

**IN THE MATTER OF**      **An appeal pursuant to s120 of the  
Resource Management Act 1991**

**BETWEEN**                      **MANUHIRI KAITIAKI CHARITABLE  
TRUST  
FRIENDS OF PAKIRI BEACH  
INCORPORATED  
DIRECTOR-GENERAL OF  
CONSERVATION**

**Appellants**

**PAKIRI G AHU WHENUA TRUST  
D CLAPSHAW  
ENVIRONMENTAL DEFENCE  
SOCIETY INCORPORATED  
R GREENWOOD  
MANGAWHAI HARBOUR  
RESTORATION SOCIETY  
INCORPORATED  
MANUHIRI KAITIAKI CHARITABLE  
TRUST  
PAKIRI TE WHANAU COMMUNITY  
GROUP INCORPORATED (TE  
WHANAU O PAKIRI)  
ROYAL FOREST AND BIRD  
PROTECTION SOCIETY OF  
NEW ZEALAND INCORPORATED  
TE ARAI GROUP – TARA ITI GOLF  
CLUB LIMITED, TE ARAI LINKS,  
TE ARAI NORTH LIMITED, TE ARAI  
RESIDENTS' ASSOCIATION  
INCORPORATED, TE ARAI SOUTH  
HOLDINGS LIMITED, TE ARAI  
SOUTH OWNERS' SOCIETY  
INCORPORATED  
S WIKAIRA**

**S274 Parties**

**AND**                              **AUCKLAND COUNCIL**

**Respondent**

**AND**

**MCCALLUM BROS LIMITED**

**Applicant**

Hearing Commenced: 17 July 2023 held in Chorus Hearing Room 5

Court: Judge J A Smith  
Judge A Warren  
Commissioner K Prime  
Commissioner S Myers  
Special Advisor W R Howie

Appearances: J M Pou and T M Ulrich for the Appellant Manuhiri Kaitiaki Charitable Trust  
J C Campbell and N R Williams for the Appellant Friends of Pakiri Beach Incorporated  
L Sutherland and D V Van Mierlo for the Appellant Director-General of Conservation  
L Black for s274 party Pakiri G Ahu Whenua Trust  
S Wikaira  
D E Clapshaw  
L Muldowney and S Thomas for s274 party the Environmental Defence Society  
K R M Littlejohn and S Hiew for s274 party the Mangawhai Harbour Restoration Society Incorporated  
V N Morrison-Shaw for s274 party Te Whanau o Pakiri  
M Downing and P A Anderson for s274 party Royal Forest and Bird Protection Society of New Zealand Incorporated  
A Scharing for the s274 party Te Arai Group  
L E Bielby, K A Fraser and L M Leyland for the Respondent  
J MacRae and N Hopkins for the Applicant

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**NOTES OF EVIDENCE TAKEN BEFORE THE ENVIRONMENT COURT**

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**PLEASE NOTE: *These notes have been transcribed from poor quality sound recording. The accuracy of the content cannot be guaranteed. Dialogue which is unable to be transcribed is indicated by (inaudible) and the time stamp.***

**THE COURT: JUDGE SMITH**

I'll just now record appearances for the formal start of the hearing. I'm just looking for Mr MacRae, yes.

**MR MACRAE:**

5 With Ms Hopkins, Sir.

**THE COURT: JUDGE SMITH**

And Ms Hopkins' initial was N, was it, is that right?

**MR MACRAE:**

Yes. And I have Mr McCallum and Ms Harnett with me. So Mr McCallum of  
10 course is the principal of the appellant and Ms Harnett is working the document system.

**THE COURT: JUDGE SMITH**

Excellent, thank you. Well that's appreciate – that's an important part of the function of the court so I thank you for doing that. So I'm going to go through  
15 the order of hearing that's been – a draft one's been sent to us, we'll worry about the details a bit later, but perhaps if I get it in that order. For the Director-General?

**MR VAN MIERLO:**

Mr van Mierlo along with Ms Sutherland. L M Sutherland, D V van Mierlo.

20 **THE COURT: JUDGE SMITH**

Thank you. And the next I have is Friends of Pakiri Beach, Ms Campbell.

**MS CAMPBELL:**

Yes, Sir. Ms Campbell, J C appearing this morning.

**THE COURT: JUDGE SMITH**

25 And there's no – you don't have any assistant?

**MS CAMPBELL:**

I have Mr Williams. He is N R Williams, and he will be here at times when I am not, Sir.

**THE COURT: JUDGE SMITH**

- 5 Yes, I'll come to the question of come and go leave a little later but, yes, I'd rather have counsel who might be here at various times so we can pick up who they are. I have Pakiri G Ahu Whenua Trust?

**MS BLACK:**

Ms Black. Initial is L.

10 **THE COURT: JUDGE SMITH**

Thank you. And then I had – I think you're appearing also for Greenwood and – I don't think you're appearing for Ms Wikaira, she's appearing for herself, is that correct, Ms Black?

**MS BLACK:**

- 15 That's correct. Yes, Sir, for Robyn Greenwood I have no instructions at this point, Sir, and you're correct that I'm no longer appearing for Ms Wikaira.

**THE COURT: JUDGE SMITH**

Okay. So Ms Greenwood, are you there? No appearance. Ms Wikaira?

**MS WIKAIRA:**

- 20 Yes, your Honour, I'm here.

**THE COURT: JUDGE SMITH**

Thank you. Are you appearing for anyone else or just yourself at this stage?

**MS WIKAIRA:**

Just myself.

**THE COURT: JUDGE SMITH**

Thank you, Ms Wikaira. I'm sorry, we had a voice over there but I heard very clearly what you said, so that's good. Thank you, Ms Wikaira. Then I have Pakiri Te Whenua Community Group Incorporated. Any appearance? I'm not  
5 sure who's appearing for them, that group.

**MS MORRISON-SHAW:**

Morning, Te Kaiwhakawa. Think you mean Te Whanua Pakiri which is Whanau Te Pakiri Community –

**THE COURT: JUDGE SMITH**

10 Right, that's what confused me. Thank you. It's written differently on this...

**MS MORRISON-SHAW:**

On the sheet.

**THE COURT: JUDGE SMITH**

The sheet, yes. And so I was reading it out and I was thinking – I wasn't sure  
15 who that was. Yes, Ms Morrison-Shaw. And have you got anyone assisting you?

**MS MORRISON-SHAW:**

No, Sir.

**THE COURT: JUDGE SMITH**

20 Single handed at the pumps.

**MS MORRISON-SHAW:**

Indeed.

**THE COURT: JUDGE SMITH**

Manuhiri – I saw Mr Pou and I think Ms Ulrich as well, is that right?

25 **MS URLICH:**

Yes. And we are also here for Mr Clapshaw today.

**THE COURT: JUDGE SMITH**

Thank you. Then we have the Mangawhai Restoration. I see Mr Littlejohn. Do you have anyone else assisting you, Mr Littlejohn?

**MR LITTLEJOHN:**

- 5 Good morning, your Honour, members of the bench. I will be the primary lead when the MHRS is questioning and giving submissions and leading evidence. I do have the assistance of Ms Hiew who is a barrister employed by (inaudible 10:14:08) and occasionally a Ms Sophia van Woerden who works with my instructing solicitor who will also be listening in and observing proceedings  
10 along the way.

**THE COURT: JUDGE SMITH**

That's fine. Thank you. And the Auckland Council?

**MS BIELBY:**

- Good morning, Sir. Ms Bielby for Auckland Council, and also – sorry, that's  
15 L E Bielby.

**THE COURT: JUDGE SMITH**

Thank you.

**MS BIELBY:**

And Ms Fraser, that's K A Fraser.

- 20 **THE COURT: JUDGE SMITH**

Anyone else?

**MS BIELBY:**

Yes, Ms Leyland, that's L M Leyland.

**THE COURT: JUDGE SMITH**

- 25 Thank you. Anyone else?

**MS BIELBY:**

No, Sir.

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**THE COURT: JUDGE SMITH**

- 5 And moving to Royal Forest and Bird, I see Ms Downing there. Is anyone going to be joining you, Ms Downing?

**MS DOWNING:**

Potentially Mr Anderson, initial P D in the later stages of the hearing.

10 **THE COURT: JUDGE SMITH**

Then EDS, I saw Mr Muldowney there so I'm assuming Mr Muldowney?

**MR MULDOWNNEY:**

Yes, good morning, Sir, for EDS, and from time to time, Ms Thomas also, S K Thomas.

15 **THE COURT: JUDGE SMITH**

And the Te Arai group of parties, I'm not sure that they have anybody appearing for them, I'm not sure what that is.

**MS SCHARTING:**

Mōrena, Sir. This is Ms Scharting for the Te Arai Group.

20 **THE COURT: JUDGE SMITH**

Yes, for the Te Arai group. I've been calling you the Te Arai Group but I think it's – I see, Te Arai Group of parties, I'm with you now, yes, I'm with you. It's my misreading of the document. It's correct, actually. Thank you very much.

**MS SCHARTING:**

25 Thank you, Sir.

**THE COURT: JUDGE SMITH**

And then Mr Clapshaw's already – somebody's already appearing for him so we'll cover that as well. That was Mr Pou. So that's all the parties. Have I missed anyone?

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So welcome everyone to the substantive hearing on this matter. I know we've had some preliminary discussions.

**JUDGE SMITH ADDRESSES COUNSEL/PARTIES – INTRODUCTION OF COURT MEMBERS (10:16:35)**

10 **THE COURT: JUDGE SMITH**

So, the focus of this case is what issues does this Court need to determine? And I just want to remind everyone at the beginning that's what we're here for. Long treatises on environmental matters, et cetera, the question is what decisions do we have to come to reach a conclusion in this case? Simplistically, so we've got to decide whether to grant consent or not and, if so, on what conditions. And with respect, I consider that very much undermines the steps you need to take to get there. If it was that simple you wouldn't be calling any evidence and so I'm reminding everyone who's listening now that when you're in the court what we're focused on is the questions we need to answer. We can't change the law and we can only operate within it. We are a creature, ourselves, of statute, and therefore can only do those things that the statute empowers us to do.

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And we realise there are wider issues at play. Some of those, well the Waitangi Tribunal, some of these are the MACA claims for various areas and, yes, we do have, particularly through Judge Warren, some understanding of those matters, but it is not in our purview to go there. And one of the questions that will come up in this case is how far does this Court go? Does it need to decide mana whenua? Does it need to decide these issues about what is the tikanga? If there is a conflict, how does it decide the difference between the tikanga of parties and that which is most applicable? Those are the type of issues that the hard edge of the work that this Court's doing and for that you will no doubt



be asked questions by members of the court, and in particular Judge Warren, how these matters are addressed in the legal sense.

5 We realise this is a developing area of law. Some of you have been involved in recent cases such as (inaudible 10:22:10) which still only has an interim decision. The Bay of Islands case, the Motiti case and then of course some of the more recent cases involving use of the ocean, Matiatia being one that is working its way I think to the Supreme Court at the moment, and various others.

10 So, with that brief introduction of both the Court and our task, I wanted to now move onto particular matters. The one matter that has been raised with us most formally is from Mr Muldowney. We describe what he's asked for as "come and go" leave. That is normally a given in this Court. The only thing is if you – you are bound by any decisions that are made in your absence and, therefore, if  
15 you want to protect your interests in the meantime, you're entitled to either have a delegate, one of the other parties or, as some counsel are doing here, having a junior member or representative sit in. The only thing you need to do is advise the registrar in case we need to ask some questions so that the registrar can say to the judge, "Oh, Mr Muldowney's away at the moment but he's delegated  
20 Ms Campbell to cover his interests." Or, more likely is Ms Campbell will say, "Mr Muldowney asked me to look after his interests and I need to go and talk to him if it's something important."

But, if it's simply about whether we adjourn for 10 minutes I'm sure nobody will  
25 have any input into that. "Come and go" leave I'm going to say is general to all counsel but you do need to appreciate that things can happen quite quickly in the court that might affect your interests and so it's common to just ask somebody to keep an eye on them and call you if there's an issue or email me. If everyone happy with that as a response to Mr Muldowney? I'll start with you,  
30 Mr Muldowney. Are you content with that as a response?

**MR MULDOWNNEY:**

Yes, Sir. That covers everything and it was just really the minor issues concerning the online nature of the hearing in terms of announcing the comings

and goings, and you've covered that off so I'm very grateful for the guidance, Sir.

**THE COURT: JUDGE SMITH**

Yes, well the registrar keeps an eye on things in and out and it's just nice if she  
 5 knows that a particular name's associated with you, if you follow me, otherwise she thinks it's simply a witness.

**MR MULDOWNNEY:**

Yes, Sir.

**THE COURT: JUDGE SMITH**

10 And I suspect there are going to be other parties who may be in a very similar position. Mr Scharting comes to mind, and others who – there were some who had less concern and I use that word, I'm not using it in a pejorative way, simply that they were more (inaudible 10:24:48) on the inshore and midshore areas, and so I suspect there may be others who will seek some "come and go" leave.  
 15 I'm not going to ask anyone to put up their hand now, it's simply a matter for their choice in due course.

**LEGAL DISCUSSION – PRELIMINARIES (10:25:08)**

**MR MACRAE:**

My written submissions start with an introduction, the contents of which will be  
 20 obvious to everyone, and then some background. So perhaps if I read from there.

**MR MACRAE READINGS OPENING SUBMISSIONS**

**INTRODUCTION**

1. This appeal relates to the Respondent's decision declining an application  
 25 by the Appellant, McCallum Bros Limited (MBL) for resource consents for sand extraction and related activities at an off-shore location in the Mangawhai-Pakiri Embayment.

## BACKGROUND

2. In October 2021, MBL took from Kaipara Limited (KL) a transfer of the application KL had made back in August 2019 for the renewal of KL's existing consent for sand extraction in an Off-shore location in the Mangawhai-Pakiri Embayment. At the same time MBL acquired KL's existing consent.

3. The KL application was made on similar terms, for the same duration and in a generally similar location as applied to the existing Off-shore consent.

4. As a result of delays caused by the Covid lockdowns and travel restrictions the application was not heard until May 2021. At that point, KL was the applicant and MBL a submitter in support. When the hearing was reconvened for two days in February/March 2022, MBL, now as Applicant, and a number of submitters presented further evidence and MBL presented its evidence in reply and closing submissions.

5. The essential terms and conditions of MBL's Off-shore application at the time it was declined by Auckland Council are set out in paragraph 2 of MBL's Notice of Appeal. The application proposes sand extraction by means of a trailing suction dredge to a maximum total of 2,000,000 m<sup>3</sup> of sand over a 20 year term. Extraction would be from an identified sand extraction area between the 25 m and the 40 m isobaths. However, following the release of a joint witness statement (JWS) by the coastal experts and a number of other expert groups, MBL has amended other key aspects of its application as follows.

(a) By the northward relocation of the southern boundary of the extraction area to a point more or less in line with the Poutawa Stream.

(b) No more than 75,000 m<sup>3</sup> to be extracted in any 12 month period from between the 25 m and 30 m isobaths.

(c) The introduction of a Mataranga Māori expert panel.

(d) The introduction of a navigation restriction directing the vessel away from the shore as it is approaching and departing from the extraction area.

(e) Provision for a biosecurity plan.

6. In addition, MBL proposes to undertake seabed sampling and related monitoring work in two control areas located outside and to the north and south of the proposed sand extraction area. The northern control area is in waters within the jurisdiction of the Northland Regional Council and is outside the

scope of this appeal. The proposed southern control area requires a coastal permit and is within the scope of this appeal.

7. The application is to replace existing consents for Off-shore sand extraction (Coastal Permit 20795) on generally similar primary terms and in the same general location. Coastal permit 20795 commenced in 2003 following an appeal to the Environment Court and expires in November 2023. KL transferred the coastal permit to MBL at the same time as MBL acquired the current application. Briefly, the existing consent allowed the extraction of up to 2,000,000 m<sup>3</sup> of sand over 20 years at a maximum rate of extraction in any 12 month period of 150,000 m<sup>3</sup> from any part of the extraction area shoreward of the 30 isobath. Extraction was also required to be at least 2 kilometres seaward of Marine Highwater Springs and from the sea floor “below the 25m sea floor depth contour”. The 2,000,000 m<sup>3</sup> volume limit on the existing consent is presently on the verge of exhaustion but a more limited rate of sand extraction will then continue at a rate of 76,000 m<sup>3</sup> of sand a year under the temporary Off-shore consent granted by the Court on 30 June 2023. The existing Off-shore consent is Coastal Permit 20795.

8. The Respondent delegated its authority to make a decision on the application to a Panel of Hearing Commissioners whose decision, dated 6 May 2022, declined the application in its entirety. MBL’s Off-shore appeal is against that decision. The Court is asked to grant consents on the basis of the amended terms and conditions now proposed.

#### **MR MACRAE:**

The next section, Sir, I deal with the consents sought, and I don’t know if I need to go through that in detail but I’m happy to do so if the Court would like me to. It refers, Sir, to basically the activity status of the resource consent sought, the –

#### **THE COURT: JUDGE SMITH**

Yes, I think we can probably skip, because it goes on to midshore and inshore applications, I don’t think that’s going to get us very far now. I would have thought you could pick up again at 18 unless there’s something you wanted to pick up in the meantime?

**MR MACRAE:**

No, nothing, Sir. As I say, that's just a matter of – I've included reference to the midshore and inshore applications as a matter of record. So I'll go to paragraph 18. Well, Sir, sorry, paragraph 16 if I may.

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Consents sought

9. The proposed sand extraction area is zoned General Coastal Marine Zone in the Auckland Regional Coastal Plan as contained in the Auckland Unitary Plan – Operative in Part. The site is not directly affected by any overlays or underlying controls.

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10. The application is for the following resource consents being, in each case, a coastal permit:

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(a) A consent for the activity of sand extraction under Rule F2.19.4(A28);

(b) A consent for discharges of excess sea water, containing oversized shell and traces of fine sediment associated with the extraction process, under Rule F2.19.2(A15);

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(c) A consent for disturbance of the Coastal Marine Area in the proposed southern control area to allow sampling and related surveys for the purpose of monitoring the effects of sand extraction. Consent for this activity is required under Rule F2.19.4(A37).

11. All three of the consents listed above are discretionary activities.

12. MBL has obtained a Certificate of Compliance, dated 16th February 2022, from the Northland Regional Council for sampling and monitoring activities in the proposed northern control area.

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Mid-shore and Inshore Applications

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13. MBL made applications for consent to sand extraction and related activities in proposed Mid-shore and Inshore extraction areas. The applications were pursued by MBL in the alternative and heard by a Panel of Commissioners between late July and late September 2022.

14. The Council granted the Mid-shore application but for a reduced term of 10 years, over a smaller extraction area and subject to an average extraction volume of no more than 50,000 m<sup>3</sup> a year over any consecutive 5 year period and 60,000 m<sup>3</sup> over any 12 month period. MBL appealed against these volume

limits and other related conditions of consent but then further amended its application and the relief sought in its appeal following receipt of the joint witness statements from the coastal experts and other expert groups. The amendments were notified to the Court in counsel's Memorandum of Friday, 2 June 2023 and a few days later MBL formerly withdrew its Mid-shore application. As a result and as recorded in the Court's decision of 22 June 2023 in ENV 2022-AKL-000219 was dismissed and the appeals by the Director-General of Conservation, Friends of Pakiri Beach Inc and Manuhiri Kaitiaki Charitable Trust were allowed with costs in all the Mid-shore proceedings reserved.

15. As MBL had made the Mid-Shore and Inshore applications in the alternative, the Council, having granted the Mid-Shore application, declined the Inshore application. MBL appealed the Council's Inshore decision and then, following the release of the joint witness statements by the coastal experts and others, notified the Court of amendments to its application and appeal and a few days later of the Inshore appeal. Ngāti Manuhiri and Friends of Pakiri applied to strike out the Inshore appeal and the events which followed and led to the grant by the Court of a temporary Off-shore consent are recorded in the Court's decision dated 30 June 2023 in ENV 2022-AKL-000220.

## **MR MACRAE:**

There's heading missing which is a little misleading above paragraph 16, and it should read "the applicant". So just to briefly advise the – sorry, "the appellant".

## **MR MACRAE CONTINUES READING OPENING SUBMISSIONS**

### **THE APPLICANT**

16. MBL is a third and fourth generation family company dating from 1904. Callum McCallum is presently the sole director of the company.

17. MBL has been extracting sand from various locations in the Mangawhai-Pakiri Embayment for about 80 years and the supply of Pakiri sand to the construction industry, concrete manufacturers and for other purposes has been the mainstay of the company's business for most of that period.

## THE SAND EXTRACTION OPERATION

18. In his evidence-in-chief Mr McCallum sets out in some detail the operational aspects of sand extraction at Pakiri. The following is a brief summary of some of the key aspects:

- 5 (a) MBL's dredge vessel is the William Fraser, a 68 metre motorised trailing suction dredge purpose built for MBL's operations at Mangawhai-Pakiri. The vessel commenced operations at Pakiri in November 2019. It has numerous features designed to reduce the impact of its operations on the marine environment. Mr McCallum's evidence includes video coverage of the trailing suction dredge method in action. A 1.6 metre wide dredge head is pulled along 10 the seabed at a speed of 1.5-2.5 knots and sucks up a swathe of sand to an average depth of approximately 100 mm.
- (b) The dredge gear is deployed before dredging commences and is lowered to the seabed when the vessel and dredge head are within the 15 authorised extraction area. The dredge head is raised when the vessel completes the dredge tow and remains in the water, several metres above the seabed, as the vessel turns in preparation for the next tow. When deployed, the dredge head is on the end of a 50-55 metre long telescopic dredge pipe. Thus turns are necessarily long and wide in order to avoid the kind of pressure 20 which would damage the dredge gear.
- (c) Sediment is screened before being deposited in the hopper which has a capacity of approximately 900 m<sup>3</sup>. Thus, if MBL were to extract 150,000 m<sup>3</sup> of sand from the off-shore over a 12 month period, the William Fraser would need to make about 14 return trips to Pakiri a month.

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## STATUTORY AND PLANNING FRAMEWORK

19. These submissions do not outline the statutory and planning framework in any detail. The Court will be familiar with the relevant statutory provisions and instruments and they are thoroughly addressed in the planners' evidence, 30 in particular of that Mr Hay and Mr Hopkins.

20. All parties appear to accept that the activities proposed in the off-shore location are discretionary activities and that the application requires consideration overall as a discretionary activity under s.104(1)(a) of the RMA.

**THE COURT: JUDGE SMITH**

I'll stop you there for a moment, Mr MacRae. I just want to check because that did seem to be largely the position of the parties. Mr Carlyon took a different view but that was bundling it with the inshore. I would have thought any issues  
 5 about bundling have now gone. I just want to check if everyone agrees that we're now dealing with a discretionary activity under the plan. I don't want to get into an argument about it whether it was before or not so I just – is that accepted? Does anyone take a different view? I can't recall who was calling Mr Carlyon. I don't think it was Mr Pou but it might have been.

**10 MR MACRAE:**

Sir, it might assist if I point out that Mr Carlyon was party to a joint unanimous funding by the planners in their expert caucus that the status of the activity is discretionary activities.

**THE COURT: JUDGE SMITH**

15 Yes. Well whatever it might have been before, it seems to me quite clearly it's full discretionary now. Does anyone have an issue with that? I just don't want to spend a lot of time spinning our wheels on issues if they're not live for us. So as a full discretionary activity of course we can take into account any matter that applies to that activity, although of course if it's a permitted activity one of  
 20 the questions asked of me this morning by one of the Commissioners was if, for example, vessel movement is permitted, does that mean it's irrelevant when we come to consider this? Well it is relevant but of course one of the (inaudible 10:52:32) into account is whether or not it's the same as the permitted activity, and so that would turn then on the difference in speed of the vessel and it  
 25 travelling in straight lines for four or five hours at a time, that sort of issue. So it seems to me that as a full discretionary activity, any matter that is relevant can be considered. The weight to be given to it is another matter, but that's always the case in the court. Does anyone disagree with that?

30 Now of course that will have consequences for each witness' evidence because many of them have dealt with a particular issue in relation to all three activities, and that may or – that's one of the big questions that we all have as a court is



to what extent does evidence, for example, about visual impacts change because there's no inshore or midshore, because there's potential for cumulative visual impacts, for example, or ecological, et cetera, et cetera.

- 5 I just wanted to point that out now, Mr MacRae, because it is one of the issues for us now as a discretionary activity the extent to which the other concerns impact upon that. One of the areas that it seems to me we're still going to hear evidence about is any existing effects of the previous activity in a cumulative sense upon the activity now proposed. I don't think that issue – that's pure  
10 surmise on my part because we haven't heard the evidence yet but the parties will need to clarify that with their witnesses.

### **MR MACRAE CONTINUES READING OPENING SUBMISSIONS**

21. The planners for the parties also unanimously agree that the statutory documents of principal relevance to the application are the Auckland Unitary  
15 Plan (Operative in Part) (AUP-OP), the New Zealand Coastal Policy Statement 2010 (NZCPS) and the Hauraki Gulf Marine Park Act 2000 (HGMPA). In my submission that very broad statement needs closer examination. The parts of the AUP-OP that are relevant to this application are the provisions of the Auckland Regional Policy Statement – Coastal Environment (ARPS) and the  
20 Auckland Regional Coastal Plan (ARCP). Pursuant to s.67 of the RMA, these documents are required to “give effect to” the NZCPS. Similarly, s.9(2) of the HGMPA requires that the ARPS and the ARCP do “not conflict with” the HGMPA. In my submission, Mr Hay and Mr Hopkins are both correct in their evidence-in-chief in concluding that, as relatively recent documents which are  
25 fully operative, the ARPS and the ARCP meet those requirements.

22. Consequently, although the NZCPSA and the HGMPA may be relevant for the purpose of assisting with the interpretation of the regional planning instruments, they are not primary documents of reference for the purpose of assessing the application and its effects. As was held by the High Court in  
30 Tauranga Environmental Protection Society Inc. v Tauranga City Council it would be wrong to apply the NZCPS (or the HGMPA) as primarily determining an issue without regard to the regional planning instruments or where the regional planning instruments satisfactorily address the matters in question.

**THE COURT: JUDGE SMITH**

Again, I just want to interpolate here that one of the other issues for this is that there is a marine spatial plan, I cannot remember its name, sorry, that was introduced, which appears to be (inaudible 10:56:48) process. I know a lot of effort went into, but the question is does it have any force in this court? As I think I pointed out to some, and others have, it appears to be a document that has no particular status under the RMA unless it is a matter we could take into account under 104(1)(c), and counsel will need to give thought to whether or not they are pressing that matter before the Court. That's a fairly recent document too as I recall, I think it's post the Auckland Unitary Plan. I think it came out in 2019, is that right? It is mentioned in some of the evidence of parties. Ms Campbell, do you have any recollection when that came out? I can't remember its name either.

**MS CAMPBELL:**

No, I'm sorry, Sir, I can't, I can't advance matters beyond what you already said but I agree with what you've said.

**THE COURT: JUDGE SMITH**

So it is a bit of an issue. Again, we need to know what are the issues that we need to take into account. Is anyone arguing that that document has particular status or should – it doesn't have to have status before it, it only needs to be a matter to which we can have regard. Of course the question then is what weight we should give it, so just (inaudible 10:58:18) the parties to that argument. And it is unfortunate that that document seems to have had a huge amount of money poured into it in time, particularly by tangata whenua, but it doesn't appear to have any status so – if I'm correct on that. If it's not an RMA document, it's quite frustrating for everyone involved I think. But again, we are creatures of statute, we are not creators of statute, so we can only apply the law as it is.

**MR MACRAE CONTINUES READING OPENING SUBMISSIONS**

23. Similarly, Mr Hay and Mr Hopkins agree that there is no need in this case to have recourse to Part 2 of the RMA to assist in assessing any of the relevant

matters in sections 6 to 8 as the AUP-OP properly reflects those matters in the context of the coastal and cultural environment at Mangawhai-Pakiri.

#### ISSUES FOR THE COURT'S DETERMINATION

24. In considering this appeal under s.104 of the Act, the Court must, of course, subject to Part 2, have regard to the matters in s.104(1)(a), (ab), (b)(iv), (v) and (vi) and any other matter of the kind specified in paragraph (c). In my submission the only other provision of s.104 which is relevant to this appeal is s.104(2) given that transit trips from Auckland to the Embayment and back and some aspects of the dredge vessel's movements within the Embayment, including its approach to the proposed extraction area, are a permitted activity under the AUP-OP.

25. In my submission, the primary issue for the Court's determination in this case is whether the proposed extraction of a valuable resource from the Embayment and its undoubted enabling aspects in respect of the social and economic wellbeing, and the health and safety of the community, together with the high degree to which adverse effects on the environment can be avoided, remedied or mitigated can satisfactorily accommodate the concerns of mana whenua and Mātaraunga Māori values.

#### 20 THE COURT: JUDGE SMITH

So I think fundamentally the question, the framing of the question in that way in my view misses a number of important points in this case. This is not a case for a new consent per se; it's a case for a consent that has been operated. So largely we know the effects because they're demonstrated through what's occurred. There might be an argument about whether they're provable or not, and it's one of the issues that I don't know that a lot of parties have spent a lot of time on, but the question for the Court is are those (inaudible 11:01:52). Obviously tangata whenua describe the effects on them as unacceptable and goes into some detail, there are ecological effects, there's trenching effects whether they're ecological or to do with sand budget and movement. Those are the type of issues that it seems to me this case throws up, which are different to our typical case where nobody's undertaken the activity previously and so we don't know what the effects could be. So we are able to look through

a historical lens it seems to me that the current condition of the environment is a product of many things, including of course the sand dredging. Allocation of that to (inaudible 11:02:39) is a matter of – that's going to be highly contentious in this case, but the sort of idea that we're just sitting here looking at the thing without any context, with respect, I just can't see fits within the purpose of the Act at all.

**MR MACRAE:**

Well, Sir, of course I accept the point you've made, and a lot of the evidence or in fact the case says the benefit of being informed by the effects and the information that has been gathered during the 20 year life of the existing offshore consent and quite a lot of the evidence is (inaudible 11:03:23) to that issue. As you say, the effects are known to some extent and some of the evidence which might have slightly marginal relevance to the offshore appeal has, in the case of the appellant at least, been left in for the Court's information so that it has more of a background knowledge of the embayment itself in light of some of that evidence, although it may have occurred as a result of inshore dredging or may have arisen or it relates to the midshore, which of course hasn't been dredged, and therefore provides an area which is in contrast to the relevant area of the offshore. So I entirely accept you on this point that that of course is a relevant matter in this case. I wasn't proposing my opening to spend any time trying to indicate to the Court my view of the extent to which it might take that evidence into account or the extent to which it informs a baseline, as it were, for the gathering of later evidence, or the assessment of later information, but of course that may be a matter that needs to be addressed as the evidence unfolds.

**THE COURT: JUDGE SMITH**

Well I think the difficulty here is that there are significant assertions of non-compliance with conditions, a huge amount of evidence given on the point. We have evidence both cultural, ecological, side scan sonar, so what you might call benthic, et cetera. The large contest here is not about something in the hypothetical; it's about whether your client has complied with things as they were. If it hasn't, then it seems to me the other parties are saying well if they

haven't complied with the conditions to date, on what basis should we assume they'll comply with them in the future. Now there might be a legal aspect to that argument as well but it is going to be front and centre, to be fair, given that that is largely one of the contests of the cultural evidence, the ecological arguments  
 5 of Mr Clapshaw and Ms Campbell's clients, and it seems to me those issues probably represent two-thirds of all of the evidence we've received.

And of course (inaudible 11:06:09) allegation which I mentioned the other day against the council in relation to that, which they say they deny, but I couldn't  
 10 find any evidence on the point, so it may be that the way the evidence has exchanged has made that difficult to respond. But it goes to the extent of some parties asserting that the Commissioners on the preliminary decision asked the council what they were going to do about the breaches and they refused to do anything. So now I'm told they deny that, and that's a matter for evidence, but  
 15 these issues seem to me unusual for a case of this sort that we're not talking about a hypothetical, we're talking about an actual and what's occurred (inaudible 11:06:50). Is it your argument that we have to ignore all that?

**MR MACRAE:**

No, Sir, it's not, although I'd be very sorry if the issue of compliance, past  
 20 compliance, assumed anything like a central position in this case. And in my submission, it is of course the allegations have been made but I would hope that after the Court has heard the applicant's evidence, the appellant's evidence, that it will be better informed about the nature of the allegations made and about the basis on which the appellant denies them. And I would add briefly  
 25 to that, Sir, that these same allegations were made at great length before both the hearings that have occurred at the council level, the first of course during the offshore hearing and the second during the hearing of the midshore and inshore applications, and although they assumed a lot of prominence in the evidence, my submission then was that they were not in this case relevant to  
 30 the outcome of the case. They might conceivably go to the suitability of the applicant as an entity who might responsibly hold and comply with conditions of consent if there was some evidence to substantiate the allegations. But I think once the Court has heard the appellant's evidence, it may well fairly

quickly come to the conclusion that these allegations have less substance than they appear if measured by the weight of evidence, Sir, which I agree is quite –

**THE COURT: JUDGE SMITH**

Well I'm not going to get into questions about how we decide something we haven't even heard yet. But my point is that I immediately think, well, how robust are the conditions. And as I pointed out the other day when I looked at the conditions, and I've looked at the latest one, they are well away from any (inaudible 11:09:01) would grant a consent for. I mean I'm particularly disturbed to see clauses such as the deeming clause that deems the council to have approved a management plan if it doesn't respond within 21 days. I don't even know the legal basis for that. I understand it's become popular in Auckland. I don't know why. Maybe I've even signed one-off, somebody can show me one that I've signed off. I can't find any yet, and I've got legal counsel looking for them, because I'm told that they've been done in other cases, but I don't even know where that has come from. What statutory power is there, what power is there for the Court to deem the council to consent to anything?

**MR MACRAE:**

Well, Sir, I take your Honour's point, and that may be a contentious point.

**THE COURT: JUDGE SMITH**

Well I will go on but shall I point out that there's been a lot of cases in this area and the practicalities are that the sort of consent that you're talking about here is probably 10 years out of date, and much, much tighter than this. There's no review – you know, there's review provisions, all sorts of things that – so this comes to the question of how robust is the decision and how enforceable it is. If it isn't an enforceable decision, the question of history becomes more relevant.

**MR MACRAE:**

Yes. And my short response again, Sir, is just that – I understand the point your Honour's making but there is evidence on the point. Reluctantly,

McCallums have been put in a position of wishing to defend themselves against allegations which their (inaudible 11:10:46) suggests have no substance.

**THE COURT: JUDGE SMITH**

All I'm trying to say for everyone is the things that have – it interested me, I'm  
 5 sure the others will have things they want to put, so that people know what the  
 case is going to be about, we're very interested in how are the concerns that  
 have been raised by other parties going to be addressed in a way that is  
 absolutely bulletproof for the future. And I've got to say the conditions they give  
 me no confidence whatsoever that they're going to be addressed in any  
 10 practical way at all. So one of the things this court has always said is it's not  
 for us to come up with the conditions. We have to be satisfied that the consent  
 should be granted either on the terms that you've proposed or on terms similar.  
 In a couple of cases this court has become involved in finalising conditions  
 between the parties, it's taken in some cases years to do, and this division  
 15 neither has the time I think or the energy to rewrite the conditions for the parties.  
 So we need to be satisfied that we're close to a consent, you're going to get a  
 consent and the terms thereof, and a lot more work will have to be done  
 between now and the end of the case to get that to a situation that would be  
 approaching a consentable process. And I just need to point that out because  
 20 things have moved on and some of these conditions I don't even know where  
 they've come from. The condition about the deeming, is that something you  
 put in or is that one of the experts put that in, because I'd like to ask the expert  
 where it came from.

**MR MACRAE:**

25 It's a matter that has been considered by Mr Hay in particular but, no, it basically  
 arose from the appellant's concern that where the council's certification of plans  
 of various kinds, of reports, as the results of reports, that if that resulted in delay,  
 then the appellant could be put in the position of not being able to extract sand  
 for a period during the life of the consent and that might lead to considerable  
 30 difficulties ultimately to its business and to the viability of the consent. So that's  
 where it's come from, Sir. It's an attempt to ensure that the council moves

things along when there are timeframes within which its decision must be given which affect the exercise of the consent itself.

5 There's probably no magic in the 20 days, and I would point out that the response threshold for the council is a pretty reasonable one because all they need to do is respond. The condition doesn't require approval or certification, it just requires a response. And responses can take various forms. And if the council are saying, well, you know, we're looking at this but we need to get some more advice, it's going to take us longer, well at least the applicant knows  
10 where it stands and can plan accordingly. So that's the origin of it, Sir.

### **THE COURT: JUDGE SMITH**

So I just need to advise the council that I'll need to get some chapter and verse on this. Mr van Mierlo I suspect is going to be raising this in due course given we've already got another case where it's been raised, not in Auckland but  
15 elsewhere. So what the genesis of this provision is I don't know and the Court's obviously going to want to track it down because it's unfamiliar with its having any legal basis, and if there's a case on the point. I do see that another judge in Auckland has granted a couple of consent memos with it but that's probably on the basis that the parties all agreed and it wasn't brought to the Court's  
20 attention. I may have even granted one without considering it, but that's not the point. We can make all sorts of things might be illegal. The question is whether it's a valid provision or not.

And Turner and Hopkins used to be the law that you can't delegate any more  
25 than the power you already have, and I can't see on what basis you could delegate to essentially a third party or to a deeming provision, council powers which need to be confirmed in writing to my understanding. Mr Muldowney acts for the council so he probably has a better understanding than I do about it, but I'm interested in those parties who have some knowledge of it as to where that  
30 type of provision came from. This is for management plans, if you haven't picked it up already, the management plans have a deeming provision that if there's no response by the council within 20 days they're deemed to be approved, and of course the argument we're getting is how can we be sure that



that's going to be anything that's suitable other than a piece of paper with a name on it.

**MR MACRAE CONTINUES READING OPENING SUBMISSIONS**

26. This is not a case in my submission which is likely to turn on differences  
5 between the parties on significant or novel points of law or planning principle. Rather, the issues for determination lie in those areas of evidence in which there remains a contest between the parties. The areas of expertise or experience which will be addressed by the Appellant's witnesses provide a broad overview of where these issues arise.

10 27. The witnesses to be called for the Appellant, listed in the order in which it is presently intended to call them, are as follows:

**THE COURT: JUDGE SMITH**

Yes, I think we can take that as read. We've read the evidence so we know what your witnesses are going to be giving evidence about. I think we can move  
15 to potential effects, 28.

**MR MACRAE:**

Yes, thank you, Sir.

**THE COURT: JUDGE WARREN**

Judge, can I just ask a question of Mr MacRae?

20 **THE COURT: JUDGE SMITH**

Yes, Judge.

**THE COURT: JUDGE WARREN**

Thank for your submissions. Just the last point you made around the areas of evidence where there is a contest, do you have a submission as to how the  
25 Court should deal with any contest of mātauranga Māori and tikanga? Is it simply the orthodox approach of weighing the evidence, the standard of proof being, as I say, orthodox, is there something bespoke that we need to consider in addressing contest of evidence in that class of evidence or issues before us?

**MR MACRAE:**

There are cases of course, Judge, in which this matter has been considered, and there is some authority in the Court's ability to – sorry, there is some authority for the way in which the Court can approach conflicting views of mātauranga Māori, tikanga, who has mana whenua, and so there is some guidance in the decisions released. I wasn't proposing to make detailed submissions on the point because I think my understanding of the area, which I have to frankly concede is not an area in which I've practised to any extent, will be assisted by the cases of the parties concerned. So at this stage, I accept that these issues might arise and have taken the view that they'll unfold in the course of the hearing. I have no particular submissions to make on the issue at this point because I'm not quite sure until I hear the evidence and obtain the results of cross-examination how the issues will arise, as between whom they will arise and to what extent.

**15 THE COURT: JUDGE WARREN**

Yes, I mean I'm just mindful of Justice Palmer's comments in *Ōrākei* around when he explored the issue of standard of proof and grappled with the issue of consensus when it came to addressing matters of tikanga. Whilst I think he found there wasn't great distinction between that and the balance of convenience, I think it's important for decision-makers to know the lens upon which it assesses that evidence if we are looking for consensus, because clearly there isn't on the evidence that I've read at this point on some issues.

**MR MACRAE:**

Yes. Well thank you, your Honour, for flagging the matter. I probably can't take it too much further in a way that would assist you at this stage.

**THE COURT: JUDGE WARREN**

Thank you.

## THE COURT: JUDGE SMITH

I think, however, it's helpful to just flag it at this stage so the parties are just aware that it's one of the issues we'll be looking at as to how we deal with that evidence.

5

(a) Mr McCallum. Mr McCallum's evidence will address the history of, and background to, the Appellant's sand extraction activities in the Embayment, the vessels, operation and methodology used, the uses and importance of Pakiri sand for high strength concrete, alternative sources of sand, consultation with Māori and other interest groups and allegations of compliance issues.

10

(b) Mr Todd of Jacobs, coastal processes. Mr Todd's evidence provides an overview of the coastal morphology, and the coastal process environment including the depth of closure. He assesses changes in the shoreline and bathymetry that have occurred or are occurring and assesses the potential future effects of extraction. He also comments on the proposed topographical and bathymetric monitoring conditions.

15

Some parts of Mr Todd's evidence are not relevant to the Off-shore application and a significant number of paragraphs are to be deleted. Some changes will also be made in response to the coastal experts' Joint Witness Statement and to clarify some of the linkages between remaining paragraphs.

20

(c) Mr Healy of Survey Worx, surveyor. Mr Healy responds to criticisms of the UAV survey equipment, its capabilities and the methodology which has been used for topographic beach surveys in recent years and is specified in the proposed Conditions of Consent. He also responds to allegations that parts of the data supplied to Mr Clapshaw and Dr Mead were redacted.

25

(d) Mr Stubbing of Discovery Marine Limited, hydrographer. Mr Stubbing describes the bathymetric survey equipment and methodologies and their capabilities as used by DML in its bathymetric survey work to date for MBL and specified in the proposed conditions of consent. In his evidence in reply, Mr Stubbing responds to allegations by Mr Clapshaw that DML data was redacted.

30

(e) Dr Beamsley of MetOcean Solutions. Dr Beamsley assesses the potential effects of sand extraction on surf breaks in the Embayment. Those parts of his evidence that deal solely with effects in the mid-shore and inshore are to be deleted.

(f) Mr West of Biosearches. Mr West's evidence describes relevant ecological surveys conducted in past years and for the purpose of preparing MBL's Off-shore, Mid-shore and Inshore applications. He then assesses the effects of trailing suction dredging on marine fauna and summarises some of the other factors affecting fin fish, scallops and horse mussels. Mr West also comments on the draft EMMP for the off-shore and he assesses the potential effects of sand extraction on sources of food for bird species, and particularly tara iti.

Although several sections of Mr West's evidence deal discretely with the Appellant's off-shore and former mid-shore and inshore applications, in several of the sections deletions have not been made as it is considered that an overall view of the marine biology and sediment characteristics over all three areas of the Embayment is likely to be of assistance to the Court in assessing any impacts of sand extraction in the off-shore area.

(g) Dr Thompson of NIWA, Avifauna. Dr Thompson considers potential effects from vessel disturbance, oil spill, erosion causing loss of breeding habitat and effects on foraging. Assuming that off-shore extraction does not cause erosion in relation to breeding habitat, he concludes that none of these potential effects would be more than minor.

(h) Dr Conwell of SRL Consulting NZ Limited, water quality. Dr Conwell addresses effects on water quality relating to the dredge activity and, in particular, the discharge of surplus sea water, shell and sediment from the vessel back to the sea. In her evidence in reply, she primarily responds to concerns expressed by Professor Jeffs to the effect of ocean acidification to the carbonate (shell) components of sediments in the Embayment.

(i) Dr Pine of Styles Group Acoustics, underwater acoustics. Dr Pine's evidence summarises the results of his technical assessment of potential injury effects and behavioural effects on marine mammals and fin fish as a result of underwater noise generated by the William Fraser. Dr Pine's assessment of the off-shore, mid-shore and inshore areas of the Embayment has been left intact as comparisons between the results for the different areas assist in an understanding of his evidence. He deals with some particular points made by Dr Radford in his evidence in reply.

(j) Dr Clement of Cawthron Institute, marine mammals. Dr Clement identifies the marine mammal species potentially affected by sand extraction in the Embayment including, in reliance on Dr Pine's evidence, underwater noise effects. She considers the possibility of whale strike while the vessel is in transit  
 5 between the Port of Auckland and the Embayment, with particular reference to Bryde's whales, and has made recommendations for a Marine Mammal Management Plan. In her evidence in reply she elaborates on aspects of her assessment of the possibility of vessel strike on Bryde's whales in response to questions raised by Ms Sitarz.

10 (k) Mr Styles of Styles Group Acoustics, terrestrial noise. Mr Styles provides a summary of the methodology used for his assessment of sand extraction noise levels generated by the William Fraser. Mr Styles has made separate assessments in relation to the off-shore, mid-shore and inshore areas and these have been left intact in his evidence as they provide a helpful basis for  
 15 assessing the level of noise that residents and others have experienced as described in their evidence.

(l) Mr Brown of Brown NZ Limited, landscape architect. In his evidence Mr Brown describes the existing landscape and natural character values of the Pakiri coast and, having regard to the relevant statutory documents, assesses  
 20 the impact of the dredge vessel's operations by reference to a range of view points along the coast.

Several parts of Mr Brown's evidence separately address the formerly proposed inshore and mid-shore extraction activity and, where appropriate, these are to be deleted.

25 (m) Mr McIlrath of Market Economics, economist. Mr McIlrath provides an economic analysis of the importance of sand to Auckland's growing economy, the relative importance of Pakiri sand and other sources of supply, present and future demand, alternative sources of supply and their cost, emissions and other disadvantages if Pakiri supply were to be discontinued. Some aspects of  
 30 Mr McIlrath's evidence are to be amended as a result of the Court's orders in respect of the Inshore and Mid-shore applications.

(n) Mr Donoghue, engineer - concrete. Mr Donoghue's statement of evidence replaces that of Mr Beatson who, due to ill health, is no longer available as a witness. He also responds to challenges to Mr Beatson's

evidence made by Ms Grant (Auckland sand market and sources of supply) and Dr Sharp (economic issues).

Mr Donoghue addresses the technical qualities of sand required for concrete making, the sources of sand suitable for concrete in New Zealand, the advantages of coastal sand, alternative sand resources and CO2 associated with concrete and alternative sources to supply from Pakiri.

(o) Mr Officer of Allied Concrete Limited, sand and concrete. Mr Officer's evidence is directed to the technical requirements of sand use for making concrete, sources of supply, the benefits of Pakiri sand and its use by Allied Concrete, a concrete manufacturer, and the difficulties of finding alternatives.

(p) Mr Scott of the Aggregate and Quarrying Association of New Zealand, concrete industry. Mr Scott provides a New Zealand-wide perspective of the demand for aggregates, including sand. He addresses limitations on the availability of sand suitable for making concrete in Auckland and difficulties with alternative sources of supply.

(q) Mr Gaimster of Concrete NZ, concrete industry. Mr Gaimster also brings a national perspective to the role of concrete in economic development, particularly in Auckland, the Waikato and the Bay of Plenty. He describes the concrete industry's endeavours to reduce CO2 emissions, general pressures on sand supply and the particular qualities and manufacturing and emissions efficiencies of Pakiri sand.

(r) Mr Thomson of Kaipara Tow Boats Limited, Kaipara Harbour sand. Mr Thomson provides an account of his personal experience on the barge and on tug boats extracting sand from the Kaipara Harbour. He outlines safety issues and other difficulties associated with sand extraction in the Harbour and the logistical problems and limitations on the supply of Kaipara sand to concrete manufacturers.

(s) Mr Te Rangi of Te Uri O Hau, cultural values. Mr Te Rangi's evidence covers his advisory role with MBL, the significance of Pakiri from a Māori perspective and an explanation of matauranga Māori and the related concepts of kaitiakitanga. He goes on to explore the ways in which Māori spiritual and cultural values can be integrated into the activity of sand extraction to mitigate their impact. He outlines the progress that has been made between MBL and Te Uri O Hau in order to achieve the same goal and provide for a sharing of

economic benefits of sand extraction. He outlines the stage that discussions with Ngāti Manuhiri had reached at the date of his evidence. Mr Te Rangi also comments on the relationships between Ngāti Wai and other Māori parties and groups in the area.

- 5 (t) Mr Thompson of Te Uri O Hau, cultural values. Mr Thompson is a trustee of Te Uri O Hau Settlement Trust and an immediate past Chairman. He outlines Te Uri O Hau's interest in the Embayment and interests elsewhere and the approach that Te Uri O Hau has taken to past and proposed sand extraction at Pakiri. He identifies the ways in which the proposed Cultural Liaison Agreement
- 10 provides avenues for the mitigation of Te Uri O Hau's cultural concerns.
- (u) Mr Hay of Osborne Hay, planner. Mr Hay's evidence covers all the matters that planners are required to cover in applications of this kind and I shall refer to it further in the submissions that follow. As might be expected amendments and deletions to Mr Hay's evidence are required as a result of the
- 15 disposal of the inshore and midshore appeals.

**JUDGE SMITH ADDRESSES MR MACRAE – BREAK (11:20:25)**

**COURT ADJOURNS: 11.20 AM**

**COURT RESUMES: 11.46 AM**

**THE COURT: JUDGE SMITH**

Mr MacRae, continue with 28?

**MR MACRAE:**

- 5 Sir, just before I do, might I just pick up an aspect of the point that your Honour raised about the 20 day requirement for council to respond, just to point out briefly that, and this will become clearer during the evidence, it doesn't only apply to management plans, although the management plans it does apply to, such as the marine mammal management plan and, as your Honour said, the
- 10 EMMP, are plans that have to be provided before extraction of sand commencing. But it also applies to operational changes, and the one that immediately comes to mind is the one covered by condition 2 which is a change in the vessel or the dredging methodology. So if McCallums are dredging and there's a breakdown in the vessel and the only vessel available has a slightly
- 15 different methodology – sorry, your Honour is still with me I assume? – I think your Honour's on mute.

**THE COURT: JUDGE SMITH**

Yes, I was just trying to get the light off my face.

**MR MACRAE:**

- 20 Yes, I can understand that, Sir, it does appear to be strong. Yes, so I was saying, Sir, that there are some operational changes that this (inaudible 11:48:36) requirement for the council to at least respond in some form within 20 working days applies to and one is the change in vessel or dredging methodology. I was saying that if there was a breakdown of dredge gear or a
- 25 breakdown in the vessel and McCallums was in the course of dredging, the demand for sand was high, McCallums are required to submit a report to the council by a qualified person explaining the changes that are being made before they're approved, and if the council didn't respond within 20 working days, which after all is a month, then McCallums' operations could be significantly
- 30 impeded.



So I think that, Sir, is where that aspect of these conditions originated, and that was just to give a little (inaudible 11:49:30), Sir, to my suggestion earlier that they really came from concerns with the delays. And I don't mean to be at all critical of Auckland Council but everyone knows and the Court will be aware of the difficulties that council are faced with, staffing and other issues, both around COVID and for other reasons, in turning around matters of this kind. And so that's where it sprang from. And just to point out again very briefly that the management plans they do apply to, the marine mammal management plan and the requirement for (inaudible 11:50:14) plan, are pre-dredging management plans, so they're required to be submitted before dredging commences. And if the council were then to take three months to get around to responding to them and granting certification, then of course the operator would be in a very difficult position. So that was the genesis, Sir, of the idea, and it was of course known that they had been used elsewhere, the same (inaudible 11:50:49) in other consents.

## **MR MACRAE CONTINUES READING OPENING SUBMISSIONS**

### **POTENTIAL EFFECTS**

#### **Potential Effects of Sand Extraction – Operational**

28. Physical effects are of a very low order relative to other methods of dredging and in absolute terms. The William Fraser was commissioned in November 2019 and has a number of state of the art technologies to reduce its environmental impact. These are:

- (a) The 900m<sup>3</sup> capacity of the vessel's hopper reduces the number of trips required to extract sand to an average of 14 trips per month.
- (b) The trailing suction dredge method by taking a relatively wide and shallow swathe of sand (1600mm wide by 100mm (average) depth) which minimises effects on the seabed and on marine life.
- (c) The dredge gear is presently effective at water depths of up to 36m so permitting an increased extraction area taking dredge runs further from the shore and reducing the intensity of sand extraction per unit of area.
- (d) Moon pools are designed to return excess shell and sediment directly to the sea below the water line so minimising turbidity.
- (e) The sediment screen is designed to reduce damage to live animals.

- (f) The dredge pump is electric rather than hydraulic so reducing underwater noise and avoiding oil leaks or spills.
- (g) The vessel is designed to operate on the minimum lighting compatible with Maritime NZ requirements and health and safety standards.
- 5 (h) The vessel has or will be fitted with a MAXSEA navigation system and other technologies which are capable of keeping a precise record of the vessel's track when the dredgehead is dredging and when it is not, and the volume of each load.

**THE COURT: JUDGE SMITH**

- 10 Now if I could just stop you there. I don't recall a discussion about MAXSEA but I may have missed it. Who discusses that system?

**MR MACRAE:**

Mr McCallum, Sir. Yes, that is in his evidence, Sir. And he also –

**THE COURT: JUDGE SMITH**

- 15 Do you know what pages or paragraphs?

**MR MACRAE:**

Just offhand, no, Sir, but it will come up shortly of course.

**THE COURT: JUDGE SMITH**

No, that's fine. Yes, well I'll come to that.

**20 MR MACRAE CONTINUES READING OPENING SUBMISSIONS**

- (i) The vessel is designed for low emission operations from engines and with high standards of insulation to reduce on-board noise.

**COASTAL PROCESSES**

- 25 29. The most important aspect of the proposal in relation to coastal processes is that the off-shore extraction area lies entirely beyond the 25m closure depth so virtually sealing the impact of extraction on the beach and dunes from effects resulting from the removal of off-shore sand. As the coastal

experts now unanimously agree, the best estimate of cross shore sediment movement across the closure depth is the 12,000m<sup>3</sup> a year as adopted in the Mangawhai-Pakiri Sand Study. As the experts found:

...the risk is low of (sand extraction) having any measurable influence on shoreline stability from continuing to extract from beyond the 25m closure depth for a period of not more than 20 years, with appropriate management conditions

30. A consequence of this agreement is that detailed analysis of changes in the position of the shoreline and whether the trend is towards accretion or erosion becomes largely irrelevant. Analyses of these issues have been

undertaken on the basis of historical photographs of the beach, monitoring of the historical beach profiles required by the conditions of consent of the recently surrendered 2003 Inshore consents and topographic surveys of the beach between 2007 and 2022. Large parts of the coastal experts' evidence have been directed towards points of difference as to the accuracy and reliability of the methodologies and accuracy of the results drawn from each of the three approaches.

31. There has also been extensive criticism of the use of a sediment budget by Mr Todd in endeavoring to quantify the extent of erosion or accretion on the beach and dunes. A strong inference to be drawn from the coastal experts'

JWS is that the use of a sediment budget for this purpose is not appropriate and Mr Todd and Dr Mead have subsequently expressly said so. Mr Todd will delete from his statements of evidence the paragraphs relating to sediment budgets. For the same reason, the Appellant is not now calling Dr MacMurray whose evidence relates to inputs of sediment from rivers and streams from the

coastline. For similar reasons, the Appellant is also not now calling Dr MacKenzie whose evidence is directed towards a statistical basis for assessing the extent of erosion and accretion along different parts of the shoreline. That exercise was proposed in the conditions of consent advanced in support of the Inshore and Mid-shore applications in order to determine whether sand extraction could continue for the full term of any consent granted. That is not a relevant exercise in the context of the Off-shore application.

#### **MR MACRAE:**

In light of the findings of course of the experts in their joint witness statement.

**THE COURT: JUDGE SMITH**

Well again, I'm not sure that I – I don't really want to put words in the mouths of people but Dr Shaw Mead spends a lot of time on this issue. It would be fair to say that notwithstanding the – there's a movement of sand across the closure

5 depths. Yes, there's a net their guess is between 620,000 tonnes, as I remember, being the net onshore, but in fact there's quite large volumes in the study going each way. And that is reflected in Dr Shaw Mead's evidence as being affected by the trenches that he says have been put in place and the fact that those haven't infilled and it will have to continue to infill before further

10 movement will occur. So that's why I said to you it does seem to me that the history of this site, the existing environment now, becomes highly relevant because it affects the way in which sand might move shoreward or from the shore to the deeper waters. I don't know where that's taking us but I don't think that issue could be said to have gone away, and Dr Todd's of course original

15 evidence was that there was something in the order of 60,000 cubic metres going onshore a year. So I'm not sure where and when he's resiled from that but it's still in his evidence at the moment. And in fact he's supporting in his reply he supported 35,000 as I recall, on the basis it was still more than the 12,000.

**20 MR MACRAE:**

The 35,000, Sir, just to take those points perhaps in a reverse order, the 35,000 applied rather to the extraction volume he would support from the inshore and the midshore. But the source of the agreement of course or the record of the agreement reached by the coastal experts is of course in their JWS and

25 Dr Todd – Mr Todd, sorry, was part of that agreement, and the issue is covered and of course it's an update to his evidence in reply, but I'm proposing to lead him through deletions and some changes to be made updating his evidence to be consistent with the results of the caucus.

**THE COURT: JUDGE SMITH**

30 Well, whatever the numbers they come to, it seems to be the issue about is the ongoing effect of the trenching seems to be an issue that the experts take particular moment of, and Dr Shaw Mead is probably the strongest in that area,

nevertheless I don't think the others would say that it's gone away, and therefore the potential for ongoing erosion as a result of what's already occurred to date, which they say is a breach of conditions of consent of course, not permitted. So I don't know the answer to all those questions, as you say we've  
 5 got to hear on that, but I'm just pointing out that I don't think the issue has gone away.

**MR MACRAE:**

No. Well your Honour has anticipated a point that I address a few paragraphs further down as to Dr Mead's evidence and the extent of agreement between  
 10 the experts. But what I'm trying to do at the moment, Sir, is give the Court some idea of the extent to which the appellant at least considers the evidence can be reduced and refined and where, given the findings by the coastal experts and the change in Mr Todd's position in particular and therefore a degree of unanimity on some of these matters, where there are still areas of contest, I  
 15 can't speak for the other parties of course but I can give an indication of the appellant's position on these matters, and I think on my understanding, with due respect, that's really what I should be doing for the Court's assistance, and so that's what I'm attempting to do here.

**THE COURT: JUDGE SMITH**

20 Well if it actually tells us what the issues are. If it simply says there's not an issue when quite clearly on the evidence there appears to be an issue, then it's not taking us very far.

**MR MACRAE:**

I appreciate that, Sir, and to some extent –

25 **THE COURT: JUDGE SMITH**

I'm just trying to point out that from my reading of the evidence, there's more issues than you're suggesting, and Judge Warren has raised the same issue in respect of tikanga. I mean I don't want parties to have the impression that you have stated as some form of final statement the issues before this Court. We'll  
 30 be spending most of the hearing trying to identify those issues. I'm trying to

point out the obvious ones at the moment. I suspect we'll find there's more as we go on.

**MR MACRAE:**

Yes, I accept that, Sir.

**5 MR MACRAE CONTINUES READING OPENING SUBMISSIONS**

32. Nevertheless, Mr Todd has left on foot most of his evidence in relation to aerial photograph analysis and historical profile surveys as these provide a general historical perspective on changes in the beach and dunes over a period of many decades and have some relevance to some of the non-expert claims  
10 of dramatic changes on the beach, dunes and river mouths over a period of many years. Counsel does not, at this point, anticipate cross examining the coastal experts for other parties in respect of these topics, but, of course cannot be sure that the other parties will take a similar view as to the limited relevance of the evidence. However, Counsel hopes that other Counsel will also exercise  
15 restraint in these areas.

33. Mr Todd's and Mr Healy's evidence in respect of the topographical surveys will remain in play as the Appellant proposes to continue with topographical surveys of the beach and dunes. All the experts agree that the kind of topographical surveys conducted by drone technology since 2017 are  
20 the best method for continuing to monitor the beach in the future. It follows, in my submission, that the relevance of this topic is limited to proposed conditions of consent rather than the issue of whether consent should be granted. Unless other parties take a different view, Counsel proposes to limit his cross examination accordingly.

25 34. Following the caucus of the coastal experts and the release of their JWS it seems that only two areas of dispute remain in respect of the Off-shore application. Both have been raised by Dr Mead as points on which he does not agree with the other coastal experts. The first is his contention that the existing trenches in the Off-shore Exclusion Area may intercept movements of sand  
30 from the off-shore to landward areas of the Embayment. The second is his concern that dredge tracks may persist for longer than is suggested by the Appellant's evidence and may also play a part in limiting cross shore sediment

transport. The Appellant does not accept Dr Mead's opinion on these points and it is submitted that there is no cogent evidence in support of them.

35. The question of the effects of climate change were relevant to the Inshore and Mid-shore applications as sea level rise would likely compound any erosive effects arising from Inshore and Mid-shore extraction. However, it is submitted that this issue does not arise in the context of the Off-shore application as there is little likelihood of any measurable effect of off-shore sand extraction on shoreline stability of the beach and dunes. Sea level rise will continue, but, as Mr Todd has concluded its effects will bear no relation to off-shore extraction.

#### Surf Breaks

36. Dr Beamsley concludes, in reliance on modelling studies carried out by MetOcean Solutions in 2022, that off-shore extraction would have a negligible effect on coastal processes (wave height, period and direction) at the three regionally significant surf break locations in the Embayment or on the surf breaks themselves. It follows that there would be negligible effect on "surfability" in the areas of the surf breaks. Dr Mead came to a similar conclusion in his evidence on behalf of KL in support of the Off-shore Application at the Council hearing. As far as Counsel is aware, there is no expert evidence to the contrary before the Court.

#### MARINE ECOLOGY

37. The composition of the sand and sediments on the seabed provide the medium in which seabed dwelling biota breed and live is an important factor in their distribution and abundance as well as being relevant to the degree of turbidity following sand extraction. Mr West concludes that monitoring of grain size composition in off-shore control areas indicates that no changes have occurred.

38. On the question of water quality Mr West's opinion that the risk of adverse effects from the dredge operations is less than minor is supported by Dr Sivaguru. Some of the other experts have a different view based on what they consider to be a lack of sufficient information but none have produced direct evidence to support a contrary view. It is difficult to reconcile these

concerns in the face of Dr Conwell's report on water quality which concludes that the risk of adverse effects on sand extraction to the existing off-shore water quality is negligible.

39. In his evidence, Mr West acknowledges that there were some difficulties  
5 in comparability between the earlier pre-dredging studies of marine biota undertaken in the off-shore extraction area with later studies to assess the effects of dredging. However, a Bioresarches 2017 study showed more crustacea in the dredge area, and no adverse effects in terms of loss of diversity or abundance for any taxonomic groupings.

10 **MR MACRAE:**

So that, Sir, is an area that (inaudible 12:10:01) rather well with the point you were making about we know what the effects of existing dredging or dredging in the past in the offshore have been, at least in respect of effects on marine biology.

15 **THE COURT: JUDGE SMITH**

Again there, I must have been reading different evidence, because my understanding from the some of the concerns, and this is particularly DOC, is that there is no evidence that the areas that were tested in the 2017 study were in fact areas that had been dredged, they were simply within the dredging areas,  
20 and those arguments are one's we're going to have to hear the evidence on. I don't know the answer to those questions but it does seem, with respect, a fairly long bow to suggest nobody disputes that evidence. My recollection is I've just been reading the DOC evidence for a start. I think others disagree too.

**MR MACRAE:**

25 Well, Sir, with respect, I didn't actually say that no one did dispute it. I just said that as far as I'm aware, that's the only study of the effects of the existing dredging on marine biota which compares those effects with an undredged area.



**THE COURT: JUDGE SMITH**

And thus the argument of the other witnesses is that's a failure to comply with the conditions of consent and there hasn't been any proper testing so that you know what the effects are. So the argument is why should it be the job of the  
 5 opposition parties to prove something you're obliged in terms of the consent to do?

**MR MACRAE:**

Well with respect, Sir, the existing offshore consent does not require that kind of monitoring of marine biota. It does – of effects on marine biota. It does  
 10 require monitoring, and that was carried out in accordance with the conditions. So I don't know that there's any contention that –

**THE COURT: JUDGE SMITH**

Well I certainly think there's a contention. We'll just have to wait and see where the evidence is because –

15 **MR MACRAE:**

Yes.

**THE COURT: JUDGE SMITH**

– my understanding is the witnesses clearly say that you didn't comply with the conditions. Maybe they've (inaudible 12:12:10) midshore with the offshore, and  
 20 I don't want to go too far into it because I rely on my ecologists rather than myself to pick up on all those things, but we will see in due course. I simply point out that I don't think it's as cut and dried as you suggest, but we will find out. You could be right.

**MR MACRAE CONTINUES READING OPENING SUBMISSIONS**

25 Consequently, Mr West concludes that the effects of continued dredging are not expected to result in more than minor effects on benthic biota. In the marine ecologist's JWS, Dr Sivaguru is recorded as agreeing with this conclusion although the participants were unanimous in agreeing that there is insufficient information to rule out the possibility of adverse effects.

40. It is submitted that excluding the possibility of adverse effects is not a test that the Act requires applicants for consent for discretionary activities to meet. In fact, it is known that some damage to shellfish and other macrofauna does result from the operation of dredging but the survival rate is as high as 95%, which, it is submitted, supports the minor effects finding referred to above.

41. Mr West confirms that the levels of underwater noise measured by Dr Pine as it applies to the off-shore area will not result in injurious effects to fish or invertebrates although some behavioural changes in fish during sand extraction may occur.

42. Stoney corals are a protected species and all the coastal ecologists except Dr Mead accept that they are unlikely to occur in waters shallower than 36m. Of all the biological survey and monitoring work conducted in the Embayment only the 2017 Bioresarches study has detected stoney corals and then only to the extent of two specimens, both under 5mm in size. In the unlikely event that stoney corals are detected in the future the proposed conditions of consent require that sand extraction in the vicinity must cease.

43. Mr West's conclusion that there will be no readily identifiable direct effects on marine food webs as a result of sand extraction was agreed by all participants in the marine ecologists' caucus.

44. A number of parties will present evidence as to a severe decline in the incidence of horse mussels in the Embayment. Earlier studies have detected horse mussel beds in various locations none of which have been subject to sand extraction. In particular, horse mussels were not detected in the current off-shore extraction area before dredging commenced in 2003. Mr West explains that a number of other factors common to East Coast beaches in the Hauraki Gulf have been responsible for the general decline of horse mussels at many locations where they were formerly abundant.

45. The Appellant, assisted by Mr West, has given considerable attention to conditions of consent and standards of biological monitoring that will rectify some of the difficulties between surveys which have been experienced in the past. Given Mr West's conclusion that a substantial portion of the proposed off-shore extraction has been dredged continuously for nearly 20 years without any adverse effects on marine species which are more than minor, it is submitted

that none of the reservations or concerns of other parties as to the possibility of adverse effects provide reasonable grounds for refusing consent.

Turbidity: Water quality,

- 5 46. It is submitted that the effects of off-shore sand extraction on existing water quality is barely an issue in this appeal given Dr Conwell's finding that they would be negligible. Dr Conwell, and Dr Sivaguru who characterises water quality effects as "less than minor" , are the only witnesses to give expert evidence on this topic. Professor Jeffs has raised a different issue concerning  
10 ocean acidification and Dr Conwell responds to this in her reply. In my submission, it is difficult to see how acidification would have any impact on sand extraction in the off-shore.

Underwater noise

- 15 47. It is submitted that the potential for underwater noise effects on marine mammals in the off-shore from sand extraction is extremely low. Dr Pine, who has particular qualifications and qualifications in the effects of underwater noise on marine mammals, draws the following conclusions from his model of the William Fraser's operations in the off-shore in this way :
- 20 (a) no risk of temporary injury threshold shifts beyond 1m from the William Fraser while it is dredging,  
(b) no risk of permanent injury threshold shifts for all species,  
(c) temporary behavioural effects (eg turning to avoid the noise) may occur if an animal approaches within a radius of 927m from the vessel.
- 25 48. Counterintuitively, Dr Pine's modelling shows these effects in the deeper waters of the off-shore extraction area to be of lesser magnitude than in the shallower mid-shore and inshore waters of the Embayment.
49. These conclusions by Dr Pine are unchallenged. Dr Radford raises a number of issues which he suggests Dr Pine has not considered, and Professor  
30 Jeffs questions the noise effects of the William Fraser in transit. It is submitted that this is not a relevant matter but, in any event, both these issues are the subject of Dr Pine's evidence in reply.

### Marine mammals

50. It is submitted that Dr Clement's overall conclusion that the effects of sand extraction on marine mammals would be less than minor to negligible remains valid despite challenges by a number of other witnesses to various aspects of her evidence.

51. Dr Clement's assessment of effects is multilayered. She identifies the potential effects for marine mammals as direct effects arising from the operation of the vessel while dredging. These include underwater noise, attraction to lighting, entanglement, contaminants, behavioural effects, and vessel strike. She also considers the risk of vessel strike when the vessel is in transit through the Hauraki Gulf. She then assesses effects in each area, first, prior to adoption of the mitigation measures she recommends, and secondly, on the basis that the mitigation measures are adopted. Finally, she makes the overall assessment on the second basis as is referred to above.

52. As sailing the vessel to and from the Embayment is a permitted activity in the General Coastal Marine Zone it is submitted that conditions of consent in relation to vessel strike in transit are not appropriate. However, as a responsible operator, MBL is happy to adopt Dr Clement's recommendations for mitigating the risk of vessel strike by of the adoption of a Marine Mammal Management Plan incorporating Dr Clement's recommendations. In any event, the Appellant has adopted the Ports of Auckland Hauraki Gulf Transit Protocol for Commercial Shipping and must comply with the relevant provisions of the Wildlife Act 1953 and Marine Mammal Protection Regulations 1992. The conditions of consent require such a plan to be lodged with the Council for certification prior to extraction commencing.

53. It is worth noting that the configuration of William Fraser limits its speed through the Hauraki Gulf to 9.5 knots which is less than the speed recommended in the Protocol. Not surprisingly, my instructions are that there has never been a risky interaction or collision between any of MBL's dredge vessels and marine mammals in the history of the company's operations.

### Birds

54. The bird species of primary concern in this appeal is the tara iti, which as a Nationally Critical species whose numbers in recent years have fluctuated

between 35 and 40 birds and are down to 9-10 breeding pairs, is entirely understandable. Apart from natural hazards such as flooding and storms, these species face multiple risks from various forms of human intervention in their breeding and foraging habitat not least along the Mangawhai-Pakiri coastline

5 as is evident from the evidence of Ms Wiles and other witnesses.

55. The Appellant is sympathetic to the issue and is proposing measures to minimise the effects of its own operations on tara iti. It is submitted that the following factors are relevant:

(a) The proposed off-shore extraction area is a minimum of 1530m and up  
10 to 1810m (inner boundary) from the mean high water mark (MHWM) and approximately 4km or more from the MHWM along the outer boundary. Consequently, the great majority of the extraction area is beyond the most commonly used foraging areas in the Embayment for tara iti, which, particularly during breeding, primarily feed in estuarine and inshore waters.

15 **MR MACRAE:**

All the experts, the avifauna experts, Sir, were agreed that tara iti do forage within the entire extraction area but the evidence suggests that foraging tends to be far more infrequent the further out to sea one gets, and that the two kilometre mark is an – limit accepted to at least some extent as a cautious,  
20 a precautionary kind of point. In this case, dredging is proposed closer than that but the evidence, at least from Dr Thompson who's the appellant's avifauna expert, and I think there's some measure of agreement with him, is that (inaudible 12:25:41) shouldn't be a problem, for that and –

**THE COURT: JUDGE SMITH**

25 I just want to check, because I have got confused, because my understanding is the current extraction area is at least two kilometres from mean high water springs?

**MR MACRAE:**

That's correct, Sir.

**THE COURT: JUDGE SMITH**

So you're seeking to come shoreward?

**MR MACRAE:**

- 5 Yes, Sir. But the – yes, Sir, that's correct but the area – there is a slightly complex area here, Sir, as to the depth, water depth and chart datum depths. So actual water depths at the time of dredging can bring the barge – the existing offshore consent permits dredging in no less than 25 metres of water, and so the conditions of consent do –

10 **THE COURT: JUDGE SMITH**

Well according to your opening paragraph 7, it (inaudible 12:26:46) permits it below the 25 metre sea floor depth contour.

**MR MACRAE:**

That's correct, Sir. That's correct.

15 **THE COURT: JUDGE SMITH**

So is that different to what you just said or the same thing? I don't know what "below the 25 metre sea floor depth contour" means.

**MR MACRAE:**

- 20 The sea floor depth contour on my understanding is that that's a chart datum point.

**THE COURT: JUDGE SMITH**

So that's 25 metres below mean high water springs, or is chart datum something different?

**MR MACRAE:**

- 25 I think it's 25 metres below the low astronomical tide point, Sir.

**THE COURT: JUDGE SMITH**

Yes, (inaudible 12:27:29) thought. I'm just trying to check because there seems to be a little bit of drifting of the cards so that we don't understand exactly what you're meaning in this. So when you say below the 25 metre sea floor depth

5 contour, that's 25 metres below the low astronomical data tide point, is that right?

**MR MACRAE:**

As I understand it, Sir.

**THE COURT: JUDGE SMITH**

10 Well who's going to be able to tell us the answer to these questions, because they're quite important questions.

**MR MACRAE:**

Yes, they are, Sir, and Mr Todd. And I'm hesitant to get too involved in the discussion because I might put things (inaudible 12:28:05) the issue.

15 **THE COURT: JUDGE SMITH**

You'll appreciate other witnesses have criticised – one of the reasons for breaches is asserted to be the changing of this 25 (inaudible 12:28:13) using various – using the high water springs as the measuring point which is about 1.8 to two metres higher than the astronomical low, isn't it?

20 **MR MACRAE:**

Well, Sir, that's not so much a matter of changing the depth reference as enabling the accurate calculation of distance from shore, and in the existing permitted extraction area and indeed for the purpose of the temporary consent which the Court granted, that measurement needed to be made. And that

25 measurement still remains relevant, and it's from that measurement that (inaudible 12:28:55) point on the shore, the mean high water mark rather than mean high water springs, because that's the only line from which co-ordinates can be reliably taken, it's from that line that the two kilometre distance has been calculated. And that is shown on the map that Mr McCallum will produce which

does show the existing offshore dredge area as modified by the temporary consent.

**THE COURT: JUDGE SMITH**

Yes, well I had a look at that and that seemed to show that your new consent  
5 is going further inshore, is that right or not?

**MR MACRAE:**

It does, Sir. It does, Sir, and that's why I'm giving the distances in my submissions.

**THE COURT: JUDGE SMITH**

10 You're (inaudible 12:29:42) to the fact that it wants to move further inshore?

**MR MACRAE:**

Yes, it does, Sir.

**THE COURT: JUDGE SMITH**

Okay. Now what I can't tell is what is a 25 metre and 30 metre isobath  
15 compared to a below the 25 metre sea depth contour?

**MR MACRAE:**

With respect, Sir, I think that Mr Todd will answer or does answer that point in his evidence, and he would be the better person to address that question to.

**THE COURT: JUDGE SMITH**

20 You realise there are other parties who disagree with Mr Todd on that topic as I understand it. I could be wrong but I think they do.

**MR MACRAE:**

I don't think so, Sir.

**THE COURT: JUDGE SMITH**

25 Okay, well we'll find out.



**MR MACRAE:**

If so, I'm not aware of that, Sir. But the evidence will no doubt answer the point. I'm sorry I can't give an immediate answer myself, Sir, but as I say I –

**THE COURT: JUDGE SMITH**

- 5 Is he going to be able to answer us? With the points we've given and the lines between those points that we've given to the existing temporary consent, is he going to be able to give us accurate information in relation to the low astronomical tide distance from the shore, the isobaths and the contours?

**MR MACRAE:**

- 10 I think the difficulty, Sir, is that the low astronomical tide from the shore is not a, again, not a line in respect of which co-ordinates can be (inaudible 12:31:11). There is no documentation, as I understand it, and again I defer entirely to Mr Todd and the other experts in this respect, but I think Mr Todd and Dr Beetham and Mr Morgan and the others, I don't think there's any dispute  
15 between them on this, Sir, because it was agreed and discussed in the context of the temporary consent.

**THE COURT: JUDGE SMITH**

Well I appreciate the temporary consent but that's a fair bit offshore from what you're seeking.

**MR MACRAE:**

There's no doubt about that, Sir.

**THE COURT: JUDGE SMITH**

- The question from the Court's point of view is how are we going to be absolutely certain that the point's we've agreed are known and what the depth of water is  
25 there and the distance from the shore. It's not the (inaudible 12:31:53) job to supply that, it's your – who's going to give us that information, or do we already have it?

**MR MACRAE:**

Yes, we have it, Sir, and, as I say, I think Mr Todd will explain.

**THE COURT: JUDGE SMITH**

Okay.

**5 MR MACRAE CONTINUES READING OPENING SUBMISSIONS**

(b) All extraction would occur during the night with the exception of up to 20 days per year. MBL are proposing to limit daytime extraction to parts of the extraction area not less than 2km from the MHW. It is notable that in Mr McCallum's 50 years of familiarity with dredging in inshore and off-shore areas of the Embayment he cannot recall a single incident involving the vessel and any species of bird.

(c) One of the benefits of maintaining a programme of six-monthly topographical surveys along the beach and dunes and discretely, at the mouths of rivers and streams, along the coastline of the Embayment is to continue to provide a history of changes which might affect breeding habitat, estuarine and inshore foraging areas and other matters relevant to DOC's intensive tara iti management programme.

**THE COURT: JUDGE SMITH**

And again, just so that other parties are aware, and the Commissioners can educate me as necessary, I'm trying to understand what parts of the dredging are likely to be dangerous to birds. My understanding is the discharge into the moon pools, if birds did dive there for shellfish or other things, there's no net – is there some nets or something that can capture them? Is there some danger to a bird if it did that?

**25 MR MACRAE:**

No. No, Sir. No.

**THE COURT: JUDGE SMITH**

And the dredge head itself basically has a pipeline and then goes under water, doesn't it?

**MR MACRAE:**

The dredge head has a, yes, telescopic pipe which goes under water and – sorry, the dredge pipe has the dredge head on the end of it and –

**5 THE COURT: JUDGE SMITH**

I'm talking about for a bird, what would be dangerous for a bird. Because I've done fishing vessels and you understand with nets coming in and nets being deployed there's the potential for birds to become caught up in them, and they do. But I'm trying to understand if there's anything – I'm struggling to understand – in your understanding, there's nothing a bird could really get captured up in?

**MR MACRAE:**

Well there's no suggestion of that, Sir. But your Honour's point about the dredge pipe and the dredge head is of course valid in the sense that that is under water. I can't tell your Honour, and your Honour could probably tell me, off hand what the diving depth of tara iti is. The dredge pipe is 55 – up to 55 metres long and the dredge head at the end –

**THE COURT: JUDGE SMITH**

I suppose the question of whether there's anything that could ensnare or – because nobody's mentioned it, and I suppose there's always a potential for a bird to simply strike the boat, but I presume that could happen with any boat or anything, but generally speaking I haven't heard that sea birds are prone to that generally, if you know what I mean, just running and striking into a boat.

**MR MACRAE:**

I do, Sir, yes.

**THE COURT: JUDGE SMITH**

But you're not aware of any particular danger associated with the dredge for birds?

**MR MACRAE:**

I think I can confidently say that no one's suggested that there is danger.

**THE COURT: JUDGE SMITH**

- 5 No. Well I'm just checking with you, because I can't remember anything either, so that's why I thought I'd better alert the parties that if I've missed something there. It seemed to me more the prospect of tara iti, and other birds, avoiding the vessel, in other words diverting somewhere else which – we discussed it in Motiti, it's the energy required for the bird to find an alternative food source.
- 10 Now if you're close to rocks where they nested or something, that might be an issue because they're having to go further away, but in this case the closest area would be the Te Arai Head, wouldn't it?

**MR MACRAE:**

- Yes, Sir, that is the closest area, and that's the point at which the two kilometre
- 15 distance from the inner boundary of the existing temporary offshore consent requires a bite to be taken out of the consented area in order to maintain the two kilometre distance.

**THE COURT: JUDGE SMITH**

- And there's no doubt that birds would fly from is it Haururi the island? The
- 20 island, I'm sorry, I've forgotten its name. The large island offshore.

**MS MORRISON-SHAW:**

Hauturu.

**THE COURT: JUDGE SMITH**

- Hauturu, yes. Would fly from Hauturu to the mainland probably at Mangawhai
- 25 Heads or possibly at Te Arai, and obviously down towards Cape Brett as well, sorry is it Rodney. Mangawhai, sorry, Omaha Head there as well. I'm just really struggling to understand whether there's any feeding areas that birds would use

that would be closer than Te Arai Heads. It seems to me that must be the closest.

**MR MACRAE:**

Well, yes, it's the (inaudible 12:36:50) proposed or at least a point slightly north  
 5 of it, because there's some (inaudible 12:36:56) in the area around Te Arai  
 itself. But it's the closest – slightly to the north of Te Arai Point is the closest to  
 the inner boundary of the proposed extraction area.

**THE COURT: JUDGE SMITH**

It's more this issue of how birds might be displaced if they're not – going for  
 10 their feeding areas would be if they're flying from point to point then the question  
 is what deviation is involved. But I'm just pointing out for other parties because  
 at this stage I am struggling to understand what impact it would have upon  
 populations if it was at least two kilometres from Te Arai Head, because  
 essentially it would amount to a deviation of the bird from feeding in that area  
 15 to another area close by one assumes. I need to probably be educated by our  
 ecologist on the issue. I must say I hadn't quite understood what the risk was  
 for the birds.

**MR MACRAE:**

Well, Sir, with respect, I think the joint view of the avifauna experts supports  
 20 your Honour's position or your Honour's problem. They all agreed that the  
 vessel dredging in the offshore presented a low risk and –

**THE COURT: JUDGE SMITH**

Well Mr Southey may not have been in that group but there are few others. But  
 I just want to point out that I'm at this stage struggling to pick up. It's not that I  
 25 understand the vessel itself to be dangerous to birds, like fishing vessels  
 definitely are dangerous to birds, especially those netting. And then the  
 question is if it's displacement, how much is that displacement likely to be for a  
 bird coming from Hauturu or from Mangawhai Heads or from Mangawhai  
 Harbour flying down the coast towards Te Arai Point or the Te Arai stream,

et cetera. Okay, so I don't know that you need to say any more. I'm really alerting everyone else to the issue.

### **MR MACRAE CONTINUES READING OPENING SUBMISSIONS**

(d) Lighting on the vessel will be at the minimum level compatible with health and safety and maritime regulatory requirements.

(e) The conditions of consent provide for an oil spill management plan designed to quickly minimise any effects. Again, Mr McCallum is not aware of any oil spill or other accident on the vessel resulting in a release of contaminants in the Embayment.

56. At the avifauna experts' caucus a number were uncertain about the effects of dredging in the off-shore on finfish and marine food webs. However, the marine ecologists were unanimous in their JWS that there would be no readily identifiable direct effects on marine food webs as a result of dredging for sand.

57. The avifauna experts were unanimous that the risks associated with off-shore sand mining to tara iti habitat are likely to be low.

### **Terrestrial Noise**

58. It is submitted that in the absence of any expert evidence to the contrary Mr Styles' conclusions as to the noise levels and audibility of off-shore sand extraction on the beach, dunes and further inland should be accepted. Mr Styles concludes that the noise of off-shore dredging will be inaudible in all these areas except in uncommon weather conditions involving a slight onshore breeze and calm swell conditions. Even then, noise would only be audible in the hinterland west of the coastline and be no greater than 20-25dB LAeq which is well below the nighttime noise limit of 40dB LAeq.

### **Landscape and Natural Character**

59. Of the three landscape architects who will present evidence to the Court, Mr Brown and Mr Kensington agree that effects on landscape and natural character from off-shore extraction would be low to very low. In terms of the 7-point scale of effects used by landscape architects, I understand this translates to less than minor to minor.

60. However, their views differ in relation to the cultural landscape and Ms Lucas' assessment relies largely on her understanding of how Ngāti Manuhiri perceive the Pakiri landscape in terms of their cultural values assisted by the guidelines provided in Te Tangi a te Manu: Aotearoa New Zealand Landscape Assessment Guidelines.

61. Mr Brown, while having considered Te Tangi a te Manu guidelines, considers that he does not have the training or expertise to be able to express opinions on the cultural landscape other than the fact he has ...not been able to identify any particular landscape values or effects – above the sea's surface – that are both uniquely important from a cultural perspective and/or that would be adversely affected by the proposed dredging to a greater degree than is already the case.

62. Mr Kensington who candidly admits that he is not qualified to assess the impacts of the proposal on cultural landscape values, states that he is, nevertheless, able to consider these values with the assistance of Te Tangi a te Manu. He then, in my submission, puts himself in a difficult position by, in effect, purporting to adopt the role of an adjudicator in evaluating and then expressing a preference for the evidence of Te Whanau o Pakiri to that of Te Uri o Hau as to their different perspectives of the impacts of sand extraction on their cultural landscape values. It is submitted that Mr Brown's approach to this matter is the correct one and that Mr Kensington's evidence on the cultural landscape should be disregarded.

#### **MR MACRAE:**

25 Well "disregarded" might be putting it a little too – and perhaps I should leave submissions on that particular point until the end of the hearing and the evidence has been heard but, nevertheless, I suggest that Mr Kensington's evidence faces some difficulties. And then endeavouring to narrow what I think is the –

#### **30 THE COURT: JUDGE SMITH**

Before we move on, perhaps if I could just touch upon that, because it may be where this issue of mātauranga but more particularly the areas of potential

contention between Te Uri O Hau and Manuhiri. Manuhiri assert, and I don't think Te Uri O Hau disputes, although we will find out in due course, that they have exclusive, as I understand it, mana whenua below Te Arai South but, nevertheless, continue to have interest further north right up to the Heads and even further past the Heads into Bream Bay as I understand. Te Uri O Hau, on the other hand, say that their area of interest extends to Te Arai Point, and I'm aware, because I've done cases on it, that they received Te Arai Point as part of the Treaty settlements and thus one assumes they were at least able to establish sufficient connection that they were given those lands back. So one of the things that came up in *Waste Management* is whether or not each other's claims claim that they should be compensated from land within the area or not. So from Te Uri O Hau's point of view, my understanding is they don't claim any interest south of Te Arai Point. Manuhiri say they have interests north of Te Arai Point but it's not clear whether they say they hold exclusive interests or not, but they seem to accept that Te Uri O Hau has an interest. And then of course there's interests of Ngāti Wai too which I notice some parties seem to say that they have no place and others acknowledge that they do, and you'll see some witnesses say that they're both Manuhiri and Ngāti Wai, for instance, and thus those issues are a little less clear.

So I just want to be clear that – I have a problem, and I'm going to ask Judge Warren to comment before I ask you to respond, I have a problem with this idea of saying, well, the cultural evidence, because there's actually different cultural evidence, and I think that's the point that Judge Warren was trying to make earlier and how do we assess that, but there may be less conflict than might be apparent, at least between Te Uri O Hau and Ngāti Manuhiri. Even where we've had cases where parties have overlapping interests, and it's not uncommon, in fact very common, (inaudible 12:46:40) for themselves, so they may have a different reaction to the same thing, and Te Uri O Hau may have meant when they say we don't speak for Ngāti Manuhiri that they're not speaking for their relationship with the area north of Te Arai Point, but we need to clarify that. So I just wanted to see if Judge Warren wanted to tease that out any more with greater clarity than I've been able to put to it.



**THE COURT: JUDGE WARREN**

No, nothing specific, Judge, at this stage. I mean I think the issues you've raised are certainly questions on my mind, because I do think whilst it's not our role to determine who mana whenua (inaudible 12:47:23), we need to

5 understand the relative relationships. So, yes, I guess we just need to wait for the evidence and explore those with the witnesses, because what may be in writing could be very different to the reality on the ground.

**THE COURT: JUDGE SMITH**

And I just want to be clear, I mean obviously this isn't coming in in a vacuum.

10 Mr Brown's been in front of me on this very issue previously, as have some of the other witnesses. The NZILA came up with the new guide. They published it. I don't even know, Mr Brown might have even been on the committee but certainly –

**MR MACRAE:**

15 Yes, he was involved, Sir.

**THE COURT: JUDGE SMITH**

Yes. So it ill-behoves people to come to the court and say we're not going to apply our own guidelines. Now, I didn't make up the guidelines. I'm simply saying that they represent the industry's view as to the obligations of the

20 landscape architects. And so if they're then going to say, as I've had both here and others say to me, I think that's what – you correctly quoted him here, say well look I can't do that because I don't have the training, well then it's just a gap, and there are plenty of other witnesses who will tell you exactly what the cultural effects are and I suppose he can't vouchsafe that because he's said

25 that he doesn't know anything about it. So what experts often do is what Mr Kensington's done, just rely on the evidence that they have in front of them and say well it's not my place to measure this evidence but, looking at it, this is where I would come to. I agree with you that there is a tendency of experts to become judge and jury, and I could make that criticism almost every witness

30 before us in this case and every other case. There's a tendency to feel that

they should our job for us. For which we thank them, but it's probably not required.

I don't know if there's much more I can say. I think it's really a discussion for  
 5 the – and any landscape architect listening to this will know exactly what I'm  
 talking about because it comes up every time, especially since the new code  
 came out. Well, guidelines I think they call them. So I don't know where we  
 can go, simply to say we are particularly interested in the relationship of the  
 various parties with the various areas. Some may claim mana whenua. We  
 10 generally try not to get involved in that unless it's absolutely required, but it does  
 seem to us that there doesn't appear to be a dispute to me that Te Uri O Hau  
 have a stronger relationship with the area north of Te Arai Point, and I don't  
 understand them to claim a relationship, Te Uri O Hau, with the area south. But  
 we will find out. Now Ngāti Wai's a bit more confusing and I think we need to  
 15 ask witnesses more directly on that one. I don't think I can reach any conclusion  
 on that at the moment because various of them say different things.

So, yes, I appreciate it's not easy, and Ms Lucas (inaudible 12:50:32) Champion  
 are trying to bring this within some sort of ambit of the RMA and also the  
 20 guidelines, so these are all valid positions. The question is where does it get  
 us to, which I think is a different question.

**MR MACRAE:**

Well thank you, your Honour, and to Judge Warren for the explanation. I mean  
 that's of assistance in helping the parties to focus which is what I've been trying  
 25 to do in a more general way with the issues, and I appreciate that that's only  
 the appellant's view of them and that the evidence is to come, and of course,  
 as your Honour pointed out earlier, I can't speak for other parties. I don't think  
 I can assist any further with the discussion that your Honours have just had.  
 The point that I'm really making here in a nutshell is that (inaudible 12:51:23)  
 30 two landscape architects who approach the question of landscape values from,  
 if I just might use a shorthand term, from a western perspective as it were, and  
 Ms Lucas is the only landscape architect who solely approaches the question  
 from a bi-cultural perspective and, even then, there's not much of the "bi" about

her evidence. So that's where the only area of dispute lies I think. And so it was just really to narrow it to that point. Mr Kensington and Mr Brown are agreed on the typical assessment that landscape architects do where questions of, well when Māori issues of this kind, Māori cultural values and issues and perspectives are not involved.

### **THE COURT: JUDGE SMITH**

Yes, well, to avoid us all jumping into the molten lava of those issues, I think it would be simple to say from the Court's perspective, we look to integrate the various values and identifications that are made as we understand our obligation under the Act. So it isn't – I've had witnesses say well I only approach from science because we're interested in science. Well that's not correct. The Court has a mandate and is in fact required to look at it through the lens of the Treaty and through the lens of the relationship of Māori with their tāonga, et cetera, et cetera. It doesn't mean one is more important than the other, as I understand it. It means they're given weight according to the tenor of the evidence in respect of each matter. And that's why Judge Warren in particular was interested in how do we measure conflicting evidence on cultural matters, and that is one of the molten lava topics for us at the moment of course and I'm sure you'll hear a lot more about it as the case goes on.

20

So move on to economics now.

63. So far as the approach taken by Ms Lucas is concerned, Counsel notes that she does not claim to have any formal qualifications or training in Mataranga Māori generally or cultural landscape values although, of course, she may well have acquired some knowledge of these in the course of her practice as a landscape architect. In my submission, Ms Lucas' evidence is entirely focused through a cultural lens.

25

### **MR MACRAE CONTINUES READING OPENING SUBMISSIONS**

#### **30 POSITIVE EFFECTS - ECONOMICS**

64. It is submitted that a continuing supply of Pakiri sand will make a major contribution to the economic and social well-being and the health and safety of

people and communities in the Auckland Region and to future growth and development in Auckland.

#### Advantages of Pakiri Sand

65. As the evidence of Mr McCallum and Mr McIlrath and of the concrete industry witnesses, Messrs Donoghue, Officer, Scott and Gaimster attests, concrete, of which sand is a necessary ingredient, is an essential product for development and growth in the Auckland Region.

66. The most important purpose for which MBL supplies sand is for the manufacture of concrete in the Auckland Region and beyond. For many years, MBL's sand has provided over 40% of the sand used for concrete manufacturing in Auckland.

67. It is particularly sought after for the manufacture of high strength concrete used in multi-storey residential and commercial buildings and infrastructure such as bridges, roads and rail tunnels, water reticulation and waste-water systems. For example, MBL is the principal supplier to Wilson Tunnelling Limited and Allied Concrete Limited for key high strength concrete components of the City Rail Link and to Hynds Pipes Limited and Allied Concrete Limited for high strength pipes and other components in Watercare's Central Interceptor stormwater and wastewater project.

68. Sand is a high-volume, low-cost commodity and so market demand is very sensitive to increased transport and other costs. An advantage of all sand sourced from Pakiri is that it is shipped directly from the Embayment to MBL's main depot at the Port of Auckland.

69. Several of the witnesses named above refer to the saving of countless truck movements on Auckland's roads as a result of transport of Pakiri sand by sea. Furthermore, the particular characteristics of Pakiri sand result in significant savings in cement use. Both these factors contribute to a relatively low carbon footprint, especially in comparison to alternative sources of sand.

70. A further factor is that MBL is an independent sand supplier, does not manufacture concrete itself and has no ties or obligations which limit or provide a disincentive in supplying any customer. This is not true of sand from the Kaipara Harbour supplied by Mt Rex Shipping (part of the Atlas Group of companies) which is the only other alternative source which might, subject to limitations on supply, provide an acceptable substitute for Pakiri sand to

Auckland concrete manufacturers. Supplies of Kaipara sand are also limited by logistical problems, significant additional trucking costs and the associated CO2 and diesel particulate emissions.

5 **MR MACRAE:**

And of course the Court has had – sorry, Sir.

**THE COURT: JUDGE SMITH**

I was going to say that obviously – I did want to ask a few questions around that of the relevant witnesses. I don't know who's going to be able to help me, but  
10 I would have thought the consents for the Kaipara sand as are contentious as these.

**MR MACRAE:**

That's a very good point, Sir, and that point is made in the evidence, but of course as some of the witnesses have said, the Kaipara – and I think  
15 Mr McCallum refers to the expiry date in his evidence, the Kaipara consent expires in 2027. And it will face –

**THE COURT: JUDGE SMITH**

And hopefully I won't be hearing it, but Judge Warren probably keen to do that one. Because of course that is, if not the, probably one of the largest feeding  
20 areas of migrating shore birds, and there's been a lot of – it was mentioned in passing with a lot of the evidence in *Waste Management* of course, and that then gets us into the issue about the ongoing depredations for Ngāti Whātua on the Kaipara Harbour. So it just does seem to me it's not a simple solution that it represents the golden child for future sand supply. I'm more than happy  
25 to be corrected on that but there's a number of parties here who would know a lot more about the Kaipara sand and its impact, potential impact, on shore birds than I do. I understand it's the sandbar in the middle, it's got a special name, hasn't it, that large sandbar in the middle?

**MR MACRAE:**

Mr McCallum knows, Sir, if I might –

**THE COURT: JUDGE SMITH**

It has a name as I recall.

5 **MR MACRAE:**

Yes.

**JUDGE SMITH ADDRESSES COUNSEL/PARTIES – BREAK /  
HOUSEKEEPING (12:59:03)**

**COURT ADJOURNS: 1.00 PM**

10

**COURT RESUMES: 2.15 PM****MR MACRAE:**

Just before resuming, could I just draw a couple of obvious points from 70. Your Honour picked the point up in relation to sand from the Kaipara Harbour and I

5 just wanted to stress the sort of more general point that leaving the Auckland market for coastal sand to just one supplier with logistical problems in terms of both extraction and distance from the market and trucking movements and an interest in concrete manufacturing itself, would be a very problematic outcome but it would be the outcome of course if this consent were to be (inaudible

10 14:16:13). So Kaipara Mt Rex Limited and the Atlas Group of companies, Atlas is a concrete manufacturer. I'm being purely speculative in saying that it might have an interest in disadvantaging certain other concrete manufacturers in supplying sand to them. I haven't got any idea that that's what its intentions would be, but anything can happen in the market. And you heard Mr Wilson

15 saying in the interlocutory proceedings that if he couldn't get McCallum sand, then effectively their tunnelling (inaudible 14:16:59) would be over. And I think Mr Bridgeman expressed somewhat similar concerns.

**MR MACRAE CONTINUES READING OPENING SUBMISSIONS****Alternative Sources of Supply**

20 71. Applicants for resource consents that are likely to have a significant adverse effect on the environment are required to investigate possible alternative locations or methods for undertaking the activity.

72. In this case, it is not accepted that off-shore sand extraction would have a significant adverse effect on the environment. In my submission, the only

25 area in which this proposition is substantially challenged is effects on cultural values. The Appellant's position is that, for the reasons outlined later in these submissions, no adverse cultural effects would arise.

73. Nevertheless, given the sensitivities generated by its applications to continue sand extraction at Pakiri, the Appellant has provided evidence of its

30 own investigations into alternative sources of supply and responded to the alternatives suggested by other parties. It is accepted that the question of

alternatives is also relevant to an assessment of the economic effects of the activity.

74. Mr McIlrath has undertaken a detailed economic analysis of the additional costs, emissions and other disadvantages of alternative sources of supply. It is submitted that his conclusions clearly establish that if consent to off-shore extraction is not granted the Auckland market will face shortages of sand in the future, additional direct and indirect costs totalling tens of millions of dollars, and additional costs associated with CO2 emissions.

75. It is submitted that the Appellant's evidence clearly establishes that the sand quality and logistical problems associated with alternative sources of supply together with the economic and other advantages of the Pakiri sand source, makes it the preferred and only realistic option for ensuring that future sand supplies are capable of meeting demand given the projected rates of development and growth in the Auckland region.

**MR MACRAE:**

And then if I move to effects on cultural values, can I delete the first three words. I've no longer indicated this, so if you would delete please the words "As indicated above", and delete the rest of that line down to – in fact delete the first two lines. Sorry, that makes it clearer. I think in view of the discussion that has occurred already and on a more reflective view of the (inaudible 14:20:28) modify what was a rather hurried summary of the appellant's position on effects on cultural values, and my submission is that the appellant has provided mechanisms which are capable of helping to ensure that effects on cultural values can be reduced to an acceptable level. And just to add a rider to that, this position would improve if Māori parties are prepared to co-operate with the appellant in realising the full potential of the measures provided. And when I say "co-operate", Sir, I really meant if consent were granted.

**THE COURT: JUDGE SMITH**

Yes, I do want to just (inaudible 14:21:52) minutes on that, and I suspect Judge Warren may also have some issues he wants to question you about with this. What is clear from the *Waste Management* decision is that the intention of – I don't want to words into Mr Pou's mouth because I'm sure he'd correct



me later and probably keep telling me for the 10 years what I've done wrong, but it would be fair to say that tangata whenua in this area in particular are looking to try and achieve some of the outcomes intended through the settlements of the Waitangai (inaudible 14:22:35) claims I think are looking for what might be called true partnership opportunities. It was clear, and I don't think I'm saying anything out of school because it was open court, it was clear in *Waste Management* that at least the kaitiaki trust felt that they wanted to build opportunities for their people and as a result they were prepared to have some involvement where they had some control over the outcomes, if I can put it that way.

Things have moved a little bit since we started in that the inshore, which was clearly the most concerning to tangata whenua, has now gone; the midshore seems to at least be addressed in part, and I say that because we will have this 1,500 metres from the shore given the discussion. One of the concerns that was particularly addressed by some of the Manuhiri witnesses is the proximity to Pakiri stream for example and at the southern end of the reach. Now as we, and I'm perhaps anticipating things a bit, but Mr McCallum's attachment to his evidence, which you referred to before, shows that southern end probably, I don't know the distance but it looks to be at least three or four kilometres, you're now intending not to pursue. And I've got to say that we have seen that there could be the possibility here of a more open approach by both parties to finding a partnership arrangement.

Now it would be fair to say that in *Waste Management*, that was strongly resisted by the Omaha marae and it may still be the position, I don't know, and thus there was a difference between the kaitiaki trust and the Omaha marae. But it does seem to me that there's more than just – having a kaitiaki committee or even an expert committee of the sort that's included in the temporary conditions is never going to be the full answer, and I'm not talking out of school here, I've just been involved in so many of these that that's never seen as the full answer. Yes, they want to have some involvement in that, they want to see some concrete benefits to tangata whenua, and I'm reluctant – I'm just really saying this from a general point of view, Mr Pou, I'm not trying to put anything

on Manuhiri or anyone else, I'm just saying they also want to avoid what they see as the worst effects of any activity, and that would be true over a whole range of activities from Northland through here through into the Bay of Plenty, and I'm sure Judge Warren could add to that as well.

5

There does appear to be potential for what I would call a true partnership arrangement here that could be entered into, and certainly I never believed it could occur for *Waste Management* so you could knock me over with a feather, so that means to me that there's always the possibility. And I don't think it could be said that any of the parties to this case have proved to be so intransigent in the past that there is no possibility of it going anywhere, and *Waste Management* is but one example of that.

10

So I just want to flag that one of the key issues for us is whether there's a way in which we can meet the aspirations of tangata whenua and the aspirations of your client and both of you walk away, if not with pockets full, at least with a feeling that you've both made a gain in the sense that you're both able to carry on.

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I think I want to hand over now to Judge Warren because I think he's had similar thoughts looking at the evidence and where things have got to. Would you like to add anything, Judge?

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### **THE COURT: JUDGE WARREN**

No, just to tautoko your thoughts, Judge Smith. Just to acknowledge Mr MacRae for amending that paragraph 76. I certainly had a few questions about it as it was originally drafted but it is a lot clearer to me. And I guess it then poses the question to the mana whenua groups as to whether those mechanisms are appropriate or sufficient in the circumstances, and I guess we'll wait to hear from them. I think there is a number of authorities which indicate that Treaty principles, including (inaudible 14:27:48) partnership, does envisage commercial and economic aspirations being achieved, and there's a number of authorities on that point, and I was curious in the sense that you didn't reference any of that in your economic section but left it for cultural, I

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assume because that's an offer that has been made which hasn't been fully accepted by any of the parties yet.

**MR MACRAE:**

Just addressing your point, Judge Warren, first, if I might. Yes, the offer has  
 5 been made and the offer has been accepted in principle by Te Uri O Hau to the extent that, as you'll hear from Mr Thompson, Te Uri O Hau are prepared to enter into what has been labelled, and there's nothing in the name, but a Cultural Liaison Agreement, which is intended to provide input of the kind specified in the agreement itself, and it's pretty broad. It's not proposed to  
 10 produce it to the Court, although it's possible if the Court were interested in taking it further that some idea of some summary of the sort of thing it might cover could be given. The negotiations themselves have tended to be confidential in the main and McCallums would be reluctant – wouldn't breach any agreement it had entered into as to confidentiality. But I can say that the  
 15 agreement with Te Uri O Hau, which Te Uri O Hau are quite open about, would provide for precisely that kind of input and for agreement on precisely the kind of input that both yourself and Judge Smith are talking about. And it extends to a sharing of economic benefits of sand extraction.

20 So I'm just about to go on and mention two mechanisms and your Honours have raised both of them. One is the Mātauranga Māori Expert Panel, and I understand Judge Smith's comments about that, but that is now in the conditions (inaudible 14:30:02) appeal at condition 58, and it mirrors what was agreed for the purpose of the temporary consent. And the other is what, as I've  
 25 said, is called the Cultural Liaison Agreement which, just to complete the picture, has been offered to Ngāti Manuhiri and is available to any group who would be prepared to take advantage of it. And it was those two matters, particularly the latter, that I was referring to when I said that McCallums have provided mechanisms by which the aspirations of Māori and their input into both  
 30 the (inaudible 14:30:51) consent, the operation of the exercise of the consent, the operation of sand extraction and other matters, the management plans, could be accommodated, kaitiakitanga trips on the vessel to understand what's happening, all this has been done in advance with Ngāti Wai in respect of the

existing offshore consent, and McCallums have honoured the agreement to pay the economic consideration that was agreed between Ngāti Wai and Kaipara Limited when the existing offshore consent was granted.

- 5 And I think just finally say that it will be obvious to you, and perhaps more so when Mr McCallum has presented his evidence formally in court, that McCallums' attitude is that they would welcome the opportunity to co-operate with Māori parties, if I can put it that broadly, in a partnership kind of arrangement, and that the two they have been advised would be the most  
10 appropriate representatives of local mana whenua are the two settlement trusts which represent one way or another most of the relevant interests in the area. So negotiations have proceeded with both of those trusts which represent the two major hapū and I think I'm free to say that negotiations, in fact I do say in my – go on to say, that negotiations in the early stages with Ngāti Manuhiri  
15 appeared promising but later proved to be unsuccessful.

**THE COURT: JUDGE SMITH**

- But if I could just back up a slight bit. I have to, to some extent, rely on, you know, several decades of dealing with these type of issues rather than any knowledge I have as to the position of the tangata whenua in this case. If I  
20 could just give you the scene. You're aware that the spit, the Te Arai spit, was taken by the Crown, planted out in pine trees and eventually returned to Te Uri O Hau as part of the settlement.

**MR MACRAE:**

Yes.

- 25 **THE COURT: JUDGE SMITH**

- You'll be aware that Ngāti Manuhiri has claims and areas of interest recognised in the Treaty, including Pakiri Beach as I recall at least south of Te Arai, somebody can correct me if I'm wrong. They were one of the, if I could call it the landless (inaudible 14:33:36) or iwi after the taking of various bits of land  
30 and other assets, including all of the trees for building Auckland, thus this has

tended to be a fairly hot topic with them, if you can follow me, the taking of their assets.

**MR MACRAE:**

Of course.

**5 THE COURT: JUDGE SMITH**

It seems to me that what is of interest to tangata whenua is finding a way to achieve both their tāonga goals, in other words achieving a better environmental outcome for tāonga species in particular, in this case tara iti, probably the fishery and – shell fishery, and probably trying to restore as far as they can, and I’m saying that without any authority from them, the foreshore. A project where the party was co-operating in protecting tara iti, restoring the foreshore and the benthic species, where the parties were working together (inaudible 14:34:44) position, if you follow me, it’s a very important distinction where the parties actually commit to working with each other rather than against each other, that is the sort of thing that we’ve found both enduring, and I can name a number of examples in the Bay of Plenty if that’s concerning, Mr Pou’s been involved in many of them, I’m sure Judge Warren can also think of some, and other areas where protections have been put in place. Now I’m not saying that that will necessarily get you a settlement here but it is the type of settlement that we have achieved in many other cases, and in fact what was offered in *Waste Management*, although of course we haven’t issued a decision on whether it’s acceptable in that case. Do you follow the point (inaudible 14:35:30) the important distinction if you follow me between – it moves the issue from one being about the removal of the finite resource, the sand, to one where we are achieving ecological gains and removing sand, if you follow me. It’s the sand is one of the costs of achieving the long-term gains.

**MR MACRAE:**

I do, Sir, yes.

**THE COURT: JUDGE SMITH**

So it sort of swings the matter around. Now again I just want to check with Judge Warren because I've got to be very careful I don't overstep here, and he  
 5 may have some comments he wants to make.

**THE COURT: JUDGE WARREN**

No, I think the point's well made. I think it would be good to hear from Mr Pou and other counsel representing those parties on this stuff.

**THE COURT: JUDGE SMITH**

10 Yes. And I'm not asking Mr Pou or anyone else to respond at this stage but I think Mr Pou will know, this is sort of painting by colours, Mr Pou, because we've been around this mulberry bush many times, you know the discussion I've had and is that something that might be of interest to your client at least discussing? There are some occasions when the pou is in the ground, if I can  
 15 put it that way, without meaning the pun, and there's no further movement.

**MR POU:**

I think it's firmly planted in the ground, your Honour. Look, your Honour, if we go back to *Waste Management*, you could have knocked me over with a feather when that agreement was made, so I could never come before this Court and  
 20 say never is a never. However, these matters for Ngāti Manuhiri have been discussed at length, and the position that has been taken in discussion with others, and it's actually good to see Ngāti Manuhiri getting along in terms of this application, is that the exploitation of their sand and the sale of their land for the building of Auckland has intergenerational (inaudible 14:37:42) and it's gone on  
 25 for too long now and it needs to come to an end. That is the firm instruction. Yes, this pou is embedded.

**THE COURT: JUDGE SMITH**

Thank you. I won't go any further at this stage. Other parties may have views. I won't ask Ms Morrison-Shaw. Her clients may be a similar – there are

common kinship ties there anyway. But the Ngāti Wai issue does seem to complicate matters somewhat and there are some who take exception to that, others who support it.

- 5 The practical position, I just want to be very clear on this, is I'm not going to grant an adjournment based upon the parties having further discussions. The time for the kōrero is over. You can discuss it outside of court but we only have this time and if you want to further those discussions that will be out of hours and on weekends. We lost a lot of traction last year on *Waste Management*  
 10 and, in the end, we still had to hear pretty much the full hearing. So I just want to be clear on that issue. But I thought it was worth airing at least briefly, Mr MacRae. The parties have heard what we've just discussed and they can think on them. As Mr Pou said, there's no such thing as never.

**MR POU:**

- 15 Look, your Honour, and it's probably appropriate to raise it now, there are issues as to representativity in the area, however in this instance I can't see that. And you will see in the past case where Mr Laly Haddon was representing Ngāti Manuhiri. He was also representing Ngāti Wai. So there was an alignment. Ngāti Wai and Ngāti Manuhiri might not agree on many things but there is a  
 20 confluence of agreement within this process in this proceeding. And to the extent that Te Uri O Hau have taken a particular position, Ngāti Manuhiri do not come to say that they have no interests or they have no rights to do those sorts of things. They are clear the rohes overlap, as is reflected in the deeds of settlement that were arrived at by their rangatira at the time. Ngāti Manuhiri of  
 25 course settled after Te Uri O Hau. Te Uri O Hau did not oppose the overlap that exists up to Bream Tail and vice versa.

- There is a convergence of whakapapa that exists between Te Uri O Hau and Ngāti Manuhiri, probably which many of the witnesses can speak about when  
 30 they get there. And I think it's important, given the issues that Judge Warren in particular has raised, not to – this isn't a mana whenua discussion. I mean there are other overlap (inaudible 14:40:39), Ngāti Rehua from the Great Barrier (inaudible 14:40:43) as another hapū of Ngāti Wai and those sorts of things.

So there are interests – I don't think they might necessarily need to be reconciled, but there is a convergence of interest between Te Uri O Hau of Ngāti Whātua and Ngāti Manuhiri who have that divergent origin coming from Tainui, and Ngāti Wai. So it's probably important for the Court not to see  
5 differences as exaggerated given the alignment in the position, and I think the differing groups are pretty clear on their positions at the moment. Sorry for interrupting but just thought that that might be helpful at this stage.

**THE COURT: JUDGE SMITH**

Yes. I think it was worthwhile that discussion because it is one of the key issues  
10 in this case.

**MR POU:**

Yes, Sir. Yes, absolutely.

**THE COURT: JUDGE SMITH**

And so I think what I am saying, Mr MacRae, is that there could be a potential,  
15 either the parties might agree or the Court might, if it considered a consent was appropriate, may very well decide that something closer to that type of partnership arrangement is appropriate. It's too early to say but those issues are definitely at large clearly in this case and to that extent we need to cover them. So I don't know if we pick up at 77 or somewhere else.

**20 MR MACRAE:**

Yes, I really have covered 76 I think, Sir, but just to stress that the topics that the immediate discussion has been engaged with are ones to which, as Mr McCallum will say in his evidence, the appellant has given a huge amount of attention and put in a huge amount of effort. There's a consultation record,  
25 a record of contacts, and to some extent because there were discussions, because some discussions were confidential, the record's a little sanitised and has to be so it doesn't necessarily refer to what particular matter is being discussed, but it's reasonably clear from that record that there have been very substantial discussions between the parties to reach the positions which I  
30 outlined earlier. The major point I wanted to add – sorry, I should just say that



in relation to Ngāti Manuhiri, Mr McCallum I think if anyone asked him would say that discussions go back to 2015.

5 But the point I did want to emphasise is, as I think you'll gather from both my submissions but, much more importantly, Mr McCallum's evidence, the appellant remains entirely open and would welcome further discussions of that kind. I respectfully agree with your Honour's reluctance to adjourn the hearing. With the greatest of respect, these things have been pursued to the point where  
10 something similar, there's unlikely to be a radical breakthrough in a matter of days or so, and I think really the most constructive approach is to get on with the hearing. But I thank the Court, your Honours, for raising the point so plainly and making your thoughts on the matter known.

#### **THE COURT: JUDGE SMITH**

15 And I think this is not one of those cases, and which there are many unfortunately, where there is an assertion, often with quite strong support, that either the Māori interests have been marginalised or ignored. I think this is a case where they just don't agree. And that's how life is. People will not always agree, but I don't understand there to be any assertion that they've been  
20 ignored or that there's been any particular insult. It's just that they don't agree with the principle, the removal of the sand. And I understand that that's a position that they're entitled to hold.

We're at 80 now, are we, or do you want to go through something in 79?

25

#### **EFFECTS ON CULTURAL VALUES**

76. As indicated above, the Appellant's position is that no adverse effects on cultural values would arise from the extraction of sand from the off-shore, given the controls, management plans and monitoring measures it proposes to avoid  
30 physical effects, and the cultural role envisaged for the Matauranga Māori Expert Panel. In addition, MBL have offered to enter into cultural liaison agreements with Ngāti Manuhiri and Te Uri o Hau which would both permit

further cultural understanding and input into the exercise of any consent and provide for the sharing of the economic benefits of sand extraction.

### **MR MACRAE CONTINUES READING OPENING SUBMISSIONS**

77. As Mr McCallum outlines in his evidence, MBL have a long and amicable relationship with Māori at Mangawhai-Pakiri and elsewhere in Auckland. In the context of its three applications, MBL has made strenuous efforts to engage with and consult with Māori and obtain the benefit of their input as to how the terms of the application and, in particular, the conditions of consent might best be framed to incorporate kaitiakitanga and other cultural values in the operation, management and monitoring of the proposed activity. A record of consultation is attached as Appendix 5 to Mr McCallum's evidence in chief.

78. To assist MBL in understanding cultural values and the ways in which cultural effects might be avoided or mitigated, MBL engaged Mr Te Rangi in May 2021 as a cultural values and relationship advisor. Mr Te Rangi has provided MBL with advice on all aspects of cultural values and on its endeavours to accommodate the competing perspectives of different groups and individuals with interests in the area. Mr Te Rangi outlines his role in more detail in his evidence.

79. MBL has vigorously pursued constructive discussions with Te Uri o Hau Settlement Trust and Ngāti Manuhiri Settlement Trust. These are the two mandated Māori Settlement Trusts in the area and Mr Te Rangi has advised that they are the appropriate representatives of their hapu. These discussions included avenues for cultural input into the application and entering into Cultural Liaison Agreements to provide for their cultural concerns and aspirations for an economic partnership. Mr Te Rangi explains how involving the hapu in operational aspects and monitoring of sand extraction provides a platform for feedback and change, as concerns are raised, which can reduce or mitigate the cultural effects which are believed to be present in the Embayment due to extraction. Agreement in principle has been reached with Te Uri o Hau. Although earlier discussions in 2021 and 2022 with Ngāti Manuhiri were promising, no agreement has been reached.

80. It is apparent from the relevant parties' evidence that cultural concerns relate to both the physical effects of sand extraction and particularly to

perceived impacts on the beach and dunes and marine life, and on spiritual values. It is submitted that the likelihood of potential physical effects of cultural significance are minor. However, it is accepted that metaphysical effects are judicially recognised as an area of potential effect on Māori cultural values. This was clearly stated in *Whakatu Incorporation v Tasman District Council* [2012] NZEnvC 75 and judicial attention to the matter in several cases since has helped to develop an understanding of the concept.

81. Mr Te Rangi addresses the effects of sand extraction on the spiritual concept of mauri and says that such effects can be mitigated or restored by ritual solutions. Mr Thompson agrees and refers to karakia as a restorative solution. It is submitted that it is apparent from Mr McCallum's evidence that the Appellant would welcome co-operating with mana whenua in any mitigation measures of this kind which do not unreasonably interfere with the activity of sand extraction (for example, rahui).

82. Previously, in the course of MBL's applications, the cultural focus of opposing parties has been in relation to the effects of inshore extraction which was continuing during the course of the Council hearings. In this case, it will be helpful to the Appellant in responding further to their cultural concerns to hear in more detail from the opposing parties in relation to the off-shore application only.

## PLANNING

83. It is submitted that the principal planning issues in this case relate to the extent to which the proposed activity complies with the relevant statutory documents and, in particular, the objectives, policies and rules of the AUP-OP. As submitted earlier in these submissions, if the activity is consistent with the relevant provisions of the AUP-OP, then it will also be consistent with NZCPS, the HGMPA, and the purpose of the RMA as expressed in Part 2 of the Act.

84. Mr Hay undertakes a thorough review of the relevant provisions of the AUP-OP and an assessment of the application and the proposed activity, and concludes that overall they are not contrary to the objectives and policies of the AUP-OP. Mr Hopkins undertakes an equally thorough review and essentially comes to the same conclusion except in respect of effects on cultural values.

**THE COURT: JUDGE SMITH**

I'm going to just pause you there because it does seem to me that one of the fundamental problems we have is a misconception by a number of the expert witnesses as to why they're here. As a discretionary activity, the question of whether it's contrary to the objectives and policies is not relevant. The threshold test for a discretionary activity is subject to the matters under section 104(1) and Part 2 of the Act. We're not required to determine whether it's contrary to the objectives or policies or not. And in fact it's likely to be inconsistent with some of them, otherwise it wouldn't be discretionary in the first place. If it was consistent with everything, one would expect it to be permitted, although councils nowadays...

**MR MACRAE:**

Your Honour is on mute I think.

**THE COURT: JUDGE SMITH**

Again, I apologise. That was a long, little homily saying essentially there's a misconception as to why we're here. This is a discretionary activity –

**MR MACRAE:**

Heard most of that, Sir. It was just the last sentence or two.

**THE COURT: JUDGE SMITH**

Right, sorry, yes, I don't know how that happened. So in other words, most of the witnesses talk about the effects being no more than minor, not a relevant consideration for this Court. They discuss that it's not contrary to the objectives and policies of the plan. Not relevant for this hearing. What we're interested in is the degree of consistency with the plans and what those effects are. Any effect that is more than minimal, and there's a discussion of that in the *EDS* decision of the Supreme Court, which is essentially if it's temporary, limited or of effects that are so small that they could be regarded as *de minimis*, then we put them to one side. Other than that, we have a general unfettered discretion taking into account all of the effects and the provisions of the plan as to whether to grant a consent. There is some guidance in case law, which I was hoping

you would guide us to, but the others will I'm sure, as to how that discretion should be exercised, but largely it's a matter of measuring each of those things.

5 It seems to me your witnesses, to some extent, have gone and set themselves a quite high target which they don't need to have. As a discretionary activity, they don't have to prove the effects are no more than minor, nor do they have to prove that it's not contrary to (inaudible 14:52:20). So I'm more than happy for you to set yourself a much higher target but I don't know that I can apply it because the statute doesn't allow me to.

10 **MR MACRAE:**

Your Honour, I think one of the difficulties in this case has been of course that the evidence was prepared –

**THE COURT: JUDGE SMITH**

Exactly.

15 **MR MACRAE:**

– and filed in relation to three applications, one of which was a non-complying activity, and –

**THE COURT: JUDGE SMITH**

20 And as you'll see, there was a whole bundling argument as well. But once the bundling's gone –

**MR MACRAE:**

Yes, well that's gone.

**THE COURT: JUDGE SMITH**

25 Yes. Once the bundling's gone, we're left with a discretionary. And unfortunately some of your witnesses have forgotten about the discretionary criteria and keep talking about the effects being no more than minor or it not being contrary, Mr Hay being one of them, which is all very interesting but, unless there's a change to the Act I'm not aware of, is not really necessary for

us to decide. Having said that, it's not quite as easy as it sounds because discretion is (inaudible 14:53:13) and it's for this Court to apply the weight. I know that several witnesses have suggested that it's for other parties, tangata whenua, to decide whether something's acceptable or not. But I must

5 confess that I'll need some case law on that because that's not my understanding of the Court decisions, and I mean by that the superior court decisions.

Well let's move on to the precautionary approach. And can I say that I think

10 there's again a conflation here which I've discussed in a number of decisions, it's unfortunate we keep repeating ourselves almost every decision, between the cautionary way in which the Act is formed and the precautionary, which has its genesis back in the days of Margaret Thatcher and the coalminers, and that's taking action when you don't even know what the effects are. So it's quite

15 different to being cautious in my view. And there's no doubt that the Act is cautious and cautionary, but I keep getting the precautionary approach, particularly beloved by the Department, and I'm not sure why.

The New Zealand Coastal Policy Statement does have a precautionary

20 provision in it and it may be that that people are relying on. But I just want to be clear that we're always going to take a cautious approach. Precautionary is taking action when you don't know what the outcomes will be.

**MR MACRAE:**

Yes, Sir. Thank you, Sir. One of the difficulties in this case, Sir, after the

25 outcome after the Court's orders following the interlocutory proceedings is to work out how to try and prune the evidence, if I can put it that broadly, that ends up before the Court, as it were, as a result of the changes. And my approach is that I'm assuming I can leave it to the Court to read simple references to the inshore and midshore appeals and (inaudible 14:55:27) as they go through the

30 evidence as not applying, but when it comes to the substantive assessments I'll be taking my witnesses, if this is acceptable to the Court, through their evidence and asking them, as I think your Honour suggested at an earlier stage, to strike out paragraphs that no longer –

**THE COURT: JUDGE SMITH**

Well it's entirely up to you how you approach it. The problem is we don't have a lot of time, so going through them individually every single time is going to take a while. The parties may want to have their witnesses restate their position in light of the position now and a brief memorandum to that effect might be appropriate. But what I found in *Waste Management* is we got another recitation of the whole case again, and it didn't help at all.

**MR MACRAE:**

Yes, and I completely agree, Sir. And I (inaudible 14:56:14) asked any of my witnesses. It will take a little time, Sir, but I have given the matter some considerable thought, it's occupied a lot of my attention over the last two weeks with 21 witnesses, I think there are 21 left, and so I think it might be helpful to the Court if we do that exercise. But I'm happy to be guided by your Honour and the Court as to exactly how far we go.

**15 THE COURT: JUDGE SMITH**

Can I simply state, we understand – it seems clear at least all the issues you've raised so far are ones we've already thought about so there's nothing there. I don't need people to tell me that their view is unchanged or that – the simple point from our point of view is given that we're only dealing with the offshore now, what's changed in terms of their overall assessments, if anything. Many of them deal with them piecemeal but then fail to deal with them separately at the end, if you know what I mean, they conflate everything at the end. So what we're just wanting to understand is given the position that's now conceded, do they still support the original area, for example, do they support the other matters. They've now seen all the cultural evidence, for example, which they wouldn't have seen when they prepared much of their evidence. Those are the questions we would normally (inaudible 14:57:38) and I would have thought could be answered, as you say, in fairly short order by the witnesses. What we find is otherwise we get into turgent repetition of the arguments which, with respect, don't add to the hearing, or our information really.

So where do you want to pick up in precautionary approach?

**MR MACRAE:**

Well at the precautionary approach, Sir, and unfortunately in terms of your Honour's short analysis of the difference between cautionary and precautionary, section F2.6.3 of the Auckland Regional Coastal Plan states in  
 5 paragraph 2 and subparagraph –

**THE COURT: JUDGE SMITH**

Yes, you don't need to read that. But the short point is it conflates the very issues I was talking about, it conflates adaptive management with precaution. So it is what it is but represents unfortunately a misunderstanding often by  
 10 council officers as to what's going on as well. Well, the council may feel I'm being cruel. 86?

**MR MACRAE:**

Well, Sir, I just did want to stress that it's the Regional Coastal Plan that really brings to a sharp edge what relevance the precautionary approach has here,  
 15 and it may be – I'm inferring (inaudible 14:59:11), maybe that should be read "adopt a cautionary approach", but I am taking it literally. And then when one looks at the five guidelines, or at least the five areas in which an adaptive management approach might be adopted as part of a precautionary approach, not all of them seem ideally stated to even a cautionary approach but,  
 20 nevertheless, that is what the Coastal Plan says. And so in my submission to the extent that the matter is addressed, those are the points that for the purpose of my submissions I've taken as relevant.

**Precautionary Approach**

25 85. It is submitted that the starting point for a consideration of the appropriateness of a precautionary approach in this case is section F2.6.3 of the ARCP which provides the following policies:

(1) Provide for the extraction of minerals, sand, shingle, shell, and other natural material from appropriate areas, having regard to the values of the area  
 30 and the natural rate of sediment being deposited over sediment lost from the area where extraction is proposed.



(2) Adopt a precautionary approach to applications for petroleum exploration and for mineral extraction within the coastal marine area, which may include using an adaptive management approach in terms of the following:

- (a) staging the operation;
- 5 (b) the location of the activity;
- (c) the maximum volume of minerals, sand, shingle, shell and other natural material to be extracted;
- (d) the term of consent; or
- (e) environmental monitoring.

# 10 **MR MACRAE CONTINUES READING OPENING SUBMISSIONS**

86. In my submission, the Appellant's proposal and conditions of consent apply a precautionary and adaptive management approach that closely follows the guidelines given in section F2.6.3. Each guideline is addressed in turn:

- (a) The proposal involves staging in the spatial, temporal and quantitative  
15 senses of the concept. For example, if a pre sand extraction assessment were to detect any area of the sea floor which is unsuitable for sand extraction in terms of sediment grain size, or the presence of sensitive benthic communities or protected species, those areas must be excluded from extraction. Similarly, if sand extraction within an authorised sand extraction cell reaches 20,000m<sup>3</sup>  
20 in any 12 month period, then the cell must be rested for the following 12 months.
- (b) The off-shore location minimises the effects of the proposed activity compared with, for example, a mid-shore or inshore location. Moreover, if sensitive benthic communities or protected species are detected after sand extraction has commenced, the area in which they have established must also  
25 be excluded from extraction. The location of extraction would be modified accordingly.
- (c) The proposed conditions of consent propose maximum extraction volumes and rates of take not only within the extraction area as a whole, but within individual extraction cells.
- 30 (d) The proposed 20 year term of the consent is of considerably shorter duration than the maximum term of 35 years for coastal permits. This is consistent with the opinion of the coastal experts that, in relation to its potential effects on shoreline stability, the activity should be limited to a 20 year term.

(e) Extensive environmental monitoring including biological, bathymetric and topographical monitoring are proposed together with the mechanisms that provide for the appropriate adaptive responses to the results of that monitoring.

87. Section F2.6.2(4) requires applications for mineral extraction in the coastal marine area to include measures to manage any adverse effects including remediation and mitigation measures. It is submitted that this application comprehensively complies with that requirement.

### **THE COURT: JUDGE SMITH**

Just before you move to your conclusion, I just want to talk about the term issue.

10 It just seems to have been suggested, there doesn't seem to be any – your client has already invested the money in the vessel before the consent was applied for so it just seems to me that that couldn't be the basis. And it's difficult to understand why a staged approach couldn't (inaudible 15:03:47), you know, five, 10, 15 years, something of that sort, with volumes for each stage and the next stage only be allowed if the first stage was met. Which would be the more modern approach where there's concerns about compliance and/or long-term effects. Do you want say anything about that issue? I'm sure other parties will be raising it with the Court in due course.

### **MR MACRAE:**

20 Yes. Well, only to say, Sir, that the appellant's advice is that that approach, along with no doubt a lot of other suggestions that the other parties might make, is not warranted in order to bring (inaudible 15:04:29) within the ambit, as it were, of the requirements for granting a discretionary consent. "Requirements" is the wrong word, Sir, but the scope of the Court's discretion to grant it based on the evidence before it. And the applicant, while being very willing to look at any constructive suggestions that might improve the exercise of its operation in a way that benefits the environment, including of course from a mātauranga Māori point of view as I've said, it will want to draw the line. It thinks that a – well, putting it far too strongly and I don't mean to imply that staging would be, but – and not justified on the evidence. And I don't think that suggestion has been made by anyone, Sir, but of course it –

**THE COURT: JUDGE SMITH**

I know they'd rather we refused it I think, although several of them do suggest that we should limit it if we're going to allow it so we can check the effects. But I mean I'm happy to leave it up to the parties. But one has to say that in cases

5 such as this, for example in that case down in Edgumbe I think where they were allowed to continue on I think for 20 years there, that was because they were investing \$35 million in the treatment and it was felt they had to get a return on that investment. Here, the moneys have already been invested in the vessel. That was done before you applied for the consent, but it's difficult to

10 see what other investments have been made. Unless we were talking about investments in restoring the foreshore environment or benthic environment or tara iti or something of that sort. But absent that, one would have thought the adaptive management approach would be to grant it for a short period of time, check how that's going and, if that's okay, allow some more and, if not, that's

15 the end of the matter. Probably dealt with by a volumetric approach. And I've got to say, that's got to be a live issue for the Court given it comes up in so many of our cases. So in *Waste Management*, the argument was that they were investing \$150 million or something and therefore it made no difference whether it was a five year consent or a 50 year consent. Here, there doesn't

20 appear to be any – it's just a marginal cost of sending the vessel out and keeping it maintained. Unless I've missed something?

**MR MACRAE:**

Well, Sir, first, the vessel was commissioned at the time the application was made. So the application was made in 2019 and the vessel was actually

25 received and commissioned in November 2019. And your Honour is right, (inaudible 15:07:32) investment had been made for the purpose of the existing consent which at that time had four years to run, but also in the expectation that McCallums' agreement with Kaipara Limited to continue extracting sand in the offshore would continue and, as it transpired, that expectation is now – well it's

30 not an expectation but, rather, to the extent that that expectation survives, it now applies to this application. And there's no expectation of consent, Sir, but of course the appellant is using its best endeavours to obtain a consent to justify (inaudible 15:08:12) that it has made in its vessel and its trucking fleet and all

the other things that go towards the cost of operating a sand extraction business that provides sand at a very economic rate to the Auckland market amongst other things.

**THE COURT: JUDGE SMITH**

- 5 As this Court has previously said, however, you invest money in the expectation you're going to be granted a consent, that's your risk.

**MR MACRAE:**

- Yes, quite, Sir. And that's why I said of course they didn't do that but, nevertheless, if this consent were to be granted, it would realise the investment  
10 made. And that's not necessarily a matter for the Court's consideration. Going back to the staging argument – point, Sir, it wasn't an argument but the staging point, I suppose in a way, Sir, the temporary consent that's been granted could, if used slightly creatively, be regarded as a kind of staging arrangement. I mean there is extensive monitoring required. The results on the environment of that  
15 consent will be subject to most, if not – not quite all, but most, obviously it couldn't be the subject to the pre-sand extraction assessment, it hasn't been, but it's an existing – it's still being dredged in reliance on the existing consent. But the ongoing impacts of at least on that area, in a sense, are going to be available for the benefit of any new consent that's granted. And of course there  
20 are already the results available from 20 years of dredging in that area already. So it's perhaps part of the reason why in this case a staging, or the efficacy of a staging approach might be questioned. But, Sir, I understand you were throwing the idea out as one that resulted from my discussion of the regional plan.

25 **THE COURT: JUDGE SMITH**

- Well I want to discuss a couple of aspects of it. So at the moment my understanding is the dredge can't lift sand more than (inaudible 15:10:34) metres down, so clearly it seems to me that it must be open to us as part of any decision to limit the maximum depth to 36 metres until some future point at  
30 which you seek to activate it for greater depth based upon the ability of the dredge to achieve those depths. Secondly, there's the question of the mobility

of sand between the 25 and 30 metres contours. As I put to you earlier, the evidence seems to indicate that whatever the transfer rate might be, at 25 metres it's likely to fall off fairly sharply over the next few metres. So by the time of 30 there's going to be a great deal more closure, which is a nonsense to me, but that's the (inaudible 15:11:18) addressed it, in other words less movement of sand across that boundary than there is at 25 metres.

So there's always the potential for the Court to look at staging, for example the 30 metre to 36 metre is preliminary and, thereafter, requiring further work to be done on the area between 25 and 30 metres before that is authorised given the history, and 36 and deeper to 40 depending on the ability of the machines to get that depth. The concern of course being to avoid the assertions, if they are proved to be correct, that there's been essentially an almost exclusive use of that 25 contour and shallower to get sand. Now I appreciate there's an argument about the accuracy of that but certainly the tracking seems to indicate that much of the sand has been removed between the 25 and 28 metre contours. So I'm just pointing out that there's a number of ways in which staging comes up, not just in terms of time: it could be in terms of depths or areas that are utilised.

**MR MACRAE:**

Yes. I take your Honour's point.

**THE COURT: JUDGE SMITH**

Well it's something you can think about and discuss with your witnesses. And the other parties, I want to hear from the other parties. I mean some of these issues may not be issues to other parties although most of the stuff I've (inaudible 15:12:42) up at least one witness' evidence somewhere.

**MR MACRAE CONTINUES READING OPENING SUBMISSIONS**

**CONCLUSION**

88. The ARCPS and the ARCP encourage the use of mineral resources for the development of the Auckland Region and for the social and economic wellbeing and health and safety of its people and communities. Granting this

application and so ensuring a continuing supply of Pakiri sand, would assist in achieving those objectives. Taken together with the comparatively minimal adverse effects of the proposal, it is submitted that this appeal should be allowed.

**5 THE COURT: JUDGE SMITH**

Q. So I do have some concern that we haven't really addressed the legal issues that arise which we've touched upon many, but overall I suppose when we talk about comparatively minimal adverse effects, I suppose those are matters of fact we have to determine.

10 A. Yes.

Q. Potential outcomes and the application of the various laws as to what de minimis – sorry, cases and law on various points of what's adaptive management precautionary approach, et cetera. It gets difficult because in response you're likely to address all those matters and the parties don't  
15 know what you're likely to say about them at this stage. So be it I suppose, we'll just have to deal with the issue as it comes up. Similarly, I have some real concerns about the conditions and we haven't touched upon those. I assume Mr Hay is the person, the witness, that the council should talk to about conditions, should they?

20 A. Yes, Sir. Primarily, Sir, there are conditions that of course affect other areas of expertise such as the monitoring surveying, surveying for monitoring purposes and various others. The monitoring and surveying for effects on marine life, et cetera. But Mr Hay has the overview of the conditions. And of course, Sir, (inaudible 15:15:08) were the subject of  
25 very close examination by all parties, almost line by line discussion, for the purpose of the temporary consent that was granted, for the purpose of reaching the agreement on the conditions for that. So all parties are certainly familiar with them.

Q. Thank you.

**30 THE COURT: JUDGE WARREN**

Q. Just wondering, Mr MacRae, the last paragraph that Judge Smith read out taken together with the comparative minimal adverse effects of the

proposal, is that still the submission even with the amendments to (inaudible 15:15:48)?

A. Well, Sir – thank you, Judge. I should have said – that was very much an overview and I should have qualified it by saying, as I did say earlier in my submissions, that the one area in which there seems to be a substantive dispute about the extent of the effects is the cultural area, and I should have qualified that statement in the same way.

Q. Thank you. 85, the precautionary approach and the extract from the policy or the plan you've set out, second and third lines it reads: "Having regard to the values of the area." One assumes, I haven't checked the plan, that that includes tikanga values, cultural values as well?

A. Yes, it would have to, Sir.

Q. And then finally just at paragraph 81, so effectively your clients accept that the likes of Ngāti Manuhiri, Te Uri O Hau, have a relationship to this area, one that is based on the tikanga values that have been put before us, correct?

A. Yes, Sir.

Q. If the manifestation of those values meant that a rāhui needed to be imposed, let's say something like the *Rena* occurred, your clients would draw a line there, so it would be selective or conditional in its support for those values?

A. Well, Sir, if a rāhui was the result of an unforeseen event, the situation would not be – well it might be a matter of agreement between the parties in what we've called cultural liaison agreements but just in agreements as to what had happened there. But it's a (inaudible 15:18:01) possibility. As far as I know, there have not been occasions on which that kind of incident has resulted previously in an interruption to sand extraction or that sand extraction has continued in breach of any such measure taken. But I'm just saying, Sir, that after some years of familiarity the case, I've never heard of anything to that effect, and I don't want to give evidence from the bar, it's a matter that should really be raised with Mr McCallum perhaps. But if there was a – what I had more in mind is that if there was some form of the restorative process involved a rāhui on the sand extraction area, that would be fine inshore but it wouldn't be so good on

the offshore in a way that interrupted the new consent granted, and certainly not if it were to occur in the event of an unforeseen event which could result in limitations of uncertain nature, uncertain duration and what have you. So I don't know that there can be evaluation of the kind of event that your Honour has suggested in terms of its likelihood but certainly the appellant hasn't conducted one.

Q. And I guess it goes to the point that Judge Smith made around whether mana whenua groups before us are looking for a true partnership and, if they are, then of course those issues would need to be explored. But once again thank you for your submissions.

A. Yes. Thank you, Sir.

### **QUESTIONS FROM THE COURT: COMMISSIONER PRIME – NIL**

#### **THE COURT: COMMISSIONER MYERS**

Q. Good afternoon. The NPS Indigenous Biodiversity, I just wondered if that had relevance in this case?

A. As far as I'm aware it's not mentioned by my witnesses, but I would have to go back to check. It's certainly (inaudible 15:20:56) one of the primary documents referred to and as far as I'm aware it's not mentioned by Mr West or Mr Hay as far as – I say aware, I should say as far as remember. But I couldn't answer your question off the cuff reliably, Commissioner, I think I'd have to look more closely at it. It's not a matter that has arisen in the course of the application, been drawn to my attention anyway.

Q. I think it's only just come out so that might be the reason. Anyway, thank you.

A. I can take the matter a step further. I'm sorry, I've just realised what the abbreviation you were using referred to. And in fact as I understand it, it doesn't come into effect for a month or so. Not that that makes it irrelevant necessarily because of course it will come into effect during this hearing. But, yes, in that case I entirely resile from what I said and say that, yes, it has come to my attention by researchers of which Mr West is a member, have looked at it quite closely. I've discussed it with Mr Hay and Mr Hay



has given me a brief analysis of some aspects of it, and it may well need to be considered a little further. But at the moment with trying to find my way with witnesses through their evidence and what remains relevant and preparing submissions, I think it first came to our attention about possibly not last week but the week before, then I just haven't had a chance to look at beyond Mr Hay's note.

Q. Just one other question. You mentioned the 14 trips I think it's per month of the *William Fraser*.

A. Yes.

10 Q. Does that change with the new like volume of 75 cubic metres? Or I mean that might be a question for Mr McCallum or one of the other witnesses.

A. I can answer that quite confidently. Yes, the temporary consent involves a lower extraction rate per month, 7,500 cubic metres, and so that number of trips would approximately halve.

15 Q. Okay, thank you.

#### **THE COURT: SPECIAL ADVISOR HOWIE**

Q. The question of precautionary principle is of some interest to me, as you might know, and I was just looking at your 85, Mr MacRae, where you quote the ARCP. And it just seems to me that in paragraph (1) it seems to distinguish between minerals and sand, shingle, shell and so on, and then in paragraph (2) it talks about adopting this "precautionary approach to applications for petroleum exploration and for mineral extraction", and it seems that mineral extraction excludes sand. How do you read that?

20 A. Yes, I can give some assistance with that. I think it's the Crown Minerals Act that defines "minerals", and I think it's the Crown Minerals Act 1953 that defines "minerals" to include sand. And this point was raised during the council hearing of the inshore and midshore applications and I did make brief submissions on it, and it's to the effect that if sand is a mineral then – sand is a mineral, sorry, and then there's an exclusion of minerals including sand from the subsection in section 5 of the Resource Management Act relating to the needs of future generations, I think it's –

25 sorry, (inaudible 15:25:32), but the Court will know, that relates to providing for – well, safeguarding the needs of future generations. And

30

so the matter was dealt with and was raised before the Court at the hearing of I think it was 2002 and 2003 hearing of the existing offshore consent, and Judge – well the Court accepted that minerals were excluded from section 5 in that way because section 5 says they are, but that the Court could consider the matter under section 7(c) (inaudible 15:26:19). And that although the Court could consider some aspects of it, other aspects were possibly excluded from consideration. So the matter has been considered, and that decision, I may have the Judge's name wrong but I think it's a decision by Judge Inglis. His honour will know (inaudible 15:26:44) will know whether I've got it right. But anyway, it's in the – no, it's not in the bundle of documents I don't think, is it – no. But it can be provided for the assistance that it gives. So I don't know whether that takes your question any further or provides any kind of answer at all. But if it applies, then the precautionary approach – if I'm right, then the precautionary approach would apply to sand – so far as it's provided for in this provision in the Regional Coastal Plan would apply to sand, as I understand it. I'd be happy to be able to advise that it doesn't but I think it does.

Q. Okay. Thanks very much, that's a great help, thank you.

## 20 **THE COURT: JUDGE SMITH**

Thank you, Mr MacRae.

**JUDGE SMITH ADDRESSES COUNSEL/PARTIES – BREAK / TIMING**  
(15:27:38)

**COURT ADJOURNS: 3.28 PM**

25

**COURT RESUMES: 4.00 PM****THE COURT: JUDGE SMITH**

Now there was one matter I just wanted to – I was looking a little vague when I ended my questions and the thing was I was trying to remember something and  
5 I forgot it but I've remembered now, and that is under section 290A of the Act we're required to take into account the original decision. You haven't mentioned that in your – so we would normally expect some analysis of the original decision as to why you say that we should depart from it. Do you want to think about that and come back to us tomorrow or do you want to make a comment  
10 now?

**MR MACRAE:**

I can make a comment now, Sir, if that would be helpful. The original decision of course declined consent, so on two principal grounds. One was it considered that there was insufficient information before it to enable it to make a decision  
15 granting consent; and the other was primarily on account of cultural effects.

**THE COURT: JUDGE SMITH**

So we've sort of discussed cultural effects anyway but the insufficient information seemed to – how has that changed since the last hearing?

**MR MACRAE:**

20 It was, in my submission, an unusual decision, your Honour, given that most of the information now available, although albeit at a forum that was current back in 2021 rather than two years later, but what was available in one form or another, the application of course was made by and was presented by Kaipara Limited so it wasn't an application that had been put before the Commissioners  
25 by McCallum. McCallum originally, as I explained in my submissions, was a submitter and was just concerned with conditions of consent that affected McCallum Brothers. But the decision was made on the basis of submissions by Mr Nolan who was then representing Friends of Pakiri and the Commissioners were obviously persuaded by it and, against my strenuous  
30 objections, I think they set an entirely new benchmark for adequacy of

information that was unprecedented in my experience but nevertheless that's what they decided.

5 And then their decision as to uncertainty about – and, sorry, part of that was their uncertainty the trenches were having on the offshore area and they called for another – or suggested, in fact Kaipara Limited offered I think in the end to conduct another bathymetric survey which had input from all six or seven of the coastal experts involved in that case and which produced results which the coastal experts then considered and was the subject of a joint witness  
10 statement. And that exercise was I think helpful to the Commissioners, but it didn't make a difference to their finding in respect of coastal processes; they felt that particularly they had enough evidence to warrant, or enough information I should say, to warrant granting a consent.

15 Nothing hugely has changed since then. There has been further work, there have been further monitoring reports since, but none of them made a hugely substantive difference.

The application had a completely different flavour in a sense to McCallums' application and some of the evidence that you might still hear from submitters is that many of the submitters on mātauranga Māori issues while opposing the consent nevertheless welcomed the transfer from Kaipara Limited to McCallum Limited who had a long history of association in the area and with whom – and I think that is recorded in the decision, and were anxious to engage  
20 in every area and had people on board who could do that meaningful such as Mr Te Rangi. Kaipara had taken a somewhat different approach.

1605

#### **THE COURT: JUDGE SMITH**

So – sorry, I'm trying to dig through that to understand what you're submission  
30 is. Are you saying that the Commissioners were wrong in saying there was insufficient information? In other words, we should not follow their decision because they were wrong in saying there was no information available or insufficient information?

**MR MACRAE:**

Yes, Sir.

**THE COURT: JUDGE SMITH**

So, why do you say that?

5 **MR MACRAE:**

That was my submission at the time, Sir, when I replied on behalf of McCallum who'd since acquired the application.

**THE COURT: JUDGE SMITH**

10 So how do you approach that? That's essentially requiring us to substitute our judgment for whether there's sufficient information or not. We've got to have regard to it, we don't have to follow it but the general rule of thumb of the Court is we like to have a reason. Usually it's because circumstances have changed and there's more evidence but you're not suggesting there is in this case, are you just suggesting that the Commissioners reached the wrong conclusion on  
15 the information that was available?

**MR MACRAE:**

No, there's more to it than that, Sir. Of course at the time McCallum was currently dredging in the inshore so there were questions of cumulated effects or at least the possibility of them. The evidence has been refined and updated  
20 and is more voluminous, as is usual really, in the step-up from a current consideration of an application to the Environment Court. Additional witnesses have been called by McCallum Bros which were not called before the, by Kaipara Limited, so there are differences and there is sufficient distinction but my first point was that, in my submission, the decision was incorrect.

25

My second point is that there is, although the case for the offshore has been considerably altered by the withdrawal of the surrender of the inshore and the withdrawal of the midshore applications and has been refined in the sense that amendments to the offshore application that I outlined in my submission, Sir,  
30 with which the Court is familiar, are of course matters that were considered at

that time because Kaipara Limited hadn't made them. So there are points of distinction and I'm really offering to comment now by way of assistance and I think if the matter is one that the Court feels it needs further information on I would probably be better to address it in the morning. Those were the two main  
5 issues.

**THE COURT: JUDGE SMITH**

I'm driven by a statute which tells me what I have to do and haven't got to do and section 290A requires us to take into account the decision in the first instance, and you've said something about trenches. What new information  
10 (inaudible 16:08:48) about the trenches that wasn't available to the Commissioners?

**MR MACRAE:**

The extent of infilling since the application was heard before the Commissioners is one matter, Sir. The extent to which some of the trenches had infilled to the  
15 point where they're now considered suitable for lifting of the, in a suitable condition, for lifting of parts of the exclusion area, although that hasn't yet been done, but there are some (inaudible 16:09:19)

**THE COURT: JUDGE SMITH**

So which witnesses? I don't recall that. Which evidence was that?

20 **MR MACRAE:**

I think primarily Mr Todd, Sir.

**THE COURT: JUDGE SMITH**

And then there was an assertion about the control areas being the areas – sorry, not the control areas, the areas within the, there's two aspects to this, the  
25 areas within the dredge area that had not been dredged. Is there new information available on that? In other words, drop-tests been done in areas that had not been dredged?

1610

**MR MACRAE:**

I think, Sir, there is, but it's as a result of work for the midshore application which had also not been dredged, of course never has been dredged, and those results were applied, as it were, were applied – that's too direct a word, the  
 5 results of that study, part of which was done at the boundary between the proposed inshore – sorry, midshore application as close to the existing offshore application boundary as possible, then those areas were considered by Mr West to give sufficient information about the undredged areas of the offshore to be of assistance.

10 **THE COURT: JUDGE SMITH**

And then –

**MR MACRAE:**

So Mr – I'm sorry, Sir, to interrupt – Mr West's evidence does (inaudible  
 16:11:16) that to the extent that that's the case. And I wasn't proposing to  
 15 delete that evidence from – to ask Mr West to delete it, Sir, partly for that reason.

**THE COURT: JUDGE SMITH**

So there's also assertions that some of the control areas, particularly to the north, have been dredged. Is there new information available on that or is that assertion still based – was that before the Commissioners?

20 **MR MACRAE:**

The northern control area, Sir, has now been moved over the border, over the regional boundary, into an area of Northland which has never been dredged, and I don't think there's any dispute over that. And the appellant in this case has a certificate of compliance from the Northland Regional Council confirming  
 25 that the use of that area as a controlled area is a permitted activity in the Northland zone, the relevant Northland coastal zone.

**THE COURT: JUDGE SMITH**

I understood that –

**MR MACRAE:**

Sorry, Sir, that's new information, Sir.

**THE COURT: JUDGE SMITH**

Well, they've moved the control area. That's not new information; that's a move  
5 of the control area. That's a change of the application, not new information.  
The question I'm wondering about is it appeared to me that the evidence before  
the Commissioners was that the then control area, the one that was the subject  
of the application at the time, had been subject to dredging. That's why they  
required that side sonar.

10 **MR MACRAE:**

Well the side sonar testing, Sir, was aimed at the trenches, it wasn't aimed at  
controlled areas or which areas have been dredged or not. But, Sir, I'd have to  
check.

**THE COURT: JUDGE SMITH**

15 Okay. So we'll have to check that, but I just have to point out that, generally  
speaking, the Court's looking for some reason to depart from the decision rather  
than a simple assertion that it's wrong. But I agree with you, we're not bound  
by the decision of the first instance but we do have to have regard to it. Those  
were my additional questions. Now we move to your witness Mr McCallum?

20 **MR MACRAE:**

Yes, Mr McCallum who's beside me, Sir.

1615



**MR MACRAE CALLS****CALLUM FRASER MCCALLUM (AFFIRMED)**

Q. Mr McCallum, have you filed two statements of evidence in this appeal, a statement of evidence-in-chief and a statement of evidence in reply?

5 A. Yes, I have.

Q. And could you turn first then to your statement of evidence-in-chief dated the 23<sup>rd</sup> of December 2022. I understand there are a number of small updating amendments you wish to make, relatively small, and that a number of paragraphs in your evidence you no longer consider relevant to the appeal before the Court, and I think the first of these occurs at paragraph 15. Paragraph 15 is on page 5 of Mr McCallum's statement of evidence and I think it's page 5 in the common bundle. Mr McCallum in paragraph 15 refers to an Appendix 1. That's a map of the proposed offshore extraction area at the time your evidence was filed but is it correct that that area has been amended?

15 A. Yes, it has been amended.

Q. And do you have an updated map showing both the extent of the original area of the proposed, now proposed extraction area applied for and several other features labelled to indicate the results, amongst others, of the Court's orders in relation to the inshore and midshore applications?

20 A. Yes, it's all there.

Q. Would you produce that map as an exhibit, please?

**THE COURT: JUDGE SMITH**

Could your assistant please pull that up so we can just check we've got the right document. She should be able to put that on the screen. I think that's actually a new document, has it been given to her to put in? Can you just look at that, Mr McCallum, is that the document you now intend to produce as your new – in replace of appendix 1?

**WITNESS:**

30 Yes, Sir.

**THE COURT: JUDGE SMITH**

Madam Registrar, could we identify that as exhibit 1, please.

**EXHIBIT 1 PRODUCED – UPDATED MAP****5 EXAMINATION CONTINUES: MR MACRAE**

Q. Mr McCallum, could you just briefly explain to the Court what the map shows?

A. In the top right-hand corner is quite an extended map showing Little Barrier, Leigh, Kawau, right up to Bream Tail. The red boxes there show the existing, or the old 2003 offshore consent, and then it gets into a bit more detail in the bigger picture where the (inaudible 16:17:58) we're now applying for is in the dark blue. Previous to us changing the southern boundary, the dotted blue was where we had applied for, or where Kaipara had applied for and we had then taken over the application. So currently where we're at with the offshore application is the solid blue boundary. The grey area is basically the existing area where we are extracting but also it is the area of the temporary consent granted recently. That has been cut off at the southern area by 4 kilometres as has our application so we've moved it further north. The two control zones are there, the one Mr MacRae talked about, the northern control area, is north of the NRC border and the southern area is south of Pakiri River. Neither of these areas have been extracted from.

Q. There are some further amendments to paragraph 15, in particular striking out sub-paragraphs. Could you refer to those, please? So, paragraph 15(a) is that to be struck out?

A. That is struck out. 15(b) to be struck out.

Q. Down to paragraph 16?

A. Sixteen and 17, 18 and 19 to be struck out.

**THE COURT: JUDGE SMITH**

Q. Sorry, too fast for me. So 15(a) and (b) were struck out?

A. Yes.

Q. Then 16, all of 16?

A. Yes.

Q. All of 17 was it, or 18? Sorry, I missed.

A. 17, 18 and 19, your Honour.

1620

**5 MR MACRAE:**

Just to draw your attention back to paragraph 15. Mr McCallum does have some updated wording for that but I'd be interested to know what the Court thinks, your Honours think and the Court thinks that it's necessary to make this kind of change. The correct position would read MBL has until recently  
 10 operated from two extraction locations and I'm assuming, Sir, that the Court, that the parties can simply take it as read but the Court will, as it were, mentally amend those paragraphs as it reads them. But if your Honour would like me to ask Mr McCallum to make changes of that kind –

**THE COURT: JUDGE SMITH**

15 I don't think it's germane to anything we have to decide and we won't rely on the description and unless anyone has an objection I would tend to think that we're going to spend a lot of time making very minor corrections to evidence that isn't actually germane to any decision we have to make. Does anyone have an objection to us dealing with it on that basis? No. No, I've got no  
 20 objections sighted by anyone so I think we'll leave it at that.

**MR MACRAE:**

Thank you Sir. Those (inaudible 16:21:21) I propose to take and the second point relates to condition numbers which have changed since this statement of evidence was filed and circulated and I have assumed that it might be helpful  
 25 to the Court and the parties to make a quick note of updated condition numbers but, again, we're in your Honour's hands.

**THE COURT: JUDGE SMITH**

Well, again, I think it's preferable for me if you just give us a sheet with updated condition numbers. Otherwise we're going to spend a lot of time going from  
 30 paragraph to paragraph to update them. Unless somebody has a different view

I think that's something we – the reason I say that is by the end of this hearing we will have another set of conditions, I am in no doubt whatsoever, and rather than spending all our time changing the numbers repeatedly it's simpler just to have an updated set. But because Mr McCallum's referring to them here it  
 5 would be useful to have them cross-referenced but – are you able to do that overnight, it should be quite simple to.

**MR MACRAE:**

Yes.

**THE COURT: JUDGE SMITH**

10 Just put them down on a sheet of people and say paragraph 20, we're referring to condition X. Does anyone object to that course? It avoids spending court time on it? Silence is assent. Let's move on.

**EXAMINATION CONTINUES: MR MACRAE**

Q. That takes us to paragraph 33, I think, Mr McCallum. No, sorry, we can  
 15 skip that one because that's just an (inaudible 16:22:48). Move over to paragraph 38, is that to be deleted?

A. I believe paragraphs 38, 39, 41 and 42.

Q. Over the page at paragraph 43(e) there's an update to what you say in that paragraph. Would you advise the Court of the update?

20 A. And so paragraph (e) reads "Recording of the dredge track will continue until dredging is ceased and the drag head lifted off the bottom. A recording device will be installed on the compensator that is triggered when the drag head touches the sea floor and turns off when the drag head is lifted." And refer to condition 36(e).

25 **THE COURT: JUDGE SMITH**

Thank you. I follow what's intended there. I think that was sort of intimidated by Mr MacRae a couple of weeks ago. (inaudible 16:24:10) further with Mr McCallum or others it seems to me. Is Mr McCallum the most appropriate person to ask questions about that system?

**MR MACRAE:**

Yes, he is your Honour. That's the swell compensator device as it's been referred to, Sir.

**THE COURT: JUDGE SMITH**

5 Yes, you did refer to it that way.

**EXAMINATION CONTINUES: MR MACRAE**

Q. And then at paragraph 43(j), Mr McCallum, I think, no it might be (i). (i) sorry.

**THE COURT: JUDGE SMITH**

10 What was the paragraph?

**MR MACRAE:**

It's the top of page 14, Sir, and it's paragraph 3(i).

1625

**WITNESS:**

15 And moving onto the end of that paragraph: "The distance the *William Fraser* takes to turn can be anywhere from 200 to 500 metres depending on the load held and the weather conditions."

**THE COURT: JUDGE SMITH**

Next.

20 **EXAMINATION CONTINUES: MR MACRAE**

Q. Over to paragraph 49.

A. Delete paragraph (inaudible 16:25:37) but at the end of paragraph 48 add on: "But not for more than five consecutive days at a time: see condition 23."

25 Q. And Mr McCallum, you also have an update of information relevant to that paragraph I think.

- A. We also propose daytime extraction at least two kilometres from mean high water mark to safeguard fairy terns.

**THE COURT: JUDGE SMITH**

- Sorry, just one moment please, just trying to write that down. Hope you don't  
5 mind, I'll call them tara iti I think, but I don't think it makes any difference. Carry on.

**EXAMINATION CONTINUES: MR MACRAE**

- Q. Just further on that paragraph in relation to that matter, Mr McCallum, has  
there been any incident to your knowledge between the vessel and birds  
10 over the time you've been associated?
- A. Not that I'm aware of.
- Q. And how long have you been associated with the dredging activity?
- A. About 50 odd years. When I was young fellow I would go with my father.
- Q. That takes us over to paragraph 61 and again I think you have an update  
15 to make there.
- A. At the end of paragraph 61, if you could add: "The situation has changed somewhat over the last three months as I explained in my affidavit filed in the interlocutory applications that were heard a few weeks ago."
- Q. And that information in your affidavit and it's also I think to some extent in  
20 the affidavits of Mr Wilson and Mr Bridgeman, is that correct?
- A. Yes. As I'm aware.
- Q. Over to paragraph 93 on page 25, there's a reference in paragraph 93 to Appendix 5. The difficulty with this exhibit 5, Mr McCallum, is that it's very difficult to read, is that the case?
- 25 A. Yes. It was set out in an Excel spreadsheet and we've submitted it in a PDF file which makes it far easier to read for everybody.

**THE COURT: JUDGE SMITH**

- Could your assistant pull that up so the witness can just confirm that the document we received, I think it's about 14 pages long – doesn't need to show  
30 us every page, and there's 14 pages similar to that, and is that now intended to be the replacement for Appendix 5?

**WITNESS:**

Yes, your Honour.

**THE COURT: JUDGE SMITH**

We'll make that exhibit 2.

5

**EXHIBIT 2 PRODUCED – PDF SPREADSHEET****EXAMINATION CONTINUES: MR MACRAE**

Q. Over to paragraph 106. You also wanted to add an updated point at that point, or explain an update?

10 A. If you could please add at the end of paragraph 106: "We are proposing to continue with the concept of the mātauranga Māori expert panel which has been set up for the temporary offshore consent. I support this concept as a way of achieving a greater understanding of how we integrate mātauranga Māori values into our operations."

15 1630

Q. And for the Court's information, that intention is now the subject of condition 58 in the proposed conditions of consent.

**THE COURT: JUDGE SMITH**

Thank you.

**20 EXAMINATION CONTINUES: MR MACRAE**

Q. That takes us to the end of your statement of evidence-in-chief. Would you turn now, Mr McCallum, to your statement of evidence in reply. And again it's paragraph 15. Paragraph 15 contains the statement that you understood that the existing offshore, which at that time you were an operator rather than the owner of, you were under contract to Kaipara Limited, as your evidence says, to dredge the sand and extract it, but can you tell the Court what gave you to understand that dredging was to be concentrated in areas of the seabed to avoid wider spread effects on marine ecology?

25 30 A. That was clearly stated in condition 3 of the offshore consent.

Q. And the reference to that is common bundle page 125. At paragraph 31, Mr McCallum, is the map that is now exhibit 1, does that allow you to point out to the Court where area 1 and area 2 as you refer to them in the existing offshore consent are located?

5 A. Yes. Yeah, they are the grey rectangles. As I said, the area 2 is to the north and there's a little A and B at (inaudible 16:33:11) of that, and then that comes back to the south, there's a cross-over between area 1 and 2, some common area. So the area 2, the northern areas, are denoted by A, B, C and D at the – A, B, D, C, anyway. But C, it's the northern rectangle of the grey area. Area 1 is the southern rect – or polygon, four-sided polygon, which goes from H at the top down to the actual southern control area. But it's not – the southern end of that is not included in the temporary extraction area.

10 Q. If you could turn to paragraph 43 and there's something you wanted to update in that paragraph.

15 A. At the end of – after it says Appendix 3 on the third line of paragraph 43: "I have obtained a letter dated 12<sup>th</sup> 2023 from Dawson & Associates, maritime law specialists, advising that AIS is not a reliable indicator of vessel location. I refer particularly to paragraphs 8, 10 of the letter."

20 Q. Do you have that letter, Mr McCallum?

A. Yes, I do.

Q. Would you produce it as an exhibit please.

A. Yes, that is it.

1635

25 **THE COURT: JUDGE SMITH**

Exhibit 3.

### **EXHIBIT 3 PRODUCED – LETTER FROM DAWSON & ASSOCIATES**

### **EXAMINATION CONTINUES: MR MACRAE**

30 Q. And then paragraph 47, Mr McCallum, you refer to Appendix 5. Again, on its face it's not entirely easy to comprehend what it shows. Do you have an updated and labelled version of that appendix?



A. Yes, we do.

Q. That's the one on the screen, is it?

A. Yes.

Q. Would you produce that as exhibit please.

5 A. Yes.

Q. Sir, it might be helpful if Mr McCallum gave a brief explanation of the diagram. It's a screenshot of the screenshot. If you would do that please, Mr McCallum.

10 A. Your Honour, we have a cement barge and tug. The tug is called the *Acheron III*, the barge is called the *Marsden Bay*. Both vessels have AIS sender units on them. At this particular time, so it was 2.34 pm on the 26<sup>th</sup> of the 4<sup>th</sup>, according to MarineTraffic which is the website we all use to see the position of vessels using AIS, at 2.34 pm the AIS showed that the tug the *Acheron III*, which has got the big red circle sort in the  
15 middle of the page, was actually quite a substantial way behind the barge according to AIS. Obviously not possible. The tug and barge are at that stage either hipped up, so tied together, or on a short tow line, maybe 50 metres. That there is in the vicinity of a couple of kilometres apart, and the tug and the barge are the wrong way around, and they are leaving  
20 port, not coming into port. When we rung up the crew at the time, the skipper said, no, actually they're off Whangarei Heads, and you can see on the bottom right screen two blue vessels with the arrows to the *Marsden Bay* barge was actually behind where it should be, the *Acheron III* ahead. So this was all at one spot of time as it were the AIS  
25 was clearly inaccurate, and that was the VHF AISs, the two circled pictures, and the satellite AIS doesn't have the name of the vessels on but they've got the arrows to, so down off Whangarei Heads (inaudible 16:38:55) vessels were at the time.

30 Q. Are you able to say, Mr McCallum, what would have occurred to cause the erroneous position of the *Acheron* and the *Marsden Bay*?

A. Well it could be anything from weather conditions to a whole number of reasons. I'm not an expert on why the AIS isn't accurate, you know, 100% of the time, but certainly in this instance, and we see a number of

similar sort of instances on the coast where the vessels are hours behind where they were and/or totally out of position.

Q. Have the differences got anything to do with the difference between VHF and satellite transmission or use of AIS?

5 A. Both of them can have issues. And a lot of it is about weather and atmospheric conditions.

1640

**MR MACRAE:**

Sir, was that exhibit 4, Sir?

10 **THE COURT: JUDGE SMITH**

Yes, I hadn't given it an exhibit number yet, so exhibit 4. It's a screenshot of AIS.

**MR MACRAE:**

It's not so much a replacement, Sir, as a supplementary to appendix 5.

15 Although it could be taken as a replacement.

**THE COURT: JUDGE SMITH**

I'll just give it another exhibit number. So it's not an appendix at all.

**MR MACRAE:**

20 No, sorry, Sir. The reference in Mr McCallum's evidence is to appendix 5 of his evidence in reply, and so it's in a sense a replacement for that appendix which is the original screenshot unmarked and unlabelled, or only marked with red circles.

**THE COURT: JUDGE SMITH**

It's now exhibit 4.

25

**EXHIBIT 4 PRODUCED – AIS SCREENSHOT**

**EXAMINATION CONTINUES: MR MACRAE**

Q. Mr McCallum, I think that takes us over to paragraph 67. Have you a clarification required here?

5 A. If you could add at the end of paragraph 67: "The proposed conditions 35 and 36 aimed at avoiding future allegations of this kind by requiring certification of the volume of a full load of the *William Fraser* and assuming that each trip will be a full load unless MBL proves to the contrary."

10 Q. Mr McCallum, at paragraph 73 you refer to the consultation record and your record of consultation with other parties and you say that you've attempted or been unable, rather, to meet with the chair of Omaha marae or other representatives. By reference to the now legible consultation register, can you give a brief account of how many attempted or achieved contact (inaudible 16:43:51) with the Omaha Marae?

15 A. We have 28 entries since August 2020 of trying to organise a face-to-face meeting and consult with Omaha marae and have not been successful on any occasion.

**THE COURT: JUDGE SMITH**

Q. Sorry, where's that? I can see some with Annie Baines, emails.

20 A. Yeah, it's a whole mixture.

Q. Well, are contacts, so I can't understand your comment. Email to Callum and Shane thanking you for koha and time at the hearing of the marae. I'm not sure what – there's a whole series of references to meetings.

1645

25 A. A number of the emails were Informatory in terms of like the MACA consultation to the Omaha marae as well as the local whānau and a number of emails (inaudible 16:45:16) meetings. We were very keen to appear at the marae and talk to the locals face-to-face.

30 Q. Well, we'll have to go through them because at page 6 Christine Baines, Shane E spoke with Christine Baines, discussions setting up a meeting, Sam Williams, the 24<sup>th</sup> of the 5<sup>th</sup> '21 had a discussion by phone with Sam regarding the applications, agreed to set up a meeting, Ringi Brown, 3/11/21, Te Mata Pakiri consultation and monitoring, permission to

undertake monitoring was then had about monitoring concerns over the (inaudible 16:45:59), something to do with COVID-19 restrictions, Olivia Haddon, so I just don't – where are the ones that you've been, refused to talk or discuss the matter at all? I'm just trying to – can't find any. It goes on and on for pages.

A. Well, it does your Honour.

Q. And all of them appear to be them dealing with you. You've got to be very careful when you're giving evidence to this Court. You said that they refused to discuss the matter with you, I thought you said, but there's a whole series of discussions.

A. Your Honour, I said that we were trying to set up a meeting and we haven't, we haven't been able to do so, say, this has been going on for years.

Q. Okay, page 8, bottom of page 8, look at the bottom of page 8, that was a virtual meeting, that's what you say, so you're saying there was no meeting yet your own records show there was a meeting?

A. That's with Olivia Haddon, your Honour. We were trying to meet on the Omaha marae with the Omaha people, so we had a virtual meeting with Olivia. I've had meetings with Olivia in the past dating back to 2015.

Q. If you go to page 13, these are your notes, and I don't understand them in light of what you've just told the Court. This is from Annie Baines at Omaha marae thanking for the koha and time at the hearing at the marae, acknowledge use of some royalties for work on the marae but confirm stance on sand extraction. You replied according to – Callum was you, I assume. Shane also responded with more detail regarding the sand consent. That appears to refer to a meeting?

A. We attended the marae for the hearing, your Honour, and so it was no meeting as such with the Omaha marae. That was during the hearing and that's where that conversation came from.

### 30 **EXAMINATION CONTINUES: MR MACRAE**

Q. Paragraph 84, Mr McCallum. This is the last one. I think you wanted to clarify the situation concerning sand distribution from the Mt Rex Shipping yard?

A. So, it's eight lines down, it talks, or seven and eight lines down in paragraph 84 it talks about: "The Mt Rex yard where the sand is distributed can only operate from four in the morning until 6 pm in the evening," and if we can add in there: "Which limits a large number of trucking movements to peak traffic hours, ie from 7 am to 9.30 am and 3 pm to 6 pm. This increases turnaround time for trucks and places additional traffic pressure on the roads."

1650

**MR MACRAE:**

10 Sir, that completes that aspect to Mr McCallum's evidence and the other material that McCallums have placed before the Court, and this might be the appropriate time to show it, is the video of the dredge operation itself and showing the barge and the dredge gear. So that's been provided to the Court, your Honour.

15 **MR POU:**

Your Honour, before we go onto that, I wanted to wait until all the material had been put, I was waiting for (inaudible 16:51:40) object to the letter being provided to the Court and then Ms Urlich has just reminded me that I'm Mr Clapshaw's lawyer for today. But the letter that's dated 12 May 2023 is a legal opinion based on an opinion from a lawyer that's rung up to a maritime school to ask for other people's opinions. I understand from Mr McCallum that he doesn't understand, he didn't understand why AIS wasn't accurate. I do note that the 12<sup>th</sup> of May is the same day that the evidence of Mr McCallum was filed in response. There's been an opportunity to provide this. For that reason, your Honour, it's my submission that it's inappropriate for the Court to receive this letter. It should've been, if it's a legal opinion, it should've just been part of the legal (inaudible 16:52:45) rather than coming in as a piece of evidence that we can't cross-examine because the person who wrote it isn't available and because the expertise it conveys is beyond that of Mr McCallum to talk to. So, for that reason, your Honour, and I'm sorry I took so long, for Mr Clapshaw I oppose this coming into the proceeding.

**THE COURT: JUDGE SMITH**

Yes. Could I ask Mr MacRae's assistant to Mr MacRae to just take the video off the screen, or whatever it is, the current entry. Thank you. So obviously I want to find out if anyone else supports Mr Pou's position before I – does

5 anyone support Mr Pou's position?

**MS CAMPBELL:**

Sir, without having had the benefit of a great deal of time with that document, yes, I would support what Mr Pou has had to say. Can you hear me, Sir?

**THE COURT: JUDGE SMITH**

10 Yes. It's echoing a bit but I can hear you. So, that's fine. So, I'm going to assume that anyone else who's in the opposing parties who doesn't say anything abides. So does anyone else take the position in support of the application to oppose exhibit 3?

**MR MULDOWNNEY:**

15 Yes, Sir, I'm going to support the submission that was made. It does seem to put parties at a disadvantage that the material comes in as an exhibit and we don't have the opportunity to cross-examine the author of the document and we don't, it appears, have a witness able to address the questions that go to the heart of the document so it feels like we're at a disadvantage, Sir.

20 **THE COURT: JUDGE SMITH**

Yes. Anyone else?

**MS MORRISON-SHAW:**

Thank you, Sir. We would also support that for the reasons given by friends Mr Muldowney and Mr Pou.

25 **THE COURT: JUDGE SMITH**

Yes. So do I take it the other parties abide? Thank you. Before I turn back to you, Mr MacRae, the general rule in the court is if we allow a document in late which hasn't been produced, then you have to give the parties an opportunity

to either produce evidence to the contrary (inaudible 16:55:14) examine your witness at the very least. So it would require leave, well it would require I think the Court to grant leave that the parties can produce it in opposition. Of a more fundamental concern, if that's not accurate, then that's a huge danger for the maritime traffic, and I would like to hear from Maritime New Zealand as to how they can safely operate the maritime system if these things are so inaccurate. So it does seem to raise some fairly large questions from the Court's point of view.

**MR MACRAE:**

Yes, I think the point of the letter, Sir, is that Maritime New Zealand doesn't rely on AIS for the reasons that Mr McCallum (inaudible 16:55:56) in his evidence and which are illustrated by the snapshot from AIS of the positions of the vessels in the Whangarei Harbour. So I'm happy to ask Mr McCallum whether he feels able to address the –

**15 THE COURT: JUDGE SMITH**

Well that's not really the point. The point is he produced the document. If I let it in, I have to require you to call the witness to give evidence to support it, and I'll probably have to give an opportunity for the other parties to call evidence against it. I have a more fundamental concern. If you're saying that Maritime New Zealand don't rely on it and they're relying on only chart positions, then I've got to say I did *Rena* and if they rely only on chart positions is a recipe for disaster for maritime reasons, and I do not believe that's the case as a fact because they had a transponder that was going all the time.

**MR MACRAE:**

Mr McCallum does address the question of AIS himself, Sir, and gives evidence about it. Mr McCallum is a skipper, a qualified skipper, has skippered his barge from time to time and is familiar with AIS, and is also familiar with the Leigh VHF station, and gives evidence as to the extent to which it drops out and produces similar results to the screenshot that is known as an exhibit. So Mr McCallum is available, he does give evidence on the point, he's available for cross-examination and –

**THE COURT: JUDGE SMITH**

It's exhibit 3 that's the subject of the objection. I mean if you withdrew exhibit 3, then the objection goes. It's up to you.

**MR MACRAE:**

- 5 Yes, well I don't want the Court to be involved in too much time over this. Mr McCallum does give the evidence himself. He can address the issue. I'm happy to withdraw the exhibit.

**THE COURT: JUDGE SMITH**

Right. Exhibit 3 is withdrawn.

10

**EXHIBIT 3 WITHDRAWN****THE COURT: JUDGE SMITH**

- 15 So that resolves that, Mr Pou? I mean it doesn't mean that Mr McCallum's evidence (inaudible 16:58:25) addressed, there's obviously a dispute between the parties on the issue.

**MR POU:**

Yes, your Honour, and I agree that he does talk about AIS. It's just the way that he attempted to bolster it at the last minute.

**THE COURT: JUDGE SMITH**

- 20 That's okay. Well it's withdrawn so it seems to me we're back to that argument again.

**MR POU:**

Yes, thank you, your Honour.

**THE COURT: JUDGE SMITH**

- 25 Now, sorry, where did we get to after that? That was Mr Pou. I think you had some additional questions for Mr McCallum, is that right?



**MR MACRAE:**

No, Sir. Mr McCallum has just got the video and I was suggesting that now might be an appropriate time to see it before cross-examination.

**THE COURT: JUDGE SMITH**

5 Yes, thank you. So if your assistant would just put that up.

**VIDEO PLAYED**

**MR MACRAE:**

It might help if Mr McCallum were able to comment on the video as well, Sir. Perhaps if it could be played again.

10 1700

**VIDEO REPLAYED**

**WITNESS:**

Those are previous dredge tracks.

**THE COURT: JUDGE SMITH**

15 It appears to me that Mr MacRae's feed may have locked up. Are you back with us, Mr MacRae?

**MR MACRAE:**

Yes, Sir, we have no idea of what happened there but we are back.

**JUDGE SMITH ADDRESSES MR MACRAE – TECHNICAL ISSUES**

20 (17:01:39)

**THE COURT: JUDGE SMITH**

Perhaps I don't think Mr McCallum should comment because it doesn't seem to be – he can tell us afterwards once the video's finished I think to be safe.

**MR MACRAE:**

25 All right. Yes, thank you, Sir.

**VIDEO CONTINUES****THE COURT: JUDGE SMITH**

Q. So, I take it that one was a diver following the dredge head, was it?

A. Yes, I was doing that, your Honour.

5 Q. So that's the *Fraser William* dredge head?

A. Yes.

**THE COURT: JUDGE SMITH**

That was quite useful, thank you. Mr MacRae, perhaps if you could that down now. Thank you Ms Harnett.

10 **EXAMINATION CONTINUES: MR MACRAE**

Q. Mr McCallum, the three videos seem to show three phases of the sand extraction operation. Could you just briefly run through what the Court has seen?

15 A. The first one was filling of the hopper or the barge with it's actually screened sand. The sand comes up the pipeline from the drag head that you saw. There's a pump mid-way up the pipeline which (inaudible 17:04:15) and also boosts the sand, and sand and water mix, slurry mix, and it goes over a screening tower where everything under  
20 two millimetres falls into the pipes and goes into the bin and anything over two millimetre screen goes back through the moon pool and goes directly underneath the vessel discharged back to the sea floor. And then, yeah, the middle video was a previous day's dredging. We found the dredge track and it's very hard to tell, it's incredibly hard to get sort of the resolution and even the depths, and that was probably at about 28 metres  
25 or something like that deep. And then the third one was actually the drag head on the bottom, and I think that's reasonably self-explanatory, it's doing about two knots, so it's quite quick when you're diving.

**THE COURT: JUDGE SMITH**

Q. Can I just ask a question. When the water slurry goes into the barge itself, how does the water exit? Is there drain holes or – how does the water leave the vessel again?

5 A. Yes, your Honour, there are drains down around the bottom corners of the bin which have got pipes, specially designed pipes with what they call a wedge-type screen, so at about 1.8 millimetres apertures, so everything above that is retained (inaudible 17:05:55) water comes out and then also the bulk of the water goes over ware boards. As the sand fills up the  
10 water's on top and the water goes over the top and, once again, there are six moon pools on the vessel so it discharges the water into the sea but below the keel depth or at keel depth.

Q. Into these moon pools, is it?

A. Yes, Sir.

15 Q. Thank you, I just wanted to follow that. I assumed that was the case. I just wanted to check because you can't see that in the video, no. That's fine.

**JUDGE SMITH ADDRESSES COUNSEL/PARTIES –  
CROSS-EXAMINATION (17:07:03)**

20 **CROSS-EXAMINATION: MR LITTLEJOHN**

Q. Hopefully these will be non-controversial but I just want to ask you to confirm three (inaudible 17:08:07). Now, your company has called evidence in these proceedings from a Mr Wayne Scott who indicates that he's the Chief Executive Officer for the Aggregate and Quarrying  
25 Association of New Zealand, do you recall that evidence?

A. Yes.

Q. Can you confirm whether McCallum Bros Limited is a member of the Aggregate and Quarrying Association of New Zealand?

A. Yes, we are.

30 Q. Mr McCallum, your company has also called evidence in these proceedings from a Mr Robert Gaimster, I hope I'm pronouncing that correct, is that how you pronounce it?

A. Yes.

Q. And Mr Gaimster is the Chief Executive of Concrete New Zealand Associated. Do you recall that evidence?

A. Yes, yes.

5 Q. Can you confirm whether McCallum Bros Limited is a member of Concrete New Zealand?

A. Yes, we are.

Q. Mr McCallum, you've called evidence or your company's called evidence from a Mr Robert Officer who is, in his evidence, expressed to be currently  
10 working for Allied Concrete Limited, do you (inaudible 17:09:33)?

A. Yes.

Q. Can you confirm that Allied Concrete Limited is a customer of McCallum Bros Limited?

A. That's correct.

15 **JUDGE SMITH ADDRESSES COUNSEL/PARTIES – TIMING / MR BEAMSLEY (17:09:53)**

**KARAKIA WHAKAMUTUNGA**

**COURT ADJOURNS: 5.19 PM**

**COURT RESUMES ON TUESDAY 18 JULY 2023 AT 9.32 AM****KARAKIA TĪMATANGA****THE COURT ADDRESSES COUNSEL/PARTIES – PRELIMARIES****5 CALLUM FRASER MCCALLUM (ON FORMER OATH)****CROSS-EXAMINATION: MR VAN MIERLO**

Q. Good morning, Mr McCallum. Could I just confirm, please, you can hear me okay?

A. Yes, thank you.

10 Q. Now, yesterday you told the Court you've been involved in sand dredging at Pakiri, Mangawhai, for five decades, is that correct?

A. Yeah, roughly. As I said, as a young fella through till now.

Q. So you'd be familiar with the plight of the tara iti that nests in the embayment?

15 A. Sorry, I didn't hear that first bit about the tara iti?

Q. You would be familiar with the plight of the tara iti, its situation as a critically threatened species?

A. Absolutely.

Q. And you're aware it's Aotearoa's most endangered bird?

20 A. Yes.

Q. Would you accept that MBL's sand extraction activities should be carried out in a way that avoids any adverse effects on tara iti?

A. We're absolutely supportive of that.

25 Q. Now, I'd just like to refer to the revised application for the offshore. The application's now removed about 30% of the area south of approximately Potaua Pakiri, is that correct?

A. Yes.

Q. So, effectively, that now concentrates sand extraction activity into a smaller area, doesn't it?

30 A. Yes, by default, yes.

Q. So the same overall volume of two million cubic metres is being removed over the same timeframe, 20 years, but from a reduced area, do you accept that?

A. Yes, it's still a very big area.

5 Q. And presumably as sole director of MBL, you approve or you made that decision to seek a smaller area?

A. We did that in consultation with our experts (inaudible 09:35:17) submissions and conversations we've had with people during this consenting process.

10 Q. So you had ecological assessments as to the potential impacts of concentrating extraction in that smaller area?

A. Yes but, once again, the smaller area's still exceptionally large, it's still 30-odd square kilometres, so 30-odd million square metres.

15 Q. Now in submissions yesterday, your counsel, Mr MacRae, said that the 900 cubic metre (inaudible 09:36:00) *William Fraser* reduced its environmental impact because it reduces the number of trips required to extract sand to an average of 14 trips per month. Do you recall that?

A. Yes.

20 Q. And you agree with that submission on that point, that the *William Fraser* trips are reduced to an average of 14 per month?

25 A. I think the point of Mr MacRae was compared to the older vessels which had a capacity up to half of the *William Fraser* that the number of trips to carry out the volume, and the volume is obviously the number in question, it is reduced compared to what we used to do previously, almost by half in one instance.

Q. But from an operational perspective would you be undertaking an average of 14 trips per month?

30 A. We won't be with a temporary consent and so what we do with the substantive application is to the direction of the Court is terms of the volume. The temporary consent, we've got up to 7,500 cubic metres per month which is, divided by 900, roughly eight, eight trips per month. So for the foreseeable future that will be the maximum amount.

Q. Now, I just want to look at some of the proposed conditions and just look at some issues from an operation perspective. Proposed condition 17

provides that sand extraction between the landward boundary of the extraction area in the 30-metre isobath must not exceed 75,000 cubic metres of sand during any 12-month period. Now, if it would assist, we can have the conditions brought up on the screen, or you may be familiar with them or you may have a copy in front of you?

A. Look, I'm pretty familiar with them, I haven't – so I see we can bring them up, certainly.

Q. So then we have condition 17. You're familiar with that?

A. Yes.

10 Q. So my question to you, really, is from an operational perspective. Over a 20-year term at 75,000 cubic metres of sand in any 12-month period we could see one and a half million cubic metres removed from between the landward boundary of the extraction area and the 30-metre isobath?

A. The intention that McCallum Bros have and as it's quite strong throughout  
15 the whole application is for even extraction through the area is deep as existing vessels and future vessels can extract. So, we inherited this application, as you're aware, at this time when Kaipara promoted it and with Ms Hart as their coastal expert. The number was 150,000 (inaudible 09:39:04) 30-metre isobath. We propose to reduce that, as we say, our  
20 intention and our expectation is we'll be extracting evenly from inside and outside the 30-metre isobath and so we don't want to be concentration extraction at all.

Q. So if that condition provided for, as I put it, up to one and a half million cubic metres to be removed from between the landward boundary and  
25 the 30-metre isobath, that wouldn't reflect McCallum's intention?

0940

A. No. That's stating that over the years with the consent we'll keep going for 20 years to remove a million, two million cubes, sorry. Obviously that's an average of 100,000 cube per year. The intention probably is to extract  
30 more than 100,000 cube per year. The intention, probably, is to extract more than 100,000 cube per year, as we have been doing in the past. So that the 75,000, as I say, was a number halved from what was originally promoted by Kaipara Limited.

Q. And if we look at Appendix 4 of the conditions you can see the 30-metre isobath shown there, it takes in cell 1 and cell 2 then half of cell 3, half of cell 4 and perhaps two thirds of cell 5. Would you accept that?

A. Yes.

5 Q. So the area between the landward boundary and the 30-metre isobath is really very limited, isn't it, in terms of the total extraction?

A. Yes, exactly. And as I said, our intention is to extract evenly or as deep as we can go which is sort of 36, 37 metres, currently, 36 metres, which takes us, I think, into the 30s and hopefully the 40s in terms of those cells.

10 Q. Yes, and do you know how deep the water is out in the outer cells, 62, 63, 64?

A. Look, I think that's 40-plus.

Q. So, it's well beyond 36 metres?

A. Yes, that's correct.

15 Q. So, would it be fair to say that the *William Fraser* is not actually able to dredge perhaps a third of the total extraction area?

A. I don't know if it would be that much.

Q. It's a sizeable percentage though? It's a reasonable percentage?

A. Yes. It might be 20-odd per cent, 20, 25, at this stage. The idea, I think,  
20 like we've said, it's a two million cube 20 year consent. There's every possibility we'd have another vessel involved at some stage, and the intention would be to, providing the sand and the substrate was suitable out in those deeper waters, we would try and extract from out there with a separate vessel. It's (inaudible 09:42:51) vessel in terms of length. The  
25 dredge pipe on our vessel goes from the fo'c'sle up forward which is the sort of cabin-like structure in the forward end and it goes the whole way down to the stern, and so at 68 metres, that's about the longest (inaudible 09:43:11) we can put on board and still have an angle on the drag head. So, yes, we'd probably have to have another 20 metre vessel or  
30 something like that, which is not out of the question.

Q. Yes, but there's no immediate plans to do that?

A. No, we need a consent, is our immediate plan.

Q. And I take it from your answer that McCallums previous vessels were not capable of dredging deeper than 36 metres either, would that be correct?



- A. Oh no, no, but the majority of the dredging was to a maximum of 32, 33 max and depending on sea state, state of the tide, wind direction, whether the vessel's loaded or not, and so that's why a lot of the dredging was actually concentrated in shallow areas and with going up a grade of vessel to the coastal carrier it gave us another, say, four or five metres of depth.
- 5
- Q. So, beyond 32, 33 metres, it's been less intensively dredged in the past?
- A. Yes.
- Q. And beyond 36 metres it's never been dredged in the past?
- 10 A. Something like that. As I say, there's a whole lot of variability in there in terms of physical depth of the water at time of dredging, how much load the vessel's got on, so therefore either the draft is deep or shallower so, potentially, the pump can be, or sorry, the pipe can be two more metres out of the water when it's empty, less loaded, and that sort of thing. So,
- 15 yes, the deeper that it goes out the less the dredging has been over the period of time.
- Q. And from what you're saying I'm hearing it's easier to dredge in shallower water than deeper water?
- A. Not necessarily easier. It's very much vessel-dependent.
- 20 Q. Is it cheaper to dredge in shallower water than deeper water?
- A. Not that I'm aware.
- Q. Well, in terms of wear on the equipment and pumping distances?
- A. No.
- Q. Now, the conditions provide for the substitution of the *William Fraser* with an alternate vessel. What alternate vessel would MBL be using if the *William Fraser* was not available?
- 25
- A. As we've stated in our applications on the way through, there's a vessel called the *Pohonui* which was a traditional dredging vessel. She was involved in stationary dredging and in the last year or two we've installed trailer suction gear with a Dutch drag head, very similar to what we've got
- 30 on the *William Fraser*. She won't be able to dredge out to 36 or 37 metres. We've actually got to determine what depth she will be dredging in but, like everybody, we've got maintenance requirements for the *William Fraser*, we've got, yeah, breakdown issues potentially, so we've

got to have a back-up vessel to keep our customers and our business going.

Q. And so (inaudible 09:46:59) back-up vessel that you would use?

A. Currently, yes.

5 Q. And, sorry, I just missed –

A. The vessels are, these vessels are few and far between so like during the interlocutory hearing when Mr Pou asked about the time to get a vessel, you just can't go and find one off the shelf like a car. You've either got to modify something that's existing and you've got to locate that or else start from scratch and build one and New Zealand conditions are slightly different to a lot of the other conditions so it's a long-term investment and a long time to get these things up and running.

10

Q. I just missed the name of that vessel. I know it's referred to in the evidence?

15 A. *Pohonui*. P-O-H-O-N-U-I.

Q. So the *Pohonui*, it won't have the oil spill prevention and management features that you describe in your evidence, in relation to the *William Fraser* will it?

20

A. Well we will have all spill response plans for it, we have. We've got – all these sorts of things are very standard for vessel in Maritime New Zealand so, yes, we'll have that.

Q. No, I wasn't referring to the oil spill response plan. In your evidence at paragraph 54 you describe a number of features of the *William Fraser* which you describe as spill-prevention and management features?

25

A. Yes, the engines are held, it's all very similar. There's hydraulic deck gear and hydraulic gear on the vessel so we're in the same situation to the degree as the *William Fraser*. We know there's bio-hydraulic oils, that takes away a lot of the hydraulics.

Q. And these are all features of the *Pohonui* are they?

30

A. Yes. The *Pohonui*, synthetic oils, yes.

Q. Now, just moving on to another topic. Yesterday in answers to questions from his Honour Judge Smith you advised that dredge material over two millimetres is sieved and then returned to the Ocean floor. Did I understand that correctly?

A. Yes.

0950

Q. Is that monitored at all to look for any indications of stony corals or other sensitive benthic communities?

5 A. It's an enclosed system. We do have the ability to look at the screen but it's not as such monitored on a daily or hourly basis. As you're aware we're doing benthic sampling annually and pre-surveying benthic sampling in the area. So that is the most, the way of picking up the likes of stony corals. Remembering that this whole embayment is being  
10 heavily trawled and scallop-dredged over the last century. So the sand extraction's not the only activity in the bay and particularly in areas where we haven't extracted sand trawling and, I think Mr West has got the trawl effort data, I think it was hard to find the scallop effort data, I think that's quite sacred and secret. But, yes, from our knowledge and people's  
15 knowledge, (inaudible 09:51:12) been well and truly trawled, dredged.

Q. Well, I'm sure there'll be some questions for Mr West about that, but just confirming, there's no monitoring of the material that's returned to the seabed for benthic communities, indicators of benthic communities?

20 A. No, it's not, it's not possible. The only time we do it is when we're doing sampling and we started this project with Dr Roger Grace being our marine biologist and we were up with Roger in the vessel, sampling what was coming out, so we've done that, we do that sporadically in terms of – with consent requirements.

**MS MORRISON-SHAW:**

25 Mōrena, Sir. And I said (inaudible 09:52:44) for Friends of Pakiri Beach today. I'm not asking any questions on their behalf but just keeping a watching brief for them.

**CROSS-EXAMINATION: MS MORRISON-SHAW**

Q. Mōrena, Mr McCallum.

30 A. Good morning.

Q. So, I've just got a couple of general questions to start that we don't need to turn to the evidence for. So, I understand that you've been taking sand from Pakiri for over 80 years, is that correct?

A. In the vicinity of that.

5 Q. Now, in Mr Todd's evidence, and we can turn to that if we need to but we'll start (inaudible 09:53:26) question. He estimates that about eight million cubic metres of sand has been extracted from the Pakiri embayment since the operation started. Do you agree with that?

10 A. That's a total number, I understand, including other operators and ourselves.

Q. So, he states about two million cubic metres of this occurred before 1966 but that that was an estimate as no records were kept, do you agree with that?

A. I have no reason to discount it.

15 Q. And you're now seeking, in this consent, a further two million cubic metres (inaudible 09:54:10) for a further 20-year period, that's correct?

A. Correct.

Q. So, all up, we're looking at around 10 million cubic metres of sand over a 100-year period, correct?

20 A. Yes. Yes, that's the numbers, yes.

Q. And in your evidence you say that McCallums have had strong multi-generational relationships with Māori at Pakiri, don't you?

A. Correct.

25 Q. When was the first relationship agreement, or MOU, entered into between McCallums and Māori?

0955

30 A. We inherited clearly the Kaipara one. In terms of the previous consents, and that's what we had, my father had a good relationship with the people up at Pakiri, and they will testify to that as well, including some of the trustees of the Ngāti Manuhiri trust. So they were friends and they were gentlemen and that's how they approached it. There was no talk of money although, in saying that, McCallum Bros would do things for different Māori groups like Ngāti Rehua at the Barrier, we took gear out on a number of trips, so that was how they operated in those days. So

we appreciate that times have changed and probably with the Kaipara agreement was the start of that and we support these agreements. So, you know, we've been in, as you're aware, intense discussions with – initially we started with Ngāti Wai because they were obviously the go-to people who had the agreement in place with Kaipara, through their chairman Haydn Edmonds they'd deferred us to talk to the two local hapū and that was in the early '20, you know, 2019, 2020s. And from there we've concentrated most of our discussions with the hapū in terms of relationship agreements.

10 Q. So, just so I'm 100% clear, there was no formal written agreement between McCallums and Māori until you inherited the agreement from Kaipara in 2021?

A. Correct.

15 Q. And the gentlemen's agreements that you referred to in your evidence with Laly Haddon, that wasn't written, either, was it, it was just –

A. No.

Q. And you've just referred in answers to me, you talked about that there was no talk of money. So there was no sort of partnership, was there? There was no sharing of the profit?

20 A. No, there wasn't. As I say, business was different in those days.

Q. And then, just in relation to Te Uri O Hau, you've talked about that in your evidence and, again, that didn't occur until relatively recently, either, did it? That was around, I think, October 2021 was the date I saw in the evidence?

25 A. Look, around about that. You know, we've been in discussion with them for a long time, we've got, you know, relations of Te Uri O Hau worked with us for, you know, 40 years basically in McCallum Bros, some of the head people there. So we've had relations dating back to those sort of times.

30 Q. For almost 80 years there's been no formal arrangement and no profit sharing until you took over the Kaipara agreement?

A. That is correct.

Q. Now, I'd just like to turn to your evidence-in-chief which is at page 8, I think, of the evidence bundle and it's paragraph 27, if I could get that brought up on the screen, please?

A. Page 8?

5 Q. Yes.

A. Sorry, which paragraph?

Q. Paragraph 27. So in that paragraph you refer to the 2006 Environment Court applications and then you go on to say that you canvassed local iwi via Olivia Haddon and local Pakiri residents. Now, I'm just wanting to clarify the timeframe there. That meeting with Ms Haddon didn't occur until some nine years after 2006, isn't that correct?

10 A. Yes. I met Olivia through, I was on the Sea Change, she was working for the (inaudible 09:59:17), so that's when we really got things up and running. Prior to that, we'd had there's numerous emails, et cetera, with the likes of Mr Clapshaw, I think dating back to 2010, taking into account that the 2006 decision was appealed, and I think we had a couple of years, almost, it would've been, after that to when we actually had a consent. So, where this all comes from is that going through the inshore appeal and the application you basically – and, you know, (inaudible 10:00:01) there were very few people at the beach, it was forested down to the water and the whole environment was different. And then that changed so it became a different game. The technology on the vessels improved and so from only being able to operate in five to 10 metres or five to eight metres probably, of water, suddenly, you know, there was a trailing suction vessel which would go out to 25 to 30 which was huge. So we immediately went and started talking with the likes of Damon and some of the other residents in the southern end of Pakiri about the possibility of moving offshore because they didn't want us there and we didn't want to be there. So, yes, that started probably, I think I've seen emails with Damon with 2010, you'll have them.

Q. Yes. So, I'm just focusing on Ms Haddon, though, and you've said you went and talked to people, but you didn't talk to Ms Haddon, personally, until 2015 when you met through the Sea Change Project –

A. Talking with Ringi Brown and Gavin at that stage, in the early stages.

Q. Thank you, but Ms Haddon was 2015, correct?

A. I think it was, yes, she'll know as well, it was during that Sea Change.

Q. And then the general support you're referring to in that paragraph was support for moving the sand mine further offshore, you've just told me about the technology developing so that you were able to work in deeper waters. So, it wasn't support for sand mining per se was it, it was support for moving things further away from the near shore, is that correct?

A. There was a preference that we extract sand from further offshore from both sides.

Q. And you'd agree, wouldn't you, that tangata whenua such as Te Whānau o Pakiri and the Haddon whānau in particular have been consistent in their opposition to sand mining over many decades?

A. They certainly have been consistent and Laly and I have read through the Environment Court minutes and co. Everybody's been consistent about moving out from the inshore and (inaudible 10:02:27) as well.

Q. That wasn't quite my question. My question was that you would accept that tangata whenua have been consistent in their opposition to sand mining over many years?

A. Yes, of the inshore. Mr Haddon's gone down in writing in the Environment Court supporting the offshore move to sand extraction.

Q. Can I take you then to Ms Olivia Haddon's evidence and that's her evidence-in-chief, and that's at page 3151 of the evidence bundle, so evidence-in-chief, Olivia Haddon?

### **THE COURT: JUDGMENT WARREN**

Excuse me, Ms Morrison-Shaw, can I just interject there just to clarify your previous question. I think it was, have all tangata whenua been consistent in their opposition. Is that in fact what you intended or were you referring to your clients?

### **MS MORRISON-SHAW:**

No, your Honour. Clarifying tangata whenua in terms of Ngāti Wai and Ngāti Manuhiri, not (inaudible 10:03:43) who have taken a different view, your Honour.

**THE COURT: JUDGE WARREN**

Ka pai. And I'll just check with the witness that that's a 'yes' in respect of the re-framed question?

**WITNESS:**

5 Yes. Yes, thank you, your Honour.

**CROSS-EXAMINATION CONTINUES: MS MORRISON-SHAW**

Q. So I think in response to my question you said that there was opposition to inshore but not – and that there was a desire to move it offshore and that Mr Haddon had been on record as supporting the further move  
10 offshore in evidence. I just want to take you to – if we can go down to –

**THE COURT: JUDGE SMITH**

Q. Can I just ask if the witness can confirm that because that's certainly what I recorded and given Judge Warren has recollection I think we ought to check with the witness, that when you were asked if they'd been  
15 consistently opposed you said they'd consistently opposed inshore, is that correct or have I misunderstood your answer?

A. That's correct, your Honour. Ngatai Wai and Mr Haddon signed the agreement for Kaipara to extract sand from the offshore consent in '98, I think it was.

20 Q. So, you said he was on the record as that, that part of that is the Kaipara consent, is that what you're talking about?

A. Correct.

1005

Q. And you said some other evidence, I just want to be clear now that – you  
25 said he was on the record somewhere else?

A. In the Environment Court, Mr Haddon was on record saying that he opposed the inshore consent and extraction and, this is paraphrasing, and supported, and he supported with his signature the offshore consent (inaudible 10:05:30).

30 Q. I just want to be absolutely clear because I don't want any misunderstandings be the questions or the answers and that's certainly



the way Ms Morrison-Shaw understood it as well. So, we're now moving onto Ms Haddon's evidence, page 3151, did you say, Ms Morrison-Shaw?

**MS MORRISON-SHAW:**

Yes. Yes, your Honour, thank you.

**5 THE COURT: JUDGE SMITH**

Thank you, and if we could have that up so we could actually see it, would be helpful. Now, which paragraph are we looking at?

**CROSS-EXAMINATION CONTINUES: MR MORRISON-SHAW**

10 Q. We'll start at 42. So, in paragraph 42 Ms Haddon states – I assume you've read Ms Haddon's evidence, Mr McCallum?

A. Yes.

Q. So in that paragraph she starts by saying that there's been a consistent clear opposition over decades, starting in 1947, doesn't she, you can see that paragraph in front of you?

15 A. Yes.

Q. And then she moves on in 43 to say that before her stood her father and that he was a principle opponent to Kaipara and the other extractors?

15 A. No, that was for the inshore. Kaipara were, Kaipara and Sea-Tow and McCallum Bros at that stage had inshore sand extraction consents.  
20 Some of the earlier consents you're talking about in the 1940s and that were when, as I read in her evidence, when a variety of operators, and I didn't see McCallum Bros mentioned, used to bring scows into Pakiri River and grab the sand (inaudible 10:06:59) to Auckland.

25 Q. I think the point is, though, that there has been a long-standing objection to sand taken, irrespective of who's been taking it, is the point. Moving on, over in –

**THE COURT: JUDGE SMITH**

Perhaps I just want to clarify that because I looked at the appendices and I've read them through. I don't know they say what you think they say. I just want  
30 to point that out at this stage and that's a matter, obviously, to be explored with

Ms Haddon in due course but you're relying on Appendix 1 and all I point out is it may say what you think – what Ms Haddon or your witness – but you're relying on Appendix 1 not upon the assertions, aren't you?

**MS MORRISON-SHAW:**

- 5 Well both, your Honour, in terms of the evidence of Ms Haddon and the appendix so, yes, we think we can raise that with her.

**CROSS-EXAMINATION CONTINUES: MS MORRISON-SHAW**

- Q. So, if I could move on, down a few paragraphs, and through paragraphs 43, 44, 45, 46, she talks about some of the process in terms of the planning tribunal at this stage. If we get down to 48 and in that paragraph she mentions, she quotes her father from his report which accompanied the Memorandum of Understanding with Kaipara Limited to the Court in 1998. And in that paragraph she's quoted her father as saying: "As tangata whenua and as representative –
- 10

15 **THE COURT: JUDGE SMITH**

You don't need to read to us evidence that's before us. If there's a question –

**MS MORRISON-SHAW:**

Yes, there is, Sir.

**THE COURT: JUDGE SMITH**

- 20 I'll just point out that the statement there needs to be read carefully, it actually doesn't say, again, what is asserted to be said about it but we'll cover that later. What's your question to the witness?

**CROSS-EXAMINATION CONTINUES: MS MORRISON-SHAW**

- Q. So Mr McCallum, in his response to me, your Honour, was saying that there hadn't been a statement of opposition from Mr Haddon and I was taking him to show that there had been a statement of opposition from Mr Haddon where he says that no sand at all would be taken from Pakiri beaches. So that was the –
- 25

A. Unfortunately, that paragraph's been cut off and after that there is a narrative from Mr Haddon talking about the movement from the inshore to the offshore, how Auckland needs sand to – something along those lines – and so it's not quite true and that resulted in Mr Haddon actually signing the Ngāti Wai agreement on behalf of Manuhiri and Ngatai Wai which was the agreement inherited.

Q. So your interpretation of that statement is that it only applied to the inshore, is that your evidence?

1010

10 A. My interpretation of 48 is that there was actually more in the Environment Court proceedings than that paragraph which should probably be taken into account.

Q. Now, if we can move onto your – and I don't need to take you to it, but in your evidence-in-reply you refer to the position of Te Uri O Hou, how they are taking a supportive position.

A. Where do you refer to?

Q. So in terms of your evidence-in-reply you refer to the discussions you've had with Te Uri O Hau and that they have generally been supportive of the applications, that's correct isn't it?

20 A. Yes, but probably to qualify that, more supportive for offshore than inshore, the same as everybody else. We claimed three CBAs from them, three CBAs, and the offshore one was compelling and supported.

Q. So, there was a CBA for each of the inshore midshore and offshore?

A. I believe so, yes.

25 Q. Now, you'd accept Te Uri O Hau are different iwi, aren't they? They're different to Ngāti Wai and Ngāti Manuhiri?

A. Different hapū.

Q. That's your understanding?

A. Yes.

30 Q. And so they do not speak for Ngati Wai or Manuhiri?

A. Correct. They've got an area of interest which isn't disputed as far as I'm concerned, part of it's shared as you're aware of.

Q. Now, I do want to take you to your evidence-in-reply, paragraph 79 – actually 78 and 79. If I could have that brought up on the screen, please?

Now, in those paragraphs you're talking about the sand extraction from offshore versus the sand extraction from inshore and the position of tangata whenua making no sense to objecting in the ocean but not inshore, don't you, that's what you're talking about in those paragraphs?

5 A. I think you're confused. Inshore is still in the ocean. What we're talking about here is the onshore.

Q. Sorry, I meant onshore – sorry, onshore I should've said. So onshore versus offshore. And you do say that it makes no sense to you to object to abstraction in the ocean but not when there has been sand taken from  
10 onshore, that's correct, isn't it?

A. Yes, it's an interesting concept. We're told and we know that all the sand, probably up to three to four kilometres in-land as part of the Mangawhai Pakiri embayment. Clearly, the on-land sand has been affected by the likes of farms, forests, golf courses, but also in terms of sand extraction...

15 Q. Sorry, have you finished –

A. Say again, Ms Shaw?

Q. No, that was not me.

A. Somebody else, sorry about that.

#### **THE COURT: JUDGE SMITH**

20 Somebody else was talking. You need to just –

#### **CROSS-EXAMINATION CONTINUES: MS MORRISON-SHAW**

A. All the sand, the history will tell us that it came out of the Waikato River back in the Holocene period and ended up in Pakiri and – in and around all through the Gulf, obviously. The same sand is, you know, 30 metres  
25 deep and water is three kilometres back from the shore. So the consistency of mining sand on the shore and that includes sand dunes and we had, during one of the hearings, one of the locals telling of how, historically, locals had taken the sand dunes and sold them and I'm not saying anything about that, that's fine, but you know, there was certainly  
30 a reason why some of the sand dunes around Pakiri River are not as big as what they were back, you know, 50 years ago. So just from our point of view, looking from the outside and trying to understand the difference

in values on land, land-base versus ocean-based sand and not – and we've always tried to question and get answers but we haven't been given answers to a lot of these sorts of things and this is one of the questions that we want to explore during this process.

5 1015

Q. So you say in 79, you go onto say that the same cultural value of marine sands should be assigned to the land-based sand quarries?

A. Well, when we talk and we're told about the history of the sand, you know, we can't deny it, it's fine, it's all the same sand, it's come out of the  
10 Waikato River, you know, tens of millions of years ago, whatever it was, and has ended up in the Pakiri embayment up three k's onshore and it seems okay for people to mine that there and some of the hapū and that have got interests up there as well and it's been mined and that's fine by me but, you know just – and to our advisors (inaudible 10:16:36) we have  
15 done quite a lot of different things in these consents and tried to take on a lot of advice from the people like Mr Te Rangi, Mr Anthony Thompson, to try and understand. We don't claim to understand these things but they don't, either. We're just trying to get some answers and work out whether there is any difference in the value of sand that's in the ocean versus sand  
20 that's on the beach or in the dunes or in the land past that.

Q. But that statement in 79 is not a question, though, is it? It's a statement so you're making that statement on the basis of evidence, are you, provided by or advice provided by Mr Te Rangi in terms of the cultural value?

A. (inaudible 10:17:33) sand is the same and it's definitely the same, it's geologically the same sand. (inaudible 10:17:42) area.

Q. This paragraph's talking about the cultural value of those sands so I'm just wanting to understand, are you putting yourself forward as having expertise to make assessments in terms of what cultural value might be  
30 assigned to the sand, are you relying on other people's evidence and advice to you in terms of fact?

A. Once again, as I said to you before, we've engaged respected Māori people to give us advice, cultural advice, and we take their advice. I

certainly don't want to pretend to be a cultural values expert at all or even have an understanding.

Q. So just to be clear, you're not putting yourself forward as a cultural expert?

A. No. (inaudible 10:18:31)

5 Q. And you don't have any Māori whakapapa?

A. No, not that I'm – well, there might be some I'm not totally aware.

Q. Just turning to a different topic now. Just over in your – it's in your evidence-in-reply but it's earlier, it's paragraph 14, if we could scroll up to paragraph 14, please? And in that paragraph you're talking about the assistance of the trenches and that you first became aware of them in 10 2019, that's correct, isn't it?

A. Yeah, yep, that'd be right.

Q. Did you inform the council at that time when the trenches were discovered?

15 A. No, we weren't the consent holder.

Q. So you didn't have any obligations, so you didn't inform anybody about the trenches at that time?

A. I'd say Kaipara, the consent holder, informed us the trenches were there.

Q. And during the council hearings did you inform the Commissioners of the trenches? 20

A. Which hearings, sorry?

1020

Q. In the council – I'm not sure which one it would've been, the offshore being the first one?

25 A. I believe it came up first with Mr Mead –

Q. Dr Mead, yes?

A. And we confirmed – Dr Mead, sorry – and we confirmed from our position that that was it. We weren't, we were submitting in support, the application wasn't ours, we had nothing to do with it.

30 Q. And just one final topic. Yesterday, you gave some oral evidence that in your 50 years of involvement with McCallums you can't recall a single incident involving a bird, didn't you?

A. Correct.

Q. And for those 50 years there's been no consent requirement to record any bird incidents, has there or you haven't actually got a record of them?

A. I'm just thinking – no, not in the consent requirements, you know, we're talking, primarily, the offshore consent conditions. I don't believe there was any requirement but we've talked to crews and obviously we're not on the vessel a great proportion of the time but we've talked to crews, nobody has seen, and they've got no bones about it, nobody's seen any interactions with birds. So, what we've done, and like you're aware, and maybe through this application process, and particularly with regard to the Tara Iti, is tried to make our operations as bird-proof as possible. So we extract, as you know, predominantly at night, our lighting is very much, you know, yellows and downward facing, just absolutely trying to avoid – no, there is no gain for us to attract and we want to try and avoid it. We totally support, like I said to Mr van Mierlo, with the plight of the tara iti and trying to help on that front.

Q. Thank you. So, just to confirm your answers, there haven't – to your knowledge there haven't been any bird incidents but you haven't been required to keep records and you, I think you said you're not on the vessel a great proportion of the time so you're relying on the discussions you've had with others, that's correct, that's a correct summary?

A. Correct.

### **CROSS-EXAMINATION: MS BLACK**

Q. Good morning, Mr McCallum. I just have one question for you. Your evidence-in-chief, pages 19 to 21 and paragraphs 65 to 72 of your evidence-in-chief and paragraphs 80 to 91 of your reply cover alternative sources of sand, is that correct?

A. Sorry, give me those again?

Q. Paragraphs 65 to 72 of your main evidence?

A. Yes.

Q. And it's 80 to 91 of your reply?

A. 91 sorry?

Q. 80.

A. 80 to 91.

Q. Of the reply?

A. That's correct.

Q. In those paragraphs are you saying, broadly, that manufactured aggregate is not of sufficient quality to be a substitute for offshore sand from Pakiri, have I understood that correctly?

1025

A. There's a mixture of reasons why it's not suitable to replace all the sand at Pakiri and quality is part of it. The actual availability of it is another thing and, as I say, some of the industry people who have put evidence in go through this with more depth and more knowledge than myself.

Q. Thank you, it was just a broad question, I'm not too concerned about the detail. So your broad answer is 'yes that's correct'?

A. Yes, and it's also a cost factor and there's certainly an energy/carbon footprint factor which should be taken into account.

#### 15 **CROSS-EXAMINATION: MS WIKAIRA**

Q. When you talk about the offshore and inshore and that people didn't want the – sorry, the nearshore, the inshore – but didn't mind the offshore, I was at a meeting when I was about 32 years old, it was at The (inaudible 10:26:17), Pakiri, where all the families got together, and every single person in that meeting said no to all of the dredging, I've never known in my whole 52 years where any family member has said: "No, no, take away the inshore and the offshore's fine." I don't understand where you think that that's what people were saying, all my families, all the people, all the Māori?

A. One of the points I've made is that in preference to dredging inshore everybody supported a move of the inshore consent. They may not have wanted sand extraction but if we were going to dredge anywhere, which we had a 14-year consent in those early days, they preferred it and we talked to people in the Pakiri Hall and the Pakiri cricket club, everybody preferred the extraction to be further offshore and that flowed through into the Ngāti Wai agreement and the Environment Court decisions around that.



Q. But I can say, hand over heart, that that's just because it was better for (inaudible 10:27:35) but no-one ever, no-one ever said it was, that they didn't mind about the offshore, everyone was against the offshore, is my understanding, right? You're just saying that because we move it over there it's better, but I'm saying that that might be what they said because they were (inaudible 10:28:00) something but in their hearts no one wanted the sand to be dredged, ever. And then how did you come to hire Mr Te Rangi, do you know how that –

A. Yes, Mr Te Rangi on the Sea Change process and he was one of the iwi advisers or one of the iwi representatives, I think you'd say, and I respected him, I talked to other people, some of our local iwi about him, and everybody, that I'm aware, respects him, his knowledge and the person he is. So we, earlier in this process, realised that the iwi perspective was very important and unlike Kaipara we decided that we needed to engage on a substantial scale and you've probably read the engagement document to try and understand the iwi issues, the Māori issues, within the Bay to see whether we could try and mitigate and, you know, make the place a better place for everybody. So, Mr Te Rangi has been involved in that journey, his relationships and knowledge and friendships span a very great area and, yes, he's been very, very – well not very useful but also guiding us and also sharing, as I have been, as he could tell us.

1030

### **CROSS-EXAMINATION: MS URLICH**

Q. Tēnā koe Mr McCallum.

A. Mōrena.

Q. Can you hear me okay?

A. Yes, thank you.

### **MR POU:**

Good morning, just for your Honour's benefit, Mr Urlich is going to ask most of our questions but I do have some follow-ups afterwards.

**CROSS-EXAMINATION CONTINUES: MS URLICH**

Q. Firstly, I'd like to re-visit some of the questioning that Te Whānau o Pakiri have around sand being a taonga and the perceived inconsistencies from MBL so can I take you back to your reply evidence, please, starting at paragraph 77 and that page reference is 1A 15. In that paragraph you say Ms Haddon refers to sand being a taonga, don't you?

A. Yes.

Q. And you would also be aware that Ngāti Manuhiri, Mr Hohneck claims the same in his evidence?

10 A. Yes.

Q. Can I just get you to look over paragraphs 78 and 79 please of your evidence-in-reply?

A. Yes.

Q. Now, I'd like to take you to Mr Hohneck's evidence-in-chief, so that's folder 9, page starting at 3410, if we can go to point 19, paragraph 8.19, reference 3422, you'll see there that Mr Hohneck says that kaimoana used to be expensive along the Pakiri coastline, correct?

A. Yes.

Q. And they relied on (inaudible 10:33:04), in terms of food, they harvested them, they ate them, yes?

A. Yes.

Q. Now if we scroll back up to the heading of this subsection or of this section which is 3420, kaimoana is a taonga to Ngāti Manuhiri, isn't it? You'll see the section there, heading there.

25 A. Where do you see that, sorry, I haven't got that in front of me.

Q. So, if you look at the heading of section 8, it says taonga species, and kaimoana is listed under that heading.

A. Underneath that, that's fine.

Q. Now, if we can go up to paragraph 7.3 so that's 3419, page above, it's on the same page, sorry.

A. 7.3? Yes.

1035

Q. So their systems require balance, things that are taken must be replaced, what is harmed must be restored whereas depleted must be replenished.

So, if we look at environmental management in accordance with Manuhiri tanga they're more focused on sustainability, aren't they, as opposed to, say, prohibiting use of taonga species, full stop?

A. Yes.

5 **MR MACRAE:**

Your Honour, if I might interject. I object to the train of these questions. Mr McCallum has made it perfectly obvious that he is no expert at all in Ngāti Manuhiri of cultural concepts and that he, indeed, doesn't have a very good understanding of them. To put to him an explanation of some of those concepts  
10 which Mr Hohneck has made and ask him whether he agrees with them is, in my submission, an entirely empty exercise and is taking us nowhere.

**MS URLICH:**

We would totally disagree with that submission. Mr McCallum has made clear statements about how values should be assigned to inshore sand or onshore  
15 sand as opposed to coastal sand. He's also made comment about the perceived inconsistencies between Ngāti Manuhiri (inaudible 10:35:58) and these paragraphs of Mr Hohneck's evidence clearly highlight those differences.

**WITNESS:**

I'm not talking about Manuhiri's inconsistencies.

20 **MR MACRAE:**

Sir, my point is –

**THE COURT: JUDGE SMITH**

You obviously don't require the Court. Do you want to have this discussion offline?

25 **MR MACRAE:**

I'm sorry, Sir, I was responding to –

**THE COURT: JUDGE SMITH**

Well, this is a court and I would expect if somebody raises an objection you would wait for the Court's direction before weighing in. Before I ask for a formal response from Ngāti Manuhiri, can I see if anyone else wishes to either support  
 5 or oppose the objection? So, is there anything further you want to add, now, Ms Ulrich, to your response to Mr MacRae's objection?

**MS URLICH:**

No, thank you.

**THE COURT: JUDGE SMITH**

10 So Mr MacRae, do you want to respond to Ms Ulrich's points?

**MR MACRAE:**

Just very briefly, Sir. If Ms Ulrich wants to question Mr McCallum about his statements on Mr Hohneck's evidence, she should refer him to the relevant  
 15 evidence in his statements and ask him questions on those and then that's what Mr McCallum has put his name to. To ask him questions on Mr Hohneck's evidence, which Mr McCallum has made clear that he's not in a position to dispute but on the other hand is in no position to affirm, as I submitted, well, in my submission is a meaningless exercise and I object to the questions on that  
 20 basis.

**THE COURT: JUDGE SMITH**

I was going to say if we're going to spend all our time, as Ms Morrison did too and I see Ms Ulrich is doing the same thing, saying: "You've got no expertise to comment on these matters," we just, there is no point in asking the question.  
 25 So the fact that you asked the question shows that you're intending the person to respond and to suggest that they can't respond vouchsafes the very point of your question. So that it seems to me to be an unnecessary circular and it seems to me somewhat polarising approach because it suggests that the only person that can comment on the evidence is your witness and any response  
 30 that the other witness gives is invalid.

Questions are weighted for the Court and I think, I don't actually have problems with the questions themselves. I think it's just the way it's framed as: "How dare you disagree with Mr Hohneck," and I think that's not an appropriate way that one gets – well, it certainly doesn't, I shouldn't speak for the whole Court, but

5 for me it doesn't seem to be productive of anything that we want to achieve. We recognise the various roles of the parties here and it could be said of every witness, and sometimes the Court says to a witness: "Why are you giving evidence about X when you're an expert and why?" Mr McCallum isn't purporting to give cultural evidence and has said at least on three or four

10 occasions that he's looking at it from his perspective. If you want his perspective, you can ask him questions. If you're not interested in his perspective, then it seems to me it's unnecessary to ask the questions.

I don't have a problem with the questions themselves, but they can't be on the

15 basis of: "How dare you doubt Mr Hohneck's evidence," which in my view would mean that there's some degree of tāonga or special status to particular evidence that cannot be in any way questioned or examined by the Court (inaudible 10:40:07) comment.

20 However, I think all the questions you want to ask can be made by just referring to Mr McCallum's evidence in the way that Ms Morrison-Shaw did in the end, to say: "When you say this you're not viewing it through a cultural lens," and I think Mr McCallum would have to accept that, as previously in questions from Ms Morrison-Shaw.

25 I think I should ask for a far more nuanced response from Judge Warren because I'm I think perhaps lacking a degree of nuance in that response, but I'm trying to be practical. Judge Warren, would you like to add anything?

#### **THE COURT: JUDGE WARREN**

30 I think Mr MacRae does have a point and in the sense that the acceptance is there that the witness isn't an expert in these areas. Ms Ulrich is seeking to highlight that further, but we understand the point and it's a question of weight after that that we give to Mr McCallum's evidence on those points. But I just,

my view is that we just see how we go and obviously if Ms Ulrich goes on too long in that regard then of course we can interject at that point.

**THE COURT: JUDGE SMITH**

(inaudible 10:41:29) we don't intend to make a ruling on the point, Ms Ulrich.

- 5 We would just suggest you reframe your questions away from some sort of absolute statement that the other witnesses' evidence cannot be vouchsafed in any way. If you focus on Mr McCallum's evidence, I think you can achieve your objectives more readily.

10 **MS URLICH:**

Thank you, Sir.

**THE COURT: JUDGE SMITH**

If you take down that – do you want 7.3 still up or shall we pull that down?

**CROSS-EXAMINATION CONTINUES: MS URLICH**

- 15 Q. No. So we were, we did start with Mr McCallum's evidence. I did want to work through these points and make sure he was across them before I turn to his evidence. So, if you've had the opportunity to review 7.3, Mr McCallum, we can move back to your evidence in reply.
- A. (no audible answer 10:42:26).

20 **THE COURT: JUDGE SMITH**

- Q. If you could just confirm that you're familiar with the relevant portions of Mr Hohneck's evidence, you have read it I presume?
- A. I just read that paragraph, your Honour.
- Q. And we're back at 78 and 79. Is that where you want to be, Ms Ulrich?

25 **CROSS-EXAMINATION CONTINUES: MS URLICH**

- Q. Yes, thank you, Sir. So, if we focus on paragraph 78 and the first sentence there. Have you had a chance to review that?
- A. 78, yes, thank you.

Q. Do you agree that applying the lens of Ngāti Manuhiri, as we've just visited in Mr Hohneck's evidence, might lead us (inaudible 10:43:41) inconsistency?

A. I'm not too sure how you get there, tell the truth.

5 Q. Let's park that there. Now the other issue I wanted to revisit from Te Whānau o Pakiri was the trenches. So, if we can go to your rebuttal evidence, again paragraph 13. I'll give you a chance to read through 13 to 15.

A. Correct.

10 Q. (inaudible 10:44:49) discovered the trenches in 2018, late in 2018, didn't it?

1045

A. Yes, apparently late 2018 they did a bathymetric survey which showed up some trenches and they informed us in January '19 I think the email  
15 was dated. And after that, we went and put divers down and, I wasn't one of them but a couple of divers down to see what that actually was and, yes, certainly found trenches.

Q. And what happened after you located or MBL retook the trenches and the divers clarified them?

20 A. We talked to Kaipara about it. We said we'd put an exclusion zone, our own exclusion zone around the extent of the trenches that we could find to avoid dredging them. As I say, there was, in the condition 3 of the offshore consent there is a condition about having, as it says in there, it did encourage dredging in concentrated areas of the seabed to avoid  
25 further spread effects on marine ecology. But clearly the thinking now is totally different to that and that's where we've got. Our extraction cells and spread out over as much of the area as what we can access and with the idea of being to evenly extract it to stop any trenching.

Q. I will return to that particular condition of the consent shortly, but firstly I'd  
30 like to make sure that we have a clear understanding of the timeline of when the trenches were discovered and when the exclusion area was applied. So, 2018, Kaipara discovered it, that's correct, isn't it?

A. Yes, apparently.

Q. And then January 2019, MBL learnt of the trenches?

A. Yep.

Q. And then in August of 2019, Kaipara applied for further extraction, offshore extraction consents, is that right?

A. I believe so. I think that's when the applications were accepted.

5 Q. And then in February 2021, Dr Mead made those trenches known to the Panel at the council hearing, didn't he?

A. I believe so, yes.

Q. And then in April 2021, MBL and Kaipara applied an exclusion area to the parts of the seabed that contained the trenches, didn't it?

10 A. As I said, we had already installed (inaudible 10:48:06) area back in early 2019 when we were first made aware of those trenches. The exclusion area you're talking about is the one which was done in consultation with the council. Kaipara being the consent holder drove that so there was an official exclusion, as it were, area.

15 Q. Now the final question I have before I hand over to Mr Pou is around dredging post-storms. How long after Cyclone Gabrielle did MBL undertake dredging in the embayment?

A. I can't tell you to the day, but when the weather conditions returned to normal.

20 Q. Can I take you to Mr, or Dr Mead's evidence. So that is folder 7, Mead, 2252 and the page reference is 2577.

1050

A. What was the number again, sorry?

25 Q. Sorry, 2577. The fifth line down, Dr Mead notes that MBL dredged the next day following Cyclone Gabrielle and four times in the following week. Do you accept it was –

A. Yes. Sorry, what did you say, the next day after Cyclone Gabrielle? So what date are we talking?

30 Q. There's actually an appendix to his evidence which sets out all of the dates that MBL dredged after storms. But while we're on this paragraph, how does MBL determine whether things have settled enough to dredge?

A. Are you talking about the sea state? Are you – what?

Q. In the earlier, when I first asked the question how long after Cyclone Gabrielle did MBL dredge, your response was when it had settled or –



A. Generally when the swell drops down to probably a metre, metre and a half. Cyclone Gabrielle the swell was up to 10, 12 metres at one stage. That's on a wave buoy south of Marsden Point.

5 Q. And earlier in discussions with DOC you mentioned that MBL appreciates the importance of tara iti habitat or fairy tern habitat, didn't you?

A. Yes.

Q. Did MBL undertake any surveys or any kind of observations of the beach and what the effect had been to fairy terns before commencing dredging the day after Cyclone Gabrielle?

10 A. We'd been up to the beach and seen that there'd been erosion. It's sort of meaningless in terms of what we were then going to do. We were permitted to extract sand and for us extracting sand after a cyclone or after a storm doesn't, there is no evidence to suggest, and nobody's put it forward, that that would affect anything in terms of beaches or any effect.

15 Q. Sorry, storms don't –

A. And none of the coastal experts have put this together.

Q. That storms, I just want to confirm that I've understood you correctly. Are you saying that storms don't affect beaches or –

20 A. No, not many people would think that. It's quite clear that we've had this large period of La Nina, which is easterly storms, which have affected all the east coast beaches in the North Island and Pakiri is just one of them.

Q. So, I'm not entirely clear on your response. After the storm did MBL go to the beach to assess the state of fairy tern habitat prior to commencing dredging again?

25 A. (inaudible 10:54:50) dredging the offshore extraction area, as we're consented to do, and we had been up the beach and walked the beach and seen what had happened. In terms of the fairy terns, as you're aware they're potentially in three spots, Pakiri River, Poutawa stream and then north of Te Arai. So when we saw that there had been – but nothing, you know, there's scarping in the dunes and things like that, nothing that was not expected from storms of that magnitude.

30 1055

**THE COURT: JUDGE SMITH**

Q. I'm just wondering if we don't need to be a bit more focused about the question because Mr Mead is very clear about what he's talking about. He's not talking about offshore areas. He actually identifies the areas where he says the dredging occurred, figures 5.11 if you need to know if you don't know where they are. And then the next day, near shore zones 3 and 4 and then, three days after, near shore zone 1 and 2. It's very precise. It's not about offshore areas. It's about specific dates which appear to be the 15<sup>th</sup> and the following through to the 22<sup>nd</sup> and if you don't understand what he's saying there, we can check those diagrams. Diagrams are attached and figures, so we can go to those. If you've already seen them and know what we're talking about, let's focus on the question, not about offshore areas or other things and the questions seem to be very clear. Did you consider the potential impacts of undertaking the dredging that is stated there on the tara iti on the days immediately after Gabrielle? Which again, those specific dates are given but I think it's either the 15<sup>th</sup> or 16<sup>th</sup> you commenced, rather than some sort of broad discussion that has nothing to do with this paragraph. So, are you familiar with what Dr Mead's saying or do we need to go to the figures?

A. Yes, well I can read that, your Honour. In terms of, well if we did walk the beach we did see the severe scarping of the dunes and as they come down to the beach around the river entrances and that, it's a lot flatter and so had less effect. Yes, we did start extracting, we always start on the offshore because you can actually dredge in rougher conditions, and then we moved to the inshore as, you know, I think for a period of a number of weeks we hadn't dredged any inshore sand at that stage. Obviously, (inaudible 10:57:33) –

Q. Can you re-read 5.1.2 because the assertion is based upon 5.1.2 and, with respect, you're not answering the point. That says that MBL dredged the next day and four times near shore zones in the following week. And the zones are mentioned and if you need the figures, we can pull them up, but they're all near shore zones. Did you consider the impact on the tara iti of dredging in those zones? That's the question. It's a very straightforward one from my perspective.

- A. We do take that into account, your Honour, and from what we have been told by our experts and in the past, the dredging wasn't going to have a significant effect on what had already happened in terms of the storm event which had just come through.

**5 THE COURT: JUDGE SMITH TO MS URLICH**

- Q. Does that answer your question, Ms Urlich? I have attempted to do my best. You may feel you need to do further mahi on that.

- A. I'm happy to leave that there for now, thank you your Honour. And I do have one more question. Sorry, I would like to return to the condition that we spoke about earlier which talks about concentrating extraction –

10

- Q. Do we actually have that and can we pull it up because I don't think the Court's familiar with it? It should be in the common bundle somewhere.

- A. Common bundle, so section C of the common bundle.

- Q. And is it the coastal offshore permit or another document?

15

- A. Yes, 254.

- Q. Thank you. And is it on that page or another page?

- A. It's on another page. Well, I think. I need to confirm that with Mr McCallum.

**20 WITNESS:**

It's section 3, ah number 3 condition.

**MS URLICH:**

That's 1256.

**25 THE COURT: JUDGE SMITH**

Just check that. Move a couple of pages on, thank you. We can pull that up that looks like and then the bottom one, special condition 3.

**WITNESS:**

- 30 Go down a bit please, Gabby.

1100

**THE COURT: JUDGE SMITH**

And so perhaps could I read that into the record because it is a matter of obviously some consequence. This is for the offshore coastal permit. “The consent holder shall use its best endeavours to extract sand by means of

5 smaller deeper extractions rather than large shallow extractions, and to endeavour to limit those extractions to no deeper than the thickness of the active sand layer.” Your question, Ms Ulrich?

**CROSS-EXAMINATION CONTINUES: MS URLICH**

- 10 Q. So, there’s been a lot of focus on the first part of this condition and the second part to this condition is that the consent holder will endeavour to limit those extractions to no deeper than the thickness of the active sand layer, isn’t it?
- A. Yes.
- 15 Q. The trenches were up to around 2.4 metres deep, weren’t they?
- A. Correct.

**CROSS-EXAMINATION: MR POU**

- 20 Q. In terms of those, and Ms Ulrich took you through the timeframe of when you found out about them, when Kaipara found out about them and those sorts of things, and when they became known to Shaw Mead and he told the independent Commissioners, when did either yourself as the operator or Kaipara inform the council what (inaudible 11:01:50) had been created?
- 25 A. As I said to Ms Ulrich, we were the extractor and we talked to Kaipara immediately that we found and then reinforced that there were trenches there and we said to them, and it was their consent, not ours, to tell the council. So the council, I think the council were informed through the hearing process from Dr Mead and then Kaipara had to agree to it.
- 30 Q. I find it difficult to understand how the council wouldn’t raise the issue at a hearing if it had known about it. Is that an indication that they didn’t know about it?
- A. I’m sure they didn’t know about it.

Q. Now, you've heard a lot about the ongoing protest to the extraction of sand in the Pakiri area. You're aware that there's a lot of evidence about that? Yes? No?

A. Yes, there's a lot of evidence (inaudible 11:03:05).

5 Q. And we've talked about the extraction that's been occurring for 80 years.

A. Yes.

Q. Now, just before I get into that history, we hear within a kind of – Ngāti Manuhiri supported the shift of your – in this temporary consent that you currently hold, Ngāti Manuhiri supported the shift of sand extraction operations to the offshore. That's true, isn't it?

A. In the temporary consent, yes.

Q. But they supported that shift while still being in complete opposition to the extraction at the same time, didn't they? Apparently.

A. Yes.

15 Q. So, supporting or giving a preference shouldn't be dressed up as support for something, should it?

A. Not necessarily, no.

Q. In the same way where Laly Haddon was saying, and I think the words that, the case she's – "It's preferable for it to be further offshore. We shouldn't need that to be support for offshore sandmining"?

20 A. There's quite a paragraph in there where Laly talks about sand being used in Auckland, sharing the resource for the benefit of all. So, there's still quite a bit in that Environment Court decision which isn't been brought out.

25 Q. Let's give you some context for those sorts of things. Laly Haddon was a rangatira of Ngāti Manuhiri. He was a rangatira of Ngāti Wai. He held esteemed positions. Unfortunately, when we did the evidence for this case, we put in extracts from the Ngāti Manu settlement but we didn't put in the historic account from the deed of settlement itself. So I'm going to ask Ms Ulrich up a part of the deed of settlement just for you to consider and I'm going to refer you to the historic account that sits within the beginning of every deed of settlement. It sets out the history of engagement and those sorts of things.

30

**THE COURT: JUDGE WARREN**

Judge Smith, I just note the time, given –

**THE COURT: JUDGE SMITH**

5 Yes, I wonder if we should come back to that afterwards. There seems to be a little problem with the way in which it's coming – that's better. But, and the other thing, Mr Pou, as I asked in the last hearing, could you ensure everyone gets a copy of that, including the Court, of the deed of settlement (inaudible 11:06:02) document. But it should be included. It's obviously, it doesn't have to have an exhibit number, it's a matter of record. So we'll come back to that.

10

**MR POU:**

What I'll do, your Honour, is, because you're right, it is a lengthy document and I have tried to truncate bits. Probably just best for me to provide the historic account, which is (inaudible 11:06:26) –

15 **THE COURT: JUDGE SMITH**

Yes, well I'm just wondering if you can do that for the moment, but is Ms Ulrich able to either send that through to Mr MacRae or, alternatively, leave it up on the screen, but I think it's more than one page, as I recall?

20 **MR POU:**

Yes, it's lots.

**THE COURT: JUDGE WARREN**

The entire deed of settlement would be online wouldn't it, Mr Pou, on the –

25 **MR POU:**

Yes, it is. Just to save people trucking around during their coffee break, coffee's important, Ms Ulrich can send it around.

**THE COURT: JUDGE SMITH**

30 Yes, just the pages that you'd like Mr McCallum, and I think it might be helpful if he had a chance to look at it before we restart, don't you?

**MR POU:**

Yes.

**THE COURT: JUDGE SMITH**

5 So, I agree with Judge Warren that perhaps we should take the break now. If you could send that through and the registrar will check with you, Mr MacRae. We'll go for half an hour, so that would take us to about 11.35 but if Mr McCallum needs a little longer, if you could just inform the registrar and we'll commence when he's had a chance to read it.

**COURT ADJOURNS: 11.07 AM**

10

**COURT RESUMES: 11.35 AM**

**THE COURT: JUDGE SMITH**

Has Mr McCallum had a chance to have a look at that introduction to the settlement deed, which is the historical presentation essentially?

5

**MR MACRAE:**

Yes, thank you, Sir. I haven't had a chance to ask him, Sir, but he's nodding.

**WITNESS:**

10 Yes, thank you, your Honour.

**THE COURT: JUDGE SMITH**

Thank you. I think, Ms Urlich, you were going to pull up the relevant portion, were you, for us to see as well?

15 **MS URLICH:**

Yes, Sir.

**THE COURT: JUDGE SMITH**

And Mr Pou, you had some questions relating to it, so we'll go to your first area of interest.

20 **CROSS-EXAMINATION CONTINUES: MR POU**

Q. Yes, your Honour. So, this is page 44 of the deed of settlement and it reads, it's a historic account. Ms Urlich directed your attention to that place. You can see there on the bottom highlighted part, Mr McCallum, you can see that Pakiri were complaining way back in the 1940s, that's 80 years ago, about people taking sand from their coast?

25

A. Correct.

Q. So, it's a longstanding opposition and protest that's occurred, you'd agree?

A. Yes.

30 Q. You understand that?



A. Yes.

Q. Now, you talked about when you got there you said that there were, you saw that there was pines down to the coast and there was nobody living there. If you read that –

5 A. Not entirely.

Q. – read that –

A. I said –

Q. Sorry, I interrupted you. You were answering a question.

A. Yeah, no, no. I said when I was a young fella going on the vessels inshore  
10 where we're extracting the pines et cetera down to the beach to the left there was farmlands or to the southern end there were farmlands and the odd house but, yeah, nothing like what's there now obviously.

Q. Are you aware that historically that if you look there at the first one, in  
15 1932 local farmers were concerned about sand drift, raised the issue with the Public Works Department and Ngāti Manuhiri actually had to vest that land in the Crown so that those farms could be protected. That was Ngāti Manuhiri land those pine forests, are you aware of that?

A. Yes, I'm aware of that. Yeah, I've read that.

Q. And that as part of their settlement they had to buy that land back off the  
20 Crown for six and a half million dollars, just to reassert themselves there.

A. Yes.

Q. You can see and I think Parikri G I think that's the greenwoods, you see all of this – what's happened around there has left them landlocked as well.

25 A. Yes.

Q. So these developments for other people which Ngāti Manuhiri have and I'm going to say allow within, within a context have allowed to occur have resulted in ongoing intergenerational prejudice to them, you understand this?

30 A. Yes, that's fair.

Q. So a lot of time – and this is where I get to where you're mining from Laly Haddon statements of consent, a lot of times they're agreeing to give their land, they're agreeing to consents, they're agreeing to particular

things because basically they're trying to make the best of a bad situation, you understand that?

A. Well as I read it.

5 Q. And I guess that's the context when we say offshore extraction is preferable, it's – the preference, you understand the preference is no sand extraction but they understand the obligations of manaaki the rest of Auckland to build Auckland to support all these sorts of things and the acceptance is within that context, it's not necessarily something they necessarily want, you understand that?

10 1140

A. Okay, yes.

Q. Now – you can take that down. Now I read through your evidence and a lot of your evidence talks about alternative supplies and those sorts of things and you talked about availability being a constraint, you talked  
15 about quality of sand being a constraint, that's correct?

A. Yes, that's part of the issues, yes.

Q. And one of the other constraints that you talked about was transport costs?

A. Correct.

20 Q. I took the time and I looked at the, in particular – because one of the issues is you say it's too costly to bring Waikato sand in because of the transport costs to get it to central Auckland?

A. That's certainly a factor. So in terms of transport costs there's obviously a dollar value, there's a social cost in terms of trucks and trailers on the  
25 road, damage to the roads, damage to people, injuries et cetera and then there's of course another environmental cost is carbon emissions and footprints and that's something that we've put quite a lot of work into. We've got an expert, Mr McIlrath, who goes into great detail. But, you know, (inaudible 11:41:38) I believe the carbon footprint that we're trying  
30 to establish using Pakiri sand is a lot more reduced than if we were supplying certainly Waikato sands probably blow the carbon figure, it quadruples, oh, many times. It's substantial numbers of CO2.

Q. But that's on the basis that the sand would have to be transported into central Auckland though, isn't it?

- A. Well central Auckland is an average in Auckland, isn't it, in terms of we don't talk about, well we actually do. Mr McIlrath goes through concrete plant by concrete plant with (inaudible 11:42:20) general conversation we talk about getting sand into central Auckland, it goes west, north, south or east.
- 5 Q. Yes I guess, when I had a look at, you had a couple of witnesses that gave evidence in the interlocutory application, one was Mr Lowry for Wilson Tunnelling. His concrete plant I understand is in Drury which is a little bit –
- 10 A. Mr Lowry?
- Q. – closer to (inaudible 11:42:48).
- A. No, Dan Wilson from Wilson Tunnelling was the person who gave evidence. I don't know who Mr Lowry was sorry.
- Q. Sorry, that's just the brief of evidence that I had on the... Sorry –
- 15 A. Dan Wilson and Patrick Bridgeman.
- Q. Yes, Lowry is his middle name.
- A. Oh, right. I don't know him by that.
- Q. So it's Daniel Lowry Wilson, sorry, I got there.
- A. I'll (inaudible 11:43:25).
- 20 Q. Wilson Tunnelling is in Drury, so –
- A. No it's not.
- Q. Well that's, I just had a look and that's where his concrete firm was based and I saw that Bridgeman Concrete –
- A. That's dated, it's actually in Ormiston, Sandstone Road, well Ormiston.
- 25 Q. And where's Ormiston.
- A. Is where their factor is. Ormiston's Highbrook, Ormiston. It's just an Auckland term, East Tamaki.
- Q. East Tamaki, which is South Auckland?
- A. Yes, central.
- 30 Q. And I saw that Bridgeman –
- A. Well, yeah, not quite.
- Q. Bridgeman Concrete's, well you've got, on one hand you've got sand having to be transported through central Auckland to East Tamaki or on the other hand – the issue for me is this, it seems, if we're going to talk

about transport costs we need to talk about transport costs, if we're going to compare sand coming from Waikato (inaudible 11:44:30) place in Papakura as well which is, that's South Auckland isn't it?

A. So their smallest plant is Papakura. Their biggest plant is East Tamaki.

5 Their next biggest plant is Avondale.

Q. So that's still, East Tamaki that's still on the southern side of Auckland, if we can't call it South Auckland?

A. Yes, yeah, I think it's 12 ks out compared to, you know, 30-odd ks out to Boundary Road, 40 ks.

10 1145

Q. You talked about the use of manufactured sand and how that would be manufactured sand costs about \$45 – hold on, you said the cost of extraction for, I'm going to try and do this without taking you to your evidence, the cost of extraction –

15 A. Okay.

Q. – from Pakiri is 35 to \$45 that's fair, that's what you say?

A. That's the delivered price.

Q. And your evidence says that the cost of manufactured sand ex-quarry is \$50?

20 A. That's figures we've been given by the likes of people like Kaipara Limited who run quarries, we don't run big quarries, and they've investigated manufactured sand, the cost of it, the energy costs, the availability of rock to crush to make manufactured sand then also looked at the final product and what it is.

25 Q. Well 45 to \$50 is only 10%, Mr McCallum, that's – it's not huge is it?

A. Once again, Mr Pou, we're talking about ex-quarry. So another 15, well 20 bucks a tonne on top of that delivered, so it's substantial. Yeah, the thing about manufactured sand is currently there is no manufactured sand commercially available in New Zealand. In Australia there's been a  
30 manufacturing sand plant there for a number of years which hasn't really gained traction despite what the people who sell them say. Around the world and our concrete people you'd be better to cross-examine them on it, they're pretty much (inaudible 11:46:58) with manufactured sand compared to natural sand. Look, we know that at some stage there's a

place for it but to substitute everything that we're doing in the immediate short and even medium term is not viable and once again not just a cost but the economic and the environmental carbon footprint, I get back to that, is huge compared to the Pakiri sands.

5 Q. And I was just getting to your evidence because your evidence you say it's 35 to \$45 for Pakiri sand and your own evidence says that it's \$50 for the manufactured sand –

A. Yes, but –

Q. – you say well –

10 A. – ex-quarry.

Q. Wait, wait, wait, I need to finish the question, okay? I know these are exciting times but I do need to ask the question so that you can answer the question because I am only referring on the evidence that you've given and you've given a cost of \$50 ex-quarry, it depends on where the quarry is, so that also depends on whether, where, how close to the concrete plants those quarries are and those sorts of things. But I just put it to you that on your evidence \$50 versus \$45 isn't necessarily, it doesn't seem to me the budget blow-out that you're asserting here? Now you can answer.

20 A. Yeah, once again ex-quarry is totally different price to landed and so if you look at some of those, the quarries are located in south or east of Auckland and it's a, you know, sort of 15 to \$20 per tonne transport to get to the majority, 15-odd to East Tamaki and then it can be more as you go further afield.

25 Q. Can I ask –

A. And if you're south of –

Q. – how many –

A. – Auckland obviously then...

Q. But there are concrete plants south of Auckland?

30 **THE COURT: JUDGE SMITH**

Q. I'm just getting a little bit confused.

A. Totally agree.

Q. The landed price is the price from the wharf in Auckland, is that right? Is that what you mean by “landed” I don’t know what you mean by landed.

A. Yes.

Q. And it's according to –

5 A. Landed at the concrete plant –

Q. I just checked and it's 21 k to Ormiston so I’m assuming it's about 20 k to the plant. The – what Whitford Quarry would be the nearest quarry?

A. Yep, that’s one and then you go to Hunua, Drury and then over the Bombays.

10 Q. So Hunua and Whitford would be the what 10 k?

A. Bit more than that, so it's about a\$15 cart.

Q. So what’s the difference between your cart and their cart?

A. No, no, very similar but same. The \$50 is ex-quarry so add 15 onto that, it's about 65, so you’re going from 45 to 65 say at the top end.

15 Q. Yes, from Central Auckland to the quarry is 55, so I don’t know where – I just don’t follow the issue.

1150

**MR MACRAE:**

If I might assist, your Honour.

20 **THE COURT: JUDGE SMITH**

Yes.

**MR MACRAE:**

I think you might have missed the end of Mr McCallum’s answer to your initial question where he said that the landed price includes delivery to the  
25 manufacturing plant.

**THE COURT: JUDGE SMITH**

Q. So what’s the landed price at the wharf then? Are you saying the landed price at the wharf is minus \$15?

A. Yes. It’s a variety of prices depending on how far from the wharf. So as  
30 we said, it’s an average of between 35 and 45 landed at the concrete

plant. The manufactured sand coming from – if it came from Brookby which, as you know, is the closest quarry, is \$50 odd, according to what we've been told, about another \$15 of transport to get it into East Tāmaki.

5 Q. But Brookby too has its own trucks, so I'm assuming they have a delivered price as well.

A. Well they don't manufacture sand, your Honour. They manufacture pap which is a similar manufacture with sand but the actual manufactured sand Mr Pou is talking about is a different grading again. It's to try and reduce the amount of natural sands as we produced from Pakiri.

10 Q. I must say, I'm not enlightened. Carry on, Mr Pou.

**CROSS-EXAMINATION CONTINUES: MR POU**

Q. I'm less enlightened. How many tonnes of sand in a cubic metre?

15 A. About 1.3 dry, 1.8 wet. Or bulked, 1.3 bulked. So, yeah, because it starts off as wet sand it's 1.8, and as it dries and gets bulked up, so fluffed up, it gets down to about 1.3.

Q. Is the royalty paid on the wet or the bulk fluffed up?

A. Cubic metres wet. As in the sea floor.

Q. And you sell it by the tonne or by the cube?

A. Predominantly by the tonne, then you can weigh it.

20 **THE COURT: JUDGE SMITH**

Thank you, Mr Pou. That's been an issue that I've been worried about from the beginning because previous cases, the difference between metric and tonnage becomes quite significant.

25 **MR POU:**

Look, I'd like to think I had gold but I'm just asking questions from my own ignorance really, so I'm seeking enlightenment.

**CROSS-EXAMINATION CONTINUES: MR POU**

30 Q. Now in your evidence you talk about the agreement that Kaipara had with Ngāti Wai. It's been traversed with you with Ms Morrison-Shaw. You're aware of that agreement?

A. Yes.

Q. But even in this process, even in this hearing, Ngāti Wai don't support the ongoing extraction of sand?

5 A. We haven't seen them up here yet. They've, through Laly, signed the agreement back in 2003 or whenever it was, I don't have the exact date for that one, and received just under \$1 million royalties since then, as part of the deal plus...

Q. You've reached out to engage with them?

A. Yes.

10 Q. And they haven't come forward in support?

1155

15 A. Initially, like I said previously, when we first started this round of consent applications, we went to Ngāti Wai up in Whangarei to see Haydn Edmonds who was the chairman and talk to him about the consents and what we were after. He deferred us to go and talk to Manuhiri south of Te Arai Point and Te Uri O Hau north of Te Arai Point. So, we did that. We have talked with particularly Mr Parata from Ngāti Wai. He was our contact who had spent time on the *Coastal Carrier*. So, part of the deal with Ngāti Wai was to get them involved in what we were doing. We had them on the vessel a number of times. COVID obviously blew out, you know, about three or four years, and since then we've talked to Mr Parata and kept them involved or up-to-date where we are with the consents, the transitional consent and, yes.

20 Q. But the clear direction that you were given was that you should engage with the hapū most affected, who are Ngāti Manuhiri. That's the direction you've been given from Ngāti Wai from Haydn Edmonds?

A. Manuhiri south of Te Arai Point and north of Te Arai Point Te Uri O Hau.

25 Q. Now, you're aware though that the deed of settlement for Ngāti Manuhiri gives the coastal statutory acknowledgement north of (inaudible 11:56:34)?

30 A. A shared one, yes.

Q. And I want to be clear. Ngāti Manuhiri Settlement Trust is not asserting that Te Uri O Hau have no interests north of Te Arai Point, but the deed of settlement doesn't record anything for Te Uri O Hau. The deed of



settlement for Ngāti Manuhiri records “a coastal statutory acknowledgement going up to the Bream Tail” which is just north of Mangawhai. You’re aware of that, aren’t you?

5 A. I’m aware of that one. I’m also aware of the deed of settlement for Te Uri O Hau.

Q. And Ngāti Manuhiri wouldn’t have settled the things that are in the deed of settlement, including a statutory coastal, the statutory acknowledgement up to Bream Tail?

A. (inaudible 11:57:32).

10 **THE COURT: JUDGE SMITH**

Is that a question this witness can answer?

**THE COURT: JUDGE WARREN**

Thank you, Judge. I was just about to say the same thing. It’s not for this witness to comment on that.

15 **CROSS-EXAMINATION CONTINUES: MR POU**

Q. You know it’s a bad question when both Judges are struggling for their mute button to get in there and make the objection. We can’t go further than that. The Crown (inaudible 11:58:00) through the settlement process that the interests of Ngāti Manuhiri north of Te Arai?

20 A. Yes, and also Te Aroha, and that was an earlier settlement.

Q. Are you aware of whether or not Te Uri O Hau opposed, and I’ll take this up with their witness but I’m just asking are you aware of whether or not they opposed that statutory acknowledgement that was granted to Ngāti Manuhiri after (inaudible 11:58:33).

25 A. I believe you told us yesterday they didn’t oppose it.

Q. Eh?

A. You told us yesterday they didn’t oppose it, so I believe you.

**THE COURT: JUDGE SMITH**

I say again, this came up in the last hearing and I didn’t understand there was  
30 any dispute between Te Uri O Hau as to the interest they have in this area.

**CROSS-EXAMINATION CONTINUES: MR POU**

Q. So in terms of those instruments, when somebody tells you that you should focus on Ngāti Manuhiri but the focus should be south of Te Arai Point, you would understand that you should tread carefully on that advice?

5

A. Once again, I listen to people who advise me. I'm not making that decision, Mr Pou.

Q. But people that advise you, taking into account statutory acknowledgements and those sorts of things. I mean similar things to the MACA claims in the MACA Act where you've got to engage with everybody who's putting the claim there as well, don't they?

10

A. We did.

Q. You can't ignore those statutory instruments like the statutory acknowledgements for Ngāti Manuhiri north of Te Arai?

15

A. Well, clearly clear and I've talked to Mr Hohneck, as you know, at length about this and, yes.

1200

Q. Thank you. Look, there is a one more area that I do want to traverse with you and it's this discussion that occurred yesterday around the use of AIS.

20

A. Oh, right, yeah.

Q. Automatic Identification System, that's...

A. Automatic Identification, yeah, that's correct.

Q. And your evidence essentially is that it should be disregarded as unreliable, is that the case?

25

A. Yes, so advice we've had, and I think you should probably go on MarineTraffic website yourself and have a look in the terms and conditions, and there's a whole lot of wording there around about accuracy and what they – disclaimers basically, so maybe have a look for yourself and see what they do. But basically anybody with a maritime background and knowledge don't use AIS as an absolute positional instrument.

30

Q. But it is still –

A. And Mr Dawson's – and I realise Mr Dawson's evidence wasn't admitted, that's fine, and it was a jolly timing thing. We did it on the day that our

evidence was due but it came in later that night so we couldn't put it through. So when you're trying to actually position a vessel within metres timing, it's really not the instrument to use. So we've looked at this whole thing and to say that'd be quite traversed re traffic. Look at the Leigh AIS station for instance and it's got statistics on how unreliable it is and currently as of Sunday night it was running at, I think, 38.9% inaction so that means 100 minus 38.9 is 61.1% of the time it's not reliable. So there's a whole lot of things like that. What we use on our vessel is a dedicated navigation system called MAXSEA which is on a whole lot of vessels, so we're point-plotted coordinates for the extraction areas and then we've used that to relay the positions of the vessels during extraction to the council. As we said during the transitional discussions on transitional consent and hopefully it's installed today, one of the navigational companies has come up with a system which will have an independent GPS recording which is basically shut away on a computer with no screen with two GPSs on which will mark on a chart when the drag head touches the ground and when the drag gets lifted. So we appreciate that Mr Clapshaw spent an enormous amount of time watching the vessels and we keep telling our skippers and all our crews that they are being watched, there is somebody watching you, it's not just big brother anymore. So when we wanted –

Q. Can I ask you –

A. – something –

Q. Just I want to stop you there because otherwise you're going to blow out the time that I've estimated for my questions. Just think. MAXSEA, is that a type of recorder, is that a brand?

A. it's a navigational distant, yeah, we're on Furuno. So MAXSEA's like software.

Q. And you've got as one of your catchments you've got a service manager for Advance Trident, do they sell that software?

A. They will. I think we bought it from ENL though.

Q. But they sell that software?

A. Yeah, we use different people. ENL were the people who provide our MAXSEA I believe.

Q. And are you –

A. Don't quote me but I believe.

Q. Are you required to have AIS on your...

A. Yeah on vessels our size.

5 Q. Yes. Could you just pull up the regulations please? Because I did have a look at the Maritime New Zealand website, (inaudible 12:04:52) through all the regulations and those sorts of things. There are particular boats that are required to have AIS aren't there?

A. Yeah, correct.

10 Q. And there are also some local – can you go to the beginning – regulations that require you to have AIS on them, don't they?

A. Yep.

Q. For instance, this one. Navigation bylaw. Are you familiar with this?

A. Right, yeah, we're –

15 Q. Can you go to 41.

A. So most of our stuff is related around Maritime New Zealand MOSS but we obviously have to fall into this as well.

Q. So when Maritime New Zealand say that particular boats – go to 41, it's clause 41 – when they say you have to have this AIS on and you're saying that it's – and I just want to, just while we're here, you see 41 there, Automatic Identification System, that's an AIS?

20

A. Yep.

Q. And if we go to clause 4 a large – that's, your vessels are large vessels because they're over 40 metres?

25 A. Correct.

Q. So you have to have an AIS on them?

A. Yes. And we've got them on smaller than 40 metres as well.

Q. And your evidence that Maritime Safety, given that they're promoting these requirements these, well this is the Auckland bylaw, but even in Maritime in the Maritime rules they require particular boats, SOLAS boats, SOLAS, not soulless as in without a soul, S-O-L-A-S, Safety of Life at Sea.

30

A. You know, I think (inaudible 12:06:48).

Q. So when you say that the maritime rules discourage the use of AIS, that's not quite true, they actually require it in particular circumstances, don't they?

5 A. I didn't say they discourage use of AIS. AIS is used for a different thing in navigating an positional, accurate positioning. So AIS is great, you can generally see all plea – well a lot of pleasure boats have got them too. But in terms of actual navigation and what Mr Dawson advised us from Maritime New Zealand is that in terms of actual location and to pin a location go to things and up-to-date chart and secondly there's another  
10 system ECDIS, Electronic Chart Display and Information System. But, yes so in terms of navigating the go-to thing is radar. Radar, GPS, so you don't actually navigate as such with AIS, what you do is you hopefully see the vessels around you with AIS but like we showed yesterday our AIS has its limitations in terms of accuracy and timing.

15 Q. I think AIS –

A. And I could say there, for example, heavy fog. If you read about AIS they say that AIS quite often doesn't work in heavy rain.

Q. To be fair I didn't understand that when Mr Shaw Mead was and when Mr Clapshaw was using that information, I didn't understand those  
20 pinpointed days were during times of heavy rain, because I think Gabrielle was over.

A. I never said that. What I said about heavy rain is that if you read about AIS it says that it can be unreliable during period, weather periods, heavy rain et cetera.

25 Q. So every system has limitations but the information that can be gleaned from them is still at times usable, isn't it?

A. Yep. Definitely, but like I said with the Leigh one, which covers the Leigh area where we extract from, it's only online 38.9% of the time currently.

Q. So if Mr Clapshaw is able to utilise the information when it is online, that  
30 information is still useable, isn't it?

A. Well did you see the picture of the screenshot we showed yesterday, Mr Pou, of apparently a tug following a barge down Whangārei Harbour but the AIS was satellite AIS. So AIS works off two things, VHS and satellite, the vessel was –

Q. I'm just going to stop –

A. – actually outside the harbour.

Q. – you there. I'm going to stop you there. That was in Whangārei Harbour, we're talking about in Leigh and we're talking about where Mr Mead and Mr Clapshaw are saying that the positioning matched up with the lines that were being left with the dredge lines. So we are, notwithstanding the limitations of AIS, it does seem that Mr Mead and Mr Clapshaw are referring to instances where the AIS was giving accurate information, and I just put that to you for comment.

10 1210

A. Maybe. A number of the instances which Mr Mead and Mr Clapshaw's reported to, for instance, the Auckland Council, and we've provided from our MAXSEA the dredge track, of the actual dredge track, and that's within metres, they didn't seem to line up. Other things which we found hard to understand with Mr Clapshaw was distances from exact, you know, from the likes of mean high water spring and where he had ascertained that to be. We weren't dredging. He knew where the vessel was potentially but there was no way to tell whether it was dredging or not. So that's why we've invested in a system which we hope is fool proof to actually show where the drag head hits the bottom, because there the dredging occurs. It doesn't occur until that.

20

Q. I think we're talking about two different things, Mr McCallum. You're talking about investing in a system which you say will be more accurate and I'm talking about Mr Mead and Mr Clapshaw using information from a system which they say on its face is accurate given the correlation of what they were monitoring with the lines that were being dredged. So whether or not MAXSEA is a superior system to AIS is not the case, is not the issue. The issue is –

25

A. It is the case to the navigational position.

30

Q. No, no, no. You have to stop interrupting. Whether or not MAXSEA is superior to AIS is not the issue. The issue is whether or not Mr Shaw Mead and Mr Clapshaw utilising AIS data when you're required to carry an AIS is necessarily something that this Court should be giving weight to in its determination. And in terms of you disregarding AIS, and

I want to put it to you we have Mr Shaw Mead and Mr Clapshaw using information and their evidence is there, it's on the record, and I'm putting it to you, because we are here representing Mr Clapshaw today, that that is an indication of you perhaps drawing outside the lines in terms of the allegations that they've made. So I want you to respond. I'm putting the allegations that Mr Shaw Mead made so that you can respond. I'm not putting it in a way that says that AIS is better than MAXSEA but that the evidence and the use of the AIS information that Mr Mead has put before this Court is something that the Court needs to necessarily look at, and I'd like your response on that focused on the particular information that's there.

A. Once again, take a step back and look at the conditions and terms of use of AIS on the MarineTraffic, and, you know, it says things like: "User acknowledges and agrees AIS data provided by MarineTraffic may be inaccurate or incomplete and are subject to error, delay or change. Reliance upon or use of AIS data shall be at user's risk." Under their warranties, they go: "No warranties. MarineTraffic does not warrant or represent the use of data in terms of its correctness, accuracy, reliability or otherwise." So that's probably not a great start. But just going to what happens in the marine world again is that this position of vessels is really relevant in terms of fishing, commercial fishing, and that's Mr Dawson, who is a marine lawyer, that's his speciality, and MPI obviously have a huge amount of interest with things like trawling and no-go zones and things like that, and for them and what we've been told is AIS is not acceptable in a court of law for prosecution.

1215

Q. Is it interesting that the marine rules don't require you to carry a MAXSEA but they require you to carry a AIS? That the bylaws –

A. Now MAXSEA – sorry.

Q. That the bylaws –

A. It's just a navigational package program and look you don't have to have any navigational gear on board apart from a compass, a chart and depending on your size an AIS.

Q. But you have to have an AIS?

A. It's just about the accuracy. It's about accuracy.

Q. Look in terms of –

**THE COURT: JUDGE SMITH TO MR POU**

5 Q. We seem to be going around in never-ending circles on an issue that from  
the Court's point of view is quite straightforward. The issue is to proof of  
Mr Clapshaw or Mr Mead's assertions, that's a matter for evidence, we  
have to hear it, and this seems to be an assertion that that information  
was (inaudible 12:16:08) at the time. I don't know if that – we'll wait and  
see, I don't know what's said about MAXSEA for that. The second issue  
10 is that the applicant itself now has cast doubt upon whether or not there  
is a system available that will give us absolute certainty in real time as to  
position of the craft. Without that the Court is going to have serious  
concerns about the operation of the conditions. So it's for the applicant  
to establish that they can give real time information as to exactly where  
15 the vessel is at all times. Without that there are real concerns as to  
whether or not the consent conditions can ever be enforced. So just leave  
it at that. I don't think it's necessary to – this Court has no particular  
interest in what the system is. What it needs is some sort of absolute  
certainty that it can (inaudible 12:16:53). This is an issue we dealt with in  
20 Mōtītī you might remember about the – MPI certainly believe they have  
absolute certainty about the tracks because they sought to protect them  
so much if you recall.

A. Yes, absolutely, Sir.

25 Q. I think we need to move on unless there's some other aspect of this that's  
missed.

A. No, Sir, that was it. I guess the issue for me was, you know, we have that  
finding by the independent commissioners. Sorry, Sir, I see you're cutting  
me off but you're on mute. Sir, you're muted, so it looks like you're  
silencing me but...

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**THE COURT: JUDGE SMITH**

Can I check, Judge Warren, can you hear Mr Pou speaking? I seem to have lost him, but maybe my system has collapsed? Oh, it has, sorry.

**THE COURT: JUDGE WARREN**

5 No I hear Mr Pou loud and clear.

**MR POU:**

The ongoing prejudice, Judge Warren.

**THE COURT: JUDGE SMITH TO MR POU**

10 Q. I apologise I lost all sound, that was my fault and I could see Mr Pou that you were waxing particularly eloquent and I missed you. So I don't know how much of me you lost, were you able to hear me?

A. Well I heard you, your Honour, and I heard you right up until you muted yourself. I thought, as I was waxing lyrical that you were not appreciating the lyrics, but I saw you –

15 Q. No I apologise for that, but I lost the power to the speaker and I apologise for that. So I'm going to have to ask if you could just repeat again if you had questions or you wanted to make a comment about mine.

A. No, no, no, your Honour. I guess I was just wrapping up that issue around  
20 this sits within that area of whether or not, I mean, the decision of the independent commissioners where there wasn't enough information given to grant the consent and it's just, I was just trying to highlight that but importantly trying to just make sure that when Mr Shaw Mead and Mr Clapshaw turn up their case has been put in terms of my rudimentary  
25 understanding of the AIS system.

**THE COURT: JUDGE SMITH**

Q. So I don't know if you wish to comment, Mr McCallum, but Mr Pou's point is that one of the (inaudible 12:19:22) is the absolute positioning of the vessel, absolute certainty about positioning of the vessel, and that was a  
30 reason for refusal by the commissioners, and I presume you want to make comment on that?

- A. Yes, your Honour. That is why we've engaged this new system, a GPS system which is going to actually show when the drag head touches the seabed and when it's lifted and those will be available to be downloaded from the vessel daily.

**5 THE COURT: JUDGE SMITH**

Anything arising from that Mr Pou?

**CROSS-EXAMINATION CONTINUES: MR POU**

- Q. No, your Honour. I've perhaps got one, just one last, I know I said one last the last time but this is a Waitangi Tribunal thing your last question is usually your third to last question. I just want to put up a (inaudible 12:20:21) before the House and I just want to ask if you've – are you aware of this, we found it just recently, the Prohibition of Seabed Mining Legislation Amendment Bill?
- 10
- A. Yes.
- 15 Q. Do you have any, has – I'm not sure what stage, has McCallums made any submissions on this, because this essentially makes mining the seabed prohibited.
- A. (inaudible 12:20:50) the AQA made a submission last week.
- Q. Sorry, we were both talking at the same time, I missed...
- 20 A. Oh, sorry, yeah. AQA made a – the Aggregate Quarry Association made a submission last week and were told by Minister Eugenie Sage that it did not cover sand such as what we extract.
- Q. I thought sand was under the Crown Minerals Act, I thought sand was a non-metallic mineral, Crown owned mineral.
- 25 A. That was the advice we got from what Minister Sage told at the hearing down there.
- Q. Well, look, that's all right. I'll put the Bill, again it's a, it's a publicly available document, your Honour, I don't think it necessarily needs an exhibit note.

**THE COURT: JUDGE SMITH TO MR POU**

Q. Probably not. I also am a bit influenced by the words at the top “Defeated on the 10<sup>th</sup> of May ‘23” so I’m not sure where it’s at.

A. I missed that part.

5 Q. So we’ll just have to see.

A. Thank you, your Honour. Those are the only questions that I have.

Q. Yes, thank you. Then again we live in uncertain times. I seem to find, I gather the NPS on (inaudible 12:22:22) known to anyone. So we’re well used to these little surprises in our lives now.

10 A. Yes, yes, your Honour. As you’ve always said, these are iterative processes that we are engaged in.

Q. Yes, perhaps a little too iterative for my taste.

**CROSS-EXAMINATION: MS BIELBY – NIL****CROSS-EXAMINATION: MR MULDOWNNEY – NIL**

15 **CROSS-EXAMINATION: MS SCHARTING – NIL**

**CROSS-EXAMINATION: MS DOWNING**

Q. Good afternoon, Mr McCallum. I just have a few questions of clarification around your evidence-in-chief. Could you please go to paragraph 45, that’s on page 14 and perhaps Ms Harnett if you could please bring that up?

20

Q. Thank you. Here you state that by far the majority of sand extraction occurs at night as per the conditions of consent proposed that the vessel usually leaves Port of Auckland between four and five reaching the embayment between nine and 10 pm and that MBL is happy to operate at night to minimise extraction during the daytime when the majority of people are using and looking out from the beach. Now is that the main thing (inaudible 12:24:26) operating during the daytime?

25

A. Not at all. That’s just one of the things. I think, especially the birds and tarake, we want to avoid them like the plague obviously, keep well away and so being there knowing that they don’t fly around at night, if we’re

30

there, you know, a couple of hours into dark we'll have no effect, we're gone well before daylight. There's absolutely zero residue or, you know, turbidity to disturb their feeding. So, no, that's the main thing. From (inaudible 12:25:07) point of view obviously it's people, but from a wildlife point of view it's definitely birds and tara iti in particular.

5 Q. And you stated earlier you've read the evidence of Olivia Haddon.

A. Yes. Yes, so I've read a lot of evidence so it's good to point to it if it's specific.

10 Q. All right, okay. If you could bring up her evidence-in-chief, that's document 23 in folder 8, on page 3173. It's paragraph 110. Now there she refers to her observations of the mokai, false killer whales, that sleep at night in the shallows off the coast of Pakiri and Te Arai. I suppose my question is whether MBL would be happy to operate in daylight hours so as to avoid their sleeping patterns?

15 A. I think – I'm not sure where the evidence came from for Ms Haddon to say that. Our experts say that it's not the case, and so I'll leave it to our mammal expert to talk to this.

Q. Is that Ms Clement?

A. Yes.

20 Q. And my last lot of questions relate to Appendix 3 of your evidence-in-chief, if we could please jump back to that and show the legend. Who prepared this map?

A. I think one of our people must have prepared it.

Q. That's fine, perhaps I could ask Ms Clement about that.

25 A. Yeah, yeah I think so. You know, from time to time, you know, whales are seen as you know throughout the whole of the Hauraki Gulf. But, yeah, honestly, it's very rarely from what we see. We're doing about nine knots max, just over nine, so as you know that there's a ban on commercial vessels like ours doing more than 10 knots, so we're underneath that, and crews are told to avoid whales if they see them. Yeah, we've got no interest (inaudible 12:29:05).

30

Q. Thank you. My question is more about this route and it appears to track through areas where orca have been sighted. So if we trace from Ports of Auckland north, we track directly through Bryde's whale, a site

where they've been sighted. Are you able to answer whether these sightings occurred at night?

A. I would say, no, more during the day. You know, at night to see a whale, you know, the whales unless they're jumping like the old sperm whales do, very hard to see. They're just sort of sliding in and out the water. So, yeah, that top map, obviously that's been where – sorry, top right-hand map up there with all the yellow triangles on, that's through the main navigational area of Auckland Harbour, you know, for recreational, commercial. We're certainly to the side of it, as you can see, by a long shot.

1230

Q. Who recorded the sightings of these mammals?

A. We've got a logbook which we've had a number for years, I can't tell you how many years but a number of years, and guys are really interested in that sort of thing, so if they see them they'll record them.

Q. So you can confirm it's an MBL employee who's been recording the sightings?

A. I believe on that track there I believe that should be the case. I'd check with Ms Clements.

## 20 RE-EXAMINATION: MR MACRAE

Q. Mr McCallum, Mr van Mierlo asked you questions about the pattern of dredging and you said it was your intention to evenly spread dredging over the entire extraction area that's authorised as areas are approved. If I could ask for the conditions of consent to be brought up, and I don't have the page number in the bundle but it's page 8, it's the conditions themselves. Mr McCallum, would you, condition 20, just have a quick read.

A. Yes.

Q. Is that a condition that reflects your intention?

A. Yes.

Q. Mr van Mierlo also asked you some details about the *Pohonui* and you referred you to paragraph 54 of your evidence-in-chief. It's just, as I say, a point of clarification, Mr McCallum. You referred generally in response

to Mr van Mierlo's question that the items listed there are available on the *Pohonui* but you were mainly talking about oil and so was Mr van Mierlo, and engines.

A. Yeah.

5 Q. Subparagraph (b), does the *Pohonui* have any –

A. No, it doesn't. No, it's got a hydraulic pump with bio oil in it.

Q. Thank you. Just to complete the picture, your Honour, that was all. Ms Morrison-Shaw asked you about talks that might have occurred with tangata whenua parties before 2015 and in particular Friends of Pakiri Beach members – I'm sorry, Te Whāngai Pakiri members. She referred in particular to Ms Haddon, and you said that prior to 2015 you had spoken to Ringi Brown and Gavin. Could you explain who Ringi Brown and Gavin are and whether they hold a position that they're representative of a wider group of people in any way?

15 1235

A. We met with Pakiri residents on two occasions, and I haven't got the email for the documents, but before 2015 at the Pakiri Cricket Club and also the Pakiri Hall, and I remember Gavin and I'm pretty sure Ringi was there as well. Ringi's one of the Ngāti Manuhiri trustees and Gavin had been one of the trustees in the past. So it was more of a, it was a general meeting with Pakiri residents including them and on a number of (inaudible 12:35:43).

20

Q. Ms Wikaira also asked you about Laly Haddon's interest in offshore sand as opposed to or compared with inshore extraction. Did the agreement that you reached with Ngāti Wai when it was signed by Laly Haddon on behalf of Ngāti Wai and you suggested he was also representing Manuhiri evidence in the Environment Court contain any suggestion that his agreement was conditional upon the then current inshore consent and discontinued or limited in some way?

25

30 A. As I read it in the Environment Court proceedings Mr Haddon talked to the movement of sand mining away from the beach so I imagine it's conditional that they weren't to extract sand from the inshore.

Q. Sorry, I haven't made my question clear. Mr Haddon signed the agreement between Kaipara Limited and Ngāti Wai. At the time did you have a current inshore consent?

A. We did, McCallum Bros as well as Kaipara Limited had one in Sea-Tow.

5 Q. Was it ever suggested to you that Ngāti Wai's agreement to offshore extraction required any limitation on your consent, inshore consent, which was current?

**MR POU:**

10 Sir, I've got to object to this line of questioning. First of all, it's extremely leading but he's asking about an arrangement that Ngāti Wai are making with Kaipara relating to a different consent, it was being held by a different consent holder and asking if they would've made that conditional on consents that actually weren't the subject of the agreement. So I just think the whole line of questioning is completely inappropriate and on that basis I object, your Honour.

15 **THE COURT: JUDGE SMITH**

Anyone else want to raise any objection before I revert to Mr MacRae?

**MS WIKAIRA:**

20 Yes, I'd just like to say that Uncle Gavin wasn't on a trust – sorry, Gavin Brown, when you met him down at the cricket grounds – he wasn't in a trust, he didn't tell us anything, he's my uncle, he would never have agreed to sand, you know, to the sand dredging so I don't know what trust you're talking about.

**THE COURT: JUDGE SMITH**

That's a slightly different issue. Anyone else?

**MS MORRISON-SHAW:**

25 Just wanting to support the objection from Manuhiri and I'm not sure how Mr McCallum is able to assist the Court in providing information on an agreement that he wasn't party to the negotiations at that particular point in time so, yes, support the objection.

**THE COURT: JUDGE SMITH**

It seems an obvious concern, Mr MacRae, but I don't know whether you want to pursue it or not. It seems to me that it may not be taking us anywhere anyway, but it's up to you.

**5 MR MACRAE:**

I won't pursue the question, Sir, thank you.

1240

**RE-EXAMINATION CONTINUES: MR MACRAE**

Q. Mr McCallum, you were questioned by Mr Pou as to the AIS system.

10 A. Yes.

Q. What is the purpose of the AIS system on your vessel for the way in which you might use it, or what way might you use it?

A. Well, we don't personally use it apart from looking from afar to see where the vessels are or hopefully they are. You don't navigate with it or anything like that, it's not in your instrument – around your instrument panel. For us, it's at the back of the wheelhouse, turn of the wheelhouse. So it's a location thing to let other vessels know that you're in the vicinity of the area. (inaudible 12:40:50) read through it then they're supposed to look on the radar and then position you through that.

20 Q. His Honour Judge Smith explained that what the Court needs to be sure of is that there is a system that gives real time position. Is the MAXSEA system such a system?

A. Yeah it does for the people on the vessel, definitely.

Q. And its readings are recorded?

25 A. Yes, and that's what we've been providing to the council, but it doesn't show when the drag head hits the bottom or when it's taken off, so that's why we're investing in another system separate to the MAXSEA which will show with, once again, with the extraction areas positioned on the chart, it will show position on the chart extraction area and show where the drag head hits the bottom and where it was taken off.

30

Q. Can you briefly explain or are there reasons if you can explain as to why the MAXSEA system can be absolutely relied on?



- A. In terms of the vessel, absolutely. It's got a number of GPS units working on it, apparently, and it's a well-renowned, world-renowned system for navigating vessels.

**QUESTIONS FROM THE COURT: SPECIAL ADVISOR HOWIE**

- 5 Q. Hello, Mr McCallum. I'm just interested in the sort of sand resource in general and I'd like to refer to one of the exhibits (inaudible 12:43:04) wide expanse of area for the original consent. It might've been exhibit 2 or 3 or somewhere around about there. Are we able to find that?

**THE COURT: JUDGE SMITH**

- 10 Exhibit 1 was the original areas with the other ones superimposed. Would that be useful?

**THE COURT: SPECIAL ADVISOR HOWIE**

Yes, that's the one, it's got a big red line on it that shows quite a wide expanse.

**THE COURT: JUDGE SMITH**

- 15 Yes, in a box at the top, I think. Is that the one with the box at the top?

**QUESTIONS FROM THE COURT CONTINUES: SPECIAL ADVISOR HOWIE**

- Q. Yes, that's the one. Now, I just wonder whether, Mr McCallum, you're able to tell us the various properties of the sand, is the sand – well, obviously the sand where you take it from is suitable for the purpose of concrete-making. Is the sand from other areas further out within that red line of similar quality?
- 20

- A. They do get siltier so, as you're aware, the waves are basically the thing and currents but mainly the waves stir up the sand and so the closer into the beach the more activity the theme of the sand and the less silt. So, as you get further out you get into sort of silty muddy bottoms as well from the silt that's obviously come out of the rivers and things like that. So the further out you get silt also further out you get probably the more benthic communities because, if you can imagine, in around that 10, five to 10 metre mark it's literally a sandstorm every time there's a metre swell.
- 25

And so things like weeds and corals and (inaudible 12:44:59) it's got to be hard shell to live in the closer part. So, as yet further out you get less wave action and so, yes, that's where you get, you know, your weeds and your corals and things like that growing on silty bottoms and on substrate.

5 Q. Yes, so is the sand, notwithstanding those, the siltiness, is it still suitable?

A. It's, for us it's out of our depth of extraction. It, the silt levels, you know, it becomes, you know, muddy shell and things like that, so that's not really suitable. You know, we're trying to get a sand equivalent, you know, in the high 90s per cents because any silt and more silt that's in the sand in terms of increases concrete, cement use in building concrete. No, it's not really. It's going to take more washing, deeper, deeper, you know, substantially deeper to extract as well.

Q. So is the main limitation the depth, you know, the ability of your, the dredge to dredge to depths? Is that the main limitation?

15 A. That's an absolute limitation with our vessel, but as I say, the best, the better sands are in shallow to tell the truth in terms of they're cleaner and as yet further out, they're probably not as rounded because of the, part of the lack of wave action out there. But, you know, where we are in that 35-odd metre mark, around there that's absolutely fine.

20 Q. Do you have to wash the sand now because of the silt and so on?

A. No, well there's only, you know, there's probably, you know, a 70/30 slurry of water to sand so there's a lot of water in there and so that, the sand's actually not that dirty if, you know, where we are in 30-odd, 35 metres. So, no, the water that comes along with the sand, as long as you keep it moving it discharges underneath the vessel.

25

Q. So, it sort of settles out itself?

A. Yes. Yes, the sand will settle out and the water hopefully, we want a dry as load as possible. So the water leaves through the drains or over the ware boards as quickly as possible.

30 Q. And is the sand outside of the proposed area for dredging now, further up the coast or elsewhere? Really what I'm saying, is this particular spot that you're going for now peculiar it about it or special about it that makes you want to stay just there?

A. Look, it's a very big resource of sand, you know, in the billions of cube. It's an ocean beach, it's a surf beach, so the sand's, you know, well sorted and well moved around. So, you know, even in those depths of 30 plus metres, this year there would have been a heck of a lot of sand movement on the bottom. When you're getting, you know, I think the biggest swells recorded on the swell buoys were up to 10, 12 metres, which is huge obviously. So, it's probably, you know, in terms of to Auckland it's closest site and had been, you know, relatively unpopulated, you know, for a long time.

10 Q. And we've heard that some sand from onshore has been extracted. Not by you perhaps but by someone. Is the onshore sand quality similar or different or worse or better?

A. It's basically the same without the shell, yes. Yes, it's good sand.

Q. So, it would be windblown though presumably, is it?

15 A. Yes, correct.

Q. And so the larger particles would be nearer the shore and finer particles inland?

1250

A. Generally, I believe that's, that is dune sand. It's finer. It's, so the coarser sand that we extract is around in the offshore consent and that's got a fineness modulus of about 1.8ish, something round about there. On the inshore sand it comes down to about 1.1, 1.9 and I believe the sand from the inlet quarries is about 1.2, 1.1. So, yes. We've got pictures, historic pictures of basically sand dunes two to three k's in from the beach at Pakiri, you know, prior to the planting which Mr Pou talked about and the golf courses, et cetera.

25 Q. Yes, those 1.2, 1.3s that you were talking about, are they the gradation values are they, or what?

A. It's an all passing. It's a measurement of the particle distribution, so there's a bit of a formula obviously but basically, the bigger the number the coarser the sand and ideally for concrete it's around about that one to two, somewhere in there, minimises cement requirements which is obviously cost and then once again Co2.

30 Q. And it's presumably a poorly graded sand?

A. It'll certainly need washing because of vegetation and/or silts and things. So, yes, it all needs washing.

Q. No, I meant in terms of particle size. The range of particle sizes would be more limited for the poorly (inaudible 12:52:07)?

5 A. Yes, yes.

Q. Thanks very much. That was just a feeling for the types of sand that we're dealing with. Thanks very much, Mr McCallum.

A. Thank you.

### **QUESTIONS FROM THE COURT: COMMISSIONER PRIME**

10 Q. Can I take you to page 37 of your primary evidence. It's a picture of a drag head. It's not very clear in figure 3. What is the dimensions of what I can see or what we can see in figure 3?

A. Yes, the drag head's about 1.6 metres wide, Sir, and it's digging in roughly about 80 millimetres.

15 Q. And how big are the holes, the orifices that let the sand come in? What (inaudible 12:53:36).

A. I believe about 200 mil squares to try and to screen out, you know, bigger lumps of wood, rocks or whatever it might be. So, yes, probably I think about 200 mil, 150 to 200.

20 Q. Would those holes ever become clogged with, say, plastic bags, fishing nets or discarded fishing nets or other sorts of things like that?

A. Yes, I know we've picked up trawl ropes, trawl wire, fishing nets. I think the plastic bags would just get absolutely shredded and sucked through the system. But certainly, you know, we've come up with trawl wires and all sorts of stuff.

25

Q. Would things like scallops or pipis fit through the holes in the drag head?

A. Yes. Yes, they do and they go – it's amazing. A number of years ago we were diving on the drag head and there were scallops there at that stage and they actually swam out of the way of the drag head. The vessel was doing about one and a half knots. And it's a bit like sometimes you watch them with (inaudible 12:55:08) dredges and the scallops aren't silly and they swim out of the way, but things like the sedentary ones like the pipis and cockles, the hard shell ones, come up and then go back in the water,

30

and Mr West can talk about survival rates of those but it's pretty high but, yes.

Q. When you get ropes tangled in the drag heads, do you clear them by hand or machinery or back blowing or how do you clear them?

5 A. Oh, no, you've got to – like it can be an absolute mess, and (inaudible 12:55:48) regular occurrence but what happens, they'll see that the performance of the sand coming out is down, so they'll turn the pump off, pull the drag head up, put it on the vessel. So I'm not sure if any – yeah, it actually comes right up on the vessel, Sir, so you can get underneath it and pull out if there's rocks stuck in there or wire. Obviously if the wire's  
10 worked its way up towards the pump, it can be a very bad day.

Q. Can you explain to me what the figure 4 is? I can read what's there but I don't understand it.

A. Oh that's a bed of (inaudible 12:56:34). So what we're trying to show  
15 there, that's immediately after the drag head has come through and that's a measurement across the flat bar or flat ruler that we've got across the drag head. You can see where the drag head's been and it's about just under 100 millimetres, so about say around about 80 millimetres is what we work on deep.

## 20 **QUESTIONS FROM THE COURT: COMMISSIONER MYERS**

Q. Ms Downing asked you about I think records of marine mammals. I was just really interested like with sea birds, do you have records of different sea bird species around the vessels that you operate?

A. Well, as I say, most of our operations are actually at night, so the majority  
25 of the sea birds aren't – they're sort of in bed. So there is (inaudible 12:57:55) sea bird life at night around the vessel. No, I don't believe – I can find out, but I don't believe we've got records of the birds that we see.

Q. So they don't like flock around the vessel at all or anything like that?

A. No. No, and that was the idea of dredging later in the evening.

30 Q. And yesterday you mentioned extracting two kilometres away I think from the mean high water springs. Was that daytime, if there were any operations in the daytime?

A. Yes. Yeah, that's what we're proposing (inaudible 12:58:44) two kilometres from mean high water mark which is slightly different to mean high water spring but it's more measurable, and, yeah, not coming within that area during daytime, primarily because of the birds and primarily the tara iti.

Q. And you're proposing coming in closer, are you, for the night-time extractions?

A. Well, basically the consent we inherited was for from 25 metres so from out – well it's actually outside the closure depth of 25 metres. So some of that is within two (inaudible 12:59:23). And I think our whole thing is we can say we'd keep out to two kilometres but if we're outside the depth of closure, then all the experts agree that there's very limited interaction with the coast, the beach as such. So in an attempt to try and spread extraction, the bigger the area the better. So if we can extract from outside the closure depth so as not to affect the beach, probably the more area that we extract the better. As you've heard, we propose to move further north our southern area to basically keep away from people in Pakiri and to keep away from the iwi-owned lands down there. So, yeah, just as much area as possible to minimise our extraction. Currently, if we were extracting a whole area, I think it's about 30-something square kilometres and even over 20 years it's something like 60 (inaudible 13:00:28) maximum. So the bigger the area the better. We've changed our minds from this concentrated extraction which was a favoured thing of the early 2000s.

Q. With the new equipment you're talking about, the MAXSEA and the GPS equipment that I think monitors when the (inaudible 13:00:56) goes down, will that allow you to more accurately, I suppose, know where you are in terms of the shoreline and where you are back from the shoreline? I suppose I'm just most interested in effects on tara iti and the fairy tern and (inaudible 13:01:23) in feeding areas out from the coast?

A. No, definitely. The old consents and, in particular, the inshore consent, was based on water depth and maybe distance from mean high water spring which are sort of quite really hard to position, so what we've done, we've said that all our extraction for the offshore, for instance, is deeper

than the closure depth but actually put locations by co-ordinates and created boxes that we can then put onto our navigational system. And so the actual (inaudible 13:02:13) of the co-ordinates of the boundaries are in black and white, as it were. So then you have no argument about your 1.6ks from mean high water spring but then the tide was in and you were deeper than whatever it was. So, we are able to put those onto a chart and then, from there, we can work out the distance to mean high watermark and then that will give us the distance from the shore which won't change. And our recording will show the tracks of the vessel, well two tracks are going to actually occur. One is the vessel but that doesn't show when it's dredging, one will be when the drag head is physically on the bottom and ensure that that is within the dredging or extraction areas permitted.

Q. And those get passed back to the council, do they?

A. Yes, we report those constantly.

#### **QUESTIONS FROM THE COURT: JUDGE WARREN**

Q. Tēnā koe, Mr McCallum, (inaudible 13:03:45) evidence. Paragraph 83 of your evidence-in-chief, just the last line there, you talk about "the key parties we have consulted with were contacted". Can you just clarify for me who you see as the key parties in that context?

A. Sir, as we said, our initial discussions with were Ngāti Wai as they were the ones (inaudible 13:04:30) the agreement with Kaipara Limited, and Mr Edmonds at the time deferred us to the two hapū, Te Uri O Hau north of Te Arai Point and Manuhiri south. And as Mr Pou said, we were aware of overlapping interests in the north but it seemed, in talking with both parties, they're comfortable that that was a good way to start anyway. But we have tried at length to engage with the Omaha marae but, unfortunately, haven't managed to meet with them yet.

1305

Q. But you still see them as a key party in that context?

A. They're the local people, Sir, that we see and we, yes, we just want to talk with everybody that we can, to tell the truth.

Q. Just in terms of the steps that you and your company have taken after the Commissioners' decision where the offshore consent was declined, can you just walk me through, I've got a list here, I'm just thinking what steps you've taken in the context of addressing the cultural and mātauranga Māori issues that have been raised. So we've got the mātauranga Māori Panel which arose in the context of the inshore, the out-shore temporary consent, correct?

A. Yes, Sir.

Q. We've got still an individual cultural liaison agreement that is still on offer to Ngāti Manuhiri and has been agreed in principle with Te Uri O Hau?

A. Yes, Sir.

Q. I think in and around the council hearing or decision, Tame Te Rangi was employed?

A. Prior to that, Sir. So, we purchased the consent application and the existing consent from Kaipara Limited I believe it's September '21. So, Kaipara had initiated the offshore renewal application in August/September '19 and that was basically the application which was declined. Kaipara hadn't engaged anybody in terms of cultural liaison or cultural relations or cultural advice and we'd seen early on in the piece with the inshore midshore applications that that was absolutely paramount. And as I say, it goes back to I think Mr Te Rangi. I can't give you the date, but it was prior to –

Q. (inaudible 13:07:51) 103 post-May 2021 hearing for the offshore consent.

A. Yes. Look, I know that we went to the final hearing and I believe Mr Te Rangi was a witness for us there. So, yes. No, we –

Q. And apart from reducing the area and the quantum of take, what else has occurred between that council decision or Commissioners' decision and where we are today to address those concerns? Is that it? Is that the extent of the steps that have been either agreed or will be supported by McCallums?

A. No, Sir. We, we've obviously given away inshore and the midshore application areas, so we've moved all potential extraction further offshore away from the beach and away from effects from the beach. So, outside the closure depth which is widely acknowledged by all experts to be the



depth for Pakiri which extraction would have an effect on the shoreline. So, we've tried to do that. We have looked at for instance Tara Iti and acknowledged that to move out from them and also to extract at night and then if we were to extract during the day and, to be honest, we are again not extracting during the day, it's only if there's a weather, bad weather window-cum-breakdown, cum-whatever, so that's actually going to be, you know, very rarely have we extracted during the day in the last year and a half, but that was to try and allay fears about the birds, et cetera. Marine mammal response, we've beefed that up, very aware of that in terms of oil spill. That's always been a (inaudible 13:10:12) but that's, once again, that's been improved. Then we also talk about biosecurity so despite that we're travelling the same bit of water and not going to foreign ports and stuff like that, that's part of our life now as well. I think the biggest thing has really been Mr Te Rangi and Mr Anthony Thompson on board and to get a view and, as I say, and you probably know them, but they're pretty balanced people and they get on well with Manuhiri people, with everybody, so we're just trying to find out how we can mitigate these cultural value issues because that is the big one for us and that we do acknowledge.

Q. That's helpful, thank you. Just coming to your reply evidence (inaudible 13:11:11) 77, 78, at page 1A 15, the paginated number. I just want to unpack this a little bit, Mr McCallum. So, I get the impression in reading 77 and 78 together that you're effectively saying, in your mind, there's a contradiction in the sense that, on the one hand Ms Haddon in this context is saying sand is a taonga yet there is evidence that Māori in the area have been exploiting that taonga, is that fair?

A. Yes, Sir.

Q. Does that contradiction come from a place where you say well if it's a taonga then it can never be exploited. Is that the premise of the contradiction that you find yourself in?

A. I don't think it's that, Sir, but if it's okay to extract it from on the beach or inland and it's the same sand, you know, it's all come out of the Waikato River 20 million years ago or whatever it is, it just seemed to (inaudible 13:13:08) a bit, you know, sands going out from inland which is the same

sand and historically off the dunes, around Pakiri River and yet what we're doing is wrong and doesn't fit the bill. And our experts, the advice is that they see that there's a contradiction here as well.

Q. Well, I mean, Māori I guess, see land as a taonga and obviously that's  
 5 (inaudible 13:13:46) in a modern context. (inaudible 13:13:54) and I'll be interested in, and whether this has come through the consultation that you've had with mana whenua groups that, yes, it's about the taonga, the resource, but it's also the kaitiakitanga and the rangatiratanga over that taonga in terms of managing it in the ways that they see as tika and pono  
 10 or customarily correct. Is that something you've read from the evidence in the discussions you've had with the individuals or groups?

A. Yes, yes, it's certainly in discussion and I've read the evidence and as I'm not an expert but, and it's interesting with (inaudible 13:14:37) we talked about, with him, about where we've come from and in terms of back in  
 15 the old days sand was extracted inshore because that was technology and the whole thing, you know, the big holes dug right on the beach, you know, so it wasn't a good scene but that was how it was. So, we've moved to something which hopefully is far more benign in terms of the actual extraction, in terms of the depth that we actually dredge from, plus  
 20 the depth of sand that we take. And so we're just trying to mitigate and have, you know, what we could find when we designed and built our vessel, have the more stringent or most stringent sort of green sort of qualities about it to try and mitigate these things so we don't have big turbidity plumes, we don't extract at daytime, at night we don't have, you  
 25 know, huge lights and that sort of stuff. So we want to be as almost as inconsequential as what we can be so that we do mitigate the feelings that people have and, you know, as in terms of the groups and the agreements we have with them where, you know, they're very much trying to help and, you know, whether it's through a royalty, whether it's  
 30 education, whether it's through employment and/or opportunities with aquaculture, we're also involved in aquaculture, we see that we can actually add value into that embayment into the relief of these two hapū which will mitigate –

Q. Mr McCallum, I guess you'd accept that positions change because the context change and it's undisputed that sand is being extracted here for a number of years and so those that have a relationship, which you're not questioning, with this resource may come to a point where they draw a line in the sand, pun intended.

A. Yes, Sir.

Q. Even though in the pass they may have exploited the resource themselves and there's no evidence before us as to what cultural rituals or protocols that were undertaken in terms of that exploitation which may not be existing today. I mean do you accept that proposition?

A. Yes, Sir. One of the things we've also tried to do is move extraction further away from the Pakiri River where majority of the people live, so we've moved – we're a good between four and six kilometres away from their houses, so actually get away from it. You know, we'd go further north but at some stage, you know, we're going to start reducing the area and we don't want to and then that might, you know, have an impact on extraction. So, yeah, we're trying to do everything we can, we're certainly trying to engage and we'd like the people to be more forthright about what we can do to help and see if we can actually make something work.

Q. It seems my preliminary review there doesn't seem to be a huge contest about the quantity or quality of the engagement, and we'll need to wait for the evidence, there didn't seem to be an issue (inaudible 13:18:35) quality and the quantity, Ngāti Manuhiri and others have just taken a position, and I think Mr Hohneck talks about striking a balance, and I guess what you're saying to the Court is that through all of the measures you've outlined in your evidence and again for me, that you think the balance has been struck?

A. No, Sir, not yet. I don't think so. We, and I hope Mr Hohneck says we are still in discussion, you know, we can see – we can see their issues and we do want to work together. We've had, you know, we've offered partnership which is, was nearly there and then not there, we've had a few of those sorts of things happen which are sad but, you know, we've, yeah, we really do want an agreement. We've got experience of this in our own rohe down at Clevedon where we're partnered up with Ngāi Tai

with the aquaculture and that so a great relationship for both. So we're like to very much, like the Judge was suggesting yesterday, a partnership for us is the ultimate and (inaudible 13:19:58).

Q. What does partnership – sorry can I just pause you there, because I know  
5 time's ticking on, but the partnership that has been offered that you have with Ngāi Tai in Clevedon et cetera, what are the key principles of that partnership? What does that entail? Is it a true partnership whereby they are directors/shareholders of your company or is it something less than that?

10 A. No, no, 50% shareholders. Directors (inaudible 13:20:30) for director. Yeah, so it's really about, you know, how we undertake the business, and we're more than happy, you know we need, once again, we need advice. I'm a Pākehā so I'm not going to tell them how is it best for me to run my business or our family business, you know, in terms of mātauranga Māori  
15 principles. I've, you know, talked to Mr Hohneck and (inaudible 13:20:57) at length about these things, and we just want to incorporate, you know, we see this as the future and we're more than happy to embrace it.

Q. Kai pai. Thank you, Mr McCallum. Thank you for your answers and again thank you for your evidence.

20 A. Thank you.

#### **QUESTIONS FROM THE COURT: JUDGE SMITH**

Q. Thank you, judge, and although I would've like to spare you over lunch I'm just wondering if we should finish because I think you'll find some of my questions dovetailed what Judge Warren's – and might give some  
25 food for thought for the parties. Firstly, these are background questions I'll come to the key issue later. But the question about depth of closure, you keep speaking about everyone agrees it's beyond the depth of closure, but you'd be aware that your own expert, Mr Todd, was suggesting that it was something in the order originally of 60,000 cubic  
30 metres moving on. By definition the depth of closure is the point at which any exchange of sand shoreward and seaward is minimal or are you using depth of closure in a different way, that was I thought the agreed definition?

A. Yeah, it is, Sir, and it's for different areas and different beaches, West Coast up into East Coast and (inaudible 13:22:13) –

Q. Well you don't need to tell me that, I was just checking that you understand. I'm just checking you understand because we do know that  
5 at Pakiri there is a huge exchange of sand going both ways and the figures that were quoted in the Pakiri study were the net figures after you've taken the shoreward movement versus the seaward movement, you agree?

A. Yes, Sir, it's a very exposed beach.

10 Q. Yes and you've pointed out in a large storm such as Gabrielle there's going to be sand going in all directions and of course those events are the ones that have the major effect on moving sand across what might be called normally the depth of closure, you agree?

A. Yes, Sir.

15 Q. Now I want to talk about the aspects and danger from (inaudible 13:23:10).

#### **THE COURT ADDRESSES MS MATENGA – MICROPHONE (13:23:16)**

#### **QUESTIONS FROM THE COURT CONTINUES: JUDGE SMITH**

Q. So I'm struggling a little, we've done fishery cases before et cetera so we  
20 understand a little bit about birds and fishery equipment and nets et cetera but I must confess I've seen a number of the pelican down in (inaudible 13:23:40), I've seen frequent, many times of course and there are other larger dredges including your dredge we saw, I think, when were out there last time. They don't tend – I've never really seen any attraction to birds  
25 in there, they don't seem to feed off the discharge that I could see, is that correct or not correct?

A. Look, I think in daytime with the old ways of discharge the oversize is discharged directly over the side of the vessel and so that would present a whole lot of food to the fish as well as the birds, so they used to come  
30 in and feed there. But as I say at night and then we've having moon pools the, all the discharge is sort of probably two metres down plus so we see nothing. So there's (inaudible 13:24:36)

Q. But it's not –

A. – extraction.

Q. Yes, but even if there was one assumes as I can't, I'm struggling to think what it is that would affect the (inaudible 13:24:42), there's no nets or lines or anything that they would hit, is there?

A. No, nothing.

Q. So the main possibility is –

A. And everything is travelling so slowly.

Q. Yes, but the main risk would be a bird just flying straight into the boat I presume?

A. Yep.

1325

Q. Yes, okay, well. So I'm just checking that. Now land uses, I dealt with the quarry behind Slipper Lake. Are you familiar with that case?

15 A. No. Look, I'll say no. I've read bits and pieces of it.

Q. So for my many sins of course I've dealt with the original planning for Te Arai right down to Te Arai Point, subsequently signed off the whole agreement that was reached with Te Arai Group that Ms Scharling's represented, but that also involved, as I recall, Te Uri O Hau and perhaps  
20 Ngāti Manuhiri, I can't remember the exact parties, but there was a buy-in to that. There's been the development of the two – is it three? – but at least two golf courses there. One of course I dealt with the consents for; the other seems to have been dealt with without coming on appeal. So I'm familiar with the background to this area, and the pampas grass which  
25 nobody's dared mention to me that was planted of course in the thought that that would save the sand somehow but it's turned out to be a major menace. (inaudible 13:26:07) of course to try and stop the shifting sand, the transfer of the land to the Crown and then of course the ongoing Treaty issues surrounding that. Of course, if you've lived in the area for  
30 a long time, you may be aware of the fact that there was relatively free access, and I don't mean free in the sense, but uncontrolled access to the beach with horses, motorbikes and cars which caused havoc with the dotterels and tara iti. And I think horses are still there, plus of course the predators that the various groups have tried to control around the spit and

down the whole arm of the Pakiri Beach in the northern area. Am I telling you things you know already or is this new?

A. Yes, Sir, and I've read the fairy tern website and it talks about the predators and they're two-legged and they four-legged.

5 Q. Yes, thank you, that's a good summary. And of course I also dealt with the damming issue on the Te Arai stream which the Court was very concerned about that pointed a fairly crooked finger both at the Department of Conservation and the council which was a major concern to this Court. So it would be said that there have been multi-faceted  
10 threats to the ecology of this area over quite a period of time?

A. It's certainly changed, your Honour, and I know 100 metres from where a breeding ground is there's a golf green which, you know, gets mown and sprayed and things like that. So, you know, there's a whole lot of things happen in there.

15 Q. And we noticed when we travelled through the area that there have been what I think are quaintly called borrow areas for sand behind those main dunes over the years, including some where there are very some nice houses now situated. We have no idea as to their genesis or who did the work but of course the one that interested us most, and nobody has  
20 mentioned, is the Semenoff Sand which appears to be almost dragging down to the water level. It looks more like a lake. Is that an extraction from the ground that then fills with water, is it?

A. Yes, your Honour. It's down maybe 10 or 12 metres deep or something like that. So I think he's coming to the end of his consent. The issue with  
25 that sand it's good sand but it's the distance factor. I think it's 30 odd ks to Wellsford to get it on the main highway.

Q. Okay. Well he might be having the Wellsford bypass coming on stream soon so that might help.

A. Yeah.

30 Q. But it's between Slipper Lake and Tomarata as far as we can see, is that right?

A. Yes. yes, yeah. It's called Tomarata sand so...

Q. And of course there's a whole series of water catchment pits that have been put in for the golf courses and otherwise (inaudible 13:29:08) now?

A. They're very big.

Q. So even in the time I've been involved in the area, I would put to you that it has changed quite a bit with a lot more two-legged predators around?

A. And some of them aren't from New Zealand, Sir.

5 Q. Well I won't get into that. So, this has been a changing environment and stressful, and I'm just wanting to now explore the reaction of tangata whenua to that because of course they too have seen everything that's happened. They said to me for the Te Arai: "Look, this is one of the only  
10 pieces of land we've had returned to us. We have to try and get some economic return on it." And the Court agreed entirely with that and thus you have the plan changes that occurred and the subsequent developments. But these things put stresses on the system and it means that other things, such as your activity, also put stress on the system, particularly when there's a perception, rightly or wrongly, that that leads  
15 to erosion on the foreshore. Have you heard about the treaty principles, because I just, this is where I cut back into where Judge Warren was, because you say you don't quite know what to do, but in fact there's a few principles that might be of enormous assistance to you in thinking about how you, how these tensions between development and use, arguments  
20 as to utilisation of resources which involve principles of active protection, true consultation – true consultation is not saying: "We're happy to talk about the conditions," but to talk about the entire matter, partnership, a principle that Judge Warren discussed with you, and I'm sure he can mention another. I think there's in fact seven. I've only got four, so I didn't  
25 – three or four, I won't pass the test. Judge Warren, are you able to give me a few more that might be directly relevant here? I'm just, my memory's faded.

### **THE COURT: JUDGE WARREN**

30 Yes, I don't think there's a prescriptive list as such, but obviously there's principle of options, principles of redress that have all derived in their relevant context, but it's certainly something that we'll be exploring with (inaudible 13:31:31) in due course.



**QUESTIONS FROM THE COURT CONTINUES: JUDGE SMITH**

Q. So clearly the Court is going to want to explore these things. Redress I think often is seen by Pākehā as money but in fact in cases such as this it might have been ways in which their foreshore might be improved, ways in which the tara iti and dotterel might be better protected, ways in which the landlocked nature of the Pakiri land might be released so that they're able to find some uses for it, those sort of things. I mean, you sound to me as though you're open to those sort of suggestions. Have I misunderstood?

10 A. No, you're absolutely correct, your Honour. We, for instance we'd offered to provide shell (inaudible 13:32:15) nesting sites through DOC and it was all underway and then it got hogwashed by Te Whānau Pakiri people. And we were pretty disappointed with that because the losers in that game weren't us. It was the Tara Iti. So, you know, we're more than happy. We've talked to the Fairy Tern Society about how we can support them. Certainly, things like, as you say, pest management, riparian planting and sand dune restoration and things like that, you know, we're more than happy to be involved with them and we do, you know, we plant our own creeks out, those sorts of things. So that's all part of our life and making a place a better place. So, we agree with you, you know. Money's one way of looking at it, but money's an evil thing as well and, you know, if we can be involved in education, employment opportunities and helping these different iwi groups and hapū groups, you know, realise some of their potential. You know, we've talked to Mr Hohneck about the potential of fish farming at the Great Barrier for instance and the mussels there. So, all, we've put a huge amount of offers on the table. So, no, we're very open to any ideas and if you or Judge Warren have got more, please let us know.

25  
30 Q. Well I suppose the only thing I can say in response to that, which those things in themselves are not bad but often the problem is the way in which it's: "We will give you this," as though it's an attitude thing as much as anything else that I think has caused a lot of the problems in the past. Rather than saying: "We want to be with, we want to work with you to find a solution together," rather than saying: "We would give X, Y and Z," I

think that starts to address the issue of rangatiratanga and the real desire by tangata whenua to have some ownership, if I can put that – I don't mean "ownership" in the sense necessarily of ownership of your business but ownership of the environment and the place where they live. I don't know all the answers. If I had all the answers, I'd have written a very good book by now. But I think I am starting to understand the questions and I just wanted to put to you that if you have an open mind to those sort of thoughts, then other parties may approach you with wanting to have a true discussion about how you might work together to make the area better, if I can put it that way. And, at the end of the day, it's quite possible that some or all of the parties may say well, in fact, the only way this area can be better is without sandmining completely and, unfortunately, we will never get an agreement necessarily with everyone but, all I can point out is things do happen from time to time as *Waste Management* as an example. I don't intend to say anything further there. All I'm saying is that those possibilities exist and I thank you that you're openminded, at least, to those thoughts which I think is helpful to the other parties and perhaps leads us away from an us-and-them approach to trying to find a way forwards. I don't know if you wanted to make any final comment. That was the end of my treatise on the topic, Mr McCallum. I don't know if you wanted to make any comment in it?

A. Thank you for that and, you know, it's worked well for us down at Clevedon where we are and we'd love to be able to have the same opportunity up north and further north where we're actually talking with iwi in the far north about, you know, logs and barging and things like that. So, you know, it's relationships that are our big thing and we're long-term players, we're family-orientated and we're doing it for the next generation, so we're not here for the short term.

Q. Yes, and I think that the tara iti needs as many friends as it can find at the moment given the number of cases I've been involved in. Many of the counsel in front of me have appeared in various contexts in relation to them. So, thank you for that.

**THE COURT: JUDGE WARREN**

I just had a question which might be a quasi-legal one. The agreement, the cultural liaison agreement that has been agreed in principle, is that before the Court, is that evidence?

**5 MR MACRAE:**

No. I can answer that, your Honour. It's not because – I think I did mention yesterday discussions have been confidential, I don't think McCallums would have any objection at all, but certainly they wouldn't want to produce, McCallums would want to produce anything that involved any kind of breach of  
10 confidentiality and so haven't done so. But I did at one stage draft a summary that I think, for example, Te Uri O Hau were happy to have been made available for the purpose of sort of informing other players of the basics that are going on, the key elements of what are going on. That may be helpful, or it may not, or may be the parties can agree to produce the agreement.

**15 THE COURT: JUDGE WARREN**

I mean, I just had this issue in the East West Link where we entered into, well clients entered to a confidential agreement with Te Waka Kotahi and we didn't produce it, and I know his Honour Justice Priestley had a few questions of me about the status in terms of what weight and whether it's evidence and we can  
20 take it into account. But I might confer with Judge Smith about that, it may be something we deal with at some point.

**THE COURT: JUDGE SMITH**

Yes, well it may be something Mr MacRae, in light of the interest of the Court and the issue and, I think, other parties in the issue. I appreciate the  
25 sensitivities because Te Uri O Hau wouldn't want to be seen as being deaf, if I can put it that way, to the concerns of (inaudible 13:38:31). But it may be that there could be some discussion between the parties to see if it could be produced on the basis of good faith rather than of some form of evidence so that there was a prospect of other parties considering the matter. I think I'd  
30 rather leave it with you at the moment, Mr MacRae, but it may be a matter we revisit later in the hearing, especially at the cultural stage. And you may be

able to liaise with the other parties to see if there's a basis on which it might be produced on a confidential basis or your summary produced, or something of that sort. Would that be appropriate for the moment, Judge Warren?

**THE COURT: JUDGE WARREN**

- 5 Yes. I think the distinction here is that, I mean, my clients were a party before the East West Link whereas Te Uri O Hau was not a party here, as I understand it.

**MR MACRAE:**

- 10 Your Honour, might I just raise a practical matter? We have had some considerable time since Mr McCallum's evidence was introduced and improving the way in which we can assist the Court's understanding of the relevance of Mr Todd's evidence and rather than taking him through a number of changes we've endeavoured to produce a table which summarises them and puts the wording that he would like inserted in writing before the Court and in addition,  
15 of course, I think the list of condition changes has already been sent to the Court. But I'm just proposing to send that to the Court for a final check with Mr Todd to make sure we both understand what we're going to do.

**THE COURT: JUDGE SMITH**

Has it gone to all the parties yet?

- 20 **MR MACRAE:**

No, Sir, because we haven't finalised it, Sir.

**THE COURT: JUDGE SMITH**

- We've got a bit of extra time now, to do that. If you could get it off to them before you go to lunch then that will give them something to mull over as they  
25 chew on their bagels.

**MR MACRAE:**

I'll do my best, Sir, but it may take a little time with Mr Todd. I'm grateful for the  
5 extra time for that purpose but just alerting everyone that something will be  
coming through.

**THE COURT: JUDGE SMTIH**

Thank you very much. And Madam Registrar, if you could make sure you send  
that through to us as soon as it comes from Mr MacRae, thank you.

10 **COURT ADJOURNS: 1.42 PM**

**COURT RESUMES: 3.01 PM**

**JUDGE SMITH ADDRESSES COUNSEL – HOUSEKEEPING**

**COURT ADJOURNS: 3.04 PM**

**COURT RESUMES: 3.07 PM**

5

**MR MACRAE CALLS**

**DEREK TODD (AFFIRMED)**

10 Q. Are you Mr Todd, Derek Todd, and have you prepared and filed with the Court through counsel a statement of evidence on behalf of McCallum in support of their application and a statement of evidence in reply?

A. I have.

Q. Do you have those documents in front of you?

A. I do.

15 Q. Now, Mr Todd, there have been a number of changes to both your statements of evidence as a result of the changes in the framework of these applications and you, with some assistance from counsel, have put together a schedule of those changes which has just been sent through the Court and the other parties, and my apologies for the time, Sir, there were several last minute which were somewhat panic-inducing and then  
20 our system froze. So my apologies, yes as I say, for the delay. So what's proposed, just before asking Mr Todd to address the changes, is simply to work from the table of changes on the basis that they either summarise or draw attention to the main issues that arise from his changes and then to leave if I may, although happy to take the parties and the Court through  
25 the evidence, but the table itself on the right-hand side, on the left-hand side sorry, gives the paragraph number of his evidence, the action to be taken in respect of the statements or that paragraph to amend or delete or amend and add, and then the additions and the deletions are shown. It occurs to me, Sir, that perhaps the best way is to allow the Court and  
30 individual parties to make these changes in their copies of Mr Todd's evidence as they see, as they think best for them, as best suits their

convenience, and I can in addressing these changes just ask Mr Todd to address (inaudible 15:09:42) as I've indicated and then as far as I'm concerned, Sir, we could proceed, subject to any questions that the Court may have about the changes, of course, we could proceed to cross-examination.

**THE COURT: JUDGE SMITH**

Your witness, Mr MacRae. Whatever you wish to do.

1510

**EXAMINATION CONTINUES: MR MACRAE**

10 Q. Yes, thank you. Mr Todd, looking at the table in front of you, the first significant – well, sorry, I'll rephrase that. The first change that involves a substantial addition of wording is at paragraph 29 and this is a matter that, if I might say by way of (inaudible 15:10:31) introductory comment, that Ms Morrison-Shaw addressed with Mr McCallum in cross-examination so she will possibly have an added interest in this paragraph. It picks up a statement in the JWS produced by the coastal experts and recalculates the figures given in that statement by reference to the withdrawal, or as consequences of the withdrawal of the inshore application or surrender of the inshore, withdrawal of the midshore application. The paragraph now (inaudible 15:11:09) for itself I think, Mr Todd?

A. Correct.

Q. And the paragraph represents the changes that you want to make to paragraph 29. Paragraph 29, Sir, contains a table that the Court might like – that's of Mr Todd's evidence-in-chief, that the Court might find helpful to refer to as I ask Mr Todd to very briefly address this addition to his evidence. Mr Todd, would you explain what you've done in this addition to paragraph 29?

A. Yes. So in this addition, what is no longer relevant from the joint witness statement is the amount of proposed extraction from the inshore and midshore and working out the percentages of the total volume of marine Holocene sand that is in the nearshore out to the 40 metre depth. And it

is also relevant to exclude the extraction that occurred prior to the Sand Study which established that volume of 82 to 142 million cubic metres of marine sand. So making those additions, which is really what the wording is about, making those changes, it drops that percentage from six to 11% given in the joint witness statement down to four to 7% of that 82 to 142 million cubic metres of marine sand that is from the shoreline out to the 40 metre depth.

Q. Next reference is to paragraph 74, Mr Todd, and that statement records the change in your position on the volume of sediment that is estimated to have been and been transported across the depth of closure. So if you could just briefly explain the basis on which your evidence as to that volume, the volume of cross-shore transport, has changed?

A. Yes. So my previous volumes of cross-shore transport are across the 25 metre isobath relied on two suppositions really. One is that the transport, the lines of evidence that I give in paragraph 75 through to 84, were I had made the assumption that they were across but in fact in the joint witness process it was pointed out to me, and I now accept, that they are more beyond, that they are gross transports beyond the 25 metre isobath, and also that with the error that was found in the survey data, the amount of shoreline storage required (inaudible 15:14:52) budget is now much reduced. And as a result of that, I now accept the 12,000 cubic metres per year that goes net across the 25 metre depth contour from the Sand Study as the best estimate of that amount of supply into the active beach system, and I do refer to that change in paragraph 88 of my evidence in reply.

1515

Q. At paragraph 86 you refer, just by way of background, to the evidence of shoreline change, or the three bases for assessing shoreline change, in your evidence-in-chief and you make a statement there about why a detailed assessment of shoreline change is not required in respect of this offshore application. Have you anything to add to that?

A. Not really. I think it stands for itself in that the information is still relevant as background, that what the shoreline has been changing at in the different lines of evidence. There was lots of work, reply, et cetera, about



disagreements about that, what that evidence was showing and which method is the best method. Now that we are just talking about the offshore application, I think that detailed assessment is of much little relevance now that the extraction is from beyond the depth of closure and that it will not affect or have a measurable effect or discernible effect on those measures of shoreline change.

Q. If you turn to paragraph 114, that refers to the Survey Worx error that you have just referred to. Would you just explain that in a little more detail what happened?

A. Yes, in the best way that I can. So, the error arose was based on a false assumption by Survey Worx that the surveys since 2017 undertaken by Survey Worx were to the LINZ updated benchmark elevation for the referenced benchmark and LINZ had noted that benchmark was an error and it should be at 83.5 since 2017. Therefore, the assumption made by Survey Worx was that for a correct comparison, all elevations in the previous Harrison Grierson surveys needed to be adjusted down by that one metre. However, in fact the Survey Worx surveyors had not, had maintained, sorry, using the original elevation which was a metre higher at 84.53, therefore, no adjustment to the previous surveys was required. As a result of the erroneous adjustment, the 2007 survey data which we relied on as the start of the topographical survey was one metre lower than it should have been. Therefore, it gave a false result that the sand had accumulated by an elevation across the whole beach width and length. So, consequentially a large increase in the volume was shown when you compare that to the 2022 or 2023 surveys.

Q. Mr Todd, in giving that explanation you've used the word "Survey Worx". As a general, it might assist the Court to understand the nature of the error if you were just to identify who in Survey Worx did the surveys on the beach and who in Survey Worx did the analysis of the data that contained the error.

A. Yes, the surveys on the beach were under the control of Mr Clinton Healy, a director of the Survey Worx company, who –

Q. Based in Auckland?

A. Yes, who undertook the drone surveys. That data was then sent to the analysis team in South Africa who undertook the analysis and it was the analyst in South Africa who made that assumption that they needed to adjust down all the previous Harrison Grierson surveys, and we didn't pick up that assumption change until very late in the piece after I'd done my evidence-in-chief that in fact that was a wrong assumption and which therefore altered all of those results.

1520

Q. And paragraphs 126 to 143, you say there that sediment budgets are only in your opinion relevant for inshore/midshore extraction. If you could just briefly expand on that statement?

A. Yes, the concept of a sediment budget records inputs and losses within an active big system which is landward of the depth of closure. So therefore they were very relevant to inshore and midshore extraction but are not relevant for the offshore extraction which is beyond the depth of closure, and that the abstraction from that area (inaudible 15:20:49) on the drivers of sediment transport at those depths. So the concept of a sediment budget and the need for a sediment budget to show potential effect is therefore not relevant when we're just dealing with the offshore applications.

Q. At paragraph 167 you record that experts agreed that topographical surveys are the most accurate means of assessing shoreline behaviour in the future and, as you say, that's the method that the appellant proposes to be used for future monitoring. Could you just very briefly (inaudible 15:21:31) context to that change to your evidence in terms of the distinction between topographical surveys and the other two methods of assessing shoreline change that have been used in your evidence?

A. Yes, the other two methods that were used in my evidence to shoreline change were aerial photographic, historical aerial photographic methods which, you can look at shoreline change over the photographic record which, in this case, is around 60-odd years and there was a lot of debate about the accuracy of that method and what they were showing. The second method is historical beach profiles which have been present on (inaudible 15:22:17) since 1978 or some of the 11 profiles and which a lot

of the other experts have relied on but I have questions about the representativeness of representing a whole beach, a 20-kilometre beach profile, by 11 discrete points. So, again, there was lots of evidence exchanged around the reliability of those two methods. The topographical survey is what's been in place since 2007 and particularly since 2017 by the aerial drone surveying which allows you to collect, for want of a better word, continuous data and millions of data per survey, a resolution of less than one metre between the survey points which allows you to create a very accurate digital terrain model. It allows you then to take volumetric changes across the whole of the embayment and different parts of the embayment rather than just relying on 11 discrete locations which may not be representative. It allows you to take profiles out at any position you like so all of the experts agree that that is the best method, it is the most accurate and representative method and it is the one that MBL do going forward and there was no dispute among the experts as that is the most appropriate method.

Q. If you would turn to your evidence-in-reply, Mr Todd, that's the final page of the table. It is the last comment in that, the last addition on that page to do with the same point as you've just made?

A. Yes, it is.

Q. It gives another, a further explanation in writing, I think, of what you've said. Yes, that was the (inaudible 15:24:29). And I think the rest, Sir, I accept that it may take the Court and the parties a little time just to become familiar with the table and be able to instantly understand how it dovetails with the evidence but the rest of what is in there is self-explanatory. So, I can –

#### **THE COURT: JUDGE SMITH**

Is that your questions or do you have some more questions?

#### **MR MACRAE:**

No, I don't, Sir. Those are my questions. I was going to suggest that if the Court has none, then I ask Mr Todd to answer any questions from other counsel.

1525

**THE COURT: JUDGE SMITH**

Normally wouldn't ask questions at this point unless it was about something. Does anyone have any queries around this table change? This is the Court, sorry. No. So I think we'll wait to see what comes out of cross-examination. So Mr van Mierlo, are you in a position to proceed or are you at a bit of disadvantage until you've had more time to look at this?

**MR VAN MIERLO:**

Sir, I'm ready to proceed, but I've just been alerted by Ms Sutherland that apparently we're about to time out on the Teams meeting and I'm going to drop out for a minute or two I understand. I'm happy to start –

**THE COURT ADDRESSES COUNSEL – TECHNICAL ISSUES (15:25:49)****MR VAN MIERLO:**

Sir, we're happy for someone else to commence their cross-examination and we can slot in whenever's convenient to the Court.

**THE COURT: JUDGE SMITH**

Okay, well I'll probably put you in next if the next party's prepared to go, which would, looks like Ms Black would be next, I think. You've got an agreement, is that still with Ms Morrison-Shaw leading the charge? Ms Morrison-Shaw, you're on. Are you able to proceed?

**MS MORRISON-SHAW:**

Thank you, your Honour. I will try, yes. A lot of my questions were around the paragraphs that have now been amended, so I'll give it a go and see where we get to. Would have been helpful to have it a bit earlier, but anyway.

**THE COURT: JUDGE SMITH**

Well, you're preaching to the choir.

**CROSS-EXAMINATION: MS MORRISON-SHAW**

Q. So, I'll just start with a general question. You would agree, wouldn't you, that a key thrust of the evidence of Ms John and Mr Coco is that we do not know enough to determine effects on coastal processes?

5 A. I would agree that that's the thrust of their evidence, yes.

Q. And you disagree with that position, is that correct?

A. I do, yes.

Q. So you consider there's sufficient information to assess effects?

A. I do, particularly from this offshore.

10 Q. And now just wanting to check. There's been no numerical modelling study undertaken to date, has there?

A. No, since the Sand Study, that's correct.

Q. Yes, since the Sand Study. So the Sand Study's the most recent modelling study and that's 1998, is that correct?

15 A. Yes, it was in that suite of work in the late '90s.

Q. So McCallums to your knowledge has never undertaken such a study?

A. They haven't undertaken a modelling study, no.

Q. And in your view, if such a study was undertaken, (inaudible 15:29:55) provide more updated and better information than what we've currently got?

20

1530

A. It could do. It could also raise more questions. Modelling is only as good as the input data that you have and while we have some more updated input data from the Sand Study, it may throw up results which are contrary to other coastal process indicators, which often happens in modelling. So it may assist but, then again, it may also not assist.

25

Q. So it's not your recommendation that we need to undertake a numerical modelling study in order to understand the (inaudible 15:30:40)?

A. Correct.

30

Q. Moving on to the depth of closure, and I will apologise in advance here because, as I've just said, I've only just got your stuff and it affects my questions into the depth of closure, so if I'm asking you something that you've subsequently changed, if you could just remind me of that, that would be helpful, thank you. In terms of the depth of closure point, in

legal submissions yesterday from Mr MacRae, he made a statement, and I'm not sure, were you online yesterday when Mr MacRae was giving his legal submissions?

A. I (inaudible 15:31:20) the submissions.

5 Q. Have you had a chance to read those submissions?

A. No, I haven't.

Q. So at paragraph 29 of his legal submissions, he states that: "Offshore extraction area lies entirely beyond the 25 metre closure depth virtually sealing the impact of extraction on the beach and dunes from effects resulting from the removal of offshore sand." Do you agree with that statement?

10

A. Yes. It is probably recognised that extraction from greater depths than the depth of closure has very little possibility of having effect on a shoreline change.

15 Q. So in terms of the "virtually sealing", (inaudible 15:32:07) sediment transport that goes across that depth of closure, if we use those terms, isn't there?

A. Yes, there is.

Q. And I think you're referring back to the Sand Study which put it at 12,000 cubic metres a year I think, was that correct?

20

A. That was the Sand Study best estimate, yes.

Q. And that's what you're now saying is the best estimate that we've got?

A. I can now accept that as the best estimate, yes.

Q. So previously you'd said it could be significantly greater, I think "much greater" were the words you used, but now you've moved back to say well actually that's the best estimate?

25

A. In my evidence-in-chief it was greater but it was (inaudible 15:32:55) that the Sand Study had suggested – because, as you have to appreciate, that even with all the modelling there will be a range of uncertainties.

30 Q. So the depth of closure is not an absolute boundary to cross-shore sediment transport though, is it?

A. That's correct.

Q. So there is some sediment that does cross?

A. Yes.

Q. Now this is an area where I'm not clear whether it's been affected by your change. In your evidence you'd mentioned that there was a large degree of uncertainty regarding the shoreward transport of sand. Has that changed with your updates?

5 A. No, there is still that degree of uncertainty. It's just that that best estimate has come down.

Q. So there's still uncertainty. And I think I've just asked you about the numerical modelling study and whether or not that would assist in providing more information to decrease uncertainty and I think your  
10 answer to me it may just throw up more questions, we aren't sure that that would provide the answers. Is there any other steps that could be taken to decrease that uncertainty if the modelling is not available?

A. The only other way would be – what you would need to calibrate your model would be nearshore sediment or offshore sediment traps actually  
15 physically measuring, which is a very difficult proposition to do, and not successfully done in very many places globally.

Q. So what is the best practice method then to estimate that sediment transport? Is it the numerical modelling?

A. It would be the best practice, but you can't prejudge what the results of  
20 that sediment modelling might be.

Q. Absolutely. But as you said, you're saying that's now the best estimate and the one that we've got, the only one we've got, is from 1998, correct?

A. Correct.

1535

25 Q. In your evidence-in-chief at para 177, and you don't need to necessarily go there, but you say that the offshore extraction will not have any effect on seabed bathymetry or rate of across-shore sediment transport and will not result in beach or dune erosion or other adverse effects on coastal processes. Is that still your current position, that there will not be any  
30 effect?

A. That's 177 of my evidence-in-chief?

Q. Correct, yes.

A. Yes, that is still my position.

Q. Let me check the table again. In your evidence-in-reply at paragraph 54 there it's talking about dune erosion and I think it mentions a general trend of dune erosion. The southern part of the beach south of Poutawa Stream (inaudible 15:36:47) already in an erosionry state, isn't it?

5 A. There is evidence from the last 16 years of the typographical survey to suggest that over that period it has been. The shoreline profiles, the small number of shoreline profiles in that area also indicate that but the aerial photo analysis over a much longer period does not.

10 Q. Correct me if I'm wrong but did you just say before that the aerial photo analysis that you'd moved away from using that to assess shoreline change?

15 A. No, I said that there was a degree of disagreement about the ability to use the aerial photos to record change. My personal view is that it is still a very relevant method because it has the longest period of shoreline change recorded in it.

Q. So what you've said was that, I think, was that there were three methods to assess the shore line change, correct? One was photo, one was topographical and one was the, what was the other one, sorry?

A. Was beach profiles.

20 Q. And you have – I think you then said that the application was proceeding on the basis of topographical surveys including the monitoring to assess the change, is that correct?

A. That is the method, moving forward, that is proposed and agreed by all of the experts as the best method to move forward.

25 Q. Yes, and you agree with that, that it is the best method to move forward. So your reliance on the aerial analysis was for evaluating shoreline changes to date, is that a fair summary of what you're saying?

A. An historical change, yes.

30 Q. Now, in your evidence-in-reply at paragraphs 58 and 66 you caution against leaping to a conclusion that erosion in the southern end is a result of sand extraction and I think you talk about some other potential causes and that sand extraction would've played a small part, if any, in contributing to those losses. That's correct, isn't it?



A. We can't assess with any degree of certainty how much that sand extraction may have contributed to erosion in that southern area but you need to look at the mechanisms that were put forward by the other experts as to why abstraction from the inshore particularly, or the historical extraction of the inshore, was causing erosion and they don't stack up in that southern area because the extraction (inaudible 15:40:04) that southern area therefore the effect on the nearshore bar which they contribute or say is the major mechanism of erosion does not occur in that southern area. And then if you look, as I have in paragraph 58 of my evidence in reply, that the Sand Study gives its net longshore transport to the north rather than to the south. So I'm saying that those results, that erosion is because of lack of supply because of extraction is, in my view, flawed and it could well be, I think a more likely explanation is that, or a greater part of that erosion, is that there isn't a net supply to the (inaudible 15:40:48) the north if we follow the sediment transport directions that the Sand Study established.

Q. So, I'm just wanting to understand here. Are you saying, is it your evidence that the sand extraction has had no part to play in the erosion to the south?

A. It is my evidence that it is unlikely.

Q. Unlikely. Now with the erosion that has occurred and with your evidence about there being a very, I guess, small cross-shore transport, do we know how long it would take to replenish the sand that's eroding? Does that occur or do we have any knowledge of that?

A. No, we don't have the knowledge on the time, but in a general principle, if you take the principle sediment budget and you take out the inshore extraction, then that budget on all of the inputs put forward by various people would suggest that that budget would turn back to surplus. Now, the surplus sediment budget, then you shouldn't have erosion because what it says is the inputs are greater than the losses. But as to the amount of time that might take to manifest itself in shoreline change is undetermined.

Q. And it could be a matter of years, decades?

A. It could be. It could be longer. Of course, we've also got climate change that goes on over those decade of changes as well.

Q. Now I think you mentioned just before the sediment budget. I'm just a little confused. I thought you had moved away or said that the sediment budget is no longer a relevant tool, am I correct?

A. It is not a relevant tool for assessing the effects of the offshore application, is what I said. But if you, what you asked me was what would be the effect of not, what I thought you were asking me would be what would be the effect of not extracting, which I took to be from the inshore.

Q. No, I'm asking you about the offshore because that's the only application –

A. Okay, sorry. Sorry, my – if, so, no, it would not. Not extracting from the offshore would not have I believe any effect on those erosion trends that we see in the southern part of the embayment.

Q. Now in your evidence-in-chief at para 167 you say there's an element of uncertainty in predicting future coastal processes and an absence of change can't be guaranteed and therefore monitoring seabed levels, dune positions and volumes a sensible precaution. I just have a general question about that. Is the monitoring proposed, as part of the conditions, able to identify adverse coastal process effects that occur in real time or do you have to await a series of reports in order to (inaudible 15:44:15) trends, et cetera?

A. You can identify, if you're talking coastal processes, you will identify the very relevant short-term processes such as storm effects, but if you were looking for longer term trends, then yes, you would need a collection of data over that longer term to determine trends that are taking the noise of those short term out.

Q. And what is the longer term that you're referring to there?

A. In terms of trends of change of a shoreline?

1545

Q. So, in terms of if we were trying to identify the, say, you've said that we need to monitor seabird levels, dune positions and volumes as a sensible precaution to make sure that there won't be effects on coastal processes so how long or how many years' worth of information or how many

months' worth of information do we need before we can tell whether or not they're having an adverse effect?

A. Whether coastal processes are having an adverse effect or whether an extraction's having an adverse effect?

5 Q. Extraction?

A. From the offshore it would be a very long period of time because those, as we've established, they come out of connection between that offshore extraction area to the shore line is very limited and so if there were to be effects, which I don't believe there will be, we would need a long period and we still not be able to unpick them as effects because of the variability that occurs on shore lines, due to natural coastal processes.

10

Q. So then is there a, I guess, the potential that we could get, if this was granted consent for 20 years that we wouldn't know whether it had had adverse effects until the end of the consent, we wouldn't have enough information until the end of the consent?

15

A. In theory that is right but in practice, sorry, in theory – in practice that is right but in theory our best understanding of the principles of closure depth and principles of connection is that there would not be an effect.

Q. That's your evidence but, yes, so what I'm wanting to understand is if we're doing this monitoring is it going to be able to show us things so that there could be steps taken before the end of the consent if we were able to identify trends that could be associated with adverse effects. But I think what you've said to me is that it may be that we don't know until the end of the 20 years that those effects may have occurred, is that correct?

20

25 A. Well, we could see trends in shoreline behaviour within those 20 years but whether those trends or the contribution to those trends from offshore extraction will be very hard to determine.

Q. So, if some trends in shoreline behaviour are identified within that term the conditions that are proposed do not require the mining to stop, do they?

30

A. No, they don't.

Q. And this will be my ignorance again, but there's no trigger levels of anything like that which require an operational response in the conditions, is there?

A. No there isn't and that's because of the very small likelihood of effect from the offshore extraction and the very large likelihood that trends will be as a result of, or fluctuations will be as a result of natural coastal processes.

5 Q. And just moving to the sand extraction monitoring reporting, that condition 45 requires comments (inaudible 15:48:34) to be included in the report, doesn't it?

A. It does, yes.

Q. But it doesn't actually require that those comments or recommendations be complied with, does it?

10 A. I couldn't comment on what the intention of that condition around those comments are. They're to be recorded in, as far as I'm aware, they're recorded and presented to the council and it's up to council, as in the Auckland Council, how they may deal with that.

15 Q. I'm not reading into the intention either, Mr Todd, I'm just talking about what the actual condition wording says and maybe it's useful to bring up condition 45 on the screen if we could. So, just on that one, it talks about the report being peer reviewed prior to its submission and then if we come down to the last sentence it says that there needs to be explanation of where any comments suggesting changes had not been incorporated and the reasons why.

20 A. Yes.

Q. So that doesn't say that, in fact that suggests that there could be reasons or the recommendations made might not be accepted, doesn't it, because you can just provide an explanation as to why they haven't been adopted, that's correct?

25 A. As I read it that would be correct.

Q. And then just in terms of, I think you mentioned before it's up to the council to, to decide what to do with that information. So under, if we go up to condition I think it's 8. So this is, this condition sort of links into condition 44 which has got the, which talks about the sand extraction monitoring report and that says that the council may review the conditions within three months, doesn't it?

30 A. It does, yes.

Q. So the council is not required to undertake a review no matter what the report says, are they? It's a discretionary power there?

A. It does say "may", yes.

5 Q. Just another general question, would you agree that if changes are going to be felt in the inshore area on the beach et cetera from the offshore extraction, that that's likely to occur in the later years of the consent?

A. Yes.

10 Q. In which case the sand extraction monitoring proposed for the second half of the consent only requires monitoring every five years, doesn't it, year 10, year 15 and 20?

A. 40. It requires monitoring every six months.

Q. Yes, so the reporting on the monitoring but it's the reporting that triggers the review power, isn't it, that condition we've just been to?

A. Yes.

15 Q. Now just moving on to another topic and again I will need to check your table. I'm not sure whether this one's been affected or not, but in your evidence in reply at paras 14 to 16 you rely on the updated university of Auckland analysis to support your view that there's been no long-term erosion, don't you?

20 A. I do. What I note there is that there is now no difference in that trend of shoreline movement between that University of Auckland study, or the updated University of Auckland study, and the Jacobs assessment.

Q. Now in the joint witness statement from conferencing, in section 2 of that joint witness statement there's some comment on the University of  
25 Auckland study and it said that there needed to be caution applied in interpreting data of shoreline change based on that study, that's under the matters of disagreement, that's correct isn't it?

1555

30 A. Yes, the fore piece to that piece of work mentioned about the need for or should be supplemented by, as it says there, the repeat elevation studies and the beach profile analysis. But I, while I accept there are difficulties and certainly with aerial photo analysis, I believe as it says there they're still valuable to show broadscale trends and in fact they are the standard method for New Zealand for interpretation of historical shoreline change

and they have been for quite some time because they cover the longest period of record we've got and they are still (inaudible 15:55:54) even where we have repeat very dense beach profiles, more dense than what we have at Pakiri, they are still the standard method for interpreting historical shoreline change and they the method for the study, the national study which part of that Pakiri beach was, for assessing climate change on beaches. So why would that be in a national sense if they are not to be relied on?

Q. Well I'll leave that question for someone else to answer since I'm asking the questions.

A. Fair enough.

Q. But I want to pick up something that you said at the beginning of your answer to me, I think you made reference to the fact that there was, in providing this study, a caveat. You didn't use the word "caveat" I can't recall the word you used, that if a single shoreline sort of proxy wasn't sufficient to assess shoreline change and it needed to be supplemented by additional surveys, that's correct?

A. That's what currently it suggests, yes.

Q. Now – and I think you've just said to me that the edge of vegetation method is still one that is the most common used to assess those shoreline changes, or historical –

A. Yes.

Q. Historical?

A. Yes.

Q. Now a point that Mr Coco makes in his evidence is that the – sort of the vast majority of papers over the last 20 years haven't used the edge of vegetation methods, do you agree with that?

A. While that might be the case in the last 20 years internationally, that is not the case in New Zealand, and it is not exactly relevant if we're talking about historical change, because what Mr Coco was talking about is the use of satellite. Now satellite has only been around 20 years which is not historical change.

Q. So when you, just so I'm clear, when you're referring to a historical change you're referring to older than 20 years?

A. Yes.

Q. Would you agree that volumetric measurements are more reliable than aerial surveys?

5 A. Yes, volumetric if we've got topographic, full topographic volumetric other than isolated discrete profile volumetric. So, yes, it's certainly much more reliable.

Q. And would you agree that the edge of vegetation method can be uncorrelated to the volumetric beach changes?

10 A. It can be. There is difficulty in that correlation because it's a position versus a volume. So a volume has an elevation component to it.

Q. Now moving to a different topic, and you'll be pleased to know we're getting close to the end of my questions, so in your evidence in reply you talk a little bit about climate change and the storm from 2007 and you say that the climate change effects and the predicted effect of increasing and frequent storms is still uncertain and have not yet been quantified for a  
15 New Zealand context. That's still your position?

A. It is.

1600

20 Q. Would you accept that as a result of climate change, storms events are becoming more frequent with less time in between them?

A. Not necessarily. What we're seeing and what we've seen in the current time is a response to El Nino conditions, which are quite different from climate change. So while we have had (inaudible 16:00:24) storms, easterly and north-easterly storms along the east coast of the North  
25 Island, they are in response to La Nina primarily. There is no clear evidence that they are totally climate change related.

Q. And would you agree that sediment in the offshore area will be worked forward over time with climate change and sea level rise and move into the into the inshore zone? Or is it your view that the depth of closure effectively stops that?  
30

A. The depth of closure, the principle of the depth of closure stops that, the majority (inaudible 16:01:07) transport, yes.

Q. Just turning to the trenches, so is it correct that it takes some years for those trenches that have been identified to be completely infilled?

A. It will take a period of years, as it has, but that rate of infill has been very rapid since they were first identified. So in the three years that they've been identified, the rate of infill has been, you know, I can't remember off the top of my head exactly what it is, but very rapid. So the number of years I think would be in the terms of years, not decades.

Q. So if in future further trenches were caused, then it would take a similar timeframe, depending on – I mean a similar trench at similar depths?

A. Well that can't happen under the existing conditions and the operation of how the extraction is occurring in the future and it doesn't happen with the *William Fraser*. Those deep trenches were formed under a different regime with a different extraction mechanism. So I think any talk of future trenches is not relevant to the deep trenches, yeah.

Q. So your evidence is that there is no potential for future trenches in the future because of the way that the operation is run now?

A. Correct.

Q. And just finally, I was just wanting to pick up on one point. So I had asked Mr McCallum about the amount of sand that had been taken to date. I think your changes have just revised those figures. So just so I'm clear, the figure I think we'd previously said two million before 1966 and then approximately six million from 1966 up till now and plus another two million for this consent. The changes that you've circulated to your evidence have dropped that middle figure from six million to 5.45, is that correct?

A. No. The 5.45 is since the Sand Study. So in the table 1 of my evidence-in-chief which is after paragraph 29, if you look at that, there is close to two million cubic metres which were taken between 1966 and 1997. So there is an estimate of two million prior to 1966 which is a little vague whether that – how accurate that is and exactly where it was from. The Sand Study then did the work or presented the work from '66 through to '97 which is another two million. But you need to take that out as I was doing earlier in my amendment if you are then looking at a percentage of the Holocene sand that was established in the Sand Study. So since 1966, the totals are as per the bottom line of my table 1. So if we add all



of those up, that six million is still close to correct apart from what's happened since 2022, yes.

Q. And just finally a question in relation to the pre-(inaudible 16:04:53) figures. I asked Mr McCallum if he agreed with those and he said he had  
5 no basis to disagree. Just wondering where you got that figure from? What's that based on?

A. Yeah, so that figure is reported in the Sand Study, and I reported that in my coastal processes assessment that accompanied the application and said in detail where they'd come from. So that number was as per  
10 reported in the Sand Study that was an estimate in order of two million and, as we say, we understand some of it's extracted from the dune field but have no real ideas of volumes, quantities, locations.

#### **THE COURT: JUDGE SMITH**

Thank you, Ms Morrison-Shaw. I'm just wondering if we take a break or not.  
15 Mr van Mierlo, I see you've been, at least from our perspective, present throughout. Are you now resurrected and online, are you?

#### **MR VAN MIERLO:**

Yes, been connected and heard all that so hopefully it's all stable and we will  
20 remain to be.

#### **THE COURT ADDRESSES COUNSEL – HOUSEKEEPING (16:06:10)**

#### **CROSS-EXAMINATION: MR VAN MIERLO**

Q. Initially, I'd just like to talk to you about the existing environment in terms of the coastal processes at Mangawhai/Pakiri embayment. Now, I  
25 understand sand extraction and this system has been going on for approximately 80 years. Is that your understanding?

A. It is.

Q. And just returning to an issue which you were just discussing with Ms Morrison-Shaw, I understand that from 1966 onwards we've got just  
30 over six million cubes of sand having been extracted from the system.

Can you help me in terms of prior to 1966 what's the best estimate of sand having been removed from the system?

A. It's as per paragraph 28 of my evidence-in-chief that, and again I'm just using what was in the Sand Study, estimated to be in the order of two million and some of that we understand was from the dune field rather than (inaudible 16:08:44).

Q. So that's in total obviously around eight million, eight million cube over the last 80-odd years and over the last 25 years my understanding it's about five and a half million cubic metres?

A. Yes, that would appear to be about right from my table 1, yes.

Q. So, the existing environment within which this current offshore consent application has been considered is one which has had a long history of sand extraction. Would you agree with that?

A. I would.

Q. Now, following the correction of the error in survey datum, you've accepted that this presents a much different picture of beach contour movements than you originally described in your evidence-in-chief?

A. Correct. From, as the beach contour movements from the topographical survey, yes.

Q. And in fact the previously reported shoreline advance converted to erosion across all contours except the 5.5 metre contour located on the foredune face. Now, that's from paragraph 50 of your evidence-in-reply.

A. Yes.

Q. So all the contours other than the 5.5 metre are eroding, not accreting?

A. That is, yes, that paragraph 50 is in relation to the beginning point and end point, sorry the end-point analysis between (inaudible 16:10:53) 2007 and March 2022 which was previously presented in my evidence-in-chief as table 1, no, I must've had a different table, which I re-presented in table 1 of my evidence-in-reply. So it is in relation to those end-point between 2007 and 2022.

Q. I put it to you that the removal of eight million cubic metres of sand under the previous sandmining operations is likely to have contributed to the erosion which is now occurring in the embayment?

A. Well the extraction potentially from the inshore, I don't believe that the 1.9 from the offshore has contributed and that's because of the depth of closure argument and that we can't really determine what contribution may or may not have occurred from sand extraction in any one location.

5 Q. Well, his Honour said we've got erosion occurring now any moment, you've confirmed that and we do know that 8 million cubic metres has been removed from different extraction areas over the years. If that 8 million cubic metres hadn't been removed then that sand would be available to provide resilience for the shoreline in the embayment now, wouldn't it?

10 A. I don't believe you can include the offshore extraction in that equation.

**THE COURT: JUDGE SMITH**

I was going to suggest, Mr van Mierlo, that for the purposes of your examination we could put aside the offshore because of the debate as to whether it is a part  
15 of the active system. I think Mr Todd accept that both the inshore and the dune system would (inaudible 16:13:05) be part of the system and thus that would be six million, so I think by modifying your question very slightly you can probably go just where you wanted to go without getting us into another area of argument.

20 **CROSS-EXAMINATION CONTINUES: MR VAN MIERLO**

Q. Well, let's look at it in that sense. If we take the offshore out of the equation for now and we look at it in terms of the 6 million cubic metres that has been removed from the system you'd accept that that has reduced the resilience of the beach system and lessened its resilience to  
25 erosion, which we now see?

A. I would accept it has the potential to have reduced it but there is no evidence that links it.

**THE COURT: JUDGE SMITH**

Q. Could I ask the question, Mr Todd, what would you say would be the  
30 evidence that would link it?

A. So my evidence of linkage is spatial so if we were, if the inshore extraction, which is really what you're talking about, minus actually whatever's gone from there was taken from the ebbside delta of the Mangawhai it should be felt, the extraction of that should be felt to be most probably the closest to where it's been extracted.

Q. You would expect it to be fairly well onshore from the point of the loss, is that what you're saying?

1615

A. Yes, they are very much concentrated there by the reasons put forward by the other experts that it is the interference with the nearshore bar. And so that interference occurs right in front of where that obstruction is from. Right now, if we look spatially at the erosion patterns, my view none of the evidence suggests that north of Te Arai Point has got those large or significant erosion patterns, yet there has been, well, a pro-rata basis, potentially around 50% of that six million on that area.

Q. I understand what you're saying and I don't want to interfere unduly with Mr van Mierlo but it is obviously an issue we've been discussing, and in that context do you see little drift as being relatively neutral or benign in some way? It doesn't have a strong tendency in one direction or another?

A. The evidence of little drift is contradictory, your Honour.

Q. That's why I asked you the question. Are you saying that you don't see it as being an influential factor in this case?

A. No, not to the north of Te Arai.

Q. Not to the north of Te Arai. Thank you, Mr van Mierlo –

A. Not until we get down –

Q. – I just wanted to clarify that response a little bit further because I understood it from his evidence. I'm just trying to make sure that we can comprehend the connection that he's saying we should see. Thank you, carry on with your questions, Mr van Mierlo.

### 30 **CROSS-EXAMINATION CONTINUES: MR VAN MIERLO**

Q. Well Mr Todd, I'd now like you to refer to table 3 in your evidence in reply, and it's probably worth if we can get this on the screen. It's on page 17 so that's in folder 1 of the evidence bundle, page 2A 19. Now as I

understood your answers to the questions from his Honour Judge Smith, you were saying that there was no evidence of erosion adjacent to the northern extraction area which is the area north of Te Arai Point. But in your table 3, you identify a net volume change in that area of minus 70,000 cubic metres. And prior to the survey error having been identified it was a net volume gain of 224,000 cubic metres, so obviously very significant shift. But the question I'll put to you is that that is now showing erosion adjacent to the northern extraction area?

A. Yes, that is showing erosion between two surveys and an end point – so it's an end point erosion rate, as the caption on table 3 says, so it is the difference between a survey in April 2007 and a survey in March 2022. It is not a trend as such other than an end point, the difference between a beginning and an end. It's not a trend of variations that go on in between those two dates.

Q. But between those two dates there's been a significant net volume loss?

A. Correct, and we need to put that into the context of the recent surveys which include that one from March 2022 in the context of the seven or more storm events that we've had in this La Nina condition which has reduced volumes across all of those beaches, and in fact go much wider than Pakiri in this latest weather conditions and cyclic conditions that we've had.

Q. And for the southern extraction area which is also shown on table 3, again we've got substantial net volume change between those two dates?

A. Between those two dates, yes.

Q. So at your paragraph 57 of your evidence in reply: "I conclude that the shoreline over the last 16 years has displayed a trend of accretion adjacent to the northern inshore extraction area, general stability adjacent to the southern inshore extraction area, some evidence of dune erosion to the south of the extraction zones." I put it to you that that statement is inconsistent with what your table 3 is showing?

A. No. 57 is in relation to the linear aggression which is shown in table 2 and shown in Figure 3 which are longshore aggression rates which take all that variability into account, where table 3 is an endpoint which takes

just one point being the first being April 2007 and the end of March 2022. So, they are two different methods and it is accepted that the linear aggression, taking all of the variations into account, which table 57 refers to in contours, is a much more accepted and representative and meaningful result than table 3 which was presented for comparison purposes with what I had presented in table 7 of my evidence-in-chief.

Q. So, despite a nett volume change of 70,000 cubic metres it's still your view that that's show a trend of accretion?

A. In terms of the contour movements, which are presented, as I said, in table 2, yes.

Q. I'd just note you had a very similar statement, pretty much the same statement in your paragraph 108 which, according to your table which is circulated, you delete it. Is there a reason why you're continuing to make the statement at paragraph 57 but you're deleting the same statement at paragraph 108, of your evidence-in-reply?

A. Yes. Paragraph 108 is in reference to the inshore and so the conclusion that I state in 108 that I still will abide by as per in 57 but the reason for the deletion is around their relevance to the effects of inshore and potential midshore extraction.

Q. We'll move to another topic now which is the depth of closure. So, in your evidence-in-chief you develop seven lines of evidence to support the view that significant movements of sediment occur across the 25 metre isobath at Pakiri, recall that?

A. I do recall that but that has now been amended in light of the discussions at the joint witness statement that they are lines of evidence and, in fact, it was your witness Mr Beetham that pointed out my error that these are really lines of evidence of movement beyond – of the gross movements beyond the 25 metres and not necessarily a nett movement across. And I accept that criticism and I accept that he is correct, that they are evidence of movements beyond.

Q. And you've referred to the outer depth of closure as being the theoretical water depth where sediment transport is very small, that is in paragraph 71 of your evidence-in-chief?

A. Yes.

Q. And I think that paragraph's retained, it hasn't been deleted?

A. Correct.

Q. And in the joint witness statement for coastal processes, you agreed with the other coastal process experts that, based on the information available, the 25 metre depth of contour represents the outer depth of closure?

1625

A. Yes, it's an outer depth where sediment transport due to waves is limited. It's what is, question is how limited.

10 Q. Do you agree that the depth of closure can change over time in the system?

A. The depth of closure will only change in the way that, because of the way that it's calculated, if you're wave climate changes and your sediment size changes, because they're the two parameters that are primarily used to calculate depth and closure.

15

Q. Yes, so if storm wave height or period change, that could affect the location of depth of closure?

A. Not an individual storm. The depth of closure refers to a period of time which is, when it was first put forward Hellermeier it was actually an annual change, (inaudible 16:25:57) to annual change, and it's been accepted that it's over a longer term. So, an individual storm doesn't change the depth of closure. What it does is signify that there is volumes of sand during that event that can move across that depth of closure.

20

Q. But if over time storm periods, wave heights were to change, that could impact on the depth of closure?

25

A. If over time, over a long period of time that occurred, that could affect the depth of closure.

Q. So, while information currently indicates the depth of closures at 25 metres, I put it to you that it's prudent and sensible to monitor that over the life of a 20-year consent?

30

A. I'm not sure I'm with you. To monitor the depth of closure or to monitor the variables that go into making up the depth of closure?

Q. To monitor the variables that go into making up the depth of closure so as to verify the depth of closure as where it's understood to be?

A. So, you're suggesting that there should be a wave buoy employed to measure wave, the characteristics?

Q. That would be a part of how one would verify depth of closure is where current information indicates it is, wouldn't it?

5 A. It is one way you could do it. You could also do it from a wave (inaudible 16:27:27) which is (inaudible 16:27:30) that has been done in the past.

Q. And in the joint witness statement there was reference, I think the experts were in agreement that a wave buoy would be desirable in terms of confirming the location, depth and closure?

10 A. I'm just looking for, which section?

Q. The pages aren't numbered. It's –

A. No, I've got you. Additional oceanographic data, it said it would be useful. Now the word "useful" was deliberately used because it was not deemed necessary. If it was necessary, the word "necessary" would have been  
15 there, and that was the discussion we had, and so it was deemed to be useful but not necessary. And as pointed out by the council representative on that joint panel, it would actually require a consent from Auckland Council and you can't have a condition, as he informed us, that required a consent.

20 Q. Yes, but I'm just, I'm really only putting the question in terms of a coastal process, processes to verify depth of closure a wave buoy would be part of the process that you would use?

A. That is one way and I would stand by the wording of that joint witness statement that it would be useful.

25 Q. Looking at some other matters around conditions, are you familiar with the, those conditions that were circulated on 7 July, at least as they relate to coastal process issues?

A. Yes, I believe they're the last set that I've seen.

Q. Did you have input into those conditions?

30 A. Over the process of them being prepared I did, yes.

Q. With regards to the commentary, there's no requirement of those conditions to undertake any bathymetric survey of the area between the shoreline and the extraction area, is there?

1630



A. I understand there is now a 200-metre area landward of the inner part of the extraction area that has been added which was as a result of the joint witness statement suggests it would be useful with that for bathymetric purposes. So there was an additional 200 metres but there is not bathymetry across that greater distance from say there to the shore, no.

Q. So that 200 metres landward from the inner extraction area boundary that's contained in the EMMP rather than in the conditions?

A. Okay.

Q. Yes? And that only goes for 200 metres, so that would still leave an area of about 1.6 ks to the shoreline where there's no proposal to undertake bathymetric surveys?

A. Correct.

Q. In terms of understanding the potential influence of sand extraction within the most extraction area on the shoreline, I'm putting to you that it would be useful for bathymetric surveys to be undertaken on regular basis between shoreline and the extraction area?

A. For an academic exercise that would certainly be useful for understanding. In terms of the understanding the effect on the beach, there is a very extensive beach monitoring programme proposed to understand what is actually happening on the beach which is where the effects (inaudible 16:31:44) are interested in. So I don't believe that bathymetric survey across the area in between is required for assessment of effects on the beach because we're monitoring where those effects are.

Q. We'll come to the beach shortly –

A. Or are likely to be.

Q. We'll come to the beach shortly, but I'm just talking about bathymetric surveys for now. So if, for example, there was a lowering of the seabed in that area between the extraction area and the shoreline, that would be useful information to know in terms of understanding potential effects of the proposed sand extraction, wouldn't it?

A. Well, if we think about the processes, the processes of lowering would be (inaudible 16:32:31) sediment moving across that boundary, and that would be picked up in that 200-metre buffer, that would be the first place it would be felt. So if there was a lowering outside of the extraction area

on a landward position, that is the purpose of that buffer. You wouldn't determine it across that 1.5 kilometre stretch because if it is dispersed, which is what again what the processes tell us, we would not deter – we would not see that in the bathymetric record, in fact we see nothing in the bathymetric record in the extraction area of effect on bathymetry that is outside of the limits of accuracy of that.

5

Q. I put it you that 200 metres is fairly arbitrary, it would make more sense to undertake bathymetric monitoring in the area through to a relevant contour and be the 10-metre contour or the 15-metre contour rather than just picking 200 metres.

10

A. I would disagree. I believe that it really would show nothing and that is, I say, the context of effects, what we're interested is the effects on the beach. There is nothing in the offshore extraction in the way that it is to be extracted. We've removed deep trenches, that there is nothing that the ability of that transport in that small amount of transport that is now agreed to be concurring from that offshore extraction and if there was it would be picked up in that buffer zone.

15

Q. So just in relation to trenches then and item 5 of the joint witness statement goes through processes. There was discussion about trenches and one of the matters of agreement recorded says: "It is therefore agreed that once the existing trenches have recovered, these areas should not form long-term barriers for sediment transfer from the offshore to the midshore." Doesn't that statement indicate that sediment is transferring from the offshore to the midshore across the 25-metre isobath?

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A. Yes it is and it's accepted by all the witnesses, the expert witnesses now that that transfer is around 12,000 or an average of best estimate of around 12,000 cubic metres per year.

Q. Yes and that's just an estimate isn't it?

30

A. That is the best estimate that is, that was provided by the same study, correct.

Q. It has not been verified in the field, it's just what is estimated?

A. It is estimated within a range of estimates, yes, is the best estimate from a range of estimates.

Q. Now just you mentioned the topographic survey on the beach and those surveys they're required to be interpreted (inaudible 16:36:00) the EMMP requires an interpretation of the cause of any change in the profiles, contour positions and topographic volumes, would be fair?

5 A. Yes.

Q. So the purpose of the topographic surveys is to ultimately inform as to the causes of any changes that are picked up?

A. Yes.

10 Q. Now in terms of monitoring any potential shoreline changes and understanding any possible influence of sand extraction activities, I put it to you that it would be useful to extend those shore, the beach profiles through the shoreline out to the extraction area through bathymetric surveys?

15 A. Again, I would disagree. Again, this was debated in the joint witness statement or in the caucusing. You are relying on, if you are going to do that, you're going to rely again on 11 discrete positions. You're going across the only place you're likely to find change over that six-monthly if you were doing that period as in the nearshore bar which is a highly dynamic part of the beach system which is going to respond to wave conditions rather than sediment extraction from the offshore.

20 Q. Don't we end up with a large gap between the shoreline and the extraction area whereby it's always going to be difficult to identify cause and effect (inaudible 16:37:42) bathymetric monitoring in that area?

25 A. When we – you're correct in that we end up in a gap, I don't believe it limits the ability to interpret change on the shoreline. Because the majority of that change, that variability of that change on the shoreline in following the processes principles is going to be due to variability in wave climate and storm conditions. Now if you start to see changes occurring on the beach which you cannot explain why that variability, then you have the potential to start to say well they could be sand extraction effects. I

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Q. Would it not help identify where, oh, put it like this. Would it not help identify that changes are not due to sand extraction? It works both ways, doesn't it?

A. Well it could work in that way. But I – from what I, what I understand of they bathymetric change which we currently see or don't see we are not going to see anything, right? So there is (inaudible 16:39:13) in doing research for understanding of processes as opposed to doing monitoring for assessment of effects and I don't believe that the bathymetry in that gap helps us in that understanding of effects when those effects are manifested on the beach itself and there is a very extensive monitoring programme on the beach.

Q. You accept there's a lot of uncertainty in this system then?

A. I accept there is uncertainty, yes.

Q. So surely more information – accepting it's got to be relevant information?  
1640

A. The accepting of relevant information to reduce uncertainty is fine but, as I say, to me what you have to unpick is that can you still, or is that uncertainty such that you can't grant a consent or that you can't monitor the effects on the beach, and I believe that the monitoring programme put forward is able to achieve that.

Q. Do you accept that in the monitoring programme, in terms of imagery and topography needs to be linked to review conditions?

A. No, I don't.

Q. Well, Mr Todd (inaudible 16:41:06) all your evidence is that extraction in the offshore won't cause adverse aspects on the shoreline, isn't it?

A. Correct.

Q. So if monitoring indicates that that's incorrect and that the extraction is impacting the shoreline surely it's appropriate for conditions to be reviewed?

A. Those review conditions are there, as I went through with Ms Morrison-Shaw in terms of the conditional review of conditions that come from the sand extraction monitoring reporting. I don't believe they need to have the review conditions as automatic ceasing of extraction as per what was going to be proposed under the inshore and midshore consent. So those review conditions are there in a more general sense if there is things determinative from the shoreline monitoring that suggest that there may be an effect.

Q. So you accept that if monitoring suggests that there may be an effect on the shoreline it's appropriate to review conditions?

A. I accept that the current conditions give the council that ability and that that is appropriate. I don't believe they need to be more stringent review conditions.

Q. I'd just like to move onto another topic now, but still with conditions. The control area, and I don't think we need to bring up the map, I think you'll be familiar with it?

A. Yes.

Q. But given the change in or the reduction in the area proposed for consenting it's now a distance of about four kilometres between the extraction area and the control area, southern control area. For the purpose of a comparison with the extraction area and the effects within it, wouldn't it make more sense to have it now closer to the actual area of proposed extraction?

A. It would from that point of view. As I understand it the southern control area was that it was outside of where the previous consent was to go to and therefore it is outside of any area that has been extracted in the past under the offshore consent. It is also, I understand, that that southern control area is primarily around biological control rather than bathymetric control.

#### **CROSS-EXAMINATION: MS BLACK – NIL**

#### **CROSS-EXAMINATION: MS WIKAIRA – NIL**

1645

#### **CROSS-EXAMINATION: MR POU**

Q. Kia ora, Mr Todd. My name is Jason Pou. I'm here for Ngāti Manuhiri. I've got a couple of questions and basically, they just bounce off some of the questions that you've already had. Ms Morrison-Shaw asked you a number of questions and a series of questions around trying to attain certainty around impacts and those sorts of thing and normally it's, when a consent is being applied for there is a lot of forecasting and those sorts

of things but I'm finding it difficult, and could you remind me, I'm finding it difficult to understand why there is still this high level of uncertainty given that these consents have been in place for 20-odd years? Why isn't the data available? Why do you not have the certainty that you otherwise would have?

A. I think there's two potential answers to that, Mr Pou. One was that the Sand Study actually made this the most studied beach in New Zealand but, as you're aware now, it (inaudible 16:46:58) number of questions as well as it raises answers. And then, secondly, the consents that were granted since that time, or in that time, the monitoring of those, which is the only additional information that has been required, didn't really address those uncertainties. Now you could argue that that was, that the monitoring was ineffective, if you like. But certainly, there wasn't a requirement in terms of the consenting to address some of that uncertainty. So, we're left (inaudible 16:47:41) we will arrive at this application with that uncertainty still in place.

Q. But when you arrive at this consent with that uncertainty still in place and it seems that we're using the same sorts of conditions to monitor and best endeavours conditions which, you know, by this, I sort of say, you know, that there's that song, *There Are More Questions Than Answers* but to grant a consent we should have more answers than questions. And I still can't understand how are tangata whenua to have the faith that these conditions will take us to a place of certainty that we haven't achieved after 20 years of monitoring?

A. We would hope that the monitoring will be able to give us more certainty, certainly around how the beach is performing and certainly around whether the bathymetry within the extraction area, the offshore extraction area is changing. Because remembering the consent conditions done previously are not as extensive as what is required under this consent. In fact, when Kaipara put this consent forward, they didn't have any beach monitoring, so that's something that, well they didn't propose it, they'd didn't see it as necessary. So that's something that McCallums have picked up and said: "No, we need to do that for the continuity of the record, for trying to answer what is happening on the shoreline. Even

though we don't believe we're going to be having an effect, we want to answer what is happening there." The bathymetry previously was, I believe was at every 500,000 cubic metres or 250,000 cubes, so the monitoring that is required under this consent is more extensive and, I guess in response to these sorts of discussions, will be audited much more rigorously by the use of the qualified experts that need to audit and sign off on those monitoring reports.

1650

Q. Well I read the Beca report and I think it's at the common bundle – the common bundle at page 131, and it talks about bathymetric comparisons. I'll just you an opportunity to consider that but because my reading of that is that the bathymetry and survey results, because one of your responses to Ms Morrison-Shaw was that we shouldn't model because that might create more questions than answers, but when I read this, bathymetric – I'm going to find it really difficult to say that word, Sir – when I read this about the comparisons, those levels of uncertainty seem to be highlighted there as well and in particular in that second paragraph. What's your comment on that?

A. I'm not sure what you're wishing me to comment on, Mr Pou.

Q. Well it says: "Undertaken by survey contractors over the life, attempts to provide realistic interpretation of changes over time have been problematic. Sources of error inherent in the survey processes are quoted in the survey reports and are significantly greater than the changes in bed height indicated in between surveys." And what you seem to be suggesting is that we take more surveys that seem to be problematic or don't take into account differing heights and those sorts of things or have – are prone to errors that a greater than.

A. I'm not suggesting we take more surveys that in error, I'm suggesting that the survey regime will be more rigorously audited to ensure that the standard of survey is sufficient and fit for purpose. But you have to remember with bathymetric surveying in 30 metres of water depth there will always be an error and you're better to address those questions, I believe, to Mr Stubbs, the hydrographer, around, you know, the sources

of error and the ability now to (inaudible 16:52:43) as far as possible because that's his area of expertise as the data collector and surveyor.

Q. Fair enough I'll ask him those questions. The other document I want to take you to is the coastal processes joint witness statement, that's in the bundle, that's page 1430. It's cumulative effects of historic and proposed extraction. Now that the matters of agreement rather than the matters of disagreement, just a little bit up a bit please. Now, one of the conditions talks about not extracting below the active depth, what is, with reference to this, do we find out what the active depth is here? And I'm just seeking clarification, I don't know what the active depth is.

A. Okay, so the active depth is, again this was a discussion that at the joint witness caucusing, the active depth is taken to be the depth of the Holocene, marine Holocene sands. Now that depth of Holocene sand is as it says a thin veneer of varying depth and it was established in the Sand Study from a very limited number of 17 samples across the, and only across the southern part of the embayment south of Kauri Head. And it was established that it's normal range is between .6 to one metre deep in those midshore to offshore extraction areas, probably a little less as you get further and the offshore, as you heard from Mr McCallum. But in some cases it was as low as .15, in some cases it was up to two metres and that would be the depth of the Holocene sand at any one point in time at any one place would be variable because we have sand ripples and other bed forms that occur. So that's the depth, if you like, of active sand as how it's determined and what it is.

Q. And did I hear you correctly there's been no assessment or surveying of what that depth is north of Te Arai?

A. Yes there was not in the Sand Study and it has not been done since, no.

Q. So we're uncertain as to what that active depth is north of Te Arai?

A. What that active depth is, the only piece of information, I guess, which could allude to that is when they're dredging do they dredge up the Pleistocene sand, you know, (inaudible 16:55:52) when they were not dredging with the *William Fraser* but under the previous extraction with the *Coastal Carrier* which was a different pipe type dredge, that went



deeper hence the deep trenches, you know, did they get below the Holocene sand, and I don't know the answer to that.

Q. Well if you said that the Holocene sands go from .6 to one metre deep, if those trenches were two and a half metres deep then they did piece the active depth, didn't they?

5

A. Well as I said that was what the results from 17 samples were and whether those 17 samples, how close those 17 samples were to the deep trenches I don't know and I don't – I see no reports that suggested that the deep trenches went below the Holocene level at all. I can't answer whether they did or they didn't because I don't know, I've seen no evidence or no reports that prelude to it.

10

Q. So again that's another area of uncertainty?

A. That would be correct.

Q. And I just note there that: "Potential cumulative effects could include," and this is just the last sentence of that (inaudible 16:57:09): "Potential cumulative effects could also include reduced stability of the bar and beach system and an overall reduction in the resilience of the system to recover from extreme events." So is that a consequence of going through the active layer?

15

A. No, that wasn't as a consequence of going through, well it was of a consequence but it really relates to the inshore extraction with is around the stability of the bar and it was really in relation to the inshore and midshore as opposed to the offshore.

20

Q. I suppose my last question is, if we don't know how deep the active layer is at any time, how can we create a realistic condition that ensures that the active layer is not (inaudible 16:57:58) again so that it can be a consent condition?

25

A. I'm not sure how, how I can answer that in terms of a consent condition. What I can say is the extraction method by the *William Fraser* being a very shallow trench as you heard from Mr McCallum being around about 100 millimetres is a, a good indication that is on a single track is unlikely to go below that Holocene layer or veneer and that because of the way that the conditions are written around (inaudible 16:58:45) and the limit of 20,000 per recording cell, very unlikely that you're going over the same

30

track twice, gives a degree of, some degree of confidence that you will not penetrate that bar. But how you write that in a condition I'm not sure.

Q. Yes and I guess that's the issue that uncertainty. Now there's been a discussion about how much sand there is in this area out to 40 metres, the 40-metre depth and whether it's six to 11% that's been taken or less or something like that. But extraction is not occurring from the entire area, is it?

A. That's correct.

Q. It's occurring from a small, it's – so what we are is we're taking a whole lot of sand from one place and then saying it's only a little bit when you compare it to all of the sand that exists within the entire embayment, even the sand that we can't get to at 40 metres.

1700

A. That's correct, but what we know from looking at the seabed out there and those repeat bathymetries, even though they may have errors, is that we are not seeing or I'm not aware that we have seen, because remember it was Kaipara's data, not McCallums', that a lowering as such, a universal lowering over the obstruction area. And the obstruction area is not – while it's concentrated compared to the whole embayment, it is still a very large area. So the ability, if there was no inflow into it, no movement at all into it, you know, I think I worked out – I don't know if you could bear with me till I find my piece of calculation – that the 20,000 cubic metres a year per resorting cell is around – and there was no recharge into that whatsoever, no movement whatsoever, would be 25 millimetres per year (inaudible 17:00:53) which, over the 20 years, would be .5 of a metre. But we know there is movement going on all over the place and so we are not likely to see those sorts of changes or be able to measure those sorts of changes in the bathymetry.

Q. And I guess that's the concern for Ngāti Manuhiri is the inability to measure and the lack of certainty that remains within this application for consent. You could understand that concern?

A. I can understand your concern.

Q. Thank you, Mr Todd.

**THE COURT: JUDGE SMITH**

Thank you very much and we'll have the adjournment in a moment. There's two things I want to discuss. Firstly, I feel that I'm not sure at this stage, and I presume it must be in some map somewhere, where the trenches are, and they  
5 were related to the offshore consent, is that right, Mr MacRae?

**MR MACRAE:**

Yes, Sir.

**THE COURT: JUDGE SMITH**

Perhaps somebody could tell us which map we need to look at to see where  
10 those are. In light of the revelation that Holocene sand depths are measured in the southern area, I'm asking Mr Todd, it will come up from me if nobody asks the question, and I'm saying it so the other geomorphologists can have a look at it, hydrologists, et cetera –

**WITNESS:**

15 The trenches are in the southern end –

**THE COURT: JUDGE SMITH**

No, no, I'm not asking you a question now. I'm just giving you some homework, and others, so they can think about it between now and when we ask the question, if nobody else does, tomorrow, and that is if the southern area was  
20 between .6 and .1, and we know that the trench was two and a half metres deep, we can assume that the depth of Holocene sand must be over two metres, and the question then does that have wider implications in terms of drift of sand to the north, or drift south from Mangawhai, does it mean that the depth of Holocene sand over the whole embayment is the same, given what we  
25 now know is the significant difference in depth between the southern and northern area?

Those are questions that this Court considers – I've been concerned right from the beginning about the question of little drift and supply of sand from the  
30 Mangawhai bar. Nobody has discussed the – Mr Littlejohn will be able to supply

us with the information about how much sand has been dredged there and put into the spit and what the erosion rates are from the spit, and whether that sand has been coming into the northern area and being used essentially as de facto replacement for the loss of sand. We don't know all these questions but, given

5 the revelation to me at least today that there hasn't been a full depth testing of the Holocene sands throughout the embayment, the assumption of uniform spread seems to be misplaced. And that's because we know from the trenches that they were over two metres deep.

10 I don't need anyone to answer that question. I'm just giving people a chance to think about it before somebody does ask them tomorrow or in the coming days, and what impacts that might have on the volume of sand available and upon the consequences of extraction in certain areas.

**JUDGE SMITH ADDRESSES COUNSEL/PARTIES – TIMETABLING**

15 (17:04:28)

**KARAKIA WHAKAMUTUNGA**

**COURT ADJOURNS: 5.11 PM**

**COURT RESUMES ON WEDNESDAY 19 JULY 2023 AT 9.34 AM****KARAKIA TĪMATANGA****THE COURT: JUDGE SMITH**

There was one issue that I wanted to raise and one issue that Judge Warren  
5 wants to raise, I don't know if there's any other issues, I'll open it to any other  
parties in a moment.

There may have been a misunderstanding about what I was asking yesterday.  
My question was about where is the northern trench. It would be useful to have  
10 it marked on exhibit 1 or something that we can actually understand in the  
context of the application, that's the first point.

The second point was that given that there doesn't appear to be any testing and  
sampling of depth much north of Te Arai Point, points 16 and 17 are just north,  
15 and if they're well away from the trenches then the question is if there is deeper  
sand further north what does that mean? In fact, we've been a little like the  
currents in the embayment, going around in little circles on it and the answer is  
we don't know. That was what we were trying to explore, not an issue about  
whether samples were in the southern area. We accept the statement that  
20 Mr Todd made yesterday about that and what we've seen just confirms what  
we've somewhere else and I can't remember where.

So, that was the issue from us and, of course, as Special Advisor Mr Howie  
pointed out, that page 42 of Mr Mead, and some other pieces of evidence, have  
25 the literal drift diagrams which I think are based on the Sand Study and show,  
essentially, on-shore/off-shore rather than the particular drift in any direction.  
That's why I was so interested why the difference in depth between the southern  
area down to point 1 and the trenches, which seem to be over two metres.

30 So, I hope that explanation lets people understand what interested me and I  
think interests us, although the answer may be we just don't know. But there is  
a potential connection (inaudible 09:40:21) spit which has also undertaken huge

changes over the last 50 years. So, that was that issue. Now, Judge Warren had an issue he wanted to raise so perhaps if we could move to that Judge?

**THE COURT: JUDGE WARREN**

Just, I guess, a heads-up for Mr Pou in tendering the Ngāti Manuhiri Deed of Settlement and, in particular, the historical account. I did wonder whether Mr Pou, because we shouldn't assume that all counsel understand how those historical accounts are negotiated and what the Crown policies are. There's a question of weight in my mind that, as I understand the policy, and you'll know better than I, that it is negotiated between the Crown and the settling iwi which I think is quite important. So I wonder whether Mr Hohneck might be able to give some evidence on that and/or submissions from you just to confirm. Because, when we look at that in terms of the weight we give it, I think it's important that people understand that it's just not an iwi statement, as I understand the policy of that historical account.

**15 THE COURT: JUDGE SMITH**

Thank you, Judge. We think some more issues (inaudible 09:41:46) case and questions of Crown acknowledgements too was something of an issue as to whether they bind other parties. I don't know that that issue is going to loom very large in this case given it doesn't appear there's a dispute but it seems to me that one of your witnesses, Mr Pou, could address that issue?

**MR POU:**

Yes your Honour. It's probably a legal submission for the statutory acknowledgements. Statutory acknowledgments under the Act still have to be proved so that's there and the historic account is what it is. Mr Hohneck was the negotiator, so he will be able to talk to those issues and he will be ready to be questioned on those issues, your Honour.

**THE COURT: JUDGE SMITH**

Now, are there any other housekeeping matters that need to be attended to? I do have one query, perhaps I think representing my confusion rather than anything else but is there anything else that the parties wanted to raise? And

this is probably a question I need to ask Ms Morrison-Shaw. My understanding is that Ms Campbell's not available at all this week, is that right, for the whole week?

**MS MORRISON-SHAW:**

- 5 That's not my understanding, your Honour. My understanding was that she was going to be available today to cross Stubbing if he came on today but that she wanted to review the transcript having missed the hearing yesterday and the day before, before she was in a position to cross Mr Todd and Mr McCallum so that she didn't double-up on things and could be a bit more specific in her
- 10 cross.

**THE COURT: JUDGE SMITH**

- I would've preferred to move through the witnesses rather than having them hang over too long but I can't see any magic to it so I'm not going to interfere, I just wondered what the arrangement was. So, she is available today? I don't
- 15 know if she's with us at the moment, is she? Is she joining us late or is she with us now?

**MS MORRISON-SHAW:**

I haven't had anything directly from her this morning but she was in the emails.

**JUDGE SMITH ADDRESSES REGISTRAR (09:44:14)**

20 **THE COURT: JUDGE SMITH**

Well perhaps, Ms Morrison-Shaw, you could just make an enquiry during the break as to when she might joining us later today?

**MS MORRISON-SHAW:**

I will do, your Honour.

25 **THE COURT: JUDGE SMITH**

That was really my only query. It was just about trying to understand – I do note that it was agreed, and I don't have a problem, it's just I was wondering

whether that meant that she had questions of other witnesses that were going to be missed, also, but the answer is 'no'. So, we move back, then, to the cross-examination of Mr Todd, unless anyone else has anything they wish to raised with the Court at this point? To that end we had, as I understand it, gone  
5 through some – my recollection now is unfortunately fading fast. We finished with Mr Pou and the next one I would have is Mr Littlejohn but I don't know if you have any questions. Mr Littlejohn, are you with us?

**MS HIEW:**

Mangawhai Harbour Restoration Society do not have questions for Mr Todd,  
10 thank you.

**THE COURT: JUDGE SMITH**

And then I had the Auckland Council. Ms Bielby, did you have questions for this witness?

**MS BIELBY:**

15 Yes, Sir, we do have some questions. It's not particularly long, I think it will only take about 20 minutes, if that, but we do have some questions, yes.

**THE COURT:**

Yes, I think that was your estimate, too, thank you.

**MS BIELBY:**

20 Thank you, your Honour.



**DEREK TODD (ON FORMER OATH)****CROSS-EXAMINATION CONTINUES: MS BIELBY**

Q. Good morning, Mr Todd.

A. Good morning.

5 Q. So, with the withdrawal of the inshore and midshore applications, the questions that I do have for you today are focused on the proposed conditions of consent and I'm going to work with some themes there which I'll come to in a moment. But I suppose just as a general question before I launch into those, it's my understanding from the joint witness  
10 statement for Coastal that the view of the experts to that document is that although the risks with the off-shore are assessed as low, that is with the management of conditions, that risks exist with the management of appropriate conditions. Is that correct, do you agree with that?

A. Yes. Yes, to some degree, yes.

15 Q. So you would agree that the conditions to a consent, if it's granted, are particularly important here?

A. Yes.

Q. So what I'll do – as I said, I'm going to work through a couple of the conditions and it's really, I thought it would be easiest to sort of discuss  
20 them in themes, perhaps. And so, just to give you a heads-up of where I'll be going with this, I want to talk a bit about the monitoring and reporting conditions then around this concept of the even extraction across the extraction area. Then I will touch on the review condition which you'll recall came up yesterday in some of my friends' questions and then I want  
25 to have a chat about the concept of technology and how that's reflected in the conditions. So that gives you an idea of where I'm heading with my questions on the conditions. What I'll do is start with the monitoring and reporting conditions and the condition I'm wanting to look at is condition 6 of McCallums draft conditions.

30 A. Yes.

Q. It might be helpful if we can have that up on the screen if possible. So, essentially, the part of the condition I'm particularly interested in is condition 36(c) which is around record keeping which, you'll appreciate,

has flow-on effects for the information that is provided to the council as part of the reporting. But condition (c), if you could focus your attention on that, requires a record to be kept of the volume of sand from each reporting cell where extraction has occurred?

5 A. Yes.

0950

10 Q. And so then it's my understanding, really what I'm trying to do is get an idea of this distinction between reporting cells and monitoring cells. So based on the conditions at the moment and the definition of reporting (inaudible 09:50:14), the reporting cells are shown on appendix 4 to the conditions, and in appendix 4, if we can turn to that – that's exhibit 1, I think, as well – but appendix 4 where we've got the extraction reporting cells shown by the red numbers, in the larger cells, and then we've got the grey indicator for monitoring cells which are the smaller areas. So, 15 am I correct that the reporting cells are big and the monitoring cells are smaller?

A. That's correct, there is four monitoring cells per reporting cell.

20 Q. So back to condition 36(c). So that requires record keeping and therefore reporting on a reporting cell basis and that's the bigger area that we've just established?

A. That's correct.

25 Q. You may be able to turn your mind back to the joint witness statement or you may need to refer yourself to it, but in section 7 of the coastal joint witness statement, it's page 1431 of the common bundle, there's an agreement between the experts around the reporting. Just a bit further down. There we go, right at the bottom there before we move into section 8. So, there's an agreement there in the second sentence under management cells and reporting cells but the experts agree that reporting for the management cells should be at a management cell level, not a 30 reporting cell level. Do you see that?

A. That's correct in that statement, yes.

Q. So, in the condition as we've got it at the moment, it refers to reporting cells being the bigger cells. Am I correct that that's an error and that it should, any reporting at that more granular level, the small level being I

think you've referred to them here as management cells, but I think, based on the conditions as we've got them, that should be a monitoring cell?

A. Yes, they're referred to in the conditions as the monitoring cells and if the conditions were to match the joint witness statement then that reporting would be separated down from the reporting cell of those four monitoring cells. No, I can't argue, I can't answer why there's a discrepancy, what the joint witness statement and what the condition now says. I can't answer that.

Q. No, and look, that's absolutely fine. The wording, I don't want to, I don't want to blur your role into a planner's role so I can take that up with the planners but the point that I just want to understand is that your view where you thought you were agreeing to here is that reporting should be at a smaller level than the reporting cells, it should be at the management cell or monitoring cell, whatever we call them and however they end up in the conditions, it's at that more granular level?

A. Yes, that was the intention of the joint witness statement, yes.

Q. That's my comment or the point I wanted to get to on condition 36. Could I ask you, Mr Todd, to please turn to condition 20 of these (inaudible 09:54:19) conditions?

A. Yes.

Q. So this is the concept that has been touched on through the hearing so far around this even spread of extraction throughout the area and from what I've heard the concept of even extraction throughout the extraction area is important and it's principally important because of this trench issue. Is that correct?

A. That's one of the reasons it's important. The other as I understand it is around an ecological consideration as well.

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Q. Yes, and I think that's one of the issues we're facing in this hearing is what's best from a coastal perspective and an ecological perspective as well but from a coastal perspective the importance of this condition is to ensure that – it's to avoid the trench issue that's fast occurring here?

A. Yes, to help avoid that and along with the method of extraction, the two mechanisms for avoiding trenches.

Q. So it seems to me to be an important, a very important condition from a coastal perspective. Do you agree with that?

A. Yes.

5 Q. So I'm just going to tease this out a little bit and hopefully I don't confuse you or anyone else, on the way, but I do think it's a really important point and it's one that's come through in the evidence. So, at the moment, the way that this condition reads is that (inaudible 09:56:16) extraction, not throughout the whole of the extraction area, which is that big rectangle that we see on that appendix, but it's in the approved extraction areas only?

10 A. That's correct, yes.

Q. And so the approved extraction areas could be a significantly smaller portion of the wider extraction areas, is that correct?

A. As I understand it, yes. That would occur.

15 Q. And at the moment, the way the conditions stand, we've got no knowledge, we don't know how big or small that approved extraction could be?

A. As I understand it but as I also understand, and it may not be in the conditions, it may be the MMP, I'd have to – the planner could verify it –  
20 but there is a limit of extraction from each reporting cell of 20,000 cubic metres per year so even if that approved extraction area was smaller, that as I understand it, that 20,000 cubic metres per year limit still applies.

Q. Yes. So on that, that's a good point. So on that, if you had a smaller extraction, approved extraction area with only a few reporting cells within  
25 that, for a period time that's how the consent kicks off, extraction could occur in one reporting cell until it hits that 20,000 cubic metre limit and then it's got a period of a year where extraction can't occur in that cell again so at that point you move to another reporting cell. So you give that reporting cell a year to recover from the dredging and move to another  
30 one. If you only had two reporting cells to the approved extraction area is that going to be sufficient time to recover for a reporting cell to recover if you're only switching between a very small number of reporting cells?

A. Well while that, theoretically, would be correct, there is an operational component, as I understand it, from McCallums, and they're better to

answer it than I, that in setting up the approved standard extraction areas they would need to look at how many do they need to be able to meet their volume requirements. So it would be, to me, rather naïve of them to only have two reporting cells in any one approved extraction area because, also, the way that the dredge operates it doesn't just get to the boundary of a reporting cell and stop and then go back over the two kilometre length, it runs in – it works best in longer runs so that there would be a number, I would imagine, a number of reporting cells in any approved sand extraction area. So that's an operational component that they would take account of, I imagine, in setting out their approved extraction areas or applying for the approved extraction areas.

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Q. And so would you agree that, from a coastal perspective, would you agree that the larger the approved extraction area the better, I suppose, in terms of risk from a coastal perspective. So the larger the area the better, basically, from a coastal perspective. Do you agree with that?

A. Again, theoretically that's correct but given that you've got a limit that you can tug from any reporting cell in any year and then you have to have that year's graze then you don't need them to be – the whole area doesn't need to be in one approved area because there's still that limit. The limit, the protection for coastal processes is really the volumed limit per reporting cell (inaudible 10:00:35) in between for that cell to recover that volume, so to speak. So, that is a far bigger control, or better control than any limit on the number of cells that might be in that area, if that makes sense.

Q. Yes. Are you aware, Mr Todd, of the – or did you have input into the conditions on the temporary consent that was recently granted for the off-shore area?

A. Not directly, only if they had occurred via the previous discussion around conditions on the substantive consent.

Q. There's just one difference with condition 20 and the temporary consent between – there's a difference in the wording of condition 20 between the temporary consent and this consent but I'm just trying to understand the consequence of it and it's quite a simple change. I don't think we need to

go back to the decision to see it but it's what we've got in condition 20 now is the word "approved extraction cells" where as in condition 20 of the temporary consent it is across the whole of the extraction area. Do you know the reason for that change, Mr Todd?

5 A. I don't know directly, I can make an assumption but that assumption could be wrong.

Q. If you were to make an assumption then?

A. I would make – well the assumption would be that because the temporary consent is over a much smaller area that all of that is being considered, then, as an approved standard extraction area for the purpose of the temporary consent. Now, I may be wrong in that assumption.

10 Q. That's fine, it's a matter I can raise with the planner. The part of the condition that I wanted to tease out is the concept, is the use of the words – and again, I don't want to stray into a planner's role for you here – but what I'm understanding is that this is a particularly important condition, even spread, from a coastal perspective and so I'm interested in the use of the words "best endeavours" in that condition?

A. Yes.

20 Q. I heard from Mr McCallum yesterday, or the day before, that there is the technology, the technology exists to actually track the dredge head whilst (inaudible 10:03:26) seabed?

A. I understand that was what he was referring to, yes.

25 Q. So, it seems to me that if you agree that an even spread of extraction is important and that we have the ability to track the dredge head along the seabed that using, that the condition could be, or should be, a lot stronger than requiring best endeavours and, in fact, based on that technology, McCallum Bros could just evenly spread the extraction (inaudible 10:04:11) in its reporting that it has evenly spread the extraction. Do you agree with that?

30 A. Well, I can't answer that operationally whether they can do it to an exact even spread, but what it reads to me, and as you pointed out I'm not a planner, is that their best endeavour would be to spread it as evenly as possible with the technology that they're using. Now, whether that means that they all have exactly 20,000 cubic metres a year or one of them might

have 19,000 and one of them 18,500, I'm not sure exactly how accurate that can be done with the dredge head, that's an operational matter.

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Q. That's fine, I'll leave that there. The next question that I have for you and,  
5 again, I'm very mindful of not straying into planning territory, was something that came up during the questioning from my friend Mr van Mierlo yesterday, and that's around this review condition that is in condition 8 of the draft conditions. My recollection, Mr Todd, of what you said yesterday, was that you felt that the review condition that there is an  
10 adverse effect associated with extraction. Is my recollection correct?

A. That's as condition 8, my understanding from condition 8(a) and (b) particularly that an unanticipated adverse effect would allow the council to then maybe review the conditions.

Q. Yes, so that's consistent with my understanding from yesterday that if  
15 there is an adverse effect and it's your view, from a coastal processor's perspective, that that's an appropriate (inaudible 10:06:21) condition. But do you, looking at that condition 8, do you accept that at the moment the way that it's drafted the council could actually only review the conditions if there was a significant unanticipated adverse effect?

20 A. In the way that that is worded that would be the interpretation

Q. Yes.

A. Because it uses those words but, again, I'm not a planner to say what those words actually mean.

Q. No, I was just interested in your view, yesterday, that a review of  
25 conditions would be appropriate when that is an adverse, a demonstrated adverse effect as opposed to some significant unanticipated adverse effect seems to me to be a higher threshold than what you thought might be appropriate yesterday?

A. I use the word, an adverse effect or unanticipated adverse effect, you  
30 know, wasn't aware of the use of the word significant or, we've seen that the use of the word, significant, was in there so I was not referring to a hierarchy of tests of size and adverse effect at all.

Q. The next condition and actually the last condition that I just want to take you to is condition (n) of the draft conditions and that relates to the

identification of an extraction exclusion area and how we identify that area by way of a bathymetric survey using a particular piece of technology being the multi beam echo sounder. If this consent is granted as it's sought by McCallum Bros it would be over a, it would have a 20-year life.

5 Do in your experience and with your expertise do you agree that within a 20-year period there may well be changes or improvements in technology that could do a better job in undertaking this work than is currently included as part of this condition?

10 A. There could well be. You can't foresee what technological changes might occur in this sort of work so certainly the multi beam echo sounder is the top range equipment or technology to record bathymetric features at the current time.

15 Q. But would it be your view that whatever that technology may be, say, in 15 years' time it would be appropriate, given the nature of this activity and whilst possibly low risk but high consequence if there are adverse effects, do you agree that it's the best technology that's available at the time should be used?

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20 A. That would be reasonable that you're probably better in terms of is there likely to be better technology in that period to answer those questions to Mr Stubbing who is the hydrographer who deals with this degree of technology.

25 Q. Thank you, Mr Todd, I may have a question then for Mr Stubbing after saying no yesterday. Those are my questions, your Honour, I don't have anything further for Mr Todd.

#### **THE COURT: JUDGE SMITH**

30 Q. Just before I move on I just want to clarify something because I must confess to my getting increasingly confused. The Court has very serious concerns about most of the conditions here but I had assumed they had been prepared by the planners without real reference to the experts. Is appendix 4 one that you had personal input into?

A. In terms of the division into the reporting and monitoring cells, Sir.

Q. That's not what I asked, did you have any input into that map?



A. I was aware it was passed by me for comment along the process of preparing the consent, the conditions, sorry.

Q. Well I was given high water springs as being mentioned most of the time using MSL, was that a deliberate decision by you?

5 A. No. MSL is the datum that the survey is undertaken by Discovery Marine Limited work –

Q. So was the two kilometre distance calculated from MSL?

A. That's not shown that I can see on appendix 4, Sir.

10 Q. You pointed out the distinction between mean high water springs and MSL for the purpose of calculating distance?

A. I was involved in those discussions around calculation of distance from shoreline datums, yes.

15 Q. We'll come to that later. I just want to understand who did what. The monitoring cells themselves versus the extraction recording cells versus the proposed offshore sand extraction area versus the approved sand extraction area, are those concepts that you gave to the planners who prepared the conditions or did somebody else do that?

A. No, they came from the biological experts.

20 Q. (inaudible 10:12:46) they don't represent the reality of the way in which the extraction occurs, do they?

A. No.

Q. Was that deliberate?

A. Oh, I can't answer that, Sir, I wasn't involved in those discussions.

25 Q. Would you agree that from a point of view of the actual functioning of the extraction of sand they may disguise rather than clarify the taking of sand at each contour?

A. They could do at each contour, though I doubt whether they will within each cell.

30 Q. Now, this gets us back to this issue about the exclusion area which I considered was at the (inaudible 10:13:29) system. Is in fact the 2.4 metre trenches, are they in that red area that's shown, so the southern area of the proposed area?

A. That's correct and they mainly actually extend further south than what is now the proposed area.

- Q. So I misunderstood that. Now I need to just pull up your map so I can just try – this is really so other people can understand the points because I had misunderstood then what was being said. You provided some documents today, I'm just trying find them. Here we are. And the maps of the core samples, of course there's no cross-section showing those core samples in relation to the area we're talking about?
- 5 A. No, we did try and locate those, co-relocate them last night so if you can pull up the map I can verbally tell you the approximate position that trenches are in relation to those core samples.
- 10 Q. Is it off Poutawa stream?
- A. Yes.
- Q. And Poutawa stream seems to be quite close to the coast from the extraction area, is that right, is Poutawa stream or is that a different stream?
- 15 A. That's Poutawa stream directly due (inaudible 10:14:56) the exclusion area.
- Q. Yes. Yes, the map's unfortunately not orientated directly but, yes, I know what you mean. And it does appear that the depth of Holocene sand sthere, according to P2, P3 and P4, were between .55 and .15, so very shallow?
- 20 A. It's on the map that I think you're referring to which is the location of the (inaudible 10:15:24) sites. The extraction at that trench area, as best as we can locate it in the time that we had available, is approximately around that shown as the 30-metre contour because, remember, (inaudible 10:15:39) chart datum which is lower than mean sea level, and somewhere along the 30-metre contour running between P4 and P5.
- 25 Q. Yes, that's what I understood, too. And it would be curious if you could create a 2.4 metre depth in Holocene sand when the sample depths is only .15 metres, you agree?
- 30 A. Yes, exactly. As I understand it is that those trenches then most likely did penetrate into Pleistocene sand and again, as I understand it, there was no difference in the ability for them to dredge it and I've done some further reading of the Sand Study around the core results and it appears, from my reading of that, that that Pleistocene sand is further compacted by the

Holocene and if in the documents or in the appendix that was positioned with you this morning has depth of the core and those ones that the core can penetrate to are around 5.7 metres so it definitely goes, is able to do into the Pleistocene and the medium grain sizes which are on the back of the documents provided to you this morning show that the grain sizes in the Pleistocene sand are similar to the Holocene sand so from a coastal processor's point of view going into the Pleistocene doesn't appear to create an issue in terms of (inaudible 10:17:18) transport and therefore supply of sand further into the system.

- 10 Q. Thank you. I wanted to clarify that, it was the subject of discussion and I suspect our special advisor will follow up on that but that just clarifies that issue. I'm assuming the actual wording of various conditions is a matter for the planners rather than yourself. So, we'll move to the next party which would you, is that right, Ms Downing, you have questions, I think?

15 **CROSS-EXAMINATION: MS DOWNING**

Q. Mōrena, Mr Todd.

A. Morning.

- Q. I just have a couple of questions around point 6 of the joint witness statement. Ms Harnett could you please bring that up? Now here you've agreed that: "The embayment is functionally closed to new inputs of sediment from the primary source being the paleo Waikato River which supplied the sediment that is now being extracted." Do you agree, then, that this type of sand being extracted is in a finite supply?

- A. Yes, it is a finite supply but a very large supply as the Sand Study indicates from its estimate of the 82,000 to – sorry, 82 million to 142 million cubic metres across that nearshore out to the 40 metre depth.

- Q. And later it's agreed, the next sentence, that: "Minor inputs of sediment, relative to the Holocene sand body, may be sourced from the rivers, cliffs, and in situ carbonate production." Does the phrase "relative to Holocene sand body" mean it's a slightly different type of sand or are we talking about the exact same type?

- A. No, we're talking about the same size. The "relative" relates to the size. Obviously, the inputs (inaudible 10:19:46) on an annual basis so in terms

of thousands of cubic metres a year compared to millions of cubic metres in the sand body.

Q. And now, moving away from that, that can be taken down. I just have a few questions around your evidence-in-reply.

5 1020

Q. And now, moving away from that, I just have a few questions around your evidence-in-reply, and perhaps Mr Harnett if you could bring that up as well, please? If you could please turn to paragraph 105. There you state that you agree that we need to keep a watching brief on potential weather patterns and storm frequencies/intensities and maintain a robust beach monitoring programme to determine changes and potential tipping points and beach response but you do not agree that these natural events are reason for declining MBL's applications. Now, my question is do you accept that these are planning matters?

10

15 A. I don't understand which –

Q. Let me re-phrase. Do you accept the engaged planning considerations such as the natural hazard provisions under the New Zealand Coastal Policy Statement?

A. Of how you might respond and plan for natural hazards, yes.

20 Q. And planning matters, I think you've signalled with Ms (inaudible 10:21:38) they're outside of your expertise?

A. Yes.

Q. And that last sentence regarding grant or decline, you accept that's a matter ultimately for the Court to decide?

25 A. Oh, I accept that, yes.

Q. Thank you, I have no further questions.

### **RE-EXAMINATION: MR MACRAE**

Q. Just one point, Mr Todd, going back to the cross-examination of Ms Morrison-Shaw. You were asked some questions about the aerial photograph analysis of changes in shoreline position undertaken by Jacobs (inaudible 10:22:48) and reference was made to the national study of shoreline and the effects of sea level rise taken on a national basis. Perhaps you could just refresh mine and the Court's memory,

30

although the Court may well be very familiar with it, of the name of that study?

5 A. I'd have to look it up. It is a national study under the challenges, the climate change challenges that are Government-funded around determining, the reasons for the study are determined as a baseline of (inaudible 10:23:34) change that might be due to climate change. So, the change in our shorelines due to an increase in sea level or any change in storminess. I will have to – but the exact name of it, I will have to look at my –

10 Q. If it's going to take time –

A. I don't have it right at the tip of my fingerprint, sorry.

Q. Does the purpose of that study include that it's the basis for decisions, for certain kinds of action or any kind of action in response to sea level rise in response to changes in the coast?

15 A. I would assume so and I have now found it, it is part of the National Science Challenge Resilience to Nature's Challenge programme. And it looks at the basis of shoreline change for sea level rise effects throughout New Zealand. And I assume that it will therefore make recommendations or decisions about or provide information about what is the level of hazard from sea level rise and what is the level of change which will then form part of the basis of decisions around future coastal developments.

1025

Q. Have you any idea of or do you have any understanding of or whether a study has yet been applied to making such decisions?

25 A. I have no knowledge but I don't believe so.

**MR MACRAE:**

That's the end of my re-examination, Sir. I'm just left wondering whether a map that in fact was referred to by your Honour during Mr Todd's cross-examination which was sent to the court this morning, it's not in the formal record so I  
30 wondered if it might be produced as an exhibit.

**THE COURT: JUDGE SMITH**

Seriously? It's not in the (inaudible 10:25:52)?

**MR MACRAE:**

No, it's not, Sir, because Mr Todd has annotated (inaudible 10:25:55). So that's the point with Mr Todd. It's just –

**THE COURT: JUDGE SMITH**

- 5 I see. Well I'm happy for it to go in. Because I thought I'd seen it somewhere else but it – and I did see the annotations so I'm happy to let it in with the annotations.

**EXHIBIT 5 PRODUCED – MPPS MAP****MR MACRAE:**

- 10 The only other matter I was going to raise is that Your Honour's question about the trenches will be answered in relation to depths of sand and other matters will be answered in the evidence of Mr Stubbing who will also produce maps of the trenches and their location.

**QUESTIONS FROM THE COURT: COMMISSIONER MYERS**

- 15 Q. The drone analysis methodology, you talked about three methods in the more recent drone methodology being more accurate and coming up with volumetric measures. So, will that, like over time will that give us a better understanding of the amount of sand in the system and the movement of it around the embayment. How will that help us into the future? It's a bit  
20 question?
- A. So the drone technology allows you to collect spatial data so as I said yesterday, the resolution or the gap between or level between each point is less than a metre, so if you think of the 20 kilometres of shoreline in the embayment or in the monitoring area and multiply it by 100 metres wide,  
25 that gives you the number of points on each survey compared to 11 discrete profiles that are not necessarily representative. So it's accuracy (inaudible 10:29:32) or that degree of resolution, a number of points, allows you to create a digital terrain model, if you like, a three-dimensional model of the beach system and the foredune system,  
30 and you can compare that in each six-monthly survey. So it then allows

you to look at different areas of the beach, are they responding different from each other in terms of its volume, not just its cross-shore location. Its limitation is that it really covers the – down to low water, the drone penetration cannot go into the surf zone as such, in terms of changes in the beach both cross-shore and longshore where the features like the dune edges might be or the volumes that are there in the beaches or the volumes that have moved from erosion from the dunes into the beaches, volumes that might have come from the nearshore bars back onto the beaches, will all be able to mapped and calculated, which we can't currently do if we were just staying with that historical profile technique.

Q. Thank you for that, that's really good. So in terms of beyond the surf (inaudible 10:31:00), so is that bathymetric surveys that we need to rely on in terms of that information?

A. Yes, that's bathymetric surveying, and bathymetric surveying in the surf zone is very, very difficult and fraught with lots of danger and that's why it's not really done because it just so difficult. And as I was explaining to Mr van Mierlo yesterday, yes there is not under the consent conditions the bathymetric surveying between that buffer zone from the offshore extraction till we get to the beach. I don't believe that's going to give us, or forcing the McCallums to do regular bathymetric survey there is not going to add to our knowledge because it's not really going to show us any change. We already know that from the limited bathymetric profiles that have been done under the existing inshore consent where they were extracting from that area that it shows no change, because of the (inaudible 10:31:59) of the system. So if we are interested in changes to the beach, we are monitoring the changes in the beach in a very rigorous way. While the bathymetric surveying in that gap might help the understanding from an academic point of view, I don't believe it is needed to understand what's (inaudible 10:32:23) beach, which is where the effects are to be felt.

Q. Just another question. In your evidence you've got some information about the grain size, the sediment grain size and a map. I was reading through Mr West's evidence and I just wondered, are you referring to the same surveys as Mr West, because Mr West says there's a lack of

consistency between the surveys of grain size, so I understand the area 1 and the area 2 there might have been differences in whether the collection (inaudible 10:33:07) data between different years. I just wondered whether you could comment on that. I can ask Mr West anyway what he was relying on. You've got a map figure 8 I think which maps all the grain sizes.

A. Yes. So our figure 8, yeah, shows the grain sizes from all of the samples collected and a number of those samples are from Bioresarches from Mr West's company for the biological reasons. And the reason for showing that in ours is that this is the distribution of grain size. So is there distinct patterns of grain size change as you go across-shore or alongshore. I understand Mr West's work is looking at is there a change in the grain size where you've been extracting that might affect biological habitat.

15 Q. Sure, no, thank you. I think you're looking at it from slightly different perspectives. So that's helpful, thank you.

#### **QUESTIONS FROM THE COURT: COMMISSIONER PRIME – NIL**

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#### **QUESTIONS FROM THE COURT: SPECIAL ADVISOR HOWIE**

20 Q. Just going back to table 3 in your – it's page 2819 or your page 17.

A. Evidence in reply, Sir?

Q. Yes.

A. Yes.

25 Q. You made comment about or you were asked about the northern extraction area and the southern extraction area and the ultimate erosion of 70,000 and 55,000, you can see there?

A. Yes.

Q. And I just wondered about the next one down, the southern control area now that's one that wasn't dredged, I suppose, and –

30 A. That's south of Poutawa stream and it's not the southern control area that is part of the offshore extraction, it's not the offshore area, it is the beach area south of where the inshore extraction has historically passed or been



located. So Poutawa stream down past the Pakiri river, the beach in that area.

Q. So was that dredged too, was it?

5 A. It's the control area in terms of shoreline change or what we refer to as the southern control area from a beach movement point of view.

Q. Well it shows a very large nett erosion?

A. It does.

Q. For the same period. Why is that?

10 A. That's a very good question, and I think it relates partly to the questions from Judge Smith at the end of yesterday about sediment transport and directions in sediment transport. The Sand Study suggests the nett transport is north and so this is the transport and surf zone primarily and that's because of the wave orientation or the wave direction, predominant direction in relation to the orientation of the shoreline. And so, that  
15 because the orientation, the shoreline curves further around turning more to the northeast as we get further south. Any easterly wave approach has greater northward transport in that southern area. So when we get a easterly storm pretty much, that is coming from the east, we will have quite large transports out of that southern area, or larger transports than  
20 what we get further north in the embayment. When the waves are from the northeast, in the northern part of the embayment we get smaller transports to the south but those northeast waves are more frequent. But when we come down to that southern area, because they are orientated further around we don't really get that south, that south supply back. So  
25 it really has a much less natural supply of sand from (inaudible 10:38:25), there's nothing coming around Cape Rodney, we run into any currents that normally occur in headlands and the lee of headlands so it is a sand-deficit area in terms of supply and that explains, to me anyway, why we have much greater rates of erosion in that southern area than we do  
30 in the extraction areas. That is not related to a translation of extraction effect or inshore extraction effect to the south.

Q. That explanation doesn't seem to me to be in line with the literal currents shown in figure 8 of Meads evidence?

- A. Correct, if I turn to the right figure, I think it's – yes, which was from – it's the one with the swirly arrows in terms of showing residual currents generated by winds and potential sediment pathways.

1040

- 5 Q. Yes, that diagram, when you look at it, one thing that struck us on our site visit, or at least struck me, was the orientation of the river mouths along that coast and they actually – that diagram explains the different offsets, some to the south and some to the north along the coast. So that would show that – that diagram shows that literal drift south of Te Arai Point would be southward?

10

- A. That diagram shows currents coming through that – because that's produced by, that's currents rather (inaudible 10:40:37) and the waves do – most of the little transport, as I've said, in the surf zone, that's supply of currents of sediment that may be immobilised by waves in the deeper water of the midshore therefore being able to be moved by waves and currents. So the current direction, you're correct, comes to the south, but the wave transport in the surf zone is predominantly to the north, and that comes from the Sand Study work, and I would comment that those river mouths, as shown in one of the figures in my evidence, I think it's figure 3, if you look historically over time they flop around between north and south. (inaudible 10:41:23) what the Sand Study land shore transport suggested was some to north, some to south, but a dominance to the north, and that dominance, in my view, increases as we go further south.

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#### **THE COURT: JUDGE SMITH**

- 25 Q. I just want to ask a question which might assist Commissioner Howie's questions and it's about table 3. You talk about a northern extraction area and a southern extraction area. From an answer you gave to a question of Special Advisor I'm taking it you're talking about current approved sand extraction area 2 and current approved sand extraction area 1, is that correct, looking at exhibit 1?

30

- A. No, no, I'm talking about the inshore and that's probably badly indicated on that table. I'm talking about the extraction areas from the inshore consent –

Q. This is the inshore consent. The current approved consent, or was that the offshore consent, the current approved sand extraction area 1 and 2. Do we not have shown on this the inshore consents, this is exhibit 1?

A. I'm not sure what's exhibit 1.

5 Q. Well, that's what we're relying on so if we need something different we'd better get it from somewhere?

A. Yes. No, it is not shown on exhibit 1. No, you're correct (inaudible 10:42:48) consents.

Q. Where would we find those?

10 A. So, we can provide a map with them but just for your reference, your Honour, the northern extraction area runs essentially from Te Arai Head, Te Arai Point to, essentially the regional boundary between Auckland and Northland and some of the extraction –

15 Q. And what depth is that from, too, is that from five metres to 20 metres or something, what depth is it?

A. Five metres to 10 metres, Sir.

Q. Five to 10 metres –

A. Very narrow inshore reach.

20 Q. – and the southern extraction area runs? And the southern area runs from –

**MR MACRAE:**

If I might assist, Sir. The map at page 2 of the common bundle at least gives you the location of the recently surrendered inshore extraction sites.

**THE COURT: JUDGE SMITH**

25 Q. Is there a particular – I'm just a bit concerned. There seems to be some very loose language throughout this evidence. Is there a reason you called it the northern extraction area rather than the inshore consent area?

A. No, not really Sir, just as you say, loose language probably, on my behalf.

**MR MACRAE:**

Although Sir, the map that's now on the screen, previously just expired or, rather disappeared, inshore consent is in two areas, northern and southern.

**5 THE COURT: JUDGE SMITH**

Well, yes, but that wasn't clear from table 3.

**MR MACRAE:**

Oh no, absolutely, Sir, yes.

**THE COURT: JUDGE SMITH**

10 Q. And so that creates enormous confusion for this Court which is coming to just about every question that's asked. The lack of clarity is a real worry. So, in fact, what's you're talking about is the shoreline adjacent to each of those areas on a perpendicular basis, is that correct?

A. Correct.

15 Q. 1045

Q. So, it's the shoreline perpendicular to the inshore northern consent and the shoreline adjacent to the southern inshore consent?

A. Correct.

Q. Thank you, sorry I don't know what it affects anything you are going to  
20 ask Commissioner Howie but it was an area of major confusion for me I've got to confess.

**QUESTIONS FROM THE COURT CONTINUES: SPECIAL ADVISOR HOWIE**

Q. Yes thank you could we have that diagram up again please. Can you point out there where the southern control area is?

25 A. Yes so the southern control area is from the southern boundary of that southern inshore extraction area so the southern edge essentially to the, just where the Poutawa stream comes, maybe if your mouse, can you mouse where that is the southern edge of the blue, the light blue box there

so the southern control area runs from there down to the Pakiri river to the south which is beyond the end of that map.

Q. For that area to be eroded, get your table there of minus 318,000 cubic metres compared with the other two much less erosion quantities, does  
5 seem incongruous to me in that it's not dredged and yeah it just doesn't seem to fit even if you say there's literal drift from the waves to the south causing greater erosion of the southern end I think was your – still seemed to be a very large difference to me.

A. It is a large number and but I haven't delved into the particular reasons  
10 for that huge number any further.

#### **THE COURT: JUDGE SMITH**

Q. Can I just check because I'm now beginning to understand that you may be, are you multiplying the entire length of each of those three areas and multiplying by your cut and fill, is that so the longer the area the greater  
15 the volume?

A. Yes, yeah so the volume is actually calculated from the topographical survey so the bigger the area, the greater volume so it's not, it's not normalised in terms of cubic metres per linear metre beach, it's of that area and the southern area is longer so therefore it will show a larger  
20 erosion in this, this you know gross volume.

Q. Yes because really to normalise it you'd have to have a volume per metre of beach, wouldn't you?

A. Correct, and that occurs, and if you look at table 4, and remembering that table 3 is just from the snapshot in April 2007 to March 2022, table 4 is  
25 actually from the linear regression trek from the graph shown above it in figure 4 and they are presented as cubic metres per metre length of beach but area 3, which I've now earned a – unfortunately called it area 3, is still greater in a normalised volume.

Q. Yes no thank you. I'm with you now. Carry on Mr Howie.

#### **30 QUESTIONS FROM THE COURT CONTINUES: SPECIAL ADVISOR HOWIE**

Q. I was then going to refer you to, which I've already done, to figure 8 of Dr Mead's evidence, and to me that simply shows that there's not a strong

literal or drift cause by currents along the abatement, would that be correct?

1050

A. That's correct. The currents are mainly by direction but there is a slight onset and what we looked at was the onset was an onshore to offshore and there's a slight onshore and as shown this is the result actually of the Sand Study modelling is where that figure in Dr Mead's evidence comes from and it shows that potential pathway via currents primarily coming down from the Hen and Chicken Islands to the north and down into the southern part of the embayment.

Q. And you don't have any reason to doubt any of that description I presume?

A. No, no I don't. That's from the, it's done in the Environment Court case in 2006 around these matters. There was some debate of the recirculating arrow at the north of the Mangawhai Pakiri embayment and whether that was real and incurring and that without it went out of embayment and back in but no, no particular reason to doubt that that is the results of the modelling.

Q. The anticlockwise direction just north of Bream Tail would be contrary to the – there was a diagram we saw, oh yes just below that there's (inaudible 10:51:14) evidence, what is it –

A. Actually hold on, I'll just go to his evidence.

Q. Yes his figure 9 – yes that one there the –

Q. Yes. It seems to be contrary to that anticlockwise one in figure 8.

A. It does but again this is the difference between say current movements and what currents doing with their limited ability to transport sand unless it's stirred by waves as opposed to this one which is, as I understand, is around waves, wave (inaudible 10:51:58) zone being in that surf zone.

Q. Okay thank you. Now Dr Mead wasn't able to be with you in your joint witness statements and he made some further comments after the joint witness statement was delivered. Do you have any reservations about his further comments?

A. Yes, I don't believe, and I believe it's in his further comments around the persistence of the shallow tracks and (inaudible 10:52:37) tracks in the

offshore, and this was something that was debated at the council hearing. My view is that those tracks are very short lived and that view is formed both by the measurements that were taken across those tracks that they filled in over a period of 16 to 35 days, the ones that we measured and they weren't with particularly severe wave events, they were just the movement of sand that's moving back in across the bed out in that 30 odd metre depth and that the photographs that he relied on that persistence which came from the joint witness surveys for that Council hearing from that detained that all the tracks that he talked about were actually of only maximum lifetime of three months. They weren't there persistent for years right and the reason why we can say they were there or have confidence that they were only that period of time is that during the time between the two surveys there was an area included in the surveys around the deep (inaudible 10:53:50) area which wasn't abstracted from and there was none of those tracks, those shallow tracks from the *William Fraser* present, and nor in the northern extraction northern control area for the offshore which was excluded from extraction, so none of those tracks were present in those areas. They were only present in the area where extraction had occurred within that three month period post the storm through to the survey, and I cover it in my right of reply evidence, and therefore I don't believe that there is a great deal of persistence in those shallow tracks as Dr Mead pertains in his (inaudible 10:54:37). I believe I'm right that he goes further into or suggests that he disagrees with me in his right of reply.

25 Q. So you wouldn't agree with his description, I think it's his description, of a ploughed field?

1055

30 A. Well, yes, that description actually come from Dr Hilton actually and Dr Mead's borrowed it. It came from that in the joint witness statement around the offshore consents for the council hearing. No, I wouldn't, because that was a particular time, for three months, and as was explained, there is a large number of tracks there in that location because that's just at the exclusion area. So the boat had to do numerous turns there and so there is a lot more tracking in that three months, in that

period, in that location, than you would if you were doing the continuous runs that you would. So, the fact that there was a lot shown in that bathymetric survey in October 2021 co-relates to the amount of survey, that activity that occurred there because of the obstruction zone they couldn't carry on through in their normal operation. But in the areas that wasn't extracted in that three months, there was no tracks. So, the fact that it's a ploughed field of any persistence, I disagree with.

Q. Thank you. Were there any other matters that you still were disagreeing with?

10 A. I did make some notes. The other matter of disagreement with Dr Mead was the view that the monitoring should extend, the topographic beach monitoring, should extend the full length of the beach up to Mangawhai inlet. And my reasons for excluding it, as we did, as the rest of the joint witness experts agreed, that the northern 1.5 kilometres of that along the spit, there'll be a number of other (inaudible 10:56:52) around the spit and inlet interactions that won't be purely coastal and we're trying to interpret how much might be due to coastal and, indeed, how much there may have been a contribution from any extraction, and, remember, the topographic survey extent was really in place around the proposed inshore and midshore consents, which have now gone, that I didn't believe you were going to get again any meaningful information that might relate to extraction effects in that northern 1.5 k.

Q. Okay, fair enough, thank you. And they were the only two matters?

A. They were the only two that, they were the only two that I've noted, yes.

25 Q. That's good. Now I was a bit interested in the trench infill rates and it occurred to me that they could provide some measure of actual sediment transport in that area. Is that fair?

A. Shall we say I believe it is but the other witnesses weren't as enthusiastic in that their view is that you can't determine the direction that it's in-filled from in that the movement at those depths is both directions, currents at weight lifting the sediment and then currents being able to move it in a (inaudible 10:58:25) directional way. So they, while they were having to accept the in-fill rates as being accurate, they (inaudible 10:58:35) to



accept that they could be inferred for rates of longshore transport or cross-shore transport, or nett cross-shore transport.

Q. Yes, I understand. So, did the infill mechanism not show a preference for direction of rate over time, that sort of thing?

5 A. Not particularly, Sir. Again, it's taken from a series that the way that we've worked out the infill rates is both from a series of cross-sections at 50 metre intervals across those deeper trenches and then from the comparison of the whole surface which Mr Stubbing can talk, it was his work, and it was really hard to interpret from that what direction or where  
10 the sand may have come from to fill those areas up.

Q. And the deeper ones, there was one up to two metres or 2.4 metres, I think, had taken quite a while to fill in, as I recall?

1100

A. It is still filling but it is, I think in my table 3 of my primary evidence where  
15 it is and it presents the infill rates, which I can't just lay my hands on, it presents both the infill rates and the depths at the last survey which was November 2022 so they are all infilling. The shallower ones that were sort of you know .4, .5, .6 sort of metres deep originally have infilled and the deeper ones are still infilling, so that abstraction exclusion zone is in  
20 place and remains in place for those trenches which are greater than .5 depth. So the infill I've found in the table, table 3 and table 4, but the total infill of those trenches now have been, total trench infill, 1.68 metres, 1.5 metres, 1.4 metres, so you know the depth is down to, the deepest one is now, was at that time in November, 1.1, so had gone from 2.4 down  
25 to 1.1.

Q. No I see that. Over what time is that? That's 20 times –

A. So that was from September 2020 if we look at that, if you go to the table, actually go to table 3, it's table 4 I think.

Q. No table 3.

30 A. Oh it is table 3, yep, the deepest trench is pics B and you can see it was 2.44 in September 2020 and 1.12 in November 2022 so that's just over a two-year period.

Q. It's sort of going up and down a bit isn't it? 2.4 – what's the – can you scroll down till I see what the heading of those columns are?

A. They, they are depths.

Q. Yes, dates, yes they seem to have done up and down a bit?

A. And that's currently, there was some issues with the March 2021 survey while it was a multi being surveyed there was some questions around the accuracy of that. There was also questions around the September 2020 survey because it was a single being surveyed so the most reliable three measures are the ones done with discovery marine and again that's Mr Stubbing's area because they were the, it was – he did it. The October 21 through to November 22, that year of record they're done with the same method and the same degree of accuracy.

Q. What's the width?

A. (inaudible 11:02:54) more to that.

Q. What's the width across the top of these trench – oh is that trench perhaps, just to give us an idea of size?

A. They are given in my primary evidence figure –

Q. Bit hard even for me to put my finger on that straight away?

A. Yes, yes. I'm just trying, can't think of what figure they, you know they are because you've got look at the vertical exaggeration. I think they might be in the order of – I'll just look at the – yes figure 10 of my evidence-in-chief gives you the order of the width across those trenches.

Q. And what does it say there?

A. And they are in the order of, that deeper one at 6B, I'm just trying to read the scale of the – that's about, around about a 10 metre and possibly a five metre in some of the other ones, but again Mr Stubbing will be able to answer that more accurately than I can.

Q. Yes, so it's quite a bit trench then?

A. They were substantial trenches when they were first identified but as you can see there in that bottom plot there of profile 6B which was that deepest one –

Q. Yes.

A. – you can see it has been (inaudible 11:04:55) and you know again there was some matter of disagreement among the experts how much of that filling might be from side collapse versus transport, you know, which is

another reason for not being able to infer long trawl transport volumes from the infilling rates.

Q. Yes. Now then this morning you sent us through some cause and so on of the sand in various places in the embayment and I'd just like to refer to those if I could.

A. Yes.

Q. We've only just received them so forgive me if I ask some silly questions about that.

A. Yes no problem.

10 Q. Now let me bring them. Where are they? Here we go. Yes there we go there's the first one. Can you just run through a description of what we're looking at?

A. So what we're looking at here is the P samples are the location of the (inaudible 11:06:17) samples that were taken by the Sand Study to determine depth, well among other things to determine the depth of the Holocene sand which you can see I've annotated on, beside each of the samples so the result of what that depth of Holocene sand was. So there are 17 samples primarily located to the south of Te Arai Point, as Judge Smith's pointed out there's none to the north, and that shows the variability in the depth, and then the subsequent pages that you were sent through this morning from module 2, the appendices and figures of module 2, show them in cross-section the core results, the (inaudible 11:07:04) side results, the compaction results et cetera.

25 Q. Yes and so alongside there you've got sort of say P11 you've got 1.0 so that's metres of Holocene sand on top of the Pleistocene. Is that correct?

A. At that, yes, states the core result I've annotated on there, yes.

Q. Yes that's fine and you've done that for each of those points, good thank you. Now the deeper trenches of course would've gone into this Pleistocene sand presumably?

30 A. Yes so as I pointed out to Judge Smith those deeper trenches are basically are the right-hand edge along the 30 metre contour.

Q. Yes.

A. So between say core P4 and P5.

Q. Yes.

A. And so yes as I understand it from the McCallums is that yes it did enter the Pleistocene and but they found no difference in extractability if that's the right word between the Holocene and the Pleistocene sand.

5 Q. So this surface that you've labelled or that's labelled "erosion surface" is just a distinction between the two types of sand?

A. Yes that's in the, in the core samples.

Q. Yes.

A. Yes, yes.

Q. So there's nothing special about not taking Pleistocene sand is there?

10 A. That's probably better but addressed to the McCallums but as I understand it no that, that it has similar properties in terms of its size. It has, it's no more silt laden so from their perspective I don't, my understanding is there isn't an issue from them and as I said this morning from coastal processes point of view from further reading of the Sand Study and looking at those results it appears to have very similar sizes and it appears to be not compacted so therefore its mobility under coastal processes once exposed it does, I would imagine view of that very similar to Holocene sand so from coastal processes point of view my assumption is that it's not going to change supply or transport or mobility  
15 of the sand by being exposed if that happened but as I have also pointed out the new or the William Fraser extraction method with the wide head and shallow depth means that the risk of that exposure is far reduced.

20 Q. Yes and when you say "a risk" is that, what do you mean risk?

A. Well the fact or the chance shall we say or the probability rather than risk  
25 that because it has a very shallow drag here that can only go up to around 100 millimetres in depth, that it's not likely to penetrate through the Holocene and the same with the management regime of limiting extraction from those, those cells and given that you'd need a year supply you know before you can come back to it et cetera that the chances or probability of going through the Holocene to the Pleistocene seems to be  
30 far reduced.

Q. And if it did go through to the Pleistocene presumably that's an even larger volume of resource is it?

A. Yes, yes. I don't have the figures to say that they were estimated from those same core samples by the sandstone and it is, it is many millions of cubic metres more than the Holocene.

Q. Yes. I think that's just about exhausted my queries at the moment so  
5 thank you very much Mr Todd.

**JUDGE SMITH ADDRESSES COUNSEL/PARTIES – BREAK (11:11:22)**

**COURT ADJOURNS: 11.11 AM**

**COURT RESUMES: 11.40 AM****QUESTIONS FROM THE COURT: JUDGE WARREN**

Q. Tēnā koe, Mr Todd.

A. Good morning.

5 Q. My only area of interest, and it might seem a little unfair to you but you'll let me know if it is, is the role of mātauranga Māori in (inaudible 11:40:48) in this country, is that a thing yet?

10 A. That may be a bit unfair to me. I don't, I have not come across it as a topic or an issue in terms of geomorphology or an input into a group in general morphology in my area.

Q. There's certainly articles out there expressing a view that mātauranga Maori values should be part of the investigations that people of your experience should undertake. Are you aware of those articles?

A. I have seen some of those articles, yes.

15 Q. But that's something that you don't have any training in and it's something that, I see you're on the New Zealand Coastal Society, is that something that they have turned their minds to?

20 A. I certainly haven't had any training in it and I am not aware of any training that has been offered by the Coastal Society by their general membership in that area.

Q. To the extent that you've heard about it and known that it's relevant in these types of proceedings, have you got a view on the merits of mātauranga Māori having a place in geomorphology work?

25 A. I don't have a particular view on it, your Honour. I'll accept if that's something that we need to do going forward but I don't have a particularly strong views either way.

30 Q. Well, if I look at your paragraph 13 third line, this is of your main evidence, you say: "The coastal processes operating in each of these extraction areas," and that's the offshore, midshore and inshore: "Are interrelated," and of course you'll be well aware that (inaudible 11:42:59) Māori see the world things are interrelated, and I mean do you accept that proposition, have you understood that to be the position in other cases?

A. Yes, I accept that proposition, yes.

Q. Well we can't take that that much further but I just wanted to test whether, because obviously we have to then piece together your evidence together with the mātauranga evidence and I've always had a view that if there's an opportunity to work together on these things I think that, I mean, it won't be easy, but it would certainly make for some (inaudible 11:43:43) and contextual outcomes, but thank you for your evidence.

A. I understand that.

### QUESTIONS FROM THE COURT: JUDGE SMITH

Q. Perhaps I could just pick up on the point that Judge Warren raised. Have you read the cultural evidence? Well I don't want to just classify it as cultural evidence but the evidence of the tangata whenua witnesses?

A. No, not in any detail, your Honour.

Q. They discuss the embayment in a number of ways and not only in terms of the species et cetera but in terms of the way it's structured, which I thought would be of direct interest to you, that several of the (inaudible 11:44:32) about a range of horse mussels that formed what they described as a fence or a barrier between the deeper water and the beach itself and, are you familiar with horse mussels at all in the context of the benthic environment in harbours or embayments?

A. I'm aware of them but I am no expert in the biological matters.

1145

Q. Well, we'll get that information from others but they suggest that those were certainly inshore of the 20 metre contour and possibly even greater, they refer, and to date we don't know because we haven't heard from all of the witnesses, although it appeared and accepted there used to be horse mussels they'd pick up in the dredges from time to time, so the evidence is that there was a population of horse mussels that essentially created the barrier and those appear to have been taken out with the inshore work or natural loss or predation from two legged and other species but the role of that type of barrier I mean is known to the Court because for Tauranga Harbour for example the main entry to the port is armoured with horse mussel shell. Have you come across horse mussels been seen in that type of situation?

A. Not, not so much as a barrier to say sediment tracks (inaudible 11:46:05) or to coastal processes. They're more in my work had been formed that any shell is part of a source of sediment. They carbonate source rather than as barriers or indicators of process.

5 Q. Right so do you acknowledge that there could be a role of such benthic, particularly things such as horse mussel to protect sand movement and sediment transport?

A. There could be, yes.

10 Q. And you haven't dealt with the issue I assume. If others have you don't dispute that?

A. I, I – no I don't dispute, no.

15 Q. No. Now also we often hear evidence, I don't know that there's a lot in this case about the way in which Māori through mātauranga Māori identify changes in sea sets, transportation of sediments and fish and all sorts of things based upon close observation and often that's given to us by people who have special knowledge tikanga or others who understand this. If there are perhaps seasons within the sea if I can put it that way in which transportation of sediment might occur in one direction and then in another?

20 A. Oh absolutely but I see them related to weather patterns particularly.

Q. So I want to discuss that very briefly because sorry I just need to move back a few – the depth of closure issue, I think you accept that the, if the depth of closure is the depth at which there is minimal transportation on or offshore, I think you accept that is the definition of closure?

25 A. As a (inaudible 11:48:03) yes.

Q. Yes and then the question is over what period, so there are going to be times at which the sea set is sufficient that it will move sand at 35 or 40 metres?

A. Yes, true.

30 Q. There are times where it won't move sand at five metres, it depends, and that's why you've talked about the original period being a year and now a longer period being seen as appropriate to try and capture the range of activity that can occur within the sea?



- A. Yes, the original work done on depth of closure by Halemeier in the early '80s was working on an annual figure, but that has been accepted now that it goes over longer, longer time periods but (inaudible 11:48:47) in terms of storm and there's the principles are that sediment could be moving up to 60 metres of depth, but you're quite also correct that in calmer periods that sediment will not be moving in say 15 to 20 metres of depth.
- Q. And so depth of closure is really about an average over a period of time at which the net transportation could be regarded as minimal?
- A. Correct.
- Q. That's the definition really isn't it?
- A. Yes.
- Q. And I understand that. I'm not disputing that in any way. What I'm really trying to understand is that there can be seasons, and that's why my (inaudible 11:49:27) issue came up because there can be seasons when you get higher sea levels and 2023 is likely to be one of those at the moment isn't it?
- A. At the moment we are having a more stormy period than what might be normal and so therefore you would expect that there is more transport across that depth than what we might see on a longer average.
- Q. And you as others so sometimes mention La Nina and El Nino and I understand that but you would understand that mātauranga Māori may have different explanations for the same phenomena?
- A. Yes, I accept that.
- Q. Now I want to understand, you've mentioned the weather but the climate change is also an issue for depth of closure?
- A. The climate change in terms of sea level rise could affect that depth of closure and also if there was evidence of change in our mean wave conditions such that that calculation would mean it deeper but the, there is no evidence for this part of New Zealand in terms of the forecasting that that wave climate is likely to change significantly.
- Q. So has somebody been doing some regressions on the latest sets, have they because –

- A. Not of the latest, not of the latest set but there is and Dr Coco is probably the right person to question around that. He has a forecast, a longer term wave forecast model which indicates, as far as I'm aware, and he has said nothing and the Court seem to contradict that that doesn't show a long-term change in the wave climate in this part of New Zealand.
- 5 Q. You may be aware there's a lot of argument at the moment as to whether or not the 100 year and 50 year period in return storms for example is still appropriate. I agree with you that there's no set agreed approach yet but you must be aware of the issue arising in respect of it generally?
- 10 A. Yes, yes and that issue isn't any more complicated actually for coastal situations because that storm is a combination of waves and water level because it's the water level that the waves are operating on and of course with sea level rise that water level is going to be higher so the effects of a 50 year wave we would expect to be greater in the future because it's
- 15 operating on a higher water level.
- Q. Yes. So the next thing I want to ask you and I know coming from the South Island you probably don't come across this very often but issues of subduction, are you familiar with the subduction occurring on the east of the North Island, particularly in Northland?
- 20 A. Subduction as in vertical land movement?
- Q. Yes, the Pacific and –
- A. Yes.
- Q. (inaudible 11:52:34) et cetera?
- A. Yes.
- 25 Q. And there's been a recent study release showing that that is a constant change. Have you considered that as its effect on sediment transport?
- A. We've considered an effect of sea level rise in terms of then what, looking forward and those projections of what sea level rise will be both from climate change and added in those, that subduction rates from that
- 30 New Zealand sea rise programme, not as such in terms of saying does that then affect transport or supply, it hasn't gone to that next stage.
- Q. Right thank you so it would be fair to say that at this stage those matters are still influx but no clear course of action has been established yet on the data. Would that be fair?

A. That would be fair, yes, around supply and transport, yes.

Q. Would it also be fair to say that at this stage the question of little or drift either to the north or south or even inshore and offshore here is still not clear?

5 A. It's not – I think the patterns are complicated, more complicated within the bay than what the literature or the Sand Study indicate.

Q. And one of the things I wanted to see if you would agree with the proposition that it doesn't necessarily follow that the point of depth of closure will be the same all the way along the beach, it could change in depth?

10

A. It, it could change if there was a – and I don't like using the word significant but if there was a reasonable, right I can't avoid it, a really significant change in the wave climate along the whole bay so and that is around height of wave because that's the input or around sediment size so it could vary but I doubt it vary much.

15

Q. Right so it does seem to be at the southern end you – I thought in answer to other questions accepted that there could be greater wave action because of its facing to the north-east and thus there may be a greater depth of closure at that end than perhaps at other places that are sheltered for example like Te Arai point?

20

1155

A. That is possible but I don't think those changes would be, or changes in the depth of closure would be significantly large, or very large. I haven't done the exercise but that is possible but I don't think it's huge.

25

Q. That's been a very long introduction to my real (inaudible 11:55:19) which is that the level of confidence as to the depth of closure will increase the deeper we go beyond 25 metres, do you agree?

A. Correct.

Q. So at 26 metres, there's likely to be less prospect of there being any difference, and by 30 metres, because your original evidence suggested it could be still getting net change at 35, I don't think you adhere to that position anymore. Would you agree with my proposition that by 30 metres you could be highly confident that there was minimal prospect of the depth of closure being wrong?

30

A. Yes, considerably more confident.

Q. Is there a point at which you feel that your confidence level would be that you would've thought the prospect of you being wrong is minimal below 30 metres?

5 A. I haven't, I haven't turned my mind to that question of what that might be between, say, 30 and 25, apart from, is that the statement that I've just made that is as you go further offshore you would be more confident but to put a figure on it within that band, I'd have to give that some thought, I think.

10 Q. You appreciate what I'm talking about is sensitivity analysis?

A. Yes.

Q. Which this Court always is interested in and the standard deviations. One would've thought that 30 metres might be two standard deviations rather than one but you haven't done any analysis to check that?

15 A. No, I haven't.

Q. No, that's fine. Perhaps I need to go back, just give me a moment, please. One of the things that this Court is almost inevitably going to look at, given its history over, now, the last 10 to 15 years of conditions, is looking at management plans that identify conditions that it often describes on the traffic light system as red where activity needs to cease till the situation (inaudible 11:57:47) clarified, those situations that are orange where there's a warning and further investigations are required, and what might be called green or the okay situation. Are you familiar with what I'm talking about, before I move, I may need to explain it further?

25 A. Yes.

Q. Now that is because in all scientific endeavours there's never any certainty and, accordingly, we tend to have to choose proxies, if I can call it that, for conditions that otherwise are difficult to explain or attribute. Do you understand the point I'm making?

30 A. Yes.

Q. For example, if there is a sudden loss of sand on the beach at Te Arai Point there's always going to be an argument that's not due to the sandmining, that's due to something else and therefore questions of proof are impossible in an environment of uncertainty, do you agree?

A. Yes.

Q. Thus, this Court has not, to my knowledge, granted any consents where it requires even that a council, or other parties, to prove that a certain effect is caused by something else. It deals with probabilities and therefore uses proxies that set out the terms on which things are to be investigated. Now, do you accept that the conditions as they're currently shown are not addressed in that way?

A. Yes, I would accept that.

Q. And I think you've also suggested that some of the more pressing questions from counsel that it would be necessary to prove that it was due to the sand extraction. It's unlikely the Court would grant a consent with that type of conditions. Do you acknowledge the problem?

A. Yes, yes, the problem of proof of cause of shoreline change is very difficult.

Q. Well I can give you – the cause of proof of water contamination, waste management, the cause of proof of over-extraction, Aupouri Aquifer, and I could just go on with every consent we deal with. The reason is that if parties want consents we have (inaudible 11:59:58) in which to identify what steps need to be taken because conditions need to be clear, certain and enforceable. Do you accept that as propositions?

1200

A. Yes.

Q. Now if the Court wasn't minded to grant a consent subject to those type of conditions you would be prepared to assist with the preparation of such criteria in relation to sediment transport at least, I'm not going to ask you about other matters but that would identify conditions where one would have to stop until it was clarified, those conditions where it wasn't, in other words –

A. Yes, I would be happy to assist.

Q. Right, now one of the problems with certainty issues around certain of the matters such as the position of vessels and whether they're abstracting within their area. Now you've prepared your evidence on, it seems only you must on the basis that they could comply with the conditions of consent?

A. Correct.

Q. You'd be aware there's allegations which are disputed as to whether that has occurred in the past but from the Court's perspective if it was minded to grant consent it would be looking for ways to be sure that the consent was complied with?

A. Yes.

Q. Now one of those is to know where the vessel is and to know sand its abstracting and that the volumes of sand et cetera are under control. Now some of those matters are well beyond your area, but you would agree that the question of the depth of abstraction and the areas of abstraction are important?

A. Yes.

Q. Now the current use of the monitoring cells, extraction cells, authorised extraction area and approved at some extraction areas seems to be incredibly complex given that the vessel is travelling along a contour for the most part and thought that the objective is to ensure that it doesn't take too much sand from one contour, ie, the 25 or 26 or 27 contour and preferably that if it is going to take sand it takes it over the entire available to it which at this stage appears to be between 25 and 36 metres, do you agree?

A. Yes.

Q. I think other questions about conditions 1 really that I should address to others. I'm just looking to see if there's anything else. I think that's all my questions. I don't know if there's any assistance you can give us on this issue but it's just a question of, there's been criticisms of the surveys et cetera and the questioning of auditing of those surveys which you suggested the council do. There seems to be a high degree of suspicion by tangata whenua in particular about both the surveys and the way in which they've been audited or, in their view, not audited. Do you think there's a way in which greater certainty could be given to the outcomes for the conditions around the depth of water, you know and the topical type of analysis you would do. I mean everyone seems to agree that a drop is good for the land base. Is there a way for greater certainty on the sea-based areas?

A. I believe that the need in proposed consent conditions for a suitably qualified person external to McCallums to, for want of a better word audit those consents or those reports, the sand abstraction monitoring reports prior to them going to council brings in that level of audit and control in question that wasn't there in the previous consents so I would hope that, that would address a number of those issues and give confidence that both the methods and the results are accepted by a pier of the people that prepared them or the scientist that prepared them in both land and bathymetry and indeed biological.

10 Q. Thank you very much. Those were my questions Mr Todd.

**THE COURT: JUDGE SMITH**

Are there any questions arising before I revert to Mr MacRae? Does anyone else have any questions arising? Mr MacRae did you have any questions arising?

15 **MR MACRAE:**

No thank you, Sir.

**THE COURT: JUDGE SMITH**

Thank you very much, I know it's been a long two days, Mr Todd, but we appreciate your evidence and unfortunately, I think you will be back with us, I think, on Monday again. I don't mean unfortunately for us but unfortunately for you because I thinks Ms Campbell has questions of you.

**WITNESS STOOD DOWN**

1205

**THE COURT: JUDGE SMITH**

So, that takes us to your next witness, Mr MacRae?

**MR MACRAE:**

Yes, it does, Sir, Mr Healy. And just while Mr Healy is in-transit to the camera,  
5 can I just mention that I have asked him to bring me his computer, his laptop,  
with a view to demonstrating the drone survey method and, in particular, what  
kinds of results that it's capable of, and that picks up some of the points raised  
by Commissioner Myers in questioning and, generally, that demonstration has  
been found because we've done it before, as being very helpful to an  
10 understanding of the kind of standard of survey on land that your Honour has  
recently referred to.

**THE COURT: JUDGE SMITH**

Is Mr Healy able to plug into our system so we can all see that, is he?

**MR MACRAE:**

15 Yes well we have, he has sent a link to Ms Hartnell who can then put it up on  
the screen. It is a possible issue as to the size of the data, or whatever the  
correct terminology is, but, as I understand it, there will be a block.

**THE COURT: JUDGE SMITH**

Thank you. Am I getting the name wrong? Is it Hartnell, is it?

20 **MR MACRAE:**

No, Ms Hartnell – I'm sorry, Ms Hartner. No, I've got it wrong, Sir. My apologies.

**THE COURT: JUDGE SMITH**

I thought it was Ms Harnett but I could be wrong again. Ms Harnett.

**MR MACRAE:**

25 I apologise to all.



**MR POU:**

Your Honour, just before this witness is sworn in, I'm not weighing into the Harnett debate. However, I've just canvassed a number of the counsel that

5 have been cross-examining and I know the order of cross-examination you've determined on the basis of when people are presenting. But, in listening to the questions that are being put by the **council** to the witnesses, we feel it's more appropriate that the friendly fire cross-examination go prior to the cross-examination by those that are opposed to the appeal. I know the **council**

10 are supposed to be neutral and those sorts of things, however, your Honour, the request that I'm making, it's not a submission, just a request, is that in terms of the order, that the **council** ask their cross-examination questions first and then revert to the order that you have been following.

**THE COURT: JUDGE SMITH**

15 Well, I (inaudible 12:08:09) preference, I was dealing with it in the order of the list of witnesses, but does anyone else have a view either in favour or contrary before I ask Ms Bielby?

**THE COURT: JUDGE SMITH TO MS BIELBY**

Q. So, Ms Bielby, obviously I understood you were opposed to the grant of

20 consent but the questions of, I think we're taking it from the questions of Mr Todd being more about the conditions of consent rather than about whether there should be a consent would indicate that you may be neutral on the grant, or otherwise, of consent. Rather than getting into that issue per se, I wonder if you're happy to go before we deal with the tangata whenua parties and the Department of Conservation?

25

A. Sorry, Sir, can I just clarify, do you mean the council present its case before or the cross-examination order?

Q. Well, it seems to me it would follow for both, because if your position is essentially – your cross-examination, to be fair, really wasn't

30 cross-examination, it was just questions about the conditions, so it appear

that you may be supporting the grant of consent or at least neutral as to its grant.

A. Sir, that was for – for Mr Todd, the reason for the focus on conditions was the similarity on the offshore evidence between that of Mr Morgan, the council's expert, and Mr Todd. That may not be the case for all of the experts.

Q. Okay. So I think at this stage, are you content to go in order with the witnesses for the applicant after the applicant and ask questions and then move through the others? We'll come to the question of when you might call your case later, but I'm not making any decision on that issue at the moment.

1210

A. Yes Sir I'm not quite sure the reason why given that the focus of the other line of questioning has been more around the effects and, as you said, Sir, whether the consent should be granted I would've thought the council's questioning to the extent that it's focussed on conditions was we were in a helpful position where we were, so I haven't been involved in the communication that's obviously been happening behind the scenes with the parties, and I'm not sure of the reasoning based on Mr Pou's comments then.

Q. So you want me to hear the argument about it rather than just have you ask your questions first?

A. Sir, we can, I mean for us it's not, I'm not going to make a big deal. As I said. I don't see the reasoning. The only thing I would ask is obviously we had proceeded today on the basis that we would go after those other parties and we do have questions for Mr West, so if there is a change in the order I would just need to ensure that I have sufficient time to move before those other parties.

### 30 **THE COURT: JUDGE SMITH TO MR POU**

Q. Mr Pou?

A. Look your Honour to be fair the request was at this stage the basis of cross-examination order. Ms Bielby is right, I didn't send the email to her. Without going into too much into the nature of the questions but

questioning which suggests that monitoring would improve over the time of the consent and marginalising some of the responses that we received by questions of other counsel, that's the basis that this request is being made. I would have thought that cross-examination, given that we know what the order had been would already have been prepared and would not necessarily have to wait to hear the cross-examination of the other parties. The fact that the counsel wants to do that suggests that similar – what in my submission looks like some re-examination my cross-examination is taking place so my – the request is still made for the counsel to go in order prior to those that are clearly in opposition to the consent.

Q. Yes well unless Ms Bielby consents I will have to take a break and talk to the Court. Ms Bielby?

15 **MS BIELBY:**

Sir, no I don't consent to changing the order at this point in time so no.

**THE COURT: JUDGE SMITH**

Thank you. We'll take a short five minute adjournment before we call Mr Healy to deal with that issue and so if the parties could remain on standby and the Court will connect by way of WhatsApp thank you.

**COURT ADJOURNS: 12.13 PM**

**COURT RESUMES: 12.21 PM**

**THE COURT: JUDGE SMITH**

Thank you. So, our understanding is that Mr Pou sought to change the order for cross-examination of the applicants so that the council was after the  
5 applicant and before those parties opposing, that was based upon one question being taken with Mr Todd. The Court has had a discussion and we have a unanimous view so could I just record a minute.

**MINUTE DELIVERED**

**THE COURT: JUDGE SMITH**

10 Now I don't know that there any necessity of further discussion on that point, in which case I'm going to invite Mr MacRae or the registrar to affirm the witness and we can move to Mr Healy.

**MS BIELBY:**

15 Sir, just before Mr Healy is sworn in, and that's certainly noted in terms of the cross-examination order, the order of the council's case obviously was in accordance with a prior Court direction made during the interlocutory hearings, and at this stage in accordance with the draft of hearing or the order of hearing that was submitted to the Court the council isn't currently scheduled to present  
20 its case until August. Obviously moving to the position of after the applicant would be a significant shift for the council's case, and I will need to canvass the council's experts to ensure that that is a shift that they are able to accommodate.

**THE COURT: JUDGE SMITH**

25 Yes. Haven't made any ruling on that point. I explicitly reserved the position because we haven't heard discussion on it. Mr Pou hasn't asked for it. The Court, however, has a feeling it would be more helpful to it if it was at that stage. but I think you do need to check out and perhaps we could revisit this matter at the end of the week.

**MS BIELBY:**

Yes, Sir.

**THE COURT: JUDGE SMITH**

You'll be able to tell us whether it's possible or not. if there's a problem, we  
 5 may not deal with it at the time but at least we know it's something we need to  
 deal with next week then at some point. That sound acceptable?

**MS BIELBY:**

Thank you, Sir, yes.

**THE COURT: JUDGE SMITH**

10 To be fair, sometimes the position of parties becomes much clearer when we've  
 had more (inaudible 12:28:42) two witnesses in front of us, so it may be that in  
 due course we have a much better idea of your position on various matters  
 including the question of the differences between the Commissioners' decision  
 and the current state of affairs. Can I just make it clear that, as we understand  
 15 it, Kaipara Contractors Limited were the applicant for the original consent, they  
 were the party refused consent, is that correct? So at some point in time  
 somebody has accepted the substation of MBL for Kaipara Contractors, is that  
 what's happened?

**MR MACRAE:**

20 Perhaps if I address that, Sir. It's not quite correct in the sense that, yes, the  
 consent was transferred to McCallum Bros in I think it was September, that is  
 the existing consent, in September 2021. McCallum Bros of course inherited  
 with the consent the application for the new consent. And McCallum Bros, the  
 only thing left in the hearing itself before Commissioners appointed by the  
 25 council was the applicant's right of reply. McCallums, having taken over the  
 application, sought leave to call some further – had presented evidence as a  
 submitter since the hearing of the application proper and sought leave to call I  
 think three additional witnesses and some of its original witnesses before it  
 presented its submissions in reply, so it did present some evidence on its own  
 30 account as applicant after all Kaipara's evidence and questions of Kaipara's

evidence had been completed. So in a sense, Sir, it was certainly Kaipara's application and McCallums was a submitter until the point at which it became in effect McCallums' application, and McCallums did what it could to, as it were, put its stamp on the application before the Commissioners were left to decide.

**5 THE COURT: JUDGE SMITH TO MR MACRAE**

Q. Yes, the question for the Court is on what basis were you substituted as the applicant? You didn't become Kaipara Contractors Limited, did you?

A. No, Sir.

10 Q. So who accepted the transfer of the applicant to a third party? Did the council do that? Is there some formal decision of the council?

A. There was no formal decision. I think, Sir, the transfer of course of the existing application was made under section I think it's 138 or 135 and –

Q. I think you mean existing consent, don't you, or the – I think there's a provision for the existing consent to be transferred but on what basis –

15 A. Yes, Sir.

Q. – is the application transferred?

A. Well, simply, Sir, that the applicant in its agreement for the transfer with Kaipara agreed that – Kaipara and the applicant agreed that the application should be taken over by McCallum Bros and the council was notified and in fact a notice of transfer was given under the same section, and so it was formally notified and the other parties informed, and that's the basis on which it was done, Sir. There was no objection and –

20 Q. I'll get our legal counsel started on that but obviously, Ms Bielby, that's a very important matter for the Court, and whether or not the council has the power to do that. You can seek a substitution in this court but no application has been made, and I am not sure – was the decision (inaudible 12:32:39) McCallum or Kaipara?

25 A. In the name of – I'd have to check, Sir.

**THE COURT: JUDGE SMITH**

30 So Ms Bielby's familiar with the issue that's concerning us, or one of them, not the only one. In any event, let's just move on with this witness, we need to keep on. So the witness has not yet been affirmed so I think I'll give –

**MR POU:**

Your Honour, sorry to interrupt, it's just, look, I just want to in front of the Court apologise to Ms Bielby for not raising the issue with her before raising it with the Court. I ought to have. I apologise.

**5 THE COURT: JUDGE SMITH**

Well I'm hoping that the parties can have a discussion and sort this out amicably. We just go with what the parties agreed but, from a practical point of view and given this issue I've just raised, I don't want to get to three-quarters of the way through the hearing only to find that there is no application for us to  
 10 deal with on appeal. I'd be surprised if that was the case, but I don't know the law myself on the point.

**MR MACRAE CALLS****CLINTON HEALY (AFFIRMED)**

Q. Yes Mr Healy you've prepared a statement of evidence entitled a  
 15 "Statement of evidence in reply" in this appeal, have you not?

A. Yes.

Q. And do you have a copy of that statement in front of you?

A. Yes, I do.

Q. So you'll be relieved to know that there are no particular changes to  
 20 Mr Healy's evidence and no need for any further evidence to be led in chief in relation to the statement itself but the matters that I'd like to ask Mr Healy briefly to expand on as a result of the fact that they were raised during the interlocutory proceedings a month or so ago and of course that was right after Mr Healy's evidence was filed and Mr Healy could I –

**25 THE COURT: JUDGE SMITH TO MR MACRAE**

Q. You also want to produce a video too from him don't you?

A. That's correct, Sir and that's what I was referring to earlier yes.

Q. Yes thank you.

A. It's not so – well Sir sorry it's not quite accurate. It's not production of a  
 30 video. It's just Mr Healy cannot on screen, on screen demonstrate the drone survey.

Q. Demonstration of drone survey that's fine. Would you like to move to the first of the matters.

**EXAMINATION CONTINUES: MR MACRAE**

5 Q. Yes Mr Healy if you could look at paragraph 38 of your statement of evidence. Could you briefly explain the reasons why you stayed with the pre-LINZ correction elevational control point at the One Tree point datum trig station, datum point given that the One Tree point trig station and continuing with your surveys after 2017?

10 A. We held original LINZ published datum level to avoid any confusion and to stay perfectly in line with the surveys that had been done in the past, any historic data that came from Harrison Grierson, we didn't want to change onto an updated datum and create a step in the data or any of the data that had already been submitted to Council over the past years so it was really trying to just keep it absolutely clear and understandable  
15 to everybody so we had decided to hold that datum and to this day we're still holding that datum for the purpose of this Pakiri survey so that it is in line with everything that's being done to date.

Q. And as a result of your doing so there occurred a somewhat unfortunate error in Mr Todd's evidence. Can you briefly explain how that arose?

20 A. So one of my employees who was our data processor who does work remotely a lot of the time, he simply got confused. He thought, unfortunately because there was this datum shift in the LINZ database he adopted the new level and consequently shifted everything to the new level whereas that was not our intention from the start. We did exactly  
25 the opposite, held that original published level to prevent any mistakes and keep everything very clear and in line with all the historic data.

Q. And where is the analyst located?

A. He's in South Africa.

Q. Thank you Mr Healy. Would you answer any questions please?

30 **THE COURT: JUDGE SMITH**

Thank you Ms Bielby.



**MR MACRAE:**

I'm sorry Sir. It might be better perhaps if Mr Healy does –

**THE COURT: JUDGE SMITH TO MR MACRAE**

Q. I think we should see the demonstration now my preference because I  
5 don't know when he's going to show it otherwise.

A. Yes there may be questions.

Q. There could be questions.

A. Yes there may be questions on it. Of course.

Q. Would you like to see if that will play, Ms Harnett.

10 1240

**WITNESS:**

Yes so we were just trying to demonstrate here how as opposed to historical  
fixed positions, you know example nine cross-sections through the entirety of  
15 the beach, with the ability we have these days with technology we're able to  
survey the entire length of the beach and truly monitor the entirety of the beach.  
Then with using obviously the UAV technology has come forward in leaps and  
bounds over the last 15 years and software, so this platform here is a platform  
where you can basically put every single survey, so there's years and years of  
20 surveys here, this is a quick example of pulling a cross-section anywhere along  
the entire beach contour model. You can simply pull a section and then simply  
request what years of surveys you want shown on that model. There's also  
historic timelines so you can visually flick back through the years of survey as  
well. So I think it just clearly demonstrates a true monitoring survey of the beach  
25 instead of as opposed to just surveying predetermined fixed cross-sections.

**EXAMINATION CONTINUES: MR MACRAE**

Q. Can you demonstrate on the information you got how the survey works in  
relation to a particular cross-section selected by you on the beach and  
dunes?

30 A. So here in the small thin part of the top here I've simply pulled a  
cross-section across the dunes and down to the water line on this part of  
the beach here. Down below here you can see we've turned on about

three different years of survey and very visually you can, for instance, between the years of survey and it's simply a case of adding, constantly you can just increasingly keep adding years of survey data so a lot can happen online but basically it gives you that ability to just simply add every year or survey and have an absolute direct comparison within seconds of what has been surveyed and how the beach has changed.

5

Q. If you take a smaller, well let's say that one, can you just draw a line across, show us, and then read off in effect what that cross-section shows as against previous surveys? Is that a cross-section you've selected at random?

10

A. Yes. Here we're able to keep adding all the survey, different years, and you can see here the differences in level and the comparison difference between the two surfaces and we can just keep adding past years survey so, it's pretty powerful, it gives you a very – very quickly you can see the, you can see the, you can instantly basically see the differences, what changes at the beach.

15

#### **THE COURT: JUDGE SMITH**

Q. Was there a reason you chose a point near the top of the first dune?

A. No, not really, it was just random. So, I've just simply dragged, tried to get a typical cross-section from the top of the dune down to the edge of the water to get a very typical situation.

20

Q. So, what about going to the back of the – in other words, a line across the whole thing?

A. Yep.

25

Q. And how far is that? Is that 200 metres, is it?

A. That particular one (inaudible 12:44:28) metres long but –

Q. I'm asking if you couldn't take us to the back of the area.

A. Yep.

Q. No?

30

A. Yes.

Q. A hundred and 26 metres.

A. Yeah.

1245

Q. And is this proprietary or available to everyone?

A. It can be available, yeah.

Q. Does that mean it's a paywall?

5 A. It's on a platform that is available online, so it's essentially published online, and just via a link and a password, anybody can view, yeah.

Q. What does "NZGD 2000 Mt Eden" mean?

A. So, that is the co-ordinate system, that is Mt Eden 2000 which is the most common co-ordinate system used in the Auckland region.

Q. And are the northing and eastings based on that site, are they?

10 A. Yes.

Q. So how does One Tree Point fit in with that if Mt Eden's the one used?

15 A. So there's two things here. So the northing and easting is Mt Eden 2000 so that's your co-ordinate horizontal position. Your verticals is a different datum again so that can be mean sea level (inaudible 12:46:36) for One Tree Hill sub, at this site here it's One Tree Hill. So, it's just a case of adopting the local datum and staying in line with any work that's been done prior.

Q. So, can you tell me what that, the One Tree Point is an MSL, is it, or what is it?

20 A. It is, yes it is, it's in tune, it's pretty much identical. In this area it's pretty much identical to MSL Auckland 1946.

### **EXAMINATION CONTINUES: MR MACRAE**

Q. Mr Healy that's in effect a 3D, three-dimensional cross-section, is it?

A. Yes.

25 Q. Can you demonstrate how the three-dimensional aspect of it operates, draw the cross-section and then show the other dimensions on the video, on the data you've got there?

30 A. Sorry, I'm not quite with you there. So, for example, we can bring up a totally different line survey, apply the same sections or different sections at any point, so you've got that added visual appreciation as well if you're looking at particular parts of the beach.

Q. Perhaps if you just speak up a little, make sure everyone can hear.

- A. So here, for example, because it is a true 3D model created from millions of points, the ground sample distance is less than half a metre, I mean, it can easily be every 100 millimetres, to be honest. So, you have the visual photos that create the terrain there of what is physically there and then
- 5 the ground sample distance is well in advance of anything we've been able to survey in the past and, as you can see there, you can very quickly run through the timeline and, you know, pick an area, look at it and see the visual impact at different surveys through those years.

**THE COURT: JUDGE SMITH**

- 10 Q. Can I just run a little test. Can you do the Poutawa stream?

**MR MACRAE:**

Mr Healy's just asking – that's south of Te Arai Point, Mr Healy.

1250

**THE COURT: JUDGE SMITH**

- 15 Q. So, how do you know where you are, is another way of asking the same question. You have to know your northings and eastings according to Mt Eden?
- A. Well, yeah, I mean if you obviously know the site it helps a lot.
- Q. Well we've got photos of the site here. You've now got it in frame there
- 20 with the yellow in it. So can you give us a cross-section through that entire area to the water, through the yellow from the high point. Do you see the high point at the back?
- A. Yes.
- Q. And how far back does the data go, to 2017 does it?
- 25 A. Yes.
- Q. Have we had that oldest one you have? Oh 2018 by the looks of it, no 2019 is it? There we are, that's the one. Right thank you. That's useful just as an example of the type of issue we've got. There's a number of them.

**THE COURT: JUDGE SMITH TO MR MACRAE**

Q. What's the prospect, Mr MacRae, of this being available because I think some of the witnesses show photographs, it would be quite useful to have – I know we've only got four years of data but, oh six years of data, but  
 5 it's better than nothing or quite interesting, will at least show us what's there now, what's the prospect of it remaining here or is it fixed to Mr Healy?

A. Mr Healy looked in my direction Sir when you asked him if it was available because of course McCallums (inaudible 12:52:36) to use this program  
 10 and so in a sense the data is McCallums as a result and I think that was Mr Healy's concern but Sir I don't think McCallums will have any objection to it being made available but I'm reluctant just to say so without thoroughly discussing the implications of any (inaudible 12:53:00) –

Q. Perhaps you could ask your clients but I could also ask if other parties  
 15 might be interested in because you know there's a number of areas parties show us photos of and the resolution on this seems to be quite good so it may be helpful, it may not. People may not think it's helpful at all but that's why I took us to the tail stream, you know where you can see the Pleistocene underneath. Is there anything else you want to show us?  
 20 I understand how it works. I don't know if anyone else wants anything else shown?

**THE COURT: SPECIAL ADVISOR HOWIE**

Yes I wonder if I could ask a question Judge.

**25 THE COURT: JUDGE SMITH**

Yes certainly.

**THE COURT: SPECIAL ADVISOR HOWIE**

Q. Mr Healy, I wonder, can you calculate the volume differences between  
 30 cross-section, between dates and certain length of beach?

A. Yes you can, yes. So you can define areas and calculate cross-sections and calculate volumes.

Q. So you could track volume changes over section, over distances along the beach?

A. Yes, yep.

Q. Okay thank you.

## 5 THE COURT: JUDGE SMITH

Q. Following up from that one possibility, you may not have caught up with the Court looking for measures which might alert it to things. Would it have the ability to throw out volume changes over a certain amount, you know more than 5% or 10%. Does it have that ability to throw off all changes above or below the figures?

A. Yes, I mean you would do that by what we call a heat map. I find the depths that you want the colour changes and then simply produce a heat map and it pretty visually, very quickly see the graduations of change.

1255

15 Q. Now a heat map like that would probably only require five or 10 screenshots I presume, or would it be more? I presume you're getting a kilometre or so or more of beach each time, or is it less than that for a heat map?

A. I mean, you can do the entire model, it's just time and how well it would operate on the internet, but it has been produced to work like that so it should be pretty effective.

20

## THE COURT: JUDGE SMITH

Any other questions of anyone else they want to ask Mr Healy?

## THE COURT: COMMISSIONER MYERS

25 Q. So previously, were the profiles done through aerial photography, weren't they?

A. No, I believe a lot of them were done by more traditional methods, survey methods, so typically a GPS and walking, physically walking the cross-section.

30 Q. Can that data be put into the model as well, or is it not comparable?

A. Yes, I can be, yes.

**THE COURT: JUDGE SMITH**

Anyone else have any other questions? Thank you. Well, I think that was a useful demonstration, Mr MacRae, and it may be that we might, as a Court, find it helpful when we come to particular issues in due course.

**5 THE COURT: SPECIAL ADVISOR HOWIE**

Q. I have one other question. The issue about the datum change, (inaudible 12:56:59) in the future are you going to use – do you fix the past or do you stick with the old, do you see what I mean?

10 A. Yes, good question. I mean, we – six of one, you know, 10, two dozen of the other, really. I mean, we could go back and change the historic data onto the new datum, for example and move everything onto the new datum but you can obviously understand why we didn't want to be seen to be changing that historic data. So, yeah, I mean I'm not quite sure what the answer there is, really.

15 Q. Well, we're looking at a consent (inaudible 12:57:46) so does that affect your view?

A. Yes, yes, valid point, yes, it probably all does need to be shifted and all the historic data needs to be shifted with obviously a clear explanation around that process.

20 Q. Thank you. Thank you, Sir.

**THE COURT: JUDGE SMITH**

Mr MacRae, any other questions for this witness?

**MR MACRAE:**

No, Sir.

**25 THE COURT: JUDGE SMITH**

That has neatly taken us to just before one. I think we will take the luncheon adjournment having lost an hour or so yesterday by continuing on. So, we'll recommence at 2.15. The witness isn't under cross at this stage so there's no constraint on him and we will recommence at 2.15.

**COURT ADJOURNS: 1.00 PM**



**COURT RESUMES: 2.15 PM****CROSS-EXAMINATION: MR VAN MIERLO**

Q. Good afternoon, Mr Healy.

A. Good afternoon.

5 Q. I'll just rearrange my screen so I can actually see you. I just have a couple of questions and it's really about the (inaudible 14:16:21) on the beach that you can survey using drone technology. I understand it's down to the upper reach of the waves wash at low tide, would that be correct?

A. Yes.

10 Q. And that's because the drone can't survey through water, is that correct?

A. Yes.

Q. And so on a gradual sloping beach, depending on wave height and swell height at the time the survey's undertaken, how far up the beach does the waves wash extend at Pakiri?

15 A. I mean we obviously do it on spring low so usually about a point 3, point 2 tide. Our methodology is worked in a way that we run down the lowest parts of the beach right on that dead low tide and accomplish that area, get that area surveyed in quite a quick timeframe, right on that dead low, and then, obviously for the rest of it, the balance of the beach we're not  
20 under so much time constraint. So we make sure that we're all set up and everything is ready to go and then we are running down that water edge of the beach at about 15, 20 minutes – 15 minutes before the exact low tide.

Q. But even at dead low tide there will still be squash coming up the beach  
25 from the wave swell?

A. Yes, yes, depend in the weather, yep.

Q. And that will limit the extent that you can survey using the drone down to the water mark?

A. Yes. So we have, at times, when the weather is extreme, we do go down  
30 that water edge with more traditional methods. We basically do one line of levels with the GPS and then that just gets added into the drone model as individual points like a line right down there but on days where it's not

extreme like that we do, you know, we do accomplish levels right down to the water's edge.

Q. Thank you, Mr Healy, nothing further.

**CROSS-EXAMINATION: MS MORRISON-SHAW – NIL**

**5 CROSS-EXAMINATION: MS BLACK**

Q. Good afternoon, Mr Healy, thank you for your evidence.

A. Good afternoon.

Q. My questions have arisen because of the demonstration you gave us this morning, that was helpful, thank you for that. So, just to clarify, you gather  
10 this topographical data by flying a UAV over the land that you're surveying, is that right?

A. That's right.

1420

Q. And are UAVs the same as drones?

15 A. (no audible answer 14:20:08)

Q. Are you aware of the Civil Aviation Authority rules applying to drones?

A. Yes, so we fly under part 101.

Q. And what's part 101?

A. So that is we, we basically lob on air share, the area of the flights make  
20 them aware of the height that we're flying at but up there we also communicate with the golf course because they have a helicopter. It operates there frequently so we also through phone calls and emails converse with them and yeah seek approval basically prior to and obviously with council and seek approval or approvals before we fly.

25 Q. So looking on the Civil Aviation Authority website over the lunchbreak, the third rule that they list there says don't fly over private land such as farms or houses unless the owner says it's okay and so my questions really relate to that rule. Have you read the evidence of Wayne Greenwood who's the chair of the Pakiri Te Ahu Whenua Trust?

30 A. No, I haven't but can I answer that firstly we do not fly over any private land because as you can appreciate there's the lens on the drone has quite a fan effect that has a very wide, it's a very wide lens so we don't,

we only – actually we don't have get a, we're pretty much above like at the top of the dune, at the start of the dunes if you like. We don't need to go out any further out the back than that to take in the entire beach.

5 Q. Okay that's helpful. At paragraph 11 of Mr Greenwood's evidence he says that the boundary of the Pakiri G Block is the mean high water line and it's not clear whether that means mean high water springs or mean high water mark but if you're flying at the top of the dune you are landward of that boundary whichever of those two it is aren't you?

10 A. Well depending on where we're talking I guess but yes we might be getting close to that line, yes.

Q. And did you seek permission or receive permission from the owners of Pakiri G or any of the Māori land blocks fronting onto Pakiri beach to fly over their lands, particularly in this case for the purposes of breaking a topographical survey in support of an application of resource consent for an activity that they've strenuously opposed for 80 years. Did you seek and gain that permission?

15 A. So firstly we seek permission from Council and it was more around the nesting birds and public and access on the beach and those issues. In our minds we are not back. We over the public beach. We are not flying behind or beyond that extent so no we haven't.

20 Q. Okay, how do you confirm the extent of the public beach?

A. Well pretty much the same understanding mean high water springs.

Q. All right thank you. Those are my questions Sir.

A. Thank you.

25 **CROSS-EXAMINATION: MR POU – NIL**

**CROSS-EXAMINATION: MS WIKAIRA**

Q. The software is amazing. I just want to know, did you say that McCallums owns the software or are you commissioned to him to do it? What's the link between (inaudible 14:24:30) –

30 A. Yes the – so McCallums is my client if you like. We are commissioned by them to complete the survey, so obviously it is owned by McCallum Bros.

Q. Then the second question is so we saw it today, was that in your evidence prior to today you just showed us today or have you always had it and you're showing it now?

A. How do we answer that one John?

5 1425

**MR MACRAE:**

I think Sir Mr Healy is having some difficulty with the question.

**THE COURT: JUDGE SMITH**

10 Q. I think the question is, have you had that (inaudible 14:25:21) time when you prepared your evidence and only produced it today or was it produced with your evidence?

A. We've had it for some time but I – we, I think it was in reply, in my evidence in reply I missed the cut-off date to, we always had the intention to add it  
15 to our evidence in reply but we basically missed that cut-off date.

**CROSS-EXAMINATION CONTINUES: MS WIKAIRA**

Q. Okay so that probably would've helped with the inshore and midshore is all I was thinking. And then my last question is (inaudible 14:26:11) A, Tomarata B and Pakiri G are all private, the beaches are private. We  
20 actually own up and into the water, there's no Queen's chain on us because we were there pre-1840, so I guess I'm just stating a fact that when you did it video it I feel that it was on – you did do it from private land, you went over the private land.

A. Okay.

25 Q. That's all I have, yes, that's it.

**CROSS-EXAMINATION: MS DOWNING**

Q. Mr Healy, in response to questions from my friend Ms Black, you mentioned you spoke with the Auckland Council around flying of drones around birds, did you not think it would be appropriate to consult with the  
30 Department of Conservation?

A. I guess we were dealing with council and from my understanding the considerations around that were all (inaudible 14:27:37) care of, I mean that would be possibly my ignorance in that area.

Q. Thank you. I have no further questions.

5 A. Could I – I'd love to add just one comment there that the driver, that there was obviously a consideration there in terms of trying to create the most passive form of survey around those nesting areas so we're not walk – like traditional surveying we're not walking through those areas or riding quad bikes or creating any disturbance. It is the most passive form of  
10 survey in terms of the drone being at a high level, higher than the birds for sure and, as you can appreciate a very passive, a very soft way of taking in all that information.

**THE COURT: JUDGE SMITH**

Q. It might assist, what height are you flying at?

15 A. Around 80 to 100 metres.

**RE-EXAMINATION: MR MACRAE – NIL**

**QUESTIONS FROM THE COURT: SPECIAL ADVISOR HOWIE**

Q. Mr Healy, I was just wondering how long does a survey round take?

A. The entire, the entire survey takes about three hours but, as I was  
20 explaining before the lowest portion of the beach or that water area that's done in literally, 20, 25 minutes.

Q. Yes and how often?

A. Six monthly.

1430

25 Q. Six monthly okay and –

A. I mean traditionally it used to take about five days of about five, a five man crew, five days walking the entire beach and you know yeah.

Q. And then how long is it before you've sort of analysed the results and produce the graphs and so forth?

30 A. Oh look it probably four weeks, roughly a month.

Q. Yes okay so and do, are there standard results that you produce?

A. Yes. Still quite traditional results in terms of contour models, plans, cross-sections but then obviously trying to bring in new platforms like this to make the information, so the information's not dumped down and you don't lose that, all that extra data that you accomplish with technology so that, that kind of platform there is what we believe these types of surveys should all be on and then it can also be made public.

Q. Yes so does that include volume change and things like that?

A. Well it has all that capability so anyone that has that type of appreciate or education can apply those tools.

10 Q. So would a volume change be a control mechanism for monitoring beach effects?

A. Yes.

Q. It could be? Yes.

A. Yes absolutely.

#### 15 **QUESTIONS FROM THE COURT: COMMISSIONER MYERS**

Q. Just a follow up question from earlier. So is this in addition to the other, so there's the beach profile and the aerial photography, is this an additional method?

A. So it's a replacement method but it's all about the methodology of it so there's obviously a reasonable amount of groundwork that's done as well for good survey practices and so you'd have a lot of redundancy and being able to check the integrity and the accuracies of it but and also in that process of processing the model and processing all the data gathered you'd have all those checks and balances too confirm but obviously there's a lot less groundwork required and a heck of a lot more data collected in that process of the aerial so when people talk about and then, sorry people would call the, typically you know they would talk about photogrammetry and they're very used to the older form order, typical forms of photogrammetry where it does lack accuracy and it's done over very large areas like say the greater wide Auckland you know or something like that where it was a useful tool for such large areas but what we're doing here with technology is bringing it down, multiplying the grounds significantly, capturing millions and millions of points and so

you're taking that methodology by being able to fly at way lower altitudes a lot slower. You're essentially putting that on steroids if you like and creating a very good accurate model that has become industry standard really for the last 10 years over across all earthwork sites, many projects.

## 5 QUESTIONS FROM THE COURT: COMMISSIONER PRIME – NIL

### QUESTIONS FROM THE COURT: JUDGE WARREN

- 10 Q. I'm not sure if it's been covered but just paragraph 43 of your evidence-in-chief, sorry evidence in 2B.11. This where you address the suggestion of Colin Hopkins of the Auckland Council in terms of pre and post storm surveys. I just want to clarify so it's your evidence that that condition is impossible to achieve or is it just difficult?
- A. It's extremely difficult because of the – yep, because of the physical weather conditions so –
- 15 Q. Are you maintaining it would be impossible? I mean it's like the difference between that and extremely difficult?
- A. Well it's never impossible I guess but it would be extremely difficult and the outcome would be potentially a bit questionable. I don't think we would achieve anything like the accuracies that we would normally so you'd have to, you could be contaminating your results with a bad survey you know.
- 20 Q. Is there a half way house between what you propose and what Council is proposing?
- A. I guess there always is, yes.
- 25 Q. You don't have anything off the top of your head now? I mean is it the 10 working days which was the problem?
- A. Yes, potentially, yes.
- Q. So what is it 15, 20, what in your opinion?
- A. Yes, it would be more like 20.
- Q. Twenty working days?
- 30 A. Mmm.
- Q. So that would be less difficult in your opinion?
- A. Yes, yes and potentially more reliable.

Q. Very good, thank you for your evidence, Mr Healy.

**QUESTIONS FROM THE COURT: JUDGE SMITH**

Q. I really have a question out of the box because it's really nothing to do precisely with, but I did notice when you were showing the, your  
5 demonstration that there appeared to be what looked like vehicle tracks into the water. You've obviously been going there for some time. Is that correct that there are vehicle tracks going into the water, in other words beach launches?

A. I can't say that I've, I can't remember seeing beach launches but there  
10 has been vehicles on the beach at times, yes.

Q. And have you seen horses on the beach?

A. Yes.

Q. Dogs?

A. Yes, absolutely, been chased by them.

15 **QUESTIONS ARISING – NIL**

**THE COURT: JUDGE SMITH**

I don't know how far – I know that people are interested in this issue about drones and private property. I think Judge Kirkpatrick did a decision on this last year some time, I think it's the Mawhinney family and the council. My  
20 understanding however is that the matters (inaudible 14:39:10) aviation, in other words the RMA, doesn't specifically deal with airspace, but it's not an argument I can really take any further except if people want some guidance on what that's all about they can perhaps read that decision. That was about photographic evidence obtained by the Auckland Council by drone, but I don't  
25 think I can take that any further. It's legitimate questions. I'm not suggesting that – just I think it has been addressed in some cases.

**WITNESS EXCUSED**

1440



**THE COURT: JUDGE SMITH TO MR MACRAE**

Q. Mr MacRae, we move to your next witness who is?

5 A. Yes, Sir, well there is a change there, Sir. Mr Stubbing has last minute availability problems. He has a major (inaudible 14:39:59) two and a half days. I don't think his evidence should take more than an hour so I'm hoping that we can fit him in either on Monday or Tuesday and, in the meantime, if I could just go on and call Mr West, who I anticipate will take the rest of the day.

10 Q. Yes. I'm just a little bit surprised you didn't tell Ms Campbell because she's obviously made considerable effort to get here. You didn't think that she might be interested in knowing that you weren't going to call Mr Stubbing?

15 A. No, to be honest, Sir, I didn't know Ms Campbell was going to be there. I may have missed something. But in any event, Sir, I only really learnt myself at lunchtime.

**THE COURT: JUDGE SMITH**

Okay, well I don't know what we can do about it. Does anyone want to take it any further? I assume you will be disappearing again, Ms Campbell?

**20 MS CAMPBELL:**

Yes, Sir, and thank you for your notice and attention. I am disappointed that Mr Stubbing is not to be called today having made not insubstantial efforts to be here, but I understand that that is the case and there's not much to be done about it. If he's to be called next week, I will be here with bells on. I had planned  
25 to be here to cross-examine Mr McCallum and Mr Todd on Monday and so if Mr Stubbing is to occur at that time, that's fine. As I indicated, I have something in the order of half an hour of questions. I believe Ms Morrison-Shaw communicated that to the Court on my behalf yesterday, so that will be my contribution to Mr Stubbing's hour if that's what it is.

**THE COURT: JUDGE SMITH**

In fact, that is the very reason I raised this morning with Ms Morrison-Shaw if you were going to be available to cross-examine Mr Todd because it appeared if you were going to be here for Mr Stubbing. So I don't think there can be any

5 doubt that you were coming back specially. And I too can only express my displeasure at having things changed at the last moment. If it continues on, we may have to take some other steps, but we'll just have to see. Mr Stubbing will no doubt explain his absence when he appears. We move to Mr West and come and go leave is clear, Ms Campbell, so I don't need to repeat that. Thank

10 you.

**MR MACRAE CALLS****SIMON WEST (AFFIRMED)**

15 **MR MACRAE:**

Your Honour there is very little change to Mr West's evidence. We have forwarded to the registrar a document which is a replacement table, table 6.1, which replaces some figures in relation to the offshore area as a result of the reduction in the square metreage of the offshore area. So if your Honour has

20 that document, I'd like to ask Mr West to produce it as an exhibit.

**THE COURT: JUDGE SMITH**

I don't have it. I'll see if it has been sent to me. Hold on a second. A very different table to the existing (inaudible 14:44:52) one. Offshore sand excavation.

25

**MR MACRAE:**

The only part, Sir, that is altered is the third – the existing table covers inshore, midshore and offshore, and it's only the offshore compiling that's been altered. So the entire table hasn't been reproduced, just the altered portion. Would that

30 be exhibit 6 Sir?

**THE COURT:**

I don't know, registrar will tell me in a moment. Is an amended table 6.1, evidence bundle 257.

5 **EXHIBIT 6 PRODUCED – AMENDED TABLE 6.1**

**MR MACRAE:**

And then Sir if I could refer Mr West to the joint witness statement that emerged from the caucus of ecological experts.

**THE COURT: JUDGE SMITH**

10 Yes well I will try and hunt those down. We have got some problems with trying to find what – none of them were named so it's become something problematic for me. Statistics.

**MR MACRAE:**

15 In date order I think, Sir, it's the third.

**THE COURT: JUDGE SMITH**

So which tab are we talking about? Mr MacRae, you should know which one it is.

**MR MACRAE:**

20 The one that we're with is on page 1435 as I understand it, Sir. I believe it's common bundle document 10.

**THE COURT: JUDGE SMITH**

So we're at document 10, 1435 of the common bundle. That's CB1435 and it's also tab 10, and I have that in front of me. And you were going to ask the  
25 witness something about that document?

1450

**MR MACRAE:**

Yes, Sir.

**EXAMINATION: MR MACRAE**

Q. So under the heading, Mr West “Protected species stony corals, matters of agreement”, reference to stony corals beyond 35 metres and a recommendation that a revised, a joint recommendation that a revised pre-extraction sampling regime will be required before dredging occurs beyond that depth, have you made any recommendations in relation to this matter to the appellant?

A. Good afternoon. I haven't made any specific recommendations required for this specifically, however, the sand extraction survey methodology would be a start for this and if it's a case of having extra replicates or extra testing then that would then be required for that but I mean 35 metres is beyond what they're currently able to dredge, sand extract for the moment so there's no point in having a pre-sand extraction methodology for that yet. It's got time. It can be added into the EMMP as a revision.

Q. Thank you. And then would you turn to section 8 of the document and there are a number of matters of agreement between all participants in the caucus, and can you just indicate reasonably briefly to the Court in respect of those whether the conditions of consent in their latest version cover those matters or provide a framework for doing so?

A. For the first paragraph there in terms of statistical rigour, the framework covered in the conditions and the EMMP as it stands for that sort of thing to be done I mean the pre-sand extraction survey would provide a robust set of data for the entire sand extraction area and that information can then be perhaps statistical rigour test conducted on it which would provide information in terms of how reliable, how much risk there is in terms of detecting species and that kind of thing so there was framework there. It requires more robust data which will be collected under the pre-sand extraction so that's covered. The next one in terms of sensitive bivalves in benthic habitat communities, there's an appendix in both these consent conditions, I think it's currently condition – appendix 2, and it's appendix 10 in the EMMP for the offshore.

Q. And at the end of that paragraph is there the need for a species which are culturally sensitive rather than being sensitive benthic amenities or protected species, would you need further information about the species

that are culturally sensitive before the programme could be altered to deal with those?

A. Yes.

5 Q. The third point is that covered by the conditions or is there a framework for covering it?

A. The conditions don't specifically mention (inaudible 14:54:03), however the previous consent conditions and monitoring plan mention recovery studies to be conducted after the dredging is finished so I mean with this particular kind of sampling it requires samples to be taken from the dredged track and we saw yesterday where you had the large metal bar across the seabed with a little 100 metre thing in the middle. It requires a sample to be taken from within that track and adjacent and then repeated over time from the same locations so obviously having repeated sand extraction dredge in the same area would make things a little bit difficult in terms of doing this so it's something that would be done, it will be done as part of the ending of the existing consent monitoring and that standalone piece of information would then provide information for this consent application.

15 Q. Thank you. The next recommendation mentions ground roll, is that something that you – I'm not quite sure what it is. Can you explain what it is and is it within your area or is that something that Dr Pine (inaudible 14:55:29) deal with?

A. My understanding is ground roll is the vibration effects as part of the – sand is made up pressure waves and of particle motion and ground roll is the particle motion part of that so it's the vibrations in the seabed. To my knowledge that hasn't been measured as yet in the sand extraction operations so it would be something that Mr Pine or someone else would conduct and then the results of that would then feed into any ecological effects so it is really defining the extent of the area of ground roll and the extent of ground roll, what level of activity there is.

25 Q. Yes and finally the final recommendation.

A. So part of the final one needs to be contingency measures as part of my evidence-in-chief I think it was 6.16 to about 6.21 or thereabouts. I discussed the various quality standards and methods for assessing these

and conditions for those so it's included in my evidence. It's not included in any EMMP at this point in time but I would envisage that once we have a full set of sensitive species and habitats, then that can be refined and added into the EMMP.

**5 CROSS-EXAMINATION: MS BIELBY**

Q. Good afternoon, Mr West.

A. Good afternoon.

Q. I am just going to start to start with a couple of general questions for you. Would you agree that again at a general level that from an ecological perspective the more information or data that is available the better?

A. Yes.

Q. And would this particular application occurring in what the evidence says is a sensitive environment from an ecological perspective. Again at a general and high level would you agree that the more information or data the better?

A. Yes.

1500

Q. At paragraph 2.9 of your evidence in reply you accept, or seem to be accepting anyway, that there is a lack of baseline data for the offshore extraction area and that this limits our understanding of the existing benthic ecology in the area, is that correct?

A. Yes, yes.

Q. And so the flow-on from that on my reading of your evidence in reply is that you place significant weight on the concept of pre-extraction surveys so that we can understand and identify the existing state of the seabed and what occupies the seabed, is that correct?

A. Yes, the principle is before and after type approach. I mean there is not just a simple before and after with controls. It's a type series including controls as well. Unfortunately, we don't have data in replicates, nor was the – nor did the MMPs actually require ecological monitoring to any great extent during the course of the consent.

Q. Yes, I understand that. So my, I'm just looking at your amended table 6.1 that you produced this afternoon and my reading of that is that on a

monitoring cell basis for the extraction area, from a benthic biota perspective, what's proposed is up to, I think it's up to the size of the area, it could be less, but it's up to three grabs per monitoring cell, is that correct?

5 A. Correct, yes.

Q. And so are those monitoring cover, and my maths isn't great, sorry, but they're a kilometre long and 200 metres wide so they cover a fairly large area, don't they?

A. They do.

10 Q. But the proposal is for three grabs within each of those?

A. That's correct.

Q. It seems to be, looking at the, looking at your evidence, looking at all of the evidence and looking at the ecology joint witness statement, there seems to be agreement between all of the ecological experts that stony corals are a protected species under the Wildlife Act, is that fair?

15

A. That's fair, yes.

Q. And that sand extraction should be avoided in the areas that contain stony corals?

A. So the sand extraction is prohibited in those areas. You're not allowed to remove stony corals from the seabed according to the Wildlife Act.

20

Q. Yes, precisely. And that stony, it's my understanding again is that stony corals are more commonly found in the deeper waters. And by "deeper waters" I understand that to mean beyond 35 metres.

A. Stony corals, yes, are generally a deeper water species. Sixty plus metres would be within their normal inshore range although obviously being ecological information there's always an exception to the rule, which is why we found a couple of individuals in the last survey, 2017, which were all on the outer extent of area 1 and the (inaudible 15:03:54).

25

Q. And so that was, am I right that that was within the, it was in the shallower waters, so shallower than 35 metres, is that correct?

30

A. It would have been right on the outer extent. So it would have been pretty close to 35 metres. So, we've basically said that anything less than 35 metres the likelihood is fairly rare that you will end up with stony corals but the much, be greater beyond 35 metres.

Q. So, the area of concern for stony corals in your view is that it's beyond 35 metres?

A. Correct.

5 Q. And obviously what we've got here and what this Court is assessing is an application that could see extraction occur up to 40 metres in depth.

A. That's my understanding, yes. The wider offshore extraction area would cover 40 metres.

1505

10 Q. So we've got that area of concern between the 35 metres and the 40 metres?

A. That's correct.

15 Q. So with the – we've obviously established that the pre-extraction surveys are critical to the identification of stony (inaudible 15:05:22) beyond the 35 metre range and my understanding is that in terms of the methodology for the pre-extraction surveying, it's a combination of photography but also those, the grab samples as well?

A. Yes.

20 Q. Do you accept that the grab samples, that methodology or that technique that is proposed poses a risk to stony corals though given that it is an invasive technique as opposed to say photography?

25 A. It is always a risk, but the photography is not sufficient to detect a less than five millimetre diameter stony coral sitting in or just below the surface of the sand so the only way to reliably detect the presence is to use a grab sample so sieve that grab sample immediately upon a, say a three ml mesh sieve and observe what's in that mesh sieve so see where there are any stony corals there, if there are stony corals present then the methodology is that we photograph those and we return those to the seabed immediately and that area is then excluded and we don't do any sampling in that particular cell.

30 Q. Okay so I understand that you need, in order to be able to identify the stony corals in that beyond 35 metre area you need both the photography which may or may not detect the stony corals but you also need the grab samples as well?



- 5 A. Correct, yes. I mean the stony corals, there are a number of varieties. Some of them are branching and form little bushes which you will be able to see in photographs. We've never detected any of that particular kind of stony coral in the sand extraction area or further offshore when we were looking at the Hawaiki Cable which is just to the north of Mangawhai. We went up to 60 metres at that point and there were no stony coral trees there. My understanding is that those treelike stony corals, much deeper water have harmed animals but for the sake of non-evasive sampling we're putting photographs in there. We'll assess those prior to taking
- 10 grab samples to determine if there's anything that's in the way that we shouldn't be looking at taking anything further so it's non-evasive to start with and then once we determine that that's got nothing to show or indicate problems then we proceed with the grab samples which are invasive but we sieve those fresh so the animals remain alive. If they are
- 15 found to have stony corals in the sample then that sample is returned to the seabed in its entirety, sampling in that cell ceases.
- Q. Is there, can you answer this question, is there a – with the grab samples given that it is an invasive technique and despite the immediate sieving, is there, does there remain a risk to stony corals with the grab sampling?
- 20 Is there a risk?
- A. There's always a risk but it's minimal in terms of the grab sample.
- Q. Okay so your position is that the use of grab samplings are minimal risk to stony corals?
- A. As long as it's, as long as it's sieved fresh and that's observed for the
- 25 presence of stony corals and if any are found then the whole sample is returned to the seabed.
- Q. So is it a, and I just want to be clear about that. Is it a no risk or is it a minimal risk. I believe you said minimal but I just want to ensure that I've interpreted that correctly?
- 30 A. It's no greater risk than someone dropping an anchor down onto the seabed and them accidentally dropping it on top of a stony coral and crushing the coral.
- Q. Just back to the question, no risk or minimal risk?
- A. In ecology there's never no risk, it's minimal, negligible.

Q. The only other question, I was going to ask about conditions but you helped me clarify that and I think it's very clear from the joint witness statement that in the event that consent would be granted there is significant work that would need to go into those conditions so I'm not going to take that further with you today. One question that I do have though is I understand from your evidence that you, I think it's in your evidence-in-chief at paragraph 10.3, I understand that you were the architect if you will of this concept of reporting cells and monitoring cells. Is that correct?

10 A. It is correct, yes.

Q. And my question really at this point I will be talking further to the planning expert about this but my question just at this point for you is if there were a change in those cells to the layout of those cells were there to for instance be longer or from a horizontal perspective, if there was any change to those cells would you have a concern with that from an ecological perspective?

15 A. Well length of the cells I wouldn't have, I'm assuming you're meaning their length along shore.

Q. Along shore, correct sorry?

20 A. I wouldn't have any, I wouldn't have any issue with them being longer, however, if the cell was larger by being longer than additional replicate samples per cell would be required to keep it at the same level of sampling so if you made the cell two kilometres long instead of one kilometre then I would anticipate putting at least six replicates in the sample cell.

25 Q. Yes so there would be flow on, it would be flow on changes from the monitoring and reporting perspective but if they were, if there were just hypothetically if there were changes to the layout of the cells that as long as the monitoring is what you've as you put it in your evidence, you wouldn't have a concern?

30 A. I can't see any reason to have any concerns, no.

**CROSS-EXAMINATION: MS DOWNING**

Q. Mr West I'd like to take you to the JWS marine ecology please and, Ms Harnett, if you could please bring that up.

**THE COURT: JUDGE SMITH**

5 So are we talking the same document as before, 1435 tab 10?

**CROSS-EXAMINATION CONTINUES: MS DOWNING**

Q. Yes please. If we could go to issue 2, you've agreed there is insufficient information to rule out the possibility of adverse effects. Do you agree that that insufficient information includes a paucity of information on the  
10 location of extent of biodiversity values present?

1515

A. I think that the information that we have currently available has sufficiently identified the biodiversity that is present. Their limits in terms of insufficient information or in regard to some of the older studies, so the  
15 2006, 2003 baseline studies, which did not have replicate data available for the ecological samples. There is also, I had issues with the fact that no ecological sampling was conducted through the course of the current consent, with the exception of adding in some grain size in 2011, adding the control sites in in 2011 and then in 2017, only area 1 (inaudible  
20 15:15:27) ecological samples. So, there could have been more information collected but there wasn't. We can't go back and change that. It wasn't anything that we were – well, we were involved but we had actually suggested that this whole area 1 and area 2 were to be sampled. Kaipara made the call to only do area 2, sorry, area 1 and I believe that  
25 was something to do with the level of sand extraction that had occurred in area 1 and area 2. Area 2 had had very little sand extraction occurring in it so decided that wasn't worth continuing with or proceeding with any sampling. That was outside my control.

Q. Your answer is that there was insufficient information and there still is and  
30 that's why you've recommended further pre-survey or pre-surveys, surveys to be undertaken pre-sand extraction?

A. We would always recommend pre-surveys prior to sand extraction, simply because being a biological ecological system things are not static. They change. Animals come and go. I mean, so the closer to, or the shorter period between the survey and the sand extraction starting the better, so that's why we've suggested that, I mean we wouldn't rely on the (inaudible 15:17:09) the 2003 or 2006 surveys for this consent. We'd recommend that, or have recommended, that a survey is done within 12 months of sand extraction starting under this new consent, assuming it's granted.

Q. And if we could please scroll down. I think it's the ninth statement there. Sorry, if we stay on 1436 please and this is back to the topic.

A. Where are we?

Q. 1,436, that last statement we were just, or you were just discussing with my friend, Ms Bielby.

A. The stony corals?

Q. That's correct. So (inaudible 15:18:04) that the probability of the presence of stony corals in water shallower than 35 metres is low. Do you, would you accept then a condition set out in the conditions of consent requiring that sand is not extracted below 35 metres?

A. No. I would follow the protocols in terms of a pre-sand extraction survey. If there are no stony corals found, then I see no reason why sand extraction can't occur in that area. There's a likelihood that stony corals will be found in those offshore greater than 35 metre depths, but if they're detected then those areas become excluded from sand extraction.

Q. From an ecological perspective though, would you accept that that type of condition would represent a more ecologically cautious approach?

A. I think excluding greater than 35 metres would be overly cautious.

Q. But you accept it would be ecologically cautious?

A. Yes.

Q. Now if we could please move to issue 8 of the JWS and the fourth statement you've, no, sorry, that's the fifth statement that there's a need to be, there need to be contingency measures included in the suite of conditions where monitoring indicates adverse effects. And do you accept that one of those contingency measures may be the requirement to cease sandmining in a reporting cell?

1520

A. Yes, and I have stated that in my evidence-in-chief. I think it was, see if I can find a reference for you. I think 6.22 lists, I think there was four responses to detecting issues ecologically and obviously the first one is to avoid dredging in the area in the first place, which is what the pre-sand survey covers, and then there are a number of other conditions, suggestions to do, reduce monitoring levels, sorry, to increase monitoring to reduce volumes that are extracted and finally to not extract from that cell, as you're saying.

10 Q. Ms Hana, if you could please take that down and if we could move to your evidence-in-chief, Mr West. I understand you've got your hard copy in front of you, if we could stay with that. Sorry, I'm just looking what tab number that is for the Court's benefit.

A. (inaudible 15:21:40).

15 **THE COURT: JUDGE SMITH**

Evidence bundle 193. Which page do you want to go to?

**CROSS-EXAMINATION CONTINUES: MS DOWNING**

20 Q. I'll just start with a generic question, but I just wanted to make sure that the Court had their copies before them. In terms of your background and experience, I'm just wondering, did you have, did you give marine ecology evidence on behalf of the fishing industry parties before the Environment Court on proposed marine protected areas under the Northland regional plan in 2021?

A. Yes, I did. Yes.

25 Q. Now if I could please take you to paragraph 3.55 of your evidence-in-chief.

A. Yes.

**THE COURT: JUDGE SMITH**

Which page are we looking at?

30

**MS DOWNING:**

I don't have the page, I've just got the paragraph number, Sir. It's 3.55.

**WITNESS:**

220, Sir.

**5 CROSS-EXAMINATION CONTINUES: MS DOWNING**

Q. You note that in 2017 two samples recorded the presence of *Scleractinia* or stony corals from the offshore and you've already helpfully confirmed with my friends these are absolutely protected under the Wildlife Act. I just wondered whether a Wildlife Act permission was obtained from the Department of Conservation for that sampling, are you able to confirm?

A. Sorry, are you saying we needed a permit to collect the samples?

Q. I'm just asking whether a permit was obtained.

A. I understand. My researchers have a general permit from MPI for the collection of ecological samples. I understand that we were supposed to have reported the presence of them in our samples. I did not do that. I apologised to DOC when I knew that that was required and any future samples we will do so.

Q. And were you – is it fair to say that some species of stony coral are classified as at-risk under the New Zealand Threat Classification System?

A. I believe some are, yes.

Q. And are you aware that the New Zealand Coastal Policy Statement directs that adverse effects on threatened and at-risk species be avoided?

A. I am.

Q. Can you explain what effect sandmining might have on stony corals in the path of the sand dredge?

A. I believe that the individuals that are dredged would, I mean if they're larger than two or three millimetres they would likely pass over the dredge spreading deck and then be returned to the seabed. Whether they would survive or not, I can't tell. They are reasonably robust because they're relatively small and they're spherical in shape. However, I don't know

whether they would be able to re-establish themselves on the seabed. So, the idea is that we avoid.

1525

Q. So the dredge could remove a coral in its entirety?

5 A. These corals that we're finding are no bigger than about five millimetres in diameter so they are very small, hence the trouble we have with trying to detect them in seabed photographs of a square metre of seabed where it's like looking for grains of sand on grains of sand, so it's a bit problematic, hence the grab samples. Once we've removed the  
10 extraneous sand by sieving through a three millimetre mesh sieve, then we find out what's present on that. If there's anything present then, yeah.

Q. And my next series of questions will just help me understand so certain AUP policies which direct avoidance of non-transitory or more than minor adverse effects. Do you consider the remove of an entire coral would be  
15 a non-transitory effect?

A. Can you explain what non-transitory means? I'm not a claimant, so ...

Q. Something like a permanent effect?

A. Removal, yeah, it would be a permanent effect. I'm picking, there is a possibility they could land on the seabed and re-establish themselves but  
20 I don't know sufficient information about the particular life ecology of that one study of coral that's been found. But I don't believe it was listed as part of the threatened species.

Q. And back to stony corals, do they require stability at the surface, the sediment, in order to feed and survive?

25 A. That's a safe statement, yes. That's why they are not found on the shallower water because the surface sediment is not stable, because it's affected by wave activity.

Q. And does de-stabling the sediment by sand dredging also destroy the habitat suitability?

30 A. With the dredge passing a piece of seabed it would extra the stony coral and therefore cause stress and damage to the stony coral so the whole point of the pre-sand extraction survey is that we avoid stony coral areas.

Q. Now, if we could please move to 3.77 of your evidence-in-chief. That, I believe, is at page 34, where you talk about offshore area 1, sand

extraction report in 2003 noting that horse mussels were present, initially by side scan sonar and then ground-truthed by video photography, and you've stated that the report describes horse mussel as being present occasionally or in low numbers at the inshore ends of two video transects.

5 Now, what do you regard as low numbers and occasionally?

A. Those are the words that are in the report. I was not part of that report, I had no involvement in it. Unfortunately, numbers were not included in the report replicates, there was nothing more than occasional low numbers. Those are the only words that are written in the discussion report. So I have no more indication as to what that is that you do. I would've thought that occasional or low numbers, to me, would mean less than one per square metre.

10 Q. And you'd agree the fact that horse mussels are present would mean that the habitat is suitable for the species?

15 A. Yeah the (inaudible 15:30:11) is suitable for horse mussels. There was a significant horse mussel bed recorded as part of the Sand Study in 1995, it was recorded in a sonar survey in September where they mapped, and that's part of the figures in my evidence. The 2003 study for offshore area 1 is adjacent to just offshore from where that sonar study reported horse mussels being present so with the sonar survey they're looking for a signature that comes back from the seabed and that indicated, they mapped that according to those. There may well be occasional or low numbers of horse mussels that extend beyond that defined bed because it doesn't produce a (inaudible 15:31:10) sonar but  
20 my understanding from that report was that the horse mussels were present on the inshore ends of those and they didn't extend into the area,  
25 it was along the shoreward margin of it.

**COURT ADJOURNS: 3.30 PM**



**COURT RESUMES: 4.00 PM****CROSS-EXAMINATION CONTINUES: MS DOWNING**

Q. Mr West, still on the topic of horse mussels. At what threshold do you consider horse mussels would constitute an important biogenic habitat?

5 A. It would depend on what the size of the horse mussel. I've come across beds in the Manukau Harbour where there might have been one very large horse mussel per two to three square metres. By "very large" I mean in the order of 300 mil length, although we didn't measure the length. We were measuring the width at the top because it's less  
10 invasive. But, yes, so in that respect, yes, large animals like that form quite significant substrate for other animals to grow on, provides protection for animals to grow in the surface, in the seabed between (inaudible 16:01:50) because the presence of a horse mussel indicates there's not been any dredge activity in that area. But if they were smaller,  
15 then I would think that a greater density would be suggested. So a dense bed, as were shown in some of the images that I've seen associated with Pakiri, there we're talking several hundred per square metre whereas, I mean I would think that medium to large – size then a couple per square metre would form a biogenic habitat. They were (inaudible 16:02:34) so,  
20 yes.

Q. Sorry, did you say a couple per square metre?

A. Yes, three or four per square metre sort of thing.

Q. And that would qualify as important in your view?

A. In my view that would qualify as important, yes.

25 Q. It would?

A. I think that's, I don't – yes, it would. I don't think they would show up on the backscatter side scan sonar-type device because I don't think it's dense enough, but I haven't come across enough beds with that particular technology to determine what the densities are.

30 Q. I just note that, and I don't, you don't need to bring it up but if you do have the conditions before you it might help, appendix 2 of the proposed conditions set out the criteria for sensitive benthic communities and there it states that in terms of horse mussels, horse mussels are to cover 30%

or more of the seabed on average in visual images of either one metre squared or lateral view?

A. Yes.

Q. Is it your view then that this should be revised?

5 A. It is and that's part of that second part of the point 8 in the joint witness statement. I mean the appendix 1 was raised as a, or the appendix 2, sorry, is raised as a starting point. This came from a NIWA document which was conducted for the Ministry of Environment looking at sensitive habitats, sensitive species, and we took that as a starting point. I'm more  
10 than open to putting in slightly different requirements in terms of maybe changing that 30% cover or 30% weight to a number of individuals per area. Some of the other segments of that have (inaudible 16:04:46) measurements. There's also suggestions that there might be some more culturally important species that might be included in there. So, yes, it is  
15 definitely something that is open to some other inputs from other individuals.

1605

Q. And in terms of the habitat of the horse mussels, so like the stony corals do these horse mussels require relative stable sedimentary habitat to  
20 establish and reach adult size?

A. They need, get into the seabed by about two-thirds of their shell length or the pointy end is into the seabed, it's got a set of byssal threads which attach to particles in the seabed and anchor it in there. If there is a lot of wave activity or the seabed is highly mobile then there's, they run the risk  
25 that they could be pulled out of the seabed by natural events and they can't re-establish themselves is my understanding so they would then die but I mean obviously if you have got a really dense bed, several hundred per square metre then it's unlikely that they're going to be pulled out because they protect themselves, they're packed in like sardines so yeah.

30 Q. And in terms of such shellfish beds, do you accept they play an important role in nutrient cycling?

A. They all have a contribution to that as part of their ecological functions.

Q. And they stabilise, they help stabilise sediments and shorelines.

A. They can do do yep. I've worked in the entrance to Whangarei Harbour and there are large numbers of the dill copal that are present on the seabed there and they provide an armouring of the seabed, particularly protecting it from the stronger currents that are present.

5 Q. And they also provide important feeding habitat for various coastal fishes?

A. They can do, yes.

Q. And then my last question about this that they, is it fair to say that they contribute to water quality and filtering?

10 A. They will filter water and they will remove some particles. It depends on the size of the individual, the amount of filtering, the number of individuals present as to whether they have an overall effect on the water quality.

Q. Now I'm –

15 A. And if they're in 25 metres of water, sorry if they're in 25 metres of water, then they've got a significant volume of water above them that they would have to filter. I mean all the water above, maybe a metre above the seabed is probably not going to be sucked down to them so they will have limited effect on the water quality and the shallowness or sorry not in the shallowness but in the water of more than a metre above shellfish are present.

20 Q. Now I'd like to take you to the New Zealand Coastal Policy Statement. Ms Hannah if you could please bring that up. That is in the common bundle at section (d), it's tab 2. Please go down to policy 11(a). Now Mr West can you please look at policy 11(a)(iii)? It refers to indigenous ecosystems and vegetation types that are threatened in the coastal environment or are rare. Do you agree that the horse mussel beds would fall under this category?

25 A. They're not vegetation so that rules out that. They're an indigenous ecosystem. Whether they're threatened or not they're not part of a threatened species list. I don't know whether they're naturally rare or not. I don't know if it's sufficient survey information to say whether they are or are not or whether they've been reduced in numbers.

30 Q. Thank you Ms Harnett –

A. It is possible they could fall under that. It is possible they could fall under that but yeah.

5 Q. Ms Hannah if you could please scroll down now to 11(b)(ii) and that describes habitats in the coastal environment that are important during the vulnerable life stages of indigenous species. Do you consider that they go in this category?

A. In an estuarine harbour environment, yes. In an open coast environment, I don't think they would.

10 Q. And then my last question is if you take a look at (iii) do you consider that the horse mussel beds would fall under this category?

A. I agree with the first part of that, in that they are an indigenous ecosystem and it's only found at coastal environments. They're not particularly vulnerable to modification. The qualifiers after that tend to exclude horse mussels in the Pakiri environment.

15 Q. And you accept that that's more of a claiming legal question as to whether that list of ecosystems are exhaust?

A. It's what's written there so I mean if that's the rules then that's what we've got to work with but I mean yeah.

20 Q. Thank you, that document can be taken down please. Now I'd like to move onto paragraph 4.11 of your evidence-in-chief, on the topic of recovery species. Now you say 92% of benthic macrofauna individuals sampled from the 10 metres site tend to have survived the pumping and screen system on the William Fraser. When you say "deemed" does this mean "assumed" or something else?

25 A. If you read the earlier parts of the evidence-in-chief we categorised. What we did was we sampled a set of dredge material that came through the screen, through the pump, through the screen and we collected the shellfish that were to be discharged down in the wastepipe so it had been through the pump, it had been across the screens so what we're doing is we pacified if they had any damage to the shell or sublethal damage so  
30 in terms of chips or cracks and then there were other shells that were either completely disassembled or had significant cracks that were deemed, that those individuals would have had lethal effects so the 92% is basically those animals that had no effect visible on the shell or minor

cracks that didn't, we didn't deem to have had lethal effect. Now we'd say deemed effects because the animals that are going out the bottom of the boat of William Fraser through the discharge pipe we haven't looked at our, what the effects are of them then going to the seabed and re-establishing. Literature suggests that the mortality from the boat to the seabed and re-establishing is probably about 7% but in an open coast environment it was somewhat difficult to assess that. It was a suggestion to McCallums to have a look at that survivorship for further details so it could be an individual body of work that could add extra light to that survivorship completing the cycle from ship to seabed.

1615

Q. And is it fair to say that you could confirm the survival of shellfish that pass through the sandmining system by holding them in an aquaria?

A. You could. I mean you could put them in an aquaria and see whether they bury themselves in the sand. We didn't have aquaria available with a flow-through seawater system. We were based in an office block in town and that doesn't go well for that kind of thing. It is something that we were looking at and the study system would be that an in situ cage that you placed shellfish on the seabed and then monitored whether they buried themselves without predation or you put it into a laboratory system where you had to control against experimental effects in terms of flow-through and that sort of thing.

Q. So, in terms of those damaged shellfish that are returned to the sea, do you accept that those shellfish will be more vulnerable to predation?

A. Any piece of shelled biota, whatever, floating from the surface to the seabed runs the gauntlet of a bunch of hungry mouths of fish, as you'd expect. So, yes, there is a greater risk of mortality from predation. However, these fish – I mean schnapper and that sort of fish will take shellfish out of the seabed and crunch them as well. Other studies, similar shellfish in the Mediterranean, have suggested that there was a 7% mortality (inaudible 16:17:20) from this passage from a dredge to the seabed in re-establishing themselves in the seabed.

Q. Now, moving onto paragraphs – well, just at a high level – from paragraphs 4.2 to 4.18 you've assessed the effects of sand extraction on

macro fauna but I didn't come across anything on bottom-dwelling fish species. Do you accept that bottom-dwelling fish species could be caught?

A. By bottom-dwelling fish species you're meaning?

5 Q. Well, I can give you an example. (inaudible 16:18:03) to bring it up but I do recall from your earlier evidence that was filed September 2022, before the hearing had been combined to deal with inshore, midshore and offshore, this was solely in relation to offshore, you had noted the presence of lizard fish and snake eels that were caught?

10 A. Yes, there are some fish that tend to be living or live in the surface sediments, they dive into the sediments and bury themselves and leap out and grab crabs and other crustacea and things that are (inaudible 16:18:45). They are unfortunately susceptible to the dredge and being sucked up and being a soft-bodied animal they will probably suffer some mortality greater than the 92%. So, I mean, we found, I think we found 15 two or three individual fish in the initial May 2019 study, with the coastal carrier. I don't remember whether there were any in the, in the *William Fraser* study that was done. They will have some indicator coming with the noise of the dredge so whether that means that the fish bury 20 themselves deeper or whether they swim away, I don't know what their reaction is to that, we've never found them in any significant numbers.

Q. Could there be any bottom-dwelling sharks that would be affected?

A. No, no.

1620

25 Q. Now if I could take you to paragraph 4.31 of your evidence-in-chief. You say that: "While the underwater noise produced by the *William Fraser* under normal operation in the southern end of the extraction area may be faintly heard by marine mammals and likely fish within the Cape Rodney-Okakari Point Marine Reserve, the sound levels are not 30 expected to result in any adverse injury or behavioural effects within the marine reserve." And you say that: "Local permitted boat traffic will produce a greater level of underwater noise in the marine reserve than a sand extraction vessel." My question is whether you've assessed the

effects of noise from the *William Fraser* in conjunction with noise from permitted boat traffic on marine mammals?

A. I haven't specifically addressed any cumulative effect. One reason for that is that the *William Fraser* is generally operating at night and the local boat traffic is usually during the day, so the (inaudible 16:21:14) in the marine reserve is to do with divers and the passage of recreational fish boats going past or through the reserve out to areas to fish north of the marine reserve. I note that that assessment of 5.6 k's and the activity in the southern part of the sand extraction area was prior to the amendment of the extraction area moving four kilometres further north, so there's an additional four kilometres of buffer between the sand extraction and the marine reserve now.

Q. Now I only have questions in relation to two more paragraphs of your evidence-in-chief, you'll be pleased to know. If I could take you to paragraph 6.11 please. You talk about progressing to Ponar grab samples which will be sieved as soon as possible. Can you tell me how big the mesh size of the sieve is?

A. The proposal is that we will have a two stage sieve. So, we'll use a three mil sieve to remove the coarse shell and any larger biota, such as the stony corals, and we can observe what's on that. It then, (inaudible 16:22:52) passes through that, goes into a bucket sieve which has a one mil mesh size on the bottom.

Q. So, if there are some stony coral species smaller than three millimetres they will not be detected?

A. They will pass into the bucket sieve and that will then be observed as well and bagged. But I mean, obviously if there's some in there, we'll see them if they're really small, but I mean we might not see every single one of them in the smaller size range. In the field that is. I mean they will be found when they're sorted, but I mean you can't expect to examine every single grain size of the sample to detect really small cryptic animals.

Q. So, it would be like finding a needle in a haystack?

A. In a haystack, yes. And you're also bouncing around on a boat at the same time, so everything's moving.

Q. And at 6.12 you say: “Additional Ponar grab samples are required to be collected from the offshore boundary and near where absolutely protected species defined in the Wildlife Act are found.” Do you know whether that’s been carried through to the proposed conditions of consent?

A. So, this was written prior to Christmas last year and the monitoring plan has been upgraded since then along with conditions. Rather than adding extra replicates along the offshore, we’ve decided that we will do three replicates in each of the cells and that was why we issued the amended table 6.1 lunchtime today, which basically says that there are three replicates per reporting cell, or sorry monitoring cell, and three cameras drops and one (inaudible 16:25:14) size sample. So, that’s in every cell, whereas before they couldn’t say it was 6.1, there was only two grabs per cell and then then there were extra ones in the offshore.

Q. Thank you, Mr West. Now, to help me conceptualise the area of the cells, the monitoring cells, that’s 200,000 metres squared, right?

A. A thousand by 200, yeah. (inaudible 16:25:52) maths.

Q. And my understanding is that, so I don’t know if you’re familiar with the Wellington “Cake Tin” or otherwise known as the Wellington Regional Stadium or Sky Stadium, that’s approximately 48,000 metres squared. So, each monitoring cell, to help me understand, would be equivalent of four cake tins, do you follow me?

A. But assuming the maths was correct, yes.

Q. At least four and you’re proposing that there are only three samples within something that size?

A. Yes.

Q. And is it fair to say that sea floor features are not homogeneous per cell?

A. It’s fair to say the seabed has some variability in it and so yes, it’s not a homogeneous, uniform, flat sand with everything disputed evenly, there are differences.

Q. So, sampling three discrete points may not be representative of the whole entire monitoring cell?

A. It is representative of the cell.

Q. But it may not catch –



A. Whether it – it may not capture everything as you have suggested, yes.

Q. Now, I'll just move to your evidence in reply and that's at tab 7(a) of the evidence bundle just for the record. Have you got that with you?

A. Yes, I have.

5 Q. You say that Professor Jeff suggests that the Benthic habitats of the Mangawhai Pakiri embayment are of such high quality that they warrant classification as significant ecological areas under the Auckland Unitary Plan now I can take you through his evidence, do you have copy with you?

10 A. Don't have a copy in front of me, no.

Q. Ms Hanett, would you be able to please bring up the evidence-in-chief of Professor Andrew Jeffs, and if I could take you to paragraph 28, please, if you could zoom in a bit, that'd be great. Mr West, I'll get you to read that.

15 A. Yes.

Q. Now, his evidence does not specifically state that it's of a high quality, does it? So, in other words he's made no comment on condition.

1630

20 A. He's made the comment that they are an excellent example of indigenous marine eco systems in the region, unlike many other coastal areas.

Q. But that's not the same as saying it's high quality, is it?

A. It's not in terms of the word, say, high quality. It's a suggestion that they're an excellent example but are of good quality.

25 Q. Ms Hartner, could I please get you to find the schedule for SEA-Marine, under the Auckland Unitary Plan. That's in the common bundle at section 4, document 4, almost the one below 1784. If I could take you to 2(a). One of the criteria is it's a habitat that provides for the life cycle of a marine plant or animal that is locally rare and it has been assessed under the NZTCS, and you've acknowledged the presence of stony corals. Do you consider that it then meets this criteria?

30

A. Sorry, what meets the criteria?

Q. The habitat, the area?

A. For what? I've got lost.

Q. The offshore area?

A. For what, what species?

Q. 2(a), the stony coral, yes.

A. Right, yes. So does the stony coral meet sub-factor 2(a)?

Q. Yes, that's my question?

5 A. The stony coral is listed as a threatened species, it's covered under the wildlife factor well, it's naturally uncommon. So, yes, if stony corals were present then, yes, (inaudible 16:32:51) meet that requirement.

Q. And that's a similar requirement as in 2(d) if we scroll down, so that's a specific reference to the Wildlife Act?

10 A. (inaudible 16:33:11).

Q. Sorry?

A. Yes, so that's the same, yeah, assuming that they are present.

Q. Now, if we could take that down. My last question is just around 9.9 evidence-in-reply and you've just noted that it's not impossible to conduct  
15 marine offsetting and compensation in New Zealand. Do you accept that whether offsetting and compensation is permissible in the coastal environment is a planning matter?

A. In terms of conducting offsetting and compensation my understanding is that there's a requirement to prove nett gain in terms of habitats and that  
20 often implies seeding or planting plans or creating new habitat or enhancing habitat in the open coastal environment such as at Pakiri. There is no source of animals that I'm aware of to seed into the environment to create new habitat other than, say, things like green lipped mussels which Dr Jeffs has been attempting to establish Firth of Thames in terms of populations but I don't believe he's managed to create a  
25 self-sustaining environment for them yet. In terms of possible, yes it's possible for intertidal habitats, for example there's been a fair amount of work done in the Wellington region for establishing greater diversity of benthic habitats on rock walls and things like that, so creating greater  
30 three-dimensional spaces rather than just creating flat walls.

Q. My question was more around the planning and legal feasibility of it and whether you deferred to planners as to whether it's appropriate in the coastal environment?

A. If it's a planning issue then yes I would defer to a planner for that kind of thing. All I'm stating is that there's no practical method for conducting that kind of exercise in the Pakiri embayment.

Q. Thank you Mr West, those are my questions thank you sir.

**5 CROSS-EXAMINATION: MR VAN MIERLO**

Q. Good afternoon Mr West.

A. Good afternoon.

Q. I'd like to start with some questions around the marine food web. At paragraph 3.1 of your evidence in reply you refer to uncertainty. You list  
10 a range of factors that are outside the applicant's control with regard to the marine throughfare. It would be fair to say our knowledge of the marine – the Mangawhai Pakiri embayment is incomplete. Would you agree with that?

A. Our knowledge of the connectivity through the food web is probably  
15 incomplete, yes.

Q. So there's a lot we don't know about –

A. You mentioned 3.1 did you?

Q. Yes.

A. You mentioned 3.1 was it?

20 Q. Yes. So there's a lot we don't know about cause and effect and how it all works within the embayment? So for example what species of small pelagic fish are present in the offshore extraction area?

A. There have been a number of studies, I think it was back in the '70s or  
25 '80s anchovies, there's larvae from a number of triple fins and that sort of thing that have been detected in the offshore environment. They have a seasonal component to them so they change summer, winter, autumn/spring and there's some geographic differences as well in terms of differences offshore. I think largely based with the current flows and things like that.

30 Q. Well would you regard that as a comprehensive knowledge or some indications of some species?

A. It's an indication, it's not a comprehensive knowledge, no.

Q. And another question, in terms of the percentage of small migratory fish such as (inaudible 16:39:20) which are found within estuaries along the Mangawhai Pakiri embayment, do we have any knowledge about what percentage of those would spend part of their lifecycle in the offshore sand extraction area?

A. I have no knowledge of how long they would be present in there. I would think they were just passing through, they would be passing through as juveniles, yeah.

1640

10 Q. And the percentage of small service-dwelling marine fish species feeding directly or indirectly on benthic biota within the offshore extraction area, do we know, do we have information about that?

A. Sorry, you said surface-dwelling fish feeding on benthic?

Q. Yes?

15 A. I would think that there is very little surface-dwelling fish that feed on the benthic habitat in the offshore sand extraction area. I mean, if they're surface-dwelling they're in the top few metres and the benthic habitat is in 25 to 30 (inaudible 16:40:37). It's a considerable swim for a small fish, they'll have to negotiate the other larger mouths of other fish on the way.

20 Q. Again, these things haven't been the subject of specific study in this area, would that be correct?

A. That's correct, yeah.

Q. Now, would you agree, given the critical status of tara iti that any adverse effect on the ability of tara iti to forage for food in the Mangawhai Pakiri embayment is something that should be avoided?

25

A. Yes.

Q. And at 4.3 of your evidence-in-reply –

A. Are you speaking or you're on mute?

Q. Sorry, fair comment. I don't know how that happened but we'll make sure it doesn't happen again.

30

A. Sorry, you're going to have to repeat your question.

Q. I was referring you to paragraph 4.3 of your evidence-in-reply and you've said: "Most tara iti small fish prey species in the shallower layer of water

are mobile pelagic species that are planktivorous, trophically disconnecting them from the benthic biota.”

A. Yes.

Q. But obviously they are (inaudible 16:42:43), aren't they?

5 A. They are able to swim from surface to bottom, yes, if they choose to do so.

Q. And we don't know the percentage of these species which make up the tara iti diet, do we?

10 A. Well, there is very limited dietary composition studies done on tara iti in terms of offshore environments, yes, I agree with that.

Q. So your statement at 4.3, it's a speculative statement, isn't it, in that we really have quite limited information about the dietary composition of tara iti?

15 A. We have very limited information on dietary composition, we have very limited information on how far offshore they forage, on the open coast, we know from studies that have been done that most of their diet includes estuarine species. I mean, the bird expert for McCallums will probably be able to expand on that more. My approach to this was that where I'm looking at it from a food source and that sort of thing so the fish that the

20 tara iti would (inaudible 16:44:22) to be in that top few centimetres of water because they're not divers, they're just, they swoop down and stick their head in and that's about as far as they go in. So they have to be very shallow, they're not a big bird so they have to be very small prey, it's not like they can go and take a large kahawai or anything like that. So

25 that's very limited in terms of species that are likely to be there. There'd be anchovies and a few other smaller fish species and some larval animals as well. In terms of those animals they will prey on (inaudible 16:45:03) which is the smaller biota that's living in the water column nearer the surface. These fish aren't large so they're not capable of

30 swimming great distances with ease. So, if they're on the surface, they are likely to stay close or near the surface. They're not likely to swim all the way to the bottom and back just for a feed. If they were going to do that, they would live on the seabed. So, that's where the “trophically disconnected” statement comes from. They're living, yes, they're living in

the water column but they're living on top as opposed to the seabed down below and they don't generally or wouldn't generally go from the top to the bottom and back. So, there's a disconnect. The effect of dredging is on the seabed rather than on the surface water column. But there's also a disconnect in terms of other things as well (inaudible 16:46:04) question.

Q. Now I understood as a marine ecologist you specialise in benthic ecology rather than collegic eco –

A. I do, yes. Correct.

10 Q. And you're not a shore bird or an avifauna expert, are you?

A. I'm not, but I come across them in my line of work and that's why we have a separate bird expert.

Q. Now still at 4.3 of your evidence in reply you've noted, you've said: "Tara iti are reported to forage in the nearshore and likely out to about two kilometres offshore." You haven't given any reference for that reporting, but I suppose the question is –

A. I haven't.

Q. You're aware though that tara iti are also recorded as foraging up to four and a half kilometres from their nest sites? Would you accept that?

20 A. If you say so, yes. I mean as I say, I'm not a, as you say, I'm not an avifauna expert but they –

Q. Have you read the evidence –

A. I've read that they fly from the Mangawhai Spit throughout the Mangawhai Estuary and they have territories there, so they have to fly from their nest site to the territory and back again. That may be that distance, I haven't specifically looked at that. It will depend on their food source as to whether they fly that far.

Q. I'd like to refer you now to the joint witness statement for marine ecology in relation to item 4.

30 **THE COURT: JUDGE SMITH TO MR VAN MIERLO**

Q. We'll just need to clarify this because it's one of the issues that has concerned me when I read the evidence. The witness here is saying two kilometres offshore. Are you saying there are other witnesses who say

that the birds typically fly 4.5 kilometres offshore? Because Mr Southey certainly doesn't say that and I can't remember who else says that.

A. Yes. Dr Beauchamp for the Department identifies that, in essence, this is an area of unknown information as to how far the birds do fly.

5 Q. Well, it's not a question of how far they fly because we know they fly and I've done more than one case on the point. I know they fly throughout the Mangawhai Estuary, going down even as far as Te Arai. They'll fly across to Slipper Lake, et cetera, et cetera. This is a territorial issue and a shore issue. They're clearly a shore bird and they will travel quite long distances  
10 along the shore, but I'm just wondering who you're suggesting says that they typically fly four and a half kilometres offshore.

A. No, I don't think I said they typically fly four and a half kilometres offshore, Sir. The proposition I was putting to Mr West is that tara iti have been reported and recorded as flying up to four and a half (inaudible 16:49:32).

15 Q. Well, if you read his evidence, he says offshore. His evidence isn't about how far they can fly. It's about how far he understands, and he accepts he's limited in his understanding, offshore. Now, there may be somebody who says it. I'm just highlighting the point that this Court is alert to the issue, the distinction between flying the longshore and within their territory  
20 and flying offshore. That's the only point I'm making. And I don't think the witness was suggesting that they don't fly alongshore because we know they do. Do you get the point I'm making? he first line of 4.3 which is your point at cross examination. So, I don't think it's of any particular moment, I was just clarifying that Mr West was (inaudible 16:50:37) to  
25 make his comment about the distance offshore and even then he accepts that he's not an expert on it, that's what he understands, so I accept there may be other evidence that shows they fly further offshore, but I just can't think who says that.

A. Dr Beauchamp refers to it, but it is in the context of uncertain information  
30 and identifying the uncertainties of these areas. And obviously we'll get to it in the (inaudible 16:51:09).

Q. And Mr Southey talks about watching them fly away and disappearing from sight.

A. Yes.

Q. So I'm not suggesting that, I'm just saying that I don't think Mr West was saying they only flew two kilometres, that's the point I think. But let's move, it was a minor point, sorry, but it is picked up by other witnesses later on.

5 A. Yes, yeah. And I was about to move on, Sir.

**CROSS-EXAMINATION CONTINUES: MR VAN MIERLO**

Q. Joint witness statement from marine ecology at item 4...

**THE COURT: JUDGE SMITH**

Sorry, can you tell me where it is in the bundle of documents. We're struggling  
10 to find these things.

**MR VAN MIERLO:**

It's 1435 in the common bundle.

**THE COURT: JUDGE SMITH**

Thank you, excellent. Yes we've been there before, thank you. No, C6. Thank  
15 you very much. No, C7.

**CROSS-EXAMINATION CONTINUES: MR VAN MIERLO**

Q. Now at item 4 –

**THE COURT: JUDGE SMITH**

Sorry, it's actually C10, 1435. Thank you, carry on.

20 **CROSS-EXAMINATION CONTINUES: MR VAN MIERLO**

Q. Yes – there's a statement that none of the experts considers that there are any readily identifiable direct effects on marine food webs related to the sand mining (inaudible 16:52:47) from the available information. So, my question around this statement is would you agree that it is really a  
25 rather heavily qualified statement? It refers to readily identifiable direct effects and available information which all qualify that statement?

A. It is a qualified statement, yes.



Q. And the available information is limited, would you agree with that?

A. Yes.

Q. And in ecology, indirect effects can be as consequential as direct effects?

A. Sorry, can you repeat?

5 Q. Yes, the statement refers to direct effects, but my question really is that indirect effects can have consequences on ecological issues as much as direct effects.

A. Okay.

Q. Would you accept that?

10 A. Indirect effects can have, yeah, same as similar effects or different effects to direct effects, yes.

Q. My notes seem to have gotten mixed up, I apologise.

**THE COURT: JUDGE SMITH**

Well would it be convenient to take a slightly early adjournment today and let  
15 you re-order your questions for tomorrow?

**MR VAN MIERLO:**

It probably would, Sir. I don't have a great deal more to do but that would be helpful, Sir, yes.

**THE COURT: JUDGE SMITH**

20 I think it may make more sense. If you've got things out of place at the moment, it will probably take the time that will be the difference and I can fill up by asking questions about the witness evidence for tomorrow. Is that okay?

**MR VAN MIERLO:**

Yes. Very, Sir.

25 **THE COURT: JUDGE SMITH**

So we'll pause the witness. The witness is under cross. Mr MacRae, I'm sure you can advise him of the consequences, and we will continue tomorrow morning.

**THE COURT ADDRESSES COUSNEL – TIMETABLING / HOUSEKEEPING**

(16:55:17)

**KARAKIA WHAKAMUTUNGA**

**COURT ADJOURNS: 5.08 PM**

5

**COURT RESUMES ON THURSDAY 20 JULY 2023 AT 9.30 AM****KARAKIA TĪMATANGA****THE COURT: JUDGE SMITH**

- 5 Now, obviously, events are unfolding in the central city. It does appear that there may have been some deaths, certainly some injuries. My hearing manager was able to get work eventually. I gather there may be some constraints for the council. Ms Bielby, are you with us?

**MS BIELBY:**

- 10 Yes, Sir, I am, I'm with you. I'm the only person from our council team that has been able to make it in, I was in early enough this morning. Obviously, everyone in our office is safe but we are looking at it out our window, so a little bit disconcerting but I'm here, nonetheless.

**THE COURT: JUDGE SMITH**

- 15 Now, I'm not sure if we're missing anyone else. I'm assuming the fact that we started that we have all of the key parties. Is there anyone who is operating in or near the CBD, beyond, obviously, the court and the council?

**MS CAMPBELL:**

- Yes, I am, Sir. And I had some difficulty getting here this morning but have  
20 managed to make it in time.

**THE COURT: JUDGE SMITH**

And you're content to – I don't want people feeling stressed unnecessarily. Are you okay to proceed in the meantime, at least?

**MS CAMPBELL:**

- 25 Thank you for asking, Sir. I'm fine.

**THE COURT: JUDGE SMITH**

Is there anyone else?

**MR VAN MIERLO:**

Certainly Sir. Myself and Ms Sutherland are in the CBD but we're all fine, thank you, Sir, and ready to proceed.

**THE COURT: JUDGE SMITH**

- 5 If any of you have a change of situation for any reason, please advise either the registrar or the Court as a whole immediately and we can adjourn, if necessary, and that applies to the court staff as well. Again, my natural cynicism in seeking to have these things remotely comes to another reason fruition. I had to mention to Ms Helms this morning that we had the SkyCity fire, and she didn't
- 10 even remember that, so it just shows it's the things that have interrupted the operation of the courts over the last few years. Plus pieces of building's falling off. I can't remember when that was, either. That was on Nelson Street, I think. In any event, I think we proceed on for the moment. Does anyone have any problems with that? So that being the case we will confirm Mr West's swearing
- 15 in. I think Mr van Mierlo was part-way through, he felt he had probably 10 or 15 minutes left. So, Mr West, you're on your oath from yesterday?

**MR WEST:**

Yes.

**THE COURT: JUDGE SMITH**

- 20 And Mr van Mierlo, I invite you to continue with your questions of Mr West.

**SIMON WEST (ON FORMER OATH)****CROSS-EXAMINATION CONTINUES: MR VAN MIERLO**

- Q. Mōrena, Mr West. You'll recall yesterday afternoon I was asking you about the marine food web and you'd agree there was limited information
- 25 about a range of natural processes and some uncertainty about precisely where tara iti do or do not forage at sea. Now, you filed a statement of evidence-in-reply but you did not reply to the evidence of Dr Beauchamp by the Department of Conservation, did you?
- A. No, I did not.

Q. Did you read Dr Beauchamp's evidence, Mr West?

A. No, I have not.

Q. Ms Harnett, if we could please bring up Dr Beauchamp's evidence please, it's page 2823 of the evidence bundle, paragraph 6.12 and 6.13.

## 5 THE COURT: JUDGE SMTIH

After a whole series of hearings I find it best if parties just refer to it as EB2823 because that way when the transcript comes back it's very clear where we are. I don't mind the paragraph being used after that and that's similar for common bundle 2, which is CB. So, we're at 2823, which paragraph are we looking at?

## 10 CROSS-EXAMINATION CONTINUES: MR VAN MIERLO

Q. 6.12, 6.13. Mr West, given that you haven't read this evidence I'll ask you please to read those two paragraph, let me know when you have.

A. So, 6.12, 6.13 I've read.

Q. Do you dispute that evidence?

15 A. No, I don't dispute that evidence. 6.12 is, I understand, most of the fairy terns that are feeding in the estuary, from the literature I've read the diets (inaudible 09:38:06) sourced food from the oceanic water which is – and in comments that I've seen suggest that it's only just beyond the waves but it states there there's some uncertainty as to how far they flow. 6.13,  
20 yes, I agree they could fly four and a half kilometres in the estuary from their nest site to the estuary. And I agree that they would fly a similar distance offshore. However, I note that fairy terns aren't fond of landing at sea so a four and a half kilometre flight would only be two and a half kilometres offshore, assuming they left from the beach.

25 Q. Well, if you read the first line of 6.13, I don't think that's quite what Dr Beauchamp is saying. He said studies of tara iti at Mangawhai have shown that some terns forage up to 4.5 kilometres in the estuary from their nest sites.

A. Correct, yes. So, they fly four and a half kilometres from their nest to the  
30 estuary (inaudible 09:39:32) areas of intertidal land which the fairy terns are able to land on.

Q. So is it your understanding that they would not fly a distance of 4.5 kilometres from their nests?

0940

5 A. I would've thought that a flight distance of four and a half kilometres there and four and a half kilometres back to feed chicks would not be terribly efficient in terms of energy expenditure. I think I have read something that fairy terns, they don't regurgitate prey for the chicks, they carry it in their beaks so it's a there and back flight, feeding chicks.

Q. Would you defer to Dr Beauchamp on issues relating to tara iti?

10 A. I would defer to Dr Thompson.

Q. Yes, well I'll talk to Dr Thompson about that. And now, if we could go, please, to EB2834 and 2835, that's paragraphs 8.20 and (inaudible 09:40:55). And if we start at 8.20, so if you just scroll up a little bit, and it does cross a couple of pages. So, again, Mr West, as you haven't read  
15 this evidence, I'll just ask you to read these three paragraphs, please.

#### **WITNESS READS**

Q. So, despite this evidence specifically refers to your evidence, you didn't put in any evidence-in-reply to it, did you?

A. No, I didn't, no.

20 Q. And, again, do you contest this evidence or do you accept it?

A. Well, considering this is the first time I've read it in (unclear 09:43:06)

#### **THE COURT: JUDGE SMITH**

You're saying does he contest. Does he contest what?

#### **MR VAN MIERLO:**

25 Well, whether he agrees with it or disagrees with it, Sir.

#### **THE COURT: JUDGE SMITH**

It appears to be the same evidence that he gave, so I don't understand – it seems to be about an interpretation of the statement and I don't know which one you're talking about.

**MR VAN MIERLO:**

About the potential impacts on tara iti foraging, Sir, and whether that's a matter that needs to be considered in the consenting of this activity.

**5 THE COURT: JUDGE SMITH**

So is this 8.22: "Consequently in my opinion there's still considerable doubt about the impacts of sand extraction on tara iti." Is that what you're talking about?

**MR VAN MIERLO:**

10 Yes.

**THE COURT: JUDGE SMITH**

Q. Well, what do you say to that, Mr West?

A. In terms of flight distances, I would like to defer to Dr Thompson as the bird expert for McCallums. In terms of food webs, the joint witness  
 15 statement, we all agreed that there was no likely impact on the food web based on our knowledge of general biology of the animals and plants and such involved in the Pakiri embayment. So, yeah, I would contest that there isn't an issue in terms of food web for food supply for tara iti. I mean, combine that also with the fact the tara iti are daylight feeding so they  
 20 need visual food for targeting and the dredge operation is at night which separates them by time.

**CROSS-EXAMINATION CONTINUES: MR VAN MIERLO**

Q. All right, we'll move to another issue. In relation to corals now, in your evidence-in-chief at paragraph 6.14, and I can probably just refer you to  
 25 it without having it on the screen given it's your evidence, you say that: "If absolutely protected species defined under the Wildlife Act are found alive, they will be photographed, enumerated and returned to the sea." Now, if dead stony corals are found, are they monitored, photographed, counted, reported on?

A. It's very difficult to determine whether a stony coral is alive or dead by looking at it without magnification. In the field we have (inaudible 09:46:02) in terms of microscopes, so everything's assumed to be alive.

5 Q. So it's any stony corals whether alive or dead, thank you. And in your evidence in reply at paragraph 7.5, you note that one of the reasons for conducting baseline surveys is to determine areas that should be excluded due to the presence of sensitive benthic communities or absolutely protected wildlife.

A. 7.5?

10 Q. Yeah, so that's at EB7A 5, paragraph 7.5.

A. Mhm.

Q. Now, bearing in mind your answers to Ms Downing yesterday, would you accept that the methodology with Ponar grab samples and photographs is only going to sample a very small portion of the extraction cell?

15 A. Sorry, which paragraph are you referring to, 7.5 in my reply?

Q. Yes.

A. 7.5 in my reply to paragraph 69 and 81 of Mr Stevens discussing kina, is that correct?

20 Q. I'm sorry, you are correct. I've obviously got the wrong reference here, I apologise. But again, I'll put the question to you. Would you accept that the methodology with Ponar grab samples and photographs is only going to sample a small proportion of the extraction cell?

#### **THE COURT: JUDGE SMITH**

I think the paragraph you may be referring to, Mr van Mierlo, is 8.5 on 7A14  
25 which talks about Ponar grab samples.

#### **MR VAN MIERLO:**

Thank you, Sir, I'm obviously made an error in my notes.

#### **THE COURT: JUDGE SMITH**

30 But in any event, the question stands with or without that reference, but it might assist you, Mr West.



**CROSS-EXAMINATION CONTINUES: MR VAN MIERLO**

A. Yes, so it does only sample a small area, and that is relatively common in ecological surveys, we can't sample every single square metre of an environment. We'd like to but the time and cost of doing such is, it's pretty prohibitive.

Q. So, how confident are you that the pre-sand extraction monitoring will detect stony corals, if they are present?

A. Reasonably confident. We have detected them in monitoring in 2017 in the past so.

Q. Yes, but it would be fair to say it's relatively hit and miss, isn't it? In the sense that you could take a sample –

A. It is.

Q. – and not find stony corals in it but that doesn't mean that they're not nearby?

A. Correct.

Q. And at 35 metres, what would be the range of visibility in photograph on the seabed?

0950

A. The seabed photograph surveys are done with a one metre square tripod and the camera is positioned about 1.1 metres above the seabed. So, visibility is more than sufficient for the camera to be able to see the seabed. We also use a lateral camera which looks out most of the time that's got at least five to 10 metre visibility.

Q. So, one square metre for a tripod camera, five to seven did you say for a...

A. Five to 10 metres visibility. That does vary a little bit. I mean obviously the further away, the smaller things are, and the resolution is not going to be anywhere sufficient to detect stony corals. The lateral view is more to look at whether we can see beds of horse mussels or scallops, the larger animals, and perhaps starfish as well.

Q. So, is the proposed methodology really suitable for determining areas that should be excluded from extraction (inaudible 09:51:07) benthic community or the corals? Given the limitations.

- A. Yes, it's the best available method that we could devise. I haven't seen any suggestions of any improvements from anyone else.

**THE COURT: JUDGE SMITH**

- 5 Q. So could I just ask Mr West, because you were involved in the Bay of Islands, that there they used an underwater travelling camera system, didn't they, what you might call an underwater drone, I suppose?
- 10 A. Yeah, I understand that NIWA have a camera system that floats about a metre or two metres above seabed, or maybe it's two to three metres above seabed. And I also note that the NIWA report that the sensitive species information in the appendices were derived from makes note in its discussion that that camera system is nowhere near sufficient in resolution to detect stony corals on the surface of the sediments.
- 15 Q. So, although that system is available, it wouldn't be of assistance for detecting stony corals at least?
- A. No, sorry.
- Q. And that only does transects or, in fact as I understand it, it followed contours, didn't it, or transects across contours?
- 20 A. It did a transect, yeah, so they put it down and then they tow it along (inaudible 09:52:29) system but it keeps it at a certain height above the seabed so it doesn't crash into anything, if the seabed got a bit of relief on it, and then they pull it back up again and take a sample.
- Q. So, even then it would only be a small sample of the area, or it might be a transect rather than a point but nevertheless limited areas?
- 25 A. Yes. It's still a limited area, it still – and it doesn't have the resolution to detect the small five millimetre size stony corals.
- Q. And sorry, the other one is the side scan sonar or double whatever they're called the various sonar types, what's your comment about those as a possible (inaudible 09:53:14) benthic species?
- 30 A. The side scan sonar is very much a blunt instrument. It's not a picture of the seabed, it's a sound echo that comes back, so you – and your resolution of that is nowhere near the resolution of, say, the camera drops. So, it's very much a case of looking at the picture, it's

black and white, from my understanding, so it's very limited in what can be seen. It's looking for density issues – density changes and reflectivity changes from the seabed. So, it's good at picking up things like horse mussel beds that are dense or changes in density of the seabed in terms of having a rocky reef. We did – McCallums did a number of side scan or back scanner surveys last year and they had a response back from just north of Goat Island. When we dropped the drop camera down, that was dog cockles so the *Tucetona* which are another species of interest sensitivity, but that was only from a small area just north of Goat Island outside of the dredging area inside the reserve.

Q. So, the final one I want, sorry I'm exploring these, but we've dealt with them all, not necessarily with you before, but the transect diving, in other words divers going down and following a line, what's your comment about that as an alternative to the grab samples?

15 0955

A. As an alternative to grab samples, it has a number of health and safety issues in that diving beyond 35 metres, or at 35 metres, is very limited timeframe and has a lot of risks in terms of diver safety from decompression issues.

20 Q. At what stage – I can't recall, it would be useful for me to remember, I thought 35 was about the limit but I couldn't remember when does the problem start? Over 25, is it?

A. The agreement from the joint witness was 35 metres.

Q. For the (inaudible 09:55:44)?

25 A. Well, for the divers, the deeper you go, the shorter bottom time you have. So beyond 30 metres you're looking at less than think from memory about 15 to 20 minutes on your first dive and then you've got to wait all day before you can go back there. In terms of costs it's –

Q. I'm thinking of the Tauranga Harbour which was shallower as I recall, about (inaudible 09:56:06). But you're saying once you get to deeper water, the practicalities become very perhaps overbearing?

30 A. Very difficult, yes. There may well be some health and safety protocols from commercial divers that limit how deep they can actually work. I'm not aware of exactly what those are, but from a recreational dive point of

view I would have thought that working beyond 25, 30 metres is just silly, it's just it's too hard, unsafe.

Q. Thank you.

**THE COURT: JUDGE SMITH**

5 Those are the only alternatives I could think of, Mr van Mierlo, (inaudible 09:56:46) others, but those are the ones I've come across I think.

**MR VAN MIERLO:**

I've got a couple, Sir, that I will come to shortly.

**THE COURT: JUDGE SMITH**

10 Good.

**CROSS-EXAMINATION CONTINUES: MR VAN MIERLO**

Q. Now I'd just like to refer you to the joint witness statement, and again I can probably just put the extract to you although, if you've got it handy, that will be helpful. It is CB1436 for the Court and parties. Now in the  
15 JWS marine ecology it was agreed I think unanimously that the likelihood of finding stony corals, even if they are there, with the proposed pre-extraction sampling programme is very low. So really my question to you, Mr West, that really confirms, doesn't it, that the methodology in terms of identifying areas to avoid due to the presence of stony corals is  
20 not appropriate?

A. Yes, I agree it has a low likelihood of finding stony corals, I agree with that statement on it. Quite how we improve that, I'm really open to suggestions, but we've looked at the best possible sampling regimes. I mean...

25 Q. Well would not the sieved extracted material from the dredge, so that's the oversized material before it's returned to the sea, help identify whether stony corals are in fact being dredged?

A. Again, that has problems in that trying to collect the material from the sand screen on top of the barge. When we looked at doing the  
30 survivorship studies on the *William Fraser*, we used a nine millimetre

mesh device that was placed at the lower end of the screen and that collected the material that was coming through the screen. That was in place for I think about 10 seconds and that produced samples which were in the order of 60 to 80 litres of shell and other materials. So I mean, yes, it's possible that that kind of thing could be done, although a nine millimetre mesh would not capture a five millimetre sized (inaudible 09:59:56) pass through. And I think trying to do a small mesh size would only create problems in terms of practicality of collecting samples.

Q. But it's conceivable, and it would be quite possible, would it not, to design a system or have a system that would capture some of that material and enable it to be monitored to find out whether stony corals are in fact being dredged, and then respond to that information if in fact it was confirmed that they were or not?

A. It is a possibility. We were trying to devise a system where we avoided impacting the areas with stony corals and if dredge activity is already occurring and we're monitoring it from that, then we're not avoiding the issues.

Q. Well, depending on how you respond to what you might find, it could avoid some future issues though, couldn't it?

A. It could avoid future issues. It could be a secondary set of monitoring.

Q. Yes. And when the dredge goes into a new extraction area or undertakes its first extraction in a new cell or a new (inaudible 10:01:33), again if the initial first cut, if you like, material were monitored and assessed for stony corals, that would help identify whether stony corals are in that cell and are going to be impacted by further dredging within that area, wouldn't it?

A. Yes, it would. However, McCallums would have breached the Wildlife Act by dredging them up in the first place and not releasing them.

Q. Yes, but if they continue to dredge in that area, they're going to further breach the Wildlife Act, aren't they?

A. (inaudible 10:02:21).

Q. Are you familiar with condition 8 which is the review condition in the proposed consent conditions?

A. Not 100%. It has changed a little bit I think in the last few weeks or months.

Q. I wonder if we could have that on the screen please if that's handy. So central to this proposed review condition is the concept of "significant unanticipated adverse effects". So I'd like to understand what adverse effects are anticipated in your view in regard to stony corals? Perhaps I'll rephrase it. Do you anticipate that there won't be any adverse effect on stony corals because MBL's going to avoid them all or do you anticipate that stony corals will be dredged up and killed because they won't all be avoided?

A. The intention is to avoid stony corals by doing a pre-sand extraction survey to detect whether they're there. I agree the detection method may not be 100%.

Q. So it could be said that it's anticipated that the destruction of stony corals is an anticipated adverse effect?

A. It's not an anticipated effect. It's a possible effect. We're doing our best to try and avoid them. They are somewhat cryptic and small and difficult to survey (inaudible 10:04:30) invasive sampling technique which is time consuming and problematic at times. If we were to do a secondary survey in terms of capture of stony corals by operation of the dredge and taking them from them from the top of the screen, then that would be – and if we found stony corals in there then, then that I would class as a significant unanticipated adverse effect.

1005

Q. So how insignificant in relation to destruction of stony corals, what's the measure?

A. Well, if we're destroying stony corals, then that's significant. I mean, that's the – it's a prohibited activity under the Wildlife Act.

Q. So you'd accept that loss of a single stony coral is a significant adverse effect?

A. In terms of the Wildlife Act that's what it would be classed as. It's a significant, it's not specifically significant, it's a something act under the law at present.

Q. Yes, but I'm really trying to understand how you would see this condition operating. If you were asked to advise whether a significant unanticipated adverse effect had occurred, if it transpired that the dredge was

destroying stony corals, how would you assess that and what advice would you provide to your client?

A. Under the current monitoring plan that's present, if the sand extraction monitoring sampling discovered stony corals in the same cells that had been open for dredging then I would anticipate that as an adverse effect because there is a (inaudible 10:06:45) they could've extracted those stony corals. That would then involve modifying the cells that are open.

Q. I'm sorry, I'm not quite clear. So you would see that as a adverse effect but not a significant adverse effect?

10 A. I'd see it as a significant adverse effect, yes. I mean, if we're damaging stony corals, if we find stony corals after an area has been opened for dredging then there's a strong possibility that they were missed earlier and we've missed them and they are pre-sand extraction because we didn't sample every single square metre of seabed.

15 **THE COURT: JUDGE SMITH**

Mr van Mierlo, I made it clear at the beginning of this case that the conditions of consent were of significant concern to the Court, I used the word "significant". These type of words have not been successful in being put into consents now for some years, the Court's well alert to it. It actually doesn't help us going through matters that have been traversed in numerous decisions. If you have better wording that you're wanting to suggest why don't you put that to the witness rather than us just spending time on matters that have been traversed in *Aupouri*, *Waste Management* et cetera et cetera et cetera.

**MR VAN MIERLO:**

25 Sir, I was going to leave it there, that was the end of my questions.

**THE COURT: JUDGE SMITH**

It would be more helpful to this Court if you had what sort of wording you think would need to be included. I mean, if you want to talk about the consent I'd rather here what you think so that we know – I find it difficult where the department takes a view 'well we're not going to suggest anything, all we're going to do is tell you that that's not sufficient'. I don't consider that acceptable

before the Court. If you have a problem with the wording what wording do you want or you say there is no wording that is possible. If that's your proposition then put it to the witness.

**MR VAN MIERLO**

- 5 Well the proposition, Sir, is a significant and unhelpful unnecessary standard here.

**THE COURT: JUDGE SMITH**

- We know that. We discussed this very issue in *Aupouri* and it's been discussed many times. There's nothing, what I'm understanding is I don't understand from  
10 your questions whether in fact there is wording that would be satisfactory to the department or, in fact, just simply throwing bombs from the side. Because going through with a witness and spending time on matters that are matters for counsel and the questions of wording of conditions doesn't assist us unless you have something better in mind.

- 15 **MR VAN MIERLO:**

Well certainly I plan on coming back to it in submissions, Sir. But the issue really is around the term significant and what that means and how, and the uncertainty that that provides.

**THE COURT: JUDGE SMITH**

- 20 Well I can tell you that just about every condition in this is of concern to me. It represents a position that hasn't been adopted by the Court for, I would say, probably since 2006 in the last of these consents and the Court does not allow these type of arguments anymore. You might recall in *Aupouri* there was an attempt to say where it was a significant adverse effect. Well, the question then  
25 is what's significant?

1010

**MR VAN MIERLO:**

I agree, Sir, and it's not the intent to, but the concerns are of significant concern to my client, Sir, and the conditions are of significant concern to my client.



**THE COURT: JUDGE SMITH**

Well, it's very clear that Mr West is not disputing the fact that the loss of stony coral is a significant adverse effect. The question is that that's not an issue except for the wording of this condition. It's an adverse effect and if the wording  
5 was to deal with any adverse effects on the environment then we avoid all those problems and Mr West is, still fits within, Mr West's at least the stony corals. He may then argue that there might be other things where the mere presence of an adverse effect doesn't necessarily cause a problem. Do you follow the issue?

**10 MR VAN MIERLO:**

Yes, Sir. That concludes my questions for this witness, thank you, Sir.

**THE COURT: JUDGE SMITH**

It's not helpful to the Court but it may be helpful to Mr MacRae to understand the problems with this consent. I mean, I would rather we didn't spin wheels on  
15 the consent which, I can tell you now, is nowhere near anything the Court would consent to. Those type of words just lead to litigation and arguments later that it wasn't an unanticipated result because we knew that stony corals would be killed and this Court cannot grant such a consent because it's illegal. Do you follow me, Mr MacRae?

**20 MR MACRAE:**

I do follow you, Sir, and there's a little bit of irony here because that condition was amended at the request of the Department and that amendment was opposed by both the – initially opposed by both the appellant and the council more or less on the basis that your Honour's outlined but, in the end, we didn't  
25 think it made much difference.

**THE COURT: JUDGE SMITH**

So the Court has spent many hours in recent decisions, and I've been doing quite a number of larger matters, with the Department saying that this isn't acceptable and then not provide an alternative. So, those words are not  
30 satisfactory and I don't consider it the Court's job anymore to write the

conditions. At the end of the day they're relying on your obligations to supply conditions that are satisfactory to us but, in my view, counsel have an obligation, if they're criticising certain conditions, to assist the Court in finalising those, because it's not our job to write them in. I've become very strong, since a series  
 5 of recent decisions, (inaudible 10:12:55) being one, *Aupouri*, that it's not our job to write the conditions for the parties and the question is getting appropriate triggers, and this is what I pointed out right from the beginning of this case, (inaudible 10:13:12) triggered for review or stopping until you know what the answer is or reviewing and for continuing on. Those are very important for the  
 10 operator as much as they are for anyone else and for the council it clarifies their obligations, as well, rather than the arguments they face at the moment, assertions that they have failed to comply with the conditions of consent by enforcing them. So, I have made that clear. For most of the parties here this is not news because we get this in almost every case we have and it's just  
 15 frustrating for the Court that we seem to be spinning our wheels in every case rather than advancing these issues. Now, that's Mr van Mierlo. I'll need to find my list of parties again, it seems to drift off.

**MS CAMPBELL:**

It's me, Sir, Ms Campbell.

20 **THE COURT: JUDGE SMITH**

Yes, Ms Campbell, is that right? These what I've got on my list, too, so we're ad idem there.

**MS CAMPBELL:**

I'm find, Sir, that my office is no substitute for a courtroom in terms of my ability  
 25 to wrangle documents on my desk so I'm sorry if I'm a little slower than I would otherwise be. Now, I've lost Mr West as well, which is unhelpful. Let me see if I can make him appear on my screen.

**THE COURT: JUDGE SMITH**

If he speaks it should come up. Mr West, could you speak briefly?

**WITNESS:**

Good morning.

**MS CAMPBELL:**

Thank you, Sir, yes, that did help.

5 1015

**CROSS-EXAMINATION: MS CAMPBELL**

Q. Good morning, Mr West.

A. Morning.

Q. Could I ask you to turn to and get Ms Harnett to bring up page EB262  
10 please, which is the conclusions to your evidence in chief.

**THE COURT: JUDGE SMITH**

Did you have a clause in mind Ms Campbell?

**MS CAMPBELL:**

Yes, at paragraph 7.4 to begin.

15 **CROSS-EXAMINATION CONTINUES: MS CAMPBELL**

Q. And Mr West, you talk in paragraph 7.4 about the continued operation of the sand dredge *William Fraser* won't entrain or I think you mean harm, entrain or harm the free swimming fish, and that statement is specific to operation of the dredge head of the *William Fraser*, isn't it?

20 A. That's correct.

Q. And turning to the next paragraph 7.5, you talk about the underwater noise being acceptable, and that too is based on the specific dredge head of the *William Fraser*, is that correct?

A. Yes.

25 Q. In the next paragraph 7.6, again, we're talking here about the reduction in water quality being negligible. That too is based on the *William Fraser's* dredge head, is that correct?

A. Yes.

Q. Now, just one point of clarification from you please. If we could turn back to paragraph 7.4, it said there 95% of macrofauna that are sucked up by the dredge will survive that journey back to the seabed. If I could get you please to consider your paragraph 4.11 at EB235, there you've just given

5 us a slightly different number of 92%, and I just wonder whether one of those numbers is a typographic error that should be corrected. Could you please consider that and advise?

A. Sorry, which was the earlier reference, the...

Q. It's on the screen now, it's at paragraph 4.11, page 235.

10 A. Both numbers are correct. The 92% refers to the 10 metre samples from the seaward side of the inshore consent whereas the 95 refers to the offshore consent and that's the 25 metre samples that were collected there.

Q. Thank you. And just in terms of 4.11, you say that they were deemed to

15 have survived. By that I take it you mean that you observed that they'd suffered non-lethal damage, is that correct?

A. That's correct, yeah.

Q. Thank you, Mr West, those are my questions Sir.

#### **THE COURT: JUDGE SMITH**

20 Q. Just to be clear, I think somebody asked a similar question of Mr West and he confirmed that that was not the survival rate once they reached the bed again which was at the stage unknown, so he accepted that the deemed survival rate was from the onscreen system. That's correct, isn't it Mr West? As I understood your questions?

25 A. Yes.

#### **CROSS-EXAMINATION: MS MORRISON-SHAW**

Q. Morena, Mr West. Do you have a copy of the joint witness statement and your evidence in reply, I'll be asking you a few questions about those documents and as well as some questions that follow on from some that

30 have been asked of you over the last day and a bit.

A. Yes, I have copies of both.

Q. Thank you. If we could just start with the joint witness statement, I don't think we need to bring this up on the screen just yet, but in that document under point 2 there's a statement that: "In the absence of direct ecological studies, estimates of benthic ecological recovery are based on literature,"  
 5 and then it goes onto say that recovery rates vary between species and can be one year to longer than 10 years. So, it could be, for a certain species it could be longer than 10 years for recovery to occur, that's correct, isn't it?

A. Yes, I mean it's correct that, yeah, 10 years or longer it could be true.  
 10 That is to cover off things such as if we were – well if – large horse mussels which live up to 15 years are damaged or lost or even present, then it would take that time period for them to re-establish to the same sized individuals, (inaudible 10:21:03).

Q. Thank you, Mr West. You've anticipated where I'm going with this. Have  
 15 you been involved in growing or receding hururoa or (inaudible 10:21:13) in coastal environments, in costal (inaudible 10:21:02)?

A. No, I haven't.

Q. You would accept that Mr Tamati Stevens has given evidence of his involvement in those sorts of exercises and other areas?

20 A. Yes.

Q. You've obviously heard the evidence because you've responded to it.

A. I've read his evidence, yes.

Q. And in that evidence, he's estimated it can take between 15 and 30 years for recovery of hururoa or horse mussels. Would you agree with that  
 25 statement?

A. It's an unknown – naturally it's an unknown question in terms of when settlement is going to occur. It depends on whether there is sufficient spat. It seems like the Pakiri embayment area has irregular (inaudible  
 30 10:22:04) from other areas arriving by currents, therefore it is dependent on a frequency of that occurring and then suitability of the seabed for the horse mussels to establish themselves and then the time taken for them to grow to maturity. I'm not aware of any culturing of, or artificial culturing of horse mussels in New Zealand. Mr Steven's may have done

something along those lines, but I am not aware of any scientific publications of that.

Q. You just referred there to scientific publications. I'll get onto the difference between that and mātauranga Maori later, but I guess (inaudible 10:22:50) is that I think he said in response to my first question that it could take for the larger bivalves like hururoa around 15 years. That's correct, isn't it?

A. That's correct – it's correct in terms of the animals if they were at that mature stage then it would take that time for them to reach that maturity again.

Q. So, you don't disagree with Mr Stevens where he said it can take a long period between 15 to 30 and you're not in a position to disagree with that having not undertaken that work yourself?

A. Yes, if you're talking about getting like for like.

Q. Now, you'd accept that there's evidence before the Court that horse mussels used to be in the Pakiri embayment in significant numbers, wouldn't you?

A. I do, I agree.

Q. And that there's also evidence that previous sand dredging had encountered the horse mussels and references I think were made in the Sand Study to them clogging up the dredge.

A. I'm not aware – I mean I'm aware of the Sand Study report but I'm not aware of where those horse mussels would have come from. My understanding was, yeah, there was – my understanding was there was only the inshore consent at that point.

Q. Yes, so I'm just talking about the fact that they were present in the embayment at this stage.

A. I don't disagree.

Q. And to your knowledge, to date there's been no remediation undertaken to replace any of the horse mussels that have been lost through the dredging?

A. No, there has not. Well I mean I would contend that the dredging hasn't impacted the horse mussels in that they are from different areas. The horse mussels associate with an area between the existing offshore

consent, the inshore consent, so they would not have been impacted by direct contact with the dredge from the sand extraction operations.

1025

Q. So you've read the Sand Study 1996 I think it was so you confirm that?

5 A. Yes.

Q. And there was a reference in that Sand Study to them blocking up the dredge, you recall that reference?

A. I vaguely recall that reference. It was some time ago that I read that document.

10 Q. So that would clearly be an impact on horse mussels, wouldn't it?

A. From that operation, yeah. I don't know where that occurred. The Sand Study would have been prior to the offshore consent. The Sand Study was completed in I think the early 1990s and the offshore consent wasn't initiated until after 2006 or 2003.

15 Q. Yes, but historically we have evidence that there was some direct impacts on horse mussels in the embayment?

A. It's possible there was, yeah. If there was horse mussels in the shallows for the inshore consent area, then, yes, if that was the only area of sand dredging. I don't know of the history of the variations and locations.

20 Q. Now I think yesterday, and please correct me if I've got this wrong, I took some notes to say that I think you said that you can't determine recovery until the end of the consent term, is that what you said?

A. The existing offshore consent EEMPs mention recovery monitoring. So my understanding of that is that it's to look at what happens after dredging stops. If this consent application was approved, then dredging will not stop in the offshore area, therefore recovery monitoring is a little difficult. One suggestion that was made during the joint witness conference was recovery could be looked at in terms of taking samples from the specific dredge track and samples adjacent to that dredge track as comparisons, controls, and excluding future dredging from that for a period of time, and then resampling those locations over a period of time to determine how fast biota remove – go back into the dredge track.

25

30

Q. Thank you. Now I think also in your oral evidence yesterday I think Ms Downing for Forest and Bird put a question to you about the threshold

for horse mussels constituting an important biogenic habitat. And I think, and please correct me again if I've got this wrong, I think you said three to four medium to large hururoa within one cubic metre would qualify with that threshold, is that correct? Do you recall that from yesterday?

5 A. Per one square metre, yes.

Q. Yes, one square metre.

A. That's my sort of gut feeling as to how many would be required to make it a significant habitat.

10 Q. I think you also said yesterday that, and this was again in response to some follow-up questions from my learned friend Ms Downing, that you didn't think that three to four large hururoa within one square metre would show up on a back scan or side scan, is that correct?

15 A. That's – I mean I'm not 100% familiar with the backscatter survey and we've looked at backscatter that McCallums collected in May 2022 and we didn't find any signatures in the Pakiri embayment area in terms of horse mussels. So we can't determine whether they were there or not because we can't see a signature that was indicative of horse mussels being present.

20 Q. So that being the case, there is potential, is there not, for hururoa to be present in the proposed offshore extraction area that might not be identified until they're (inaudible 10:29:41)?

25 A. There is potential that they could be present in the – probably along the inshore edge of the offshore consent area based on the Sand Study locations of horse mussel beds. The pre-sand extraction studies, whether they drop cameras or the scientific dredge tows, if they were conducted in those locations, then if we were to detect horse mussels in those, then those cells would be closed.

1030

30 Q. And I think in response to questions for the last day and a half, there's been a significant amount of questions to you about whether or not there's sufficient sampling within each of those cells because there's only three locations within a relatively large cell. So you would accept, wouldn't you, that there would be potential, notwithstanding you're doing those three



samples within the cell, that there would be potential for horse mussels to be there that wouldn't be picked up until they were dredged?

5 A. Well there's always the potential. We try and make that as small a possible potential. The three samples that you referred to are the Ponar grab samples and they cover a relative area. The drop cameras are a one square metre vertical image, plus lateral images which, depending on the visibility, could stretch out to five or 10 metres, so you cover a relatively large area in that respect. There are three of those drop cameras in each cell, so we're talking a bit of a large area. I know it's not  
10 every square metre of the seabed. And also –

Q. Can you remind me the size of the cell?

A. I know the cells are 200 by 1,000 metres, yes, and so we've got three  
15 drop cameras in there. The seabed is (inaudible 10:31:48) in terms of it's a sandy seabed. There are obviously some variations in terms of some biota would prefer little bits more than others. To try and determine where those are is a little bit difficult. That's where a side scan sonar might show up some differences in density of seabed and in the past that has been used to try and stratified sampling. But I'm more of the opinion that a random location is probably a better solution. In addition to the drop  
20 cameras, we also operate a scientific dredge tow which is just over 650 millimetres wide scallop dredge type device which is towed for 200 metres, so that covers a large area as well. Yes, that's invasive and could be destructive but we try and – we'll do the first, determine whether there's anything obvious in that and then proceed to the more invasive  
25 samples.

Q. So with that dredge tow that you've just talked about, what would be the effect of that being run over some hururoa?

A. It wouldn't be particularly helpful for them.

Q. So there's potential that that could result –

30 A. The idea would be to capture them and that they would, yeah, it would bring them back to the surface and they would most likely have died as a result of that. But the endeavour is there with the cameras to avoid that if we can.

Q. Now I just want to turn back to the joint witness statement, and that's at the point 4 of the joint witness statement which talks about the food web.

A. Yes.

5 Q. And I think counsel for DOC asked you about this yesterday and that point is about that none of the experts considered there were any readily identifiable direct effects on the marine food web from the available information, I think counsel for DOC asked you about, you know, that that was a qualified statement and you agreed that that statement was qualified, didn't you?

10 A. Yes. And the others in the witness conference agreed that it had to be qualified.

Q. So I think you also agreed that knowledge of the food web effects is incomplete, didn't you?

A. Yes.

15 Q. In response to questions yesterday. Thank you. So when you were discussing effects on the food web, did you consider that evidence of Mr Stevens and the linkages he explains between the various species?

A. That was in the back of my mind, yes.

1035

20 Q. I want to move on to para 5 now of the joint witness statement which is talking about the marine mammals and that I think it says the risks are more than minor of adverse effects on marine mammals from underwater noise, and I think there was agreement that it's unlikely to have hearing damage effects but likely to be behavioural effects. And just wanting to clarify, I think it goes on to say that the significance of those effects is uncertain. Where does that uncertainty arise from? Is that a result of a lack of studies being undertaken?

25

A. I'm going to have to defer to Dr Clement on that. As you'll note in there, my initials are not on that statement.

30 Q. Thank you. All right, I'll ask that question of –

A. I declined from commenting on that because I'm not a marine mammals expert.

Q. Okay, I'll move those questions to her. And, yes, just moving on to paragraph 6 but again if you – I think your initials are on that one but –

A. Yes.

Q. – if you think it needs to be directed to somebody else, tell me. And that paragraph says: “In the absence of the guideline values, the risks of effects on benthic fauna cannot be determined.” So my question is so we can’t rule out that there may be effects, can we?

A. We can fairly safely rule out that there will be injurious effects in terms of hearing (inaudible 10:36:34). The literature suggests that the level of noise that’s produced by the *William Fraser* will not reach that trigger point of an injurious effect. There is a potential for an effect such as masking where there is a background noise and people can’t hear, or the individuals can’t hear what’s going on around them. That might have issues in terms of predator avoidance or communication over distances with other fish. So that kind of effect.

Q. So just so I’m clear, does that mean with the masking that they would be potentially more vulnerable to predation as a result of that masking effect?

A. Potentially, yes. Or it could mean that they can’t hear prey, as an antithesis of that as well.

Q. Now I think in that paragraph it talks about the geographic range of effect s small as a duration of effect. So would you accept that the scale of the effect might differ between different species?

A. That is distinctly possible.

Q. Just moving on now to paragraph 7 of the joint witness statement which talks about climate change, and it’s a very brief statement saying there’s an absence of information. So again there’s uncertainty. Would you agree that there’s just not information to determine what the effects of climate change will be? That we just don’t –

A. Yes.

Q. – have that information? So there is a potential for a risk of more than minor adverse effects?

A. Are you talking more than minor adverse effects from climate change or...

Q. Yes. What are the risk of more than minor adverse effects resulting from climate change? I’m just talking about that particular statement in the joint witness statement.

A. So there's always a risk of climate changing causing habitat changes, changes in the ability or suitability of environments for animals to operate. If temperature changes, then animals have a specific range of temperatures which they like to operate in. That's why we have differences in the range of species geographically around New Zealand. So if that temperate is altered, then there will be differences in the ranges of species. There are also differences in terms of the physiology they adapted to and survive in a certain temperate range. If that changes, then that might mean that some species may cease to occupy the particular area where that temperate or climate effect has occurred, and there might be a set of new species that arrive instead. So, there's always a change, and whether that's an effect in terms of – I mean it's an adverse effect for the individuals that become absent but it's a beneficial effect for those species that arrive and can now survive in that location.

15 Q. And that would be relevant in terms of assessing the effects of dredging over time as the effects of climate change continue to be felt?

A. Yeah, this is where the uncertainty comes in because we don't know how fast and how greater extent these changes are going to be. Yes, they've been modelled, they've looked at the past information and tried to come up with a model that's (inaudible 10:40:59) fast things are going to change and this is what we're going to have in a certain timeframe. But that's a model, it's not absolute, and the timeframes that we're talking about in terms of this consent, which I think is for a period of 20 years, is relatively short in terms of climate change. Yes things are changing faster perhaps at the moment than they have in the past but how that effects, I'm not 100% sure, I don't know, and I don't think there's anyone that would be able to confidently say that they can predict what's going to happen in 20 years' time.

30 Q. And then we move to just the last (inaudible 10:41:44) of that joint witness statement which is about monitoring and it's about all of the things that need to – what is needed in terms of the monitoring, and I understand that the conditions are proposed to be updated, that hasn't been done yet, to pick up on those points. So, just from your view, the current conditions aren't adequate are they to the current ones that were

circulated on the 7<sup>th</sup> to identify, monitor and address marine ecology effects, are they?

A. They are a starting point, they need some additional inputs from other parties, I can't make comments on culturally sensitive species, I don't have the expertise or such to do that, it needs input from a cultural representative or group of representatives and to that point – no one has at this point provided any of that nature despite being given copies of the monitoring programme, no one's put any constructive comments in.

Q. Can I just pick up on that answer. I think yesterday you indicated as well that you needed further information about culturally sensitive species. Have you read the evidence of tangata whenua, of Olivia Haddon and Edward Watts?

A. I have read Mr Stevens' and Mr Watts' evidence.

Q. And Ms Haddon?

A. I don't think I did read Ms Haddon's evidence, no.

Q. So, you read Mr Watts evidence and you are aware he discusses the role of hururoa as being something of a pou or a boundary fence to protect the other species there and Mr Stevens does the same?

A. I'm aware that the horse mussels create by genic habitat a three dimensional habitat by providing locations for other animals to grow on their shells and also providing habitat in between the shells which are less effected by wave activity because they form some sort of photographic shield in terms of current flows and I've seen that myself in the Manukau and intertidal samples where there's been a large bed of horse mussel and have been particularly large beds of scallops in amongst those. So yes, I agree that they are important.

Q. I think the evidence is pretty clear that hururoa is a culturally sensitive species.

A. Yes.

Q. And you've got that evidence before you so there is –

A. Yes.

Q. And Mr Stevens goes through and indicates the other species that have an important role and the interconnections between the different species in his evidence, doesn't he?

A. He does, yes.

Q. So, that information, that evidence, would be relevant to inform that particular piece of work, wouldn't it?

A. It has and those species that Mr Watts and Mr Stevens have mentioned  
5 are included in the appendix sensitive species.

**THE COURT: JUDGE WARREN TO MS MORRISON-SHAW**

Q. Sorry, Ms Morrison-Shaw, can I just jump in here and just ask a question just for my own understanding. Is there a reason why Mr Stevens wasn't part of the expert conferencing?

10 A. Is the question to me your Honour or?

Q. Yes.

A. Yes, so the expert conferencing, the marine ecology conferencing, Mr Stevens wasn't part of that because his expertise is in mātauranga Maori rather than a strictly ecological qualification. That was the only  
15 reason, your Honour.

Q. And was that a judgement call by him or?

A. I discussed it with Mr Stevens and the decision was that it was more appropriate not to put him forward into that marine ecology conferencing.

**THE COURT: JUDGE SMITH**

20 It does seem curious that so much of your questioning is based around the differences between the witness, and I've got to say that the Court would never suggest that somebody with his background wouldn't be useful in such a meeting. I am surprised, I want to be very clear it's not a decision this Court made, and I would have encouraged relevant parties, as you know I have  
25 allowed other parties to attend the expert conferencing even though Mr MacRae and others have objected, because it seems to me if the person has knowledge or information that's of assistance, then they can use it. Now, this concept of experts I think is something that the Court has had to review and it's around who can form opinions as opposed to who can state facts, but it  
30 seems to me anyone who has relevant facts can always inform experts because they have to rely on facts.

**MS MORRISON-SHAW:**

Thank you, your Honour.

**THE COURT: JUDGE SMITH**

So, it's unfortunate, because a lot of these questions would have been really  
 5 helpful, I believe, to the expert conferencing, or the area conference at least. I  
 can see that Commissioner Myers is nodding because we recognise that often  
 observational information can supply very important facts. Commissioner  
 Prime has a little treatise on this topic in a recent interview. So, one has to  
 remember that science (inaudible 10:47:44) is based on knowledge which is  
 10 based on observation, and I don't think Mr West would vouchsafe those that  
 can give you actual information about what's going on can be very helpful when  
 you're trying to understand the ecology of a situation. I take it, Mr West, you  
 didn't object to Mr Stevens attending in any way?

**WITNESS:**

15 No, I did not object.

**THE COURT: JUDGE SMITH**

So, it's an unfortunate decision and it's led to the questions, I'm not stopping  
 the questions, but I can understand why Judge Warren is wondering whether  
 or not somebody's made a call, it's certainly not the Court, that mātauranga  
 20 Maori is not relevant to expertise, and in our view it is a form of expertise.

**MS MORRISON-SHAW:**

Thank you, your Honour. It wasn't a call that it wasn't relevant because clearly  
 my position is that it is relevant and that (inaudible 10:48:36) longstanding body  
 of observations and evidence that we've got. It was more about the forum of  
 25 conferencing and whether that was an appropriate place for Mr Stevens that I  
 discuss with him.

**THE COURT: JUDGE SMITH**

Well, certainly that's something I wonder if you might explore in due course  
 because the Court would like to feel that such expertise is taken into account

and if there was a feeling that it might be discounted in someway, and I have had that in other cases, and I would stress not with Mr West or ecologists but (inaudible 10:49:23) areas. We need to find a way around that issue because it's certainly not the intention of the Court that we don't take into account relevant information. Clearly, that's at the heart of building up expertise. Judge Warren.

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### **THE COURT: JUDGE WARREN**

Well I guess my point, Judge, is that obviously all we've now got is an opportunity to question Mr Stevens. I think Mr West has already said that it's not his area of expertise but he's not discounting the area and if there was an engagement on the issue in the joint statement before us it just helps us where there is a collision of views and we have to weigh up which one we give particular weight to. At the very least, the other experts have the opportunity to engage with it other than from a statement of evidence type approach. But, anyway, I just thought I'd ask the question when I found it a little bit odd that Mr Stevens wasn't at that conference.

### **THE COURT: JUDGE SMITH**

Again, without the involvement, we get this issue where we get propositions being put to witnesses all the time, a little like Mr van Mierlo's one about condition wording, and it seems to us that there is a real important (inaudible 10:50:53) we have the best information available and that the experts (inaudible 10:50:58). Those with expertise in an area, and I don't mean by that those who are simply qualified, and I keep reminding people that expertise is either knowledge by experience or by qualification, often both, and that's why this Court has always seen mātauranga Māori as a form of expertise but it isn't a discipline per se in itself, it feeds into other disciplines. So obviously Mr Stevens is a person who has particular knowledge and expertise in relation to the marine area and particularly in respect of re-establishing rare species or lost species or diminished species. And given I will be pursuing a line, I should point out to people about the potential for mutual benefit by re-establishing species within the Bay, the very discussion you've been having is one of some particular



interest, at least to me, and I suspect the rest of the Court as well, and it's a pity that Mr West and others didn't have a chance to really engage with that at an earlier point. I may be open to thinking about asking him to consult, now, or during the hearing or in our break, but I'll leave that for the parties to think about.

5 I know at the moment most parties are absolutely adamant that they don't want any form of dredging at all but...

**THE COURT: JUDGE WARREN**

Judge, can I just make a final comment. My question and comments is certainly not a criticism of Mr Stevens or council because I'm well aware of the  
10 sensitivities and the trepidation that witnesses with that knowledge going into forums such as expert conferencing, so I understand that, and he's obviously made a judgement call on that front. So, thank you.

**THE COURT: JUDGE SMITH**

And so do I, and I want to make a (inaudible 10:53:02) because it is very  
15 important that there is the dissemination sharing of the knowledge of both parties. Anyway, and I repeat, it's not a criticism, I can understand the call and many other witnesses have made the same call on some occasions. Having heard from the relevant witnesses with qualifications I understand why they've made that call. I don't think this is one of them but it would certainly, we need  
20 to make it more friendly for mātauranga principles to be discussed. Carry on, Ms Morrison-Shaw.

**CROSS-EXAMINATION CONTINUES: MS MORRISON-SHAW**

Q. So I have a (inaudible 10:53:44) of the joint witness statement, so I'll just be moving to your evidence-in-reply, Mr West. So, if you have a copy of  
25 that with you, and it might be useful to just bring that up on the screen, Ms Harnett, and we're at page 7A 12 of the evidence bundle, so EB7A 12, and it's starting at paragraph 7.1 there. So, in paragraph 7.1 to 7.6, you respond to points made in Mr Stevens' evidence, don't you?

A. Correct, yes.

30 Q. And you'll be aware that Mr Stevens has provided his evidence from a mātauranga Māori perspective, hasn't he?

A. Yes, I assume he has, yes.

Q. And since you've read it you'd be aware that in various paragraphs he talks about his evidence being based on kōrero tuku iho and tikanga passed down from his nanny and, in turn, from her tupuna, do you recall that?

5

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A. Not specifically, but I can agree that he would've taken it as a history of what's been passed down to him.

10

Q. And so that's a very longstanding knowledge base of the marine environment, isn't it, and it's based on tikanga tikanga and observations?

A. I would have to take your word for it so, yes, it's long-term.

15

Q. Now, in terms of your 7.1, you say there that to your knowledge no karepō have been present in the open coast environment in at least the last 30 years and then you qualify that by saying that's the period that you've dived and undertaken scientific sampling in the embayment, that's correct, isn't it?

A. It's correct, yes.

20

Q. So, I just wanted to clarify – you're not saying that it wasn't once there, just that prior to 30 years ago you had no knowledge of whether or not karepō was there?

25

A. Yeah, in my knowledge it hasn't been there. There is always a possibility that it could've been present but my knowledge of seagrasses that it is generally in more sheltered environments because it needs to anchor itself to the seabed and nearshore shallow waters or open coastal beach. It's not particularly stable. We've all heard that the sand moves and we're seeing the sand move so it may well have been present in the tidal creeks and the Pakiri creek or the tawa stream but I am not aware of anything in the last 30 years.

Q. And does that extend to the Pakiri river as well?

30

A. Yeah, I'm –

Q. You say there it should be present but you say, and then you go on to say it's not been in the open coastal environment so I'm just wanting clarify. Are you saying it's not present in the Pakiri river?

A. I'm not aware of it being present in the Pakiri river, no.

Q. Now, you have read Mr Stevens' evidence and he's mentioned karepō being present in the Pakiri river at his paragraph 47. You're not in a position to disagree with that, are you?

5 A. No. I mean, from my observations at the Pakiri river I haven't observed seagrass there.

Q. But, again, you're not directly contesting his evidence that he has seen karepō?

A. I can't –

Q. You're not in a position to?

10 A. – argue with that. No, I mean, he's – if he's said he's seen it then he's seen it so good on him, he's observed things and that's fine. It's what we all do if we're going out and about, we're observing what's present or not. I mean, he's obviously recorded it as being present. When I've been there I haven't seen it.

15 Q. Now, we've already talked about the hururoa being present which is your 7.3, and then in 7.4, if we scroll down to there, you say that: "Kutai have not been present in the embayment other than on rocky reefs, which are not dredged for sand, their absence in the sandy seabed of the embayment is not due to sand dredging." Now, you're aware, obviously,  
20 that tangata whenua have provided evidence of the presence of kutai in the embayment?

A. I'm not aware of that, no.

Q. So you've read the evidence of Mr Stevens but not of other tangata whenua witnesses?

25 A. No. (inaudible 10:59:30) Mr Watts, if he's classed as that.

Q. Yes, yes, he is. Now the evidence of tangata whenua isn't specific as to location. Some mention rocky reefs, Mr Stevens mentions kutai being present in the embayment. So your knowledge of them not being present is based on the studies and dives you've done in the particular area over  
30 that time period, is it?

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A. It is, yes.

Q. Yes.

A. Yes –

Q. If you want to add to your answer, please do.

A. No it's fine, I will leave it.

5 Q. Then in paragraph 7.5 we get to the vexed issue of kina barren and you talk about, well since there's no kūtai beds then there would be no worm fields and then go on to talking about it not being related to sand extraction. In his evidence, Mr Stevens talks about while he has, and this is at his para 80, he has never personally seen the worm beds, the kōrero

tuku iho indicates they were there. That's correct, do you recall that paragraph from Mr Stevens' evidence?

10 A. Yes, not word-for-word but yes.

Q. Yes. Then just down to your paragraph 7.6, you talk about piper, and Mr Stevens talks about that in his evidence as well and talks about how they've, the numbers have reduced over a wide area, and you say that that's well beyond the influence of sandmining and suggest a wider scale

15 cause. You'd agree wouldn't you that sandmining is potentially one of the factors that could be relevant locally to the numbers of piper or are you saying that sandmining has no effect on the piper population locally?

A. The effect of sandmining would be relatively minor in terms of the scale of piper decline I think, I wouldn't, yes I mean there's never, you can never

20 discount it as being a potential effect but in terms of the demise or the decline in numbers of piper, it's not an indicated factor. I mean the fact that's, that piper have declined over a much wider area tends to suggest that there are other much greater factors with influence on them than the sand dredging.

25 Q. But you can't rule out that sand dredging would have an effect on and it may be (inaudible 11:02:39) –

A. No, you can't, yes you can't rule out sand dredging, you can't rule out recreational fishing, you can't rule out all sorts of other factors that could have an influence on it.

30 Q. Yes. Now if we just go back, no actually forward, if we can go forward to your para, I think it's 9.6 of this evidence in reply, 9.6 in reply, yes. So in that paragraph you talk about the marine environment being highly dynamic and its diffuse nature making it difficult to predict the spatial scale of adverse effects which may extend far beyond the project area. I

understand that that comment there, are you saying that there could be effects from sand extraction beyond the actual extraction area?

A. Not necessarily no. What I'm saying there is that there are influences over a much wider area than, well from a much wider area. So you've got currents that are flowing in in terms of providing spat for shellfish and or other animals to enter the environment and again, (inaudible 11:04:16) of spat from the environment going out. So they are going to have an influence, however big, most likely small going out but coming in might be quite a major effect. So it's not just like a forest where you can say, okay you've got a set of trees and you've got a very defined location and influences. It's much more complicated than the traditional sort offsetting compensation type packages that are currently being developed.,

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Q. So, with the sandmining, is there an effect outside of the direct extraction area through things like plume drift, sediment drift?

A. There is a possibility of plume drifting. My understanding from the quality work which the later witness will expand on is that that water quality effect is relatively minor, short-term. From memory I think the plumes were only present for half an hour or thereabouts. Remember, the material is all coarse sand and shell so once it's discharged from the vessel it sinks relatively rapidly to the seabed. The lack of fine materials in there means the physical plumes are not present for very long, and I don't think there's a lot of current in the area either so they wouldn't drift very far.

Q. Now, just a different topic. There's been a number of questions to you about your statement in I think it's para 4.3 of your evidence in reply about tara iti foraging out to about two k's offshore. Have you read the joint witness statement for the avifauna experts?

A. No, I haven't.

Q. Can we just bring that one up please and it's just section 3 of that statement. It's in the common bundle. So, if you could just read the sentence under Matters of Agreement there and let me know when you're done.

## **WITNESS REFERRED TO JOINT WITNESS STATEMENT**

A. So, experts agree that potential foraging area for tara iti includes the proposed sand extraction mining areas. Yes. I...

Q. So, it's not just limited to the two kilometres offshore you've mentioned, is it? Because it's referring to all of the proposed sand extraction mining areas, it's not just the inshore or the midshore, it's referring to all?

A. It refers to all sand – the foraging area includes all of the proposed –

Q. Mhm.

A. Does that mean that the tara iti are foraging in all of the offshore? I don't see it saying that it covers all of the offshore environment, offshore sand extraction area.

Q. "All of the proposed sand mining extraction areas." So in this statement, they were asked about the effects obviously about the different sandmining activities and it says here that they agree that it occurs in all. So, where they've talked about, and as you (inaudible 11:08:21) joint witness statement for marine where it affected different areas it was categorised as affecting inshore or midshore, in this one it talks about of all of the proposed sandmining extraction areas. So, before you said you would defer I think to Dr Thompson in terms of the foraging range, would you defer to this joint agreement of the avifauna experts that the foraging range extends across all of those sandmining extraction areas?

A. Given that I was not party to the discussions that went on to create that statement, then I would have to defer to the expert witnesses as part of that (inaudible 11:09:01).

Q. And now, we can take that down. Just back in your evidence in reply, if you've got that in front of you and it's on page 7A10 which is your para 4.3 and I think you've had a number of questions from other counsel on this topic and I'm just talking about trophically, I'm not sure if I've said that properly, disconnecting them from benthic biota, that paragraph there.

A. Yes.

Q. Now you've read the evidence of Mr Stevens who talks about the interconnectedness of this species in the marine environment, haven't you?

A. Yes.

Q. And have you read the evidence of Mr Southey?

A. I didn't read the evidence of Mr Southey and complete, no. It wasn't provided to me at the time so.

Q. In that evidence, he states that he doesn't consider the seafloor and the surface to be (inaudible 11:10:24) habitats but functionally linked. Would you agree or disagree with that statement?

A. Functionally linked is not in terms of species operating in both areas, so it is possible that the seabed could provide some nutrients in terms of spawning from shellfish or that sort of thing or transfer of nutrients or recycling of nutrients from the surface, because it will mean there will be a rain of nutrients coming down, there's a possibility that there could be some connection in that respect. But in terms of population, I don't see there is major influence from the seabed to the surface.

Q. So, in that evidence and I don't need to take it to you but you've anticipated again where I'm going with my question in terms of the nutrients, he talks about nutrients in the environment and so, my question is, the same currents that carry sand up from the sea onto the beach also carry nutrients which reach in and reach the surface as the water becomes shallow, that's correct isn't it?

A. General principles would suggest it. I'm not a hydrographer so I don't know the full details of how the currents work in the embayment other than the diagram with the squiggly arrows on it that we saw (inaudible 11:12:14).

Q. But you're aware that there's nutrient upwellings that occur in the embayment?

A. There could be yeah. I mean, I'm 100% where they are, but there will be some interchange of water bodies.

Q. Again, this is covered in Mr Southey's evidence. And in that evidence, he says that the nutrient upwelling that occurs through that area occurs during the tara iti breeding season and that it could provide an abundance of a fish (inaudible 11:12:54). Now, if that's correct, is there likely, from your expert point of view as benthic ecologist, to be effects from the sand extraction during the time that that nutrient upwelling occurs?

A. I don't – the opinion I have is I don't think the effects of the sand extraction will influence that to extent that there is a significant change, and I mean

statistically significant, ecologically significant change in the fish populations nearshore in the surface waters, so that the tara iti would feed on during breeding.

Q. Then in a question yesterday, I've only got two more, just about there.  
 5 I'm aware that it's almost morning tea. In response to a question from Ms Downing yesterday, she asked you whether the Hururoa would contribute to water quality and filtering and I think you said and correct me if I got this wrong, that there's a limited effect on water quality probably no more than one metre above where the shellfish are present, is that  
 10 correct?

A. Yeah, I mean the currents that are – the filter water – but they're not creating a downward current that comes in and sucks water from high up in the water column down to the seabed that they can then filter in, there will be some circulation from wave activity where there's a bit of  
 15 interchange of water, but the level of filtering I don't think – it won't cover the whole water column in 25 to 35 metres of water.

Q. And would that change during the times that there's that costal upwelling?  
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A. From my understanding of what I think you're referring to as coastal  
 20 upwelling is that there is a current that would flow across the seabed and then reach a point where it would be forced to go up by some structure on the seabed, in terms of a rocky reef or an opposing current. I don't think it would influence things greatly. I mean, obviously, the horse mussels would filter water if it was coming in from offshore would mean  
 25 that there was less food source in that water than an upwelling.

Q. And final question, again arises from a question or follows on from a question that Ms Downing asked you yesterday. I think she asked you whether any bottom dwelling sharks would be affected by dredging, do you recall that?

30 A. I do.

Q. And my understanding is you said no. That's correct?

A. (No audible answer 11:16:07).

Q. Yep. So I just want to clarify whether you mean there are no bottom-dwelling sharks such as carpet sharks present in the are at any



time or just that in your view they won't be affected by dredging. I wasn't clear on your answer there?

A. No ecologist would definitely say there are no carpet sharks there, that's just a recipe for someone to prove you. There are more than likely some carpet sharks there. They have sufficient sensory abilities to detect the dredge head so they would be more than capable of avoiding any contact with the dredge, they may well find at an opportune point for a feeding source because of following along in the dredge track and feeding on the exposed seabed there.

10 Q. So they wouldn't be directly affected and I think you said that it may actually provide some food for them. Is there a potential that the dredge could also be, have an adverse effect on their food source since they feed on food on the seabed?

15 A. There is always a possibility but they have the ability to move to unaffected areas, the (inaudible 11:17:30) is not covering the entire area of seabed. The level of dredging will mean there are always area in the offshore extraction and adjacent in the nearshore for an offshore north and south of the dredge area where there's no impact.

Q. That's all my questions, thank you, your Honour, thank you, Mr West.

20 **THE COURT: JUDGE SMITH**

Thank you. I had you down for 30 minutes. We seem to have taken about 80.

**MS MORRISON-SHAW:**

Apologies, your Honour.

**JUDGE SMITH ADDRESSES COUNSEL/PARTIES – TIMING (11:18:30)**

25 **COURT ADJOURNS: 11.20 AM**

**COURT RESUMES: 11.51 AM**

**THE COURT: JUDGE SMITH**

Now is Ms Black with us? No. So I turn to you, Ms Ulrich.

**MS URLICH:**

- 5 Thank you, Sir. And just noting that we're appearing for Ms Black, Mr Clapshaw and Ms Campbell if she's now offline.

**THE COURT: JUDGE SMITH**

I see, thank you. That explains that issue then.

**CROSS-EXAMINATION: MS URLICH**

- 10 Q. Tēnā koe, Mr West.  
 A. Good morning.  
 Q. Can you hear us okay?  
 A. Yes, I can, thank you.  
 Q. Fantastic. So thank you for your evidence today, and yesterday. I wanted  
 15 to cover off a couple of the responses that (inaudible 11:52:40) Dr Maseyk's evidence. So if we can start at your rebuttal evidence, so that's EB7A 18. If you can review paragraph 9.11 and 9.12 please.  
 A. Okay.  
 Q. Can you bear those paragraphs in mind while we turn to Dr Mayseyk's  
 20 evidence. Her evidence is EB and we're going to 3328.  
 A. Would be good if it could put up on the screen.

**THE COURT: JUDGE SMITH**

Which paragraphs are you wanting to bring up?

**CROSS-EXAMINATION CONTINUES: MS URLICH**

- 25 Q. So we're focusing on paragraph 8.5 which is the paragraph reference to Mr West's evidence, written reply evidence, sorry. So your reply evidence talks about Dr Maseyk's evidence referencing ecological degradation

solely due to sand extraction. Can you show me where it says in her evidence that degradation is solely due to sand extraction?

A. It doesn't specifically say that, at 8.5, no.

Q. Does it say it anywhere else in her evidence?

5 A. I can't remember whether it did or didn't. I would've thought that evidence for this particular case it would be looking particularly at sand extraction rather than a general comment.

Q. Again, in your rebuttal evidence it talks about that you don't agree that comparing future ecological states with what is present now obscures  
10 potential adverse effects. So, that's focusing on the first sentence, or up to the first comma of Dr Maseyk's evidence so still at 8.5, it talks about inadequate monitoring, doesn't it? Would you agree that there hasn't been robust monitoring?

A. So at this stage there has not been robust monitoring, no.

15 Q. Now, and I'll refresh your memory on the second paragraph that we focused on, so: "Neither do I agree that the ecological state of the sand extraction area should be compared with a pristine pre-human occupation state as suggested by Dr Maseyk." Now, I've key word searched Dr Maseyk's evidence, and I couldn't find any reference to "pre-human".  
20 I could find references to pre-extraction and pre-industrial sand extraction. Did you mean pre-sand extraction?

A. Well, pre-sand extraction, yes. Often my understanding is that they're referencing back to as early as possible.

Q. So that the sentence or the paragraph 9.12 should talk about pristine  
25 pre-sand extraction state of the embayment rather than pre-human?

A. You could put it that way, yes.

Q. Turning to your responses on offsetting and I'm mindful that Ms Downing for Forest and Bird covered some of this with you. I'm just wanting to clarify your answers and draw it together with your responses to  
30 Dr Maseyk. Now, my take-aways from your evidence were that offsetting is not possible here because the effects are not quantifiable, is that correct, or the losses aren't quantifiable and the carnage has like for like?

A. Yeah, it's not possible to re-establish environments in a like for like way, nor is it possible to quantify what those like for like states will be because the environment and the ecology is dynamic. It changes.

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5 Q. And in terms of compensation, compensation may be possible but it's costly and, again, there'd be difficulties assessing the gains or the outcomes of the compensation, is that accurate?

A. By compensation you mean creating something new in a different area?

10 Q. Yes, so rather than looking for like-for-like we are accepting that there is some loss and we are replacing it with something to compensate for that loss. But I can direct you to the paragraph of your rebuttal evidence that discusses this if that would be helpful.

15 A. No, that's fine. Yes, look the problem with the compensation side of things is, yes you can, you can put resources towards creating or enhancing habitats that are adjacent to or nearby, it's the formulae with which how much you have to attribute because of the effects or if there are effects as to how much of compensation is required. That is, it's not something that's defined anywhere that I'm aware of for the open coastal marine environment in any sort of detailed mechanisms.

20 Q. Right, so could I summarise that as being compensation may be possible but would be difficult, difficult, let me put it that way.

25 A. Compensation is, yes, I mean I am aware that McCallums have offered compensation towards fairy terns by supplying sand and shell gravel for building raised nest platforms and things like that. If that's what you are meaning by compensation then it's definitely possible. But if it's in terms of creating habitats by seeding animals, shellfish, whatever, into an environment and trying to create a new habitat such as trying to create a horse mount or a green lip mussel bed then that becomes a little bit more difficult in terms of mechanisms for doing it.

30 Q. Yes sorry, I probably should have been a bit clearer. I am just focussing on kaimoana or shellfish fish here.

A. So McCullums don't have the expertise and the knowledgebase to re-seed shellfish beds, there are other groups that have that. I mean Mr,

Dr Jeffs and his group are looking at green lip mussel restoration. It may be possible that McCullums could contribute to that.

Q. Okay, thank you.

A. But that would be up to McCullums to provide that information.

5 Q. Yes. So we will park that there. I did have one question before I hand over to Mr Pou and that was a more general question and perhaps a broader question around the assessment of effects. So if we can please go to your evidence-in-chief, so EB235 and I'm focussing or looking here at paragraph 413.

10 A. Yes.

Q. My understanding is that you see the benefits or there's some benefits, ecological benefits of having the *William Fraser* dredge head because it's shallower and wider. Is that correct?

A. Yes.

15 Q. Well have the various assessments of effects been based on the circular dredge head?

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A. A good portion of them have been based on the *William Fraser* dredge head. The earlier studies, the 2017 study, in the offshore extraction area was prior to *William Fraser* being commissioned so that was under the original coastal carrier dredging operations at the time so the effects that we observed there were as a result of that vessel and that particular method of dredging. We looked at the survivorship of using both the coastal carrier and the *William Fraser* and that's how we came to that 4.13 paragraph saying that the *William Fraser* dredge head and pump size have resulted in improvements to survivorship of macrofauna going through the system.

25 Q. And have there ever been any assessments in relation to the *Pohonui*, *Pohonui* ship, is that the correct name?

30 A. I've not made any assessments on that.

Q. Would you accept if a different type of dredge head with different depth, for example, was used that it might have different effects?

A. Definitely, yes. That's why there are conditions in place to cover different vessels.

Q. There's also a condition that allows replacement of the *William Fraser*, if approved or if deemed to be approved, by council, isn't there?

A. From memory I think there was a condition in there which allowed the *William Fraser* to be replaced on a short-term basis while it was under maintenance (unclear 12:07:13) the vessel that replaced it, I assume, would've had to have gone through an assessment process and be approved as a substitute vessel by the council.

Q. Those are my questions. I'll hand you over to Mr Pou.

### **CROSS-EXAMINATION: MR POU**

10 Q. Kia ora, Sir, My name is Jason Pou. Look, much has been made of the assistance that Mr Tame Te Rangi has had in this application. In terms of the drafting of your evidence and an understanding of kaupapa Māori, mātauranga Māori, how has Mr Te Rangi in the drafting of your evidence?

A. He hasn't.

15 Q. He hasn't? So notwithstanding the assistance that was available it wasn't utilised for the development of this evidence?

A. He provided no input to me, no, that's correct.

Q. Now, in one of your responses to your evidence, one of your responses, I think it was to Ms Morrison-Shaw, you said that you also didn't consider the evidence of Ms Olivia Haddon?

20 A. No. I was provided a set of evidence that related to the marine ecology and that was the evidence that I was to review and comment on. I did not read every single piece of evidence from every individual.

Q. I think that's fair, you shouldn't, but to the extent that that's tangata whenua evidence that talks about horse mussels, horse mussels are part of what you were studying, wasn't it?

25 A. It was part of that, yes. Obviously there were some pieces of evidence that I was not made aware of and obviously, I mean, I didn't read every piece of evidence to start with and filter it through, I was provided a set of evidence that was solely to do with marine ecology, obviously there were some pieces of evidence that were, that should've been included in what I read and commented on and I didn't comment on them.

30 Q. So, that's a gap?

A. It is a gap, yes.

Q. And (inaudible 12:09:24) word search for “horse mussel” to find out which pieces of evidence talked about horse mussel, whether they were qualified as a technical expert or otherwise, you could've done that yourself?

A. I'm not discounting whether they're technical experts, or anything like that. I was just provided a set of evidence that I was told was what covered marine ecology and that was what I was to respond to. Obviously, Ms Haddon's evidence wasn't part of that. There were a few others that weren't part of it which, in hindsight, would've been nice to have replied to.

1210

Q. I guess the concern that I raise is that you have got an obligation under the Code to the Court to consider everything that's independent of the applicant and it seemed, it seems like you only considered the evidence that the applicant gave to you and you relied on that. Is that fair, is that a fair assertion given your answers?

A. I did rely on the evidence that I was directed to look at. I did look at some of the other evidence, which I expected to have something in there and...

Q. I was interested yesterday when you were questioned by Mr MacRae, he took you to the Marine Ecology Joint Witness Statement. I am not going to get it up, you will recall that one of the matters of agreement was that if dredging was to occur but beyond 35 metres a revised pre-restriction sampling regime. You recall that part of the JWS?

A. Yes well I heard (inaudible 12:11:15), yes.

Q. I think your response was that they aren't mining out beyond the 35 metre mark, therefore, that wasn't required. Is that a fair –

A. A pre-sand assessment is not required initially because they are not going dredge there. So I mean there is time to add detail into the EMMP in terms of modifications to the pre-sand extraction for the greater than 35 metre areas when and if that actually occurs.

Q. Can I ask, there's a table on page 34 of your evidence, it's EV226, and I accept that, Mr MacRae, that this is the old extraction area as it was before it's been modified.

A. A table or a figure?

Q. It might be helpful if it's put up, it's EV226, there's a figure there, figure 3.13. Do you see that?

A. Yes.

5 Q. It seems to me that most of the extraction area or at least half is beyond that 35 metre mark. Wouldn't you agree?

A. Yes that would be valid, yes.

10 Q. If there's a condition that requires even extraction throughout the whole extraction area, are you saying that – because that condition says “best endeavours”, are you saying that that condition cannot be achieved?

A. No.

15 Q. Thank you. Now I do want to take you to, and this is EVD2842, and it's a table that's attached, much has been made of the evidence of Mr, is Beauchamp. So I need to move to EVD42, 2842, this is the last page, it's appendix B it says and “Fairy Tern Nesting Sites”, you see that?

A. Yes, I can see that.

20 Q. Everybody has taken you to his words. I'm a graphic novelist fan comic book, I like pictures more than the words and I just thought I'd bring this up because I don't see that this map has been challenged. You see that that sets out where the nesting sites are?

A. Yes, it does.

Q. Sets out where, are those the old extraction area, that's the old extraction areas there?

25 A. The two dark red lines are the inshore consent and then the, I think the is it purple is the mid-shore one, which is has all, both been withdrawn.

Q. Mhm.

A. Then the other one, there's the original offshore extraction area.

Q. Yes.

A. Which has now been shortened by four ks from the south.

30 1215

Q. Yes. But you will see that, is it Dr Beauchamp, Mr Beauchamp, Dr Beauchamp – people always mis-pronounce my name and I apologise if I'm doing that at the moment, you'll see he has a circle, there's one at



a, is it a 2k, a 2k zone, which is how far they go for when they're feeding their young?

A. Yes, that would be the dark bits in red, yeah.

5 Q. And the other circle is the four and a half k nesting site, circumference, so that's where they go to feed when they're not going to feed their young?

A. Right, okay, is that what he's – what the story is, yep.

10 Q. And so when we read the joint witness statement comment that (inaudible 12:15:56) to by Ms Morrison-Shaw where that witness statement says that all of the extraction areas overlap the feeding areas of the fairy terns, this map becomes quite informative, doesn't it?

A. In that respect, yes.

15 Q. And I guess when they're not feeding the young that's not them going, picking up a kai, leaving it in their mouth and bringing it back for their young, that's them going out and feeding, that's what that – I think it's important not to conflate the two, isn't it?

A. That's probably a good separation, yes.

20 Q. I mean, we will bring this up with Mr Beauchamp and I know this isn't your area of expertise but I think this clearly shows an overlap in the feeding areas that hasn't been responded to by you?

A. There is an overlap in those areas.

25 Q. A significant overlap, over all of the areas and, I mean, it's a significant overlap over the, and I just want to put this to you, the overlap that is drawn by those yellow circles overlaps, entirely, the extent to where all of the extraction is going to occur within a 35-metre contour line?

A. Correct, yeah.

Q. Because your evidence is no extraction can occur outside that feeding zone?

30 A. I think my – it's not my evidence, it's Mr McCallum's evidence would be that they can't extract beyond the 35 or thereabouts metres of water depth. I've had to take his advice. I would also note that this is a relatively simple approach to it in terms of showing an overlap but there is also a temporal component to it as well in that the fairy terns are only feeding

during the day and the sand extraction (inaudible 12:18:23) so they are not actually in the same area at the same time.

Q. I think that's a really, really, good point. They are feeding during the daytime and the interference with the feeding area occurs during the night-time, that's the point that you're making?

A. That's the point I'm making is that we've separated the interaction between the vessel and its dredging and the feeding activity of the fairy terns.

Q. But your evidence is around the horse mussels is that the horse mussels provide an area where other (inaudible 12:19:08) can find refuge, for want of anything else?

A. On the seabed, yes.

Q. On the seabed. So, if they are being cleaned out in the night-time then the habitat's being removed then even if the fairy terns, the tara iti, are feeding in the daytime and the interference is occurring at the night-time, there's an overlap, isn't there?

A. There is perhaps a potential for that for horse mussels but not for fairy terns, they're two entirely different individual animals. They're entirely different ecologies.

Q. If you could pull that one down. Yesterday, a document from the Otago Department of Zoology – has your counsel given you that document to consider?

A. That one there?

1220

Q. That's the one. I hope I sent a copy to the Court. While Ms Ulrich is putting it up I just want you to go to the Executive Summary which is on – it starts at about page 4. Unfortunately, it's not numbered?

A. Yes.

Q. And, first, I will firstly readily accept, this is for a study that doesn't relate to Pakiri, does it?

A. My understanding from reading it is it based on the Tauranga Harbour?

Q. Yes, yes. And it's about – and it's not about sand dredging, it's about the effect of recreational scallop dredging on horse mussels?

A. That's correct, yes.

Q. That's correct, and if we go to the Executive Summary though and I just want to take you to the third bullet point and have you consider it as the horse mussels, you'd agree with that third bullet?

A. Horse mussels have been identified as a key species, yes.

5 Q. They create habitat complexity by protruding above the surface?

A. Yes. I don't agree with that at all.

Q. They reduce predation on juvenile states of commercially imported fish and shellfish species?

A. In the estuarine environment, yes.

10 Q. They also have a potential as indicator species for sediment loading in estuaries, so that's in estuaries and those things. So, if those horse mussels communities, which you accepted with Ms Morrison-Shaw, the current monitoring regime can't necessarily pick up, if those had been cleared out in the night-time then the species that they're going to support  
15 in the daytime for the purposes of feeding the tara iti are also being impacted upon, aren't they?

A. The horse mussels to my knowledge are not present in the offshore sand extraction area. Surveys that we have done have not shown horse mussels to be present, currently, in the offshore sand extraction area.

20 The most obvious (inaudible 12:23:02)

Q. I do want to interrupt you because though you've said that you haven't found them, you have accepted, under cross-examination to Ms Morrison-Shaw that where they exist in two to three per square metre and those sorts of things, that your survey techniques can't pick them up,  
25 that's the case, isn't it?

A. What I've said is that the, my understanding is that the site scan sonar, the back scanner surveys which I have had limited involvement in, I don't think they are capable of detecting them when they're at low numbers and we have done a significant amount of work in terms of drop-camera  
30 surveying, we've done scallop dredge tows, none of which have detected horse mussels. With that backscatter, any points of interest that were investigated with (inaudible 12:24:12) and underwater (inaudible 12:24:15) and, again, no horse mussels were detected. But earlier studies, using the same methods, in earlier studies like the 2003, the

2006, those studies, and using the same methods detected beds of horse mussels and we've not seen them in the recent years.

**THE COURT: JUDGE SMITH TO MR POU**

5 Q. I've got to confess, Mr Pou, you've entirely lost me sometime ago. There seems to be an assumption that tara iti feed on horse mussels, I don't quite get where we're going. You were saying they were being cleaned out at night and the tara iti had nothing to feed on so I couldn't understand what you were meaning.

1225

10 A. I'm sorry, Sir. I was just trying to – because I'd truncated my timeframe. What I'm saying is that the horse mussels create an environment and a habitat for other species, exist amongst, and the presence of those species within the column then could provide food for the tara iti. It wasn't saying at all Your Honour and I'm sorry if I was ambiguous.

15 Q. I just need to understand then the Mangawhai-Pakari Sand Study page 226 of Mr West's evidence sets out various areas in relation to the mussel beds which they found were generally between 10 and 20 metres but at the southern and northern end out to 30 meters. We know that there is no application for either the northern end anymore, there was at one stage but they are gone. So I don't really know what this has got to do with horse mussels. Are you suggesting that there's, that, I can't think which witness you are talking about, maybe I've missed something, you were saying that there's horse mussels out to 35 metres.

20 A. No, no Your Honour. It's just, it was just in terms of – I will move on Your Honour.

25 Q. Thank you, my facts are – I just got confused about the lack of precision with a lot of this just seems to be getting the boot into the witness without really any point. I can't really follow where we are going to with it because you have got to have evidence to support the proposition that there's horse mussels, this is exactly what has occurred in the Bay of Islands, as you know, where there was an assumption that all of the seabed was important because it had creatures on it. And as this Court said in that

30

case and we are unlikely to reach a different decision in this case, there's got to be some evidence to support the proposition.

A. Look Your Honour, and I think in the words of Sir Joe Williams, if everything is important nothing is. So we are, we are trying to focus. The evidence before this Court is that the horse mussels exist out to 30 metres, not all the way out. And I was just discussing that –

Q. Well according to the Pakari study that's at the northern/southern end which are not relevant here and I think, in fact, I mean that map on page 226 is actually of assistance because it actually very clearly shows that they probably did go beyond the 25 metre and it's been "farmed out" if I could put it that way. But and to that end, I do not know that we need this witness, he has already presented that evidence so he cannot vouchsafe that so I think we need to move on to an issue where we are actually going to gain some information that will assist us.

A. Okay Your Honour, I will try to be assisting.

#### **CROSS-EXAMINATION CONTINUES: MR POU**

Q. If I could refer the witness to the Coastal Policy Statement, that's in the common bundle, in particular (inaudible 12:27:55) 496.

#### **THE COURT: JUDGE SMITH TO MR POU**

Q. Which policy are we looking at?

A. The Coastal Policy Statement.

Q. Yes, which policy?

A. Policy 11 Your Honour.

Q. 11, yes that's fine yes.

#### **CROSS-EXAMINATION CONTINUES: MR POU**

Q. If that could be brought up.

#### **WITNESS REFERRED TO COASTAL POLICY STATEMENT**

#### **THE COURT: JUDGE SMITH**

Q. Mr West, this policy was drawn to your attention yesterday too I think.

A. Yes, yes it was.

**THE COURT: JUDGE SMITH**

I assume we are starting at 11(a).

**CROSS-EXAMINATION CONTINUES: MR POU**

5 Q. Ms Downing brought it to you, to your attention. Essentially, I wanted to take you to 11(b). Ms Downing has covered 11(a). Now when she talked to you about 11(b), avoiding significant effects and – she took you to in particular (b)(iii). You read that and you said: “Well the list at the end seems to exclude the coastal environment and horse mussels.” But can you just read that carefully and you see that that’s habitats that are found  
10 in the coastal environment, particularly vulnerable to modification, but that’s an inclusive list including everything else. Can you see that

A. So are you saying that the coastal environment is a thing, and those, it’s specifically those ones listed there or not specifically those ones listed there?

15 Q. Absolutely, specifically those ones but there may be others, that’s an inclusive list that, for the avoidance of doubt, it includes these. But basically it’s indigenous ecosystems and habitats that are only found in the coastal environment. That’s, I mean that’s a horse mussel environment isn’t it?

20 1230

A. Oh, yeah, the open coastal is a horse mussel environment.

Q. And that inclusive list should not be read to exclude horse mussels, as I think your answer suggested?

25 A. Well, (inaudible 12:30:23) so it’s inclusive then it shouldn’t be excluded, correct.

Q. Now I just want to take you to the next paragraph, habitats of indigenous species in a coastal environment, because this informs what else might be in the list that are important for cultural purposes. Now tangata whenua in this case have asserted, or not asserted, have affirmed that  
30 horse mussels are important to them for cultural purposes. You’re aware of that even if you haven’t considered the evidence, that’s correct, isn’t it?

A. Yes.

Q. And my last question, and it relates to the issue that Ms Ulrich brought up in terms of compensation, and I understand what you're saying, it's difficult to ascribe compensation and those sorts of things or how do we compensate for an impact in those things. But I've been looking for where that compensation could have been occurring in those sorts of things and one of the things I look at the old regime which provided for a royalty to be paid to tangata whenua to compensate them for impacts. That's not appropriate for impact on kaimoana beds and those sorts of things, is it, just the payment of an amount?

10 A. Not really my area of expertise but my understanding is that that payment was for mineral rights, the ecological effects.

Q. Where would you get that from, because it was a kaitiaki liaison fee.

A. I sort of was under the impression that's what it was. I said it before it's not my area of expertise but that was my understanding, so I've got – I mean, I don't know, yeah. I mean the sand's been removed and, yeah.

15 Q. Thank you, Mr West.

#### **RE-EXAMINATION: MR MACRAE**

Q. Mr West, you were asked by Ms Downing about the stony corals found in your sampling study in 2017 and I think you said one in the controlled area and one in the offshore area at about 35 metres depth contour. Was the habitat of the two specimens found likely to have been where they were found?

20 A. If I understand correctly, the 35 metres is about the depth that they were found in. It's to my way of thinking very shallow for those stony corals. Previously we haven't found them shallower than about 50 metres depth. We found those offshore just north of the Mangawhai estuary. The two sites that we found them in, one in the control, one in the outer edge of the southern part of area 1, yeah, there were – I think there were a couple found in the controlled and about – or thereabouts, found in the offshore extraction area.

30 Q. So was their habitat likely to have been where they were found or is it possible it was somewhere else?

A. It's where they were found is where we found them, yeah, so that's their habitat. I mean I don't – I'm not sure I understand the question entirely, sorry.

5 Q. Well, is it possible that the stony corals you found were moved by coastal processes for example or currents?

A. It's always possible that they could have moved (inaudible 12:35:11). They're only a small animal so they could have been transported by seabed currents but it would have to have been relatively significant currents to pick up the five millimetre sized animals. And noting that the grain size, the offshore area is reasonably coarse, there's a large number of large shell fragments and in some place's little bits of gravel, so that to me suggests that there are potential currents down there that could be – that move things.

10

Q. You were asked questions about horse mussels by several cross-examining counsel and you said in your response to a question from Ms Downing that they can assist, the concentrations of horse mussels can assist in (inaudible 12:36:14) shorelines. What type of environment is that most likely?

15

A. I mean horse mussels aren't generally a shoreline as in the base of the beach type animal, they are more of out in the middle harbour or out in (inaudible 12:36:40) as was shown in that figure with the Sand Study sonar survey. They weren't right next to the shoreline. So dense beds of horse mussels will provide a hydrological buffer in terms of the current movement, meaning that the sediments and other animals that are in between them are more sheltered rather than being picked up and moved or sand moved around, so that the sand settles in between them. In that respect, they protect the seabed, rather perhaps is a better term than in shoreline.

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Q. Are they likely to have stabilising effect in the sort depths of water in which the proposed offshore extraction occurs?

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A. They are likely to have stabilising effect on the seabed when they're present. There are – there will be wave conditions and extreme storm events that will likely lead to disturbance of the seabed at those depth and I believe there is anecdotal evidence that large storm events have caused



the loss of some of the horse mussel beds in the past. There are various comments, I think Mr Watts made the comment that there were horse mussels washed up on the beach at times, and there have been various other comments, I think there was one that was included as part of evidence in the last Environment Court case.

5

Q. The questions that were put to you referred rather to stabilising a shoreline, do your comments apply to that aspect?

A. I don't see how horse mussels could stabilise the shoreline at Pakiri in terms of their location being in that 15 to 25 metre water depth and the shoreline being obviously much further inshore. It's potential that if there was an extensive bed that there could be some disruption to sediment transport but that's not my area of expertise, they would have been a Derek Todd type question as to whether the modification of the seabed by the horse mussels creating the greater relief and coarsity could prevent transport, I don't know.

10

Q. Ms (inaudible 12:39:43) referred you to paragraph 30 of Professor Jeff's evidence and if Ms Harnett would bring that up, it's the evidence bundle, pages 3724 is where it begins and paragraphs 27 to 30, please. Yes, could you quickly read through those paragraphs again Mr West.

15

20 1240

A. I think that was it, wasn't it?

Q. It's probably enough for you to answer my question accurately. Is Professor Jeff referring to the Pakiri offshore area in those paragraphs?

A. Can we go back up to 27. It doesn't specifically mention the offshore area. He says "moving seawards from the foreshore" which, depending on how far it moves, then it could be in part of the offshore consent area.

25

Q. And go back to paragraph 29.

A. Again, there he's considering a range of depths, that subtitle "Benthic community", so assuming that he's referred to – he's covered both the inshore, midshore and offshore consent applications, then he would be referring to the offshore consent as well.

30

Q. Are there areas of the environment where those complex community assemblages of benthic species are most concentrated?

A. There are differences in the (inaudible 12:42:37) across the range of depths. So in the shallow areas there is an abundance of the sand dollar, the (inaudible 12:42:47), it's an urchin, it's a snapper biscuit, and then there are abundances of things like the paddle crab, and there are other species associated with that area of the shore which is highly mobile and less firm footing. Then, as the depth increases, then the area of, or the (inaudible 12:43:21) from wave activity starts to diminish and you start to get a slightly more stable environment and then you get an (inaudible 12:43:30) series of different animals as part of a community in there, and that grades further and further as you go further offshore. There seems to be an indication of a change, or a significant, reasonable change in species abundances at about the 30 metre mark. Like there was a figure in my evidence that covered – was taken from Hilton which showed Venn diagrams of some of the more abundant or common species and (inaudible 12:44:05) see that change in abundance. So, yeah, there's a whole sequence of events. I don't disagree with his suggestion that there is a sequence of benthic habitats out there but that is still there and it's present irrespective of the 80 odd years of dredging in the inshore area and the 20 plus years or so of dredging in the offshore area and all the other influences that occur in that area such as the scallop dredging and the bottom trawls and all sorts of other activities occurring there.

Q. Thank you. Most of the questions that various examining counsel asked (inaudible 12:44:58) incidents of horse mussels in the embayment were in relation to the effects of dredging. Are you aware of other factors that would play a part in the embayment, in the incidence of horse mussels?

A. Yes, I mean the area has been subject to scallop dredging from time to time. They aren't restricted in terms of the sand extraction area being defined and you're not allowed to (inaudible 12:45:32) that, so they were able to operate in that area between the offshore and inshore consents. I note that (inaudible 12:45:44) now stopped because the fishery has collapsed and it's been closed. There are other – I mean there's also any trawling, bottom trawling type exercises could appear in that area as well, there's no restrictions for certain times of year for trawling to occur. So, if they are targeting fish such as gurnard which live solely on the bottom,

then they are trying to set their trawl nets that are closer to the seabed. That has the potential to lift and pull horse mussels out of the seabed, so there's a potential for that effect. And there's also anchoring and things like that. I mean, a horse mussel that's not going to help their survivability either so.

5 Q. Do natural conditions and weather conditions effects horse mussels?

A. Yes, as I said earlier, some of the extreme weather conditions are likely to create wave activity that's great enough to lift and shift the sediments – especially in the death range that the horse mussels were present, where they would potentially be ripped from the seabed and then either transported onshore or left in situ but (inaudible 12:47:12) aren't really capable of reburying themselves from my understanding so.

10 Q. You're asked by Ms Morrison-Shaw whether your knowledge of horse mussels in the embayment was as a result of your own observations, and I think you agreed with that proposition. Is your knowledge limited to your observations of the area or is the other material you've taken into account.

15 A. There is other material that I've taken into account. I mean I didn't specifically conduct the 2003 and 2006 surveys that were for the initial surveys in the offshore consent, those were conducted by ASR. Mr Mead was part of both of those I believe. And then I've relied on information provided by the Sand Study, again I wasn't part of that study, so that provided the maps of distributions of horse mussels. I did conduct a shoreline survey of shellfish along the Mangawhai Pakiri Coast and down through the reserve and further south which I referred to in my evidence I believe, and then the studies that I've conducted of the monitoring for the offshore consent in 2011 and 2017 and the studies that I've been involved in, in looking at results, or, yeah, the samples that are collected by McCallums for the inshore and midshore consent application.

20 Q. Moving to a question that Ms Campbell asked you, Mr West. She raised the question of turbidity and asked you whether it was related to the dredge head and you responded that it was. Are other features of the *William Fraser* that are relevant to the turbidity and its effects on marine life?

A. I think the *William Fraser* is quite good in that it actually doesn't discharge the wastewater and oversized material at the surface, it actually forces it down from underneath the vessel so it's actually in a flow already directed down, so the turbidity is shorter in its duration because it's actually deposited before the surface already and it's already being pushed down towards the seabed. So once the initial velocity from the discharge has ceased, then it will continue to settle to the seabed and, once it's settled, then turbidity decreases, it's gone.

1250

# 10 QUESTIONS FROM THE COURT: COMMISSIONER MYERS

Q. Good afternoon, Mr West. Can you hear me okay?

A. Yes, I can, thank you. Good afternoon.

Q. Right, thanks. I was interested in – so you were just asked a question by Mr MacRae about the gradations within the area in terms of species and I've just looked at the Hilton like graph that you talked about. So that's the macrofauna, isn't it, the larger species –

A. It is macrofauna, yes.

Q. What about like the benthic species, there are some graphs in your evidence around the mollusc and the bivalves and all the other wider family, is there more specific information at a species level as to what would be within the offshore consent application area in terms of those species?

A. Well I mean the species that Hilton put in his graph are still present in the environment now and they were part of our assessments that we've made. I haven't graphed the species that we've – the data that we've collected in the same way that Hilton graphed his.

Q. Okay, that's fine. And you talked about at like the 30 metre there's a difference in (inaudible 12:52:07). Is that the macrofauna as well as the other species that might bury into the sediment and the benthic fauna?

A. I haven't delved into the infaunal species in that sort of level of detail. With a more robust data set that would be created from the pre-sand extraction survey, then that might provide sufficient information to delve into the details of the differences across the depths.

Q. Okay, thank you. Because I was reading in your evidence that there seemed to be more data for like the area 1 as opposed to area 2 and lack of comparability of that data. So are you relying on having that pre-sand extraction assessment to understand the level of detail as to what is there?

A. Yes.

Q. Another question. Yesterday there was discussion about the Holocene sand and the Pleistocene sand. Is there any difference in the habitat values of those sands in terms of the species that live in and on them?

10 A. I couldn't answer that. I haven't investigated the differences. I mean my understanding was that the Holocene sand was the surface sand and Pleistocene sands were deeper. And if the Pleistocene sand is not exposed, then there's no biota present in them. So I would assume there's some difficulties in determining what habitats might be. If the sand  
15 is of the same quality in terms of grain size and there's no chemistry differences and that sort of thing, then I see no reason why there shouldn't be similar biological communities in each.

Q. But there probably hasn't been too many studies of that?

A. No.

20 Q. I was interested in – so there was quite a few questions already about the monitoring in the extraction cells. So the monitoring cells and the extraction reporting cells, they're separate, are they?

A. When I originally proposed (inaudible 12:55:03) of creating the cells, I was looking for a way to try and relate the amount of effort – of sand extraction  
25 to what was happening in terms of the ecology and trying to put a cause and effect together. I was told that they do alongshore dredge runs so that's why we have a longer longshore dimension to the cells. So I proposed these 200 by 1,000 metre cells. When McCallums took over the consent application from Kaiapara, they expressed some concern  
30 about the logistics of reporting each individual reporting cell which is – the monitoring cell, sorry, the 200 by 1,000 metre, so they suggested can we make some bigger areas that we can do for reporting the level of extraction. So the suggestion there was, okay, we'll make it bigger by combining the two adjacent monitoring cells, that's two offshore and two

alongshore, so that's where those cells come from. So the extraction reporting cells are made up of four individual monitoring cells.

Q. So the drop camera and the other monitoring methods, will they be in a similar location? Like will you drop the camera down in the same location, or is that a difficult thing to do?

A. The intention is that there's a random GPS point created for a set of (inaudible 12:57:02) and that random GPS point, the boat will approach that, the drop camera will be dropped on the first occurrence of sampling so that we do a diligence in terms of looking for any potential issues, then on a later sampling date the grab sampler will be dropped on the same GPS point and a sample will be extracted in that way.

Q. So you're looking to try and get your comparative data?

A. Yeah, we're trying to get a much more robust set of data than has been collected in the past.

Q. Thank you. Just one other question. There's been a lot of questions around food webs and the fish communities and the seabirds that feed and forage around the location. So there haven't been any studies, I presume, on the relationships between the birds that use that part of the sea and communities that they might be feeding on and do we need, you know, is there a need for better understanding of that? And I suppose I'm thinking more not just the tara iti but, from my reading of the evidence, there are other seabirds that use the area, including ones that feed at night.

A. That is probably a question that's better suited to Mr Thompson.

Q. Okay. That's all right. I'll ask Mr Thompson, that's okay. Thank you very much, I think those were my questions. Kia ora.

A. Thank you.

**QUESTIONS FROM THE COURT: SPECIAL ADVISOR HOWIE – NIL**

**QUESTIONS FROM THE COURT: COMMISSIONER PRIME – NIL**

**QUESTIONS FROM THE COURT: JUDGE WARREN**

Q. Tēnā koe, Mr West, thank you for your evidence. Paragraph 3.84 page 228 of the paginated version, just the last sentence there where you say: "Sand dredging does not occur outside the approved areas. There

5 has not been any direct effects to the horse mussel beds." Are there any indirect effects?

A. Not that I'm aware of. I mean there is a suggestion in some of the literature that (inaudible 13:00:35) affected by increase suspended solids but from what I understand the levels that are required to cause the

10 (inaudible 13:00:49) effects on the horse mussels are greater than what Mr (inaudible 13:01:03) from the water quality studies that were done.

Q. Pause there. We might have lost part of your answer.

**THE COURT: JUDGE SMITH**

Yes, certainly we seem to be having an overload problem, probably at your end

15 somewhere. Sorry, Judge, but I think we might be better to take the luncheon adjournment and come back and see if it's repaired after lunch because they're frozen completely no.

**THE COURT: JUDGE WARREN**

That's fine, that's perfectly fine.

**20 THE COURT: JUDGE SMITH**

So we'll take the adjournment and come back and I have a couple of questions as well, so we'll deal with those after the lunch and then move to the next witness.

**COURT ADJOURNS: 1.01 PM**

25

**COURT RESUMES: 2.15 PM****THE COURT: JUDGE SMITH**

Just prior to lunch Judge Warren had a question I think and unfortunately the answer we could not understand because of jitters on the system. I cannot see  
 5 – yes Mr MacRae and Mr West are with us. So Judge Warren, would you like to repeat the question and hopefully we have overcome the jitters.

**QUESTIONS FROM THE COURT CONTINUES: JUDGE WARREN**

Q. Quite happy to do that and, of course, Mr West has had a good hour to think about the question, which is always good. So I was asking a  
 10 question of 3.85, you talk about there not being any direct effects from the sand extraction to the horse mussel beds, but I was asking whether there were indirect effects and I think you were just starting to answer that?

A. Yes, there can be indirect effects in terms of, I mean I class the plume  
 15 that comes out from behind the boat as an indirect effect in terms of suspended (inaudible 14:16:46), although it comes directly from the sand extraction process. But it is not like it has been dug up and put through things. So there is potential that the suspended solids can have an influence on the feeding rates of the horse mussels. There have been  
 20 studies that have been done that show that they are effected by certain suspended level sub concentrations. From my understanding, those levels that cause adverse effects to horse mussels are higher than have been present, and there were quality results of Dr McConnell.

Q. So when at 3.79 you say the conditions need to be right for the spawning  
 25 adults to settle, is it the absence of those indirect effects that would be part of those conditions that need to be right?

A. My understanding is that the requirements for spat settlement are not fully understood. Some, the effects from the dredge plan would be temporary effects so they are not permanently present in the whole area all the time.  
 30 So I wouldn't class those indirect effects (inaudible 14:18:19) plume as causing fisheries to prevent spat settlement. But quite what the issues are with spat settlement for horse mussels I don't know, I don't know



whether anyone fully understands what the spat are looking for to settle on. I know with the green lip mussels they have recently discovered that there are various triggers that, before they actually settle, I think recent papers have indicated that they have to have other mussels present for them to follow chemical signals to settle here. Whether the same occurs for horse mussels I don't know.

Q. Yes, no thank you.

#### QUESTIONS FROM THE COURT: JUDGE SMITH

Q. I really only have probably one or one and a half issues to talk to you about. It is about mussels again and I want to, if we have EB226 up, your figure 3.13.

A. Yes.

Q. I take it in you producing that you do not dispute the content diagram?

A. No. I would note that the southern end of that offshore extraction has now been retracted further north.

Q. Yes, yes I understand the changes that have occurred since your evidence was prepared. That is not my questions. My questions relate to abstraction generally before 1990. My understanding is that before the RMA they I presume just abstracted by some general right or marine authority the sand, is that right?

A. (inaudible 14:20:13) have the knowledge to answer that, I'm sorry.

Q. No, well on the face of it, it appears that they were removing sand from the shallow areas, you would have read evidence from witnesses saying they saw them doing that years ago.

A. Yes.

Q. Would you agree with me that it's likely that the loss of those mussel beds has been due a combination dredging but due to both sand mining and probably scalloping over the years?

A. They would be two causative factors another factor could be that there's variable recruitment so the story that I've put forward in my evidence is, it looks like there was nothing there in the early 1990s, then by 1995 when the Sand Study was done there was a bed, a (inaudible 14:21:09) dense bed of horse mussels present as indicated by the figure there. So,

that sort of indicates that there was some settlement that came in – in the early '90s the animals have grown to a size of the order of I think about 100 mms long, in that three or four year period and then they've continued to grow and they have a perceived maximum age for about 15 years so by the time we get to the 2003 study which was done in area one and along the inshore part of that we were still seeing horse mussels, 2006 the area investigation was further offshore so we weren't expecting to see them but since then we've not detected them and they're no longer present so I mean if they haven't had a (inaudible 14:22:07) of juveniles in the intervening period, then that population is going to reach its maximum age and then die off, so that could also be a more likely explanation by –

Q. The more likely explanation is that the continued dredging has affected those beds?

A. Well, if the dredging isn't occurring in the same locations as the beds then I would put that the dredging doesn't have that effect but I mean scallop dredging hasn't restricted in that respect.

Q. Whatever caused it, it does seem to be which mussels have proven to recede and repopulate the area, do you agree?

A. Correct yes. Yes, I'd agree with that and to that extent the areas proposed for sand extraction in the offshore are outside that area that was reported in 1995.

Q. Well, for the most part –

A. Most part.

Q. – it was reported up to 30 metres, but putting aside the 25 to 30 metre issue which I agree with you, you have to have a closer look at the bathymetric to understand all of that and I'm not really going there, given that we're only talking about an offshore consent now, if an offshore consent was granted, one in which the way of mutual benefits might be by reseeded the mussel beds inshore and re-establishing the horse mussels and of course the associated scallops et cetera given that my understanding is that's been banned within the Hauraki Gulf, scalloping.

A. Scallop dredging – the scallop fishery for the whole of Northland and the Coromandel has been put on hold, I don't know I think it's an indefinite hold as far as I'm aware.

5 Q. So, there is a real prospect that receding this area may have benefits not only for horse mussel but for scallops and other benthic items inshore of the sand mining area?

A. Yeah, well they will have benefits if they create a biogenic habitat of sufficient density of horse mussel, a large enough area.

10 Q. Now, you've already answered questions about your experience with that so you would defer to those who have been involved in that sort of process previously?

A. Yes, I would.

15 Q. Yes, that's fine. So, the only other question I want to ask you about, and you seem to have got really caught up in the tara iti issue and I don't whether you know anything about the history of the tata iti and the Te Arai stream for example, do you?

A. I know some of the history of it and that there's been intermittent breeding pairs that have nested there.

20 Q. Were you aware that DOC and the council allowed a damming of the Te Arai stream?

A. I was vaguely aware of that, I believe one of my colleagues was involved in part of that.

1425

25 Q. And although the Court couldn't make direct orders, it made some fairly significant comments which led the parties to remove the dam and re-establish the ability for fish to spawn upstream and the smaller fish to – inanga to return, et cetera, and thus restore the feeding for the tara iti?

A. Yes.

30 Q. You've been going to the beach for a long time. You must have seen, as I have every visit, people with horses, dogs, cars on the beach?

A. I've seen horses, I'm pretty sure I've seen dogs and I believe I've seen some cars on there. Whether it's on the Te Arai side of it or whether it was on the Pakiri side.

Q. And it would be fair to say that for shorebirds such as tara iti, New Zealand dotterel, those things can cause major problems and upset for the birds?

A. Definitely, yes. And it can also cause issues for shellfish that live in the beach as well.

5 Q. And in fact these problems are well recognised elsewhere in New Zealand?

A. Correct.

10 Q. In answer to the concerns about the *Fraser William* dredge using alternatives that have dissimilar systems, one would have thought that it would be a very sensible condition if a consent were to be granted that any alternative had to have a similar design so that it did not penetrate more than 120 millimetres, it had a sufficient pump size to enable maximum survival of species and was at least a metre or 1.2 or 1.5, whatever the experts think, wide, so that it performed in a similar way, don't you agree?

15 A. I agree, yes.

Q. So that type of issue would mean that rather than requiring deeming somebody to certify something, it would require it to meet certain standards?

20 A. Yes. You could impose a design standard.

Q. And finally it seemed to me at one stage you were venturing into the staging issue and I just want to check whether or not (inaudible 14:27:46) to say that we couldn't impose a consent with conditions that didn't allow dredging beyond 30 or 36 metres depending what the evidence supports without further evaluation and satisfaction as to the appropriateness of both the system to be used and the benthic habitat?

25 A. I mean at the moment no one has investigated what's in that habitat beyond the 35, 36 metre mark. We've done a little bit of work in terms of the Hawaiki Cable route which ran through north of Mangawhai estuary and that went out to 60 metres. But the (inaudible 14:28:31) of habitats and biota that's present beyond 35, that may or may not be present less than there.

30 Q. Normally if there's no evidence to support that it's appropriate, we wouldn't grant a consent at all. Those seem to be the two choices, not to

grant any consent beyond 35 or 36 metres or, alternatively, have a staged consent that only allowed it to be utilised if it can satisfy certain preconditions. I don't know, were you going as far as to suggesting we couldn't do either of those things? I was a little unclear with your evidence.

5

A. I don't think I was eliminating the (inaudible 14:29:11) metre habitat area. I think that needs to have a pre-sand extraction survey done before any sand extraction would occur in there and that would then define the presence of any sensitive species and as to whether those areas could be included or excluded for dredging. There's some issues –

10

Q. Yes, the other thing is of course whether the methodology would need to be modified as well, don't you agree?

A. That was where I was just going, yes.

Q. Sorry. Carry on.

15

A. Yeah, I mean the presence of the stony corals presents an issue in terms of the level of sampling required to determine reliably that they're present or absent, and there's an awful lot of work involved if sampling is to be at a much greater density to the point where the disturbance in actual sampling might be more than it's worth.

20

Q. Yes, thank you Mr West, those are my questions.

#### **QUESTIONS ARISING – NIL**

#### **WITNESS EXCUSED**

1430

**THE COURT: JUDGE SMITH TO MR MACRAE**

Q. We are moving now to Mr Thompson, is that right Mr MacRae?

A. Yes it is. Mr Thompson will be appearing remotely Sir. So just while we get him online I wonder if I could catch up with two or three things that are outstanding. First of all, we have in the room here at McVeagh Fleming, Mr Gartan, Ms Harnett – sorry, we felt we needed to provide a back-up to Ms Harnett if she was no longer able to carry on or became unwell or something like that, given the length of the hearing, so Mr Gartan, who is also from MBIE or from the McCullum Bros, is just observing what Ms Harnett does and if it became necessary he would be available to take over, I think so, that's the plan.

Q. I mean the next witness is remote. Some counsel have been having the witness swear that they are not getting cued from anyone off-screen et cetera, et cetera. I do not think that is necessary. I rely on counsel to ensure that things are being done appropriately. So unless somebody else has an objection I do not have any problem with the staff being in the room. Thank you, so that is that issue.

A. Yes, and actually Sir, there was the question of whether the appellant was prepared to make the topographical survey data, illustrated, of course, by Mr Haddon, in his evidence and the answer is yes that he would be happy to.

Q. Well it might be quite useful as that might be shared, there might have to be a methodology agreed between you as to sharing because I suspect there is some form of licence, I'm not sure. But actually, Mr MacRae can move over a little bit because now that you are the sole focus of our attention we can see all of you, which is nice, thank you. Perhaps I can leave you to liaise with the parties or one of your assistants with the parties in due course about that because they may or may not find it useful. I just feel that the photographic cross-sections did not give us the potential to look at a particular area and sometimes witnesses are talking about particular places and it may be useful, it may not and it may also demonstrate or not demonstrate the various information which might be seen either as a strength or weakness, I have no view on the topic, I am

just simply saying that people might want to have a look and see what it shows. Was there a third thing?

5 A. Yes there was Sir and it was just to confirm the order of witnesses for this afternoon. In fact I won't be occupying the hotseat of counsel calling witnesses all afternoon if we get to Dr Conwell, Ms Hopkins will call Dr Conwell. But next after Mr Todd we've got Mr Thompson, Dr Thompson, as I have said, then Dr Pine, sorry, then Dr Conwell and then Dr Pine. I am hopeful that we will get through their evidence this afternoon Sir but doubtful that we will go on to Mr Brown's evidence beyond then.

10 Q. What about Ms Clement, are you calling her today if time permitted?

A. If time – just check this. Yes if we get to her Sir.

15 Q. Yes, yes, and Mr Styles, of course, we have had to put to one side because you had to find another time for him, so we will talk about that later this evening.

A. Actually I will call – that's next week Sir I think.

Q. Well yes, well I do not know, you said you would get back to us and we will have a talk about it later.

A. He is not available this week Sir.

20 Q. Yes we have got both Mr Stubbing and Mr Styles to deal with as well as the other witnesses that are on Monday. So we will have a talk about that shortly. No, that is fine.

**MR MACRAE CALLS****DAVID THOMPSON (AFFIRMED)****THE COURT: JUDGE SMITH**

So Mr Thompson, just by way of explanation, you don't have to be in the same  
 5 room as counsel, and quite frequently witnesses are separate, but the  
 questions will in the first instance come to you from Mr MacRae, then I'll invite  
 other counsel to ask questions in due course. If your counsel, if Mr MacRae  
 speaks to the Court by way of an objection or another matter, then just stop  
 talking until we've dealt with whatever the issue is. It doesn't happen very often  
 10 but it occasionally does occur. Is that clear?

**WITNESS:**

It's understood.

**THE COURT: JUDGE SMITH**

Thank you. And so Mr MacRae's going to ask you some preliminary questions  
 15 now.

**EXAMINATION: MR MACRAE**

Q. Dr Thompson, it is correct is it not that you've filed both a statement of  
 evidence-in-chief and a statement of evidence in reply?  
 A. That's correct, yes.  
 20 Q. And you have both with you?  
 A. I do.  
 Q. Could you turn to paragraphs 28 and 29 of your evidence, there in the  
 EB294?  
 A. Yeah, okay.  
 25 Q. And if we could bring them up on screen. Are those paragraphs still  
 relevant to your evidence Dr Thompson? In relation to the offshore  
 application, I mean.  
 A. No, they're not really.  
 Q. So, would you like to strike them out?  
 30 A. Yes, please.



**THE COURT: JUDGE SMITH**

So, is that 28 and 29?

**MR MACRAE:**

28 and 29, your Honour.

**5 THE COURT: JUDGE SMITH**

Right, they're both deleted, carry on.

**EXAMINATION CONTINUES: MR MACRAE**

Q. If you turn over to paragraphs 46.

**THE COURT ADDRESSES COUNSEL – TECHNICAL ISSUES (14:38:00)****10 EXAMINATION CONTINUES: MR MACRAE**

Q. I got to the point of asking you, if you could turn to paragraph 46 to 48, Dr Thompson. and I think events since you wrote your evidence-in-chief and it was filed mean that you'd like to make an amendment to paragraph 47, is that correct?

15 A. That is correct, if you could just give me one second, I'll... would you like me to read what I'm proposing as an amendment to paragraph 47?

Q. Yes, if you would please.

A. So, I would like to propose that paragraph 47 now reads: "However, the costal experts agreed in their joint witness statement that there is a  
20 low risk of detectable erosion on tara iti habitat. On that basis, the impact of offshore zoned extraction on seabirds and shorebirds while on land will, in my opinion, be negligible."

**THE COURT: JUDGE SMITH**

Q. So, the last sentence is the same. You'll need to speak to us very slowly  
25 so we can write into your evidence the first sentence, just do it in small pieces please.

Okay, just repeating the first part of that then. “However, the coastal experts agreed in their joint witness statement that there is a low risk of detectable erosion of the beach and tara iti habitat.”

5 1440

Q. A low risk of detectable erosion of the beach and tara iti habitat?

A. Correct.

Q. And that is a full stop?

A. It is a full stop, sorry yes.

10 **EXAMINATION CONTINUES: MR MACRAE**

Q. If I might interject Dr Thompson, would it make it clearer if you added from “extraction from the offshore” or “in respect of offshore extraction”, words to that effect, is that what you are saying?

A. That’s what I am saying, yes.

15 **THE COURT: JUDGE SMITH**

Q. So I will just end habitat “from the offshore extraction”. Then on that basis the impact of sand, that’s the same sentence on seabirds and shorebirds while on land will, in my opinion, be negligible”?

A. Correct.

20 Q. That sentence can stay, thank you. Thank you for that amendment.

**EXAMINATION CONTINUES: MR MACRAE**

Q. And the same question in respect of your conclusion in paragraph 48 Dr Thompson, does that stand?

A. That stands.

25 Q. Could you now turn to the joint witness statement by the coastal experts, that’s in the common bundle, starting at page 1419, if I could ask Ms Harnett to bring that up, I will get it right. Then the reference I am going to make is to page 1420, in section 3, 1420, it’s –

**THE COURT: JUDGE SMITH**

Q. Just while that is coming up Dr Thompson, I take it DT is the shorthand for your name isn't it, as you've agreed or?

A. That's correct.

5 Q. A particular position, thank you.

**EXAMINATION CONTINUES: MR MACRAE**

10 Q. Dr Thompson the finding at the very end of section 2 does not bear, sorry bears your initial but differs slightly from the conclusions you just confirmed in paragraphs 47 and 48 of your evidence-in-chief. What was your approach to that issue as stated in the joint witness statement?

A. When the experts met and discussed this we didn't necessarily refer back to the exact wording that we placed in our respective drafts of evidence. This says: "The experts consider the risks associated with offshore sub-mining to tara iti habitat are likely to be low." I mean, I'd use the word  
15 "negligible". In my mind they are, sort of, they may not be technically the same but negligible, either or really as far as I am concerned.

Q. Further down in section 3 under the heading "Matters of Disagreement", that was a finding to which you didn't append your name, that is the first paragraph, but you have recorded your own conclusion in the second  
20 paragraph. In respect of the first what areas did you understand, well what areas of extraction in fact I think, did you understand to be being referred to in that paragraph or did the group understand they were referring to?

A. I think here, if I recall correctly, I hope I am not doing a disservice to the  
25 other members of the panel, we may have discussed that in the sense of all three extraction areas, inshore, mid-shore and offshore. I'm not entirely certain whether that was the case or whether by that stage we were just considering the effects of offshore extraction, I couldn't be 100% certain, I am sorry.

30 1445

Q. You are aware that the caucus had the findings of the expert coastal witnesses before it? That is in their joint witness statement?

A. Yes, we had that.

Q. And is the same conclusion true of the next paragraph to which your initials are appended, all three areas?

A. That would be my conclusion if I was considering all three areas, yes.

5 Q. Any different conclusion in respect of the offshore area only? Given that it's now been amended? (inaudible 14:45:52).

A. Yeah, my conclusion will be the same, that the – what's being proposed in terms of offshore extraction will have a less than moderate effect on fin fish and pelagic food webs.

10 Q. In section 4, just below on the same page, there's a finding by four of the experts to which your initials are not appended. You didn't agree but didn't give an alternative, as it were, finding. Can you just briefly explain what's your reasons for disagreeing with that finding was or were?

15 A. Yes, I mean I wasn't – I'll be perfectly (inaudible 14:46:41) up to speed with the draft EMMP at that stage but I've since acquainted myself with it, and I think that the EMMP contained the details of a monitoring programme, shoreline monitoring programme, which to my mind would be absolutely necessary, and I'm assuming it's been constructed and devised with sufficient rigour to be able to detect any changes to the beach morphology should consent be granted for offshore  
20 sand extraction that would allow for decisions to be made based on the findings of that beach survey, monitoring survey, six-monthly survey going forward in time. So, I disagree with that paragraph in the sense that the draft EMMP is inadequate. I think from a seabird point of view, that proposed monitoring programme that's been outlined in the EMMP  
25 would be adequate. Again, I'm obviously not a coastal expert but I'm assuming that's been devised and structured in such a way that it would allow for protection of any impacts on the foreshore if they were to occur.

30 Q. And then, finally in relation to the last paragraph in the joint witness statement again under section 4 on page 1421 of the evidence bundle, your initials are not attached to that finding. Did you in fact disagree with it?

A. No, I don't disagree with it actually.

Q. Or do you disagree with it, sorry, is what I'm asking?

A. No, I actually agree with that statement.

Q. So, is that the one commencing: "Tara iti are already managed intensively by DOC"?

A. That's correct.

**CROSS-EXAMINATION: MS BIELBY**

5 Q. Good afternoon, Dr Thompson.

A. Good afternoon.

Q. Firstly, I just wanted to talk to you and ask you some questions around the foraging area for tara iti and I think it would assist if you could turn to Dr Baber's evidence, that's Dr Baber for the council, at paragraph 9.19, and that is EB1205.

10

1450

**THE COURT: JUDGE SMITH**

9.18, was it?

**MS BIELBY:**

15 9.19, Sir. 9.19(a) through...

**THE COURT: JUDGE SMITH**

That's all right, we'll start at (a).

**CROSS-EXAMINATION CONTINUES: MS BIELBY**

Q. Yes, it's really (b) that I would like to talk about. And this, you'll see, Dr Thompson, that this paragraph is focused on the foraging area and the distance from the shore that tara iti travelled to forage. So, do you agree with Dr Baber's statement that the research that there is has established that tara iti forage at least up to two kilometres out to sea, is that agreed?

20

A. I agree.

Q. And Dr Baber goes on to say that, I suppose it's a flow-in from the words "at least", to say that he considers it likely that the maximum foraging range for tara iti actually extends beyond two kilometres. Do you agree with that statement?

25

A. I do.

Q. So it's feasible or indeed actually likely that the tara iti forage beyond the two kilometre mark?

A. Yes, it is.

5 Q. Sticking with paragraph 9.19 of Dr Baber's evidence and looking at (b)(ii), in that paragraph, to put it simply I suppose, he opines that the majority of the area, the offshore area, is within foraging distance but essentially the further out you go the less important the area is to tara iti. Do you agree with that proposition as well?

A. I would, yes I would, yes I would, yes.

10 Q. If I could get you to turn, sticking with Dr Baber's evidence, turn to paragraph 13.4, it is EB1215, and this is a recommendation from Dr Baber and it's a recommendation based on the foraging distance that we just touched on, that the extraction operation if it were to occur and consent was granted, that it not occur within two kilometres of the tara iti  
15 nesting areas, wherever those may be at the time. Are you aware of that Dr Thompson?

A. I am.

Q. I have had a look and I've had a read of your evidence in reply and you, I don't believe, correct me if I'm wrong, but I don't believe you comment  
20 on Dr Baber's evidence at all I don't think. Is that correct?

A. I think that's correct, yes.

Q. I think, I'm not sure whether, I know you are appearing remotely so I'm not sure whether you heard the evidence, the oral evidence of Mr McCullum earlier in the week around this two kilometre distance from  
25 the tara iti nesting area, were you there for that?

A. I wasn't I'm afraid, no.

Q. No. That's fine. Essentially Mr McCullum appeared to agree with Dr Baber's suggestion that if extraction is to occur in the offshore area that a condition be included requiring an avoidance zone essentially two,  
30 at least, or two kilometres from the tara iti nesting areas. Do you support that condition?

A. Yes I would, yes.

1455

- Q. Right. So what I would like to do now is talk about the risk, and you will have to bear with me, I've been trying to, I was obviously following along with the recent changes to your evidence but I think I've got my head around them. Would you turn to in your own evidence, your evidence-in-chief sorry, paragraph 26, and that is EB294. At this paragraph you state that: "Extraction of sand could result in physical effects along the shoreline running approximately parallel with the sand extraction area. If for example sand extraction resulted in undermining of the shoreline with an associated loss of shoreline habitat, then nesting birds that use the upper shoreline for breeding could be detrimentally affected." So based on that paragraph, Dr Thompson, am I correct that it's your evidence that if there was an impact on the shoreline, tara iti habitat could be impacted?
- 5
- 10
- A. Yes. If there was an impact, breeding habitat of shorebirds could be impacted.
- 15
- Q. And I understand that you've arrived at your conclusion, and I don't believe your conclusion has changed but I do just want to clarify that, my understanding from your evidence and from the examination just now is that it's still your conclusion that there will be a negligible effect on the habitat of tara iti, is that still the conclusion?
- 20
- A. That's my conclusion based on the fact that the coastal processes experts considered the risk of an effect occurring to be low from offshore sand extraction only.
- Q. Yes.
- 25
- A. Ie with the removal of extraction from the inshore and the midshore.
- Q. Yes, and your evidence, so there's been no change to your conclusion around the effect on it for tara iti habitat and nesting areas being negligible, but in your evidence it's based on a conclusion – you rely on the evidence of Mr Todd, don't you?
- 30
- A. At that point I was relying on the evidence of Mr Todd, that's correct.
- Q. And the evidence of Mr Todd at that point was that there was unlikely to be any impact associated with offshore extraction on the shoreline, so he used the terms "unlikely". Is that correct?
- A. If that's what he said, that's what he said, yes.

Q. That's just what's in your evidence.

A. Okay.

Q. Obviously, as we've canvassed this afternoon, there has been a change in language at least from there being unlikely to be any loss in upper beach to there being a low risk of there being any impact on the shoreline. Did you think that that might change your conclusion at all in terms of the negligibility of the effect?

A. No, I think my view is that given that the coastal processes experts in light of the new information that had come to hand fairly recently in this process were a reasonably coherent view, that that new information was likely to result in effects from inshore and midshore, but they felt collectively that the likelihood of that being the case was low I think happening for the offshore, on that basis my conclusion and my position is the same, that the effects on the breeding habitat of (inaudible 14:59:08) nesting birds will be negligible.

Q. So the coastal experts say that there is a low risk to the shoreline but your evidence is that there's a negligible risk.

A. Yeah, I'm happy to use the word "low" if you're questioning my use of the word "negligible", um...

Q. Yes, it seems that there is a difference between low and negligible so if based on the coastal experts' evidence being that the risk to the shoreline is low, then you're happy to clarify your assessment of risk as low, is that...

1500

A. That's right. I would add that – yes you can take that. I mean I think there's another point here that I think, I don't know but there might be a difference in what the coastal process experts are determining to be a low risk in the sense that it could be impacting some part of the shoreline which would still be some distance from the breeding habitat of coastal birds. So with that caveat, I am more than happy to use the word "low".

Q. So there's an element of uncertainty in there as well, is that right?

A. Well, like everything in science or virtually everything in science, certainty is hard to come by a lot of the time, so there is always an element of uncertainty.



**THE COURT: JUDGE SMITH**

Can I ask if the page could be brought down please, it is not being used anymore.

**CROSS-EXAMINATION CONTINUES: MS BIELBY**

- 5 Q. So if we accept that there is a, well we take what the coastal experts are saying, there is a low risk to the impact on the shoreline and I am taking from you that it therefore follows that there would also be a low risk to the tara iti nesting area, do you accept that if that low risk were to eventuate that it would for tara iti, given – and I am not going to ask questions around
- 10 this because I believe it is accepted by the experts – but given how few tara iti there are left at Pakiri, that it would carry a high consequence, low risk high consequence?
- A. Yes it would, notwithstanding that I think before any of that got to the point of affecting the breeding habitat of tara iti and other coastal nesting
- 15 shorebirds. The monitoring programme proposed in the EMMP I would assume would detect a change or an effect if such an effect was to occur, long before, or before that effect propagated to higher up the beach.
- Q. So in this environment where there is risk, against that backdrop, could I ask you please Dr Thompson to turn, we've been there sorry for going
- 20 back there, to 13.4(b) of Dr Baber's evidence, that's EB1216.
- A. Could that evidence be brought up on the screen please, I don't have that before me at the moment.
- Q. It is 1216 ND. If we could just scroll down to paragraph (b). So Dr Thompson, this is a recommendation from Dr Baber, again as I said
- 25 against that backdrop of this being not a no risk situation, and Dr Baber has recommended that if consent were to be granted and if extraction were allowed to occur in the offshore area, that this be subject to specific plan focussed on the protection of tara iti. So Dr Baber called it a Tara Iti Management Plan. You were silent on that in the JWS and in your
- 30 evidence-in-reply. But what I've heard this afternoon is that you don't support the imposition of a specific Tara Iti Management Plan. Have I understood that correctly?

A. Not quite. I support the efforts and management plans, recovery plans, developed by the Department of Conservation. So in that final paragraph of the joint witness statement of avifauna experts: “Tara iti are already managed intensively by DOC via the tara iti recovery group and an additional tara iti management plan is not required,” I would be happy to put my initials next to that paragraph.

1505

Q. We’ll obviously hear from Dr Baber later in the hearing but it is his evidence that the purpose of such a plan in an environment where there is risk is that essentially (inaudible 15:05:33) more can be done to protect the tara iti. Do you accept that more could be done?

A. Ah...

Q. Well let me rephrase the question if that would assist. You may not have had any ideas as to what more could be done but if Dr Baber when he gives evidence speaks to what more could be done for tara iti, do you accept the proposition that if we can do more we should do more?

A. Yes, of course.

Q. Thank you, Dr Thompson. Those are all of my questions, thank you.

# **CROSS-EXAMINATION: MR VAN MIERLO**

Q. Good afternoon, Dr Thompson.

A. Good afternoon.

Q. I’d just like to firstly pick up on an answer to a couple of questions from my friend Ms Bielby just now. I understand you to say that the further out you go – this was in relation to tara iti foraging areas and the two kilometre circle, and I understood you to say the further out you go beyond the two kilometres the less important it is for tara iti. Did I hear that correctly?

A. I agreed with that statement which I think was a statement from Dr Baber? Or a piece of evidence from Dr Baber.

Q. Yes, Ms Bielby was putting Dr Baber’s evidence. So in your opinion, is two kilometres a hard line or a gradual line in terms of importance of the area for tara iti? And really I suppose another way of asking it does importance to tara iti reduce abruptly or gradually as you go further out from the coastline?

A. To answer the first part of your question then, I think there's a lack of information to enable anyone to say whether two kilometres out from a breeding site is a hard line. In my opinion, it would be more likely that the importance, however that's defined, of foraging habitat for tara iti would decline gradually or in some sort of decaying sort of level of importance, reducing level of importance, with increasing distance from the breeding site.

Q. And the basis for that view, what would you base that on?

A. Well as I say, there's a lack of information currently for to what extent tara iti use the marine environment for foraging, how important it is. They clearly use the marine environment but putting some parameters around that, the information doesn't exist currently to allow anyone to do that. (inaudible 15:09:14), if you're confined to a spot where you have to return repeatedly, in this case a breeding site, a nest site with eggs, and then later in the breeding season chick or chicks, it seems reasonable to me that you have to return back to that site at some point. You can't, as a bird, keep foraging further and – on a foraging trip just fly off in the wide blue yonder and at some point come back. If that distance into the wide blue yonder is a huge distance, it becomes untenable. It's energetically just not sustainable to do that. You need to gather resources for the chick in particular which means that you can't forage beyond a certain distance. There'll be a limit how far tara iti can forage out at sea, beyond which it becomes energetically negative for them to do so, they're expending more energy than they are returning or gathering for themselves. So whilst there's a lack of information to fully appreciate the nature of that relationship between foraging distance and how important foraging distance with increasing distance from the nest site is, my view would be that it's likely just to be a sort of decreasing relationship the distance from the nest site.

Q. Given the limits of information are you aware of any studies that either NIWA has undertaken or proposed or that you have been involved in or are aware of in relation to these issues in terms of the relationship in terms of energetics and distance and points?

A. As far as NIWA goes or myself, nor anyone else at NIWA know, nothing has been proposed to do that and I am unaware of any study which would allow you to disentangle or acquire the information to define that sort of relationship, ie between foraging distance and location of a breeding site for tara iti.

5

Q. You said you were unaware of any study, would it be feasible in your view to design a study which would help inform these issues?

A. It would, it would be challenging I think but theoretically it would be possible to investigate marine habitat use by tara iti and how important that is, put some context to that around their overall foraging strategy.

10

Q. We will move on to another topic now but thank you for that evidence. I just wanted to talk briefly about oil spills because you mentioned that in your evidence. Obviously you are an ecologist rather than a marine engineer ecologist but do you have any expertise in oil spill contingency planning, those sorts of matters?

15

A. No.

Q. So, I put it to you that the likelihood of an oil spill occurring from a vessel such as the *William Fraser* or an alternate vessel such as the *Pohonui* or another vessel being brought as an alternative, in terms of the likelihood of a spill occurring, that would be outside your expertise as an ecologist?

20

A. As an ecologist it probably would be but – it would be outside my expertise, that's right.

Q. Whereas the consequences or an oil spill on marine ecology and birds in particular would be within your expertise?

25

A. To some extent, yes.

Q. Yes, yes. Would you accept that an oil or fuel spill in the embayment during the tara iti breeding season, if it wasn't able to be cleaned up adequately and in time, that could be catastrophic for the tara iti?

A. Under certain circumstances, yes.

30

Q. I would just like to look now at the issue of lighting on a vessel at night. It is my understanding seabirds can be attracted to lighting on vessels at night. Is that correct?

A. That's correct, yes.

Q. And artificial light is a major threat to some seabirds?

A. It's certainly a threat to seabirds, that's correct, yes.

Q. It's a particular issue in the fishing industry isn't it because obviously little fishing vessels operate at night?

A. Seabirds can be attracted to fishing vessels at night, that's true.

5 Q. Yes. And the attraction can be the lighting as opposed to the actual fishing activity itself?

A. It could be. I would suspect it's more likely to be the provision of or the potential provision of food material for them though.

10 Q. Are you aware that the Department of Conservation and Fisheries New Zealand has a document Mitigation Standards to Reduce Light-induced Vessel Strikes with New Zealand Commercial Fishing Vessels?

A. I am, yes.

Q. You are familiar with that document?

15 A. I am, yes.

Q. And that document sets out a number of mitigation standards doesn't it?

A. It does.

1515

20 Q. I wonder if we could have that document brought up on the screen, thank you. If we could scroll down from the top of the second page, so firstly I want to check, this is a document you are familiar with?

A. It is.

25 Q. If we just scroll down to the top of the second page. Yes, so it notes there in the first paragraph that the standards for commercial fishing vessels are aligned with advice being provided to other marine users such as cruise ships, recognises that vessel strikes are important to manage across many sectors. Would you agree Dr Thompson that these guidelines can have applicability not just to the fishing sector but other vessels operating with lighting at night?

30 A. Yes, of course.

Q. Yes. If we could just scroll down to the first part of the next, we don't need to go through each of these mitigation standards but would you agree that all of those mitigation standards in 1.1 through to 1.7, which is just off the screen, that they could all have applicability to a vessel such as the

*William Fraser* or an alternate vessel operating at night in an important seabird area?

A. I would agree with that.

5 Q. If we just scroll over to the very next page and it's just down at yes just there, mitigation standard 2.1, which relates to what vessel operators should do in the event of bird strike. Again most mitigation standards would be equally applicable to a vessel such as the *William Fraser* or an alternate vessel operating in Pakiri embayment. Would you agree Dr Thompson?

10 A. I would agree.

Q. Thank you Dr Thompson. Dr Thompson would you produce this document as an exhibit please? Do you agree to do that?

A. Yes, that's fine.

Q. Thank you.

15 **THE COURT: JUDGE SMITH TO MR VAN MIERLO**

Q. So what is it a copy of, sorry I need to go back again, it is some document produced within the Department is it?

A. Department and Ministry of Fisheries Sir, mitigation standards to reduce the light and reduce the source strike –

20 Q. Yes but it has no statutory basis, it is simply an advice document is it?

A. That's correct Sir.

Q. So it is an advice document, DOC and Fisheries NZ.

A. Thank you Sir

Q. Thank you.

25

## **EXHIBIT 7 PRODUCED – DOCUMENT AND FISHERIES NEW ZEALAND ADVICE**

**THE COURT: JUDGE SMITH**

Are you moving on to another topic or is that the end?

30 **MR VAN MIERLO:**

Yes, I am just checking to see what –

**THE COURT: JUDGE SMITH**

Thank you, just take it down again thank you.

**MR VAN MIERLO:**

- 5 That concludes my questions Sir, well within half an hour.

**THE COURT: JUDGE SMITH**

Well within, well done, Mr Pou must be getting worried. Next is, Ms Campbell do you have any questions for this witness, is she with us – I take it not. Ms Morrison-Shaw?

10 **MS MORRISON-SHAW:**

Yes Sir, I think it will be about 15 or 20 minutes so in your hands whether you want me to proceed now or whether you want to have our afternoon adjournment.

**THE COURT: JUDGE SMITH**

- 15 I will look to Judge Warren but I think maybe now we will take the break and come back at 10 to four.

**THE COURT: JUDGE WARREN:**

I am happy with that, Judge.

**COURT ADJOURNS: 3.20 PM**

**COURT RESUMES: 3.51 PM****CROSS-EXAMINATION: MS MORRISON-SHAW**

Q. Tēnā koe, Dr Thompson.

A. Good afternoon.

5 Q. I am going to ask you a couple of questions about your evidence-in-chief and then about the joint witness statement AB40, do you have both of those documents with you?

A. I do.

10 Q. Great, it's a good start. I don't need it brought up on screen but in paragraph 4 of your evidence-in-chief, which is page 20, you say there that you have not been involved in any field studies of seabirds or shorebirds within the Pakiri embayment, although you have visited the site. That's correct isn't it?

A. That's correct.

15 Q. Have you been on a boat while it is extracting?

A. I have not.

Q. How many times have you visited the site?

20 A. I think over the course, in total I've visited the site relatively recently twice and occasionally maybe two or three times to the area prior to that. So a handful of times all up.

Q. To your knowledge has McCullum undertaken or commissioned any studies of seabirds or shorebirds for previous consents?

A. To the best of my knowledge, no they haven't.

25 Q. Are you aware of whether they have kept any records of any bird incidents or bird strikes?

30 A. I'm not sure whether they have formal records in the sense that they have been documented and written down and recorded in that way. But my understanding is, as an example, that when operating at night they haven't recorded any incidents of bird strikes or birds landing on the vessel at all.

Q. Yes. And entanglement with dredge gear, no records kept of anything – I think we've had evidence from Mr McCullum saying he is not aware of any, but I think he did confirm that there was no records kept. So your



assessment of effects on birds was, effectively, a desktop literature type review. Is that correct?

A. That's correct.

5 Q. That's correct, yes. Based on the information that we've got, we do not know with any certainty the extent of use of this particular embayment by seabirds and shorebirds do we?

A. No, we don't.

10 Q. The conditions, and I know there has been a lot of discussion about the conditions, they do not require any monitoring of seabirds or shorebirds do they?

A. I don't think so, no.

Q. No. So we have no way of knowing whether the sandmining is currently in use of the area by birds do we?

A. No, we don't in a formal sense.

15 Q. Is it possible to design a monitoring programme to detect effects?

A. To detect effects? Do you mean to detect effects impacting –

Q. Of the sand extraction, yes.

A. Actually impacting rather than detecting the impacts themselves?

Q. So obviously the –

20 A. What, going from potential real?

Q. Yes, yes, to detect effects that have been caused.

1555

25 A. For some potential effects it would be possible. So, for example, because sand extraction is largely occurring at night, hours of darkness, it would be possible to instruct a monitoring programme to record the incidents of interactions between the vessel and birds, birds landing on the vessel, more severely impacting the vessel and causing injury or possibly even death. So that would be a possible thing to do. Some of the other potential effects it would be more challenging to devise a programme of work that would unequivocally link the activity to an effect.

30

Q. I think in response to a question that one of my friends put to you about the usage or the reliance of the tara iti on the marine environment for feeding, you said that it would be difficult but not impossible to design a

research study to look at so that there's a better understanding of tara iti use of the marine environment for (inaudible 15:56:13). Is that correct?

A. That's correct, yes, it would be possible.

Q. But again, to your knowledge, none of that work has been undertaken?

5 A. No, to the best of my knowledge, it hasn't.

Q. Just then turning to the joint witness statement and don't need to have that up on the screen at this stage, but if you've got a copy in front of you, if we could have a look at the section 3 of that statement. I just wasn't clear after Mr MacRae took you through – I was rapidly taking notes but I may have missed it – in terms of point 3 which says that the experts agree that the potential foraging area for tara iti, all of the proposed sandmining extraction areas, your initials are clearly there so you, you agree with that statement?

A. I do.

15 Q. Yes. And your understanding is that those extraction, proposes sandmining extraction areas included inshore, mid-shore and offshore, which were before you at that time?

A. Correct.

20 Q. Correct. You would acknowledge wouldn't you that, unlike some other types of birds which you've discussed in your evidence that have a relatively large range, the range that tara iti can fly to is relatively small in comparison to other birds?

A. It is, correct.

25 Q. Then just in that joint witness statement again, if you could flip back to point 1, which is section 1, and then I think there was no change, that you agreed that the embayment is critically important to fairy terns. There was no change to that position, you agree with that don't you?

A. I do.

30 Q. Yes. So while we may not know the full extent of their foraging in the offshore, it is used by them and at different times potentially could be used extensively, we just, we don't know the full extent. You'd agree with that?

A. Yes they could do. I would suggest it's unlikely to be extensively used but it's possible that it could be used from time-to-time.

Q. Could we – Ms Harnett could we get – I am going to have to apologise myself as well, I am not sure how we pronounce Mr, Dr Beauchamp's name, I am sure that's probably not the correct way. Could we get that brought up on screen, his evidence in the bundle, and I am wanting to go to that same page that you brought up before when Mr Pou was questioning Mr West, which is the last page of that document, thank yes that's it. You've read this evidence have you Dr Thompson?

A. I have, yes.

Q. Yes, and so you are aware that this diagram shows the nesting sites and then it has got the circle showing the two kilometre distance in the red and then the sort of yellow colour is the 4.5 ks?

A. Yes.

Q. Would you agree with Dr Beauchamp that, and I think he says it in his paragraph 8.21, which links to this map, that the best estimate of the foraging distance at this stage that we have for tara iti is 4.5 kilometres?

A. Yes, I'd agree with that.

1600

Q. Yes. And that covers the entire offshore extraction area doesn't it?

A. It does.

Q. Would you also agree that the foraging distance of tara iti is likely to be greater when they are not actually feeding their chicks, so potentially they might fly a shorter distance to forage if they are feeding their chicks but they might fly the full 4.5 ks perhaps to feed if they are not feeding their chicks. Would you agree with that?

A. That's possible, yes.

Q. Yes. Would you also agree – we can take down thank you Ms Harnett – would you also agree that we do not have enough information to confidently conclude that no material harm will be caused to the tara iti?

A. You mean generally or are you now referring to the foraging of tara iti over the sea or?

Q. I am just, by the, let me rephrase that sorry, I will try and be clearer. Would you agree that we do not have enough information to conclude no material harm, whether it's foraging, whether it's other impacts arising are associated indirect or direct impacts of the extraction to conclude that

there won't be any material harm? Do we have enough information to make that conclusion?

A. Whilst it would always be good to have more information, I think the existing amount of information and our understanding of how seabirds operate, in conjunction with some of the other evidence that you've heard presented by other experts in different fields, I think the general harm would be low given the things that I've read and I understand to be happening. But I agree, you know, it's always good to be able to, there's an element of uncertainty there, of course, and it would always be good to reduce that as much as possible. But I think, given the current state of play, I think the risk of material harm would be low from the offshore sand extraction.

Q. You also provided evidence Dr Thompson didn't you for the Trans-Tasman Resources Offshore Sandmining?

A. Yes, yes I did, yes.

Q. You have recently just completed a brief file, I think it was in May this year, where you summarised what the Supreme Court's findings in relation to seabird issues in that evidence, didn't you?

A. I did, yes.

Q. Yes. Do you have a copy of that with you?

A. Fortuitously, I do, it's right here.

Q. Ms Harnett, could you bring that up, I circulated that earlier. First of all, if we can just confirm that this is the document that I was talking to you about, the document that you prepared Dr Thompson?

A. It's the very same one.

Q. If we could go down to paragraphs 8 and 9 please. So in those paragraphs you are summarising the Supreme Court's assessment of the DMC decision and there you talk about there was enough information to show there's a presence of diverse seabirds. But the Supreme Court said that there had been no systematic and quantitative study of the at sea distributions and abundance of seabirds and that the lack of detailed knowledge about habitats and behaviours of seabirds made it difficult to confidently assess the risk of effects. That's what is stated there isn't it?

A. It is, yes.

Q. Then going over to paragraph 9, and there the Supreme Court says that there has been a failure to evaluate and ensure there would be no material harm from the mine and discharges. Now, appreciating it's a different legislative framework because it's under the exclusive economic zone rather than the RMA, the issue is about a lack of information and that issue is similar to what we have got in the present case isn't it?

A. In the sense that there isn't complete information, that's correct.

1605

Q. Yes, and in the sense that there haven't been any quantitative surveys undertaken, have there?

A. For the current situation?

Q. Yes.

A. Or for South Taranaki or both?

Q. No, for Pakiri, sorry.

A. No, no, that's correct, there hasn't.

Q. And would you agree that potentially, given the nationally critical status of the tara iti, the need for information is higher here as the risk is greater if we get it wrong?

A. I think that would be useful, yes, if there was more information.

Q. Thank you.

A. That's not to say that there aren't critically endangered – or nationally critical classified seabirds using the South Taranaki Bight but also to point out that whilst they might occupy the same threat classification category, some potential effects manifest themselves differently with different species of seabirds. They might not have the same magnitude of effect.

Q. But you do agree that the tara iti is New Zealand's most endangered and at-risk bird?

### THE COURT: JUDGE WARREN

Counsel, can I just interject there. Can I be clear that the witness is only answering these questions in the context of the area of his expertise, that this seemed – I wasn't clear in the framing of the questions.

**MS MORRISON-SHAW:**

Yes. I'm just linking them to the avifauna effects, your Honour, I'm not going wider than that.

**THE COURT: JUDGE WARREN**

5 That's fine, thank you.

**CROSS-EXAMINATION CONTINUES: MS MORRISON-SHAW**

Q. Now would you be happy to produce that document, Dr Thompson, as an exhibit?

A. Of course. Yes.

10 Q. Thank you.

**EXHIBIT 8 PRODUCED – EXPERT EVIDENCE OF DR DAVID THOMPSON ON BEHALF OF TRANS-TASMAN RESOURCES**

Q. So different topic now. Now I just wanted to check, have you read the evidence of Mr Southey?

15 A. I have.

Q. You did not respond to that in your evidence in reply, did you?

A. I didn't, no.

Q. Was there any reason for that?

A. No particular reason, no.

20 Q. So we're back in your evidence-in-chief, and we don't need it brought up, but if you could (inaudible 16:07:51) 37 of your evidence-in-chief. And there you talk about that sand extraction has the potential to reduce seabird prey abundance/prey availability within and around the area of active sand extraction, don't you?

25 A. I do.

Q. And you also while you recognise that potential and you say that they're likely to be small given the large foraging ranges. But we've just had that discussion about the fact that the fairy tern, the tara iti, their range is much smaller, isn't it?

30 A. In paragraph 37 I talk about how prey availability and abundance could potentially be reduced. I don't talk in there I don't think about foraging ranges. Similar (inaudible 16:09:12) I think.

- Q. No, sorry, I'm linking that. So you're saying there's a potential to reduce prey abundance and then I'm saying that – and I think down in I think in (b) you talk about: "All such seabirds have foraging ranges that are relatively large compared to the sand extraction areas and so the effect on these species will be, in my view, negligible."
- 5 A. Okay, yeah.
- Q. So I was just wanting to clarify that that may be true for the seabirds but is not true for tara iti, correct? They're obviously not diving birds but...
- A. No, no, in terms of foraging range, it's true to say that tara iti have a reduced range available to them to forage compared to (inaudible 16:10:11) birds, correct.
- 10 Q. Would you agree that the ocean is not uniformly bountiful and that the food resource within it is patchy, so some places provide better food for some kinds of seabirds than others at different times of the year?
- 15 A. Yes, I would.
- Q. And would you also agree that birds often nest close to these patches?
- A. Often – do you mean seabirds –
- Q. Seabirds.
- A. – when you say birds?
- 20 Q. Birds. Yes.
- A. They have to nest within – it depends how you define "close". I mean birds in general have to nest and raise chicks within range of food source that they can access and exploit. I mean otherwise they would die. So it stands to reason they do. But the scale at which that occurs is very variable across species.
- 25 Q. And so if the mining affects food availability or the ability of species to exploit that food in a particular area, so the birds may not need to just fly past the affected site, they may need to fly to the next patch which might be further than just outside of the area of mining, would you agree with that?
- 30 A. That might be the case for some birds, yes.
- Q. Now Mr Southey mentions a coastal upwelling that operates during the tara iti breeding season. Do you recall that?
- A. I do recall reading that, yes.

Q. And his view is that this could provide an important food for tara iti while they're breeding. Would you agree with that?

A. If that was to happen, it could theoretically, yes.

5 Q. And then the other point that Mr Southey raises in his evidence is that there's been an unusual and, in his words, "unacceptable" number of adult fairy tern deaths at Pakiri and Te Arai. Would you agree that Mr Southey that tara iti at Pakiri and Te Arai die more often while feeding chicks than elsewhere?

A. It would appear so, yes.

10 Q. And Mr Southey expresses the opinion that one possible cause of this could be due to problems with food supply at sea, doesn't he?

A. He does, I think, yes.

Q. And do you agree with can't rule that out? Could be an issue?

A. We can't rule it out completely, no. I think it's unlikely but we can't rule it out.

15 Q. Thank you.

### **CROSS-EXAMINATION: MS URLICH**

Q. Tēnā koe, Mr Thompson.

A. Good afternoon.

20 Q. Now happily a lot of the ground, a lot of the questions that we had have been covered. I did have several more lines of questioning for you. The first point that we'd like to understand better is the process that you undertook to assign biological or biodiversity values and undertake the assessment of effects. So perhaps if I explain that a little better.

25 Dr Baber, for example, uses the ecological impact assessment guideline which has quite a structured transparent method of looking at what the values are and how proposed activities might affect those values. Can you tell us what process you undertook?

A. In a report I compiled some time ago for McCallum Bros I (inaudible  
30 16:14:38) a risk assessment approach in that report. It's a fairly well – it's a well-documented approach, it's been used extensively – it's not the only approach to impact assessment, but it does assign a value, ecological value on the basis of conservation status. So it uses the New Zealand



threat classification system specifically to assign ecological value, so that those species which are classified at a higher conservation status and for the purposes of that risk assessment are assigned higher ecological value, in a nutshell.

5 1615

Q. Thank you, that's helpful. And in undertaking that assessment, is there any consideration of cultural values, associations, relationships with any given species?

10 A. For that particular assessment approach, or the one I undertook, there wasn't, no.

Q. Did you have contact with Mr Te Rangi throughout the undertaking of that assessment?

A. I didn't, no.

15 Q. Now I wanted to confirm, and we don't necessarily need to go to the document, but Mr Baber identifies that there's around 40 fairy terns left and around nine breeding pairs remaining. Do you agree with that?

A. Yes, I agree with that.

20 Q. I did note that those particular figures were given prior to Cyclone Gabrielle. Has an assessment been undertaken of how many breeding pairs there are or birds there are remaining post-Cyclone Gabrielle?

A. I don't think so. I can't (inaudible 16:16:54). That obviously hasn't been undertaken by me, but others might have started that process to assess the effects in terms of population size, numbers of birds.

Q. But nothing's been initiated from MBL to your knowledge?

25 A. No, it hasn't, as far as I'm aware.

Q. Now in terms of the changes of the beach profile since Cyclone Gabrielle, you see your rebuttal evidence identifies that some areas have been lost (inaudible 16:17:26) or possible nesting areas, is that correct?

A. That's correct, yes.

30 Q. So would you agree that it's perhaps more important to protect the remaining habitat of fairy terns now?

A. I think it's important to conserve breeding habitat for breeding terns period, you know, full stop. I mean if Gabrielle's a sign of things to come, ie severe weather events, if they're going to increase in severity and

frequency, then it's obviously going to be important to maintain that beach habitat. It was important before Gabrielle of course but may add some extra urgency, but I think the requirement to maintain that beach habitat is there, absolutely.

5 Q. Now in terms of the effects management, our friends from council took you to a reference earlier in the joint witness statement, and please let me know if you'd like me to read the – actually it might just be easier to go there. So the reference is CB1421, and we're looking at the final sentence there, tara iti are already managed intensively by DOC via a recovery group and an additional management plan is not required. Now I just want to confirm whether my understanding is correct. Does this mean if effects are monitored and there's proven to be adverse effects on fairy terns, that the proposal is to leave it to DOC to address those effects?

15 1620

A. I'm not sure whether DOC would step in at that point and address the effects. If the effects of offshore sandmining were manifest in terms of tara iti, whether it would be DOC at that point stepping in or some other agency or how that work, I'm not clear on that.

20 Q. But there's no management plan required for MBL in your view? That correct?

A. I think it would be inappropriate for McCallum Bros Limited to develop a management plan (inaudible 16:20:41). They're not experts in managing seabirds and specifically tara iti. I think the approach that's being adopted by the Department of Conservation is, you know, gold standard.

25 Q. So your evidence is then that effects that might result from sandmining should be dealt with or are better dealt with by an organisation other than MBL?

A. Well, I think in the unlikely event of an effect being manifest – I think the, as I mentioned earlier, the draft EMMP has a provision for a beach monitoring programme that would detect any effect on the beach profile, six-monthly interval approach to that. And I would assume that that's been set up in such a way that those – any such effects, if they were to occur, would be detectable at an early stage being any effects on upper

30

beach breeding habitat for birds. And if that was the case, then there would be obviously some sort of process put in place to address those findings and act accordingly. You know, some decision would be made as to how to respond to that finding.

5 Q. So I'm a little confused as to how that would be activated if there's no requirement for an effects management plan and a requirement in the conditions to monitor.

A. Well, it's not entirely clear to me either, but there would need to be some sort of feedback from whatever monitoring is in place, should consent be  
10 granted, whatever monitoring is put in place there would need to be obviously some sort of feedback from the findings of that monitoring so that actions could be taken which would rectify the findings of that monitoring.

Q. Now the final questions I had are just on the next page, so 1420 is the  
15 reference on the joint witness statement. I'm focusing on the fourth paragraph here and second line. So: "Potential lag time means impacts may not be evident until beyond the 20 year proposed permit duration." So if that were the case, it would render any monitoring or action steps resulting from that monitoring meaningless, wouldn't it?

20 A. It would if it was the case but, as I say, I think the EMMP has provision for a monitoring programme that would actually – instructed in a rigorous and systematic way would actually allow any such effects to be detected at a relatively early stage.

1625

25 Q. But are those your initials there, DT?

A. They are my initials, that's right.

Q. And you've agreed that the effects may not materialise until after the 20 year period?

A. Yes, I did agree to that, that's right.

30 Q. Thank you. Those are my questions.

#### **RE-EXAMINATION: MR MACRAE**

Q. Dr Thompson, Ms Bielby asked you some questions about your evaluation of the risk to tara iti as stated in the last paragraph that

Ms Ulrich was referring you to, and she was asking if you'd be happy to use the word "low risk" instead of "negligible". Do you see a difference in meaning between the two?

5 A. Well, there almost certainly is a difference but I would require a definition of both to be able to sort of quantify what that might be.

Q. Well, perhaps the point is what you understand them to be because they're the terms you're using. So what do you understand the difference to be?

10 A. So I understand the difference to be fairly small between those two terms and I don't think in my mind I don't see a massive difference between the two terms.

Q. So are you equally happy to use the word "negligible"?

A. Yes.

Q. And that's the word you use in your evidence, isn't it?

15 A. It is.

Q. So do you see any need to amend your evidence as a result of your agreement that you'd be happy to use the word "low"?

A. Personally I don't, no.

20 Q. There was also some questions about the suggested two kilometre limit on extraction from the shore and that's been the subject of some discussion before as you'd be aware. Your assessment and characterisation of the potential effects on tara iti as negligible, was that made in relation to the whole of the proposed extraction area, the proposed offshore extraction area?

25 A. Yes.

Q. And you're aware that some parts of the proposed extraction area are closer than two kilometres to the shore, aren't you?

A. I am aware of that, yes.

30 Q. Mr van Mierlo asked you some questions in relation to an advisory document produced by the Department of Conservation to light-induced vessel strikes of seabirds and, again, in relation to fishing vessels. This document I think you've had some opportunity to look at but –

A. I'm familiar with that document.

Q. You are familiar, good. Does any obvious difference between the attraction that fishing boats present to birds and a sand dredge present to birds occur to you?

5 A. The obvious one is that if a fishing vessel is discarding unwanted material or (inaudible 16:29:47) a trawl mat to the surface, it represents a potential source of food that certain species of seabirds have found attractive and some species of which are keen to try and exploit. And so that provision of food, either in the hauled net as it approaches the surfaces and slips out of the surface as it enters the rear of the boat, or discarded material  
10 that is thrown over the side of the vessel, is an obvious attraction that doesn't exist in the current situation.

**THE COURT: JUDGE SMITH**

Q. It would be fair to add to that baited hooks, wouldn't it?

15 A. Indeed, yes, baited hooks as they are set out from behind a vessel on a longline, that's right.

**RE-EXAMINATION CONTINUES: MR MACRAE**

Q. Did you agree – I'm sorry, it's just as a matter of clarification because I wasn't quite sure of exactly what your answer to Mr van Mierlo's question was intended to be – did you agree though that the measures that might  
20 be appropriate to fishing vessels in relation to lighting might be equally appropriate to the *William Fraser* as a sand dredge?

A. Yes, the measures outlined in the document you are referring to are fairly standard measures that could be applied to any vessel operating at night.

Q. Are you familiar with the lighting plan and lighting standards proposed in  
25 respect of the *William Fraser*?

A. I'm not fully appraised of that, no.

Q. Are you in a position to compare the two as it were, the standards proposed, or the standards that apply to fishing vessels –

**THE COURT: JUDGE SMITH**

30 No, no advantage in doing so, no advantage in doing so Mr MacRae. This person doesn't need to be heard on the topic, that's for counsel.

**MR MACRAE:**

Yes, thank you Sir. I will take it no further.

**RE-EXAMINATION CONTINUES: MR MACRAE**

5 Q. Ms Morrison-Shaw referred you to the, if I can call it, the Trans-Tasman case, Trans-Tasman Resources case, for which you prepared evidence Dr Thompson.

A. Yes.

Q. Are the circumstances of that case different to this case?

A. In what sense do you mean?

10

**THE COURT: JUDGE SMITH**

Q. Well, from the Court's point of view, is it an onshore or offshore application?

15 A. So the application, the TTR application is outside territorial waters so beyond the 12 mile limit.

**RE-EXAMINATION CONTINUES: MR MACRAE**

Q. Do the standards, does the regime then apply to what is beyond the 12 mile limit, have the standards that might apply in terms of the effects on seabirds in the Mangawhai-Pakiri and embayment?

20 A. Well they apply in the sense that, in the case of seabirds I mean all seabirds are protected under the Wildlife Act, so that applies to both situations. Coastal policy statement doesn't apply absolutely to those applications outside the 12 mile limit but I think in the case of *TTR*, in terms of (inaudible 16:33:38) taxa, attention was given to those which  
25 have been classified as threatened under the New Zealand Threatened Classification System or under the IUCN so-called Red List classification system, yes.

Q. But are all birds capable of foraging and feeding out beyond the 12 mile limit are they?

30 A. Well some of the birds that are under consideration, species of birds that are under consideration here, would I think forage both within 12 nautical miles of the coast and beyond that. (inaudible 16:34:22) in South

Taranaki for the TTR situation, there are birds there which could forage within the 12 mile limit and forage outside the 12 mile limit. The extent to which they do so –

5 Q. Are any of those species birds that would be threatened by the operation of the *William Fraser*?

A. No.

1635

### QUESTIONS FROM THE COURT: COMMISSIONER MYERS

Q. Good afternoon, Dr Thompson.

10 A. Good afternoon.

Q. Can you hear me okay?

A. I can indeed.

15 Q. Just picking up on the monitoring. You were asked some questions about that. What would be a trigger if there was an adverse effect, are you talking about both, like beach monitoring and bird monitoring like, and I'm thinking about Tara Iti in particular?

20 A. Yes, so this is where it gets really hard, challenging I think. To construct a monitoring protocol that would definitively allow you to say that any effect you detect is a result of what has happening in the offshore sand extraction area. I don't think, my personal view is that I don't think what is being proposed in terms of offshore sand extraction would have a measurable effect on seabirds and shorebirds and so trying to construct a, you could construct a sort of monitoring programme that would be rigorous and scientific, et cetera, et cetera, you might find some effect  
25 being manifested in the species that you are monitoring. Being able to say that, with any certainty, that that's caused by offshore sand extraction I think is going to be very hard.

30 Q. Would more understanding of where they feed and forage and I suppose the, what the parameters are of what might trigger an effect, would that be, help?

A. That would be helpful in the sense that you would have a better understanding of ethology ecology of Tara Iti. You would have more information to be able to understand how it is they operate and what's

important for them. You could go beyond that and look, if you are talking about prey in the green environment you could, you know, go beyond that and look to see how that prey source varies over space and time. Not easy to do, of course, when you think about what you would have to do

5 to be able to determine how various species of prey vary in space and time. But you could theoretically do that. You could look at what species of prey Tara Iti are taking and how long they are taking to find it, that material when they go and forage and you could construct a picture of how they utilise marine resources. So all of that could be done, none of

10 that would be easy though, that would be hard, challenging work to do, in my experience.

Q. Thank you very much Dr Thompson, those are my questions.

#### **QUESTIONS FROM THE COURT: SPECIAL ADVISOR HOWIE**

Q. Hello Dr Thompson.

15 A. Good afternoon.

Q. In the case in the Taranaki that you referred to, two terms in there that I didn't really understand. One was "material harm" and the other was "effect at a population level", do you think you could explain that in the light of the current case?

20 A. So a population level in fact, in a general sense, is something that you can measure that, it goes beyond the individual. So, as a very extreme example, an individual in a population might die and that's an effect on that individual clearly, it is now dead. Whether that effect on the individual affects the population or whether it causes the population, it obviously,

25 the population at that instant will have declined by one. But whether the population will now be affected of any magnitude or importance is a different question. So population level effects are those matrix like population size, the survivability of breeding birds from one year to the next, not individual birds but across the entire population averaged out.

30 So those are population level effects. And those parameters change in birds from year to year as a result of a whole host of different factors which are brought to bear on the population. So populations in seabirds typically are not stable from year to year. I am talking now about relatively large



populations, Tara Iti are a little bit different, of course, because there's so few of them. But if, you know, you take any other seabird and you see it within a much larger population, it won't be 1,000 breeding pairs one and 1,000 breeding pairs in year 2, it will have gone up or gone down by some amount. They tend to oscillate. If they are not under any pressure or severe impacts from some source their populations will naturally oscillate around a stable position, up and down over the course of time. Material harm, to be honest, I'm not quite sure what that means in the sense of seabird ecology. I guess it's, it would be something like, you know, a population that will effect or it could even be applied at an individual level as well, but some, obviously some detrimental effect has been brought to bear on that population or those individuals.

1640

Q. Yes, and how would you apply that to this case?

A. Well, population level effects, when it comes to tara iti, you know, you don't need a great deal of sophistication to appreciate that you don't need to do a lot of work that would be required for a very large population, a species with a very large population. When the population is so low any detrimental effect becomes, you know, a population level effect. The removal of one individual is obviously a detrimental effect for that individual. It's also a detrimental effect for the population because the population is so small. You don't need to worry about whether to extrapolate from that, one individual has a detrimental effect to a population of (inaudible 16:41:14) it, by definition, will be because the population is so small.

Q. Yes, thank you very much for that explanation.

#### **QUESTIONS FROM THE COURT: COMMISSIONER PRIME – NIL**

#### **QUESTIONS FROM THE COURT: JUDGE WARREN**

Q. Thank you for your evidence, Dr Thompson. I wasn't 100% clear from your evidence, did you give evidence for McCullum Brothers in the Offshore Council hearing?

A. That's a good question. I'm honestly not sure.

Q. At your paragraph 5, you wrote a report for them in 2020, presented expert evidence at the recent joint hearing of the inshore and midshore. Is that the council hearing or something else?

5 A. That was a hearing that took – well I participated at a hearing that was in Warkworth at the time. It says –

**MR MACRAE:**

Your Honour, no Mr Thompson wasn't called as a witness for the council level hearing for the offshore application.

**QUESTIONS FROM THE COURT CONTINUES: JUDGE WARREN**

10 Q. Have you read the decision of the council, Dr Thompson?

A. Not completely, no.

Q. So I'm just wondering where your evidence fits in. So if you haven't read that decision, you don't know whether someone of your expertise was giving direct evidence for McCallum Bros before the Commissioners?

15 A. Do I know if what, sorry?

Q. If an expert similar to your expertise was giving evidence at the council level hearing, you don't know that?

A. I don't know that, no, that's correct.

20 Q. So just looking at the conclusions of the Commissioners' decision, and in a sense, and I'm going to ask you for your comment, that the line of questioning taken by Ms Morrison-Shaw about the lack of information and the no quantitative sort of investigations, et cetera, seem to be themes in the findings of the Commissioners at the council level. And I'm just wondering what has changed if you are telling us today that it isn't complete in some respects?

25 A. Well in that regard, nothing has changed to be honest. I mean the information available is not – in –

Q. So nothing has changed?

30 A. – the sense that, you know, do we know everything about everything? No, we don't. And in terms of seabirds, do we know everything about everything? No, we don't. So –

Q. Well I think you've accepted that we could do more than a desktop review as you've undertaken, you accept that?

A. More could be done, for sure.

Q. Is it common for desktop reviews to be done in your profession?

5 A. It is.

Q. In cases like this

A. It is, yes. And that's because, you know, putting it crudely, (inaudible 16:45:06) to do systematic – so as an example, if you wanted to quantify the use of a particular area by seabirds and how that varies in time, that involves going out on a vessel repeatedly throughout the year, you know. The resources required to do that very quickly ramp up. And so for these sorts of applications, it's my experience that a desktop approach is the one adopted more often than not.

10 Q. I mean even in the context that is clearly described by some of the witnesses and some of the questions put to you this afternoon about the state of the tara iti, I mean I think Ms Morrison-Shaw asked the question if the tāonga in that case is at threat then more probably needs to be done, and I think you accepted that proposition.

15 A. I think, you know, as a general – particularly in this case but as a general principle, it's always good to do more work, gather more information. It reduces uncertainty in my experience.

20 Q. It does leave us in quite a difficult position, if the council's clearly saying there wasn't enough information and here we are, experts like yourself telling us effectively the same thing.

25 A. Yeah. Having said that, I mean if it's theoretically possible to, you know, examine a situation, understand the potential effects of what's being proposed and apply a little bit of rigour to understand whether those potential effects are going to be significant or minor or whatever they might be, how they might manifest themselves, whether they manifest themselves at all, and come to some reasonable conclusions. Which is what I've tried to do, you know.

30 Q. Yes. No, thank you again for your evidence.

**QUESTIONS FROM THE COURT: JUDGE SMITH**

- 5 Q. I want to take a slightly different line, possibly because of the amount of time I've spent dealing with fairy terns over the last 14 or so years. Are you aware there's been a series of cases relating to the fairy tern and dotterels in this area?
- A. No, I'm not.
- Q. Okay, perhaps I'd better go back to first principles then. The main population of fairy tern is now at Mangawhai Spit, isn't it?
- A. It is.
- 10 Q. Are you aware that there was a consent granted back in the I think 1990s for a place called Tern Point which is next to Mangawhai Spit?
- A. I wasn't aware of that.
- 15 Q. The fairy tern from Mangawhai Spit, this seems to be well documented, Mr Southey repeats the information given to us many (inaudible 16:48:03) utilise the harbour area, especially with the young chicks and feeding the chicks but also when the chicks are old enough to feed. You would confirm that from your – if you don't know just tell me but I'm going through what I consider 101 in this area.
- A. No, no, that was my understanding.
- 20 Q. And there used to be two breeding pairs at Te Arai stream. Do you know where that is?
- A. I do.
- 25 Q. And between Te Arai stream and Mangawhai Spit, are you aware that there was a plan change done by the Te Arai Trust when the land was revested from the Crown to tangata whenua and plan changes were looked at at that time and the issues about the impacts on dotterels and fairy terns were specifically raised, were you aware of that?
- A. I'm – yes, I'm vaguely aware of that.
- 30 Q. And subsequently there was a plan change which enabled the land to be developed at a limited rate and some land vested around Te Arai Point, in part to seek to protect the fairy tern, but to provide some protection for Te Arai stream as well.
- A. Yes.

Q. Poutawa stream is the next place that had been breeding pairs and Pakiri River, do you agree?

A. Yes.

5 Q. Now I think the obvious conclusion I've reached, I want to put to you, is that the association with the ability (inaudible 16:49:35) going on freshwater is important for them and that's why they've nested in those areas. Would you agree with that proposition?

A. I would agree with that, yes.

10 Q. Now there seems to be a misunderstanding by some counsel about tara iti. Tara iti only spend their breeding and fledging season at Pakiri, don't they, or Mangawhai, and then go to the Kaipara Harbour for the balance of the year, is that right?

A. That's right.

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15 Q. And so they're there from about September/October through as late as February?

A. Correct.

20 Q. If I'm wrong on anything, tell me. It's just it's engrained, seared into my brain through all of the hearings. Now you'll be aware that the tara iti are also to known to use Slipper and Spectacle Lake?

A. I'm aware of that, yes.

Q. And are you aware (inaudible 16:50:33) taken to this court around about six or seven years ago by the Fairy Tern Trust because the council and DOC had allowed a weir to be constructed over the Te Arai stream?

25 A. I wasn't aware of that.

Q. So you were aware that the Court concluded that that prevented the passage of inanga upstream to breed in the area that somebody had spent many hundreds of thousands of dollars redeveloping for the breeding of inanga?

30 A. Yes.

Q. You were aware of that. And the Court concluded that that had affected significantly the ability of the tara iti to feed in that area and that it was a known area for feeding for fledglings?

A. Yes.

Q. The other concern that this Court has raised on just about all of the occasions, because you'll be aware also that the Mangawhai Restoration Society has had an ongoing issue about the removal of mangrove in the Mangawhai Harbour and its effect on tara iti?

5 A. I'm aware of that, yes.

Q. And that has been the subject of I can't think how many avifauna experts giving varying evidence before me on numerous occasions about whether or not it has an effect or not.

A. I wasn't aware and I'm sure that's the case.

10 Q. Are you aware that the area, one of the concerns this Court has raised and has been raised in evidence numerous times, is the number of horses, dogs and people and vehicles using the beach?

A. (inaudible 16:52:12).

15 Q. And that has included getting into the Te Arai, Poutawa stream and Pakiri stream areas, or river areas?

A. Yes.

20 Q. Now looking at those risks, would you agree – and I'm putting this as a proposition to you, I don't want to give you the names of all the cases to go and read overnight but I just want to put the proposition – given that knowledge about the mangrove removal, the construction of a residential area next to Mangawhai Spit, the stream blockage that occurred and the failure of the inanga, the animals that are access – and vehicles accessing the beach, how would you rate those risks compared with the risk within the feeding area where the sand extraction is taken?

25 A. I would say that they're much greater risks.

Q. The Court has consistently considered that those risk are a threat to the survival of the species. Would you agree?

A. I would agree.

30 Q. It seems to me that without some further protection for the Mangawhai Spit to prevent dogs coming from the residential area, which I've seen when visiting the area, prevent horses, vehicles and dogs going to Te Arai, Poutawa and Pakiri River, the prospects for tara iti are grim, would you agree?

A. I would agree. Yes.

Q. I'm sorry I get upset about it because I have spent a great deal of effort trying to protect the species, and you would agree that they do deserve protection, do you?

A. Absolutely.

5 Q. Now it seems to me that those issues are ones that can't be controlled by any condition we could impose by consent but it may be that there might be the capacity to aid and others in the protection of tara iti by working together. Would you agree with that prospect?

A. I would agree with that, yes.

10 Q. Now dotterel are in a very similar position to tara iti, aren't they?

A. In the sense that they're under threat and they breed in a similar sort of habitat, not identical but similar, yes.

Q. Yes, especially on that peripheral area of high tide where it seems to be a favoured area for horses and people to walk and can disturb the nests, if not destroy them. Would you agree?

15

A. I would agree, yes.

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Q. And predator control is another important issue, and I won't go into all the evidence I've heard about that, but the issue of predator control is very important if you're to protect these shoreline species. Do you agree?

20

A. Critically important.

Q. I just wanted to speak briefly about Kaipara because my understanding is when the birds leave with any chicks that have survived through fledgling, they then travel over the saddle by going up I presume the river, the Mangawhai River, and then crossing across to the Kaipara. Is that your understanding?

25

A. I'm not sure of the exact route but certainly that's where they end up, yes, for sure.

Q. And they would spend from March through to September/October feeding on the flats there?

30

A. Essentially the non-breeding period, yes.

Q. And do you understand that that is on some of the sand flats at which sand is also extracted in the Kaipara?

A. I'm aware of that, yes.

Q. So there's an irony to this, isn't there?

A. There certainly is.

Q. And my understanding is they're not the only species of bird that do the same. I think the dotterels do and then there's the birds that migrate to  
5 New Zealand, (inaudible 16:56:44) that also feed in the Kaipara in particular.

A. That's correct, yes.

Q. And that is regarded as a Ramsar site and one of the key migratory bird sites in the world, isn't it?

10 A. It is.

### **QUESTIONS ARISING – NIL**

#### **THE COURT: JUDGE SMITH**

Sorry I had to ask the questions in that way but it's important we have on the record the real issues in this case and why I feel that we need to focus on the  
15 birds that they're protected rather than using them as weapons in this case. And I'm not saying that that takes us one way or the other, but it does mean that I particularly am going to be focused on how do we benefit and improve the lot not only of tara iti but the dotterels and other species that utilise the area.

#### **MS BAINES:**

20 Tēnā koe, your Honour. Look, I just wanted to say, because I've been listening to you talk about the tara iti and about the cars and the people and horses and all that, and I just wanted to let you know that we do our damndest to stop the dogs, (inaudible 16:58:11) vehicles and horses on the beach as kaitiaki there, and we don't really get a lot of help from the council in regards to it. I just  
25 wanted to put that out there.

#### **THE COURT: JUDGE SMITH**

I'm obviously preaching to the choir with you but I'm simply – that's a matter for the parties to think about and I'm really just trying to refocus.



**WITNESS EXCUSED**

**MR POU ADDRESSES THE COURT – FORMALITIES (16:59:04)**

**KARAKIA WHAKAMUTUNGA**

**COURT ADJOURNS: 5.01 PM**

5

**COURT RESUMES ON FRIDAY 21 JULY 2023 AT 9.32 AM****KARAKIA TĪMATANGA****JUDGE SMITH ADDRESSES COUNSEL/PARTIES – PRELIMARIES****THE COURT: JUDGE SMITH**

5 Mr Pou, you were going to mention something?

**MR POU:**

Just inconsequential really, housekeeping matter, Your Honour. If my picture is up on the screen, you will see I am sitting here rather lonely without Ms Urlich next to me. She is actually in Hamilton today, she is online, and just for ease  
10 to stop the unmute/mute thing going on, Ms Urlich will be leading the hearing for Ngāti Manuhiri today, so I just thought I would mention that before we start Sir and you start asking people things.

**THE COURT: JUDGE SMITH**

So should I mention to you that you are not supposed to be speaking today  
15 when you find it irresistible, Mr Pou, or...

**MR POU:**

I am sure both yourself and Ms Urlich will do the same thing Sir.

**THE COURT: JUDGE SMITH**

No, that's fine and I do not really require people to tell us how they are changing  
20 the order because you are entitled to use both counsel so that is entirely up to you, it is your show –

**MR POU:**

It's more to do with because we are on the electronic thing and as we are racing for the mute buttons and those sorts of things it just creates that sort of – it's  
25 just for that Sir.

**THE COURT: JUDGE SMITH**

Just going on, I thought I should say just before we call the next witness that I grumbled at Ms Morrison-Shaw a little bit the other day but what I didn't appreciate is she had cut a lot of issues that were covered by other parties.

- 5 When we added up the time you were actually exactly the same as the estimate. So I am not to derogate from the parties doing that because it makes a lot of sense to avoid duplication of witnesses. We are looking at the overall time to deal with witnesses and try to avoid unnecessary duplication or distractions, but I cannot suggest in this case that anyone has undertaken that course of action
- 10 to date. I just wanted to give out the bouquets as well as the brickbats. At this stage we are progressing, I believe, as best we can in the circumstances and it appears that there has been some rationalisation of cross-examination to avoid duplication, which I want to say that we are grateful for. That was all so we move now to witness Mr MacRae.

**15 MS HOPKINS CALLS****CLAIRE CONWELL (AFFIRMED)**

Q. Dr Conwell, can you confirm that you have provided two statements of evidence for this appeal, one dated 23 December 2023 and one dated 9 May 2023?

- 20 A. That's correct.

Q. And as a result of the change for the appeal only relating to the offshore, I understand that there is a small update to be made to your evidence-in-chief. If I could just have her evidence-in-chief brought up, and turning to page 190 of the evidence bundle, which is paragraph 35.

**25 MR MACRAE ADDRESSES THE COURT – MR GARTON (09:39:08)****EXAMINATION CONTINUES: MS HOPKINS**

Q. So Dr Conwell, just starting at paragraph 35, can you please confirm if this evidence between 35 and 40 is still relevant?

- A. No, it's no longer relevant. Those paragraphs are specific for the inshore application only and not relevant for this current offshore application
- 30 hearing.

**THE COURT: JUDGE SMITH**

Q. Can the Court delete them, Ms Conwell?

A. Yes. Yes, thank you, please delete those.

Q. Dr Conwell, sorry. To 40, was it, 35 to 40 inclusive?

5 A. That's correct, yes. Thank you.

**EXAMINATION CONTINUES: MS HOPKINS**

Q. Thank you, Dr Conwell. Please answer any questions.

**JUDGE SMITH ADDRESSES COUNSEL/PARTIES –**  
**CROSS-EXAMINATION (09:40:38)**

10 **CROSS-EXAMINATION: MS BIELBY – NIL**

**MR VAN MIERLO:**

Sir, Mr Van Mierlo here, I have very brief questions for the Director-General of Conservation, but I'm also asked to put a small number of questions for Ms Downing for Forest and Bird. I think probably 10 minutes in total.

15 **CROSS-EXAMINATION: MR VAN MIERLO**

Q. Good morning, Dr Conwell.

A. Mōrena.

Q. Looking at paragraph 23 of your evidence-in-chief, and that's at EB187, you list a number of factors relevant to assessing the extent and degree of effects of increased suspended sediment concentrations. And then item (h) proximity of ecologically sensitive areas or species relative to the location of sand extraction. I just want to confirm, you haven't specifically considered this factor in your evidence, have you, particularly in relation to tara iti foraging potential in the offshore area?

20

25 A. No. I didn't undertake components of the ecological impact assessment as such. These were covered by the avian expert Dr Thompson yesterday and also Mr Simon West in terms of benthic ecological sensitivities. My assessments were really focused on the water column effects themselves, so without extending to other receiving environments.

Q. So you rely on those other witnesses and you haven't considered avifauna effects in terms of impacts of sedimentation? Sorry, impacts on avifauna through sedimentation?

5 A. So just for clarity, I was not looking at sedimentation in itself. That's a different process compared with the impacts I was looking at in terms of turbidity and suspended sediment concentrations in the (inaudible 09:43:23) itself as a result of the discharge of the water from the dredge vessel. The sedimentation itself is a different aspect.

10 Q. And in terms of the potential effect of suspended sediment on seabirds, you haven't looked at that?

15 A. No, it was – the effects to the seabirds themselves were considered by Dr Thompson. But just to clarify, you know, obviously the impacts overall considered as a whole, and I listened in on the evidence or the dialogue yesterday, and Dr Thompson definitely did, you know, include the outcomes of the technical reports that I was reviewing in terms of the implications of those findings for his conclusions as to the effects to tara iti.

20 Q. Now just moving on to another topic, ocean acidification. At paragraphs 6 to 26, and that's pages 6A 3 to 6A 6 in the evidence bundle, you respond to Professor Jeffs' evidence concerning ocean acidification and carbonate sediments.

A. That's correct.

0945

25 Q. Would it be fair to say that we're learning over time more about the way ocean acidification is affecting biota across different coastal sites in New Zealand and also worldwide?

30 A. I think over time yes. I think the research, as I think we probably all appreciate, it's very much, in terms of affects to biota, to themselves, it's all very much lab-based or mesocosm-based experiments. The actual in-field data so, you know, in the environment itself is still in a very, there's still a lot of unknowns. So a lot of what we know about effects to biological systems specific for New Zealand species has focussed on aquaculture species and that's been driven largely through the, I think it's the MBIE funded programme that is specifically for effects of say, sensitive life

stages, shell formation, reproductive success for key species of aquaculture interests.

Q. Yes. Just before we go to the next question. Mr Garton, we could probably take that down off the screen thank you, we probably don't need that up anymore, thank you for that. So you mention if effects arising over time and would it be fair to say that our understanding is incomplete at the moment as to what effects the ocean acidification will be over time and would it be fair to say that our understanding is incomplete at the moment as to what effects the ocean acidification will be over time?

10 A. Yes, I think that's a fair statement. I think it's, in terms of a global scale what the literature says, you know, from other international studies, it's still a lot of uncertainty and so for New Zealand is similarly there's a lot of uncertainty about what the effects of acidification will be for New Zealand. The research that I've seen has focussed heavily on, I guess, more tropical systems such as coral reef systems in tropical waters, which are subject to, I guess, significant research efforts such as, you know, the Great Barrier Reef, is dedicated (inaudible 09:47:30) looking at that.

Q. Have there been any studies done in relation to ocean acidification on shellfish at Pakiri?

20 A. Not to my knowledge. The studies that I'm aware of are focussed on those aquacultural sort of studies themselves.

Q. What about in locations perhaps nearby from which conclusions could be drawn which would be relevant to this site?

25 A. The only one that I could find was in terms of the desktop assessment for the implications for the Hauraki Gulf and that research was I think cited in my evidence-in-reply. That was done for Waikato Regional Council to provide a context of what ocean acidification means for their particular waters. Again, the findings from that, from memory, indicated that it's, as we probably expect, is highly complex, there's a lot of things at play and, particularly for the national waters in that Gulf environment, there are interactions between land-based discharges of nutrients into the regional waters themselves which can exacerbate the fluctuations in localised pH measurements. So again, it's highly dependent on factors such as

land-based discharges themselves and (inaudible 09:49:09) those sources as well.

Q. Yes, thank you. Now in your evidence you focus on carbonate rich surface sands, including column pest set settlements. You haven't considered the effects of ocean acidification on other calcifying organisms that may get caught in the sand dredge?

Q. I referred, yes so I was, the purpose of my reference to the palimpsest sediments was to explain that the majority of our understanding of ocean acidification to sediments is focussed on carbonate sediments. But for sediments (inaudible 09:49:52), I've cited a paper that includes references to other sources such as fluvial sources of sediments to our national coastal waters and so those are, you know, basically derive – that means derived from the land, so not formed by biological processes such as skeletal formations. So the reference to the carbonate sediment as a mixture with fluvial sediments was in that context, and as far as I could tell from the research documents I looked at, the research papers did not focus on those sorts of other components other than carbonate-rich sediments. So I made the comment in my statement that given that there are fluvial sources of sediments, it would be reasonable to expect sediments in Pakiri to be a mixture of both carbonate plus fluvial sediments which makes them palimpsest type. In terms of the other effects to shellfish, shells themselves, again most of that research is based from laboratory experiments and there's very little information to say what that means for, you know, in the environment itself.

Q. Would you accept that other calcifying organisms such as horse mussels are susceptible to ocean acidification?

A. I think all shellfish are. Anything with an external shell, anything with a skeletal forming type structure is susceptible.

Q. And would you agree that the impacts of ocean acidification are cumulative to other adverse effects on organisms?

A. I think everything's cumulative, not just limited to ocean acidification itself. I think everything is cumulative in terms of, you know, ocean acidification is just one part of the puzzle. We're also dealing with temperature changes such as (inaudible 09:52:15) marine heat waves, differences in

runoff from land-based activities which is probably one of the significant component of the impacts to nearshore coastal waters across New Zealand. It's not just an issue for Auckland, it's an issue, you know, regionally wide. And then there's the cumulative impacts of I guess any

5 human-based activities as well. So I think they all need to be considered, not just a single activity in itself.

Q. Thank you, Dr Conwell, thank you for your evidence.

**JUDGE SMITH ADDRESSES COUNSEL/PARTIES – FURTHER QUESTIONING (09:53:15)**

**10 CROSS-EXAMINATION: REMAINING COUNSEL/PARTIES – NIL**

**RE-EXAMINATION: MS HOPKINS – NIL**

**QUESTIONS FROM THE COURT: COMMISSIONER MYERS**

Q. Mōrena, Dr Conwell. Just a question, when you're talking the samples, presumably there's like a continuous flow of sediment or the plume that

15 (inaudible 09:55:04), so are you taking samples off that continues flow as well as I think I understood some grab samples? Can you just explain how you test the plume?

A. Yes sure. So the plume was tested as a series of transects. So there was a, obviously the dredge vessel, and the sampling vessel was

20 anchored to a fixed point and so that, the sampling vessel stayed at that particular point and took samples as soon as the dredge activity commenced. Over, as the dredge vessel, you know, moved along its course, samples were taken on an integral basis that was measured by, I think, a timing interval, so obviously the, so that the plume could be

25 measured at intervals rather than following the dredge side-by-side or, you know, to its bow basically. It was to gain a picture of how quickly, or I guess the concentration of the plume itself was extending through time as the dredge progressed and how quickly the plume itself dissipated as well. The calculations were, as the dredge vessel moved along at a rate

30 of 2.5 knot for its normal, that's a sort ambient speed at which the dredge



progresses, samples were taken at approximately every three minutes and that equated to a distance of about 250 metres that the vessel itself had moved. So samples were taken from that fixed vessel, the fixed sampling vessel, every three minutes to represent the, I guess, how the dredge vessel progressed to 2,000 metres. So samples were taken over that time period and by, the results show that after the vessel had reached 2,000 metres that the in-water column suspended sediments and to better the measurements had reduced to ambient levels or near ambient levels themselves. So that you get the highest concentrations when you are closest to the vessel but after that period of time of about, I think it was, 23 minutes to 30 minutes there were no more detectives of that plume in the water column at that fixed vessel, sampling vessel point.

Q. Thank you, and are the results sort of like averaged or how do you interpret the results?

A. So the results are taken as grab samples themselves and the transect was repeated. So you can see the differences in, between the different sampling occasions themselves and also the results were compared to ambient, we will call them ambient background levels themselves. So before activity was undertaken measurements of the water column properties were taken and also results were compared to other sampling stations at the Māhia Peninsula and also the Goat Island, just for reference in terms of the local mid-ocean conditions.

Q. Thank you that's helpful, thanks very much for your evidence.

**QUESTIONS FROM THE COURT: SPECIAL ADVISOR HOWIE – NIL**

**QUESTIONS FROM THE COURT: COMMISSIONER PRIME – NIL**

**QUESTIONS FROM THE COURT: JUDGE WARREN – NIL**

**QUESTIONS FROM THE COURT: JUDGE SMITH – NIL**

**WITNESS EXCUSED**

1000

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**THE COURT: JUDGE SMITH**

Do we know what tab Mr Pine is?

**MR MACRAE:**

Starts at page 302 of the evidence bundle Sir, he is in folder 1, Court's folder 1.

**5 THE COURT: JUDGE SMITH**

Yes, he is tab 10 so, or tab 9 and 10 I think, 10 and 10A Dr Pine.

**MR MACRAE CALLS****MATTHEW PINE (AFFIRMED)**

10 Q. Dr Pine, you've prepared have you two statements of evidence in support of this appeal, a statement of evidence-in-chief and a statement of evidence?

A. Correct.

Q. Do you have those with you?

A. Yes.

**15 MR MACRAE:**

Sir, just before I ask Dr Pine any questions, there are no changes to his written evidence. He has made separate assessments of the inshore and midshore areas in relation to underwater noise effects. But they do provide some quite helpful context and a basis for comparison between the different areas of the embayment in which the vessel is worked. Dr Pine proposes to leave those in.

20

**EXAMINATION CONTINUES: MR MACRAE**

Q. Dr Pine, are any amendments required to your evidence as a result of the withdrawal of the inshore and midshore applications?

A. No.

25 Q. Could I refer you to the joint witness statement by the marine ecologists. The relevant page, Mr Garton, is common bundle 1437. And at section 5, Dr Pine, there are some findings in relation to underwater noise and their effects on fish and marine mammals. Have you read those findings?

A. Yes, in the last 10/12 minutes, just reading them again now.

**THE COURT: JUDGE SMITH**

Q. Firstly, I take it you weren't a party to the joint witness statement?

Q. No, I was not.

**MR MACRAE:**

- 5 This is the marine ecologists, of course, Sir. Dr Pine is an acoustics expert primarily.

**EXAMINATION CONTINUES: MR MACRAE**

Q. Dr Pine, do you have anything to say about the first of those findings?

A. In the matters of agreement?

- 10 Q. Yes.

A. I would agree with the first statement based on the predicted – apart from the 168 was based on hydro flow measurements is (inaudible 10:04:13). But yes: “It is unlikely to have any hearing damage effects on marine mammals.” I would agree with that.

- 15 Q. And the second statement?

A. Second: “Is it likely that there are behavioural effects?” Physiology affects I would class differently to behavioural effects, and “significance of those effects remain uncertain”. The ecological significance of the noise effects I would probably need to defer to the marine ecologist or Dr Deanna Clement being the marine mammal ecologist. My lane is, yes, strictly the  
20 underwater noise and the propagation of noise and how far it extends of those in terms of establishing footprints. But yes, there are behavioural effects that are likely to occur on marine mammals, as I have stated in my evidence, within a limited range of the activity.

- 25 1005

Q. In terms of the range of the activities, does the question of stress arise?

A. No. No, it's behavioural effects in terms of – low or moderate behavioural effects which are sort of minor behavioural effects classed as respiration rates, swimming speeds, direction changes, that sort of thing, yeah,  
30 moderate effects being continuation of those minor effects, but nothing to do with stress.

Q. And then the next finding: “The probability of there being an effect that is more than minor,” and in context that suggests an effect from underwater noise: “Is very low.” Would you agree with that?

5 A. That’s probably a question for Dr Deanna Clement being the marine ecologist, marine mammal ecologist, just because of its relation to effects in this case, the context of this case.

Q. And finally the final finding.

10 A. Negative effects, ship strike. Probably don’t agree with that one in its entirety. Primarily that example, the ship strike risk due to a reduced ability to detect an oncoming vessel. The main reason for that is because underwater noise is a contributing factor towards ship strike in some cases but in this particular case when the activity I’m defining is in the extraction mode, so moving one and a half, two knots extracting sand, and an oncoming vessel, from the perspective of a marine mammal the activity is essentially a point source that’s pretty stationary at 1.2 knots because the oncoming vessel will be moving significantly faster so the danger will be present for maximum few minutes and, in that time, the dredger will not have moved very far and the oncoming (inaudible 10:07:16) completely different location to the activity. Snd so animals 15 have a spatial masking release, as we term it, that if you’ve got two sources in two different directions, they can disseminate between the two and the oncoming vessel will be several (inaudible 10:07:35) louder than the activity. So based on that, it would still be able to detect an oncoming vessel, yeah, and that’s why I don’t agree with that entirely. But it does 20 have a potential for negative effects because masking is a negative effect and that is established within a certain range, as are behavioural effects.

25 Q. Yes, thank you, doctor.

**JUDGE SMITH ADDRESSES COUNSEL/PARTIES –**  
**CROSS-EXAMINATION (10:08:13)**

30 **CROSS-EXAMINATION: MS BIELBY – NIL**

**MR VAN MIERLO:**

Sir, I don't have any for the Director-General but again Ms Downing has asked me to put a couple of questions to this witness on behalf of Forest and Bird and (inaudible 10:08:31). I'm happy to do that now or at any place in the order,

5 whatever is appropriate.

**THE COURT: JUDGE SMITH**

Now is fine.

**CROSS-EXAMINATION: MR VAN MIERLO**

Q. I don't think we need – we'll probably bring it up. At EB10A 8, so it will be

10 at page 10A 8 in the evidence bundle, you say the *William Fraser* being a single vessel transiting the gulf twice daily would have no measurable effect on the median daily ambient sound levels in the plots that are shown at your paragraph 30. So there we see the plots. And at paragraph 32 you've noted your view that the transiting vessel won't have

15 a measurable effect (inaudible 10:09:31). Do you have a measure of the sound level at source for the *William Fraser* when fully loaded and steaming back to the Port of Auckland?

A. No is the short answer. Not a source level.

Q. And do you think that that would be important to assess in relation to impacts on those plots from the transiting vessel?

20

A. No, I do not sorry.

Q. Could you clarify, is that not relevant?

A. Yes. So, is this in relation to sort of cumulative noise so, because that's what this paper is sort of addressing.

25 Q. Yes.

A. So yes the *William Fraser* transiting the Gulf it will be emitting noise into the marine environment while it transiting, so therefore it will have some cumulative effect. However, it's very important to understand that it will be of a negligible amount because of it's a single vessel underway of

30 9 knots. And it's moving through an area with nearly 100 other that are moving the same speed, faster, most often faster, and at levels that are higher if not equal to the *William Fraser* in transit, even under full loaded.

So because cumulative noise is added logarithmically and not lineally, by removing that one vessel transiting the Gulf, on any given day in the Gulf it's not going to significantly reduce that cumulative level. To illustrate my point, if it was using empirical data collected from an hydrophone that we've had in the Hauraki Gulf Rangitoto Channel between January 2020 and mid-2020, if we pick a day in the summertime, the 2nd of February for example, we didn't actually looked at it, there were 87 occurrences of boats of all different classes moving past the hydrophone and two passes of the *Fraser* constituted 2.3 of all vessel passes that day in the summer to, and it ranges up to 3.4% of vessel passes during the day in the winter, just to give you a range, that equated to approximately .1 or 0.15 decibel increases in the cumulative noise of the *Fraser* being present and 0.15 dB, is decibels, is not a significant number that will have any change or have any measurable affect on an animal. That's all else being equal. So when it comes to the source level, the *Fraser* under full loading is similar to any other sort of bulk carrier or cargo coming into the Ports and the noise level is not going to be too dissimilar to a large recreational launch moving through the area. So it's not an unusually loud vessel.,

**20 THE COURT: JUDGE SMITH**

Q. Can I just clarify. If this was from 2020 to '22 it would include the *William Fraser* wouldn't it?

A. Yes. So yes.

Q. So those levels are already in that hydro – in those noise levels?

25 A. Yes. So by removing them, you are looking at a .1 decibel drop in that cumulative level, all else being equal for that day.

**CROSS-EXAMINATION CONTINUES: MR VAN MIERLO**

Q. Would you agree that the *William Fraser* is transiting through an important resting and feeding habitat for Bryde's whales?

30 A. That's a question I think for again Dr Deanna Clement because I'm not the ecologist for the area. But my understanding is yes the Hauraki Gulf Marine Park is an important area for marine mammals in general.

Q. Did you hear the evidence of Mr McCullum earlier this week and he referred to an average of about 14 trips per month of *William Fraser*?

A. I did not hear him give his evidence but –

Q. But if we proceed on that basis that that is the average, around about  
5 14 trips per month, and a typical return trip from Ports of Auckland ranges to about 16 to 20 hours depending on the weather. Do you accept that?

A. Yes.

Q. So despite these hours and the frequency and duration, is it not the case  
10 that the underwater noise is cumulative from this operation to the various underwater noise experience in the Gulf?

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A. Yes. But, again, a very insignificant amount. So, you know, that  
.1 decibel increase is over one day. If you extrapolate that out to a month,  
it will be even smaller, because noise is logarithmically, so it's not linear.  
15 So over a month, those 87 vessel passes, or 85 vessel passes if you exclude two a day for the *Fraser*, turns into nearly 1,000 vessels over a month. We're getting 980 odd vessel passes over three weeks for example, so 1,000 was (inaudible 10:15:40) measured during the summertime, and therefore the significance of 17 trips becomes even  
20 less.

Q. Are these other vessel (inaudible 10:15:50), and obviously there's a lot of them, but are they evenly spread over the day or night or are they more predominant during daytime?

A. (inaudible 10:16:00) the daytime.

25 Q. I'd just like to go back to the joint witness statement marine ecology which Mr MacRae showed you when commenced giving your evidence, and it's the same page, common bundle 1437, and it is the last statement that we just looked at, the paragraph that starts: "Vessel noise generated by the activity." Now I understood your answer previously was that when you  
30 read that paragraph, you referred to activity as the dredging activity because (inaudible 10:17:01) the *William Fraser* moving at one to two knots.

A. Mhm.

Q. Is that how you interpret that statement?

A. Yes. Yes, that's how I interpret that statement as that activity.

Q. Would you have a different view about that statement and whether you agree with it or not if you interpret the activity to include the *William Fraser* in transit and at nine knots on the full node?

5 A. No. I wouldn't change my opinion on that statement. Nine knots is below the 10 knots on the transiting protocol for the gulf for safe passage inclusion risk.

Q. Right, thank you, Dr Pine.

### **CROSS-EXAMINATION: MS MORRISON-SHAW**

10 Q. Tēnā koe, Dr Pine. Do you have a copy of your evidence in reply with you?

A. Yes.

Q. Can we turn to paragraphs 8 to 10. Now the evidence in reply is in the evidence bundle but we don't need to bring it up but it's 10A 4 is the page  
15 if others are wanting to follow along. And at paragraph 8, you talk about the proposed sand extraction and that it won't be changing the environment's soundscape as sand extraction's occurring in the area. So this assumes that existing noise is occurring and it's just a continuation, doesn't it?

20 A. Yes.

Q. You're aware this is for a renewal of a resource consent (inaudible 10:19:13) like a new activity, isn't it?

A. Sorry, I missed the first half of your question.

Q. So this application for the offshore is for a renewal of the offshore  
25 application, isn't it?

A. Yeah, okay. A renewal?

Q. Yes. And so it's like a new activity, isn't it, in terms of – so when you're assessing a renewal consent, and this might be a bit more of a planning question, but you're assessing it against the effects as if that activity  
30 wasn't occurring already, would you agree with that? Have you undertaken similar noise assessments for renewal consents before?

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**THE COURT: JUDGE SMITH TO MS MORRISON-SHAW**

Q. Got to say, think it's a difficult call, Ms Morrison, as to what level of the existing environment is contributed by things that have occurred previously. To suggest that we ignore, for example, the fact that there's  
 5 been 2 million tonnes extracted would be a nonsense. So that's the reason I ask the questions because some of the environment we are looking at is environment that is influenced or includes the effects of this activity.

A. Thank you Your Honour.

10 Q. So I don't think it would be that simple to say and I certainly don't think Dr Pine, unless he has a degree in planning would even want to venture into such an argument, which sounds like a perfect argument for the Supreme Court.

A. Thank you.

15 Q. So I think reframe the question. I don't think you need to get into that issue with the witness to get where you want to go. I think you could ask your question without having to ask him to avoid that premise.

A. Thank you.

**CROSS-EXAMINATION CONTINUES: MS MORRISON-SHAW**

20 Q. Let me see if I can reframe it. You, in your paragraph 25 of your evidence-in-reply, I think it's your evidence-in-reply, you talk about that you deployed – it might be your evidence-in-chief – two passive acoustic monitoring arrays inside the offshore application area?

A. Yes.

**25 THE COURT: JUDGE SMITH**

25 in chief I think.

**CROSS-EXAMINATION CONTINUES: MS MORRISON-SHAW**

Q. Yes. So can you confirm whether the ambient sound monitoring undertaken was taken excluding the operations of the *William Fraser* or  
 30 did it include, so when you were assessing what the existing sort of sound levels were, was it including the existing extraction or excluding?

A. Including.

Q. Including. So when you've made your assessment you've made it on the basis that the noise from the sand extraction forms part of the, basically the background, the existing environment. Is that correct?

5 A. Yes, correct, because it's existing.

Q. Yes, yes.

#### **THE COURT: JUDGE SMITH**

Q. Well we won't, I just get into that. But all I've noted is that you included it in the measurements you took?

10 A. Yes, that's correct, yes.

Q. "As it was occurring" might be a better word when you took the measurements. Is that right?

A. Yes "as it was occurring" yes.

Q. I am meaning as a matter of fact it was occurring?

15 A. Yes. The two recorders were deployed and left in the water for 69 days and during that time they were operating normally.

Q. I just want to clarify that I think that included what occurred with the *William Fraser* during the time of measurement, he didn't exclude that from the data or switch it off or something of that sort. You will be aware at sometimes acousticians, for example, with bird noise will have to stand next to it so they can turn it off when the bird is sitting on top of the measurement device. In this case it was, it's a raw data including all activity that occurred and he accepts that the *William Fraser* occurred during that time.

20

25 A. Yes.

#### **CROSS-EXAMINATION CONTINUES: MS MORRISON-SHAW**

Q. In response to a question that my friend Mr van Mierlo asked about the transiting, you talked about how you were able to extract the noise levels from the *William Fraser* from the transiting vehicles. Have you undertaken a similar activity where you extracted the, or is it possible to extract the noise from the *William Fraser* from those ambient sound

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levels. Have we got that information? Is that an information before the Court?

A. Sorry, I was just, the first part, I must have not been clear on the decumulative side sorry. The noise from the *Fraser* wasn't excluded from those measurements, it was the number of vessels passing the hydrophone for that day and two of those transits would have been the *Fraser*, so just simply going on the presence of vessels moving through the area. It wasn't about extracting noise from the *Fraser* directly, if that makes sense.

10 Q. So it's not possible to, I guess, see what the – I'm sorry.

A. I'm sorry I keep interrupting and making this difficult, I am sorry, repeat the question.

Q. Yes, the question was whether or not it was possible to see what the ambient levels were using that data you've already collected but putting the noise of the *William Fraser* to one side.

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A. You can, yes it is possible to do that.

Q. But we don't have the information before us?

A. You do.

20 Q. We do?

A. But not in the evidence. So the percentile plots were presented in the assessment, in the original assessment, and looking at those you can see what the noise levels are, you know, the fifth percentile all the way to the 90<sup>th</sup> percentile, 95<sup>th</sup> percentile, and so those lower percentiles are going to be without the *Fraser* because it's not there all the time. So, yes, the form of that has been –

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#### THE COURT: JUDGE SMITH

Q. So perhaps I might be able to assist here. So what was the 95<sup>th</sup> percentile, do you know?

30 A. The 95<sup>th</sup> percentile level? Not off the top of my head. It's presented as a spectrum in the report.

Q. So would the *William Fraser* influence the 95<sup>th</sup> percentile or would it be excluded?

A. It would be excluded from that level.

Q. So the 95<sup>th</sup> percentile would give us a better understanding of the ambient level without the *William Fraser*, do you agree?

A. Yes, I would agree.

5 Q. Can that be supplied?

A. It can be supplied.

Q. Because that's a relatively simple calculation on your data, isn't it?

A. Yes, it's simply just going back to the percentile plots and (inaudible 10:26:39). So the results are currently presented as percentile plots in spectrum as opposed to broadband decibel levels, but the range was about 96 decibels to about 110 decibels. Yeah, because the way that it's calculated and it's a soundscape existing, it does include weather and waves and a lot of that geophonic sort of sources. So the 95<sup>th</sup> percentile essentially is the fifth quietest level so it's, you know, without the *Fraser* and without the weather and that sort of stuff, so, yeah, the lower sort of possible noise level, so is the 5<sup>th</sup> percentile (inaudible 10:27:18) the other extreme, so it's going to have either the roughest days or the *Fraser* being present. And, yeah, I would suspect it would largely controlled by wind and given it's over 69 days and wind and waves are essentially always present whereas the *Fraser* is not.

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**THE COURT: JUDGE SMITH**

Does that assist, Ms Morrison-Shaw?

**MS MORRISON-SHAW:**

It does, thank you, your Honour.

25 **THE COURT: JUDGE SMITH**

Q. I would suspect the 5<sup>th</sup> percentile is probably the 111 and the 95<sup>th</sup> is the 96 but I don't know. Is that right?

A. Yeah, the 5<sup>th</sup> percentile – yeah, and underwater it's opposite to the airborne (inaudible 10:27:59) present in that the 5<sup>th</sup> percentile is the lowest level and the 95<sup>th</sup> is referred to as the highest level. Yes, I know. I'm not sure why.

30

Q. That's very interesting. I wasn't aware of that. I am going to write that down because I wasn't aware, and I've been thinking about normal discussions. So the 5<sup>th</sup> percentile is actually the quietest, is that right?

5 A. Yeah, often referred to in underwater the 5<sup>th</sup> percentile is the quietest, sort of, you know, your lowest ambient noise level, and the 95<sup>th</sup> is the highest, the other end of that.

Q. Yes. Very interesting. It's the opposite of terrestrial, isn't it?

A. Yes, I understand it is.

Q. Just to confuse us all.

#### 10 **THE COURT: JUDGE SMITH**

Ms Morrison-Shaw, I don't know whether that helps or you have further questions?

#### **MS MORRISON-SHAW:**

15 No, that's the end of my question on that point but that is helpful. Thank you, your Honour, for your assistance.

#### **CROSS-EXAMINATION CONTINUES: MS MORRISON-SHAW**

Q. So moving on to a different topic. In your evidence in rely at para 10 you talk about displacement effects are unlikely to start because the TSHD – is that the trailing suction head dredge, dredge head?

20 A. Trailing suction hopper dredger, yes, the *William Fraser*.

Q. Thank you – is not a newly introduced noise source. You say that in your evidence, don't you?

A. Yes.

25 Q. So that I can understand, what you're saying is that displacement effects will have already occurred and there's unlikely to be any additional displacement effects from the activity getting consent to continue, is that right, is that fair summary?

30 A. I'm not saying (inaudible 10:29:50) has already occurred, that's for the marine ecologists and marine mammal ecologists. What I'm meaning by point 10 is that when we do see long-term habitat displacement or habitat exclusion, so animals are changing the way that they use an area, that

usually happens when you've got some pretty significant changes to a soundscape. So, and they can't adapt to it quick enough or, you know, something like that. With the *Fraser*, or sorry, with the activity, because it hasn't been the *William Fraser*, but with the activity occurring in the area for the last sort of two decades, it's, the soundscape is not going to drastically change with continuation on it and we are seeing animals coming into the extraction area over those 69 days of recording we had 62 days of marine mammal detections of dalphinids and that includes all species, I haven't broken them down into which species were detected because it was outside the scope. So there is evidence that animals are coming into the extraction area over those 69 days at least. So the animals are there, they are coming in. And so, because there's no significant changes to the soundscape from my understanding looking forward, I would suspect that habitat displacement is quite good long-term, habitat displacement, habitat exclusion would be very unlikely.

Q. So we don't know before the, we don't have any data as to the use of the environment by marine mammals prior to the existing or, yes existing it hasn't expired yet has it, offshore consent do we? So if there was displacement according to what you're saying, because of noise, it would have occurred when that activity started in the offshore. Is that correct?

A. I'm not sure.

Q. From the noise perspective.

A. What, yes, I don't know what the habitat use was prior to the activity, that's again, Dr Deanna Clement, (inaudible 10:32:08) ecologist.

Q. Yes.

A. But if a habitat drastically changed the landscape then habitat displacement, you know, is a consideration, that can occur. From a noise perspective if you have a quiet natural soundscape and then you introduce an invasive noise source and you keep that noise source going for a prolonged period of time and it's significant and that it prevents them from doing their natural behaviours or eavesdropping on their prey or, you know, things like that, it can cause an animal to leave and we have seen that in numerous cases around the world, particularly around China where significant projects have all happened at once and the animals do

change their distribution ranges within that habitat. So from a noise perspective yes. Pristine environment to the very noisy environment can have that effect. I don't know what the soundscape was before the activity 20 years ago, I was a kid in the 90s and I don't have any knowledge of habitat use in that area before any of this, so that's definitely out of my realm.

Q. What would the, so if this was a new activity and knowing what you do about the noise profile of the *William Fraser* what would be the, sort of the, would the noise change be such if we were comparing it to an area that hadn't been dredged and so we are introducing the *William Fraser*, would that noise be such that you would expect displacement effects to occur? Is it sort of at those levels?

A. No. No I do not. It on its own wouldn't be enough, in my opinion, to eliciting habitat displacement effects, especially if it's an area of ecological significance. It takes a lot to push an animal out from where it wants to be. I mean if it has high site fidelity, for example, some fish do, they will continue to use that habitat and adapt or they need to be affected rather than sort of, just sort of up and leave if, (inaudible 10:34:26) crew birds up and leave. So no, based on what I've seen with the *Fraser*, even if it was, yes, no habitat displacement and exclusion in changing habitats, it's quite a significant (inaudible 10:34:42) on the upper ends of ecological changes. There's a lot more sort of acute effects that happen well before then.

1035

Q. Turning to a slightly different topic. Now you were taken in the joint witness statement for marine ecology to a number of the points and the one of the points I don't think you were taken to was just point 6. Do you have a copy of that in front of you?

A. I do.

Q. And I just wanted to check with you, it says in point 6: "In the absence of guideline values, the risk of effects on benthic fauna cannot be determined," and in this context they're talking about the risks from underwater noise. So I was wanting to check with you, are there any

guidelines or standards from a noise perspective that you're aware of in terms of when thresholds might be met to elicit change from benthic?

A. In relation to dredging or vessels or continuous noise, no there are no guidance. For pile driving, blasting, sonar, that sort of thing, yes there are, but not for this context.

Q. Now in your evidence in reply you responded to concerns of Dr Radford regarding noise effects on other fish, didn't you?

A. Yes, I believe that is correct.

Q. And I think at your para 18 of your evidence in reply you noted there's very limited data that quantifies the level of sound exposure to elicit noise effects for fish and invertebrates. That's correct, isn't it?

A. Yes, that is correct.

Q. So no studies have been done to investigate these issues to your knowledge?

A. No, there's a number of studies that have been done, primarily out of the United Kingdom. Louise Roberts, for example, has worked with mussels and crustaceans and that sort of thing. But usually when you have noise exposure guidelines, you need quite a few studies to, you know, come into it, rather than a handful of laboratory or field-based investigations. But, no, there have been studies done on vibration and responses in invertebrates to vibration.

Q. And that's sort of internationally rather than for this specific area?

A. Oh, yes. Yes, that's right. It's nothing to do with dredging. It's lab-based and there are field-based (inaudible 10:37:30) with playback of motorboat noise. Yeah, so very different context to this, yeah.

Q. So just so I'm clear, there's been no studies you're aware of in relation to the effects of dredging on these fish?

A. (inaudible 10:37:51).

Q. Have you read the evidence of Tamati Stevens?

A. No, I haven't.

Q. Could we just bring that up please, and that's in the evidence bundle, it's page 3297, and we're at paragraph 79. So in this paragraph, if I could get you to read it to yourself and then let me know once you've read it.

A. 79. Okay, yeah.



Q. Thank you. So in that paragraph Mr Stevens explains the relationship between kōura and kina, doesn't he, and how that relationship (inaudible 10:39:39) tatetate or clicking, so inaudible sound, you agree with that?

A. Mhm.

5 Q. So would you agree that the introduction of a noise source such as extraction could have the potential to interfere or have some effect on that process?

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10 A. Yes, if the noise propagates far enough and of sufficient amplitude to a rocky reef, then yes.

Q. Yes. Or to an area where they were located?

A. Mhm.

Q. Yes thank you.

A. A reef, just because it says "reef".

15 Q. Yes, thank you. We can take that down now thank you. Different kōpāpā. In your evidence-in-reply, at paragraphs 20 to 21, you responded to some concerns raised by Dr Radford regarding ground roll and substrate-borne vibration effects on benthic and other animals didn't you?

A. Correct.

20 Q. There you stated that there's very little scientific data on the effects thresholds but that if there were any you'd expect they wouldn't propagate beyond the immediate vicinity of the drag heard. That's correct?

A. Correct.

25 Q. Have you done any monitoring, testing, modelling to support this? What was the basis for that conclusion?

30 A. So thasn't been any direct measurements off trials such (inaudible 10:41:19) dredges and vibration but there is some literature on dredging in general and drilling, for example. Usually, well ground roll is one of three ways vibration can travel through a seabed and all of them require a transmission. Often ground roll is basically when particle motions oscillate so they kind of move in multiple axis, as opposed to S waves or P waves, compression waves. So in order to do any measurements or things like that, there has to be a rationale for it, it's very tricky, very complicated to measure with a moving drag head effective ranges, and

there's literature to suggest that because the energy exerted into the seabed is not particularly high in comparison to seismic and piledriving, they are below, sort of, detection thresholds for crustaceans in those limited studies mentioned earlier. So when you have ground roll there's sort of two parts of it. One, the sediment has to have sufficient shear strength or cohesion or, you know, to transmit that energy and wet sand, or sand in general even if it, or even more so with a very high attenuation coefficient, just doesn't travel very far. And the second part is the energy being imparted to it and the source depth, the drag head is extracting sand in the top 80 millimetres to 120 millimetres, on average 100 millimetres I believe, so it's a very shallow source depth. It's the source that's *on* the seafloor as opposed to the *in* the seafloor. And when it comes to imparting energy into it, having something below the seafloor, like piledriving several metres, gives way to ground roll. And that's why a lot of the previous literature talks about ground roll in relation to seismic and piledriving. Dredging and drilling and those sorts of lower, shallower energy imparting sources, the literature doesn't really suggest (inaudible 10:43:48) discussion says that drilling and dredging is below, at 50 metres for example, is below the detection thresholds for crustaceans, or this particular crab that they were looking at. And so therefore there was no rationale, you know, to think that it would go any appreciable distance based on what the physics is telling us of the area.

Q. So you'd be aware, wouldn't you, because you said you (inaudible 10:44:20) joint witness statement now, that in section 8 of that there's a conclusion which was agreed by all of the expert marine witnesses that there needs to quantification of the spatial and temporal effects of ground roll from extraction events, you're aware of that statement?

A. Yes. Yes, I did learn of that statement very recently.

Q. And would you agree that that would be helpful in terms of determining effects?

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A. Yeah, it's a very good question. So in terms of would it be helpful in determining effects, well, as a scientist I love data. So if you had it, then it takes this out, right, means you've actually got that certainty, you can

actually know it. In this case, it can be done, you can measure it. It's just it's very complicated, it's very expensive, it's very – it would take time to do it, you know, you have a borehole geophone and things like that which, yeah, so sort of what would you gain from it and, if you did have the levels, what would that mean ecologically I guess is the two things. And because the literature is all saying that it isn't really going to – or it shouldn't propagate beyond the immediate vicinity, you know, like from the extracting area it's not going to cover a massive area of ocean like the pressure wave component in the water column is for marine mammals, and so, yeah, looking at it, there needs to be a quantification to move forward. I'm not sure I entirely agree with just seeing it now with what we know. So if there's evidence to, you know, suggest that, yeah, the ground roll will be, you know, quite a distance propagating then it will reach, you know, mussel beds and things like that, then it might be different. But my understanding is the physics suggests that it shouldn't really be that much of an issue outside the extraction area. And if you had a number, what would that mean.

Q. And were you here earlier in the week when Mr West was questioned?

A. Yes, I was in and out the day before yesterday, and I did see him being questioned but not in his entirety.

Q. I'm not sure whether you heard this then where he was questioned about the extent to which we knew (inaudible 10:47:09) down on the seafloor and the extraction area and the extent to which the sampling and the pre-extraction surveys could pick up what's actually on the seafloor in terms of, in the side sonar scans, et cetera, in terms of like hururoa, the horse mussels, and other things, and his evidence was that we wouldn't necessarily pick up some of those if there's only three or four in a particular area in which case you could be extracting quite close to where some of the horse mussels are. In that sort of situation where we don't have the knowledge of what's exactly there, would that change your view in terms of the necessity for quantifying the spatial and temporal effects of ground roll?

A. Only if, and it would come from an ecologist rather than me, if the vibration emitted from the drag head is above a detection threshold for a mussel,

which there is one paper on mussel responses by closing their valves, if the energy imparted is enough to elicit a response sort of like that, then it could be worthwhile doing it. It comes down to ecological significance, and this is why I'm (inaudible 10:48:35) it would come from an ecologist.

5 If it's found that, yes, these ground rolls can happen, I haven't seen any studies to say that ground roll from dredging is above (inaudible 10:48:48) level, most of the work is piledriving and blasting, (inaudible 10:48:51) more energy and this is a drag head on the sea surface, but if there are sufficient numbers of mussels in the area and, you know, there is data to

10 suggest that the energy from the drag head will be enough to elicit some response, then it's up to the ecologist to decide whether that's worth pursuing ecologically or not. At that point it's out of my region (inaudible 10:49:16) simply to say that, yeah, it's vibration or it will go potentially this far or not and that's where it ends. But based on the literature that I've

15 seen and experiences (inaudible 10:49:34) dredges, I don't believe the energy being imparted into the seafloor will be enough in this case, water-logged, unconsolidated, non-cohesive material at maximum 12 centimetres or 120 millimetres depth, will elicit sufficient ground roll. The other important factor is ground roll the speed at which ground roll

20 happens is very slow compared to compressional waves, it's got 90% of shear wave velocity, which is about 65/75 metres per second, as opposed to sound and water, which is 1,500 metres a second, or a compressional wave which could be 16/50 metres a second a second for sand. So yes, as I said the physics doesn't suggest to me that it's going to travel, you

25 know, hundreds of metres –

1050

Q. Length.

A. – from the drag head yes.

Q. Thank you Dr Pine, thank you for your evidence and thank you for your

30 answers.

### **CROSS-EXAMINATION: MS WIKAIRA**

Q. I don't know if you will be able to answer this but we can hear a low humming from the dredging boat onshore when it's out on the water. So

are you saying that that humming noise that we hear and drives us crazy, (inaudible 10:51:11) effect on any of the sea life in the water? Is that what this is?

5 A. That's airborne noise. I, yes sorry I don't have any knowledge of the airborne components that would be, yes it relates, what you can hear I'm only strictly underwater. But in the interest of assisting you, the two are very different. Airborne, what you are hearing is above the water and it's propagating on the sea surface. But the marine life are detecting sounds under the water and it propagates very differently and they hear sound  
10 pretty differently to us. So yes the two aren't really comparable like that.

Q. Thank you.

### **THE COURT: JUDGE SMITH**

Thank you and I think Mr Styles is the person to ask that question, he is the terrestrial acoustician so – is there anyone else with questions?

### **15 MR POU:**

Your Honour, I said Ms Ulrich was going to take all our questions but she is off just for the next hour. I have got one question.

### **CROSS-EXAMINATION: MR POU**

20 Q. I have read your reports and I am not going to ask you anything significant about your report but all of yourself and Ms Clement, Dr Clement, you talk about a range of whales but nobody is mentioning the Minke whale, tangata whenua evidence has specifically made reference to a pakake, which is Bryde's whale and this is in Rangi Brown's evidence, and a pakake ma, it is a Minke whale, and they have called this area  
25 Te Arau Pakake Ma, which is the pathway of the Minke whale. Why has nobody, and I don't know if it would make a difference but why has nobody made an assessment of the impact on the Minke whale. I don't know if they have got different ears or anything?

30 A. Yeah, no, it's a good question. I'm not sure of the answer, a direct answer, so I think it would be probably more again Dr Deanna Clement, being the ecologist, as to which species are in the area. From an

underwater noise perspective, it doesn't make a difference in the assessment because the minke whale is also a low frequency cetacean hearing so classed in the same group as the Bryde's and the humpbacks and all the other large baleens of mysticetes. And again, similar to other, you know, low frequency cetaceans, the audiogram that we use is a representative one across all of those species that are, you know, all the mysticetes and baleens. So the input data is the same for that, you know, as for Bryde's, so.

Q. Thank you for that. Yeah, it is just a noted omission but thank you for covering that off in terms of that impact. Just the last one. In response to a question to Ms Morrison-Shaw you said over the time that you sampled you had marine mammals coming into the areas, I think for the majority of the time. Were you sampling when the dredging was occurring at night?

A. Yes. So yes, so the hydrophones were placed at the seafloor and they were there in the 25 metre depth, so just inside the offshore extraction area, and they were left there for 69 days over two deployments, 69 days over two deployments between April and May or June, during that time period, and over those 69 days, yes there 64 detections of delphinids, so odontocetes, toothed whales, yes coming in at all times of the day and night, and the *Fraser*, well the *Coastal Carrier* at the time, would have been operating during those 69 days, yes.

1055

Q. I understand that the *Coastal*, which ever boat it was, was operating at the time. The specific question is, and that whales were coming in during that time but were they actually in there while the extraction was occurring, when the noise was actually there, and it's about, and how does their presence when the hum is there correlate to the presence when the hum isn't there?

A. I haven't looked at that specific question I'm afraid so I can't, I can't answer it. It would involve going back to the data again in the logs of when the vessels were there and then just correlating that with when the times were and just overlaying the two and that's how you get that answer. It was outside, sort of, the scope because what we were doing

was, sort of, characterising the soundscape and the marine mammals make up that soundscape as a biological source of noise. That's it, yes, that's kind of where it stops.

- Q. Thank you. Thank you Sir. I found your evidence fascinating for what it  
5 is worth thank you.

**THE COURT: JUDGE SMITH**

Anyone else in my mystery package now, it has gone from two people to four.

**RE-EXAMINATION: MR MACRAE – NIL**

**QUESTIONS FROM THE COURT: COMMISSIONER MYERS – NIL**

10 **QUESTIONS FROM THE COURT: SPECIAL ADVISOR HOWIE – NIL**

**QUESTIONS FROM THE COURT: COMMISSIONER PRIME**

- Q. Could you tell me, is the intensity of noise increased when it happens underwater?

A. In relation to what sorry?

- 15 Q. Well in, well I can remember as a kid I suppose diving and getting two stones and when you whack them together underwater it's a heck of a lot louder than when it's above water. So I'm just talking about ordinary sounds.

- A. Yes, so it's sort of a tricky question I guess because what you are talking  
20 about is your perception of sound underwater and human's perception of sound. We are not the best, yes our hearing is pretty fascinating underwater, bone conduction, so we actually hear sound underwater using our jaws and skull as well as our ears because our ear canals fill up with water. So in air they work because the, you know, pressure waves  
25 into the ear canal and it the eardrum and so on and so forth. In water the ear canal is completely logged with water, there is no air in it right so those compression waves don't travel as well. So instead, if you are underwater the sound reverberates sort of, it will conduct through your jaw or through your skull and that's why if you had a dive hood you can hear sounds

underwater just the same as if you take your dive hood off because you are not hearing with your ears. So yes, in terms of intensity for the animals it's, it's (inaudible 10:59:08) listening outside of the water to the intensity is, it doesn't really have a human element to it. So it's, yes I don't know how to answer it directly sorry. Because listening is sound energy and the energy is what energy is underwater, yes.

Q. What I am trying to get at is how are you able to assess that it's unlikely to affect mammals if you can't interview the mammal I guess.

1100

10 A. Right, yes. So the, all the marine mammals will have a hearing threshold. So just like us right, they are called an audiogram and if the sounds or, you know, the sound energy is high enough, is loud enough, has a high enough amplitude, and it exceeds that threshold, then it will be audible. And it's the same thing with humans, we have audiograms, and if hearing  
15 loss occurs, then your thresholds increase and so the sound has to be louder to be able to hear. So how they do it with marine mammals is a lot of audiograms come from captive marine mammals, so that's (inaudible 11:00:33) information on killer whales and bottlenose dolphins and things like that because they're in marine parks, and so they're able  
20 to do hearing tests, just like they do with humans, and see which ones trigger the brain responses when they play back sounds. With large whales, you don't have any large whales in captivity so that's why those audiograms and hearing thresholds are based on modelled threshold audiograms which are based on the skull size and shape. So that's sort  
25 of how they do it. Does that answer your question?

Q. Yes, it has answered my question. Thank you very much.

#### **QUESTIONS FROM THE COURT: JUDGE WARREN – NIL**

#### **QUESTIONS FROM THE COURT: JUDGE SMITH**

30 Q. I really just want to ask one high-level question or one high-level issue, and this is based just upon observation that vessels leave either down the Rangitoto Channel or through the Motukorea Channel. Those that would be of more interest to us are the ones that leave via the Rangitoto



to the north, and that includes a lot of very large vessels, in other words the big freighters and container ships. That's correct, isn't it?

A. Yes, that's correct, yes. The Rangitoto Channel has all of those vessels as opposed to any channel.

5 Q. So those vessels would tend to work along the east coast and many of the vessels you'd be picking up and even past Leigh would be these larger vessels that are heading north that go between – do they go inside Little Barrier or outside Little Barrier? I just don't know. Do you know?

10 A. My understanding is that once they get up – depends on where they're going. They can go outside Little Barrier and they can go out past – in the Colville Channel out past Coromandel and the Barrier if they're going off that way, or they can go through the Jellicoe or to the Barrier and Kawau as they move north. So my understanding is it depends –

15 Q. So I would have described that as a fairly busy maritime environment, because it's a major pathway into Auckland. Would you agree?

A. Yes, I would agree. The inner Hauraki Gulf is a very busy piece of water.

Q. And accordingly the areas such as Omaha, inside Kawau Island, Orewa, tend to be more recreational vessels.

A. Yes.

20 Q. If you can't comment, tell me, but it seems to me that they move a lot (inaudible 11:03:20) 10 kilometres.

A. Absolutely. The recreational vessels are very fast moving and very loud as well.

25 Q. And I'm assuming by going faster, they have two potential effects. It would increase the potential to hit a marine mammal and also annoy them, if I can put it that way, and this is based upon a lot of evidence we heard in the Bay of Islands where it's not uncommon to see, what are they called, sea-doos or little things chasing the dolphins and other vessels, recreational vessels, chasing them. Have you had any  
30 experience of that and the impact (inaudible 11:04:07)? Just of the impact of directly chasing whales or dolphins and the noise with recreational vessels?

A. I have not personally. But there is a body of research, you know, for whale watching boats, for example, they do look at the impact of tourism

operations on marine mammals, and, yeah, that sort of harassment is a thing.

Q. And I'm not aware, it may not even be in your field, I'm not aware of any evidence showing that maritime vessels, and by that I mean either  
5 freighters or (inaudible 11:04:51), have any particular – I mean they travel at such a speed they can hit sleeping whales, for example, the big ships, but beyond that I wasn't aware of any particular literature on them having a greater affect than recreational vessels or whale watching vessels, et cetera. Have you, is there such data?

10 A. Yes, I think this is outside my field.

Q. Yes, that is fine, it is probably going too far.

A. I believe, yes I believe there are some papers out there, I'm just thinking of the work that, the outstanding work that Rochelle Constantine at the University of Auckland does, and she is a (inaudible 11:05:35) with  
15 Bryde's as well. Yes, I mean in other parts of the world we do see yes, no it's not my area.

Q. No, no, I think there's some issues about vessel strikes particular, you know, at sea. But those are large vessels travelling at the sort of 20 knots sort of idea. Anyway I do not think that – I am going off on a tangent  
20 which is not of any assistance to any of us so I will stop there.

**QUESTIONS ARISING – NIL**

**WITNESS EXCUSED**

**JUDGE SMITH ADDRESSES COUNSEL/PARTIES – BREAK / TIMINGS**  
(11:06:10)

25 **COURT ADJOURNS: 11.08 AM**

**COURT RESUMES: 11.45 AM**

**MR MACRAE CALLS**

**DEANNA CLEMENT (AFFIRMED)**

5 Q. Dr Clement, have you produced two statements of evidence in relation to this appeal, one a statement of evidence-in-chief and one a statement of evidence in reply?

A. Yes, I have.

Q. And do you have those with you, Dr Clement?

A. Yes, I do.

10 Q. Does your evidence need to be amended in any way in your view as a result of the changes that have occurred since you wrote your statements and they were filed and today, particularly in relation to the disposal, as it were, of the inshore and midshore applications as a result of the Court's orders following the interlocutory applications heard a month or so ago  
15 and, secondly, as a result of the proposed reduction in the size of the offshore extraction area?

A. No.

Q. Could I turn you to the joint witness statement for the marine ecologists and, again, to page 1437, section 5. Dr Clement, have you had a chance  
20 to examine the joint witness statement that the marine ecologists produced?

A. Yes, I have, just recently.

Q. And do you have section 5 on the screen before you?

A. Yes, I do.

25 Q. If I take you through the findings of the marine ecologists, and just to clarify first, there was no caucus for experts on marine mammals I think, was there?

A. No, there wasn't.

Q. And is that because you're the sole occupant of that title I suppose at the  
30 moment in these proceedings from a scientific point of view?

A. Yes, that was my understanding.

Q. Well, these findings in section 5 by the marine ecologists are of some relevance to your area, and could you please make any comment that you have in relation to the first?

5 A. In terms of the matters of agreement, I am in the agreement with the first statement that based on the in situ recorded noise levels, not predicted, it was unlikely that there'd be any hearing damage. The second one I am of similar mind as Dr Pine in that, yes, there are likely to be behavioural effects to noise but these do not relate to physiology stresses put in here. And the significance of the effects is uncertain, I think that is a true statement but the caveats around that statement are the fact that 10 behavioural effects in general for marine mammals can differ per species, they can differ per the age groups that are being impacted, and they can differ in relation to what the animals are doing at the time. When we talk about behavioural effects, we are looking at changes in respiration rates, 15 so how often they are remaining at the surface, often they are diving, if they are tending to carry on any behaviour such as socialising or resting and they are changing those behaviours. So they are difficult to quantify but, in general, they have given some real general standards for noise thresholds around this. Not everyone is in agreement but they have put 20 some out there and those are the levels that Dr Pine has modelled in his original assessment of effects and that we base these on. We have also done a bit more work on these, looking at low and moderate effects. I wouldn't say the significance is uncertain completely but is complicated and difficult to ascertain on a per species basis and so we have some 25 general guidelines that we use and in this case we have considered those to be very low or low level effects.

Q. Just referring to that conclusion then "very low effects", does this statement by three of the marine ecologists alter your conclusions at all on the significance or scale or measurability, as it were, of the effects of 30 noise?

A. I don't think this really points to the measurability of those per sae in terms of this but I think no, this statement does not change my opinion on it.

Q. Then there are two matters of disagreement. The first one probably you don't need to comment on but it's up to you. But the second one, do you agree with what is said there?

5 A. Again, the second one I'm of similar mind with Dr Pine, the vessel noise is generated by this activity. In terms of having a negative affect that might increase the risk of ship strike, I do not believe is probable, it is such a low level and the ships, in terms of noise with multiple sources, as Dr Pine explained, a lot of it depends on the proximity, it depends on the activity and, given what we have measured from the dredge itself and the  
10 low level compared to the other ships, they would be able to hear and indicate where another ship is very easily.

Q. Thank you Dr Clement. Would you answer any questions please?

A. Yes.

#### **THE COURT: JUDGE SMITH**

15 So we firstly go to you Mr van Mierlo.

#### **CROSS-EXAMINATION: MR VAN MIERLO**

Q. Mōrena Dr Clement, can you hear me okay?

A. Mōrena, yes I can.

Q. At paragraph 56 of your evidence-in-chief, I don't think we need to bring  
20 it up but I could just refer you to the statement. You note that: "Bryde's whales are present in the Gulf year round and have an extremely high vessel strike rate within Gulf waters given their tendency to rest or remain just below the water surface." I would just like to ask a couple of questions about that if I may. Are you aware that the *William Fraser* transits from  
25 Ports of Auckland to the extraction area?

A. Yes.

Q. And you are aware that –

A. Sorry, can I just correct that. They do leave in the evening, early evening, and they return in the early morning, depending on the time of year.  
30 Sometimes this is in the daylight and sometimes this is in night-time.

Q. Right, thank you yes. You are aware that Bryde's whales have been observed through the area where the *William Fraser* transits?

A. Yes.

Q. Is that correct, yes. Would you agree that the transit route goes through important resting and feeding habitat for Bryde's whales?

A. Within the inner Hauraki Gulf?

5 Q. Yes.

A. Yes.

Q. Would you agree that it's quite likely that the sleep or feeding of these whales could be disturbed by the transit of a vessel?

1155

10 A. Are you just – in terms of noise?

Q. Well in terms of noise or any other impacts of the vessel transiting through areas where these whales are resting, feeding, sleeping?

A. In terms of a noise effect, I don't think it probably has much effect given the fact that the other container ships and shipping in the area would  
15 (inaudible 11:55:32) top of the dredge most times when this is taking place, and these animals have remained in this area and are continuing to be in this area with those noise levels and they continue to take those sorts of behaviours, or undertake those sorts of behaviours in this area. So I think while there might, in terms of the transiting, there might some  
20 noise level effects, they would be very low in relation to the context of the gulf in general.

Q. And at paragraph 61 of your evidence-in-chief, you refer to the Ports of Auckland Hauraki Gulf voluntary transit protocol, and I understand you've recommended that that be formally implemented through the consent  
25 conditions, is that correct?

A. That's right.

Q. Are you aware that there's no reference to that in the proposed conditions at the moment?

A. Yeah, I can't – I'd have to look at it per se but I think that that is because,  
30 given the protracted timing of all of these reports when they came out and then leading up till today, that they have already become part of that protocol and have been assigned to it fairly early in the process after I had made the original assumption of that, or a recommendation of that, and I've just left that in there as that was part of the process. But as far

as I'm aware, they are now part of the protocol and following it and ascribe to it.

Q. Just turning now to your reply evidence, at paragraph 13 of that you state there will be less than minor effects – or you say your opinion that there will be less than minor effects is after any mitigation actions, and that the risk of strike is still possible but more likely to end in a minor injury. We can bring it up on screen if that would help or have you got it there?

A. Yeah, I've got it here.

Q. And then at paragraph 13(c) in that reply evidence, you say that the consequences of a vessel strike would be at the population level for Bryde's whales given its current threat status and population size. Is it only population level effects that you consider should be avoided in respect of Bryde's whales?

A. I guess what other level are you thinking?

Q. Well you refer in 13(f) to prospects of a minor injury.

A. Mhm.

Q. Is that a population level effect?

A. So, yeah, okay. So in terms of a consequence back on sea, the discussion is related to a death of a reproductive female, mortality rate.

And then (f), yes, I'm discussing the fact that because the *William Fraser* transits at the speed that it does, it has a much lower or less draught than container ships and the size of it, if it were to strike an animal it would more likely end in an injury. So if this was a reproductive female, depending on the injury, she could still go and be able to breed and contribute to that population. So at that point it would not have a population level effect. The effect would only come if it ended in a mortality where it was a female no longer contribute to the population. Is that what you are asking?

Q. Well, yes, it is. But I suppose the follow-on question is those effects that might be less than population level, are they effects that in your opinion that should be avoided or not, if they were to materialise? Are we only concerned about population level effects with this species or other effects?

1200

**THE COURT: JUDGE SMITH TO MR VAN MIERLO**

Q. Can I clarify. Are you talking about transiting or are you talking within the, while the activity is occurring?

A. Yes, well I think the context is transiting Sir but –

5 Q. So on what basis is there an argument of any ability to control transiting? I don't understand we have any ability to do so, it is a Maritime New Zealand issue.

A. Yes, I think that's something that Ms Downing thought –

Q. We will come back to that later then.

10 A. Yes.

Q. So we are talking about transiting. Carry on.

**CROSS-EXAMINATION CONTINUES: MR VAN MIERLO**

A. So I guess in terms of the question that you've asked, in the way that I have gone through and made my judgement, we look at individual,  
15 regional and population level effects.

Q. Yes.

A. So an individual injury would not necessarily be the same as a population level, for me. Is that the question that you're asking in that context, because I don't think an individual level would merit a significant effect,  
20 no.

Q. Finally, your table 1 to your evidence-in-chief, it sets out various potential effects that you've identified. If these effects were to occur cumulatively, so rather than individually, so a number of them were to occur or were to materialise, is there potential for a non-transitory or more than minor adverse effect on specifically Bryde's whales?  
25

A. So to rephrase your question, you are asking if while they are dredging we had the effect of any of the underwater noise a vessel strike, artificial lighting, entanglement or all of those together as a cumulative effect on any of the marine mammals or, in particular Bryde's whale I think you are asking?  
30

Q. Well in particular Bryde's but if you can answer in relation to other marine mammals it's relevant that would be helpful. But –

A. Yes, I think you could –



Q. – the primary interest is Bryde’s whales, yes.

A. Yes. I think you can tell from the table that most of those are nil to negligible. So the only real effect the dredging itself will have on any marine mammal in the area is most like vessel strike. In the case of the dredge dredging it will be more likely the whale hitting the boat than the boat hitting the whale.

Q. Yes.

A. Because it’s curious. So the only real effects that could be undertaken or could occur while would be underwater noise and the level of assessment that I put there is what I would think those cumulative effects would be.

Q. So you have assessed them cumulatively as well as individually, would that be correct?

A. Well yes, this, the table lays them out individually but together the only effect that would be taking place at that time would be the underwater noise effect.

Q. Thank you Dr Clement. Thank you Sir.

### **CROSS-EXAMINATION: MS MORRISON-SHAW**

Q. Tēnā koe, Dr Clement. Just starting with your evidence-in-chief and we don’t need to bring it up, but in that you state, I think at para 13, that you are familiar with the site. So just wanting to clarify, you’ve visited the Pakiri-Mangawhai environment?

A. I haven’t been out on the water but I have been on the beach on several different occasions for personal trips.

Q. So, sorry, you just said you haven’t been on the water, so you haven’t been on the boat, whether it was the *Coastal Carrier* or the *William Fraser* transiting to the site or extracting?

A. No.

Q. Can you clarify for me, were any specific marine mammal surveys undertaken for this project?

A. No they were not. This was a desktop assessment only.

Q. Are you aware of whether any were undertaken previously for any of the previous MBIE consents, were you referred to any?

A. No, there were none that I was aware of when I asked if they had any information. But I know that they has been in the process of putting together a sighting log of the trips that they were undertaking and they supplied those to me as I was doing my assessment of effects.

5 1205

Q. So the sighting logs, they are sort of observations that the staff on the boat may have made of marine mammals while it was operating?

A. That's correct.

Q. And you took that into account as you were preparing your assessments?

10 A. That's right.

Q. So we don't know, do we, the extent to which marine mammals currently use the embayment and the extent to which they'll be affected by dredging?

A. I agree with your first part of that statement. There has been no  
15 systematic surveys that have been done (inaudible 12:05:39). That is actually very common for most of New Zealand. The place that surveys take place are usually places that are easy to access, that have a university or have a research organisation that's been there. There has been numerous aerial surveys and boat surveys that have been done  
20 around the Hauraki Gulf and there's been research undertaken by some private organisations north of that area and along the area in terms of for orca and other things. The Department of Conservation keeps a sighting database of any sightings made anyone along the coast, and that often includes tourism boats as well as seismic survey, mining vessels or any  
25 other government vessels that are out and about, and those will have to be reported, and those are put into their database that then we use and (inaudible 12:06:32) display in my assessment. Those are done over decades. So of course some of the sightings from probably more than 20 or 30 years ago might not have been as systematically done as some of  
30 the stuff that's done a bit later. But it is all in that database and available.

Q. I think at the beginning of your answer you referred to aerial surveys. Is that sort of aerial transects where you fly over to identify whether there's any marine mammals at certain times?

A. It can be for both. Fisheries in the past used to use those to locate bait balls for fishing a long time ago, and they would also sight marine mammals when they were flying those. The more recent ones are usually for estimates of marine mammals and there have been quite a bit done in the gulf and around the channels leading into the gulf area.

Q. But we haven't had any of those aerial transects flown in the Pakiri embayment?

A. No.

Q. And would you agree that that sort of information might be helpful in terms of determining the extent of use, appreciating that you would need to do them at different times of year to capture the different seasons?

A. Yeah, I guess that's the point, and to your second point when you said that we can't be able to assess the effects of dredging, it depends on what your question is. If your question is how is noise going to affect these animals, we have fairly good, as Dr Pine has indicated, we have these animal – the animals are broken into their hearing levels and we have some standards, some very good standards from overseas, that let us know when those reach certain levels that would cause effects in terms of temporary and/or permanent hearing. Those can be applied pretty broadly to all those groups of animals. So even if an animal wasn't (inaudible 12:08:32), anything that we put in place that might protect a baleen whale will protect all the baleen whales in terms of a hearing threshold. So whether those animals are there or not at the time that that survey took place and/or if they visit at different times of years, they would still be protected regardless if those hearing thresholds are in place. So depending on what your assessment is for. If your assessment is for use in terms of how frequently they're there and what they're doing, then, no, we wouldn't necessarily have that information from just the desktop. However, given the desktop information that's been used to date from the DOC sighting database around New Zealand, we have a fairly good idea of locations where we have groups of animals (inaudible 12:09:23) that smaller home ranges that tend to hang or remain in particular areas for particular periods. And that's come from the public as well. We would know that these days with the amount of social media in terms of these

animals. And all of that information can go into an idea of how an area – how frequently these species or what species might visit an area and whether it is a residential area for them or whether it's part of a larger home range and which they regularly pass through. And those are the sorts of assessments that we're doing for these.

1210

Q. Thank you, that's helpful. Now in paragraph 38 of your evidence-in-chief you say: "Little research has focussed specifically on effects of dredging or sand extraction on marine mammals," and I think that similar point was put to Dr Pine who agreed that there had been little research. Without that specific research can we be certain that there won't be effects on marine mammals from sand extraction?

A. I think, in terms of the Todd Review that was done, they've looked at everything overseas that has been done and a lot of the studies haven't been focussed on the marine mammals themselves, they have been focussed on dredging and the effect that it has on the ecosystem and then the marine mammals are brought into it. So there's not too many studies from a marine mammal perspective only is kind of where that is directed. But there has been a lot of data that has been collected on dredging and noise and we have quite a bit of information on dredging and its effect on the habitats. The indirect line between how a habitat changes and a marine mammal there has probably been less done. But it's often the case where these animals aren't living there long enough to be able to get that kind of data, they are not resident till, they are passing through. However, I must say, this also relates to the fact that we don't have much in New Zealand but we do now have, we've just completed a study in Lyttleton Harbour in which they were doing capital dredging of a dredging channel and it was in the Hector's Dolphin Sanctuary, we have data from that now that we can look at to see the effects at least on that species. So we are beginning to collect that data.

Q. Thank you, and that most recent data that you just referred to, was that considered as part of your assessment or is that –

A. No.

Q. – to come subsequent?

A. That's only just, yes it's only just been completed.

Q. In your paragraph 68 you say that: "McCallum have been dredging in the embayment for more than 75 years and therefore it is unlikely that the areas aren't unimpacted or pristine and it is unlikely that the sites currently serve as unique or important feeding grounds for marine mammals." So just trying to understand what that means. Are you (inaudible 12:12:20) because of the historical dredging that the effects have already been felt if there was to be, such that that may have reduced the usage or the benefit of that area for marine mammals for feeding?

10 A. I guess my point in that is that I, I can't say what the before was we don't have any data on it so I don't know what the before is, we only know what it is in this case. The second part of that is, that has been going on for 75 years. If that was a unique or an important feeding area the dredge skippers would know. We would have regular sightings of those animals in that area and they would be identifying that they are seeing these animals on a regular basis and at regular times a year and/or in particular regions. So I mean I guess that's kind of, with that desktop data that we've discussed before, that's what we get a feel of over decades of use of particular areas is, these reports don't go unnoticed. If they are there they are reported, people talk about them, they are brought up, and so I guess that's the two part of that. I don't know what it was like before but if there was a case that it was now we are not seeing that in any data that is coming through.

25 Q. Before you mentioned that you were provided with some logs with observations from the staff on the boat. How far back do those logs go, just roughly?

A. It wouldn't be more than a year or more than I think that I had started working on it. So those were their formal written down logs.

30 Q. Different topic now. Have you read the evidence of Ms Olivia Haddon and Dr Craig Radford?

A. I don't remember Mrs Haddon but Craig Radford...

Q. So with, and they both mention it so I can just talk about Dr Radford's evidence. In his evidence he talks about false killer whales and that they frequently use the environment as a feeding and resting

area and Ms Haddon says similar and I think Dr Radford says, especially during autumn. Now you didn't respond to Dr Radford's evidence in your reply did you?

A. No. I believe Dr Pine had covered that, yes.

5 1215

Q. So that was your reasoning for not responding to the false killer whales and the potential for effect on the false killer whales, because Dr Pine had covered it?

10 A. Yes. And I guess the reason was, in my evidence-in-chief on paragraph 32, I talk about how I actually, I have some species of interest that I've highlighted because those are the ones that use that area the most, but I've considered all species that have ever been sighted in the area and are particular interest for rarity or sound sensitivity. Then in paragraph 72, I've also discussed how I, I took my assessment as a  
15 worst-case scenario in that any animal that has ever been sighted or known to be in the area could be in the area and how it would be affected. Again, because we classify these animals according to their hearing, anything that we've put in place for an orca, a bottlenose or a (inaudible 12:15:55), would also go in place for a false killer whale.

20 Q. You would agree with Dr Radford would you that the false killer whales use the shallow waters at Pakiri to rest and provide refuge?

A. I haven't seen any, when he has produced it I haven't actually seen any of the data from that. I know the researcher who is working on these animals. I have no reason to doubt that he has seen them there, the  
25 frequency of which, the regularity of which, I have nothing to be able to base any of that.

Q. Now I am just putting a question for Forest and Bird before I move on to my next topic. Mr Garton, could we have the Auckland Unitary Plan, schedule 4, the Significant Ecological Areas brought up. It's in the  
30 common bundle and it's page 1784, section B. So this schedule is schedule 4 to the Auckland Unitary Plan, that sets out significant ecological areas, it's the marine schedule. Are you aware of this schedule?

A. Yes.

Q. If we can scroll down “Factor 6C” please, which is on the next page, representative yes, 6C. If you could just read that to yourself and let me know once you ...

A. Yes.

5 Q. The question from Forest and Bird is: “Do you consider that the area may provide significant habitat for the false killer whales in accordance with that factor?”

A. You are discussing the area of the dredging, is that correct?

10 Q. Yes, yes, or in fact the area that’s likely to be impacted by the dredging, yes.

A. I’ve seen no evidence to suggest that that’s a key habitat, no.

Q. You disagree with that. And: “The Bryde’s whales also sleep at the surface at night?” Correct?

15 A. Not at the surface, they are below the surface, they are closer to the surface than below yes, and they rest not sleep, sorry.

Q. Thank you for the correction. And: “Do you consider that the area may provide significant habitat for those types of whales?”

A. Again, this is where the dredging is taking place, and my answer would be, no that’s not significant habitat for resting Bryde’s whales.

20 Q. We can take that down now Mr Garton. Different topic. Now, before you said you hadn’t read the evidence of Ms Haddon?

A. I don’t believe so, no.

25 Q. Could we please bring up Ms Haddon’s evidence, it’s in the bundle, and we will start at page 3145. If we could just blow that up. Right, so in section B1, Ms Haddon sets out her whakapapa and that whakapapa links her to the area. You would accept from her evidence that she set out information identifying herself as Mana Whenua?

1220

A. I would.

30 Q. If we could scroll down now to page 3161, paragraphs. In fact if we could just blow that up. So at the first sentence there she says: “The Whai, the Tara Iti and the Tohorā are our kaitiaki species.” And talks about the important role, how they are of high spiritual and cultural value to them as Mana Whenua doesn’t she?

A. Yes.

Q. Can we go down now to paragraph 76.

**MR GARTON:**

I will stop sharing and then reshare and see if that fixes it.

5 **MS MORRISON-SHAW**

Thank you.

**MR MACRAE:**

There appears to be a malfunction in the system Your Honour.

**THE COURT: JUDGE SMITH TO MS MORRISON-SHAW**

10 Q. I do not actually know what it is, we seem to be referred at the moment to various provisions which I do not really know that we need to have them up. I do not know what the question is yet, all you have done is ask the person to read pieces of paper, which we have already read the evidence so we do not need to read it again. What is the question might be helpful.

15 A. I am getting there, I am just wanting to take her through those before we get to the –

Q. Most of our cases consist of people doing setups for questions. I always suggest you try the question and see what the answer is.

A. Thank you, Your Honour, I just wanted to establish (1) that she was mana whenua and (2) that she had addressed the values –

20 Q. Well this witness would have no capability of vouchsafing that issue.

A. Thank you Your Honour.

Q. Always ask the question. She is a marine expert not an expert on whakapapa.

25 A. I understand that Your Honour. I will go to the question then which I am leading to.

**CROSS-EXAMINATION CONTINUES: MS MORRISON-SHAW**

Q. Are you familiar with section B6.3 of the Auckland Unitary Plan, which talks about recognising mana whenua values?



A. Probably not, I have not refreshed myself on that one, sorry.

Q. I am not sure whether our sharing is working. But, so –

**THE COURT: JUDGE SMITH**

Again, that's not a question. The question really must be something that this  
5 witness can comment on.

**MS MORRISON-SHAW:**

I am getting to that Your Honour. Sorry, I know the suspense is – I will jump to that now.

**CROSS-EXAMINATION CONTINUES: MS MORRISON-SHAW**

10 Q. So in that particular section there are objectives and policies regarding  
mātauranga Māori and the relationship of tangata whenua with both  
species and taonga that are of importance to them. There are a couple  
of policies, policies 2 and 3 in that particular document. Policy 2 requires  
integration of those values into the management of natural and physical  
15 resources and policy 3 requires that any assessment of environmental  
effects for an activity that may affect mana whenua values includes an  
appropriate assessment of adverse effects on those values. So my  
question is, when you were preparing your assessment which addresses  
the effects on marine mammals did you take into account the relationship,  
20 the cultural values of tangata whenua as expressed in relation to the  
tohorā?

A. As I have put in my evidence, I don't have any expertise in that  
background but I do involve those species in other relationships that I've  
dealt with that I know are important to mana whenua, including sperm  
25 whales, and so I am not wanting to venture too far out of my area of  
expertise on the western science side of things, have just tried to bring in  
those species that I know are of importance but it's from a western  
science perspective, it does not involve any mātauranga understanding  
or knowledge-base as that would be out of my realm of expertise and  
30 comfort. I do acknowledge that they are important and should be part of

the system and happy to work alongside those. I don't think those are in disagreement with the western science side of things so is in my area.

Q. So you acknowledge that mātauranga Māori has important knowledge about not just the species that are of importance but also about the usage of areas by a particular species, et cetera, et cetera, but again you haven't considered those or taken that into account or read that evidence when you've done your assessment?

A. No, because they weren't available to me. I would have been uncomfortable commenting on them other than just agreeing that they're – of their importance.

Q. So just to pick up on your last point about them not being available, so you weren't provided with a copy from McCallums, is that what you mean?

A. Oh, no, sorry. I meant when I was doing my original assessment.

Q. And what about when you were preparing your evidence for this and your evidence in reply?

A. I did look at those that were supplied, yes, but I didn't feel it was my place to comment on what they were saying because I wouldn't disagree with their knowledge.

Q. Sorry, just to clarify, were you supplied a copy of Ms Haddon's evidence? You said to me before you hadn't read it.

A. Yes. Ms Haddon's, no, but there were other closer assessments that – or submissions that were made that I had read, yes.

Q. So for example, Mr Hohneck's evidence, you read that one?

A. Sorry, let me just bring up... I had Mr Rangi Brown and through the (inaudible 12:27:27) but not his in – his is referred to I believe in Mr Brown's but I hadn't read it specifically, no.

Q. And that evidence also addresses mātauranga Māori values of (inaudible 12:27:42).

### **CROSS-EXAMINATION: MR POU**

Q. Is it Dr Clement or Ms Clement?

A. It's Dr Clement.

Q. I have a couple of questions to ask you. One comes off the question that you were just discussing with Mr Morrison-Shaw, the evidence of Mr Te Rangi Brown.

A. Mhm.

5 Q. Now he specifically mentions the minke whale and I'm not sure, in the council hearing, discussion occurred about a minke whale that stranded just before the hearing took place in Pakiri but your evidence doesn't seem to mention the minke whale. Is there a reason for that?

10 A. My assessment does have minke whales that are noted in the sighting database. They're in the Hauraki Gulf and it has the strandings that have taken place along that beach. But I look at the species that tend to, from this desktop data and from any additional assessment done in that area, that tend to have greater use of the area, so frequent the area more often and therefore would be impacted by any work in that area, those are the  
15 ones that I tend to draw on the most as my example species. So toothed whales are represented more from the bottlenose as being endangered and the orca that tend to feed on those. The baleen whales are represented more by the Bryde's whales given their importance in the area. Minkes was not one that came up to me as a regular visitor through  
20 that area more so than the Bryde's whale and given that they are not – their status is not considered threatened or endangered, so I just haven't listed them as a higher species of importance from that area.

1230

25 Q. And I accept that, I accept that the minke whales are more should I say plentiful than the – how do you pronounce it?

A. Bryde's. B-R-U-T-U-S is how it's pronounced but not spelt.

30 Q. You've considered the evidence of Mr Brown, I understand you didn't read Mr Hohneck's, where they clearly stipulate that for Ngāti Manuhiri though this area is to them the pathway of the minke whales. Are you aware of that?

A. From his evidence I am, but that's the only reference I've seen of it till now.

Q. And I note in your evidence in particular at paragraph 34 this isn't the only migration route, I think that's what you're saying. You say: "While whale

species have migration routes along the North Island, sand extraction does not constitute part of an important migration corridor. Most migratory whales pass by these areas much further offshore, mainly in winter or the spring months.” But you would appreciate that given that they’ve named it for it, that this would be an important migratory route for Ngāti Manuhiri and their relationship with the whale?

A. Yes, I wouldn’t question that, that knowledge that they have on that.

Q. And so at paragraph 33, you say: “There is no evidence indicating that any of the species have home ranges restricted solely to Mangawhai,” and I’ll get to that later: “As relevant to 6(c).” You haven’t commented whether or not 6(e) was important.

A. Sorry, you’ll have to refresh 6(e) for me.

Q. Tangata whenua connections.

A. Yeah. So, no, I haven’t commented on that. Mine’s from only the western science desktop assessment that I have done and the movement of those whales that we have knowledge on up and down that eastern, north-eastern block, and their sightings in that wider area.

Q. Now you as a western science expert have been able to look at the evidence of Dr Pine’s, look at other western experts and use that to inform yourself. You didn’t think, given that you’ve got a mātauranga Māori person within the team, you didn’t think to use Mr Tame Te Rangi to maybe help you go through some of that mātauranga evidence?

A. No, I didn’t. I mean in hindsight that probably would have been a good way of doing it. I guess my view is I don’t have that relationship at the moment with the mana whenua there to be able to dig deeper but also I take their evidence as read, I’m not necessarily questioning it or saying it’s wrong. So...

Q. And I don’t think I’m asking that. Just on the applicant team of experts, there’s somebody with some particular expertise in mātauranga Māori.

A. Mmm.

Q. So on the applicant’s team of experts, there’s some experts with particular expertise in sound underwater which you’ve been able to go to.

A. Yeah, I understand what –

Q. On the applicant's team of experts you've also got mana whenua giving evidence for Te Uri O Hau who Ngāti Manuhiri have recognised, and it seems that you've made an effort to allow a cross-pollination with the other western experts but you haven't made the same effort with the members of your team.

A. Yes, I understand your question now. So, again, because this has been a protracted and multi-client application, the original team as I understood at the time when my assessment was actually done, which I think was 2020 or 2021, that was not available to us, there was not a cultural person on the team that we were able to go to to gather expertise at the time. I have worked on different applications where that has been there and we've been able to bring that synergy in and discuss and make those connections from the start. That was not my understanding in this case. And then working across two different clients, they had very different ways of dealing with multiple experts across all areas. And so, yeah, it was very confusing at a time but I have to say when my assessment was being done and even closer to the time when our first evidence, because we've done multiple evidence now for these cases, those experts were not available to us, and they've come in later in the process for us to be able to deal with.

Q. The problem with that is that this court's been told that Mr Te Rangi was brought on board to assist just prior to the conclusion of the council hearings. The council hearings then came along highlighting the cultural issues that were extremely relevant and required consideration. Mr Te Rangi has been there all that time. You had your evidence drafted subsequent to the engagement of Mr Te Rangi but now you're telling the Court that you haven't had access to the person that the Court are being told was brought on to assist for those particular reasons and I'd like you to comment on what was a really convoluted question.

A. So, your question is, why haven't I used him in my most recent evidence? I think is what you're getting at.

Q. Yes. Given that he was available and brought on for that reason.

A. I guess I wasn't as explicitly aware of that as I probably should have been.

Q. And also, if there are concerns with using Mr Te Rangi because he's not mana whenua, you've actually got mana whenua witnesses who are saying that their interests are being mitigated but there hasn't been any engagement with them either, for instance, with Te Uri o Hau. Is that right?

A. Sorry, I'm not...

Q. I'm not talking about the application, I'm only talking about your engagement and your evidence, I should be clear.

A. So, you're asking if I've had specific questions from mana whenua that I haven't engaged with?

Q. So, where you're doing your assessments, going to the mana whenua, people that are on the team, I think it's Anthony Thompson, and saying: "Is there anything that mātauranga could add?" Because I understand he's the RMA person for Te Uri o Hau.

A. Sorry, we didn't have those kinds of conversations. Those weren't put forward to me as resources.

Q. Okay. And then at paragraph 33 of your evidence as well, evidence-in-chief, you're highlighting that policy 11 of the Coastal Policy Statement isn't triggered. But you would be aware that the Coastal Policy Statement refers, and I'll read in particular policy 11(b)(iv): "Habitats of indigenous species that are important for traditional and cultural purposes." So, you're aware that the cultural purpose is important and inform policy 11 as well?

A. Yes, so I probably should've caveated that to (a) and (b) but in terms of the western science aspects. But my understanding with that, and I guess that's maybe misconstrued, is that would be more use.

Q. I'll just read it. "Avoid significant adverse effects of activities," and this is (b), "habitats of indigenous species in the coastal environment that are important for recreational, commercial, traditional or cultural purposes." So, I mean, that's just the wording, that's without getting into any mātauranga Māori, it's just recognising that there are traditional and cultural purposes that are being asserted.

A. Okay. So, in terms of the dredging area, as far as I am aware, these habitats are not important to any species from those perspectives.

Q. But you didn't do the assessment on the traditional cultural purposes so that's the caveat you have to put in.

A. Yep.

1240

**5 RE-EXAMINATION: MR MACRAE**

Q. Dr Clement, Mr van Mierlo earlier in the piece asked you some questions about conditions, proposed conditions of consent that related to management or conditions relating to marine mammals. Are you aware of condition 32 in the proposed conditions of consent?

10 A. Yes, I'm looking at it right now.

Q. Does that require a marine management plan, marine mammal management plan, sorry?

A. Sorry, I might have a different condition to you but mine is the 31 that requires the, 30 and 31 have the marine mammal management plan, yes.

15 Q. There has been a slight change in numbers since then but those are the conditions I'm referring to and have you had input into the proposed marine mammal management plan?

A. Yes.

Q. Recommendations?

20 A. Yes.

Q. And have those recommendations been adopted by McCallum Bros?

A. Yes.

Q. Do they include observation of the Hauraki Gulf protocol in relation to whale strike and...

25 A. Yes, they do involve adopting the protocol.

Q. In answer to questions from Ms Morrison-Shaw, Dr Clement, you referred to recent studies at Lyttelton Harbour, in particular on Hector's whales and relating to the activity of capital dredging, is that right, did I understand that –

**30 THE COURT: JUDGE SMITH**

They might be dolphins, actually. I think they're a bit small for a whale.

**QUESTIONS ARISING CONTINUES: MR MACRAE**

A. Yes, the Judge is correct.

Q. All right, thank you, your Honour. I see that Dr Clement agrees. As I understood you, studies weren't available at the time you prepared your evidence, but have you seen the data that you referred to?

A. Yes, I was involved with that study, yes.

Q. Does it give you any assistance in your assessment in this case?

A. Yes. So, we look at the effects of the noise from the dredge on Hector's dolphins using underwater noise sound traps and also visual observations and what we found is that the behavioural effects of the animal at close range, and this is a dredge that is much larger and about 10 to 15 decibels larger than the *William Fraser*, remembering that 10 decibels is 100% because – or 100 times more noisy because of it being logarithmic, underwater noise, that the dolphins tended to have unequivocals, meaning they did everything kind of equally around the dredge when it was dredging where there was a strong attraction when it was (inaudible 12:44:00) disposing. and we were unable to ascertain if this is because the dredge was actually going slow and these animals are quite attracted to moving vessel, or if it was the noise, but within a few hundred metres away from the dredge, where the sound traps were, we saw no difference in behaviours between dredging, transiting or disposal in terms of the dolphins presence and their acoustic behaviour.

Q. And in answer to some questions, several questions, from Mr Pou, you referred to this being a multiple-client case.

A. Yes.

Q. Did I understand that correctly?

A. Yes.

Q. Could you just briefly outline who first instructed you in the case?

A. I was first contracted under the McCallum Bros for the midshore, and then I was later on contracted under the Kaipara, Kaipara Limited, I believe.

1245

Q. All right, thank you. I had thought it was in the other order but I'm wrong about that, am I?

A. Yes.



Q. In the reverse order. You're sure about that?

A. Yes.

Q. All right, thank you.

### **QUESTIONS FROM THE COURT: COMMISSIONER MYERS**

- 5 Q. I'm just interested – so the existing information like the DOC database that you have used, does that indicate any – so from what I understand you're saying they're not like the whales, dolphins, orca that might be in this area, the marine mammals might be not resting but could be travelling through. Does it show any sort of pathways up and down the coast where  
10 the dredging is occurring?
- A. So the sighting database is usually just a location where they've seen the animals, and sometimes we get the behaviour and sometimes we don't. My experience those animals travelling through, moving through, could be any of those behaviours that you named, but they don't remain in that  
15 area for long periods of time, say multiple weeks, multiple months. So the way that we tend to look at use from a marine mammal is they might have a residential area and they might be residential seasonally where they come in for certain periods. So if you think of Hector's dolphins down south, they come into the bays, they use those bays more in summer, the  
20 majority will move out in winter but they still might visit and be present there throughout the year. Some such as the southern right come up to the north-eastern area over the winter and spring months but then they'll move away again, so they're visiting those areas, and that species in particular might hang out in an area for several days before it moves  
25 along. So from those sorts of data, those days and when the sighting happens, sometimes it could be the same animal that's been reported over and over again and sometimes it completely different ones, but we begin to piece together an idea of their movements along those coastline. With the exception of southern right whales, most whales will move along  
30 their migration routes usually in a direct line or along contours where they're using those contours or those headland areas to help direct themselves. That's kind of like humpbacks. So that's why they tend to hit like the Banks Peninsula and the Capes, they'll hit those headlands as

they're going up to help direct them to their northern migration routes. Sometimes when they come back and they have cows, they might move inshore to avoid predators a little bit but, again, they're usually trying to get down to their feeding areas as quickly as possible. Southern right whales and Bryde's because they tend to overwinter here, they tend to come into those areas more. So we have some general ideas about the pathways and the migrations of most of the species as they move through. Some they're more vague than others but, yeah, we've got some general – knowing the dynamics of the animal, the depths that they tend to hang out in, the food that they tend to feed on, we have a very generally a good idea of their movements around New Zealand waters.

Q. So in this area like Hauraki Gulf and further up the coast, do they use like the boat channels like going up through the Rangitoto Channel and further up the coastline, do they transit up and down?

A. It depends on their destination. So if you look on the maps that I produced of the Bryde's whales, you'll see that there's quite a bit through the Rangitoto Channel because of coming into the gulf and in those feeding areas because they tend to move offshore at different times of the year. But if you look at the other channels, they're used just almost as frequently. We have more sightings along the coastline because we have more people in recreational boats and shipping boats going up that coastline. We don't have them on the other side of Great Barrier Reef because we don't have very many recreational vessels that are calling in and reporting those sightings.

Q. And is there a difference in their behaviour at night as opposed to during the day, or does that depend on species?

1250

A. It does depend on the species. Bryde's whales they found does not tend to dive as deep at night so it does more shallow dives but it still remains sort of sub-surface on its dives and it might undertake a bit more resting. Some species are very active at night, like common dolphins, because they feed on the species that migrate up in the migration towards the surface. So, it is very species oriented, unfortunately.

**QUESTIONS FROM THE COURT: SPECIAL ADVISOR HOWIE**

Q. I hadn't noticed that you've referred to stingrays at all. Do you have anything to say about their occurrence and so on?

5 A. Sorry, that's a little bit outside my area of expertise. I know that stingrays do inhabit most estuaries but they also inhabit areas outside the estuaries, along the sandy areas. But I wouldn't have any knowledge in that particular area, no.

**QUESTIONS FROM THE COURT: COMMISSIONER PRIME – NIL****QUESTIONS FROM THE COURT: JUDGE WARREN**

10 Q. Thank you, Dr Clement, for your evidence. The marine mammal management plan, what is its current status? Is it in force?

A. I think informally it's in force. It's something, yeah, that I have discussed originally with McCallum Brothers when we first did the assessment and a lot of the aspects, especially around the protocol, they were already  
15 adhering to. They just weren't formally signed up to the protocol itself and they didn't have some of the watches and things taking place. In regard to some of the recommendations in terms of entanglement and debris, I know that those sorts of things have to be done from a safe ship management plan anyway so I'm assuming they have. But I think that  
20 might be a better question for Mr McCallum in terms of the rest of those recommendations.

Q. I asked that question for two reasons. One, it seemed to find favour with the Commissioners in their decision at the council level, so I'm just reading from their decision at paragraph 4.16 where it says: "Further, the  
25 proposed MMMP if the resource consent had of been granted would suitably mitigate any potential effects on marine mammals." So, you're not 100% clear whether it was enforced then or now.

**THE COURT: JUDGE SMITH**

Perhaps I should explain, Judge, that it's the conditions of this consent that  
30 would make the MMMP necessary. What I think Dr Clement is saying is that they have informally adopted many of those procedures already, even though

of course this consent has still not been granted. I think that's what you meant, is it, Dr Clement?

**WITNESS:**

Yeah, mainly in relation to the protocol but yeah.

**5 QUESTIONS FROM THE COURT CONTINUES: JUDGE WARREN**

Q. Do you know if there was any mātauranga Māori considerations in development of that plan or were you not aware?

A. Not that I am aware of, no.

10 Q. So, just turning then to that issue because I think in response to Mr Pou's questions you indicated that you have been involved in matters where you have engaged with those with the requisite mātauranga Māori knowledge on issues relating to mammals.

A. Yes, in other cases. Only in a few, sorry. But, yeah, not this one.

15 Q. And in those cases, where there have been differences between your opinion and theirs, how have they been resolved from an expert professional perspective, if at all?

20 A. Yeah, I think that that's where we've entered new territory. It's something that I would not question what someone's ancestors and/or relatives or themselves have seen. We deal with fishermen, we deal with skippers. And what they've seen is what they've seen and we always accept that. And so, we haven't probably come with a good framework for incorporating the two into one coherent system. I think it's something that we're still working with. So, in those cases, I take their knowledge as verbatim. They might not always agree with my assessment based on  
25 the western science but I see no reason to challenge or disagree with their knowledge.

30 Q. So, if you're findings are that there's minimal effects on the marine life or marine mammals but they come to a different view, what you're saying is that we must give some weight to that. It cannot be discounts out of hand just because you come to a different view.

A. That's right. That's been my way of, yeah, of dealing with it. I won't – yeah.

Q. In the council decision, I'm not sure if it's 100% clear whether they touch specifically on exactly mātauranga principles were or the effects on those were unacceptable. But was there anything that you're aware of in the context of your expertise?

5 A. Not that I can recall, no.

Q. And you obviously gave evidence before the council. You equally didn't engage with any mātauranga experts in that process as well as the current appeal.

10 A. The hearing that I gave evidence in front of was the original Kaipara offshore.

Q. Right.

A. The inshore and mid-shore I was not called in to question and did not give evidence in front of.

15 Q. So, in terms of that offshore piece, did you engage with any of the mātauranga evidence in that hearing?

A. No, not that I recall, no.

#### **QUESTIONS FROM THE COURT: JUDGE SMITH**

20 Q. Doctor, I want to ask a couple of questions first and this is about what, you know, the habitat issue is that arises for both seabirds and marine mammals. You may or may not have some familiarity with the Northland Regional Plan and its marine mammal areas and significant seabird areas. Have you come across those at all?

25 A. I haven't seen where it's landed but I have dealt with it when it was in its interim phase and I thought the way that they dealt with it was a very blunt measure. They basically classified any place that a marine mammal was sighted as significant in my (inaudible 12:58:18).

30 Q. You've got it. The problem was of course that was pretty much all of Northland which is thousands and thousands of kilometres and that caused problems which some counsel here have been involved before the Court with and in the end we resolved the issue by looking at areas of what might be called concatenation. In other words, areas where you get the combination of species, for example seabirds nesting and feeding, marine mammals perhaps breeding and feeding for long periods of time.

The sort of issues you're talking about. But it would be fair to say that habitat is a difficult issue for marine mammals because they are, not necessarily migratory, but they are a species that have a very, very large range, aren't they?

5 A. Yes, hundreds of kilometres for some and most at least tens of kilometres.

Q. Thousands of kilometres it seems to me, depending on –

A. Yeah, I was going to say, if you think outside New Zealand, yes.

Q. So, the difficulty there is understanding what areas have particular importance over the generality of the habitat. It's a little like a bison grazing on the plains, isn't it? They use the grass and they need the grass to live but the question is which pieces of grass might they have to have all the time.

10 A. That's correct. And that is one of the difficulties and that's why we've struggled a little bit with the ecosystem framework of trying to protect and look at things from that ecosystem because they pass through. But just because they're –

Q. I'm glad I'm not the only one that's having big headaches about this.

A. Yeah.

Q. Same for seabirds, but you don't need to comment on that. So, I just wanted to contact that, so what we tend to do when we're looking at a consent, if we get to that point, and I'm not saying we have, I'm just simply saying, rather than leaving everything to a plan that, in this case, the parties or at least the applicant is intending if the council doesn't say anything within 20 days becomes – defaults to something they comply with, putting in the consent key conditions that have to be met. Now, in this case, I would've thought issues about, for example, vessel strike, especially within the area of breeding animals or, you know, young, those are matters that would bring at least an orange flag, if not a red flag, aren't they? They'd leave it with you to see how things are going?

25 30 A. If those happened in the area?

Q. Yes?

A. Definitely a vessel strike. Breeding would be very difficult for anyone to see or know if it was taking place, if there was an animal born in front of it that might be something but, I mean, the dolphins could have young

with them at any time travelling through and same with the – so I, I mean, noting that would be good and having somebody review that would be good but I don't know that they'd necessarily be a red flag.

Q. Finally, I want to deal with the issue of western science which has popped up in the last year and I'm not sure where it's come from. I always thought of it as science not western science. Is there a particular source for this because you're not the first one to talk about western science to the Court and I must say we're all a bit bemused as to how that's different to science generally?

10 A. I think it's a terminology that's come out, I picked it up from others so I'm not quite sure of its orientation but, yes, I think it's a way of saying non-indigenous.

Q. Yes, that's what I think, too. And the reality is that science is based on observation for a start. Scientia means observation, doesn't it? I don't know if you know your Latin but certainly when I went to school that's what it meant?

A. Yes, I would say it's a hypothesis and hypothesis-driven, yes.

Q. So that's interesting. Because, post-war, science has become hypothesis-driven, in other words you don't have to observe, you create a hypothesis and then design a – I say this because my son's a doctor of quantum physics, so they live in a very rarefied atmosphere and everything therefore is hypothesis. But it does seem to me and I want to put this proposition to you, that for a person such as yourself, you are driven, first, by the real world and what's observed within it?

25 A. Yes.

Q. Do you agree?

A. I look at the sightings and the data and that's what I go by.

Q. And mātauranga Māori is, as I understand it, we'll find out when we hear from the witness, is driven by close observation over centuries of the environment around them. So to that extent I don't understand there to be a lot of difference between science, whether it be mātauranga Māori or science or western science, if you want to call it that. So, it does seem to me that the question of who can form an opinion about something, which is, I've got to say from the Court's point of view, an expert is a

person who can give their opinion based upon facts. All experts need, in the first instance, to be driven by the facts, don't they, before you can extrapolate to the unknown?

A. I would hope so, yes.

5 Q. And so for what I call the hard sciences, unkindly, such as maths and engineering, that's normally driven by the (inaudible 13:04:15) science or physics involved. As we get more into the social sciences we form more interpretation of information. But, it seems to me your area of work is driven more by observation data?

10 A. Yes. I mean, I like to think that's the basis of it and then as Commissioner Myers has said, then we have to kind of draw some extrapolations from that from migrations. You know, we have to use that to be able to answer those bigger questions but, yes, we like to base it on something hard, some hard facts to being with, and observations.

15 Q. And if we're looking at a post treaty world in New Zealand, and I'm getting a little bit philosophical now, it does seem to me that there is the ability to meld, if I can call it that, the observational data from mātauranga Māori, and the experiences based on a whole series of kōrero and sayings et cetera and look to try and reach a compromise. I don't say necessarily  
20 compromise, I don't think that's a fair – an integrated solution that recognises that state of knowledge as well. Would you agree?

A. Yes, I would hope so. I just think the framework for that and how to begin those conversations and to get that knowledge together is still being explored but I 100% agree with that.

25 Q. Good, I won't ask you how to do it then because I don't know the answer either but I know the problem. So that's one of the things that's very much to the fore in this case is how those matters might be addressed, if we get to that point and you'll appreciate that that ought to be heard. Thank you for your time and I do appreciate you being prepared to have a  
30 philosophical discussion with me about these issues.

**QUESTIONS ARISING – NIL**

**COURT ADJOURNS: 1.06 PM**



**COURT RESUMES: 2.15 PM**

**JUDGE SMITH ADDRESSES COUNSEL/PARTIES – TIME ESTIMATES**

**MR MACRAE CALLS**

**STEPHEN BROWN (AFFIRMED)**

5 Q. Mr Brown, you've prepared evidence, a statement of evidence-in-chief and a statement of evidence-in-reply in support of this appeal. Do you have those documents with you?

A. Yes, I do.

10 Q. Are there any amendments required to your evidence Mr Brown as a result of the Court's orders disposing of the inshore and midshore applications?

A. Yes, there are.

Q. And the amendments to the offshore extraction area?

A. Yes.

15 **MR MACRAE:**

Sir, Ms Hopkins in particular has sent to the Court (inaudible 14:17:39) which gives the same sort of guide to the amendments to Mr Brown's evidence, as was presented for Dr Todd's evidence. Because the changes I've just referred to do make several differences in several different areas in Mr Brown's evidence and, in particular, to his assessments, we presented this table and I think it's self-explanatory down to the reference to paragraph 134.

20

**EXAMINATION CONTINUES: MR MACRAE**

Q. Would you just explain Mr Brown how you have dealt with the changed in relation to your evidence?

25 A. Yes. The effective contraction of the offshore extraction area to an area roughly north of Poutawa Stream has an effect on the impacts associated with views from the vicinity of Pakiri River and that has now reflected in that particular statement. So I have had to add that statement in there and amend the ratings in relation to effects view point 11, which is at the mouth of the Pakiri River.

30

Q. Then Mr Brown, if you go over the page to the reference to paragraph 143, is that the introduction to and the table that shows your ratings?

A. Yes, it is.

5 Q. Again, could you just briefly explain how the changes work?

A. Yes. The changes simply mean that all of my ratings for inshore and mid-shore extraction are removed, they are deleted. And the two ratings for view point 11, Pakiri River Mouth, change from low in both cases to very low.

10 **THE COURT: JUDGE SMITH**

Q. Because of the movement of the offshore southern boundary to about four kilometres away. Is that right?

A. That's correct Your Honour.

1420

15 **EXAMINATION CONTINUES: MR MACRAE**

Q. Mr Brown, have you – of course you've seen it because you're a member of the caucus considering landscape effects, and do you have a copy of the joint witness statement produced by that caucus?

A. Yes, I do.

20 Q. CB9. It starts at page 1433. Mr Brown, could you just run through – there are only three sections of findings, and just run through and explain what these findings apply to and whether they're still relevant to your evidence?

A. Well, issue 1 addressing ONLs is no longer relevant because the area of interaction between ONL22 and the extraction area's mainly related to  
25 the inshore and the margins of the midshore extraction areas, not the offshore extraction area. So that statement is effectively superseded, or that issue is superseded by the change to just the offshore proposal. In terms of issue 2 which addresses the implications of the updated advice from coastal experts on landscape values, clearly the amended position  
30 of Mr Todd carries over into my assessment of the situation at Pakiri. It's reflected in the change to the proposed extraction, and I therefore have to take guidance from that. Lastly, there is the issue 3 – sorry, I've

5 forgotten the conditions of consent. “What are the landscape and natural character effects on the Mangawhai-Pakiri coastal environment?” The first of those paragraphs deals with offshore extraction and is still relevant where there is agreement that the effects generated by offshore extraction will be low to very low in terms of both natural character and landscape effects. That was agreed by myself and Peter Kensington –

**THE COURT: JUDGE SMITH**

Q. Now that was prior to the reduction to the southern area. Does that change the overall assessment in your view low to very low?

10 A. No, it doesn't, your Honour. There is still – I supposed you'd say the weighting is more towards very low but I've still got a low rating for those areas of Te Arai Beach or North Pakiri. Now the next two paragraphs, sorry the next paragraph is effectively made redundant because it addresses the midshore extraction area.

15 Q. So that's no longer relevant in your view?

A. No. No, your Honour. However, the last paragraph is still relevant but I've addressed that in both my evidence-in-chief and my rebuttal statement.

20 Q. Sorry, that's not expressed as associated with any particular extraction area. So you say you deal with that rather in your reply, is that right?

1425

A. I deal with it in both because part of my evidence-in-chief, your Honour, also addresses the issue of cultural values and effects in response to Auckland Council's decision in evidence.

25 Q. Sorry, just looking, which paragraph would you be referring to when you say it's in your reply evidence? Just so I can link them.

A. I think it's paragraph 28 to 36, your Honour.

Q. Thank you.

A. In my reply.

30 Q. Yes, I'm just wanting to identify what we're looking at. Right, 28 to 36, that's cultural landscape effects.

A. Yes.

Q. Thank you.

- A. And in relation to the last matter, I think that still stands, that of conditions being very much secondary to whether or not consent is granted. I think that still is the case, certainly from my perspective.

**EXAMINATION CONTINUES: MR MACRAE**

- 5 Q. And then from your perspective, Mr Brown, have you given any consideration to if consent were to be granted, what offset or possibly compensatory measures might be taken by the appellant to improve the landscape and the conditions that you assess at Mangawhai Pakiri.
- A. I think the only area where there can really be beneficial mitigation, as it  
10 were, is in relation to beach management and that might mean assistance with control of access to both beaches as well as the Pakiri river mouth and revegetation of pīngao and other native species that might assist with stabilisation and, to a certain extent, the natural restoration of the dune systems at Pakiri.
- 15 Q. Answer any questions please.

**THE COURT: JUDGE SMITH**

Now Ms Bielby doesn't have any questions anymore. Mr van Mierlo.

1430

**CROSS-EXAMINATION: MR VAN MIERLO**

- 20 A. Good afternoon.
- Q. I would like to, there's really one line of questioning and it relates to, it does relate to ONL22 and I know you just talk about that in relation to the joint witness statement. But if we could turn first to paragraph 30 of your evidence-in-chief, and Mr Garton it would probably be helpful if we could  
25 have this on the screen. Go rather to 30 please, that's a good spot to be, it's schedule 7. ONL22, it extends from the boundary with Northland to the south around Cape Rodney. Is that correct?
- A. That's correct.
- Q. How far out to sea does it extend?
- 30 A. Approximately 800 to 900 metres.

Q. So the offshore extraction area is outside the mapped boundary, that's correct?

A. Yes.

5 Q. Yes. But I noticed you didn't delete the discussion of ONL22 and its values in your amendments that you've made to your evidence. So I assume it still has some relevance in the sense that if activities in the offshore area were to impact on the values and characteristics that make ONL22 outstanding, that would still be a relevant matter for consideration?

10 A. Yes.

Q. Yes.

A. That's precisely why I did leave it in.

Q. Yes, yes thank you. Mr Garton if we could just scroll up just a little bit so we get schedule 7 on the screen.

15 **THE COURT: JUDGE SMITH**

That is it thank you, that's it.

**CROSS-EXAMINATION CONTINUES: MR VAN MIERLO**

20 Q. Mr Brown, would you agree that habitat values for seabirds is one of the characteristics that contributes to this area's outstanding natural landscape values?

A. Yes.

Q. Yes, so it's listed there under "Natural Science Factors, Significant Bird Habitat"?

A. Yes.

25 Q. Under "Ecological". And likewise under the "Transient Values" column at the end seabirds are prevalent?

A. Yes.

Q. It's an unusual and almost unique feature of this landscape in once sense because this is the primary habitat for tara iti. Would you accept that?

30 A. Yes.

Q. Yes. So anything that was to compromise or adversely affect the ability ONL22 to support or provide habitat for tara iti would compromise or

adversely affect the qualities and values that are in ONL22 being an outstanding natural landscape?

A. It would to some degree.

5 Q. To some degree, yes. Mr Garton if we could now scroll down to paragraph 45. Mr Brown you've noted there in the middle of that paragraph the relevance of policy 15 of the NZS and, in your words, you've noted that: "That raises the bar even higher by stipulating that all adverse effects on ONL22 in particular must be avoided." That's correct.

A. Yes.

10 Q. Yes. Likewise, the Auckland Unitary Plan, which implements policy 15 would also require adverse effects on ONL22 to be avoided?

A. Yes.

1435

15 Q. Now, in your paragraph 60, and we won't get it all on the screen at once but here, Mr Brown, you list the values and effects and the factors and considerations in your assessment of effects. But I've noted you haven't referred to wildlife or fauna values or seabirds and the habitats in your assessment here at all. Would you accept that?

20 A. No, I don't. Because it's clear that (inaudible 14:35:59) part of the transient value component. In other words, they're not present all the time but there is an awareness of them.

Q. So, you would still regard them as transient, even though they may be nesting in the ONL for a number of months, seasons, during the year?

25 A. Yes, I think that you have to appreciate that when this work was undertaken is never – sorry, I'm talking about schedule 7. When it was prepared, it was probably designed with interrogation that has – it has been subject to over more recent years. It was, as it were, adopted knowing that there were some inadequacies with the identification of attributes and values. But there was common terminology adopted which  
30 related to the modified Pigeon Bay criteria or factors that we were asked to address in 2008 when undertaking the regional (inaudible 14:37:35) assessment. As a result, that reference to ephemeral or transient values also embraced such matters as the presence or absence of wildlife, tidal and wave changes, the times of day, varying climatic conditions and so

on. So, it was quite a complex issue. So, I accept that there is a degree of inadequacy there but this was simply aligned with that or those assessment criteria. Now, in terms of human perception of that environment, for the most part, wildlife is seen intermittently and temporarily. So, that's why it was addressed in the way that it was, accepting the point that you have made.

Q. And so, you would accept though that they are values that are identified in the Auckland Unitary Plan in terms of this ONL?

A. Yes.

Q. And so, any loss of those values is something which ought to be avoided if the Court is minded to grant consent for this activity?

A. Yes, but I think it would – it's a matter that really is subject to specialist expert analysis. As a landscape architect, I'm expected to traverse quite a wide range of values and some of those require a level of enquiry that a landscape architect simply doesn't have the expertise to undertake. And so –

Q. No, I understand that point you're making.

A. – in order to determine – yes, in order to determine that there has been a degradation of, say, wildlife values, I think there would have to be examination of that by people who have the expertise to do that. Ecologists, (inaudible 14:40:15) experts and so on. I simply don't have it.

Q. No, no, I accept that point. The assessment is on the ecological evidence, I think is the point you're making there.

A. That's essentially what I'm saying, yes. I can't – in a similar fashion to having to accept that there are limitations in terms of how I can address coastal morphology issues, there are also limitations in this area.

#### **CROSS-EXAMINATION: MS MORRISON SHAW – NIL**

#### **CROSS-EXAMINATION: MR POU**

Q. Kia ora, Mr Brown.

A. Kia ora.

Q. You probably are aware of the questions that I'm going to want to ask you, we probably have to stop meeting like this. If I could get from bundle

page number 1227 put up, at the top of it. This is the offshore council hearing findings and it's just the findings that they made on landscape. You're aware of those, aren't you?

A. Yes, I am.

**5 MR POU ADDRESSES MR GARTON – TE TANGI DOCUMENT (14:42:37)**

**THE COURT: JUDGE SMITH**

Which paragraph are you wanting us to go to, Mr Pou?

**MR POU:**

460 and 461.

**10 CROSS-EXAMINATION CONTINUES: MR POU**

Q. The key finding is that two landscape architects were there, yourself and Mr Kensington, making particular – and they agreed with you in terms of visual effects however they didn't agree with you in terms of the cultural effects on the landscape.

15 A. Yes.

Q. That's correct from there. And it's on that basis that they were saying landscape effects were significant and adverse. That's correct?

A. Yes, cultural landscape effects. The effects on cultural landscape values.

Q. Yes, yes. I mean, but cultural landscape values are landscape values, aren't they?

20

A. They're part of landscape values.

Q. I guess that's the issue. If something is part of a value – I mean, natural character values are part of landscape, cultural landscape values are part of landscape. They're landscape values. Aren't they?

25 A. Yes.

Q. I'm going to try and adopt the theme that his Honour took, rather than calling it mātauranga versus Western science to try and find how they come together. And that's why I'm saying, where there's a cultural landscape value that's a landscape.



A. It is, a landscape value. But it may not be the only landscape value. And in this case, I would argue that it's not the only landscape value.

1445

5 Q. Oh, absolutely. And I'm sorry if I'm putting it to you in a way that – I guess, I'm not trying to suggest that the mātauranga usurps or overwhelms other aspects of landscape but it's a landscape value, nonetheless, that is significant and needs to be taken into account in an landscape assessment?

A. Correct. To the extent that it can be, yes.

10 Q. And Mr Kensington, and I mean this is where Mr Kensington in his evidence without taking you to all the paragraphs and those sorts of things, he's saying those cultural landscape features, those cultural landscape matters become so significant that – and I should be clear, this is in that council hearing – they mean that the landscape values are significant?

15 A. Yes. And they've set out the reasons in both my evidence-in-chief and in reply as to why I don't agree with Mr Kensington or, at least, don't think that his assessment is adequate in that regards.

20 Q. So, before going to your evidence-in-reply I just – did you consider some of the evidence that was filed, for instance, by Te Whānau Pakiri?

A. Yes.

Q. In particular, Mr Watts' evidence which I found particularly fascinating, he's the one that talks about horse mussels (inaudible 14:46:52)?

25 A. Yes. Well, I've been through a lot of that evidence and I'm not a marine ecologist so I did read Mr Watts' evidence but I also read and have the evidence which I felt was important from David Reid and from Vanessa Mutu and from Terence Hohneck and Olivia Haddon and others which I felt was more direct to the matters that I was addressing.

30 Q. I can understand why you go there but Mr Watts, as he conceptualises mussel beds as a fence, do you recall that?

A. Yes, I do.

Q. When he conceptualises it as a fence it's his perception of that underwater landscape I mean, you know, like a fence, a pa. So I guess

you can see that he's talking in what might be seen as a cultural landscape feature?

A. Absolutely.

5 Q. And it talks to the way that he experiences at coastal landscape above, not just above, but also below the water, doesn't it?

A. Yes.

10 Q. Without going to the coastal policy statement one of the ways to restore natural character is enhancing cultural landscape features then the (inaudible 14:48:58) of those things that mātauranga Māori suggests are cultural landscape features become significant in terms of their consideration, don't they?

15 A. Yes, they do but they may also be significant from the ecological perspective in terms of marine biota in general, the geomorphology of the coast and so on. So, the changes that are alluded to, or referenced in the various statements of evidence from submitters, or section 274 parties, sorry, sometimes need to be considered on a wider context.

1450

20 Q. I absolutely agree with you but essentially what we find is that for instance everybody is saying horse mussels are important but perceptions of the horse mussels and why they're important might sometimes be different. Would that be fair?

25 A. I think it is fair, and I think it comes to a critical point that (inaudible 14:50:24) the evaluation of both cultural values and effects, and that is what is the significance of those horse mussels, in other words what is the significance of the values and what is the significance of the effects on them, and that requires critical examination.

Q. Absolutely.

A. And that's where I hit a sort of full – not a buffer as it were, I hit a point where I don't know the answer to that.

30 Q. But the important thing is trying to understand what those perceptions are. So for instance this is the first place that I've ever seen horse mussels described as a fence, as a boundary, maybe where Tangaroa meets Tumatauenga, those sorts of things, but that's the way that Mr Watts is

describing it, it's describing it in a different which highlights his perception of that landscape feature.

A. Yes.

5 Q. Now if I could ask Mr Garton to put up the (inaudible 14:51:59) and in particular page 32. Again, because I like comics better than novels I go to the pictures. The picture, the picture on it, sorry Mr Garton, that one. Now this picture, your Honour it would be good if we could get a science one of them, of how they sort of come together. This picture talks about different aspects of landscape on the left, the perceptual associative and  
10 physical, do you see that?

A. Yes.

Q. And then on the one on the right there's been efforts to colour it in and maybe highlight where those sorts of things meet or how they're looked at from te ao Māori?

15 A. Yes.

Q. And in the middle you have landscape and on the – I'm not going to say it's the Māori one on the New Zealand one, I'm going to call it the New Zealand one, we have whenua in the middle. Do you see that?

A. Yes.

20 Q. And you understand, you of course understand the significance of whenua to Māori?

A. Yes.

Q. And then in terms of biophysical or physical ways in which it can be experienced, you see hikoi there?

25 A. Yes.

Q. It's walking the whenua, I mean that's not just Māori, it's Pakeha as well, (inaudible 14:53:59) want to experience it and perceive it is to walk it, feel the wind, experience the smells and hear the sounds?

A. Yes.

30 Q. Now, Ms Wikaira talked about the drone of the, when she was asked, she asked a question around the drone of the boat from, before they go to sleep to after they wake up and those sorts of things, is that an impact on the landscape?

A. It's an impact on a person's perception of the landscape but that doesn't mean that a perception that is shared by the wider community. But that doesn't make it any less meaningful for that individual. It's a bit like –

1455

5 Q. Sorry, sorry, Mr Brown, sorry.

A. It's a bit like somebody who, say in another situation, loses a view.

Q. Yes.

A. The individual. And then there has to be a judgement made about what are the affects then on the wider community.

10 Q. And I suppose, if we look at views, I might have a fence build out my view, that's one thing. But when a marae loses a viewshaft to a specific taonga place, you'd understand that that's seen as something different, it's seen as a cultural impact more than an individual impact, one that's shared by those people who hold the culture there.

15 A. Yes.

Q. And not that there are any viewshafts being closed off or anything by a boat – I don't want to get there but just since you've raised it, and those things. But when you look at that hīkoi and you see up to the top you have the biophysical and down to the bottom you have that perceptual, so walking the whenau, listening to the whenua, now where that drone of the boat all night is an experience that not a tangata whenua individual Ms Wikaira, but that tangata whenua consistently throughout the council hearing and as they have talked about it, have related as impacting on their existence and their ahi kā, then that's a, that's something that impacts on their perception and their experience of the landscape isn't it?

20

25

A. Yes, I think normally we would, just using common parlance, we would probably refer to it as an effect on amenity. But I see amenity as being a subset of landscape. So I agree with you, but I also think this comes back to having a scientific understanding of just what those affects are too.

30

Now again, this is an area where my area of expertise inevitably overlaps with somebody who has more specialist expertise in that area and in this case that's Mr Styles.

Q. Look, absolutely, absolutely, I would accept that. I mean there's also the psychological effect of having the hum go all night, like what do they call

it, that dripping tap torture that people talk about. It's probably outside your expertise but something that you can understand that, as an experience, would impact on the perception of the landscape.

A. Yes. It's a matter that's not just been raised in this forum, it has also arisen in the past in relation to windfarms.

Q. Yes.

A. A low, deep, sort of drone or hum. But it's not an area that I can offer any real comment or opinion on, simply because I'm not the right person to ask about it.

10 Q. Look, in fairness, I'm not asking you to quantify that impact and those sorts of things. All I'm asking you to reflect on and consider is that, yes it has an impact on the experience of the landscape. Or yes, it is something relevant to consider in terms of the landscape assessment.

15 A. Yes it could be. I mean if it's something that is identified through specialist examination as an issue then yes I believe it could have an impact on perception of the landscape, yes. Where there is no specialist identification of such an issue then it becomes much more difficult to deal with.

20 Q. No, I understand that and it's like, for instance, Te Tangi a te Manu suggests that when you are going to engage in, that sometimes you should just, and I think you recorded in your evidence, go to the published documents and the CIA, CBAs and those sorts of things, but it also refers to pūkenga experts and those sorts of people there as well doesn't it?

1500

25 A. That's absolutely correct.

Q. The pūkenga of hapū or iwi usually come from that hapū or iwi?

A. Yes. And, in fact, I think the High Court confirmed that in the Tauranga Transmission Corridor case, decision.

30 Q. It's a question that I've asked, and I, look you've helpfully actually referred to the fact that you refer to Mr Te Rangi's evidence, you refer to it in your evidence.

A. Yes.

Q. Did you sit down with Mr Te Rangi as a pūkenga, even though he is not from Ngāti Manuhiri, did you sit down with him and discuss these aspects and these matters that might have an impact on perception?

5 A. No, I did not. I think we found ourselves in a very rapidly evolving situation through and then after the council hearings, simply because there was such a succession of them. And what effectively happened was that evidence had to be prepared in parallel, so it was very difficult to, as it were, sit down and have a discussion about it then go away and start preparing or modifying evidence.

10 Q. I just, I will raise an issue. At paragraph 31, and I won't actually ask you to get there, I will ask Mr Garton to pull it up because I do want to come back to this picture later. I will just read this bit out to you, and you are criticising Mr Kensington. "In reality Mr Kensington has based his review of cultural effects on public submissions, matters raised at  
15 councils' hearings and one council decision, reaching his view on cultural landscape effects. He has not engaged with iwi directly and he states that he is not qualified to address Māori cultural landscapes." No you didn't engage with iwi Māori directly either did you?

A. No I did not. And I've made my reasons for that clear.

20 Q. And to be –

A. But I felt that that's different, I think it's one thing to be very clear about the boundaries or the scope of your evidence and then adhere to that. It's another thing to say that you don't have expertise in a particular area and you haven't engaged in consultation, but here is your opinion  
25 anyway.

Q. Now that may sound a bit blunt but it, and I realise that we are all in a difficult situation because this is sort of cutting edge work, this bi-cultural assessment of a range of values is, it's difficult if not confrontational at times for everyone. But, and the practice is evolving. And I think the  
30 biggest difficulty of all is that we don't have a framework within which to operate or to undertake assessments of cultural landscape values and effects.

A. But –

Q. Look Mr –

A. I have to be blunt because I think that's the truth.

Q. Look Mr Brown, I like asking you these questions because you do bluntly answer them and you do engage on the topics and those sorts of things. And in terms of raising that issue of assessing effects in an absence of consultation, it's my perception that the evidence as a whole, not just yours, but the evidence as a whole in this inquiry has been largely desktop and that there hasn't been that effort to – apologies I've just got all these sirens happening around me, I'm not sure if the Court can hear them, but this just threw me for a little while. But there hasn't been consultation that you criticised Mr Kensington of doing. Mr Kensington has attempted to engage with all of the cultural evidence that was put before the council. What the independent commission has said. You've criticised him for that and then you've said you've been able to rely upon the evidence of Mr Te Rangi and Mr Thompson. And the Manuhiri CBA, cultural impact assessment, I need to say that as well. But there hasn't been that cross-fertilisation as well.

A. No, and that's fair.

Q. And I guess the issue is, isn't the criticism – and I say this within the context of accepting what you're saying is that landscape architects are sitting at the cutting edge of something that other disciplines should be attempting to do, we are breaking new ground in those sorts of things but in this particular circumstance the criticisms of Mr Kensington, they probably can be made of you as well?

A. No, I don't believe so because I didn't actually come to a finding in relation to cultural landscape effects and, you know, my view on this is quite simple. That landscape architects have expertise but part of their role is critical examination, critical evaluation. Now, if all we do as a profession is mouth or repeat other peoples' views and findings, there is no critical component to that. That's why I have a real concern about the simple repetition of what other people have said and I suspect that's also the issue that the High Court was concerned about in its decision over the Tauranga Transpower Corridor. So, I felt – and you've got to remember that my assessment mostly took place in 2019 and then for a period during 2020, well before Te Tangi a Te Manu came out and the sort of

progress that you (inaudible 15:08:09) emerged. But at that time there was a very strong focus, for instance, on the effects of the actual dredging and that's clear in my evidence. So, a lot of the other issues that have arisen that relate to landscape, such as those on beach morphology, underwater species, even marine mammals, a lot of those have emerged since that time. And the difficulty is that once positions were taken in (inaudible 15:08:53) to all of those issues, any form of engagement with Ngāti Manuhiri or any other groups, such as the Omaha marae and so on, would've been difficult because that assessment has to be undertaken in a co-operative fashion.

Q. I want to stop you there, Mr Brown. I just want to stop you there in terms of entrenched positions. You probably should be aware that Ngāti Manuhiri are an iwi that have an engaged in the past, this court is more than most aware of the fact that Ngāti Manuhiri can engage after positions are given to the Court and make arrangements with applicants. So, I want you to carefully consider and reflect on that assertion that Ngāti Manuhiri had reached an intransigent position that they couldn't get over and – could you reconsider that?

A. I didn't say intransigent. I didn't mean it in that sense. But what I'm saying is that it would have been advantageous is the sort of consultation and engagement that you're talking about had taken place in 2019. At the start of my assessment process.

Q. You're aware of the evidence of Mr McCallum that engagement between the Ngāti Manuhiri Settlement Trust and McCallums, in particular Mr McCallum, was convivial, it was constructive at times. It just didn't get to where the applicant wanted it to be.

A. Look, I completely understand that. I'm not so much talking about that. I'm talking about engagement in relation to the issues that have since arisen but there are two problems. The first is, that some of those issues hadn't arisen at that stage and that's why my evidence was focused the way it was. And secondly, by the time some of those matters did arise, people in general had taken positions which made it more difficult to have a co-operative engagement. Look, I can't take it much further. It's a very difficult situation.



Q. Your evidence then is – with respect to Mr Kensington is (inaudible 15:11:42) you can't do an assessment on the cultural impact on cultural landscape features but your evidence is that – you're not giving one but you're saying that Mr Kensington can't either.

5 A. Well, I'm saying it's difficult for him to do that without the critical examination that I've talked about

Q. What about Ms Lucas who actually has engaged with the iwi?

A. She has and I've accepted that her view is relevant in that regard. I do have other concerns about her evidence though and I've expressed those  
10 in my reply as well.

Q. I understand that but I just (inaudible 15:12:28) getting that understanding. And you did mention the Transpower case.

A. Yes.

Q. Now, that Transpower case was about ensuring that one hapū's view wasn't used to trump another hapū's view, isn't it?  
15

A. No.

Q. So, for instance, where one hapū wants to support a realignment and another hapū doesn't want to support it because the impacts on its marae are different and one doesn't cancel out the other, you can't say that the net effect on Māori is minimal because it's positive for some others. Is that not your reading of (inaudible 15:13:14) case?  
20

A. I was involved in the case.

Q. I understand that.

A. And quite frankly the effects in relation to one marae in particular were significant.  
25

Q. Yes.

A. And I gave evidence to the extent that I felt I could in terms of my expertise on perceptual effects. And marae kaumātua gave further evidence that was more detailed in relation to the values that they held, in relation to Rangataua Bay especially. And the effects that the proposed realignment would have on those values. And I think that was actually quite a balanced approach.  
30

Q. But the issue there as well was putting a pylon in front of somebody's marae, out the front of somebody's marae, couldn't be offset against the

gains that orchards would get that were owned by other hapū. That's the gravamen of that, wasn't it?

A. No. Look, I think we could get really side-tracked here into.

Q. And we probably shouldn't be discussing (inaudible 15:14:38) anyway.

5 I'll go back to the (inaudible 15:14:40). I can see his Honour has unmuted. Look, I want to go back to that green circle because it highlights that. Now, in terms of the perceptual, down the bottom we have kōrero tuku iho, do you see that?

1515

10 A. Yes.

Q. And you understand that those are kōrero purakau, those are stories that have been passed translating Māori into Māori, those are stories that have been passed down that give a connection?

A. Yes, and they're interconnected through time, place and people.

15 Q. I mean and that kōrero tuku iho doesn't necessarily mean that they necessarily need to be 300 years old, it could be the kōrero that's been passed down to Olivia from her father Laly, you understand that?

A. Yes.

20 Q. And so perceptions of applications and perceptions of these matters and their impacts are shaped by those recent kōrero tuku iho as much as they're shaped by the kōrero tuku iho that might describe the connection to tangaroa and the fish and the whales and those sorts of things as well, (inaudible 15:16:17) that?

A. Yes, of course.

25 Q. And then up on the other wedge, between biophysical and associative values, we have whakapapa which, you understand, genealogy?

A. Yes.

30 Q. And genealogy's important regardless of where you come from, whether you're a Māori or a Pakeha, my Irish roots are as important to me as my Ngapuhi ones, that's not a hard thing to understand, is it?

A. No.

Q. But in terms of this, and we are talking about associative values, how we associate to that whenua, this is a whakapapa and a kōrero tuku iho that

locks the ahi ka into a particular time and place that makes this particular area significant, isn't it?

A. I can't answer that. All I can say is that there is evidence which supports that view but I have no way of confirming it or otherwise.

5 Q. Well this is a framework that shows an overlap in a Venn diagram which is supposed to guide landscape architects as to how to understand the associative values, how people associate with the whenua.

A. Yes, I understand that but then you related ahi ka to, once you start relating it to a specific locale or area –

10 Q. Well whakapapa relates to a specific – sorry, I interrupted you again.

A. That is where I'm simply saying that that is the perception that has been presented but I haven't critically examined that.

Q. And I mean this is the issue and, again, you have (inaudible 15:18:32) there, Ngāti Manuhiri are talking about, and the evidence talks about, for instance, the Te Arai or (inaudible 15:18:34) and so the whakapapa is (inaudible 15:18:48) they've said in their evidence is one of their ancestors, he's an ancestor that had a pa at Te Arai and they talk about their connection down through to (inaudible 15:19:06), you've got Annie, you've got Vinnie, you've got Olivia, (inaudible 15:19:10) discussing their whakapapa which locks them to cultural landscape features which lock them into a place, doesn't it?

A. Yes.

Q. And when they're talking about tangata whenua connections those are the associative values, aren't they?

25 A. They're not the only associative values. I found it interesting to read the evidence of Mr and Mrs Reid, for example, who provide other forms of associative connection with Te Arai and Pakiri.

1520

Q. But in terms of the matter of national importance, the connection of tangata whenua to these wahi, they might not be the only associative values but they are associate of values of national importance aren't they?

A. Well, look to be honest I think you are asking me to stray into an area that leads, needs some legal interpretation.

Q. Okay.

A. You know, there are overlaps between section 6(e) of the Act and section 6(b), but I have a sense that where you are taking me at the moment has possibly more to do with section 6(e).

5 Q. It has more to do with 6(e) but I can't see that 6(e) and 6(b) are inconsistent.

A. No but when you –

Q. Can you explain it do you think. If you think they are inconsistent can you tell me how?

10 A. No, I'm not saying they are inconsistent but what I'm saying is the weighting given to them would be different because under 6(e) the focus is very much upon tangata whenua values. Whereas in, under section 6(b), and if we are just dealing with ONL22, which is what 6(b) addresses in this case, then it is one of, it's one part of the Venn diagram,  
15 but it's not the only part. And this is the reason why, with some strategic landscape assessments that I've been involved with mana whenua have at times decided that they want taonga and areas of significance to iwi addressed in strategic landscape assessments because they felt it would water down their importance under landscape. They felt it was often  
20 better to address it more directly under section 6E.

Q. If it's addressed under 6E and is not inconsistent with it being addressed under 6B, what is the issue with the weighting if they both reinforce each other?

A. They may not entirely.

25 Q. It's either, hold on I just want to finish. It's either a matter of national importance under 6(b) or it's not. It's either a matter of national importance under 6(e) or it's not.

A. Yes.

30 Q. If one is and the other one isn't it's not about the weighting, it's just about giving effect to that matter of national importance isn't it. Aren't you putting it in a way that cuts, where the two cut across each other when they don't necessarily have to?

A. No. I think you, what I'm saying is that, if you are addressing associative values as part of landscape, first of all there may be a broader range of

associative values than just those that relate to tangata whenua or iwi or hapū. Secondly, you've also got to consider the physical and perceptual components of landscape. It may not give you, they may not be totally aligned. In other words, there may be differences that mean that overall the values are less than you might otherwise think if you were just focussed on cultural heritage issues.

Q. See, I don't understand that and this is why I don't understand that. If something isn't, and I want to say this without, if something is important to somebody it's because, and actually I will start off. I started off this cross-examination on the basis that the perceptions are different. We might look at the same thing but we might see it in a different way. That's, you'd accept that?

A. Not always. I think there's actually a very strong, and past studies of Aucklanders' reactions to different types of landscape tend to reinforce that.

1525

Q. I said we might look at something, we might look at the same thing, so not all the time, not every time I'm going to see a chair is different to you, Mr Brown, but sometimes we'll at it from, you'll look at it from the front, I'll look at it from the back, it might have a red front and a black back, we might see different things, our perceptions might be different on different occasions, you'd accept that?

A. They might be.

Q. Now, if you don't appreciate it as much as me that doesn't necessarily negative my appreciation, does it?

A. No, it doesn't but I'm not arguing with that.

Q. Now, lastly, again just going back to you used Mr Te Rangi's evidence, you referred to him as, or you referred to him as expert, as being helpful in your assessment, that's correct?

A. Yes.

Q. And he talks on how the cultural effects could be addressed in the proposed sand extraction, I think that's at your paragraph 32 in your evidence in response?

A. Yes, I think you're right. I have to just, if you'll bear with me I'll just check that. I've got it.

Q. And when I go to Mr Te Rangi he doesn't, his evidence doesn't seem to sit, it's a lot about the engagement but his evidence doesn't seem to address how landscape effects can be dealt with. He talks about the cultural liaison agreements, he talks about economic interests and consultation but in terms of addressing the significant effects, and that's at EV540. He doesn't seem to give evidence that is as conclusive as you would suggest here?

10 A. I'm simply saying that I took guidance from his assessment and I'm just trying to, I'm just going back through parts of it.

Q. And he has got a topic, it starts off at paragraph 56 of his evidence at EV539, he talks about the effects of sand extraction?

15 A. Yes. I have got that. I'm not sure that I can add anything to what he has said.

Q. But he doesn't say well this is how you deal with those cultural effects that Ngāti Manuhiri are asserting, he says you can do things through cultural liaison agreements, he says there's a lower impact so he doesn't say that there's no impact, he says there's a lower impact and he says through agreements at 64 manu whenua can achieve economic value and he talks about aligning differences in consultation but that's not about addressing effects, is it?

1530

25 A. I had read his evidence as stating that he felt that there had been an appropriate level of consultation and he felt the level of effects was appropriate. Now, I have to say that in making that point he appears to have relied to a considerable degree on the expert findings of McCallum's consultants. Particularly in the areas pertaining to marine ecology, fish life and so on. But I think if you want to take that matter any further, really Mr Te Rangi is the person to discuss it with. I can't answer for him.

30 Q. Fair enough, Mr Brown. Lastly, and this is my last question, Ngāti Manuhiri are a that don't necessarily get along. You are aware that there is not one person with Manuhiri whakapapa that supports this

application or thinks that the impacts of it on their landscape are insignificant. You are aware of that?

A. No, I'm not aware of that. I didn't know that nobody in Ngāti Manuhiri felt that the (inaudible 15:31:47) appropriate or acceptable.

5 Q. Those are all the questions I do have for you and I really appreciate the way that you answer questions.

A. Thank you.

### **RE-EXAMINATION: MR MACRAE**

10 Q. Mr Brown, this is concerning questions by Mr Pou. As you've said, you've read the evidence of Mr Te Rangi. Do you recall any significant concerns about landscape from a mātauranga Māori point of view?

A. No, I don't believe he did.

Q. And you've read at least some of but perhaps most of or all of, the evidence for Ngāti Manuhiri by the witnesses that Mr Pou referred to?

15 A. Yes.

Q. Reading that evidence, did that help with your problem in including within your assessment an assessment of landscape effects on mātauranga Māori?

20 A. I think it gave me a better appreciation of the concerns that individuals have. But I'm not convinced that it gave me a better understanding of the cumulative effects in terms of cultural landscape values.

Q. When you say you're "not convinced," you carried out your assessment of course, you concluded an assessment. Did you make any reference to the material that you read from Ngāti Manuhiri?

25 A. No, I didn't. Apart from the material that had been produced on behalf of McCallums and that material was produced in support of the application and I think, if you will bear with me...

### **MR POU:**

30 Your Honour, to help things along and in fairness to Mr Brown, he does refer to the Ngāti Manuhiri cultural impact assessment at paragraph 32 of his evidence in response so I don't think I said that he didn't refer to any of the Manuhiri

evidence. He's listed ones that he considered and he quite fairly and squarely references that. So, no issue if that's what we're fishing around for here.

**WITNESS:**

My apologies, because I was focused primarily on the section 274 parties. And  
5 in that regard, I didn't reference them in my evidence or my rebuttal. But I have certainly read their evidence.

**RE-EXAMINATION CONTINUES: MR MACRAE**

Q. And that's what I was asking you about, Mr Brown. If we might return to  
10 my question. You've read the evidence of the witnesses that Mr Pou referred to and mentioned, if I might just recap on what you said to Mr Pou, did you have a problem in including what they said in your assessment from a cultural point of view? If I can use that term. Is that correct? Does that correctly reflect what your answers were to Mr Pou?

A. Yes, well, I –

15 Q. I'm not asking you to elaborate, Mr Brown, I'm just asking for an answer to that question.

A. No, I understand. And the reality is that, no –

**MR POU:**

Well, in fairness, your Honour, if Mr MacRae is going to try and lead and restrict  
20 the witness it's not really examination and I would object.

**THE COURT: JUDGE SMITH**

Ask the question again and let Mr Brown answer. It might be a pleasant change for him, and then we can move on.

**RE-EXAMINATION CONTINUES: MR MACRAE**

25 Q. So, you understood my question, Mr Brown.

A. Yes, I believe so. And, no, I haven't included that in my evidence.

Q. And can I ask you why not?

A. I think it comes back to this issue of, how would I examine it? How would I determine the degree to which it provided a greater understanding of the



cultural landscape effects at Pakiri and Te Arai? And I felt that if I had tried to put it in my evidence, it wouldn't have assisted at all.

Q. Thank you. Just turning very briefly to ONL 22, did any part or any of the witnesses for Ngāti Manuhiri, whose evidence you read, define or express their concerns by reference to ONL 22?

A. I think one piece of evidence did but I am unsure which one. I would have to go back through it. But I think one did refer to it extending from the northern regional boundary down to near Goat Island. In fact, just beyond. But I would have to go back through the evidence to clarify that.

Q. Well, perhaps just to be a little bit more specific. Did any of the witnesses whose evidence you read from Ngāti Manuhiri draw on the matters of concern in ONL 22 in presenting their evidence?

A. No, not directly. I suppose the only issue that might arise somewhat obliquely is that of effects on wildlife.

**15 THE COURT: JUDGE SMITH**

Now, I'm going to take the afternoon adjournment anyway even though there could be questions from the Court. And the next question I have for you, Mr MacRae is whether you've got somebody to take us to the end of today?

**MR MACRAE:**

20 Yes, I do, Sir. I have Mr McIlrath. Although, in the afternoon adjournment a few minutes to have a word to him because I haven't been able to do that yet to explain how the system works but that will (inaudible 15:39:58).

**THE COURT: JUDGE SMITH**

25 Okay, if somebody could contact Mr Littlejohn to make sure he's with us, I'm not sure if he's with us at the moment or not but if not if he could advised.

**UNKNOWN FEMALE SPEAKER:**

Mr Littlejohn is here, your Honour.

**THE COURT: JUDGE SMITH**

Oh, good, excellent. Okay, so we'll take the afternoon adjournment and it's 39 now, I think we'll try and recommence at 4 o'clock if we can so a shorter break.

**COURT ADJOURNS: 3.40 PM**

5

**COURT RESUMES: 4.00 PM****THE COURT: JUDGE SMITH**

I just want to see if there are any questions for the various members of the Court. Commissioner Myers, did you have any questions of Mr Brown?

**5 QUESTIONS FROM THE COURT: COMMISSIONER MYERS**

Q. Good afternoon Mr Brown, can you hear me?

A. Good afternoon Commissioner.

Q. In your evidence you have described changes over time so like the loss of the pines and the golf courses being put in at Te Arai and, but you also describe the remoteness and grandeur, I think particularly in relation to Pakiri. But with the changes I think you talk about, you know, the modification of that area. I was just wondering, like I suppose it's a big picture question, but how do you go about your assessment of character and values when you've got an area with that grandeur and remoteness?

10 A. It was, I have to say it was easier 40 years ago when it was just basically open ocean beaches, Te Arai Point, Mangawhai Heads, High Dunes, the dune corridor behind the beach and then the pine trees, because that also leant the beach area in particular a sense of isolation and separation and naturalness even if the pine trees weren't natural. Now it's become, in my view, markedly different and I think that really began with the amount of consent for subdivision south of the High Dunes, not far from Mangawhai settlement. And now we are seeing it with the mixture of golf course development and residential development both sides of Te Arai Point. I think what it's doing is creating a situation that's much more complex and it's really narrowed down that marginal area of beachfront and dunes and ocean that might be still considered outstanding.

Q. But that beach and dunes still has the natural values does it?

15 A. In places I'm not sure it does right throughout now. I have a sense that if you look at it overall some of those qualities have been lost and are continuing to be lost. And I did raise the prospect that in the future ONL22

might disappear or change, it might be more focussed on the cliffs at the southern end of Pakiri through to Leigh, less so on the beach.

Q. Thank you, that was just a big picture question of mine, so thank you very much.

## 5 QUESTIONS FROM THE COURT: SPECIAL ADVISOR HOWIE – NIL

### QUESTIONS FROM THE COURT: COMMISSIONER PRIME – NIL

### QUESTIONS FROM THE COURT: JUDGE SMITH

Q. Thank you, you will be pleased to know Mr Brown that I am not going to get into a further major discussion with you. I just want to just briefly touch on, and my thesis to you I think is one you have probably heard from me before, which is that there is not as much difference as some might suppose between the various aspects of value versus those, in New Zealand at least, as modified over recent years. Is it possible Mr Garton to pull up that Venn diagram again, I can't remember, it was from the Te Tangi a te Manu and we had that up most of Mr Pou's discussion. So, in short, the days of Liberty Brown and arcadian landscapes are well gone in New Zealand, aren't they?

1605

A. Yes, I'm not sure that they're arcadian perception or view of landscape had as much currency up in the north as it did in the South Island, your Honour.

Q. Yes, yes, I was thinking back to our discussion of pine trees back in 2002 I think it was so we tend to go around in fairly large circles, one has to say. So, nevertheless, many of those aspects there which are discussed have relatively close parallels. If I could put it this way, one could see the inner circles of overlap in terms of tangata whenua values is functional elements of the landscape, those which can provide resources, those which might trigger memories of whakapapa or ancestors, those trigger or be utilised for the purposes of kōrero warnings, praises et cetera, in that broad sense and thus might be very similar to the way in which Europeans might see landscape in terms of reminding them by names or

other features of things that are important. Now, it's probably not as detailed but, nevertheless, it does seem to me that landscape really is about how we react to the landscape and I know we've had this discussion many times?

5 A. Yes, your Honour. I mean, there have been two major studies that tend to (inaudible 16:07:02). The first was undertaken in 1982 (inaudible 16:07:05) and the second was undertaken, it began in 2003 to 4 and went through to 2004. They were both public preference studies and the first one involved nearly 1100 members of the public from throughout the  
10 Auckland region and the second one was more focused on particular, I guess you'd call them, focus groups. And in both of those studies, what emerged was that there tends to be an overwhelming preference for landscapes that have one particular quality and that is more naturalness. The more natural a landscape is the greater the preference. Now, that  
15 was common irrespective of cultural or racial or socio-economic differences. The only difference that was identified in the later 2003 to 4 the Q-sort study undertaken by Professor Simon Swaffield and John Fairweather was that Māori indicated a slightly stronger preference for landscapes that incorporated a food production element, in other words  
20 (inaudible 16:08:26) landscapes were rated slightly higher by tangata whenua than by the population at large. But that was still a relatively minor variation within those studies. So I think overwhelmingly what you're saying is correct that almost irrespective of what our cultural backgrounds are people respond in very similar fashions to local features,  
25 to areas that – and areas of significance.

Q. And it would be fair to say the one confounding factor we've discussed on many occasions is pine trees, those from North America seem to love them whereas many New Zealanders view them more as a productive item as opposed to naturalness per se, would you agree?

30 A. Yes, I would and in fact, those two studies tended to confirm that with pine forests rating very lowly, in fact they related below open dairy pasture in most instances. But the reason I mentioned that I mentioned them in a more positive vein in respect of Commissioner Myers' question was that

in that case they actually helped to provide a sort of vegetative buffer and sense of containment for the beach that I thought was very positive.

1610

Q. And my recollection is we had the same discussion about Matakana Island, I think you were involved in that, weren't you?

5

A. Yes, your Honour, though I'm still not convinced that all of the pine production areas within Matakana Island should be regarded as an ONL though it might well be an ONF.

Q. Yes, well, I won't go into all of that. I wasn't involved at that part, only some previous hearings. And it would be fair to say that you've been involved in many of these areas. I think you've just finished the Tauranga Port hearings, is that right?

10

A. Yes, your Honour.

Q. And many of the other areas I've dealt with, particularly through the Auckland region. There have been a number of facets, including I think you may have been involved in some of the early hearings in this area, Pakiri.

15

A. Yes. I have in the past, your Honour.

Q. Yes. So, I don't want to go any further with that. I just want to say that one of the aspects of course is avoiding adverse effects on those values, whether they're functional or other values. But it seems to me that – but the other aspect is of course enhancing or restoring values that have been degraded. You would agree, wouldn't you?

20

A. Yes, I certainly would.

Q. Now, I want to ask you about three things and see that those would assist in a landscape sense. The first is, if work was done to try and what I might call control the beach, and by that I mean, your Honour, less vehicles, dogs, horses, some work with pīngao, you've already mentioned that, and other restoration programmes. You would agree that that might degrade – that that might restore or improve, depending on your view as to its base situation, those values in a landscape sense?

25

30

A. I certainly would. Yes, I would, your Honour. I would wholeheartedly agree with that approach.

Q. The next is any work that might be done to enhance and protect both the habitats but the prospects for Tara Iti.

5 A. Yes, and I do agree with that as well. And there's one other matter that I would like to see happen but it does raise the possibility of a conflict with the golf courses and that is with some form of canopy species being established between the golf courses. In fact, behind most of the dune corridor.

10 Q. Yes, I don't think I want to get started on the golf courses. But I appreciate your point. Were you involved in the (inaudible 16:12:52)? I can't remember the name of the top golf course, the most northern one.

A. No, I was not, your Honour.

15 Q. No, I didn't think so. No, unfortunately I was. So, the next matter is re-establishing the mussel beds, the fence that Mr Pou was talking about, that may have less visual landscape effect but no doubt would still form part of the broader landscape in the cultural context and the broader associative values, would you agree?

A. Yes, and it would also assist with natural character enhancement.

20 Q. Yes. And given that the mid-shore and inshore are no longer on the books, it does appear to me there is the potential to recreate those mussel beds, would you agree?

A. I would hope so, your Honour.

Q. Would they all be positive values in a landscape sense if they were enhanced?

A. Yes. They would also be positive values in terms of natural character.

## 25 **QUESTIONS FROM THE COURT: JUDGE WARREN**

30 Q. I just had one thing to explore arising out of your questions, if I may, Mr Brown. In answer to Judge Smith questions about the differences or distinctions between landscape values (inaudible 16:14:17) context and in a non-Māori context, you said there wasn't great difference. Why then have you been critical of Ms Lucas' evidence for focusing on, as you say, almost entirely through a cultural lens?

A. Because I think Ms Lucas had the opportunity and the time to address the landscape as a whole, bearing in mind the evidence that had already

been prepared. So, there was the opportunity to look at the (inaudible 16:15:00) of Te Arai and Pakiri as a whole and –

Q. Did you do the same thing?

5 A. I did in every respect except for the cultural landscape and felt that cultural values were being addressed by other specialists for McCallums.

Q. Okay. I think the distinction you gave was around – from the research reports that you identified was to do with kai or food was one of the distinguishing features. What about matters such as mauri? Did that come through the research papers that you quote?

10 A. No, your Honour, it did not.

Q. So, I note that –

A. I have to say – it just did not, no.

#### **THE COURT: JUDGE SMITH**

15 Q. To be fair, that may have been the way in which that study was framed. It does seem to me we may be in a situation where it's due for another revision. It's been, what, 20 years now hasn't it, Mr Brown?

A. Yes, your Honour. The problem is each time we undertake these studies they get more and more complicated and longer and larger and more expensive and I think we're now reaching the point where everybody is  
20 wondering just how to undertake future studies. They're just so complex now.

#### **QUESTIONS FROM THE COURT CONTINUES: JUDGE WARREN**

25 Q. Well, I guess (b)(vi) of the unitary plan, I mean, in terms of heritage sites and sites of significance, clearly and squarely identifies mauri as important.

A. Yes. Look, I agree with you but just to give you an example, I undertook study about 12 years ago of Kawhia Aotea Harbour catchments, the harbours and then the catchments behind them. But in discussions with (inaudible 16:17:13) they felt that the identification of areas of significance  
30 under the umbrella of landscape would actually dilute their significance and so they didn't want that to happen. So, at that stage, they felt that it



would be more appropriate to identify them separately and address them through section 6(e) of the Act and, you know, that was –

Q. But that's relevant to that particular context. There's no riders in 6(b) that this is the domain of non-Māori only.

5 A. No, but to be fair I need to say that we've attempted to do the same study in 2005 for Whangārei District and more recently we've had a pilot study undertaken for part of the Coromandel Peninsula. Now, neither of those seem to have made any progress and I can't explain why they have not made any progress but there have been two attempts that I'm aware of  
10 to try and address what is clearly a missing dimension from these strategic studies. But at the moment they're struggling to get off the ground.

Q. I mean, it's a legal issue at the end of the day which we'll no doubt hear submissions on but, I mean, 6(e) talks about (inaudible 16:18:44)  
15 whereas 6(b) is about protection. And so, yes, we'll leave that there.

#### **THE COURT: JUDGE SMITH**

It sounds like I'll be able to involve Judge Warren in the next round for ONS and ONLs in Northland which we've just had to, after two years, given up on unfortunately.

#### **20 THE COURT: JUDGE WARREN**

Is Mr Pou involved in that? I might have to bow out.

#### **THE COURT: JUDGE SMITH**

The council ran out of money, as I understand. It was budgeted at a certain amount and then couldn't fund the full cost which, as Mr Brown said, was orders  
25 of magnitude above what they'd intended. But that's not a problem I think either you or I or Mr Brown can deal with, unfortunately. Thank you, Mr Brown, I think those were all the questions, unless somebody else had something arising? Now, what I'm intending to do with Mr McIlrath is start even though nobody's given me estimates of time. We won't finish him by 5 o'clock today, unless I'm  
30 mistaken, in which case I will then ask counsel how long they're likely to be for

those who haven't already asked their questions. So, would you like to call Mr McIlrath please, Mr MacRae.

**MR MACRAE CALLS**

**LAWRENCE MCILRATH (AFFIRMED)**

5 Q. Mr McIlrath have you produced statements of evidence in this appeal, a statement of evidence-in-chief and a statement of evidence-in-reply?

A. Yes, I'd did.

Q. You have copies of those with you?

A. Yes, I do.

10 Q. Mr McIlrath, do the changes, some of the changes that have recently occurred in the framework of the applications now before the Court made a difference to your evidence in a way that requires updating?

A. Yes, it does.

**MR MACRAE:**

15 Sir, again if I might just intervene for a moment and, by way of explanation, we've addressed the changes to Mr McIlrath's evidence (inaudible 16:21:53) and that was sent.

**THE COURT: JUDGE SMITH**

Yes, thank you. I am just pulling it up now so if you just give us a moment. The  
20 others probably already have it to hand but I will just pull mine up. It seems to be fairly limited changes, would that be fair Mr McIlrath?

**MR MACRAE:**

I just wish to explain that a little Sir. As with some of the other witnesses, we've taken the approach and so far it seems to have been acceptable to the Court,  
25 of leaving in material where the amendment is self-evident. So small changes that refer to the inshore or the mid-shore or, and so where sections are left in they are regarded as still having some relevance just to the overall context rather than to Mr McIlrath's analysis of economic effects on the offshore. Sometimes, as with the evidence of, for example, Dr Pine, they provide a basis  
30 of comparison.

**THE COURT: JUDGE SMITH**

Yes, thank you.

**EXAMINATION CONTINUES: MR MACRAE**

5 Q. Mr McIlrath, the first significant change, although it doesn't appear to be very significant is paragraph 76 and again in 91 and they are the first two entries.

A. Yes.

10 Q. Those that occupy the first page. It will be difficult for the Court just to read those in isolation. Could you explain what has prompted these changes and why they are worded as they are?

15 A. Yes, thank you very much. So those two changes are really, well the first one on paragraph 76 is just clarifying the number, so the number and the percentage in the brackets was correct and it's just replacing the 83% and making that 78%. So that's of the total tonnes, so that's just the wording. Then I will just clarify that that's the percentage that includes the surrendered inshore consent. Then the second one, second row, paragraph 91(b)(i), that's just an amendment to clarify exactly what component of the sand market we are talking about there. So that's just clarifying that.

20

Q. Just if I could hold you there for a moment Mr McIlrath, you still refer to, towards the end of that paragraph, to the mid-shore or inshore volumes. Could you just again explain to the Court briefly why you are doing that?

25 A. So this is just to clarify that I'm looking at a specific subsegment of the transportation cost. This paragraph relates to the existing situation or the situation in 2021. So it's just clarifying what those trips relate to. So further on from here, further forward into the evidence is where the main changes occur.

30 Q. I think the effect of those changes and the reduction in area lost, particularly of the inshore consent, has led to changes in the figures in paragraph 128 that reflect the result of your altered analysis, is that right?

1625

A. That's right.

Q. So could you, again, explain to the Court how that works?

A. So in paragraph 128, so the struck-out numbers, and I'll just talk to the first bullet point which is (a) so the total cost avoided, so the previous numbers or the original numbers were \$67 million and the (inaudible 16:25:31) which is \$94, those reflected a discounted and undiscounted values as is shown in the paragraph, explained in the sentence above, and then the rest of that sentence is with the values of only the offshore, and then I've got the new dollar estimates there, so being \$44 million which is the discounted value or \$58 million which is the undiscounted value. And that pattern is consistent across the rest of those bullets.

Q. And for the purpose, just explaining your footnote 44, you refer to 13 years for the offshore consent. Why 13 years?

A. So, it's my understanding that if we look at historic or the more recent consent (inaudible 16:26:17) in terms of how much sand's been extracted it was around about 150,000 tonnes per year so I use that number. Of course, that means that you'll run out of the total volume of 2 million cubes before 20 years and I've just used that to reflect the patterns.

Q. If we go to paragraph 140?

A. So paragraph 140, for most sand structure in terms where we've got the discounted and undiscounted values, with the undiscounted values in brackets and then the replaced numbers just highlighting the year with bullet (e) that one can be deleted, it's the same information as in bullet (d).

Q. Do you want to say anything about 141?

A. So, this is in the sort of tail end of my analysis and it really just highlights the fact that regardless of whether Pakiri consent whether it's proved or not I think looking forward we know that there's, we expect a supply crunch for sand and now with the loss of the inshore and midshore it even adds a little more uncertainty and it exacerbates the risk associated with that supply crunch that's on the horizon.

### **MR MACRAE:**

And just to explain, Sir, that this table relates only to Mr McIlrath's evidence-in-chief. There are other amendments to his evidence-in-reply.

**CROSS-EXAMINATION: MS BIELBY – NIL****CROSS-EXAMINATION: MR VAN MIERLO – NIL****CROSS-EXAMINATION: MR WILLIAMS**

Q. Mr McIlrath, can you hear me okay?

5 A. Yes.

Q. So, I just wanted to start off with the joint witness statement that you were a signatory to. I don't know if you have that in front of you but perhaps, Mr Garton, if you could bring that up, it's common bundle 1442? So, this was a joint expert witness statement and it was from Friends of Pakiri Beach, Ms Grant, you and Mr Sharp for Mangawhai Harbour?

10

A. Yes.

Q. So I just want to ask you about issue 1 which was the matters of agreement which, given they're agreed we should be able to cover off relatively quickly. It was agreed that alternative sources exist within the broader Auckland region, that Kaipara was agreed as the most probable primary alternative supply and that there's a wide range of alternative sources available. Just as a general proposition, as I understand it, you don't really take issue with Ms Grant's brief as far as it goes, particularly in relation to her assessment of alternative supplies. Your objection, if I can call it that is, just she hasn't assessed any transportation costs or done any cost benefit analysis. Is that right?

15

20

A. I think it goes a little bit further than that, you know, when we look at the availability of sand and that really goes to the fourth point there, you know, it's about suitability of those alternatives, because otherwise we end up with a situation where we have a, let's call it an inventory, you know, a very long list of potential alternatives that we could use. But it's really important and that's the thing that we actually agreed on as well, it's like, you know, we have to consider and reflect the transportation, you know, the modes and, from memory, Mrs Grant actually reflected some of the, and commented on the importance of mode. You know, we also talked about the quality and the implications of that because the quality goes towards sustainability, you know, how much cement is actually used.

25

30

Then also – of the sand – and if it's already allocated to existing users. So it's not just looking at a list of potential sources but it's also about whether what are the attributes of those sources, where are they located and what are the implications and the cost implications of actually accessing those sources and using them in the Auckland market.

5

Q. Let's just focus on the Kaipara Harbour resource. You accept that that's a suitable resource, suitable for use in concrete, don't you?

A. That is my understanding that yes you can use it for concrete, yes.

Q. Would you agree that it's effectively a huge resource, it's estimated to have annual replenishment volume of 2.6 million cubic metres? I am taking that from Ms Grant's brief.

10

A. That is right, yes.

Q. You accept that?

A. Yes.

15

Q. So she says it's a sustainable extraction volume of 780,000, 1.3 cubic metres per year, you don't quibble with that do you?

A. That is outside my field of expertise.

Q. So I'm just trying to tease out where you depart from Ms Grant and I'm just trying to run through what I think you agree with her on. She says at her brief and we can bring this up if you need to look at it, but I will just quote it to you first to avoid the, happy to bring it up. She says: "The most probable source considered is the unutilised consent Kaipara Harbour as it is already permitted, is presently used by the concrete industry and has a large volume available. The current extraction undertaken by Mt Rex Shipping is around well under the total consented volume at 600,000 cubes per year, leaving approximately 300,000 cubes per year of consented sand presently unutilised." Now as I understand it, you don't disagree with that, in fact your evidence-in-chief talks about spare capacity in that consent and you talk about it in tonnes of about 686,000 tonnes. Correct?

20

25

30

A. That is correct. In fact Kaipara is the principal alternative in my analysis.

Q. Yes.

**MR MACRAE:**

Your Honour, it might be helpful to the witness if Mr Williams were to bring these passages up on the screen if cross-examination is going to continue in this way.

**MR WILLIAMS:**

- 5 Well, I just offered that to him if he needs it. I am trying to avoid having to take time given we are trying to get through by five. So the witness can indicate if he needs to see it.

**CROSS-EXAMINATION CONTINUES: MR WILLIAMS**

A. Yes please, which paragraph?

- 10 Q. Well I haven't referred to a paragraph, I'm just going to refer to your brief at 91 of your evidence, (a)(i), you talk about the Kaipara sand being barged to Helensville in truck-free plants and that's done for Winstone and Atlas, correct? Correct?

15 A. So at the moment that is done for that but in my analysis I, if I replace or substitute Pakiri sand then it's either trucked or via rail for some of the options, the two options, mode options that I look at, to the clients that use McCullum sand.

- Q. Yes, I am just asking about your 91. My question really is this, it's clearly economically viable Winstone and Atlas to barge sand to Helensville and  
20 to have it trucked to concrete plants? Otherwise they wouldn't be doing it right?

1635

A. But you have to consider where they're trucking it to. They're trucking those ones –

- 25 Q. Well let's take this step by step.

A. – to Kumeu, Helensville and Silverdale.

**THE COURT: JUDGE SMITH**

- I would prefer we had a question and then an answer rather than – so I think you need to repeat your question, I didn't even catch it Mr Williams because it  
30 was (inaudible 16:35:29) –

**MR WILLIAMS:**

Oh I'm sorry Sir.

**THE COURT: JUDGE SMITH**

The other witness started to answer his answer to your previous question, and  
 5 you asked him another one. So I think if we're going to do this in an ordered  
 way you need to ask the question, allow the witness to answer fully and then  
 ask the next question, otherwise it just becomes chaos.

**CROSS-EXAMINATION CONTINUES: MR WILLIAMS**

Q. Yes well what I'm asking the witness is, Winstone and Atlas barge sand  
 10 to Helensville, truck it to concrete plants, what I'm putting to you  
 Mr McIlraith is that is clearly economically viable for them to do, otherwise  
 they wouldn't be doing it. Do you agree or not?

A. I think we need to qualify concrete plants, because it's where those  
 concrete plants are located that influences the viability and it's my  
 15 understanding that they are supplying mostly from the Kaipara that sand  
 goes mostly to concrete plants in the north of Auckland and for the most  
 part that's Silverdale, Kumeu and Albany.

Q. Okay and so that's economically viable for them, correct?

A. Yes. I would assume so because as you say otherwise they wouldn't be  
 20 doing that.

Q. That's all I wanted. So I take from your evidence-in-chief, you effectively  
 dismiss manufactured sand as a possible alternative source of supply?  
 You spend about two paragraphs on it.

A. I think that part of that explanation for that is, it is the volumes that we are  
 25 seeing at the moment in that space are actually quite small, it's not really  
 something that we see in the short-term to replace (inaudible 16:37:14)  
 sand, you know, in terms of the volumes needed. From memory that is  
 also a point that was raised by Ms Grant.

Q. I think in, we can look at your brief if we need to, but in the passage you  
 30 talk about manufactured sand, you talk about your understanding and  
 your footnotes refer to Mr Officer who's a witness and Mr McCallum, I'm



right you've really just got your understanding about manufactured sand from those two witnesses, correct?

A. Can you point me to that paragraph please?

5 Q. Yes, you talk about this at, other sand options, at 131, page 34 of your evidence-in-chief and you have a footnote at 45 and at 46 where you refer to Mr Officer and Mr McCallum, you've no other references to manufactured sand or in support of your analysis of manufactured sand as an alternative.

10 A. So if we look at 132 point (b), well and (a) as well, what we're talking about here is when I look at the price, \$60 that's mentioned, you know, the sand manufacturers really sort of step into the market, I look at that and say well actually based on the delivered price at the moment, which is around 34 to \$45, you know that's quite a disadvantage so it will actually take quite a bit of time before we actually get to that space.

15 Q. Well thank you for that, but I don't think that actually answered my question. My question was, what information did you use to get your understanding about manufactured sand and whether it was a viable alternative resource and I put to you that you've only referred to Mr Officer and Mr McCallum in your brief of evidence, that's right isn't it?

20 A. That is right. But I've used that information and I've compared it with the information about the price of sand from an economic perspective to see whether that is viable or not.

Q. Well did you Google for example manufactured sand New Zealand to see what might come up?

25 A. Yes I did, and that is part of the council hearing process in the lead up to this (inaudible 16:39:50) –

Q. So you would have come across the – oh sorry. So you would have come across the Kayasand website who have a plant in Waikato?

A. That is right, yes.

30 Q. And did you go on their website and have a look through it?

A. Yes, I did, yes.

Q. And did you see that they got a grant of 3.5 million in 23 May this year from the New Zealand Green Investment Finance Fund with the aim of reducing carbon emissions from concrete?

A. I would've looked at that before that date. So, I would not have seen the grant that they received.

5 Q. Did you discuss their operation and what they're trying to do? Did you talk to anyone at Kayasand about manufactured sand and whether it might be a viable alternative?

A. I did talk to some of my other clients that I work with in terms of what they are exploring for manufactured sand.

Q. Okay, so your other clients, they're not Kayasand, are they?

A. No.

10 Q. So, the answer to my question was: "No, I didn't talk to Kayasand" would that be right?

A. That's right.

Q. Okay. So, if you had have asked them you would've no doubt been aware that their technology is used in 300 plants across Japan, China, India and  
15 Australia. So, you're not aware of that, are you? Because you didn't ask them.

#### **THE COURT:**

Well, that's evidence from the bar for a start. You need to refer to the witness who raised that issue.

#### **20 MR WILLIAMS:**

I've emailed a document, Sir, which is relevant to the so I wonder if that could be brought up. It's the first document I emailed recently. It's called "about Kayasand."

#### **THE COURT: JUDGE SMITH TO MR WILLIAMS**

25 Q. Is this a document you're putting to the witness to see if he knows about it?

A. Yes, I'm going to ask him some questions about it, Sir.

Q. Well, you first have to get a basis to admit the document. So, find out if the witness knows about it or tell us who's going to be producing the  
30 document.

A. All right. Well, I may produce it through this witness, Sir, depending on the answers. But perhaps I'll just, by way of background before I ask –

Q. It's not a question of background, it's a question of whether the witness knows the document. This is the court, it's just like any other document production in any other court.

A. Yes, understood, Sir. What I was proposing is ask him some background questions about manufactured sand which will then lead into this document.

**CROSS-EXAMINATION CONTINUES: MR WILLIAMS**

Q. So, are you aware, Mr McIlrath, that there are manufactured sand plants around the world that manufacture sand as an alternative to mining sand?

A. Yes, I am.

Q. And are you aware that there's a company in New Zealand that is proposing in setting out in trying to set up a manufactured sand business?

A. Yes, I am.

Q. And they're called Kayasand.

A. Yes. I can also say that they're not the only one.

Q. Okay, who are the other ones?

A. Brookby. Brookby Quarries.

Q. And where are they based?

A. South of Auckland.

Q. And how long have they been operating for?

A. I don't know all those details.

**THE COURT:**

I did the consent for them about 10 years ago and that was the second or third consent but I don't know anything about manufactured sand but obviously this witness does.

**MR WILLIAMS:**

Yes, Sir.

**CROSS-EXAMINATION CONTINUES: MR WILLIAMS**

Q. So, if I can just ask you to have a look at this document. This is a document produced by Kayasand which talks about their operation. And on page 2 in the second paragraph it talks about uses. Because you've touched on this I think in your evidence about manufactured sand (inaudible 16:44:38) particularly useful for some applications. So, under the second – no, sorry, page 5. Under the second heading, what are the common applications of manufactured sand in the construction industry, do you see there it says manufactured, I think it should be sand, can be used to replace natural sands in almost all concrete mixes and (inaudible 16:45:20). "In dry concrete applications they are typically superior to natural sands." That's something your familiar with?

A. I am now.

**THE COURT: JUDGE SMITH**

Q. Well, have you seen this document before? Is my issue.

A. Ten minutes before we walked in, so...

**CROSS-EXAMINATION CONTINUES: MR WILLIAMS**

Q. In terms of the technology, could you go to page 3 at the top of the page, that was the question I was asking about the different countries. I think you accept that manufactured sand is used overseas and here it talks about this production of manufactured sand started in Japan when there was a ban on dredging and it's now in China, they have over 240 plants producing manufactured sand.

**MR MACRAE:**

With respect, Sir, I object to this line of questioning. Mr McIlrath saw this document 10 minutes ago and my learned friend hasn't established any basis on which Mr McIlrath can accept or not accept the statements in.

**THE COURT: JUDGE SMITH**

I agree. I certainly cannot understand that reading a piece of paper to somebody represents evidence, especially if it's read by counsel.

**MR WILLIAMS:**

Well, in my submission, Sir –

**THE COURT: JUDGE SMITH TO MR WILLIAMS**

Q. Which witness raises this issue?

5 A. Well, this witness does, Sir, he talks about (inaudible 16:47:29) sand and dismisses it as a viable alternative. So, in my submission I'm in –

Q. (inaudible 16:47:35) contrary evidence produced?

A. Well, there's a reference in Ms Grant's evidence-in-chief about manufactured sand. She mentions it in her evidence.

10 Q. I'm struggling to understand the basis upon which to rely on the document. The witness – I presume it was the one copy you sent to the Court and him (inaudible 16:48:08) validity or anything.

A. Well, in my submission, Sir, the witness has accepted that there is a company called Kayasand. If he thinks this is a forgery, he can say so.  
15 But if he accepts the document is a valid document and he accepts the matters that I'm putting to him then, in my submission, you can take in this hearing.

Q. Well, he just answered your question and said he'd only seen this a few minutes ago. I am struggling to understand – I'm not aware of any court  
20 in New Zealand that would accept evidence given by counsel in this way. I probably need to think about it some more and have a talk to the other judge and also the members (inaudible 16:48:55).

A. All right, Sir, I'll move on in any event.

**MR MACRAE ADDRESSES THE COURT – UNABLE TO HEAR (16:49:05)****25 THE COURT: JUDGE SMITH TO MR WILLIAMS**

Q. I think what I'm going to do is adjourn the hearing and the witness for the time being because I'm concerned about why this approach is being taken. Did you obtain this from a website or something, Mr Williams?

A. I think I obtained it from another party in the case, Sir. I'd need to check  
30 exactly, it was emailed to me. I mean, I have no doubts about its

authenticity. I mean, it's certainly not a manufactured – it's a document from Kayasand.

Q. But you're not giving evidence to the Court. You're not sworn, nor can I – I just am so surprised that counsel would suggest that this could constitute evidence before the Court. You've only arrived – this is the first time I've seen you, I have no experience with you previously. I'm not even sure who's leading the case. Are you leading the case or Ms Campbell?

10 **MR WILLIAMS:**

Ms Campbell is Sir.

**THE COURT: JUDGE SMITH**

I want to talk to Ms Campbell now. Ms Campbell, if you're lead, why wasn't this put in evidence to the Court?

**MS CAMPBELL:**

Sir this material wasn't in possession of Friends of Pakiri Beach at the time the evidence was exchanged. I might add Sir that Kayasand was a submitter on this application and its status as is submittable is challenged by McCallum Brothers, a success for me (inaudible 16:50:52) and the Commissioners ruled that they were a trade competitor Sir. So they did commence involvement by lodging a submission and indeed presented evidence at the council hearing on the offshore consent but that was after Kaipara ceased to be the consent applicant, McCallum Brothers took a different approach to the material and sought that it be disregarded by the council which the council duly did. So –

**THE COURT: JUDGE SMITH TO MS CAMPBELL**

Q. So is there any form of sustenance for this case to your clients from Kayasand?

A. Well as they're not able to participate obviously because of the ruling and they're not called as a witness Sir, we don't have (inaudible 16:51:40).

Q. No that's not my question, my question of you is whether or not they're providing any form of sustenance financial or otherwise in terms of Pakiri Beach?

A. Oh sorry Sir I misunderstood. Not as far as I'm aware Sir.

5

**MR WILLILAMS:**

No there's none Sir, I can answer that categorically there's none.

**THE COURT: JUDGE SMITH TO MS CAMPBELL**

10 Q. Thank you, I'm not sure what to do. It may be that when Mr McIlraith's had a (inaudible 16:52:06) this document by Monday he may be able to – I don't have a problem with the questions per se but it's the way in which they've put as though the document itself constitutes proof.

A. Yes I understand the problem Sir.

15 Q. There's no problems asking a question whether or not manufacture – because I in fact thought all the witnesses agreed with that manufactured sand was available and that the work – I thought somebody said they were intending to do it in New Zealand but it hadn't started yet. That seems to be where we're at.

20

**UNIDENTIFIED MALE SPEAKER:** (inaudible 16:52:29)

Mr McCallum said that Sir.

**THE COURT: JUDGE SMITH**

25 Yes, yes, I thought Mr McCallum said exactly that. So I don't know if –

**UNIDENTIFIED MALE SPEAKER:** (inaudible 16:52:36)

I think there was a (inaudible 16:52:42) plant servicing. I'm sorry Sir.

30 **THE COURT: JUDGE SMITH**

Yes but I don't think the actual questions themselves are a problem, the problem's with the document not with the questions, do you follow my point?

**MS CAMPBELL:**

I understand the problem entirely Sir and Mr Williams has indicated that he's happy to spend the next 10 minutes asking a different line of questions if you'd like to conclude the evening with that, or alternatively if it's time a natural break to adjourn Sir then that's acceptable too.

5

**THE COURT: JUDGE SMITH**

I wonder if we shouldn't just park it because I'd like to have a chance to talk to the rest of the Court. I think in fact, just with a slight reframing of the way you approach it, you can ask all the same questions without the need to rely on the document directly. But that's a matter you might want to consider and we will have to consider it and we will (inaudible 16:53:32) because it may be that once Mr McIlraith has had a look he may tell Mr MacRae that he doesn't have a problem answering questions on it, or alternatively it may be that on reflection you can ask the same questions in a different way. So I'd rather deal with it on Monday than now, so I'll park it. I don't see a lot of advantage on us continuing for five or 10 minutes on a different line because Mr Williams was pursuing that line. And I do want to talk to the parties about what happens next week so I think this is a convenient time to do that. Are you content with that too Mr Williams?

20

**MR WILLIAMS:**

Yes thank you Sir. That's fine.

**THE COURT: JUDGE SMITH**

So we're going to look at on Monday. Meantime can we just talk about where we're going to with the case? Overall we seem to be about tracking right, is that your understanding Mr MacRae?

**MR MACRAE:**

Yes Sir I think so, yes. And I think we may make more progress next – well I think we'll make sufficient progress next week to complete the applicant's case Sir.

**THE COURT: JUDGE SMITH**



Yes and I wonder whether there might not be some time over to want to talk to – that's why the reason I want to raise it today. I told Ms Bielby we'd address this before the end of play today. So we've got, is it Sian is that female or male I'm sorry? But I've got Sian John.

5

**MS CAMPBELL:**

That's Ms Johns your Honour.

**DISCUSSION – TIMETABLING FOR NEXT WEEK**

10

**KARAKIA**

**COURT ADJOURNS: 5.16 PM**

**COURT RESUMES ON MONDAY 24 JULY 2023 AT 9.59 AM**

Audio unavailable 09:59:48 to 10:20:20

**5 LAWRENCE MCILRATH****EXAMINATION CONTINUES: MR WILLIAMS**

A. ...I can actually go on and actually look at some of those different studies but I think if you just look at page 43 and I'll just read this because this is really goes to that –

10 Q. Please don't, please don't read it, just tell us where the page is.

A. Page 43 Sir.

Q. Thank you. Is there anything else you want to say?

A. Just what they're actually saying there is you know (inaudible 10:20:48) look at the reports and they make this statement saying: "It would be  
15 unwise and require a cascade of heroic assumptions to use some of the international reports to come up with (inaudible 10:21:00) values" and I think this really goes to the point that we're trying to make in the joint witness statement is yes we acknowledge that those (inaudible 10:21:08) were trying to express them in monetary terms, it's just virtually  
20 impossible at the moment with the techniques that we have currently available.

Q. Well, is it because they've attempted in their table 1, if you can go to roman numeral 4, to put a figure on the value of the Hauraki Gulf isn't currently included in GDP, which is 3.3 billion is the non-market value of  
25 the Hauraki Gulf, isn't it?

A. No, where do you see the non-market values?

Q. On the right-hand column. Not included in GDP.

A. Yes, but like you can think about the recreation what is actually associated with that, that's the time value of money and the value that  
30 people spend, how they value their time when they actually participate in some of those recreation activities. But I think part of it is also which component and which elements of these line items are relevant to the Pakiri case.

Q. Okay, well let's have a look at that. If you see on this page it's got cultural services, the total cultural services are 3 billion excluding property value uplift, you have the category "recreation", do you see that?

A. Yes.

**5 THE COURT: JUDGE SMITH**

I'm becoming increasingly concerned about what the document that has no statutory status before us we seem to be doing a sort of some sort of book exam on a document that has no status. It's irrelevant to the Court, you can read any number of decisions of this court on the question of economic value and how  
 10 that's calculated in the RMA. If you want to quote law at the Court that's fine and there's a lot of it I can tell you, and it pretty much summarises what Mr McIlrath said a moment ago, but that's the place to do it. This report is just a piece of paper. It's not giving, assisting this court in any way. If your thesis is that there are a lot of other values that (inaudible 10:23:26) then I don't think  
 15 there's anyone here who would disagree with you. Mr McIlrath certainly doesn't appear to. Is your argument that everything is included in the economic value? I just don't know that point of your questions is –

**MR WILLIAMS:**

This point, Sir, was just this is a very recent report from an esteemed economic  
 20 institute that talks about the need to quantify economic value so –

**THE COURT: JUDGE SMITH**

I'm sorry, I've never even heard of them, it seems to have been produced for something that's not an RMA thing and the short point I'm getting to is it's not evidence before the Court simply because you quote a piece of paper.

**25 MR WILLIAMS:**

No, I think it's only come out on Friday, Sir, I think another witness might be going to seek to produce it but I was just the only point I was going to come to is to define what this report says about recreation, which includes a cultural value aspect but I hear your Honour and I don't have anything further.

**THE COURT: JUDGE SMITH**

So is the thesis because it certainly hasn't been advanced in any of the Friends of Pakiri beach, is your thesis that everything should be valued in economic terms? Because that would be, I've got to say simply astounding to the Court

5 if that's the thesis you're asking of this court.

**MR WILLIAMS:**

No, the only thesis, Sir, is that there's been a cost benefit analysis and it necessarily has to be incomplete from a totality perspective.

**THE COURT: JUDGE SMITH**

10 Well, Mr McIlraith agreed with that entirely and so do all of the other decisions of this court and (inaudible 10:24:51) has been issued including Superior Court decisions that economic values cannot capture many of the values and the most difficult to capture are cultural values.

1025

**MR WILLIAMS:**

Yes and this report is just a very recent discussion of that, so I will leave it there, Sir, thank you.

**THE COURT: JUDGE SMITH**

Now I had recorded that there was a couple of other people who had questions

20 of this witness. I think Mr Littlejohn you were one but there was someone else as well, wasn't there? Perhaps I misunderstood, it may be that Mr Williams was thinking he'd be another 20 minutes. Mr Littlejohn, I know you had questions, is that correct?

**CROSS-EXAMINATION: MR LITTLEJOHN**

25 Q. Yes, Sir, thank you. Good morning, Mr McIlraith.

A. Morning.

Q. I must say I've never got used to cross-examining across a video link. It's always much better in person but we'll see how we go. First of all, I wanted to commend you and Dr Sharp and Ms Grant for converting what

was a substantial compendium of evidence into a two page statement. I'm sure everyone's grateful for the clarity of matters that you've expressed that you've agreed and disagreed. Now, I do want to use that like Mr Williams as a little bit of a (inaudible 10:26:19) put some propositions to you and have a chat about it. So if you've got it in front of you, your Honour, we're back at CB12, page 1442 and first of all I want to, I want to just go through the matters of agreement. Before I do that, can I ask you though are you familiar with the Resource Management Act, Mr McIlrath?

10 A. I'm not a lawyer but yes.

Q. Are you familiar with its primary purposes expressed in part 2?

A. Yep.

Q. And that is the sustainable management of natural and physical resources? So you're familiar that that's the paradigm that we're operating in?

15 A. Yep (inaudible 10:27:06).

Q. So the second matter that the experts in this field agreed was that Kaipara was the most probable primary alternative supply. Now if we were to look at the sand resource at Kaipara and contrast that with the resource available at Pakiri, do you accept that there's a difference in the renewability or the capacity of that resource to renew itself?

20 A. That is correct.

Q. So the evidence that's before the Court that the Pakiri resource has a limited annual replenishment, I think the number that Dr Sharp refers to in his evidence is about 12,000 cubic metres per annum, whereas by contrast the Kaipara resource is renewing at between .78 million cubic metre and 1.3 million cubic metres per annum. So you're familiar with the difference in the natural resource to that extent?

25 A. I'm aware of the reports that point to those processes, yep.

30 Q. Okay. Now it might be getting into the realm of policy, but I'm interest in your view as an economist in the realm of our paradigm which is sustainable management would you accept that it is preferable to utilise a resource that is renewing over a resource that might not be renewing?

A. I think if you compare two options like that side by side then yes, it makes sense, but I think it's important to in this case actually reflect the context within which we are operating because as part of the process we do have you know cradles that actually go with the difference sources, it's not just a binary these are the attributes of the one source, these are the attributes of the second source, therefore this one attributes more important. And if we look at using the different resources then there are other effects that also come in play and you know like the emission and the transportation loads.

10 Q. Okay and do I take it that, I mean I accept as a matter of I guess principle we should favour the resource that is renewing over the one that is not, but you qualify that and I think that's where the fourth matter of agreement comes in, which is that the suitability of a source is influenced by a variety of other factors. Is that the point you're making there, that putting to one side the principle. there may still be other reasons why you may favour a non-renewing resource?

1030

A. Or consider as part of the overall assessment alternative yes.

20 Q. Okay. Okay. So back on the matters of agreement you've all agreed that there is a wide range of alternative sources currently available – market. Do you accept that if the sand resource from Pakiri was no longer able to be extracted or available for use for concrete production for example, do you accept that that would not lead to the cessation of the ability to produce concrete in the Auckland region?

25 A. It would certainly range a whole range of complexities and a range of other effects.

Q. Okay but that's not my question – that's not –

30 A. But yeah again I think the issue is we're looking for a binary yes no but it's understanding the wider flow on implications or – (inaudible 10:31:33) traction.

Q. Well part of the process of cross-examination if the lawyer is any good and I'm not saying that I'm one of those is that I do want a binary answer. If the Pakiri sand was not available would the ability for ready mix

concrete to be produced in the Auckland region come to an end? Yes or no?

A. No.

5 Q. No, and that's because there are a wide range of other alternative sources available in the market isn't there?

A. Yes.

Q. And have you reviewed the evidence of Mr Officer who's quite – a witness produced by McCallums who operates the Allied Concrete business. Have you read his evidence?

10 A. Yes. Yep.

Q. Now you, at the proposition his evidence is the evidence of the fact that there a range of sources available and a ready mix concrete supplier of their reach will pick and choose those sources based on the plant locations and the available supply. That's essentially what his evidence says, isn't it?

A. From memory yes.

20 Q. When it comes to the issue of suitability of sources and just bearing in mind Mr Officer's evidence, would you accept that the factors that go to suitability are determined by consumers exercising their (inaudible 10:33:01) that is therefore reflected in price?

A. To the extent where the supply options actually help and contribute towards the marketplace and having the choice.

Q. Does the cost per tonne of sand vary across Auckland based on source that you're aware of Mr McIlraith?

25 A. Say that again please.

Q. Does the cost per tonne of sand vary over Auckland based on whether the sand came from a land-based source or from the Kapari or from the Pakiri? Are there different prices based on the origin of the sand Mr McIlraith?

30 A. I do not have that information.

Q. Do you accept that if one source no longer is available to the market that the market would adapt? That it would look elsewhere for the next best alternative for its needs?

A. That is the market process yes.

Q. And that's what Dr Sharp means when he says that the market for sand is competitive. Is that right? Do you agree with that?

A. I think Dr Sharp draws on the Commerce Commission work to say whether the market is competitive or not.

5 Q. So if we turn over the joint witness statement and we get into item heading group, thank you I've dealt with the first matters of agreement now, we get to the potential market response. It says: "Mr Sharp considers that the Auckland sand market is competitive and is the Pakiri sand is not available to the market the nature of extent of price adjustments in the market is uncertain." You go on and record your position following that but I don't – and perhaps you could clarify. I don't understand you to say that you disagree with the notion that the sand market is competitive. Can you confirm that's the case?

10

A. So as part of my assessment I didn't go through a process relies on the Commerce Commission and what they classify as competitive or not. Instead I looked at the different alternative or the principal alternatives and I assessed the potential effects of using those or using that alternative and I think as part of this assessment it's perhaps less about the is the market competitive but it's about what does it actually mean? You know if we forg – lose access to Pakiri how does the market respond and what are the effects associated with it?

15

20

Q. And I mean I think, I don't think you and Dr Sharp are in completely different orbits there. Dr Sharp says that the nature and extent of price adjustments in his opinion will be uncertain whereas you're a little bit more definitive and determinative and as I read the second statement there you're essentially saying that there will be a price increase. So you're less uncertain, you're more certain, the price of sand is going to go up because transport costs are going to go up. That's what you're saying there, isn't it?

25

30 A. Correct. Yes.

Q. If we then just have a quick look at these transport costs I want to just get a sense of how you've assessed those. In your evidence-in-chief you from paragraph 99 onwards undertake an analysis of current transport costs and come up with a rate per tonne per kilometre and I understand



that your assessment of current transport costs is done on the basis that the trucking component of the transport cost all originates from the point of unloading of McCallum's at Ports of Auckland out to the plants that it supplies, is that correct?

5 A. So it's partially correct. So in my assessment say well if Pakiri Sand isn't available and the sand is then sourced from the Kaipara, what is the transportation costs associated with moving from the Kaipara to the concrete plants.

10 Q. So that's where we get to paragraph 106 of your evidence and you say: "Shifting to the Taporapora option via road more than doubles the average distance." Is that because you're assuming that McCallums continues to supply the plants that it is presently supplying from the Ports of Auckland unloading depot from the Kaipara Harbour directly?

15 A. No it goes directly from the Kaipara to the plants. It doesn't go to the port first and then redistributed.

Q. So when you've assessed the cost therefore have you taken off the cost presently experienced or passed on by McCallums in transporting from the Ports of Auckland to those same plants.

A. Yes. So I look at the next change.

20 Q. Now of course that model, we'll call it a model, assumes that the concrete plants that are presently accepting McCallums as their supplier continue to do so price, doesn't it?

A. Correct.

25 Q. The evidence from Mr Officer though is that they will regularly look for the closest affordable source to meet their supply. So do you accept that your model of increased transport costs essentially assumes a counterintuitive behaviour by the purchaser of that good?

30 A. No because what – you know if we look across available sources where are those alternatives? Alternatives are then looking at Tuakau, Pukakawa, you know the Waikato sources, and those are really the options and I understand those potential sources already have capacity constraints in them. I also understand that when we you know the concrete producers they do look at alternate or sand sources that are consistent and you know they don't like switching between different

options because it changes them, the cement requirement and those aspects.

1040

Q. All right. Well but those are matters I can talk to the concrete experts  
5 about but thank you for your views on that. One of the, one of the last  
points I just wanted to touch on with you, in your evidence-in-chief, thank  
you, Madam Registrar I don't need the joint witness statement up  
anymore, one of the points that you make in paragraph 82 of your  
evidence-in-chief and I must say it's a refrain that follows through in a  
10 number of the applicant's witnesses is this concern that if the Pakiri ocean  
sand was not available and additional source had to be – sand had to be  
sourced from the Kaipara, it would result in the phrase you've used is a  
concentration risk. Now is that a polite way of saying a monopoly?

A. No, I'm quite careful here, I don't want to go down the (inaudible  
15 10:41:37), you know, this isn't about the monopoly or oligopoly type risk,  
this is about a lot of Auckland sand coming from a single source, so if  
something were to happen to that source or the availability, you know,  
then we've potential risks and disruptions.

Q. So you're not using the phrase in the sense of an adverse economic  
20 situation, you're using it in the situation that if that was, if that was the only  
source that was being used that that would create a risk, is that what  
you're saying?

A. Yes. So if you think about resilience and (inaudible 10:42:23) supply  
chain and I think it's also, you know, it's, it's not the only source but you're  
25 looking at 80 to 90 per cent of the potential supply coming from a single  
source.

Q. Okay.

A. So that's the concentration risk that I've talked about.

Q. Well, I'm glad we've cleared that up because I was thinking you were, you  
30 were trying to suggest in your evidence that this court should be  
concerned about this wonderful first come, first served approach that we  
have to resource allocation in New Zealand, but that's not the case here  
from what you've just said. This is about, this is about what putting  
potentially of our, all of our sand in one basket, is that the issue?

A. Yes.

Q. Well, we know that from the evidence the basket is big enough, there's enough sand there, so is the risk in relation to the supply infrastructure? Is that your concern?

5 A. Yes.

Q. So don't, doesn't the existing supply infrastructure bring risk with it at the moment, though?

A. It does but well spread for you know the largest part of the market in terms of if you look at market shares, we're spread across the east coast and  
10 the west coast, so you do have resilience in that.

Q. In terms of McCullum's use of the Ports of Auckland unloading facility, when it comes to transport related costs would you accept that of all of the places in Auckland to unload and put a bulk low value good into a large truck and send it forth onto the road network, that the central  
15 business district of Auckland would be the least desirable location to bring your product?

A. (inaudible 10:44:37) that is where the port is, that is the location of the port and I don't think this is an argument about the merits of the location of the port and how it sits within the CBD.

20 Q. Okay, okay. All right, thank you, Mr McIlrath, that was very helpful. Thank you, your Honour.

1045

### **THE COURT: JUDGE SMITH**

Thank you, Mr Littlejohn. Now before I invite Mr MacRae for re-examination I  
25 think that was everyone. Is there anyone who wants to ask questions of this witness? Thank you, Mr MacRae, any questions?

### **RE-EXAMINATION: MR MACRAE**

Q. Just one point your Honour. Mr McIlrath, you were questions by Mr Williams about supply of Kaipara sand to plants closest to the source,  
30 the Kaipara source, and plants at Helensville, Silverdale and Albany were mentioned. Do you know who owns those plants?

A. I'm not 100% sure. It could be Atlas, I'm not 100% sure.

Q. And do you know if there's any link between Atlas and the company that extracts sand from the Kaipara?

A. I believe so, I think it's Winstons and Mt Rex, those two companies and I understand that there are links.

5 Q. Do you know who owns the Mount Riggs company which extracts the sand?

A. I, off the top of my head Atlas.

Q. Do you know anything about what pricing or other arrangements are made between these companies which on the basis of your answer would appear to be in the same group of companies.

10 A. I don't know about how they would do their pricing, no.

Q. No further questions, thank you, Sir.

#### **QUESTIONS FROM THE COURT: COMMISSIONER MYERS**

Q. Just one, good morning Mr McIlrath, you talked about electric trucks I think taking up was it 4% of the fleet in New Zealand or –

15 A. No, sorry, that's less than 4% of the passenger vehicles at the moment. So I understand that the trucks is less than 0.1%.

Q. Right, okay, thank you. I misunderstood what you said, so less than 0.1% was it or?

20 A. Yes, virtually nothing is the short answer, Ma'am.

Q. Okay, thank you. Do you know if any companies are starting to use them or is that a question for another witness?

A. So I did try to get a sense of the uptake. I know that in Europe, Europe Volvo, the manufacturer you know do have quite a big push in terms of coming up with the technologies. In New Zealand I know that it's you know some of the examples that I've seen are more just sort of small I would say 3 to 5 ton vehicles, which is almost a step up from what tradies would use but your big 33 ton vehicles I do not know of anybody that actually uses those.

30 Q. Okay, thank you very much. That's all I had.

**QUESTIONS FROM THE COURT: SPECIAL ADVISOR HOWIE**

Q. I have one, Sir. With the alternative sand supply from Kaipara that seems to feature in the argument, do you know if there are any constraints about the availability of sand from Kaipara? Like as I don't have anything in front of me saying how big the resource is or how many consents are available or what's left to run or what are the environmental effects of it, we've had a bit about the transport but I don't know anything about the site or the effect on the environment and so forth and how realistic an alternative supply from the Kaipara really is. Do you know the answer to that question?

A. Unfortunately not all of those, no and in terms of the environmental effects, you know, I'm not an ecologist or somebody like that, so unfortunately that's sort of well outside my field of expertise, but I do know in terms of the accessibility of getting from the sand resource to the you know where the barges unload, you know it's up the stream, the river, it's tidal so there are technical considerations but beyond that my knowledge of the Kaipara's is limited, especially in terms of those other aspects that you talk about.

Q. So (inaudible 10:49:50) guaranteed alternative?

A. From the consent conditions, I look at that saying, look, the consent's likely to expire. I do highlight, in my analysis, with that consent continuing and the implications of what happens if that consent isn't granted so, and that's part of the risks that we have here and, you know, we're placing a lot of weight and emphasis and belief in the Kaipara and its on-going future availability. If that is not the case, then we've got a very deep supply crunch to the Auckland sand market.

**QUESTIONS FROM THE COURT: JUDGE WARREN – NIL****QUESTIONS FROM THE COURT: JUDGE SMITH**

Q. I don't want to get into a long discussion about externalities but you would agree with me that in environmental cases often the environmental values are not really seen by a particular commercial operator as part of his costs

because there's no actual cost paid unless he has to meet a condition or takes some other step, do you agree?

A. Yes, I agree, Sir.

5 Q. It's one of the major problems for New Zealand with its primary resources and the ones I've dealt with in the last few months, and I only – water, quarries and waste management – all three involved very similar issues about transportation, about access and usage and they all represent the use of what some might describe as a public good in some ways and do you agree that (inaudible 10:52:17) in finding a way to measure those things fully, in other words the Court takes into account economic evidence but it also needs to take into account all of the other externalities that have been discussed in this case and you know, roughly, some of them at least, do you agree?

10

A. Yes, Sir, that's right.

15 Q. And there's a long line of cases saying that although theoretically you could put them all into monetary forms you end up having to make the same sort of judgment calls that this Court is deemed by statute to have to make anyway, you have to (inaudible 10:52:52) or what the breeze on your face is worth, these things are not easily valued?

20 A. That is right, and I think part of the challenge and I look at the shadow price for carbon, we try to integrate and use some of these values to reflect the potential, the costs of some of these sort of considerations and externalities but even if we look at the shadow price of carbon it reflects the value of the carbon and so we can't look at that but it doesn't reflect the damage associated with climate change because we know that

25 carbon, the emissions associated with that. So we do end up in these quite complicated convoluted circles and we end up at the tail end none the wiser.

Q. And the difficulty, and this is an economic, because we get a lot of economic evidence in all of these fields, is that at the end of the day there are some fairly compelling environmental reasons why activities that have occurred over many years may no longer be appropriate?

30

A. Correct.

- Q. And this Court has been involved in a quarry situated only a couple of kilometres away at Slipper Lake where it wouldn't allow the quarry to continue and so the argument then was that would reduce the supply of metals within Auckland. I must say I'm in no doubt that is occurring because I've been involved in Three Kings which was another major source. Of course this Court was involved in Lunn Avenue as well which is, as you know, two of the biggest rock quarries in Auckland. But there are many other exhausted quarries throughout Auckland and its region. Hunua, that's Brookby, is also a major source now but is going to be exhausted one day. That's the problem with finite supplies, isn't it?
- 5
- A. That's right.
- Q. The other difficulty at the moment, and I just want to go through a couple of them, because we generally get evidence about the particular projects that people are servicing. Now that hasn't occurred in this case which is quite unusual given, for example, Three Kings said it was going to receive the soils from the CRL, which didn't actually happen, it went somewhere else. The quarry says it is going to serve this particular road. So we have got at the moment, the airport has been on the cards for a long time, are you aware of that?
- 10
- A. (inaudible 10:55:14), yes Sir.
- Q. That's right, and it's a huge user of concrete isn't it, around a million tonnes as I recall?
- 20
- A. That's right.
- Q. The CRL is a huge user of concrete, not only for themselves but some of the buildings that are being constructed and we can see them all coming up now. That's using a huge, I don't remember but it's well over a million tonnes isn't it?
- 25
- A. I don't have the number but it, yes.
- Q. Big, big numbers. Then we've just finished, well I don't know if we have just finished or just started the Puhoi to Warkworth, but that again was a major consumer of materials both quarry and concrete. Do you agree?
- 30
- A. Yes.
- Q. And if W2W goes ahead, the Warkworth to Wellsford, that again will be a huge user won't it?-

A. Correct.

Q. So there are projects that are happening both to the north of Auckland and the south of Auckland because it's a linear (inaudible 10:56:10), that are huge users of concrete and they are normally government or local government projects aren't they?

A. Correct.

Q. I am just going to mention a couple of others just by the way, just so that people don't think I'm narrow-minded. We have all of the wastewater inter-sector stuff that has to be done not only in south Auckland but, as Albany, et cetera, expands, there's a huge amount of concrete and other materials that go into the roads, the pipes, everything that happens to make people able to live there. Do you agree?

A. Yes Sir.

Q. So the question for the Court really is, is this argument about concentration of supply and you are not aware when the Kaipara consent runs out?

A. I think it runs out in 2007 Sir, somewhere there.

Q. '27 I think you mean.

A. 2027, sorry.

Q. I thought that was going to be the one that will probably, either they will ring me, wheel me back out of retirement for it or somebody else will have to deal with it. But are you aware that the Kaipara Harbour is a major issue tangata whenua, particular Ngāti Whātua?

A. I did not go into all the details of that particular consent Sir.

Q. Well in Waste Management we had four weeks on the topic so many people here know it very well and the issue is that they are looking at expending something in the order of (inaudible 10:57:32) dollars trying to improve the environment around the Kaipara. Of course, one of the issues is the areas where the birds congregate, which is a national – are you aware that's an international Ramsar site?

A. Yes Sir.

Q. As sand extraction, which is in an offence to tangata whenua. Does it sound familiar?

A. Yes Sir.



Q. The same sort of argument we have here. In other words, the difficulty with some of these extractions is the externalities become huge.

A. Correct.

5 Q. I am really taking the long point as it seems to me that (inaudible 10:58:13) is part of the jigsaw, it can't give us a complete picture in any way. Do you agree?

A. I agree Sir.

**QUESTIONS FROM THE COURT: COMMISSIONER PRIME – NIL**

**QUESTIONS ARISING – NIL**

10 **WITNESS EXCUSED**

**THE COURT: JUDGE SMITH**

That takes us, as I understand it, to Te Whānau o Pakiri's two witnesses, Ms John and Mr Coco. Is that your understanding Ms Morrison-Shaw?

**MS MORRISON-SHAW:**

- 5 That's correct Your Honour yes Ms John is first in the line-up.

**THE COURT: JUDGE SMITH**

- There were a few parties that had some questions I think, so well I think (inaudible 10:59:14), has just moved to that. Now, I think members of the court have dealt with this type of, trying to reorganise all the extra evidence that came in in different ways, this was part of the original, was originally part of folder 8, 18 to 22, and it's 18 and 19. So I actually have created another folder because of the amount of (inaudible 10:59:38) that came in. But nevertheless that's where it is and if the witness, is the witness with you Ms Morrison-Shaw or is she remote?
- 10

- 15 **MS MORRISON-SHAW:**

Yes. She is not with me sorry Sir, she is remote but she is online.

**THE COURT: JUDGE SMITH**

- If you would just like to speak, yes she can turn her microphone on and speak, she should come up.
- 20 1100

**MS JOHN:**

Kia ora.

**THE COURT: JUDGE SMITH**

- Kia ora. So thank you, Ms John. Now I just wanted to check with the court whether we've all got copies of her evidence and there is an evidence amendments as well that were received this morning. Just checking everyone has them either to hand or accessible. Commission Meyers are you okay? Just
- 25

give me a thumbs up if you're all set. Mr Howie are you all set, just a thumbs up will be fine.

**THE COURT: SPECIAL ADVISOR HOWIE:**

Still looking.

5 **THE COURT: JUDGE SMITH**

Still looking okay. (inaudible 11:00:46)? Thank you and Judge Warren?

**THE COURT: JUDGE WARREN**

Yes I am working, I am at home today so I do not have everything at my fingertips but perhaps if staff could just send me the evidence-in-chief by email.

10 Just saves me having to look for it thank you.

**THE COURT: JUDGE SMITH**

Thank you yes. Madame Registrar if you can just send that to Judge Warren I think Mr Howie shouldn't be far off. He's just I think going to have a look at his printer.

15 **THE COURT: JUDGE WARREN**

I've certainly got the amendments that were put through this morning.

**REGISTRAR:**

I'll send that through.

**THE COURT: JUDGE SMITH**

20 Thank you. It looks – yes thank you. If you can just send the chief through thank you. So Madame Registrar I don't want to make you do too many things at once. Are you able to affirm the witness?

**REGISTRAR:**

Yes.

25 **THE COURT: JUDGE SMITH**

Thank you.

**MS MORRISON-SHAW CALLS****SIAN ANKARD JOHN (AFFIRMED)****THE COURT: JUDGE SMITH TO MS MORRISON-SHAW**

5 Q. Now Ms Morrison-Shaw we've got an evidence amendments which consist of a couple of paragraphs, 20 and 23(a).

A. Yes (inaudible 11:02:11)

Q. We're happy to take those as read if you are or would you like the witness to go through them in some way?

10 A. No your Honour happy for those to be taken as read and I'll just ask Ms John to confirm that those (inaudible 11:02:22) evidence once we go through the preliminaries.

Q. Yes so I think that was the only preliminary question I had so your witness Ms Morrison-Shaw.

15 A. Thank you. Just checking your Honour is all of the Court back now. I think you mentioned Commissioner Howie was grabbing something.

Q. Oh right yes sorry. I still see a blank screen. I thought he was back with us but, perhaps we just wait a moment. Here he is. Are you right? Just need to turn on your microphone Mr Howie.

**THE COURT: SPECIAL ADVISOR HOWIE**

20 What trial is this in?

**THE COURT: JUDGE SMITH**

I think it was in 8. 18 and 19.

**THE COURT: SPECIAL ADVISOR HOWIE**

(inaudible 11:03:02)

**25 THE COURT: JUDGE SMITH**

The problem with us dinosaurs Ms Morrison-Shaw is the paper gets muddled after a while.

**THE COURT: SPECIAL ADVISOR HOWIE**

You're not kidding. Okay let's go.

**THE COURT: JUDGE SMITH**

Right we're all set. Thank you. Ms Morrison-Shaw.

**5 EXAMINATION: MS MORRISON-SHAW**

Q. Ms John can you confirm to the Court that your full name is Sian Ankard John?

A. Yes it is, yep.

Q. And that you have prepared one state of evidence in this matter dated  
10 20 April 2023?

A. Yes that's correct.

Q. And that you have made amendments to paragraphs 20 and 23 and that those have been circulated to the Court? You confirm those amendments?

15 A. Yes, yes.

Q. And that with those amendments everything in that statement is true and correct to the best of your knowledge and belief?

A. Yes.

Q. Thank you. Now your Honour there's just a few questions that have come  
20 up as a result of questions and statements made last week that I will just lead a bit of evidence from Ms John before I turn her over for questions. So Ms John you participated in the expert coastal process conferencing didn't you?

A. I did yes.

25 Q. And you're aware that in paragraph 29 of his opening legal submissions Mr MacRae described the matter of the agreement reached in point 5 of the joint witness statement as virtually sealing the impact of extraction on the beach and dunes from effects resulting from the removal of the offshore sand. Can you comment on whether you agree or disagree with  
30 that characterisation point 5 and why?

**THE COURT: JUDGE SMITH TO MS MORRISON-SHAW**

Q. Before she answers can we find, which point is the joint witness statement?

A. So at – it's point 5 of the joint witness statement.

5 Q. Which is CB?

A. Sorry your Honour I should have that to hand but I haven't got it open at the moment, I'll find it. Oh someone's beaten me to it, it's on the screen.

Q. So what is that? What page?

A. Can you scroll down to the page please?

10 Q. Oh C8. It looks it's C8, let me have a look.

A. Yep 1429. CB1429, thank you.

Q. Thank you, excellent. Just like having it in front of us while while we're discussing because I don't have an eidetic memory. CB1429 yes now what was, you've asked her to read that and you were going to ask a question. Oh this is about the characterisation of this agreement.

15

A. Yes so yes, so in his legal submissions Mr MacRae described that point as virtually sealing the impact of extraction on the beach and dunes from effects resulting from the removal of offshore sand.

**EXAMINATION CONTINUES: MS MORRISON-SHAW**

20 Q. So Ms John can you comment on whether you agree or disagree with Mr MacRae's characterisation of that matter of agreement in the joint witness statement?

A. Yeah I – thank you I disagree. I think it's, that statement is far too strong. It's acknowledged and it's been acknowledged by all of the experts, including Mr Todd, that sediment is transferred outside of that so-called closure depth, that sediment crosses that boundary onto the inshore, and that's been established for a long time. So in Kaipara's evidence to the offshore hearing, in NIWA sand study. As I said, Mr Todd himself in his evidence-in-reply for example talks about an estimated gross average transport of 340,000 cubic metres occurring across that boundary. So it's very clear that you cannot say that (inaudible 11:06:57) transport or the sediment outside of that closure deck is sealed from the inshore. The important point to make about the joint witness statement is it's all in the

25

30

subtlety of the wording. It talks about there being limited net movement and I agree with that in that we – throughout the whole process of preparing the joint witness statement we were talking in sequence really about the inshore dredging, the midshore dredging, and the offshore dredging. So the context is all of these statements about the offshore were relative to the inshore and midshore. So limited net movement is referring to the fact there's less movement from the offshore onwards (inaudible 11:07:42) as compared to the other areas closer to the beach and it talks about the risk being low of having any measurable influence. Now those words are important, the risk is low but it's not non-existent. A risk still exists and we talk about a measurable influence. That's where the risk is low. We're unlikely to be able to measure the effects of dredging in the offshore on the beach for some time but that does not mean that it's sealed from the beach system or the active system that effects won't be occurring. It just will be very difficult for us to know that they're occurring. Thank you.

Q. Thank you Ms John, and just while we're on the joint witness statement can you confirm that with that clarification you otherwise remain of the views as set out in the joint witness statement for coastal processes?

A. Yes I do.

Q. Thank you. We could take that joint witness statement down now thank you Mr Garton. Now in response to a question from the Court last week regarding whether the level of confidence around the depth of closure would increase the DPU Go and whether by the time you got to 30 metres you could be highly confident, Mr Todd responded that he agreed you could be considerably more confident at 30 metres. Can you provide your views on that statement?

A. I can. I'm actually of the opinion that this notion of a closure depth and the fact that there is closure at that point is actually a bit nonsense. It's a useful way to think about how the beach system operates and what's in the so-called active zone and what is outside that zone but there is no point when that – there is actual closure. As I just said in response to the last question that sediment is moving in that offshore area and that sediment over time is coming onshore, and we can actually see that from

the fact that this is, as we've talked about a lot, it's a relic resource. So it came from the Waikato River when the Waikato River discharged into the Hauraki Gulf. Now that doesn't happen anymore. But in this century the decades and centuries that have happened, thousands of years that have happened since then, that sediment resource has moved up from the river mouth, up the coastline and onto that beach system. So that policy and sediment in my view is one unit of sand. That has moved from the Waikato up the coast and onto the beach. And it diminishes yes, in its depth as you go from the dunes, the back shore and out into the near shore and further out. So all of the while that resource is getting thinner as it covers the Pleistocene sand. But it's still part of one. And so yes we know that once you go further offshore there will be less active transport onto the inshore. So you can be more confident of that, that it doesn't mean it's not part of that wider system of sand transfer and that system that over thousands of years has brought the sediment onshore and formed Pakiri Beach. Thank you.

Q. Now Mr Todd was asked about whether we have enough information about the sediment supply and transport processes to enable consent to be granted. His view was that we do. Could you confirm a view on that?

A. Yes my view, strongly held view really right throughout these processes has been that we do not know enough about the Pakiri sand system to be able to determine applications such as this. It's quite remarkable I would suggest that the last and most comprehensive study we have was done in the 1990s. So you know I was involved as a student in some of that onshore surveying work with Professor Hilton. And for me is ridiculous because that's 20/30 years' ago. And the fact that the best evidence we have is that old, yet dredging's been going, progressing to a large extent in that zone, just doesn't make sense. And the Commissioners from the offshore hearing made this point that they said with respect to June stability, coastal erosion changes, bathymetry in coastal processes there's a great deal of uncertainty and a lack of reliable information from which to understand or determine the extent of effects. So no. I'm very much of the view that our information in order to



determine this application is inadequate and a more comprehensive investigation needs to be undertaken.

Q. Thank you. Now since the time you prepared your evidence and attended conferences, McCallums have circulated an updated set of conditions as well as a proposed environmental monitoring and management plan. Have you had an opportunity to read those documents?

A. I have thank you.

Q. And do you have any comment from a coastal process perspective on those documents?

10 A. I do unsurprisingly. I do not think that they go far enough given the uncertainty I was just talking about. Not just in terms of the level of surveying required because there is a reasonable level of survey included within them. But they don't require cessation of activity if adverse effects are identified. They don't include criteria for defining what constitutes the significant adverse effect. They talk about looking for a significant adverse effect but what is that? And they don't quantify what the response ought to be. That's really left to the council, it's in a grey area. They talk about sand extraction, monitoring on an annual basis in the first three years but after that it goes to you know, five/10/15 years. And that is of some concern to me because the changes, if the changes of offshore extraction are going to be felt in the inshore zone that is going to happen in the – not the next few years. It will be something that occurs over time. So I think that surveying needs to be more frequent offshore and it needs to be better connected to the inshore survey work. And then also there's that reporting period, so yes there's a six month reporting period for the topographic surveying, but then there's a – sorry, six monthly surveys, then six months reporting periods, three months for reply by council, so if an adverse effect's occurring it could be two years before any action's taken and it's not clear what those triggers for action should be. So when should you respond and I think –

**MR MACRAE:**

If I might intervene at this point. The pattern of examination-in-chief has been to ask a very short question which is leading to very long answers of new

evidence-in-chief by this witness and to give an example, there were conditions of consent supplied with the application, there were revised conditions of consent supplied with the appeal, the evidence on appeal, substantially revised, and the examination-in-chief is providing as I say a lot of new evidence which

5 the applicant's witnesses have not had an opportunity to comment on. With respect, it's just a disguised form of leading questions in a sense and I object to the train of questions in evidence-in-chief that are being asked.

**MS MORRISON-SHAW:**

10 You're on mute your Honour.

**THE COURT: JUDGE SMITH**

Before I revert to Ms Shaw, is there anyone else who'd like to comment on the application, is there anyone else who supports Mr MacRae's position?

15 **MS BIELBY:**

Sir, for the council, this is Ms Bielby, I would simply say yes, the council does support that application. There's a lot of new information that's coming out of the witness but certainly all I would ask is that (inaudible 11:17:04) the line of questioning so, trying to keep up with this information before cross-examination

20 is proving challenging.

**THE COURT: JUDGE SMITH**

Thank you, now anyone other than Ms Morrison-Shaw want to state a position? Is anyone against it.

25

**MR POU:**

Your Honour, Mr Pou here. Of course I oppose the application, we are in a state where the application that is being discussed is not the application that evidence is being given on. My view of the answers that have been given, she's

30 qualifying the (inaudible 11:17:48) of language, in particular when she's talking about low, low in respect to the midshore and the in-shore, so I can't see that it's new evidence coming in, in my submission it's a recontouring of the evidence that she's given in line with the amended application that she has

before her that has changed since her evidence was given, so I oppose the application and support the questioning that Ms Morrison-Shaw is maintaining.

**THE COURT: JUDGE SMITH**

5 Anyone else?

**MS CAMPBELL:**

Yes Sir, Ms Campbell, for the Friends of Pakiri Beach. I don't want to take up too much time Sir, but I endorse what Mr Pou has said and add that the question  
10 that was being asked when Mr MacRae made his objection related to these new conditions of consent and indeed, as Mr Pou said the application is quite fundamentally different from what it was at the time that Ms John prepared her evidence, so those are the matters that I just wish for you to consider Sir in making your determination.

15

**THE COURT: JUDGE SMITH**

Anyone else, before I revert to Ms Morrison-Shaw? Ms Morrison-Shaw?

**MS MORRISON-SHAW:**

20 Thank you your Honour. I think my friends have covered my response for me, but yes certainly the intention was to assist the Court by getting Ms John to confirm her view on things (inaudible 11:19:17) her evidence had been filed, particularly in the question that Mr MacRae responded to, was that the conditions and the EMMP have been significantly updated and the application  
25 has been updated since Ms John put her evidence before the Court and I thought it would be of assistance to have her view put before the Court before cross-examination came up so that the Court and the parties were aware of those points your Honour and that's actually my last question in any event, that we've now reached.

30 1120

**THE COURT: JUDGE SMITH**

So, I've got to say that I felt that the questions around the JWS must be within scope. I'll just see if Judge Warren agrees with me because they were about what was said in the JWS which was filed later so other parties have

5 commented on it. Judge, do you have a different view?

**THE COURT: JUDGE WARREN**

No, I don't. I actually (inaudible 11:20:19) –

**THE COURT: JUDGE SMITH**

And the next one is my comment with Mr Todd about the debt, that must be

10 new because it was a matter I raised with him and he responded to my question. The question as to whether we have enough information is really it seems to me arguably but I would've thought on the facts that was one of the core issues that cross-examination has been around. So, the question about the new set of conditions on the commentary, I think the only two issues that I can see that

15 you need to answer the question there's enough information, although I think that's clear but I want to check with my colleagues. And then the new set of conditions seems to be the argument Mr MacRae was raising so I think that's the issue. I do want to have a chat with the rest of the court. It's probably convenient for us to take the break anyway, we're slightly overdue. Did you

20 want to response, Mr MacRae, before we take the break?

**MR MACRAE:**

Just briefly, Sir, the conditions of consent were in pretty similar form to what is now proposed when they were put before the Court a week or so before the hearing commenced. In her evidence, Ms John referred to the conditions of

25 consent and did not amend her evidence-in-chief in any way that gave notice to the applicant or other parties of what her comments might be. And without stating the obvious, Sir, the whole process of providing evidence-in-chief and evidence-in-reply is to give parties the opportunity to answer the applicant's case, the appellant's case, and that process in my submission should also play

30 in reverse, the other way round and in this case a line of questions into very broad and full answers are putting the applicant in a difficult position.

**THE COURT: JUDGE SMITH**

Thank you. We'll take the morning adjournment and I'll discuss the matter with the Court in the break and we'll recommence at 11.50.

**COURT ADJOURNS: 11.22 AM**

**COURT RESUMES: 11.49 AM****THE COURT: JUDGE SMITH**

Thank you, briefly I will respond on behalf of the Court as a whole to  
5 Mr MacRae's objection. In respect of any objection to matters prior to the  
discussion on conditions we can't see that any issue arises (audible – missing  
audio 11:49:40). And in fact the set of conditions now produced are in fact new  
but more importantly the only reason this is an issue at all is because  
10 Ms Morrison is calling two witnesses out of order. If Mr Hay had given evidence  
all of these issues would have been explored, I suspect at considerable length  
by parties, if not by the Court. So there is no surprises in any of these matters  
and in fact I've touched upon several of them in discussions with Mr MacRae  
earlier and the comments in relation to those conditions are entirely expected  
and would cover matters that this Court has covered in any other cases  
15 previously. So there are no surprises in my view. If Mr MacRae is surprised by  
those questions then that is going to be a particular issue when we come to his  
witnesses who discuss conditions and that is one of the consequence where  
parties are commenting on matters that haven't yet been addressed by their  
counsel with other witnesses. So it's just the way in which the matter's been  
20 advanced. We see nothing exceptional and I must say that the Court as a whole  
found the questions helpful. So I can't take it any further than that. So did you  
have any further questions arising or did you want the witness to conclude their  
answer, Ms Morrison-Shaw?

**25 MS MORRISON-SHAW:**

Thank you, your Honour, no, there was no other questions arising but I just  
wanted to check with Ms John whether she'd finished her and to me in relation  
to that last question in relation to the conditions in EMMP.

**30 THE COURT: JUDGE SMITH**

Yes the last point you made was that there were no clear triggers for action and  
there was potential for up to two years of delay so I don't know if there were any  
other further points you wanted to make?

**WITNESS:**

Thank you. I was only going to go on to say that the – I was talking about the conditions, the conditions rely on the EMMP and I have similar concerns there in fact they don't talk about triggers, they don't talk about full response, they

5 don't talk about options for response. Where effects are defined in section 3.1 they don't include effects on the full dune and beach and also section 48.2 refers to the analysis of survey results as per the conditions and I found that quite circular so that EEMP was referring to the conditions but I couldn't find anywhere in the conditions that covered that topographic survey point and it

10 seemed to be that the conditions were saying the SEMR with the EMMP and the EMMP were saying that the analysis in the SEMR must be as per the conditions so I couldn't see a resolution to that, but that was – those were all of my comments. Thank you.

15 **THE COURT: JUDGE SMITH**

Thank you Ms Morrison-Shaw. I don't think there were any other questions from other parties beyond Mr MacRae, obviously. So Mr MacRae your cross-examination

**CROSS-EXAMINATION: MR MACRAE**

20 Q. Ms John can we just start off with the comments you made about the changes in the offshore application. It's the case isn't it that the only changes that have been made reduce the area of proposed extraction, reduce the rate of take of sand and in general terms reduce the effect that the proposed offshore extraction would have on coastal processes and in

25 other areas. There's no increase of intensity or size or other change, is there?

A. No. I don't actually talk about the changes to the offshore extraction.

Q. I'm just asking you the question, Ms John, I wasn't asking about your evidence, I was just asking about your understanding of the changes that

30 have occurred?

A. Yeah, yes, I agree with that.

Q. Thank you. And so the changes wouldn't have caused you to amend the conclusions that you express in your evidence-in-chief, would they?

A. No they don't, no.

1155

5 Q. Because I turn to your comments on the availability of knowledge or state of knowledge of the Pakiri embayment. I think you tell us in your evidence that you were involved at the early stages of the Mangawhai Pakiri Sands study as a student in the late-80s. Do I understand that correctly?

A. Yes, that's right.

Q. So, you'd be aware that the period of the study, which I think as you say in your evidence was published in '99, was over 10 years or more.

10 A. Yes, that's right.

Q. And you'd be aware that there was six modules.

A. Yes.

Q. And then the final modules of conclusions.

A. Yes, that's right.

15 Q. Totalling I think, or expressed I least in a total of something like 850 pages of data reports and conclusions, is that right?

A. Yes, yep.

Q. Do you know how the research and the study itself was funded?

20 A. I understand that there were a number of different contributors across the council, the university and also the extraction companies at the time, I think.

Q. Thank you. Do you know Mr Todd said in his evidence that the Mangawhai Pakiri embayment is the most studied embayment in New Zealand? Did you hear him say that or read that?

25 A. I did, yeah, I did hear him say that.

Q. Can you think of any other beach in New Zealand which has been subject to a study, including model, as large in size and a intensive in effort as the Mangawhai Pakiri sand study?

30 A. I think – there are certain beaches that have been studied in more recent times as to the more recent coastal processes that are going on but in terms of a historical examination and sediment sampling and all of those sorts of things it was certainly state of the art science at the time.

Q. Yes. And in order to obtain the sort of complete understanding of all processes in the embayment that you were suggesting, are you in effect



suggesting it was a benefit of more modern technology a similar study be undertaken?

A. Yes, that's right. To some extent because there's certain things that we don't need to redo or repeat. So, things like the information on geology and so on, that doesn't change in the time scales (inaudible 11:58:18) since that original work was done. But we do have much better computer processing power now. We can deal with a lot of data much more quickly and our capabilities and capacity to look at those broader processes has advanced a long way in those 30 years.

10 Q. And there is quite a lot more data available since the sand study was completed, isn't there?

A. Yes.

Q. Or the data that the sand extractors have gathered, the survey work.

A. Yes, there's some (inaudible 11:58:58).

15 Q. The monitoring results.

A. Yes.

Q. Yes. So, the coastal experts involved in this case are in a better position to assess the effects of sand extraction in the offshore, on the embayment, than perhaps the authors of the sand study were because of course the coastal processing experts in this case have got the benefit both of the sand study and the additional data. Would you agree with that?

A. Yes, in theory, yes.

Q. And none of the experts, as far as I'm aware, have taken issue with any of the conclusions reached in the sand study, have they?

A. No.

Q. Thank you. I'm going to refer to your statement of evidence, Ms John. It's at folder 8, your Honour. I think you had it already but pages 394 to 3017 and for the purpose of my next question if they could be brought up. Tab 18, pages 294 – sorry, can't read my own writing. 2994, not 3994, to 017. And if you scroll down to paragraph 17. These paragraphs raise the (inaudible 12:01:00), Ms John, and you deal with that issue briefly at paragraph 7 and 14(c) of your evidence and in more detail at paragraph 17. And you tell us that sea level rise is predicted to result in

an increase in sea level rise of approximately .2 to .3 metres by 2050, is that correct?

A. Yes, that's correct.

Q. And that's under the high emissions scenario, is it not?

5 A. Yes.

Q. And is that situation reflected in your figure 2?

A. It's one of the scenarios, yeah, postulated in figure 2, yes.

Q. Yes, and it's represented by the yellow line, isn't it, which is the worst case scenario.

10 A. It's – yes, the grey lines also represent the high emissions scenario and the yellow lines represent –

Q. Yes, but the worst case is...

A. Yeah.

Q. Sorry, no, you finish.

15 A. The yellow lines are the H plus scenario, the extreme scenario with the melting of the ice caps. I think that it's the grey lines that are – is what was used (inaudible 12:02:54).

Q. Millimetres in 2043. Does that seem right to you?

20 A. Yes. My internet actually dropped out, my coverage dropped out while you were asking that question but I caught the end of it and, yes, I think you're looking at – you were talking about what the sea level rise could be under an extreme sea level rise situation.

Q. Correct. And that leaves an increase of about 18 millimetres based on those figures, doesn't it? Over a 20-year period.

25 A. Yes.

Q. Would the proposed offshore extraction have any effect on sea level rise?

A. No.

1205

30 Q. But it would tend to increase the water depths where sand extraction takes place, wouldn't it?

A. Marginally, yes.

Q. Yes. And similarly dredging might have the same kind of (inaudible 12:05:17) resulted in some lowering the seabed, you'd agree with that?

A. Yes.

Q. As is increased the depth?

A. Yes, marginally, yes.

Q. Increase the depth at which, yes, right, increase the depth at which dredging takes place.

5 A. Yeah, I mean I think it's, it would be lost in the noise.

Q. Yes, well, accepting that it's a very marginal effect on both accounts and may well be lost in the noise, even so if when we added to the two extreme figures together and I'm told that dredging in theory over a 20 year period could result in a drop of the seabed about 70 or 80 millimetres over a 20  
10 year period out to the 35 mark, would a depth mark, both would have the same effect of tending to deepen the water in which dredging occurs and to the effect that there was any flow on effect from that, would it tend to move the closure depth further towards the shore?

A. It marginally, it marginally could do.

15 Q. If there was a trend that's likely the direction it took?

A. If the seabed was getting deeper but I don't think, I think there's so many forces at play here with sea level rising and also the issue with the uplift and down lift of the land so the NZ sea rise work on land change and then the change in the seabed, it's not those issues that concern me as much  
20 as the increased frequency of large storms that will attack the beach in a situation of climate change.

Q. So just to clarify one point in New Zealand, sea level rise projections would you refer to in your figure 2 –

A. Yes.

25 Q. – do include subsidence, don't they?

A. They do, yeah, it's yeah, they're relative figures.

Q. So the question of land (inaudible 12:07:57) is already taken account of in your figure 2, is it not?

A. Yes, it is, yes.

30 Q. Yes, thank you. At paragraphs 19 and 36 of your evidence you say that sand stored in offshore areas is important to maintaining the beach and dune system in the future.

A. Yes.

Q. And you make the same point in your amended paragraph 23(a), that's in the table of amendments that you was produced (inaudible 12:08:40)

–

A. Yes.

5 Q. (inaudible 12:08:43)

A. Yes.

Q. But I think your change in paragraph 23(a) is that you state the matter a little more highly and say that the sand stored in the offshore areas is critical rather than important as you've said earlier? Is that right?

10 A. Yes.

Q. By offshore resource in your amended paragraph 23(a) and in paragraph 19, do you mean sand beyond the outer closure depths or landward as the closure depths?

A. I mean both, as I was expressing in my evidence I see this resource, this  
15 Holocene relic feature as being one resource and I think I see the closure depths being an artefact. It's an arbitrary line that we've invented to try and make sense of the science and for me that sand resource is the sand resource that will feed Pakiri beach into the future. So where that sort of theoretical line that we've imposed on the seabed is or isn't doesn't matter  
20 to me. All of that sand is going to be the future of Pakiri beach.

1210

Q. Nevertheless, you accept that even given all the variables that you suggested the best testament of net sand transport across the 25 metre closure depths is 12,000 cubic metres, don't you?

25 A. I think the, are you referring to the Pakiri sand study there?

Q. Yes.

A. They gave more of a range, they give more of a range than that. They talk about 2,000 to 64,000 cubic metres.

Q. But sand study made a best estimate, didn't it?

30 A. Yes, it did, yes, it did of 12,000 and Mr Todd's evidence suggests that an underestimate.

Q. Well, are you aware that Mr Todd now accepts that that is the best estimate?

A. Yes, I am.

Q. And you accept it's the best estimate, do you not?

A. It's the best estimate where we really don't know, yes.

Q. Well, the sand study factors into account in arriving at that estimate, didn't it?

5 A. It did but it was done before we know what we know now about climate change and the effect of larger storms and the way that they can (inaudible 12:11:45) sediment and attack the coastline.

Q. Just turning more broadly to the focus of your evidence, isn't it rather, this is your evidence-in-chief, isn't it rather on the inshore and midshore applic  
10 – the impact they might have on the beach and dunes?

A. I mean it's both, I had this, maintain this position as you'll remember in the original offshore hearings I raised concerns about the in combination effects, the cumulative effects of extraction, of sea level rise, in the offshore zone on the beach. So I've always had that position, yes.

15 Q. Yes, but my question was isn't the main focus of your evidence on the effects of inshore and midshore extraction?

A. I think it's on the effects of all extraction.

Q. Yes, I accept that. I was asking you where the main focus lies.

A. I think it's equal focus.

20 Q. But could I take you to your paragraph 23(n) which you've amended.

A. Yes.

Q. If you read the parts that haven't been amended as it originally read and excluding your addition of: "And the offshore resource", doesn't the sentence you've deleted suggest that this quite important paragraph in  
25 your evidence related primarily to the inshore and midshore applications? You talk about –

A. It does, yes, yep and that, you're right, that's why I deleted it because they're now obviously not being discussed and I think yeah, in terms of actual wave attack, it's once the sediment gets into that active zone that  
30 it has the ability to affect the beach. The point being so that's why that sentence has been deleted but the point being it's the sediment in the offshore resource that will move into that midshore zone over time and become part of that active beach system but I (inaudible 12:14:35), because that was explicitly about inshore/midshore.

Q. Yes and that's how your evidence originally read, wasn't it?

A. Yes, yes.

Q. Which is what I was putting to you, Ms John.

A. Yes, that's, sorry, that's right.

5 1215

Q. Yes, thank you. And then, just reading that paragraph as a whole, the addition of a reference to the offshore, proposed offshore extraction, is really a rather bald addition that has been made out of context both in, and I'm referring to both the context of that paragraph and the context of the rest of your evidence. Would you accept that?

10

A. No.

Q. It's a very simple bald addition?

A. No, I don't accept that because I've made it clear elsewhere in my evidence and, as I said in my previous evidence, that I'm concerned or I believe the offshore resource is that it is important whether it's important or crucial, different ways of saying the same thing, to maintaining the integrity and the volume of the beach system. I've always said that, I've said that in my offshore evidence and my midshore and nearshore evidence. What happened with this paragraph, and I'm a bit disappointed in myself here, is that from the evidence, separate evidence I'd written on inshore and midshore and neglected when I included it in my integrated evidence to add the point about the offshore. But it is made elsewhere in my evidence, unequivocally.

15

20

Q. Does your evidence provide any analysis of the effects of offshore sand extraction on the effects on the beach (inaudible 12:16:38)?

25

A. No.

Q. So are you relying on the evidence of others to support the statement in paragraph 23(a)?

A. Yes, I am and my knowledge of how beaches function and the importance of those sand reserves, in principle.

30

Q. So whose evidence are you primarily relying on, Dr Beetham's?

A. Yes.

Q. Mr Morgan's, did you rely on him to some extent? You mentioned him in your evidence?

A. To a lesser extent because that was newer evidence.

Q. And Ms Hart?

A. Her evidence, no. I have reviewed the work that Beca did originally for the offshore licence.

5 Q. And what about Dr Meads?

A. No.

Q. Turning to a new topic, you mentioned the questions of storminess at paragraphs 21, 23(a) and 33 of your evidence and if I could turn you to paragraph 33 you mentioned the ability in that paragraph of storms to bring sand to the nearshore?

10

A. Yes.

Q. I'm just trying to find the paragraph myself. I wonder if you could clarify some of the knowledge that you use in that paragraph. So, in your second sentence you say that storms erode or borrow sediment from the beach which is then stored offshore. What do you mean by offshore there, do you really mean, can I suggest to you, the nearshore zone?

15

A. Fundamentally, yes.

Q. And is that reflected in the (inaudible 12:19:17) where sand from the beach is primarily stored in the nearshore bar and in the vicinity of the nearshore bar?

20

A. Yes, that's right. That's right but of course it depends on the size of the storm because your typical storm would only affect that so-called active zone which doesn't include this offshore area but your larger storms will bring that deeper sand into that active zone.

25

Q. Yes, I understand that. And you go on to say in that paragraph: "More importantly, may also bring sediment from further off nearshore zones," so you're talking there about beyond the nearshore bar, beyond the nearshore zone but more in the vicinity of what we've called the midshore area, I think, aren't you? So further offshore in terms of your figure 4?

30

A. I was talking about the offshore zone, may bring it from the offshore zone, so the end of that Holocene reserve, that sediment will be brought into the midshore and the inshore in the largest events.

Q. I thought you'd just explained that there were three steps involved from the (inaudible 12:20:43) storage area to the (inaudible 12:20:45) zones

from the midshore, that is landward of the 25 metre depth to the nearshore zone and thence onto the beach and then the final step which you don't mention in this paragraph but you referred to in your answer to my previous question, is from the offshore to the midshore and ultimately to the nearshore by way of cross-shore transportation, is that how you see it?

A. Not quite. I do refer to the offshore in this paragraph. In my second sentence I say they erode and borrow sediment from the beach which is then stored offshore. I mean, yes, you did say I was largely talking about the inshore, the bar, there. But I don't, as I've said a few times, I don't make a distinction between the so-called midshore and the offshore area because I think that is all part of the one resource that, overtime, is being brought onshore. That's why it reaches a point as you go further offshore where that Holocene sand is no longer present. It would've been there in the past when the Waikato river deposited it there but over the centuries it's been moved further onland and that process will continue into the future. But that's the, the key for me is this is one resource that is being brought onshore suggesting that offshore area is in that active zone for a typical storm now, but it will be in time, in my opinion.

20 Q. As a result of cross-shore transport?

A. Yes.

Q. Just for the sake of clarification, you relied on this part of your evidence, you relied on Dr Beetham's evidence to some extent and you've noted that in the footnote, haven't you?

25 A. Yes, yes, and –

Q. In footnote 13, and Dr Beetham uses the term nearshore zone, doesn't he?

A. He does, yes he does, yes. Ms Hart also has a similar analysis.

30 Q. Turning to your criticism of Mr Todd's use of a sediment budget and the budget he relied on in his evidence-in-chief in support of inshore and midshore extraction, you're aware that Mr Todd no longer considers a sediment budget an appropriate tool (inaudible 12:23:43) apply to offshore extraction or endeavour to calculate the extent of cross-shore



transport of sediment from the offshore over the closure depth, you're aware of that?

A. Yes, I'm aware he's no longer supporting that, the use of the sediment budget.

5 Q. And the references to paragraphs 98 and 99 of his evidence-in-reply, I think. And you'd agree with him on that point, I take it? You've been very critical of the sediment budget approach yourself?

A. Yes, yes.

10 Q. And you're aware that Mr Todd's use of a sediment budget was primarily to infer a figure for the volume of cross-shore transport, wasn't it? It was to provide a basis of measuring or inferring what a measurement might be for cross-shore transport?

1225

15 A. I thought it was a way of arguing that the beach was accreting because there was – where was the sand coming from? He needed to find a place that the sand was coming from and he'd balanced his budget by assuming there was a supply from somewhere.

Q. But, Ms John, have you read Mr Todd's evidence-in-chief –

A. Yes.

20 Q. – and his evidence in reply in which he explains the purpose of his use of a sediment budget.

A. Yeah, because the budget has to balance.

Q. Yes, you have.

A. Yeah.

25 Q. And you would've understood from that that there are really about three steps, three essential steps, to the process he used. The first was, to measure the volumes of sand on the beach over time to detect whether the beach was eroding or accreting. You understood that?

A. Yeah, mhm.

30 Q. And he used three methods to try and do that.

A. Yeah.

Q. Aerial photographs, historical profiles and topographical surveys.

A. Yeah.

Q. And then having arrived at the volume of accretion, which was a measured volume, he then looked at the other, the second step, was to look at the inputs and outputs.

A. Yes.

5 Q. To the system, the active system as you've called it, towards landwards of the closure depth. That's right, isn't it?

A. That's right except of course with the revisions to Mr Todd's evidence and the area that was found that undermines all of that because the volumes in the beach system are no longer being – it's no longer being argued that they're accreting.

10

Q. Yes, but just to ensure that we agree, that the purpose for which Mr Todd was using a sediment budget, the final step was to attribute the total surplus in the beach to cross-shore transport, taking into account all the other inputs.

15 A. Yeah.

Q. And outputs, as it were.

A. Yes.

Q. including sand extraction.

A. Yeah.

20 Q. And as you say, his analysis became unstuck because of the survey works error which has already been the subject of evidence before the Court.

A. Yes.

Q. And as a result of that error, there was very little storage, or comparatively, little storage on the beach from which to infer a greater level of cross-shore transport than the 12,000 cubic metres estimated in the sand study. Is that your understanding?

25

A. Yes, it is.

#### **THE COURT: JUDGE SMITH TO MR MACRAE**

30 Q. I'm struggling to understand what the question was in all of that. It just seemed to be a re-representation of Mr Todd's evidence. I'm not sure where it took us, I'm just a bit confused because essentially Mr Todd's argument relied upon the fact that the depth of closure wasn't the depth

of closure and that a lot more sand was being transported across than the Pakiri study would indicate and so I'm not sure exactly why this is all relevant anymore because no other witness agreed with Mr Todd and he (inaudible 12:28:51) so why are we going over it again?

5 A. Well, Sir, my original question was that Ms John agreed that a sediment budget wasn't appropriate for assessing the effects of (inaudible 12:29:10) sand extraction.

Q. Oh, I agree, and then we spent another 10 minutes going through the sediment budget. I'm not sure – are you supporting the sediment budget, 10 are you? I'm not sure what the questions are about.

A. Not at all, Sir. Well, it seemed from Ms John's answer that she may have not quite understood the way Mr Todd was using it and I wanted to ensure that she understood the way that he put it or rather ask her to confirm that she did, and she has, in order to ensure that when she said it was no 15 longer relevant to assessing the effects of offshore extraction we were, as it were, had the same understanding about what the purpose of the sediment budget was in the first place. That was the point of the question, Sir.

Q. Yes, well, it was lost on me, I must say. And if there's an assertion that 20 the witness doesn't know what she's talking about, I don't know that there's any basis for such an approach.

1230

A. Well there was no implication to that effect Sir. Ms John has answered 25 the questions in a way that clearly indicates she did understand the basis on which Mr Todd used a sediment budget and understands and agrees with the reasons (inaudible 12:30:18) are appropriate. So that's what I was endeavour to establish Sir beyond doubt based on some possible misunderstanding.

### **CROSS-EXAMINATION CONTINUES: MR MACRAE**

30 Q. But if I could turn to your evidence in relation with what you've called Ms John loss of the sand reserve and in particular the photos that you attached to your evidence in your figures 6, 7, and 8. So looking first at the photograph which is figure 6 taken by Mrs Haddon you say on the 8<sup>th</sup>

of May 2021 just as a matter of interest Ms John do you know who's the dog in the photograph is?

A. I think it's hers. I'm not sure though.

5 Q. It appears to be a Dalmation of some kind. Does Mrs Haddon have such a dog, do you know?

A. I don't, I don't sorry.

10 Q. Now are you suggesting that these photographs are relevant, or that photograph in particular, and then if you look at figure 7 that's a photograph by (inaudible 12:31:44) and figure 8 is a photograph by Natalie Jessup of Mangawhai Heads. Are you suggesting that they are relevant to the offshore application?

15 A. What I'm suggesting is that and I'll just preface this in that I am fully aware from a scientific perspective that these aren't – this isn't scientific evidence in that sense. It's observational and so I'm aware of the sort of weaknesses associated with including these photos. It doesn't sort of, you can't suggest there's a link between offshore extraction and these photos, but the reason I included was because the, of the, and remember I wrote this evidence before we knew about the error by Survey Worx and there was still a suggestion that the beach system was accreting and I

20 couldn't understand that because of the you know, I heard the discussion, an interesting discussion the Court had at the end of last week about science, and the basis for science, and the basis for science is evidence and for me this evidence tells you that something is happening at Pakiri Beach that (inaudible 12:33:13), that it's accreting, and it suggests it's

25 eroding and it suggests that there are some real issues and challenges and my point we don't know what is happening and what is causing this. We do know that there's offshore extraction going on which won't be positive in the context of the problems the beach is facing and I'm suggesting we don't know enough about why this is happening to be able

30 to support ongoing extraction and as I say at the time the argument was still being made that the beach was accreting and it just didn't add up in my mind and I wanted to demonstrate why it didn't add up. I explained you know what the connections were but there was to me this says

something's wrong and we don't know what it is and how it is and we need to know more.

Q. So these are as you put it observational photographs?

A. Yes, yep.

5 Q. Like your evidence of observations by others and recorded by others in photographs?

A. Yeah.

Q. (inaudible 12:34:26)

A. And that just explained my concern.

10 Q. Do you know where along the beach the photographs were taken?

A. No I don't.

Q. And they're all taken shortly after Cyclone Gabrielle were they not?

A. The ones in the seven and eight are – sorry. Photo 7 after the cyclone. Photo 8 the second one was after the cyclone. The top one before obviously and photo 6 was before the cyclone.

15

1235

Q. Yes, quite right. Thank you. And that was taken on the 19<sup>th</sup> of February so that was. what, somewhere around 10 days after this?

A. Yes, (unclear 12:35:23), yeah.

20 Q. Yes. Have you seen the photographs some of which Mr Todd attached to his e but the full range of which was attached to Mr Brown's evidence and the photos were taken by Mr Brown?

A. Is that when they flew the coast line after – shortly after the cyc –

Q. Yes.

25 A. Yes.

Q. Yes. If they could be brought up by Mr Garton, they're attached to or a part of Mr Brown's evidence in reply, that's EB tab 12A and they provide a contrasting, or at least a (unclear 12:36:10) of Ruakaka Beach.

A. Mmm.

30 Q. A few weeks after the cyclone and of Pakiri Beach on the same day, 7<sup>th</sup> of March 2023. If those photographs could be brought up. The Ruakaka ones are at pages 38 to 43, so starting at page 38. Thank you, so that's the Ruakaka (unclear 12:36:50) those photographs (unclear 12:36:53) Ms John?

A. Yes.

Q. Along the Ruakaka Beach?

A. Yeah.

5 Q. If you could just click through them. yes thank you. Perhaps not quite so quickly. Do you know Ruakaka Beach, Ms John?

A. I do and not as well as Pakiri but I know it.

Q. Right, so on the 7<sup>th</sup> of March, two or three weeks after the cyclone quite a lot of black sand at Ruakaka, along the Ruakaka coastline?

A. Yeah.

10 Q. Would you move up to the Pakiri set of photographs EB12A 23, starting at page 23. Thank you.

### **THE COURT: JUDGE SMITH**

15 Q. Just while that's coming up, do you know what the black is, is that charcoal or something else? Do you know what it is? I'm not asking Mr MacRae, I'm asking the witness.

A. I, yeah, I wondered that, not that time but back in 2021 when we were first seeing evidence of it on Pakiri and I think it's a lag deposit so a previous deposit of, it could be vegetation, it could be another type of sediment that  
20 was laid down at a certain point in time over the Holocene and you can see it as evidenced from these photos right along that coastline.

Q. The reason I ask is that I've walked along Ruakaka not so long ago, you can see it there clearly but curiously enough you can also see it at Bowen Town and a number of other places and I just wondered if anyone knew  
25 what it actually was, whether it was a volcano, Taupo, or something.

A. Yeah I couldn't get to the bottom of it.

Q. Rangitoto, whatever.

A. Yeah, (unclear – audio missing 12:39:01).

30 Q. Somebody may be able to help us later if you can't help us. I just ask the question because it seems to be very widespread. I'm not sure how far. But anyway the photo we're showing now I'm not exactly sure where this is supposed to be but I'm assuming it looks like a couple of houses there, is it? So is this up at the top golf course, or the second golf course?

**MR MACRAE:**

Pakiri Beach north, your Honour.

**THE COURT: JUDGE SMITH**

5 Right. So this is golf course number one?

**MR MACRAE:**

Moving out towards the spit.

10 **THE COURT: JUDGE SMITH**

Q. Yes. So what are you asking? The beach again, we can see a little bit of black there. I take it you agree Ms John?

A. Yes, yeah.

Q. And it doesn't seem to be quite as starkly cut as Ruakaka is, agree?

15 A. From those photos, yeah.

**MR MACRAE:**

Can you drop down to the next photo please Mr Garton.

1240

20 **THE COURT: JUDGE SMITH**

Q. So do you recognise this Ms John, and which stream it is?

A. Can we move the photo down? Yeah.

Q. It looks like Te Arai, the Te Arai Stream, but I could be wrong, I'm not sure myself. Is there any – the witness to pick up Mr MacRae there?

25 **CROSS-EXAMINATION CONTINUES: MR MACRAE**

Q. Not particularly Sir, just to note the incidences or the absence of black sand along that photograph. If you can move to the next one. And again do you know what part of the beach that is Mr John? Pakiri Beach South-side?

30 A. Yeah.

Q. You're familiar with that area?

A. Yes I am, yeah.

Q. (inaudible 12:41:03).

**THE COURT: JUDGE SMITH**

Q. Is this the second golf course is it?

5 A. Yeah I think so.

Q. Thank you.

**CROSS-EXAMINATION CONTINUES: MR MACRAE**

10 Q. And then the next photograph Mr Garton please. And again just observing that there's now very little black on the Pakiri Beach Ms John isn't there?

A. Ah, yes.

Q. Next photograph down.

A. So we're moving –

15 Q. Does that take us to the Pakiri River? Takes us to the Pakiri River Ms John?

A. Yes, yes.

Q. And I think maybe one more. Thank you. And perhaps if there's another, that's Tara Stream actually, sorry.

20 **THE COURT: JUDGE SMITH**

Yes I didn't think it was Pakiri I was just looking, because we seem to remember (inaudible 12:42:11) exposures there.

**MR MACRAE:**

25 So if Mr Garton could drop down another photograph.

**THE COURT: JUDGE SMITH**

That looks more like Pakiri.

30 **MR MACRAE:**

That's Pakiri. And the next photograph I think Mr Garton. And again.



**THE COURT: JUDGE SMITH**

Yes so, there's a little one, I recall anyway I don't know if the rest of the Court does but there was a little one you can see there which is a patch. It may have changed something since. On the right-hand side there's a little patch there,  
 5 yes. I'll just point out this isn't exactly the way it was by the time we did our site visit, it was different again by the time we were there.

**WITNESS:**

It would be.

10 **CROSS-EXAMINATION CONTINUES: MR MACRAE**

Q. Well it was a stormy period Sir, but, and has been since of course. Next paragraph down please Mr Garton. Do you recognise that area Ms John?

A. I recognise it in general terms yes.

15 **THE COURT: JUDGE SMITH**

Yes steeper cuts there and my recollection is as we go further south we saw where the very expensive homes are, there's very steep cuts there too. I don't know that I remember the black. When you're there it seems those patches that look a bit grey look a bit darker, but it's hard to know what they are. Is there  
 20 any further (inaudible 12:44:03) south Mr Garton?

**MR MACRAE:**

That's what allows the photograph Sir.

25 **THE COURT: JUDGE SMITH**

Yes because we haven't got to the houses yet. I don't think. No okay thank you.

**CROSS-EXAMINATION CONTINUES: MR MACRAE**

Q. Just as a matter of observation sets of photographs it seems that Pakiri  
 30 has recovered rather more quickly than Ruakaka or had recovered rather, by the 7<sup>th</sup> of March, rather more quickly than Ruakaka. Is that how it looks to you?

- A. No. You can't, I just wouldn't suggest that from a snapshot of photos, along the coastline on one day. We don't know what height the beaches were at to start with, we don't know where that land deposit is relative to them. You know the whole of the coastline was heavily impacted by that storm event and different beaches by their very nature will recover and respond in different ways and it depending (inaudible 12:45:08) state is to start with. I don't think you can take much from it, other than it was a big storm that affected the whole of the shoreline.
- 5
- Q. You were referring to your figure 7 as an indication of black deposits or black material –
- 10
- A. It was an, yeah as –
- Q. – and the extent to which it was being, yes and so compared with that photograph some 16 days later, there's no sign at all along Pakiri beach of deposits of that, black deposits of that magnitude or extent, is there?
- 15
- A. No, not in that particular location, no.
- Q. And you don't know where that location is?
- A. Not specifically, no.
- Q. Thank you. Ms John, I wanted to ask you about possible mitigation will offset matters from a (inaudible 12:46:14) processes point of view, do you know what I mean by offset measures?
- 20
- A. I do, yep.
- Q. Yes. I understand that from your evidence that you're very familiar with Pakiri?
- A. Yes.
- 25
- Q. Have you lived there at any stage?
- A. No, I haven't, no.
- Q. Do you live in the area at all now?
- A. I live in Auckland, Tamaki.
- Q. That's a rush, you don't have to tell us where, but you have friends there and know the community at Pakiri, don't you?
- 30
- A. Yes, I do, yes.
- Q. And Oliva Haddon's a friend?
- A. Yes, she is, yes.
- Q. Are you doing this work pro bono?

A. I am, yes.

Q. You know that various sections of the community have strong views about this application, don't you?

A. I do, yes, yes.

5 Q. Do you have a personal view?

A. I don't know, I don't know, I have a professional view in that I know the Haddon family through, for other reasons other than this case and Olivia asked me if I would look at from a professional position the evidence and this was years ago now, to see once she knew what I did at a professional level what my interpretation of the evidence was and I formed that opinion without knowing what her view or position on it was and for that reason offered to support the, this hearing and so on by providing my evidence to it.

10

Q. So you're satisfied that you're impartial in this case?

15 A. Yes, I am because I –

Q. – (inaudible 12:48:26) impartial, you're not appearing as an advocate for anyone?

A. No, I –

Q. (inaudible 12:48:31)

20 A. No, I judged the evidence on its merit and based on my professional standards and the work I do all around the country on management and coastal adaptation to climate change.

Q. Thank you. Well, given that and your knowledge of the community and your coastal expertise as you say, have you thought of or can you think of any mitigation or offset measure which the appellant might take to protect the beach and the coastline in the vicinity of Pakiri or along the Pakiri coast? And that, of course, assumes that consent might be granted. So if consent were granted.

25

A. That's a huge question and in terms of from a coastal process perspective the only mitigation, which of course is about avoiding the impact, so if mitigation is possible once extraction's occurred if it's linked to erosion on the beach, you in theory you could offset it by feeding sand back into the system. So you'll know there are beach recharge and beach replenishment programmes that are undertaken on the New South Wales

30

coastline where they rainbow sediment back onto the beach to help mitigate erosional effects but that has a significant cost associated with it and it's can be a transient result. So you could offset in that way from a coast process perspective there's other offsetting measures you could take in terms of compensation but that wouldn't be for me to talk about, you know, I can't, I don't know, I wouldn't want to judge the acceptability of that or not to the community.

1250

Q. You'd understand that offsetting measures don't need to be linked directly to any perceived effects of the sand extraction itself.

A. Yeah, which is –

Q. Again extend more widely from that, so –

A. Yes.

Q. – again I'm relying on your knowledge of the area and asking you this question but are there other areas in which offsetting or mitigation measures might be taken?

A. I couldn't comment on that. I think in terms of (inaudible 12:51:00) potentially, but I'm not an ecology expert. From a coastal process perspective in terms of sediment and sediment supply and the geomorphology and form and function of the beach I can't think of any other than sediment replenishment, putting it back.

Q. Thank you, Ms Johns, no further questions, your Honour.

## **RE-EXAMINATION: MS MORRISON-SHAW – NIL**

### **QUESTIONS FROM THE COURT: COMMISSIONER MYERS**

Q. Yes, thank you, good afternoon, (inaudible 12:51:47) Ms John. Can you hear me okay?

A. I can, thank you.

Q. You talk about the Holocene sand being part of one resource, is that across the embayment?

A. Yes.

Q. Is it like, what's its limitations? Like what, how, how much could be taken out of it over time, or is that too difficult to answer?

A. Yeah, I, from a coastal process perspective and in terms of the situation we are currently in in Aotearoa and across the Pacific where with climate change and sea level rise we're going to face increasing loss of our beaches and our beach systems that I don't, my argument would be none of it should be taken out of the system because, well that is if we want to maintain our beaches into the future and for our children. This is the resource that will continue our beaches' ability to survive and be as they are now in the longer term and that's its purpose and function.

Q. Thank you. There was discussion last week about monitoring and explanation of some of the drone information and gathering volumetric data, is that a useful method to assess changes in the beaches?

A. I think it has some value and you know I did refer to that work in my evidence because it was showing slightly different things and I think as part of having a broader picture it's useful, but it's not as useful as topographic survey methods and it has limitations and that drone imagery work is qualified in the degree to which it can be relied up because you need to know the broader context, you need to know what vegetation has been planted, what other effects have happened to the system to be able to interpret it properly. I think it's the topographic profiles that are the most valuable in terms of looking at topographic and bathymetric in terms of knowing the evolution and changes of the system here.

Q. And would they be like continuous like topographic of the beach systems and then out to the bathymetry, do they need to be linked?

1255

A. Ideally, I mean that's challenging to do because you know there's only so far that you could take a topographic survey and there's only so far inland that a bathymetric survey can come, but yeah in theory you would want, in an ideal world, a continuous profile, or profiles I should say.

Q. Thank you and I mean just one other thing, what's the trigger if there's an effect on the sand resource (inaudible 12:55:46).

A. Ah yeah that's a good question and that's quite challenging. You need to think about – because there's normal cyclical patterns as we know of erosion and accretion, and so you can set the trigger based on a extent of erosion but you then need to investigate that further to – so you know

whether it's linked to a particular event or whether it's more of a trend, because you need to know what the underlying trend is. Lots of these adaptation triggers are linked to a certain extent of erosion occurring through an event or through a series of events, but then, as I say, it needs more thorough examination linked to that. You can also have triggers linked to sea level rise, rates of sea level rise, but how that translates onto the beach is difficult as well, it need quite a lot of detailed and careful thought.

Q. Thank you, those were my questions thank you.

#### 10 **QUESTIONS FROM THE COURT: SPECIAL ADVISOR HOWIE**

Q. Yes thank you Sir. Just going to the joint witness statement, if I may. And just to confirm that you're in agreement with that in paragraph 5, partway down the first paragraph of it, you jointly have said that the risk is low of having any measurable influence on shoreline stability. Are you still happy with that?

15 A. I am with the qualification that I added earlier, that that was a statement that was relative, the risk of - offshore extraction is (inaudible 12:57:49) of the onshore extraction and the risk that we were talking about is the measurable influence. So I'm happy with the statement but it needs to be understood. We're not saying that there is no risk, we're simply saying it's unlikely to be able to be measured.

Q. Now that sort of brings me to Commissioner Myers question, that if measurability is so difficult, what sort of trigger would you think of? Because if you can't measure it, you can hardly set a trigger.

25 A. Yes that is true and I think it will change over time, so at the moment you know, in 2023, it's unlikely to be measurable but I think in time it could become measurable as we get bigger storm events and so on and so forth. And there's a lot of science and a lot of work that's going on in the field right now at setting these triggers and establishing these triggers, but what it needs is a really close watching brief and a good understanding of the system to be able to determine what the triggers should be, and that could be a trigger for further investigation. And the

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way it works is (inaudible 12:59:21) signals that come before the triggers, and then you have thresholds as well.

Q. Yes, well do I take it from that answer that you're really saying that we need to investigate further to be able to set a trigger?

5 A. I am, yes, I mean that's sort of been the point I've advocated right throughout but one thing that will happen with the – once, let's say if, offshore extraction occurs, then there will no longer be inshore extraction, inshore or midshore extraction, so any changes you could link to the dredging will be associated with the offshore dredging, so it is likely to  
10 become more measurable because there's less interference from other actions going forward.

1300

Q. If it's big enough to detect?

A. Yes, yes, in the short term. That's the problem. It could become obvious  
15 in the longer term but it will be hard to tell in the short term.

Q. By short term you're talking, what, 20 years or something is it, or 10 years?

A. I would, generally I would refer to 10 years for short term.

Q. And just one final point. I was a bit curious that all the coastal experts  
20 seem to have rejected this sand budget idea of analysis of the processes and that it's been dumped just because there was an error in measuring accretion or non-accretion as the case may be. But wouldn't it still apply to the correct interpretation of the profiles and so forth?

A. Yeah, yeah, no, you're absolutely right actually. I think the criticism, my  
25 criticism and the criticism of some of the other experts was of the sand budget that was being presented to us because we didn't believe it, it didn't stack up significant other source from somewhere of sediment that was causing accretion. And that the sort of devalued the sediment budget that was presented but of course there will be a sediment budget that is  
30 active and is acting in the Pakiri embayment.

Q. Yes. But we don't know what that is do we?

A. No, and the best information we have is the sand study. But as I would say I think, you know, that's 30 years old.

Q. And if we take the correct typographical storage or accretion or non-accretion or stability results what is the sand study (unclear 13:02:24) about that correct position?

A. Do you mean what did it say in terms of the balance of the cistern?

5 Q. Mmm. Given the correct beach information.

A. Yeah, I mean 30 years ago it said that the beach was in a stable, for want of a better word, state, relatively stable state, and that there was some sediment coming from the outer area into the onshore but which we've talked about, it talked about the 12,000 cubic (unclear 13:03:10). Since  
10 then though things have changed because as I said this – that work was done when we were just beginning to think about the effects of sea level rise and climate change on our coastline and those effects weren't really accounted for in that work and we have, as has been said already, much more information now on the – much more topographic and bathometric  
15 information that we could sort of plug into a model to develop a new sediment budget.

Q. Yes, but the sediment budget, or the stand study sediment budget was conducted extraction going on and having gone on for many years?

A. Yes.

20 Q. And concluded that the coast was stable and now we're faced with extraction and then the extraction was on to real near shore, it was almost on the shore wasn't it?

A. Yeah.

Q. Now we're faced with a situation where there's no extraction on the shore  
25 or near shore and there's limited extraction offshore (unclear 13:04:38) make any deductions using the stand study of that new set of circumstances?

A. I wouldn't want to not without a proper re-examination of the inputs and, you know, I mean that would be – Mr Todd gave up on the notion of a  
30 sediment budget and I wouldn't like to sit here today and try and come up with my own.

1304

Q. Yes, okay, well it just seemed to be rejected on the basis that there was an error in the topography and that didn't seem to me to be a basis to



reject the sediment budget. It seemed that there must be something else behind (inaudible 13:05:20).

A. Well, yeah.

Q. Lack of knowledge is what you're saying.

5 A. Yeah, that's it. We need more information and to be able to validate a new budget beyond that that we were presented with 30 years ago.

Q. I think you shared that the sea level raise issue was reasonably minor in the context of this case. Is that what you think?

10 A. I said that I think that it's actually the increase in intensity in storms that is going to cause the issues for Pakiri, rather than sea level rise per se. You know, in theory with a sea level rise a beach rotates itself backwards. To that though it needs its sand and it needs not to be constrained on the landward side. And the difference between the Holocene and now is whereas the Holocene you had stand stills that allowed for the settlement  
15 of sediment and these deposits to be built up. Now we're going to have – it's a force that will keep coming and keep coming.

#### **QUESTIONS FROM THE COURT: COMMISSIONER PRIME – NIL**

#### **QUESTIONS FROM THE COURT: JUDGE WARREN**

20 Q. Tēnā koe, Ms John, thank you for your evidence. I was just, and this may be my naivety in this area, but I note that the purpose of your evidence is to identify your issues with other evidence. As opposed to what (inaudible 13:07:35) an approach to which was simply to give your response to the evidence or the issues at Pakiri in terms of the applicants for sand extraction. It seems your evidence is simply focused on things you take  
25 issue with, as opposed to things that may be okay in terms of the other evidence. Is that fair or am I reading it incorrectly?

A. No, I think that's fair. I think that's fair.

Q. So, were those your specific instructions, just to identify the issues as opposed to things you might agree with as a professional?

30 A. No, it was broader than that. It was (inaudible 13:08:18) at that stage, that was for the offshore application. What do you think of it? What is your opinion on this? And of course it's human nature you don't go

through and set out the things you agree with, you set out the things you don't necessarily agree with, so that's why I think the focus of my evidence is the way it is.

5 Q. Well, at 13 it says: "The purpose of my evidence is to describe the issues I have with the assessment of the (inaudible 13:08:54) effects of coastal processes," et cetera.

A. Yeah.

10 Q. So, it's clearly focused on the things you don't agree with, things you have issues (inaudible 13:09:02), hey there may be some good points that these other experts have raised.

A. Yeah, that's true. I didn't, for the purpose of brevity.

Q. But obviously in the joint witness statement there was opportunity to agree and disagree on certain things.

15 A. Yeah. And I – that is what we did as you will have seen from the joint witness statement.

Q. Yes.

A. There's a lot of agreement there.

20 Q. In your conclusion at paragraph 39, you talk about socioeconomic and cultural value of the beach in this context (inaudible 13:09:49). Where's that source from? Is that simply just a conclusionary comment, because you didn't deal with the cultural value in your evidence, did you?

25 A. No, I was trying to stay in my lane, for want of a better phrase, in that – the purpose of my evidence was to examine the coastal process issues and the coastal process discussion. I didn't really want to stray into an area that I'm not – I don't have – I'm not an expert in those areas but in the work I do I (inaudible 13:10:29) a sort of holistic approach to these things and coastal processes are the driving forces for all of those other things, for ecology and socioeconomic value and cultural value. And they're all fundamentally interlinked, in my view. And I couldn't finish my evidence without making that point.

30 Q. Right. Just for my own understanding, you gave evidence at the council level hearings.

A. Yes.

Q. Who did you give that evidence for?

A. Te Whānau o Pakiri.

Q. And I note that you were also a member of the coastal process expert group convened by the independent (inaudible 13:11:14). What is that, sorry?

5 A. Oh, for the offshore hearing.

Q. Yes.

A. There was a level of, I can't think of the right word, disagreement over coastal process topics. So, there were a number of experts who had different views. And there was, though, a clear need or request for additional bathometric surveys. Because an independent bathometric survey had been commissioned which showed trenching offshore. And so what was determined was an offer was made for another survey to be done and the Commissioner has asked that coastal process group to oversee that process.

10

15 Q. Right.

A. Both from the approach, the results and the interpretation of those results.

Q. And that had a makeup of people from the applicants, experts, interested parties.

A. Yes.

20 Q. Right.

A. Yeah, so Dr Todd and Ms Hart as well as Mr Shamford-Dock (spelling 13:12:22) and Mr Shaw. Dr Shaw.

#### **QUESTIONS FROM THE COURT: JUDGE SMITH**

Q. I really only have three issues I want to discuss with you. The first is about accretionary phase in Pakiri and your current position. So, it does seem to me there's a large measure of agreement that through the 1950s post-war there was a strong presence of sand on sure, taking farm land, led to the acquisition and then planting of the areas because of the amount of sand coming through which in other cases we've seen it got through to the black swamp, for example, areas like that. Do you agree with that or disagree?

25

30

A. I agree.

Q. (inaudible 13:13:12) by the 1990s at the (inaudible 13:13:14) study, it might be described as dynamically stable?

A. Yes, yeah.

5 Q. So, at that stage, to the extent that we don't know whether the abstraction, what effect or input it had to that but it was still – it had been subject to abstraction for some time as dynamically stable. The question now is whether or not it's still dynamically stable or is in an erosional phase. There's an argument for the southern end that there is an erosional phase. It's less clear for the northern end, would you agree?

10 A. I think so, yes. No – yes. I think so.

Q. So, clearly with the sand that was being removed from the midshore and inshore I'd expect to see the sand that is moving, the cross-shore sand, making its way eventually to the beach, as you've said before. That's the model, isn't it?

15 A. Yes, that's right.

Q. So, whether that's 2,000 metres or 60,000 metres a year, we don't know. And its effect, we don't know how long it'll take to see those effects. But one would expect there to be no worsening and perhaps a slight improvement within the next 10 years or so.

20 A. Oh, because of the removal of extraction. Yes.

Q. Yes. So, any sand that goes through the net gain will now be able to make its way to shore in the normal way, wouldn't it?

A. Yes, it would. It would.

25 Q. Because my next question is of course, what we don't know is the effect of storms because you've said it's the storms that move the (inaudible 13:14:52) from a greater depth, I won't call it depth (inaudible 13:14:55) but from a greater depth onshore, the bigger the storm the more likely it is to push sand towards the shore.

1315

30 A. Yes, and what I was about to say was there's one qualification to that in that it's not necessarily a, and I heard your discussion about this last week, it's not necessarily a direct line so the place that you might be extracting from offshore you wouldn't necessarily expect to see the effects directly in line with that onshore because of the (unclear 13:15:25)

transported around the embankment. It doesn't come directly on and offshore, it's circulated around the embankment and we, I saw last week you had pictures showing the way, the sort of (unclear 13:15:39) in a sense the way that sediment's transported.

5 Q. Well of course the literal drift changes as I've known from many other cases and it depends on the sets, the el nino, la nino, of the particular storms.

A. Yes.

10 Q. So there's a range of factors that affect it. I accept that. Next, you seem to have experienced generally the coastal matters, would you accept that there has been an erosional phase generally on the east coast of New Zealand?

A. Yes.

15 Q. And we see that from places as far down south as Papamoa, Bowen Town, coming up and (unclear 13:16:14)?

A. Yes.

Q. Tauranga Bay recently and that's been half eaten away by storms.

A. Yes.

20 Q. So there's been quite a significant general erosional face, mainly storm related, would you agree?

A. Yes I do.

Q. And we know that there are cycles, we see it with the tides you were looking at, or sea level riser, it goes up and down but we also have storm cycles where there's an erosional and accretional phases?

25 A. Yes that's right, yeah.

Q. So it's never a straight line is it, as it's shown to be in the pictures?

A. No. It's never a straight line but it's definitely trending upwards.

Q. No, I agree, there's been a change, the point is it doesn't happen from point to point to point.

30 A. No. absolutely.

Q. Now the core question I wanted to ask and I think it's a question that Mr Howie put to me some time ago and I may have put to another witness, and that is under the holocene sand, is plasticine sand?

A. Yes.

Q. Are we agreed on that?

A. Yes.

5 Q. What we can't understand is if there's any distinction between the Pleistocene sand and the Holocene sand? What seems to be clear is when it was dredged in those deep trenches it appeared to be no more difficult to remove than the ordinary sand and seems to have almost identical qualities, is that correct, or do you not know?

10 A. I don't have a lot of knowledge in that regard but my understanding is that the plasticene sand is more compacted in general. I take your point about the trenches, that when it was dredged in the trenches and maybe that's something new we're learning but the theory is (unclear 13:18:01) pacted so it's harder to dredge and also it has different properties. It's a different colour to start but I mean that in itself doesn't matter but that suggests it might have more different types of materials in it and I, yeah, so.

15 Q. Well what Mr Todd said about it was that he was told it was no difficulty dredging it, that's how the channels got so deep, and that it actually was perfectly serviceable as the same type of sand, different colour but perfectly serviceable. My point is simply once you run out of Holocene sand there doesn't seem to be any evidence to suggest that that  
20 Pleistocene sand doesn't then (unclear 13:18:45) suitable storms and form part of the onshore – so we might expect to see more yellow sand turning up on the beach in the next few centuries?

A. That's, yes, I think there's been some evidence of that already.

25 Q. Because it does seem to me that you're all agreed that the sand isn't going off the Continental shelf, it's moving inshore?

A. Yeah, yeah that's right. It will change the nature though of Pakiri Beach fundamentally.

Q. It would be a different sort of sand there's no doubt about that at all.

A. Yeah, yeah.

30 Q. White versus yellow.

A. Yes.

Q. As you know much of the North Island, east coast, is a yellow sand.

A. Yeah. I don't (unclear 13:19:29) dredged though. Why not leave the Holocene alone and dredge it out?

Q. Well that's a very good question. That's why I was asking you the question but I don't think you can answer that question, can you?

A. No.

Q. No. Thank you. Those are my questions, any questions arising.

5

**MS WIKAIRA:**

Sorry, Judge, I have a question. Cherie Wikaira.

**THE COURT: JUDGE SMITH**

10 Q. Was it arising from anything I asked?

A. It was, with the pictures that were shown and it had Pakiri River mouth, that's not right. that is actually outside where were stay, it's outside (unclear 13:20:12) further along, it's not actually part of the river mouth. And then the other thing, I don't know if this, I can do this –

15 Q. Well that's a matter you can cover in your evidence, it's not really a question for this witness because she didn't know where the photos were taken, is this the one with the dog on the beach, you mean?

A. No, this is the one when, it was like the second to last one that Mr MacRae showed.

20 Q. Oh the aerials. Yes, well it would be useful if you could help explain those in due course but this witness I don't think can really assist with that.

A. Okay.

Q. Was there another issue that might relate to the questions that were made by the Court?

25 A. I have photos from (unclear 13:20:53) of the same area but I don't think I can show those, right?

Q. Well you can show them when you give your evidence, if you circulate them to everyone else. But not to this witness right now, I don't think because she won't be able to comment on them.

30 A. Okay. Thank you.

Q. Okay. Thank you. Any other issues? Thank you for your help Ms John, we appreciate your evidence and your answering questions.

**QUESTIONS ARISING – NIL**

**WITNESS EXCUSED**

**COURT ADJOURNS: 1.21 PM**



**COURT RESUMES: 2.29 PM****MS MORRISON-SHAW CALLS****GIOVANNI COCO (AFFIRMED)**

5 Q. Can you please confirm to the Court that your full name is Giovanni Coco?

A. I do.

Q. And that you have prepared one statement of evidence in this matter, dated 20 April 2023?

A. Yes I have.

10 Q. And I understand there are two amendments you wish to make to your statement, could you please confirm what those are for the Court and the parties?

A. Yes, they are number 31 and 32 of my evidence.

Q. So paragraphs 31 and 32?

15 A. Paragraphs 31 and 32 of my evidence, yes.

Q. And what is the amendment?

A. Just remove them, I don't think they are really essential to the conversation, it is not about (inaudible 14:30:33) should be using, it was just an example. I think we have too many datasets, we are just going to get more confused.

20

Q. Thank you, so just so we're clear, you're seeking that paragraphs 31 and 32 of your evidence be deleted, is that correct?

A. Yes.

25 **THE COURT: JUDGE SMITH**

Q. Can I just ask does that have any effect on figure 2, or is that a separate...

A. Yes, figure 2 gets removed too.

**EXAMINATION CONTINUES: MS MORRISON SHAW**

30 Q. And with those amendments, can you please confirm that everything in your statement is true and correct to the best of your knowledge and belief?

A. I do.

Q. Now there have just been a few questions that have come up in the last week or so and I'm just wanting to clarify your position on a few things. Now you participated in the Expert Coastal Process Conferencing?

A. Yes I did.

5 Q. And you're aware that in his opening legal submissions, Mr MacRae described the matter of agreement reached in point 5 of the joint witness statement as: "Virtually sealing the impact of extraction on the beach and dunes from effects resulting from the removal of offshore sand." Can you comment on whether you agree or disagree with that characterisation of point 5 of the joint witness statement?

10 A. Well I mean it is agreed because we (inaudible 14:31:59) extreme, especially since everyone on the Coastal Expert panel there, they all agreed that there was sediment movement (inaudible 14:32:11) that we've seen (inaudible 14:32:18). The problem is (inaudible 14:32:18) not a clue about how much sediment is moving. In this sense, knowledge (inaudible 14:32:27) then the number that was proposed is a guess, it could be true (inaudible 14:32:38) times larger, it could be in a different direction, I don't think there has been any study that has improved the knowledge, on how much sediment is exchanged, so it's not (inaudible 14:32:49).

20 Q. Thank you for that clarification. Now in response to a question from the Court, regarding the level of confidence around (inaudible 14:32:59) and whether it would increase the deeper you go and whether by 30 metres you could be highly confident, Mr Todd responded you could be considerably more confident at 30 metres around the depth of closure. Do you agree or disagree with that statement?

A. I agree with that statement by Mr Todd, yes.

25 Q. Now in response to further questions from the Court, regarding whether climate change was also an issue for depth of closure, and whether someone was doing an analysis, Mr Todd responded, it was in terms of sea level rise, if that resulted in changes to (inaudible 14:33:42) and that he understood that you had a model. Could you provide your response to the Court's questions on that issue?

30

A. Yes, I can because over the past few years I've studied the New Zealand wave climate and not only the waves but also the storm surge (inaudible 14:34:04) projected funded by the Ministry of Business, Innovation and Employment and as a result, we reproduced the past waves and storm surge, compare it to the data to see that they were (inaudible 14:34:17) and then once we produced what are called wave and storm surge projections in 2001, this modelling and results are published in international journals, peer reviewed and they are publicly available so whoever wants to access it. Now the results of the study for this part of the coast of New Zealand, probably you can't (inaudible 14:34:49) everyone is saying, our results indicate that in terms of extremes in (inaudible 14:34:57) or peak periods, there will not be really a significant difference in terms of frequency or magnitude. Yes we could get (inaudible 14:35:07) where we get more storms, but also we could have also the periods where we have fewer. So overall it doesn't seem as if the wave climate or the storm surge are clearly changing. In fact the storm surge if anything is also predicted in the wave (inaudible 14:35:29), they both predicted, projected is probably more correct to say, to slightly decrease. What we see that changes a lot is as I said the wave angle of the waves. That's predicted to change and that's something that actually might effect even the circulation as we understand it of the (inaudible 14:35:52) system.

Q. Thank you. Thank you. In regards to the edge of vegetation, Mr Todd was asked questions regarding the edge of vegetation and the use of arial photo analysis to determine shoreline change. And he expressed the review in response to questions that while it might be different internationally, that this is still the standard method used in New Zealand in terms of the aerial photo analysis because it covers the longest period of record we've got. Could you provide your view on this method of analysis?

A. If the work is often (inaudible 14:36:31) detection on the shoreline evolution, internationally the age of the (inaudible 14:36:37) is more or less abandoned because especially now there has been the explosion of satellite measurements. In New Zealand several regional councils,

several regional councils for example, they still use (inaudible 14:36:52) vegetation because New Zealand has a big problem, we have a lot of coast, a huge coastline and in a lot of places there is absolutely no measurement. Where we (inaudible 14:37:04) we always prefer (inaudible 14:37:09) and this is why when the data was provided of the (inaudible 14:37:13) vegetation it was clearly indicated that before making conclusions on the nature of change, (inaudible 14:37:23) important to supplement the data with beach (inaudible 14:37:26) or beach surveys. There is another reason why it's used because I don't want to just completely discredit the (inaudible 14:37:37) vegetation. There are places where the (inaudible 14:37:38) vegetation is a good proxy of what's happening at the shoreline . And in those cases yes it's great to use it as a complimentary tool but you first need to check that the (inaudible 14:37:54) vegetation is doing the same thing that the beach profiles are telling. This is why there are published (inaudible 14:37:59) that show that there are instances where the (inaudible 14:38:05) vegetation does not reproduce beach erosion or beach accretion as measured by (inaudible 14:38:09). So there are a lot of warnings on why should really not use the (inaudible 14:38:16) vegetation as a measure of shoreline or beach face changes. And in fact when we had the meeting of the expert, essentially everyone was happy to dismiss completely this data set, only Mr Todd wanted to keep it. But I think in terms of the quality of the (inaudible 14:38:41), definitely were better measurements where the beach profiles that are long enough to detect oscillations, they're enough to detect trends. Now there is this new programme with drones with the start and I think it's the best thing we can actually do. And that's why in the future we all agree that we should drones. We don't want (inaudible 14:39:03) vegetation. We know it has limited value. Especially for Pakiri, not everywhere, there are case where it works but not here, in my opinion.

Q. Thank you. Now in response to a question from counsel for DoC regarding whether the sand extraction has reduced resilience of the beach to erosion, Mr Todd responded that while that had the potential to reduce there was no evidence to link it it. And then there was a follow on

question from His Honour and in response Mr Todd explained that the evidence of linkage is spatial and should be felt closest to where it's been extracted. And he pointed to the areas north of Te Arai Point as evidence that there hadn't been that issue. Can you provide your view on this issue?

1440

A. Yes. I was there and so I listened to the conversation and what immediately came to mind these published papers that I called where we actually put the first (inaudible 14:40:09) of the seabed either (inaudible 14:40:13) or we built a hole on the seabed offshore and we were looking at what effect it had on bed forms developing in the surf zone. And the result of our numerical study, it was not done for Pakiri but as a general, just a view generally idea, in a lot of cases there were not any effects, specifically, in front of the (inaudible 14:40:38) that we were replacing numerically. So I think it's relevant because our intuition said that we should find the erosion straight in front but in the surf zone there's a lot of mixing ability and we also know that there are currents, longshore currents so, overall, it's not entirely surprising that we do not see that effect straight ahead. But to really answer this question we should do some numerical modelling of the system.

Q. And then just in relation to, so since the time you prepared your evidence and attended conferencing McCallums have circulated an updated set of conditions as well as an updated environmental monitoring and management plan. Have you had the opportunity to read those documents?

A. Yes, I have.

Q. And do you have any comment from a coastal process perspective on those documents?

A. Well I'm pleased with the dune and beach monitoring, I think that's fine in terms of a temporary resolution. I would like the barometric monitoring to be more extensive because if at some point the decision to perform a numerical modelling is taken the symmetry would be fantastic to be able to validate the model, to test it, and then to (inaudible 14:42:01) any answer that the model might give.

**THE COURT: JUDGE SMITH**

Did anyone else in the opposition parties have any questions?

**MS BIELBY:**

Sir, the council has just a couple of questions.

**5 THE COURT: JUDGE SMITH**

I'll just check if anyone else does and then I'll move to you. Does anyone else have any questions?

**CROSS-EXAMINATION: MS BIELBY**

Q. Good afternoon, Mr Coco?

10 A. Good afternoon.

Q. Can you hear me okay?

A. Yes.

**THE COURT: JUDGE SMITH**

I think it's either Doctor or Professor, normally you would say Professor, I  
15 would've thought.

**CROSS-EXAMINATION CONTINUES: MS BIELBY**

Q. Professor Coco, my apologies, I do apologise for that, sorry. I have read  
your evidence, Professor Coco, and I just want to ask, in preparing your  
evidence I think you, and it's set out in there, but I just want to confirm  
20 that you did read the evidence of Mr Morgan that was prepared for the  
council?

A. Yes.

Q. And I think in the body of your evidence that you state that before  
(inaudible 14:43:25) analysis that you refer specifically to the evidence  
25 that was prepared by Mr Todd for the applicant, is that correct?

A. Yes.

Q. And I just want to tease that out because I note that you don't, you've read  
the evidence of Mr Morgan, but you don't specifically, at least in that  
paragraph of your evidence, you don't say that you specifically refer to Mr

Morgan. Is the reason for that, that you are in general agreement with Mr Morgan?

A. There is one aspect that I particularly like about the evidence provided by Sam Morgan and I even wrote it down, it's page 939.19 –

5 Q. If you just give me one moment, Professor, I will just pull that up.

A. Because at that point, again evidence that the actual vegetation is not the (inaudible 14:44:36) and Sam Morgan speaks about the fact that there was clearance of vegetation, he shows two pictures indicating that the measurements would not be really, should not be really trusted or should not really, they do not relate to what happens on the beach face.

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1445

**THE COURT: JUDGE SMITH**

Yes, I am just wondering if Mr Garton could bring up EB939, which should be 9.19 of Mr Morgan and we can just all look at it, and we might be able to refer to the photos as well. Can you bring that up Mr Garton.

15

**CROSS-EXAMINATION CONTINUES: MS BIELBY**

Q. Thank you and professor, sorry as I was flipping I wasn't also listening, so I would be grateful if you could just go back and start that response again.

20 A. The same argument in this evidence, this point, 9.19, is –

**THE COURT: JUDGE SMITH**

Q. If we can just have a second professor, we will just wait till that comes up, we just want to all be – that bit, and there's a couple of photos there, so 9.19 is where you refer to it.

25 A. Yes, there you go, that's exactly, yes, yes.

Q. Then he talks about the two images then Ms Bielby, so –

A. The (inaudible 14:45:44) level, yes.

Q. – if we just went down to 940.

A. Where it's, it's shown that essentially the edge of a (inaudible 14:45:56) is doing, that is quite independent from the beach face, vegetation would follow over but that what was not beach accretion. It's a false way of

30

looking at the, well the vegetation is moving forward but the beach is not accreting.

**CROSS-EXAMINATION CONTINUES: MS BIELBY**

Q. Yes, so the vegetation is doing that in isolation?

5 A. Yes.

Q. Is that what –

**THE COURT: JUDGE SMITH**

Q. Well we know that this is when they replanted I think. But –

10 A. Yes, exactly. So it's a place where, that is a history also, it's indicated in the evidence, of clearance, of maybe also other species (inaudible 14:46:35). Where beach transects where the long record, I think that's what we should really rely on.

**CROSS-EXAMINATION CONTINUES: MS BIELBY**

15 Q. So that was a, your opening commentary was that that was an aspect of Mr Morgan's –

A. Yes.

Q. – evidence and you do agree with that, with his comments at paragraph 9.19?

A. Yeah.

20 Q. And I suppose just going back so I can understand your position on Mr Morgan's evidence, just reverting back to that question. Are there any aspects of Mr Morgan's evidence that you don't agree with. I only ask because I don't think there's, there are a couple of places in your evidence where you confirm agreement for Mr Morgan's methodology and his  
25 assessment. But I just want to understand whether there are any differences between the two of you?

A. Honestly, I don't recall because I read it, it was quite some time ago. I remember this aspect of the beach dunes which is what I found most, the most relevant. There are a lot of these reports where we, I didn't, all  
30 repeat more or less the same thing. So for me what was standing out was that aspect and that's what I recall more clearly.



Q. Yes, and certainly from the joint witness statement it looks to me as if you and Mr Morgan are largely in agreement?

A. Yes, okay, yes, I'm (inaudible 14:48:01).

Q. On that basis Your Honour no further questions thank you.

## 5 CROSS-EXAMINATION: MR MACRAE

Q. Professor Coco, just picking up a point I want – you questioned by counsel for Te Whanau o Pakiri, was most, she asked you about the wave model that you've developed. Do you recall those questions?

A. Yes.

10 Q. Is your wave model applicable to Mangawhai-Pakiri?

A. The wave model yes, it's been downscaled down to five kilometre, we could downscale it even more. Yes, it could provide an even more detailed picture of the waves in that area, yes. It is still the model used internationally, so it's, it will work, it would work, yes.

15 Q. What would be required to obtain the inputs for the model?

A. So the wave model are (inaudible 14:49:17) which are available for free and the (inaudible 14:49:23) and a detailed, (inaudible 14:49:26).

Q. Does it require a wave buoy?

A. The wave buoy we could use it for testing the model. It doesn't require it to set up the model. We only need the weights and the weights and the weights we can get them from other sources.

Q. Thank you.

A. The weight buoy would be very useful to test the model but if we want to forecast no, of course, we rely on weight (inaudible 14:49:56).

25 Q. You might have, but also suggested another wave buoy would be difficult to install because, amongst other things, it will need a resource consent and that can't be guaranteed, of course, but your model could operate without the necessity for a wave buoy, do I understand you correctly?

A. I think you understand correctly, I think the model has been validated enough that we could run it possibly also without a wave buoy to test the results and still believe the output.

30 Q. And would that be a useful device or a useful method of monitoring changes in the (inaudible 14:50:40) Pakiri (inaudible 14:50:42)?

- 5 A. Not that model would only provide the waves offshore or (inaudible 14:50:48) down to the surface and it would provide the waves that develop but then we need to analyse the currents, then we need to analyse the sediment transport pathways, we definitely then need to analyse the effect of storms and for that you need a more completed model. The moment you begin to put sediment in motion possibly of differing grain sizes if we wanted to be more detailed, that would require a much bigger model than just a wave model. The wave model would be one component.
- 10 Q. Thank you. I may have misunderstood you but I think again in response to Ms Morrison-Shaw you indicated that Mr Todd had a difference of opinion with the other experts about using the edge of vegetation as a means of ascertaining shoreline position and I think you said but please correct me if I'm wrong, that Mr Todd wanted to keep the edge of shoreline position as a determinant of future, as one of the determinants of future shoreline position. Did I understand you (inaudible 14:52:17) or did I not hear you properly?
- 15 A. No, I think what I said is that Mr Todd was the only one that wants to use the edge of vegetation method to understand current trends but that when we move to the future we all agreed that the best method to monitor the beach is to the use of ground surveys.
- 20 Q. I see, so I'm sorry and just to get your answer clear, you were saying that for the purpose of evidence to this application Mr Todd considered the use of vegetation to fix shoreline position is still a valid method –
- 25 A. Yes.
- Q. – others disagree.
- A. Consider it is a valid method, yes.
- Q. Yes. Thank you. He agreed with everyone else as you've said that in the future topographical and in particular drone surveys are a much better method?
- 30 A. Yes.
- Q. Is that correct?
- A. Yes.

Q. Yes, thank you. I think you've established Dr Coco that in respect of the findings of all the experts or where there was a difference with the majority of experts who produced the joint witness statement for the coastal experts, you agreed with those findings?

5 A. I agree with those statements, yes.

Q. Would it be fair to say that your evidence is very much an overview of the three applications of picking out specific points in which you see weaknesses in the material that's been put before the Court, particularly by the applicant?

10 A. I think I looked at really the driver for me to do all of this is I wanted to look at the inconsistencies in this study, the sense that it was very (inaudible 14:54:24) just after they finished and so there was still a lot of talk about and so we went out also to take measurements in deep water, we run some other study on some other beaches around New Zealand and –

15 Q. Sorry, Dr Coco, if I might interrupt for a moment, my question was just limited to your statement of evidence and I was suggesting that in it you took an overview of the three applications but where you saw weaknesses or points of difference you picked those specifically out.

20 A. Yes, I looked at statements that there were, that I did not consider scientifically sound.

1455

Q. Yes, thank you. You don't yourself undertake, sorry, you don't yourself in your statement of evidence refer to, refer anywhere to any analysis of the offshore application and the effects of the offshore application that you yourself have conducted, do you?

25 A. What do you mean that I had conducted, sorry, would you clarify?

Q. From your own research or from your own or the data available because –

30 A. No, because I did not study –

Q. – you didn't undertake –

A. – I have not in the past I have never studies measurements from Pakiri (inaudible 14:55:54).

Q. That's, sorry.

- A. Our, the earlier on was the question of what's the most studied beach in New Zealand, I think the most studied beach in New Zealand is Tairua beach. For that beach we have collected a lot more measures offshore, we have more than 20 years of daily shoreline position, we have waves, we had many other, many researchers around the world that work to try to predict the future of Tairua beach.
- Q. All right, thank you, Professor Coco. I have no further questions, your Honour.

#### **THE COURT: JUDGE SMITH**

- And I should perhaps confess that I did the marina there and of course all of that information was part of all of that. You've reminded me of something else, Professor, I'd forgotten about that one. Thank you.

#### **RE-EXAMINATION: MS MORRISON-SHAW – NIL**

#### **QUESTIONS FROM THE COURT: COMMISSIONER MYERS**

- Q. Yes, good afternoon, Professor Coco.
- A. Good afternoon.
- Q. Can you hear me okay?
- A. Yes, yes, good afternoon.
- Q. Okay. You, in answer to a question you talked about numerical modelling and needing that to be extended, I think that was your answer. I just had some questions about what, what is that numerical modelling. Is that the drone surveys and the bathometric surveys or what is it?
- A. No, no, those are separate.
- Q. Okay.
- A. The bathometry in fact is almost the input of the model, so this is a model the one that we used where we take the winds and from the winds we generate the waves for the whole region and so we can study the wave climate at any location around New Zealand. So it's a model that requires the bathometry knowledge of the wind and we really generate winds, wind waves and what waves propagate. So, but it only gives an idea about the wave climate. If we want to understand how this system works we need

to understand how the sediment moves and so that requires a different model again, a model that takes the waves, sees how much sediment they move from the seabed and where the sediment gets moved and that is clearly more complicated model than just the waves.

5 Q. The wave model does that assist with measuring the surf zone, is that one of the (inaudible 14:58:55)?

A. Yes, if we had the beach (inaudible 14:58:58) we could use the wave climate to see how far offshore the surf zone extends, yes, we could see where waves break.

10 Q. So the modelling you were talking about and then the sediment, the sediment modelling, so there's various different models, so how, like is that across the embayment or is that where the information is needed or more specific?

A. Yes, (inaudible 14:59:31), I think the information is needed for the whole  
15 embayment. We are incapable or at least needless to say that we are incapable to do a reasonable sediment budget because we really don't know how much sediment moves particularly now because of all those (inaudible 14:59:51) that have been hypothesised to happen because we don't really know the exchange of sediment between across the depth of  
20 closure, we don't really know, we know that there are some longshore currents but we don't know how much sediment they carry, so that's the type of numerical modelling that I think is required to understand how the system works.

Q. Thank you very much, those are my questions.

25 1500

### **THE COURT: JUDGE SMITH**

Mr Howie did you have any questions and I think Mr Howie was also involved in the Tairua matters too.

### **30 QUESTIONS FROM THE COURT: SPECIAL ADVISOR HOWIE:**

Q. Yes, Sir, my recollection of the Tairua was how heavy it can rain there. I was just going to follow on the Commissioner Myers question Professor.

In this model you create the wave climate from your wind information and from the bathymetry that you've got.

A. Yes.

Q. At what scale is that?

5 A. The present model, the one that I'm using in the future wave climate and storm surges on the scale of five kilometres.

Q. What does five kilometres mean?

A. Every point along the coast, five to 20 metres.

10 Q. I see. So you're predicting a wave climate each five kilometres along the coast?

A. Let's say 10 kilometres, that's the maximum that we have so I prefer to say 10 kilometres, yes.

Q. So 10 kilometres. And have you done that?

15 A. Yes, yes, yes, we've done it, we've published it, the results are available and yes as I commented earlier on the overall finding is that we do not (unclear 15:01:47) according to this model result an increase in the frequency or magnitude of storms. We do not include cyclones, like Cyclone Gabrielle, because those cyclones have their own way of generate waves that is quite peculiar and essentially nobody in the world  
20 knows how to predict how big those waves could be.

Q. Okay. And then to take that model a bit further you'd need to know your sediment gradings alongside the bathymetry?

25 A. Yes, that would help because that essentially the sediment the grain (unclear 15:02:32) is what the friction is and so we can better model the wave propagation.

Q. Okay, and would that then predict long shore transport of sediment?

30 A. We are still at the stage where we are talking about the model that simulates the waves, simulates the waves then we have to simulate the current and then we have to simulate how much sediment is moved by the current and the waves so it's I think, the way those big models are run is that the wave part is kept almost separate. The results of the wave part are then (unclear 15:03:12) type of model that calculates how much sediment is put in suspension and movement.

Q. Okay, so your wave model goes through an interim step of calculating the currents?

A. Yes, and then the sediment transport.

5 Q. And then the currents are applied to the sediment to estimate your sediment transport?

A. Yes.

Q. Yes, I see. And you haven't done that for this -

10 A. It's not the simple exercise, it requires large model link up ability, we do have this capability in New Zealand certainly we do have it but it's not something that I can start and do in my free time.

Q. Yes. and just going on from that, just thinking about trends and what you might measure, how would that reflect in the beach profile?

15 A. So are you asking me if those type of models can reproduce the changes we observe in the beach profile, or are you asking me if the beach profile can reproduce the trend?

Q. No, I'm asking the next step in the modelling –

A. Yes the next step.

Q. You've got (unclear 15:04:49) to currents, to sediment transport, now the next step is well what does that show up on the shore?

20 1505

A. Yes, yes that's the most complicated step. We have several intermediate steps where we could already claim success, we reproduce the waves, we reproduced the currents, but the moment we begin to try to change the morphology at the beach, it's very complicated, so that we are able to reproduce the exact measurements is probably too much, if we can reproduce trends, yes, I think we probably can. And once we have a model validated like this, then essentially we can use the model, we can remove 2 million cubic metres of sand and we can see how we change the system, if we change the system.

25 30 Q. Well that's assuming you know where the sand comes from in the first place isn't it?

A. Well, it seems like the sand can only come from offshore, here or from the river, yes so there are all those things that have to be defined, that's where the modelling exercise becomes complicated.

Q. And just finally, you mentioned that excludes things like cyclones. If you're looking at the volume of sediment transport that occurs, what sort of proportion would you attribute that to cyclones for instance, if they come once every I don't know, five years or twice a year or whatever, what's the kind of proportion of sediment transport would you attribute to cyclone activity?

A. Okay so the (inaudible 15:06:48) increase the wave height more and more sediment is put in motion. That is clear but there are a lot of other things that are not clear during those super cyclones. A couple of years ago there was an article published that said that over three beaches in Mexico, Sydney in Australia and in the UK, as a result of major storms, they had a massive amount of sediment coming across the (inaudible 15:07:23) and getting into the actual beach. Now that's something that completely affects the sediment but is something that we didn't know it happened (inaudible 15:07:35) it happens or no on a beach like Pakiri, so the thing is, we would have to use the model to try to understand if those things can happen and I think it could help us a lot to understand what the sediment (inaudible 15:07:51) of the system is. I'm not keen at the moment to make any statement on the sediment (inaudible 15:07:56) because the numbers are not firm enough. (inaudible 15:08:00) we don't (inaudible 15:08:03).

Q. (inaudible 15:08:08) we always ask for more information, don't we? But it seems from that comment, that cyclonic activity could have quite a significant effect on the amount of sediment moving at Pakiri?

A. Yes, yes. And I think this also (inaudible 15:08:32) explaining how the sediment moves (inaudible 15:08:38) what happens during that, during a major storm.

Q. Thanks very much for that, very interesting, thank you Professor.

## **QUESTIONS FROM THE COURT: COMMISSIONER PRIME – NIL**

## **THE COURT: JUDGE WARREN**

Q. No questions as such but I do note in your conclusion, Professor, you seem to have answered the ultimate question as to whether consent



should be granted. But I assume that that's simply based on your area of expertise.

A. Of course, of course.

Q. Yes, that's fine. Thank you for your evidence.

## 5 QUESTIONS FROM THE COURT: JUDGE WARREN – NIL

### QUESTIONS FROM THE COURT: JUDGE SMITH

Q. Yes thank you first Professor for your evidence. I don't think you've appeared in front of me before and it's certainly been enlightening for me, given the number of times we've dealt with these type of issues and I'm very pleased to see that work has been done to try and model this incredibly complex area. Now just talking about Tairua. Was this the Tairua Harbour or the Tairua Beach in front of Pauanui or another beach?

A. Tairua Beach. The one (inaudible 15:09:51) -

Q. Is that the one in front of Pauanui itself is it?

A. The system of the two beaches in Tairua, Tairua is a beach that we study really, really (inaudible 15:10:00) sand that is more reddish.

1510

Q. So is that the beach that's attached to the (inaudible 15:10:09) is it?

A. Yes.

Q. Yes, oh I'm with you yes, now I'm with you thank you very much.

### THE COURT: JUDGE SMITH

Q. Okay and I didn't really have any questions, I just did want to encourage you with your work because I think it's an important area for New Zealand to have a better understanding of the water around us, especially differences between the West and East Coast and it's pleasing to hear that somebody's been trying to advance this area.

A. Thank you.

Q. Thank you for your evidence. So that I think concludes, unless any questions arise I don't think really...

## 30 QUESTIONS ARISING – NIL

**THE COURT: JUDGE SMITH**

Thank you Professor. And this as I understand it means we're reverting back to the applicant's case. And at this point as I understand there are two witnesses, there was only one person to ask questions, that's Ms Campbell and

5 I don't know what your time estimate for each of them was. I think I did it get it from you before, let me just check.

**MS MORRISON-SHAW:**

Yes you did Sir and I indicated an hour for each witness. I have to say since I  
10 gave that indication Sir I did, contrary to your suggestion, I did make trips over the weekend and it might be a little longer with that Mr McCallum does tend to give quite fulsome answers so I might be a little longer with that witness Sir, just depending on what he gives us in answer.

**15 THE COURT: JUDGE SMITH**

Well my understanding would be Mr MacRae you're simply recalling, there's no further questions and we just put the witness in the hands of Ms Campbell essentially as though she was here at the time. Once we've finished with that witness you'd have a right for re-examination. The Court would only ask  
20 questions that arise from cross-examination. I don't think that will be overly complicated. But if necessary you might need to seek guidance of the Court. Once that's concluded then we'd move to Mr Todd, a similar situation. I assume Mr Todd's available tomorrow morning if we can't finish both of them today Mr MacRae?

25

**MR MACRAE:**

That's a problem and so I was going to, if I may, call Mr Todd first to ensure that he is completed today. Mr Todd is in Auckland to accommodate Ms Gandel (inaudible 15:12:36) but he does need to get back tonight and we anticipated  
30 as I think everyone did on Friday that that should be possible. But I wouldn't like to leave it in any doubt for his sake Sir if I may call him first.

**THE COURT: JUDGE SMITH TO MS CAMPBELL**

Q. I can't see any magic to it. Ms Campbell do you have a problem with Mr Todd being called first?

A. No Sir. It makes my line of questioning just be a little bit awkward but I'll  
5 muddle my way through it and we'll get there Sir.

Q. Thank you.

**MR MACRAE RE-CALLS****DEREK TODD (RE-AFFIRMED)****10 THE COURT: JUDGE SMITH**

Mr Todd you are recalled only for the purpose of answering questions from Ms Campbell who wasn't available when this issue, Monday. So I'm going to invite her now to ask you any cross-examination she wishes, thank you.

**CROSS-EXAMINATION: MS CAMPBELL**

15 Q. Thank you Sir. Good afternoon Mr Todd, can you hear me all right?

A. Yes good thank you.

Q. Now I do want to, in fairness to you Mr Todd, I do just want to start with paragraph 13 of your evidence-in-chief. So Mr Garton if you could please bring up EB49 please. That should give us (inaudible 15:15:05) 13 of  
20 Mr Todd's evidence. Now, you say in the first sentence that you're presenting expert coastal processors evidence in support of coastal permits for sand extraction. Do you see that?

A. Yes.

Q. And I just wanted to confirm with you, you say in your two statements that  
25 because of the timing you've had to read both the codes of conduct from both 2014 and 2023 and your evidence complies with them, that's right, isn't it?

A. That's correct.

Q. And so it's your understanding you must impartially assist the Court and  
30 you're not here as an advocate, that's right, isn't it?

A. Correct.

Q. So, to the extent there that you've got a statement of support we shouldn't really take that at face value, should we, we should take you to be saying that you're here presenting expert coastal processors evidence in relation to sand extraction, is that correct?

5 A. That is correct.

Q. Mr Garton, if we could scroll a little further down to EB51, paragraph 16 of Mr Todd's evidence, now Mr Todd, you've said there that the inner boundary of the proposed extraction area is located between 1.5 to (inaudible 15:16:36) from the mean highwater springs position and  
10 Mr MacRae, when he gave his opening address, he said that the extraction area was located between 1530 to 1810 metres from mean highwater mark. So he used a different starting point and a different number and then when I read the transcript of Mr McCallum's answers in response to Commissioner Myers he said that McCallum Bros was  
15 seeking to extract two kilometres from mean highwater mark. So could you please help me with which place extraction is proposed to start from, relative to coast?

A. The position as I understand it that has been adopted for this hearing from McCallums is from mean highwater mark rather than mean highwater  
20 springs and that is because mean highwater mark has been defined by LINZ, it has a digital signature, so a set of co-ordinates that are accepted as being the mean highwater mark position.

Q. So the starting point is mean highwater mark because of that LINZ definition and then we measure out how (inaudible 15:18:15), is it the  
25 1530 to 1810 that Mr MacRae gave us, is it the 1.5 to 2.1 that you've given us or is it the two that Mr McCallum gave us?

A. I can't answer it. Which one is more correct of the three, I would have to leave that to Mr MacRae to confirm which of the more likely answer that is.

30 **MR MACRAE:**

If it's of any assistance to my friend there is a map which, I think it's map 2 or 3, I think it's map 2 in the common bundle which shows the distances marked

from mean highwater mark and those are co-ordinate-related distances. Mr Garton has it on the screen.

**MS CAMPBELL:**

Thank you, Mr MacRae.

**5 CROSS-EXAMINATION CONTINUES: MS CAMPBELL**

Q. So, Mr Todd, are you familiar with this map that we have onscreen, Mr Todd?

A. Yes, I have seen it before, yes.

Q. You didn't help in its preparation?

10 A. One of my staff probably did but not me, personally.

Q. And you're not sure if one of your staff did?

A. I would imagine that either one of my staff or one of Mr West's staff from Bio researchers but I think it looks like something that has come from our office.

15 Q. But you're not 100% sure about that?

A. I couldn't categorically say that we did but I'm pretty sure we did.

Q. So am I to take it –

1520

**THE COURT: JUDGE SMITH**

20 Q. Can I ask a question just because you mentioned that they were digitally entered but I can't see an indication of a digital point. Is every point on the coastline digitally recorded?

A. The LINZ database, you can go to that database and look up that line and then get the digital signature from it and GIS so that you could put any position on that line and get a coordinate.

25 Q. So is that provided to us anywhere?

A. I am not sure Your Honour. It would be, it's a continuous line which you can pick any position that you want and then go, what is the coordinate of that line at that position.

30 Q. Are we provided anywhere any method by which we can distinguish the difference between mean high water springs, mean high water mark, MSL

I think was medium springs low, which were all used by different people to calculate the distance.

A. Yes. So the difficulty with mean high water springs is it comes in the definition of what is mean high water springs and how long in the tidal cycle you might consider to be springs. So scientifically what most scientists use is actually the tides, the highest 10% or 12% of tides and the elevation that they might come to. Now the reason why LINZ have made this definition of mean high water mark is that that's easier to define because that's the mean of all the tides regardless of what phases of the Luna cycle we are in. If you look at the LINZ database that that comes from it says that is the first in the step of being able – mean high water spring and mean low water spring et cetera – so the definition of exactly where mean high water spring lies is, is somewhat more difficult and somewhat less certain. MSL is mean sea level so that's the mean level of the sea across tides, but also includes meteorological conditions over whatever period you defining that being suitable for.

Q. So do I take it then that mean high water springs would typically be further, land within the mean high water mark and the MSL would seaward?

A. Correct.

### **CROSS-EXAMINATION CONTINUES: MS CAMPBELL**

Q. You pre-empted one of my questions so I think I might just move to it Sir. Mr Garton, if we could go to EB94, that should be figure 3 of Mr Todd's evidence-in-chief and Mr Todd when we get there, it's a figure that runs for three pages from page 94 to page 96 and there's a series of profiles, it might be helpful if you did have a hard copy or your own soft copy in front of you for various diagrams, if that makes sense. Would you let me know when you are ready?

A. Yes, yes I have that.

Q. I will just wait while His Honour finds his copy too. So here we have some distances that go across the page Mr Todd, 100, 200, 300, 400, so those distances are stated to be measured from MSL, mean sea level. Is that right?

A. Correct.

Q. At Pakiri, would you accept that there's about a two to 2.2 metre vertical (inaudible 15:24:44) at this beach Mr Todd?

A. I think it's more in the range of two rather than 2.2.

5 Q. Okay let's take two because that makes for easy maths as well. So in the order of two metres of vertical tide (inaudible 15:24:55).

A. Yes.

1525

10 Q. So just to round out His Honour's questions, mean high water springs would be about a metre higher than mean sea level?

A. Ah, yeah potentially in that order.

Q. Yes, and mean low water springs again about a metre lower in that kind of order?

A. In that kind of order, yes.

15 Q. We're not trying to get precise to the last centimetre here. And you've noted in your evidence and if Mr Garton wants to go there at EB56, para 45, in that paragraph there you've described the shape of the beach and you've concluded with the (inaudible 15:26:05) that the roughly two metre tidal range that we're talking about here, on those gradients of  
20 Pakiri Beach that you've set out, would produce a horizontal distance of about 30 to 45 metres that the tide, you know, if I'm standing there at high tide, with wet toes, and then I wait for low tide, I have to walk something like 30 to 45 metres in that order, Mr Todd, would you accept that?

A. Yes, that would be in the right sort of range for those (inaudible 15:26:45)  
25 slopes, yes.

Q. Now if we could return, sorry Mr Garton, I've got you on heavy lifting this afternoon, if we could return to figure 3. Would you agree with me Mr Todd, and there's five different profiles for you to have a look at, but would you agree with me that generally the crest of the nearshore bar that's shown in those profiles, that's generally about 100 to 200 metres  
30 from MSL.

A. In the profile that we're looking at here?

Q. In all of them, I know it's variable between profiles and I know it's variable over time, I understand the beach is variable but we're talking in that kind

of order, one to 200 metres for the crest in each of the profiles (inaudible 15:27:53).

A. Yes the profiles at the time of those surveys would indicate that, yes.

5 Q. And again with reference to figure 3, I'm looking at the five metre depth and that's signified on your diagram by the minus five that we can see on the left-hand side there, and if I trace across until that line intersects the distances from shore, it looks to me that across these various five profiles that we've got, we get to a depth of five metres, around 250 to 350 metres offshore, depending upon which profile you look at, would you agree with that Mr Todd?

10 A. I would say it's closer to 350 metres.

Q. 350 metres. (inaudible 15:29:28) –

A. (inaudible 15:29:30) P4 it is somewhat further than, ah, somewhat less than that.

15 Q. Yes the P4 would be closer to that 250 and the others perhaps closer to the 350 that we talked about.

A. Yes.

1530

20 Q. But, with these measurements for the water depth, Mr Todd, am I correct that those ones are measured from mean high water springs, not mean sea level?

A. Those depths as it shows on the Y axis there are below chart datum, so chart datum is the lowest astronomical tide which is actually much lower than any of the data referred to. The lowest astronomical tide is lower than mean low water spring, it's the lowest tide you can get from astronomical tides.

25 Q. And I see that note at the top, I should have seen that. I was drawn to the typing in blue on the chart that said water depth from mean highwater springs minus 9. Could you just explain to me what that note means?

30 A. That's minus water depth from mean highwater spring, .9 I think that is, isn't it? I'd have to have a look at the original. No, it is minus 9, sorry. What that's saying is that at that point where those arrows are the water depth below mean highwater spring is minus 9 metres at that position, as shown. So, from the blue line down to that position is shown from chart



datum to be close to minus 7 – remember, highwater spring is up to, a bit more than two metres above that lowest astronomical tide so if we rounded it to two metres plus around the 7 metres to the seabed it makes 9 metres.

5 Q. But that's happily confirming our earlier conversation about the Tara Range, isn't it, so that's something?

A. Yes.

Q. So, just to recap then, this figure is showing me the bar at a distance from mean sea level and it's showing me water depths at a distance from chart datum?

10

A. No, it's showing you the bar – actually I was wrong in that answer before. If we look at the Y (inaudible 15:32:33) it is the height of the bar in relation to chart datum, all of the heights, all of the profiles are in relation to chart datum.

15 Q. But the horizontal distance of the crest of the bar is shown from MSL?

A. From MSL, correct.

Q. So, if it's a height or a depth it's shown relative to height chart datum but if it's a distance of the location of the bar that's shown from MSL?

A. Yes, and that's why the zero is that the plot disappeared to the left-hand-side beyond that zero distance.

20

Q. So, the water depths, are the distance of the water depths measured from MSL or chart datum, Mr Todd.

A. (inaudible 15:33:59) the 2004 MSL contour so to normalise them you need to normalise them to one MSL position and remember, MSL, the position of the MSL contour on the beach will move around regardless of when you're surveying it so what we've done for this, for these charts, as we've set the zero horizontal distance to the position of the MSL contour in 2000 at the time of that 2004 survey.

25

Q. So in some we have the crest of the bar 250 to 300 metres, I think you said, from MSL offshore and we have five metres – no that's not right – please forget that question. You said the crest of the bar is 100 to 200 metres from MSL and the depth of five metres is reached 250 to 350 metres offshore, is that correct?

30

A. Just repeat that to me, the first part of the statement, please?

1535

Q. I'll give it to you in two chunks, how about that?

A. Yes please.

Q. The crest of the bar is 100 to 200 metres from MSL?

5 A. Yes.

Q. And we reach five metres depth, 250 to 350 metres from MSL?

A. Five metres on chart datum. If it was from MSL then it will another metre or so of water depth.

10 Q. Thank you. Is there a diagram that shows this sort of depth information relative to the proposed sand extraction area? So I'm looking for a combination of this information and the blue box that we have in conditions of consent that shows the location of extraction.

A. I think you're referring to, if I can get Mr Garton to – this is the figure that I think she's referring to, or the blue box.

15

**MR MACRAE:**

(inaudible 15:36:26) Mr Todd has exhibit 1 from memory.

**CROSS-EXAMINATION CONTINUES: MS CAMPBELL**

20 Q. Yes, that's thank you, thank you Mr MacRae. Yes what I'm wanting to understand is Mr McCallum said that 20 to 25% of the proposed offshore sand extraction area was deeper than 36 metres and so I was hoping you might be able to tell us which cells, and, cells aren't shown there or which part of that sand extraction area would be beyond current technology to take sand from?

25 A. There's probably a more useful figure which does have the cells on it.

Q. The one I looked Mr Todd was Appendix 4 to the Draft Conditions of Consent that was circulated to the parties.

A. Yes I'm just trying to locate one.

Q. If you were in court, I'd hand you mine.

30 A. I've got one in front of me but yes.

Q. That's all right, take the time you need you need to find the document. These Teams environments, you have to be careful what type of desktop you have.

**THE COURT: JUDGE SMITH**

I wonder if it would be an appropriate time to take the afternoon adjournment and come back to deal with it because it's going to take a little time. My understanding is Appendix 4 to the Conditions.

5

**MS CAMPBELL:**

Yes, mine too.

**THE COURT: JUDGE SMITH**

10 That's the cells, I don't know whether that's what Mr Todd's looking for but that's where the cells. And if we could come back and address that on our return I think. We'll try and start again just after 4 o'clock if we can.

**COURT ADJOURNS: 3.39 PM**

**COURT RESUMES: 4.03 PM****THE COURT: JUDGE SMITH**

Ms Campbell, I think we were getting some documents sorted. Did you work  
 5 out which ones you wanted and are they up for us now? Is that what you were  
 looking for Ms Campbell?

**CROSS-EXAMINATION CONTINUES: MS CAMPBELL**

Q. Yes Sir that's the one I've got up, I'm not sure whether Mr Todd has a  
 better one in mind but was asking before we took the break, was whether  
 10 Mr Todd was able to combine this document with the depth information  
 that he has so that we can see which cells lie beyond the 36 metre depth  
 that I understand to be the limit of the current extraction technology.

A. The answer is I can't categorically from this map, because it doesn't show  
 gaps beyond the 30 metres and remembering those depths that are given  
 15 there are from mean seal level (inaudible 16:04:30), but I understand that  
 it is that contour is somewhere within the cells marked 41, 42, 43, 44 and  
 45, but I don't know exactly where within those cells that is, that particular  
 contour.

Q. So the 40 series cells Mr Todd, the cut off is somewhere within the part  
 20 of the cells, the landward part of those cells is able to be extracted from  
 at a suitable depth and the seaward part is not but exactly where, we're  
 not 100% sure?

1605

A. That's my understanding but I'm sure someone from the McCullums'  
 25 team would be able to answer that more correctly or more definitively than  
 I can.

Q. I had intended to ask him first I will turn to him tomorrow. While we are  
 on this map Mr Todd, you said in answer to questions from Judge Smith  
 that this map was passed by you for comment. Do you remember that?

30 A. Yes.

Q. You said that you had had input into the division, into the reporting and  
 monitoring cells. Is that correct?

A. No. They, again they were set, what I have actually originally said from the Kaipara when Kaipara were the applicant and really in the grounds that they were done by the biological team and then were passed through for me for comment in terms of (inaudible 16:05:56).

5 Q. That leads me to the next question I had which was, you didn't prepare this map did you?

A. No, no it's Bioresarches that you can see in the bottom right.

Q. Yes. I also note as well as the Bioresarches' logo it does say in very tiny print in the middle if you scroll up that the microvisions were noted as being by SW, so perhaps it was prepared by Mr West.

10 A. That would be my understanding who SW would be.

Q. Yes, but I suppose because you weren't personally involved in its preparation it could have been someone under Mr West's supervision I suppose, rather than Mr West personally couldn't it?

15 A. It could have been yes.

Q. Mr Garton could please tip this back up the other way and take us back to condition 1 in the Condition 1 in the conditions set please in the same document. Sorry, if we could go right back to page 1 Mr Garton, my poor direction, thank you and if you could scroll down at the bottom of the page is what I'm after. So at the bottom of that page we've got the definition of the extraction area, where it says: "The consented sand extraction area" I think it should read "is defined by the following coordinates." Then we go over to the top of page 2 where there's a list of coordinates. Do you see those Mr Todd?

25 A. I do.

Q. Did you provide those coordinates?

A. No, not personally.

Q. Do you know who did?

A. Again, I'm not sure if they have come from Mr West or somebody else but certainly I wasn't involved in providing the coordinates for the offshore extraction area.

30 Q. So you can't tell me where each of these points is?

A. No not without reference to a map where one to seven might be located.

Q. Well let's try and do that Mr Todd.

**MS CAMPBELL:**

I'm not quite sure how to achieve this within the limits of the technology Sir. Ordinarily I would ask Mr Todd to look at the coordinates in one document and look at the map which Mr Garton has thoughtfully anticipated on the other side.

**5 CROSS-EXAMINATION CONTINUES: MS CAMPBELL**

Q. This appendix 4 to this –

A. I might be able to help Ms Campbell in that the copy that Mr Garton, of this map that Mr Garton has put on the board, is not in fact appendix 4 of the conditions of consent and consent does, I don't think unless I've got  
10 it wrong, but condition 4 does have the coordinates, sorry appendix 4 has the coordinates on it and a complete list of the legend. Perhaps if you can address that.

1610

**MS CAMPBELL:**

15 Your Honour, I've got a version of conditions that were circulated by email by the applicant shortly before the case commenced and that has an appendix 4 to it that looks the same as what I'm looking at on the screen so to the extent that this document, in terms of what Mr MacRae has just said, I'm not sure what the differences might be.

**20 THE COURT: JUDGE SMITH**

Sam problem, Ms Campbell. This is what I have before us, this is what's circulated, this is the document we're talking about, should be page 33, appendix 4. I can't see the distinctions between the two, it's certainly got all of the points shown so let's carry on, on the basis of this document. If that's wrong  
25 it's a major problem for the applicant and not for you. Carry on.

**CROSS-EXAMINATION CONTINUES: MS CAMPBELL**

Q. So, Mr Todd, you talked about – I'll start asking these questions (inaudible  
16:11:09) we're not responsible for provision of those co-ordinates so if these questions aren't properly directed to you then please just tell me  
30 that but hopefully we can make some progress, if we can't I'll have to find

another witness, so that's fine. If we look at page 2 of the consent which has the co-ordinates for the extraction area, if we take .ID1, I think it would be best, Mr Garton, if you could stay on annexure 4, the diagram, and Mr Todd will just have to have –

5 A. I can do that, yep.

Q. – some other version –

**THE COURT: JUDGE SMITH**

If we could go back to appendix 4, please, thank you and if we can get that orientated correctly. We need the co-ordinates blown up, a little bit more, that  
10 should get us so that I think most of us can read it. So ID.1, that's the one you wanted to look at first, is it?

**MS CAMPBELL:**

I think we'll start with that and we may stop with that, depending on how this goes Sir, but yes, ID.1 in the table, just the top point has got a northing and an  
15 easting.

**CROSS-EXAMINATION CONTINUES: MS CAMPBELL**

Q. Mr Todd, it seems to me that the item described as MCB01 in that table there at the top of appendix 4, it seems to me that .ID1 may be the same thing as MCB01, do you see that, Mr Todd?

20 A. Yes, and I – and that certainly is the way that I would read the table on page 2 of the conditions and it appears to have the same northing and eastings as MCB021.

Q. Yes, it does, it's a little unhelpful but the lat and long and the northing and easting are given in the opposite order but, yes, the northing and easting  
25 do appear to be the same. Things get a little more difficult when we come to the lat and long. It appears that the coordinates on page 2 use the sexagesimal degree format. These boxes on appendix 4 use decimal degrees, do you see that?

A. Yes.

Q. And I anticipate the answer to the next question but I'll ask it anyway, are you able to tell the Court whether the latitude and longitude for .ID1 is the same as the latitude and longitude for .MCB01?

5 A. I can't say definitively but they do look the same in that the latitude for .1 is 10 degrees 56 minutes, 10 degrees is around 16, is a tenth of 60, which is about 6 so it does appear to be that the decimals in the figure that you're looking at appeared to align with the minutes, degrees, minutes and seconds in table, on page 2.

**THE COURT: JUDGE SMITH**

10 Q. Have you any idea, Mr Todd, why anyone would put them in a different format in a consent?

A. No, I don't, Sir, I'm sorry.

Q. You'd agree with me that it creates an enormous amount of confusion and possibility for argument?

15 A. It does.

Q. Do you know who did prepare this?

A. All I can say is this map, as I said, is it Bio researchers, is on the title block so I presume that they have prepared the map as opposed to the table in the proposed conditions. I don't know definitively but that may, it may be  
20 a question to ask Mr Hay.

1615

**THE COURT: JUDGE SMITH TO MS CAMPBELL**

Q. Ms Campbell, as I pointed out there are, I mean every single page of this has got problems as far as I've found so far. I don't really want to  
25 exhaustively go through them all. It appears Mr MacRae may not be aware of the number of problems there are given his objection to the matters raised by Ms John. But some of these matters have not been missed by the Court already, this is a new one, but there are others about proposed extraction area versus the active extraction area and it goes on  
30 and on and on.

A. Thank you Sir. The points made are going to tend to take us through every box that we can see in front of us.



- Q. Well quite simply it's completely unacceptable and I'm not sure if Mr MacRae is going to be able to give us any sort of explanation as to how this could occur. But I've just got to say that the conditions as a whole continue to show these sort of basic fundamental issues and whether it's deliberate or, I can only assume it's an accidental or there has been a failure to consider what they were trying to seek before. But to ask a Court to have two conflicting sets of document numbers just does make no sense to me at all. I am not sure about the rest of the Court but I do not even understand what the dexta-decimal, is that, what did you call it, it was a very flash name?
- 5
- A. It was a fancy, I had to look it up Sir, I had to google it, so I'm not very far ahead of you, I had not heard of it before a few days ago, sexa-decimal, it means that it's related to things being in sixtieths, to do with minutes, so there we are.
- 10
- Q. Well let's carry on anyway. I think we do not need to go through every part of this.
- A. No Sir, no, no.
- Q. Mr Todd did not prepare it. He cannot explain it.
- A. No.
- 20
- Q. He agrees with you it does not make sense. Let's move onto something else.
- A. Yes Sir, thank you Sir.

### **CROSS-EXAMINATION CONTINUES: MS CAMPBELL**

- Q. I think Mr Garton if we could return to Mr Todd's statement of evidence and if you could please take us back to EB51, that's paragraph 17 of Mr Todd's statement of evidence. Mr Todd, just at the end of that paragraph there you've noted that there's a limit of 80,000 cubic metres per year per extraction cell. You'd accept that what's not proposed is a limit of 20,000 cubic metres per year per reporting cell wouldn't you?
- 25
- A. I understand that is the case, yes.
- Q. Do you know whose idea that was reduction was?
- A. No I don't know particularly where that came from.
- 30

Q. Right, I will try to stop asking you questions about things that aren't your evidence. So I would like to talk to you now then about your evidence or MBL Bros Limited for the offshore hearing at the council level Mr Todd. I, and I am sort of like taking coals to Newcastle, I have provided

5 Mr MacRae over the weekend a copy of your statement of evidence from that hearing, a statement of evidence that was filed in advance of the hearing in February 2021. Do you have that there?

A. Yes, I do.

Q. Could Mr Garton bring that up on the screen please?

10 **THE COURT: JUDGE SMITH TO MS CAMPBELL**

Q. Is this for MBL for Kaipara?

A. This is for MBL Sir.

Q. So there was no one at that stage in support of the application. Is that right, or do misunderstand?

15 A. No Sir, you're quite right, at this point they were a submitter in support of the application.

**CROSS-EXAMINATION CONTINUES: MS CAMPBELL**

Q. So this is sur statement of evidence Mr Todd?

A. Correct.

20 **MS CAMPBELL:**

Sir, I wonder if I might produce this statement through the witness, just as I may have course to refer to it, it would be handy to have it in –

1620

**THE COURT: JUDGE SMITH TO MS CAMPBELL**

25 Q. Yes, I don't normally encourage parties to produce evidence before a previous body, I don't really mind if it's, it's just that you're probably producing what a 30 page or 50 page or 100 page document –

Q. No, it's worse than that, so let's try and spare the record more paperwork, sir, you make a good point.

30 A. My suggestion is if there's particular pages you refer you –

Q. Yes.

A. – can ask, then ask could they be bundled together and treated as an exhibit together with numbering on each page or referring to their page numbers. That's more sensible, there's no –

5 Q. Yes.

A. – prospect we're going to be reading evidence from another (inaudible 16:20:38) –

Q. No, sir.

A. – commissioners.

10 Q. Thank you, Sir.

A. Where would you like to take us first in this document?

Q. I'd like to take us please, sir to its section 2.3.5 of the annexure, it's page 30 of the document, Mr Garton if that's helpful. It's page 11 of the report itself but page 30 of the overall document. So, thank you, that's perfect Mr Garton, you can, 235, yes, thank you, that's it, right there. Now, Mr Todd I did a search, I too did not read the entire document, your Honour, I did a search of the statement of evidence for the word "trench" and the word "trench" does come up and is discussed in your evidence and this is an example of the sort of discussion of trenches that is included in your evidence and Mr Garton if you could just scroll down to page 12 you'll see there's some images that follow that are being discussed in that session. Perfect, right there. So Mr Todd, this is, this section of evidence is about what I'd call the tracks resulting from everyday operations rather than the deep up to 2.4 metre deep trenches, is that a fair characterisation of this section of the material, Mr Todd?

20

25

A. Yes, what you're referring to here was actually from the assessment of effects report stage we were referring to all of the disturbances shall we say of the bed as trenches.

Q. Yes.

30 A. And then subsequently we have broken that up to being the trenches being what's now referred to as the deep trenches and those that are the normal operation of the *William Fraser* as shown here as being tracks.

Q. Yes, and that's a very helpful distinction for us just to both try and use through these questions so that we can keep straight as to what we're

talking about. Mr Garton, if you could go down to table 3.6 of this report, it's on page 57 of the document. Just scroll down towards the end of that table please, Mr Garton, thank you. Mr Todd, there's notes at the bottom of that table noting two trenches, the first with an average depth of .3 metres and the second with an average depth of .1, so that's the sort of scale of what we'd now call the tracks, isn't it?

A. That's correct, the first one you can see were created by the coastal carrier and the second footnote refers to those created by the William Fraser.

10 Q. Yes and there are other references but I don't think we need to go to them. I'll just put to you that this evidence from February 2021 to the council hearing did not mention what we're not calling the trenches up to 2.4 metres deep that had resulted from the sand dredging operation, the ones Dr Shaw would subsequently provide evidence about.

15 A. That's correct because I was unaware of them at the time of writing this.

Q. Right. Mr Garton, just on the thread of the trenches if you could take us please to EB 66 and 67, which is Mr Todd's tables about the, perhaps start with table 3 which is on page EB 60, yes, perfect, thank you, Mr Garton. Mr Todd, did you prepare tables 3 and 4 yourself?

20 A. These are from my evidence-in-chief?

Q. Yes.

A. Yes.

Q. And at the top of table 3 and the top of table 4 you've listed the data that you've drawn on, is that correct? And where did you obtain that data from, Mr Todd?

25 1625

A. The data was given in the first three incidences was given from the report produced or the spreadsheet that was produced for the joint witness statement of the offshore hearing, so that was the September 2020, the March 2021 and the October '21 bathometric surveys so that information was presented to all joint, all the coastal experts in that joint witness hearing. Subsequently I had added the information from March '22 and November '22 from the subsequent surveys undertaken by DML at that time for McCallums.

30

Q. So if we take trench A1, just because it's the top one, easiest to look at, so where we are there on the page and Mr Garton's got us, that tells me that in September 2020 table 3 tells me that trench A1 was approximately 1.72 metres deep, is that right?

5 A. Correct.

Q. And you'd agree that that depth was caused by multiple visits from the dredge?

A. From the coaster carrier, yes.

Q. So if the coaster carrier's dredge track makes tracks about up to 30 centimetres deep, at least six visits from that ship?

10 A. I can't answer how many visits were involved with getting to that depth.

Q. I thought that was just maths, if it can't –

A. It could be more visits, it certainly wouldn't be less visits.

Q. Yes, thank you, that's fine. So then if we turn to table 4 please, Mr Garton, just on the next page, thank you and we can see there in the top line again trench A1, this is an incremental change table, isn't it Mr Todd?

15 A. Yes.

Q. So this is telling me that in the next six months to March 2021 trench A1 filled in approximately 26 centimetres?

20 A. Correct.

Q. And then again in the next six months period March to October almost half a metre, that's quite a lot. Is that because that was winter, Mr Todd? Bigger waves?

A. It could have been, if you look at my evidence there is also that there is different technology involved in the September '20, March '21 and October '21 surveys which was went through with the report writers covering (inaudible 16:28:15) joint witness statement and that that second period or one of the periods was actually in very benign conditions but I can't recall off the top, I'd have to look at my evidence to see if it was the September '20 to March '21 or the March '21 to October '21 conditions.

Q. So we go across that table showing the amounts of infill and then in the right-hand column we've got a total infill to date being November '22 of 1.17 metres, is that, Mr Todd?

30 A. That's correct.

Q. And so after two and a bit years there's about a 55 centimetre trench remaining, is that right?

A. Moving back to that first table was, I think it was 1.7 –

Q. 1.72.

5 A. – was it, the original.

Q. 1.72.

A. 1.72 minus 1.17, 350, yes, just over 50, yes, 55 as at the top of table 3, yes.

10 Q. And you say that slumping of the trench sides isn't a significant contributor to the infill of the trenches, don't you?

A. I don't believe it is, no.

15 Q. And you've said, I don't think we need to go there Mr Garton, but you've said that a larger percentage, larger than the infill is from sediment transport. So is it your evidence that sediment transport is responsible for most of the infill compared to slumping of the trench sides?

A. Yes.

Q. Thank you, Mr Todd, thank you, your Honour, those are my questions.

1630

#### **RE-EXAMINATION: MR MACRAE – NIL**

#### **20 QUESTIONS FROM THE COURT: COMMISSIONER MYERS – NIL**

#### **QUESTIONS FROM THE COURT: SPECIAL ADVISOR HOWIE**

Q. Yes I did have a couple if I may. Hello Mr Todd.

A. Hello.

25 Q. I just want to understand a wee bit better the LINZ mean high water mark methodology and what it looks like and where you find it, that sort of thing. Can you explain that a wee bit in more detail for me please?

30 A. (inaudible 16:31:10) the mean elevation of all tides, so covers springs, neaps, lowest astronomical, highest astronomical, so it covers the full range of tides and that is the mean of the highs, and so where you would find it on the – that then sets an elevation and then where you would find it physically on the beach is you would look at a digital drain model of the

beach from either a topographic survey or a LiDAR survey and trace that elevation along that beach position. So the elevation won't change, but its position on the beach could change with beach accretion or erosion.

Q. Okay so does LINZ calculate this at a series of places around the coast?

5 A. Yes they're done by looking at their database as I understand it, at the mega data around that database, is that they've done this nationally to help define elevations and positions of boundaries if you like, what it says in that mega data is this is the first stage of defining such things as mean high water spring and low water spring and other tidal boundaries, if you like. So it's a national database.

Q. Yes so presumably it's located at certain spots around the coast is it? The LINZ –

15 A. Yes, but what – and again I can only assume how they've done this, is that they've taken say LiDAR where it exists across all parts of New Zealand's coast, they've calculated what that elevation is and then they've digitised that elevation onto those topographical surveys to local LiDAR surveys all around the coast where it can be. I don't know how they've done it in places where there's an absence of LiDAR for example.

Q. So at Pakiri how many spots would have been determined by LINZ?

20 A. I couldn't answer that because as I say it's a digitisation of a elevation, so that would depend on what the resolution of the underlying LiDAR data or topographic survey data that they used to put that position in, would be, it's not like you've got a table and say, okay at this point or coordinate or profile, it is here, it is a continuous digitised line, or like a contour line, based on that topographical data.

Q. So is that a topographical line drawn on a LINZ map?

A. It's produced on a digital map, yes, you can elevate, you can go and extract it off that digital map as you might do a land contour.

30 Q. Okay, I see. Thank you for that. The other thing I had, I was just a bit – I was looking at one of your maps, it's under A2, tab A2 in the common bundle. With that big yellow area showing the offshore extraction area, oh and the other extraction areas as well, with a whole lot of distances offshore.

1635

A. Yes.

Q. Now I'm not sure whose map it is and I'm just wondering about document control, what methodology of document control was followed in producing these maps, do you know?

5 A. Again, I can't answer that in terms of this map, because it doesn't have – you're correct, it doesn't have a title block to say who has produced it and when, so certainly documents produced normally (inaudible 16:35:55) Jacobs would have a Jacobs title block on the bottom and it will have a date and who produced it and where it's filed, so given that this doesn't  
10 have that information, I can't really help you I'm sorry.

Q. So really (inaudible 16:36:10) it's really...

A. No, I don't know, I'm not sure how it's been derived in terms of those distances. It may have been done by my office, as I said earlier, if it was then it certainly shouldn't have passed our quality control.

15 Q. Yes. And in terms of the extraction area, the yellow goes out beyond the reach of the dredge at present, doesn't it? It goes out to beyond that (inaudible 16:36:52) 36 metres?

A. Yes that's my understanding.

Q. And it comes within the two kilometres of the mean high water mark,  
20 mostly?

A. Ah, yes, the inshore boundary of the offshore extraction area is set around (inaudible 16:37:14) 25 metre water depth in relation to the depth of closure.

Q. Yes, okay. So the red line on there, the temporary inshore boundary  
25 seems to roughly follow is what depth?

A. Ah as I understand it, that's a variable depth because (inaudible 16:37:45) from the two kilometre criteria rather than a (inaudible 16:37:50) criteria.

Q. Oh okay, yes. Okay thanks very much, that was all I had at the moment.

## **QUESTIONS FROM THE COURT: COMMISSIONER PRIME – NIL**

30 **QUESTIONS FROM THE COURT: JUDGE WARREN – NIL**



**QUESTIONS FROM THE COURT: JUDGE SMITH**

Q. I want to ask a question arising from this about how the current level is on the beach, has anyone done the work to compare the 2004 contour from LINZ with the actual contour now based on the survey works groundwork?

5 A. I haven't your Honour, so I would suspect that no one has that I'm aware of. We could look at in terms of looking – we really can't to be honest from 2004, we can from say 2007, the first of the McCallums topographical surveys, but the topographical surveys didn't start till 2007, so the (inaudible 16:39:11) offshore profile map that we're looking at in  
10 my figure 3, came from the offshore profile that those, I think it's five distinct places or six distinct places rather than a continuous line.

Q. So I want to be very clear, are you telling me that you cannot put the digitised information from Land Information New Zealand onto the contour diagrams from the beach (inaudible 16:39:38) work?

15 A. We could but it would be limited to those, just the location of those (inaudible 16:39:45).

Q. And when did the drone work start?

A. The drone work started in 2017 but there was topographical survey by more traditional methods, GPS methods, back to 2007.

20 1640

Q. So you can understand why the Court's become increasingly concerned when we have even no idea how much, if any, the beach has eroded from the position shown in LINZ and whether in fact it might be half a metre or two metres lower already, we don't know do we?

25 A. Not on the information presented no.

Q. You would appreciate as an expert coming to the Court you have to satisfy us that you've got real information.

A. Yes.

Q. What can you rely on to know what the beach contour is at the moment  
30 in relation the WINZ data, Mean High Water Mark?

A. No there's no information that's been presented that would elicit confidence.

Q. So was that a deliberate decision or is that an error?

A. No, it was something that the use of the Mean High Water Mark only really come about in the last, since the procuring of the temporary consent and things like that over the last month or so. And it wasn't something that I was asked to look at, that relationship of Mean High Water Mark and the LINZ data base versus what it might have been historically from the earlier surveys.

Q. I suppose I struggle because at least in the evidence, I don't know what's produced to the council but at least in the evidence produced to this Court, a lot of people spend a lot of time saying that MBL was excavating below 25 metres. Mr Clapshaw might be said to be obsessed with the issue and goes into a huge amount of detail to show in his view that MBL was excavating within the 25 metre contour. What I know understand is MBL are unable to answer that question because they have no actual data as what levels they were excavating at.

A. As I understand it Sir, the (inaudible 16:41:57) or the boundary of the current offshore consent is, even though it is 25 and two kilometres, is determinative by coordinates. And therefore they can say whether they're in or outside of their existing consent area.

Q. Well yes but that again, even if it is a temporary consent, we didn't become, we assumed that the parties had recognised that the depth was at least 25 metres. I don't know if you were here but in those discussions the Court said it was unhappy unless it was over 25 metres and it understood the parties had agreed it was. But that appears to be based upon some issues around what you were measuring from, whether you were going from Mean High Water Mark, Mean High Water Springs or MSL. And they vary every diagram I've looked at.

A. Correct. As I understand, it's from the survey works which is done from Discovery Marine which on the figures that were shown before is that 25 metre depth is for MSL.

Q. So quite simply I would have understood that LINZ High Water Mark situation is a level that's determined from One Tree Point or somewhere, wherever they take the point, and it will X metres above chart datum or something of that sort wouldn't it?

A. Correct. (inaudible 16:43:27).

Q. You don't have to be a brain surgeon to apply to a contour map if you know the levels above chart datum do you?

A. No that's correct.

5 Q. So why hasn't that been provided to the Court? Because you know from all of these grown surveys what chart, what the levels are of chart datum and you can easily plot on the maps what the current High Water Mark for LINZ is on the survey works maps. At least as at today's date?

A. That's correct but as I say I wasn't instructed to undertake that work.

10 Q. No I'm not blaming you I'm trying to point out a fundamental problem with the case. And I appreciate that you may not be responsible for it, but nevertheless there is nothing complex about it, this Court gets it all the time. Is there something complex about transferring the data from survey works chart datum and using the LINZ Mean High Water Mark to show what the difference is between the two?

15 A. Not complex, it's a little confusing because of different datums but it's certainly possible.

Q. So at this stage it's really not possible for MBL to prove one way or another whether Mr Clapshaw was right is it?

A. I can't answer that Sir.

20 Q. Well I thought you'd engaged in that issue?

A. I haven't been involved in the compliance.

1645

Q. No, no, but you engaged with the issue and I thought you said that you know the way in which they were operating was in accordance.

25 A. As I understand it that it is in terms of the co-ordinates that fix the inner boundary of the existing offshore consent.

Q. Oh, I see. When were those co-ordinates fixed? I know they're fixed now in the temporary consent, when were they, were they fixed at a previous time were they?

30 A. I assume they were fixed in the granting of that consent to Kaipara in 2003.

Q. Oh, well that's something we can check out, I'm sure the other parties will be looking that up as we speak. Thank you, very much for your assistance, sorry to have to recall you, Mr Todd and you're free to go, of

course, unless there's anyone else has another question arising? Thank you.

**QUESTIONS ARISING – NIL**

**WITNESS EXCUSED**

5

**THE COURT: JUDGE SMITH**

We've now reached 4.45, I wonder if it's worth calling Mr McCallum or whether we should perhaps, sorry, I can't start early tomorrow so it may be better to start with Mr McCallum tonight and carry on tomorrow at 10. So are parties content  
5 to do that? Is Mr McCallum with you, Mr MacRae?

**MR MACRAE:**

Yes, he is Sir and he's available tomorrow of course.

**THE COURT: JUDGE SMITH**

Yes, I was just I was thinking we could start early tomorrow but I'm not available  
10 till 10 so I think we'll carry on for a little while. Has anyone got a time constraint? I wasn't going to go too late, for half an hour, to quarter past or so? Judge Warren?

**MR POU:**

Your Honour.

**15 THE COURT: JUDGE SMITH**

Mr Pou?

**MR POU:**

It's Mr Pou here. I don't have a time constraint, Sir, but I do want to follow up on the issue and I'm sorry, Sir, I wasn't here when court commenced this  
20 morning. I do want to follow up on the issue of an application for the council to go after DOC. You will recall that we were discussing this after court last Friday. We have had some discussions. I do want to make a formal application for the order to be changed. I've had discussions with my friends, Ms Bielby and Ms Fraser from the council. They oppose the application and I've in discussions  
25 I've had them, I've let them know that (inaudible 16:47:17) application. I'm not sure if we do that now or we do that (inaudible 16:47:21) –

**THE COURT: JUDGE SMITH**

I'm just wondering if it's probably more convenient in a way to have Mr McCallum start and have a clean run if I can put it that way. Mr MacRae,  
 5 Mr Pou is wanting to pursue this issue which we parked on Friday if you recall about the order of the council.

**MR MACRAE:**

Yes, I do, Sir.

**THE COURT: JUDGE SMITH**

10 Judge Warren, do you think it does seem to be sensible we deal with that now?

**THE COURT: JUDGE WARREN**

Yes, it is, I mean I did want to finish at 5 due to familial obligations but –

**THE COURT: JUDGE SMITH**

No, that's fine, well, we'll try and finish by 5 but I think we should spend the time  
 15 if we can Mr Pou on the issue. It seems to me we should start with Ms Bielby and Ms Fraser given the court's directions earlier and its indication that it's preference in the absence of agreement to the contrary would be to proceed on and there were some issues about inconvenience to the Auckland Council about that, but also issues of principle, I think. So perhaps I'll ask Ms Bielby or  
 20 Ms Fraser if they could address their reasoning as to why they should be later in the order.

**MS BIELBY:**

Yes, Sir, Ms Bielby for the council and am of course happy to do that. So where we left off, your Honour on Friday night was my friends and I did have a  
 25 discussion on Friday and I have sought instructions on the shifting of the council's case forward. Sir, my instructions are that the council opposes the application. Mr Pou is correct in that regard. There is a number of reasons and principally and the rest really stem from this, it's that the existing order of the

hearing was an order that was agreed by consent between the parties and it was during the, your Honour, may remember during the interlocutory hearing and the council has diligently prepared (inaudible 16:49:24) in reliance on that order that was agreed by consent and there are matters that the council is

5 looking to cover in legal submissions, Sir, that have arisen in the course of the last week that it is working to address and compile but was working to that August date. By that I'm just to be candid I'm principally referring there to the I'm mindful that the council is particularly interested in the complaint history or the compliance history and so the council is working towards that.

10 1650

There's also logistical matters and depending on, certainly there's logistical matters if the council was to present its full case. Four out of its I've witnesses have availability issues over the next, it's probably looking like the next week

15 and a half or certainly the final of this July tranche. But the council's inhouse counsel, Ms Layland, who I believe is on the line, was also intending on presenting part of the council's submissions and two made arrangements in reliance on the existing order which was consented to by the parties.

20 Sir, I do – my instructions are that the council would like me to record its disappointment that this was an agreed order between the parties and that the order seems to be resiled from now. From the council's perspective its case is clear, it's set out in its evidence, and it doesn't agree that legal submissions are required for the parties to understand the council's position or the council's

25 case.

#### **THE COURT: JUDGE SMITH**

Thank you. Before I ask if any other parties want to (inaudible 16:51:34) go back to Mr Pou. And then obviously I'm always one to see if there's a way around the problem. The parties that aren't directly addressing this issue, and

30 Ms Campbell may take exception, Ms Campbell. I'm not sure that the cultural issue per se is (inaudible 16:51:56) on your witnesses. Or am I – it does seem to me there's some issues relating to it. Is it a problem for you to go before the council? Even if it's out of order with the tangata whenua parties?

**MS CAMPBELL:**

No, Sir. The original order had me following the Department and I'm content to do that if that's what's agreed. I think as I indicated in some stage in these proceedings, now that we're past last week, Sir, I have no constraints timing wise and my witnesses have very few timing constraints as well. So, in terms of practicality, Friends of Pakiri Beach can be quite flexible. In terms of the principle of the matter, I suppose, I would – Friends of Pakiri Beach will abide the Court's decision. I would note that the council's case as advanced through cross-examination has not been as I imagined it would be in that they haven't been – questions haven't been squarely been directed to declining consent in the way that I anticipated. But I'm not going to take a position, Sir, I'll abide your decision in this regard.

**THE COURT: JUDGE SMITH**

Thank you. I want to check now, Mr Littlejohn, are you with us?

**MS HIEW:**

Ms Hiew here for Mangawhai Harbour Restoration Society.

**THE COURT: JUDGE SMITH TO MS HIEW**

Q. Do you know if Mangawhai Harbour Restoration Society has any particular issue if they're brought up in the order?

A. Our position is to abide by the Court's decision in this matter.

Q. Okay. Well, that may mean that you're in week 3 rather than week 4 (inaudible 16:53:48).

A. We agree.

Q. That's next week, the week of the 31<sup>st</sup>.

A. I might have to get instructions because my understanding is one of the witness that we would be calling might have availability issues.

Q. Well, apparently that's on the 31<sup>st</sup> of August. So, it may suit them better. Can you check it out now while we're talking?

A. Sure.



Q. Now, it does seem to me somewhat cruel when Ms Downing's lapping up margaritas on some sunny shore to put her into week 3. Is anyone suggesting that? No.

**MR ANDERSON:**

5 I'm probably Ms Downing in this situation given her absence. I'd have to check the dates when she's back, Sir, I don't have them right to hand but obviously we need to avoid anything in her absence.

**THE COURT: JUDGE SMITH**

I don't think I want the extra stress on her. People take holidays for good  
10 reason. I did have Environmental Defence Society but they and Ms Scharting are only making submissions. I would've thought they might be able to be dealt with earlier in the process. Ms Scharting? Perhaps not with us.

**MS SCHARTING:**

Apologies, Sir, what was tt?

15 **THE COURT: JUDGE SMITH TO MS SCHARTING**

Q. Oh, well, whether or not – you're only giving submissions as I understand it so what I'm looking at is a way to get around it serve honour here by Mr Pou going later but Ms Bielby not going too early, it can be in week 4 or 5 but there's a problem with that, we'll come to in a second. But it did  
20 seem to me that both EDS and Te Arai could give their submissions at any time, couldn't they?

A. I'll have to seek instructions, Sir, we have been in discussions with the client given the direction the hearing is going as to whether they just simply want to table the submissions rather than have them heard. So, I  
25 can seek instructions quite quickly.

Q. I don't have a table, there is no table. You either make submissions or you don't make submissions.

A. Right, I understand that, thank you, Sir.

Q. So, you can come back to us. Perhaps somebody can check with Mr  
30 Maldowney (spelling 16:56:05) as well. If that was to occur, my

understanding is we're likely to be coming towards the end of this week before we finish the applicant's case. (inaudible 16:56:15) they take right to the end of the week, that may or may not be the case. But if the Director General went next that's two to three days. Is that estimate still  
5 about right, Mr van Mierlo, do you think?

**MR VAN MIERLO:**

That would still be my best estimate, Sir.

**THE COURT: JUDGE SMITH**

Do you agree, Mr MacRae? It seems to me some of the witnesses are likely to  
10 be of interest to you, Mr Betham and Mr Beauchamp.

**MR MACRAE:**

Yes, yes, I agree Sir, that sounds reasonable.

**MR VAN MIERLO:**

And then one matter there, Sir, we may be able to dispense with Mr Westbrooke  
15 being called to give evidence –

**THE COURT: JUDGE SMITH**

Sorry, I lost you for a second there, you turned yourself off somehow.

**MR VAN MIERLO:**

My apologies. I was just saying, Sir, we've got five witnesses. Mr Westbrooke,  
20 if none of the parties and the Court doesn't have any questions for Mr Westbrooke we may not need to call him. But I just signal that at this stage, we don't need (inaudible 16:57:14).

**THE COURT: JUDGE SMITH**

Well, perhaps if you could enquire of the hours but I don't think it will save us a  
25 lot of time, it may make it an hour or so less but I doubt it would even be that much of an effect. So, there is the possibility of after the Director General hearing from EDS and Te Arai group and then from Mangawhai Harbour

Restoration. And if those three went, we'd be getting close to the rest of the week, we've got a day there, two days. Possibly we might get to you, Ms Campbell, but we're unlikely to finish you in that week. The issue that then arises is, Mr Pou, are you wanting – the difficulty is if we then move to the marae and come back from the marae, are you then going to give the rest of the cultural evidence and then Ms Bielby gives, but you haven't had an opening, if you follow me. What's the thinking?

**MR POU:**

Yes, your Honour, my thinking was that the council would be opening before the marae visit.

**THE COURT: JUDGE SMITH**

Oh, so that still puts them at the end of week 3, doesn't it?

**MR POU:**

Yes, your Honour.

**15 THE COURT: JUDGE SMITH**

Ms Bielby, what about an opening at the end of week 3, would that be doable?

**MS BIELBY:**

I would need to check in terms of Ms Layland's availability. The – my instructions are, and I don't want to be obstructive, my instructions are that the council wants to present its case in one as opposed to a split case whereby it presents first, followed by evidence. But ultimately in the Court's hands.

**THE COURT: JUDGE SMITH**

But it doesn't want to present them in week 3?

**MS BIELBY:**

No, Sir, I think the parties are agreed that the council's experts should hear the cultural evidence first before its own witnesses are called and that's not happening until the middle of August.

**THE COURT: JUDGE SMITH**

So, if that's the case, Mr Pou, and you want that preference then we're going to have to shift the marae date. And on that note, I think we'll take the evening adjournment and let you all sort it out because marae dates is something I'd  
 5 rather leave to you, Mr Pou, than try and do it myself. Good luck I say.  
 1700

This is the difficulty when we start changing them around we get – I don't know why the order was agreed as it is but so be it. I mean the parties probably had  
 10 a different view at the time. But I want to make it very clear that the mere fact that other parties agree to something doesn't mean the Courts considered it, made a decision on the point. But I would like to find a way that keeps everyone happy if possible and it seems to me that if you're going to get your wish, that means we're going to move the cultural evidence to probably Week 5 and that  
 15 means that Ms Bielby will have to give her evidence in Week (inaudible 17:00:48). You want to hear all of the council's evidence, even the stuff on cultural or not? What's the story?

**MR POU:**

20 Your Honour we agreed for the council to go, at the council's request to go after the cultural evidence because (a) a number of the cultural evidence is still will-say, and (b) the reasons for decline were largely relating to those cultural matters. So there would seem to be some synergy. Since that time, and I understand what the council evidence says, however those positions haven't  
 25 been put to the applicant in a way that would suggest that the council necessarily holds the position that its witnesses do. Your Honour in a very recent case relating to (inaudible 17:01:37) you will recall I was cross-examining my own planner, disagreeing with the position that was taken there. So the fact that expert witnesses take a position doesn't necessarily mean that that's the  
 30 position taken by the party itself. And that comes to a head your Honour when one of the cultural parties is giving evidence and examining its witnesses and the council takes a position which tries to counteract that cultural party bringing that evidence out. So my clients are very concerned listening to the questions that have been raised by the council. We will have an engagement with

Ngāti Manuhiri and Omaha Marae and the whānau o Pakiri. But given the way that this hearing is playing out, the strong preference from my clients at the moment is that we hear at least (inaudible 17:02:38) opening. We don't require that the witnesses that – we know what the evidence says, it's subject to cross-examination and those sorts of things but we want to know what the council's position before we make our cases out Sir.

### THE COURT: JUDGE SMITH TO POU

Q. Mr Pou can I just make a comment just on those reasonings for the change in position on the order. Clearly one must have assumed that you cannot control how the council runs its case and change the order just because your clients don't like the way in which it's running it's case is a little odd. If we all took that approach then we could have a very jumbled proceeding.

A. Well with respect your Honour cross-examination order is usually friendly fire first and we usually take that order, we take that order through and –

Q. But we're not talking about cross-examination at the moment we're talking about changing the order of presenting evidence and submissions.

A. Yes, yes and I was just moving onto that. But usually cross-examination order follows the way in which the cases are presented as has been the hallmark of this case and those that are in support moving through to the more neutral, moving through to those are opposed would in my submission be a more appropriate way to go rather than, in my submission it's more jumbled to have people who don't necessarily oppose the consent being littered and sprinkled in amongst those that do.

Q. Yes well albeit you must have assumed the risk when you agreed to that order. But anyway I'll leave that there.

A. I assumed that –

Q. I have a similar issue in that requires Ms Bielby's questions of several witnesses in a particular way which I don't know is necessarily borne out. But even if it was –

A. That's fair your Honour.

Q. – it appears to me that I may be able to, if all the parties agree to the following position or statement, that the council must be assumed to be

supporting in full the decision of the Commissioners unless it has notified the Court and the other parties that it intends to take a different position prior to its opening and calling its witnesses. That is a line of authority going back to Judge Jackson in Christchurch and it's been adopted quite widely in New Zealand. It seems to me that the question of having notice rather than finding out at the eleventh hour that the council's changed its mind. This is not a situation where the council is making the decision, and there's a little bit of a tone to that, to the discussions that the council is in control and telling the Court what to do. I'm not going to interpret it that way, I'm going to say instead that the council is concerned that it needs to prepare and properly present its case. That being the case, this Court will assume unless we have a notice in writing from the applicant to the parties in the Court by tomorrow, that they intend to support the decision of the Commissioners in all respects. Now there's limited things they could do about their witnesses in cross-examination and that's not the point here. The council has reached a different position but has not communicated to the Court or the parties, the case law is relatively clear that they're not able to do that. Now somebody will be able to find the case, I'm pretty sure that you'll be able to find it very quickly Ms Bielby, they're relatively well known and I think it went on appeal on one occasion and the Court said that council had the opportunity of doing so as long as it notified all the parties well prior to the case commencing. So that's why I've assumed you're still supporting the position of the Commissioners at this point, because you've never told the Court anything to the contrary.

**MS BIELBY:**

Yes Sir the council is supporting the decision of the Commissioners. There has been, and this will be addressed in legal submissions, the council's evidence is clear though that the principal reason for supporting the Commissioner's decision relates to cultural effects as opposed to the other issues on appeal such as coastal. And that was my surprise your Honour when this was first raised by my friend after the cross-examination of Mr Todd because the council's evidence from my perspective could not have been clearer in that regard.

**THE COURT: JUDGE SMITH**

I can't comment on that, I would say that I thought there were two reasons that the Commissioners refused the consent and one was that there was a general lack of (inaudible 17:07:41) on which they could reach conclusions to the effects. Are you resiling from that?

**MS BIELBY:**

Yes Sir the council in terms of those other issues, the council's position in the evidence is that there has been a shift since the Commissioner's decision. The overall view of the council though is that the application should be declined, and as I said that's based on, principally on cultural issues.

**THE COURT: JUDGE SMITH**

I can see why Mr Pou's worried, that sort of, is a comment that gives me cause for concern. Look I'm not going to take it any further now, we've reached 5 o'clock. All I can do is try and encourage the parties to engage again if they can resolve this in some way. I don't think the Court wishes to be involved in having a heavy handed approach into how people present their case but I must confess I hadn't understood that you were resiling from part of the Commissioner's decision and I don't think the evidence, you say it's very clear in the evidence, it wasn't clear to me I've got to say. I need to talk to the others about it, they may see it much more clearly than I do.

We'll take the evening adjournment, we'll discuss this issue again in the morning. We won't be starting until 10 o'clock, I've got another matter unfortunately. Or fortunately, depending on which way you look at it. Thank you everyone. Could I encourage you to try and discuss it overnight, see if you can come (inaudible 17:09:12). This is not the sort of thing the Court normally gets engaged with.

**KARAKIA**

**COURT ADJOURNS: 5.10 PM**

**COURT RESUMES ON TUESDAY 25 JULY 2023 AT 10.01 AM****THE COURT: JUDGE SMITH**

I'm not sure where we got to overnight with the issue about order. Mr MacRae?

**5 MR MACRAE:**

Yes sorry Sir, no I can't help with the order of the parties (inaudible 10:01:31), witnesses.

**THE COURT: JUDGE SMITH TO MS BIELBY**

10 Q. Perhaps I'll start with Ms Bielby, any resolution Ms Bielby?

A. Sir, there's no change to my knowledge, I haven't heard from the other parties, so no change in terms of the order. I will just flag your Honour the other question that you'll recall came up at the end of the hearing last night, it was the point in relation to the council's evidence, if it will assist  
15 the Court the position is still the same but I can flesh that out if that's going to be of assistance to the Court once we've dealt with this order point.

Q. Well I think – are you talking about what the position of the council is?

A. The position of the council Sir and (inaudible 10:02:15) what I was sort of reading between the lines, the concern that the council wasn't supporting  
20 its decision, which as I said yesterday isn't the case, but I have done some more digging and can flesh that out if it would assist the Court.

Q. Yes I think we would like to hear that now before we make a decision on the issue. So are you able to state the position of the council please?

A. Yes absolutely, your Honour. So the question, my take on the Court's  
25 question or concern that came up yesterday afternoon is whether the council's evidence is inconsistent or contrary to the decision and as I signalled yesterday, the answer to that is no, but as I said I've done some further digging and looked at the case law on this very point and of course, as the bench will be aware, there is the general expectation or principle  
30 that a local authority like the council will support its decision and that is absolutely accepted by the council and the Court will be aware that cases like *Chan v Auckland Council Authority* are for that principle, but I think where the confusion has arisen between the parties is that it's important



not to blur the decision (inaudible 10:03:48) the decision, the decision being the outcome and that's the, whether a consent is granted or declined and if it's granted on what conditions it's granted and the reasons, being the reasons for that decision. And the case that is

5       incredibly helpful in explaining that and I can provide a copy to the Court and the parties is the decision in *Beca v Auckland City Council*, I can provide the citation if that would assist, and that makes it very clear that –

Q.    Can you give us the citation?

A.    So it's a decision of Judge Whiting, and the copy I have is A102-99. It's

10       Beca, B-E-C-A and Auckland City Council.

Q.    Thank you.

A.    It was before Judge Whiting and two commissioners and it's a longish decision but the paragraphs that will be of particular interest to the Court and the parties are I believe starting at 15, oh 18 maybe, but run through

15       to about 23. That deals with this very sort of preliminary question around evidence and in that case Sir, it was (inaudible 10:05:13) by the council and then appealed to the Court and the position of the council was that it continued to support the decision to decline consent, so it wasn't a case of a decline and then the council's overall position on appeal being one

20       of support, it still continued Sir to support that decline as the council is doing here, however it did have further evidence which made findings contrary or different to some of the issues that were before the council when it made it's first instance decision and the Court found essentially that the principle that existed from, or stems from the likes of *Chan*

25       shouldn't extend to binding the council on appeal to reasons that were given at the decision of the primary hearing and the Court quite helpfully, and I think it's really relevant to this case, says that to so bind the council ignores the reality that planning and resource management procedures are dynamic and that further investigation, further consultation, the mere

30       passage of time, and new theories can overtake a council between the time of the primary decision and the hearing of an appeal and it goes into some (inaudible 10:06:41) about distinction between the decision and the reasons, and states I think it's at paragraph 17 that the reasons are not

the decision and that the evidence that the council called was ultimately consistent with the decision. So I think it's particularly pertinent –

Q. I appreciate what you're saying and as you'll be aware there was an amendment brought into the Act subsequently to make sure that the Court couldn't do that, the section 290A amendment, but it still only requires us to have regard to, so whether or not the council agrees with it, we still have to have regard to the (inaudible 10:07:22) and it's probably of more direct bearing than what the view of the council might be now, other than as one of the parties. But anyway, I accept the point you're making and I think it's well made. Do you want to move on?

A. Sir, just a couple of other points that I do think are worth – that are specific to this case, it's got an interesting history obviously, a complicated history, and I do think are worth raising. And that is when we go back to the decision of the commissioners in respect of – and I'm going to talk about coastal processes because I think this is the big issue where my friends concern (inaudible 10:08:02) was raised after the cross-examination of Mr Todd, the commissioners' decision on (inaudible 10:08:10) was one of not enough reliable information, to quote them they said that: "We do not have enough reliable information to fully understand the coastal processes and there remains a great deal of uncertainty about the coastal processes taking place and the actual and potential effects of sand extraction." That's different to the commissioner's findings say in respect of cultural issues, where there was a finding that there were significant adverse effects. So there was a different approach and I think that nuance in the decision shouldn't be – it needs to be remembered and shouldn't be lost. So the council engaged Mr Morgan on coastal processes, who undertook the fulsome assessment he did and has arrived at his position. It's always been, the issue, and that stems from all of these decisions, *Chan* and the like, on this issue of the council's position on appeal, I think a key consideration in all of this is fairness, that certainly stems through those decisions, it certainly stems through the *Beca* decision and the council, we've obviously – this is a matter that's proceeded to court quickly and the council's position has been since it filed its evidence, there has been no shift on that particular issue

(inaudible 10:09:33) one that's been, it's contained in its evidence, it's one, and I'm not going to, obviously I will be careful with my words around mediation but it's one that through discussions with the parties there hasn't been a shift Sir, and so in terms of fairness no party has actually raised a concern with the position of Mr Morgan or the movement if you will in terms of the reliability of the information that's available on coastal processes.

Q. Thank you very much Ms Bielby.

1010

10 **THE COURT: JUDGE SMITH**

Now, I just want to check if any of the other parties other than Mr Pou want to comment before I revert to him. I think Ms Campbell you've expressed support for that position. Did you, are you content for Mr Pou to take the lead on this or do you want to make a comment?

15

**MS CAMPBELL:**

No, Sir, I don't. I'm happy ultimately to abide the Court's decision in this regard, Sir.

**THE COURT: JUDGE SMITH**

20 Thank you. Anyone else before I revert to Mr Pou? Mr Pou, you've heard what Ms Bielby wants to say. Obviously, we're going to have to take a short break to consider what to do. What would you like us to consider in addition to what you've already raised?

25 **MR POU:**

Look, your Honour, I understand the submission that Ms Bielby's made. As you've highlighted, a number of those decisions, the *Chang* decision and the *Beca* decisions predate the amendment, the 290 amendment A amendment which I think is in the 2005 Amendment Act. I'm not trying to overcook this and suggest that the council ought to be bound by that decision or that this Court should have anything more than just regard for that decision. And I mean it's the throwaway submission that I think I make every time I've appeared before

30

you, your Honour. There's a requirement to have regard to it. Just in terms of this application, this application isn't seeking to bind the council to a position. This application is an application around the order of presentation given the position that's become more apparent now.

5

Your Honour, if we look at the evidence that has come before this Court and the cross-examination that's taken place, my submission is, and it is a premature submission, that there seems to be less certainty now than there was before the evidence was given. That's why I say it's a premature submission, your Honour, that's made prior to it and I did take the opportunity, and Ms Bielby, I did take the opportunity to consider the evidence of Mr Hopkins and he is definitive in saying he, his reasons for opposition were around the cultural grounds that he, his view, his expert opinion was that everything else could be managed. But the submission that's made for Ngāti Manuhiri is that this hearing ought to progress in a way which allows the council's position to be made out, the legal submission to be made out prior to tangata whenua evidence being given.

Now, your Honour, before, that's the submission. I have taken the opportunity to because this isn't an application that tries to put Ms Bielby or her team on the, to try and prejudice them by making them have to write their submission in a weekend and three days, or those sorts of things. It wasn't about that.

#### **THE COURT: JUDGE SMITH**

Could I suggest, Mr Pou, before we final – and before you move to your final point, one possibility, and it won't be any surprise to you, is if we are to retain the order and the witnesses for whatever reason proffer a contrary opinion on cultural matters or on other matters that's contrary to the evidence already circulated, it seems to be inevitable that you could seek leave to call witnesses in rebuttal again. That's the downside to having an unknown position at the end and of course if that derails the hearing, so be it. But of course, as you appreciate, generally speaking, people's view on the ultimate issue doesn't really have a lot of influence with the Court because we're there to make that decision, not other parties, if you follow me?

**MR POU:**

Absolutely, your Honour, and I'm mindful of one of the questions that his Honour Judge Warren raised around who is the ultimate determiner of issue. It's (inaudible 10:14:30) around those. I guess the issue for Ngāti Manuhiri is the evidence that they've put that's been put for the trust is the evidence. They've worked hard to get that. They don't want to be in the place of calling rebuttal evidence and those sorts of things and their preference is just to follow that status quo where those who are more aligned with an application ought to go first.

10 1015

**THE COURT: JUDGE SMITH TO MR POU**

Q. Well at this stage we don't know what the alignment of the – I mean this, I mean she can't control what a witness might say in answer to a question but their evidence on cultural matters is, I would have thought, very clear and is (inaudible 10:15:14) if the witness suddenly decides they want to proffer a different opinion then there's questions as to whether or not such an opinion is of any value to this court and I would assume that the first line is we usually face objections to that sort of change of position mid-flight if I can call it that, or alternatively if it continues then there's always the question of allowing an opportunity for recall or rebuttal. The difficulty for this court is when we come to issues of judgement and as is clear, cultural issues often turn on issues of judgement, because parties could argue the same tikanga and come to a different conclusion of which you are very familiar from Waste Management. So things that are tapu (inaudible 10:16:04) by virtue of tikanga being applied in the correct way, and that is not surprising, but the reality is that expressing views by third parties judging the views of others, doesn't seem to be of much assistance to this court if you follow me.

A. Yes your Honour.

30 Q. So I would anticipate that Ms Bielby's witnesses are going to be reluctant to start proffering opinions on ultimate cultural questions at least, they may want to express opinions, as she's indicated, on the question of the amount of information and whether it satisfies this court, but they can't

(inaudible 10:16:48) if it satisfies us or doesn't satisfy us, that's quite clear, isn't it?

A. Yes your Honour it is clear.

5 Q. And although there are arguments which I'm sure you're going to engage in due course about cultural matters, about ultimate arbiters, you would appreciate as you have in other cases, that in terms of the RMA we are creatures of statute, we have to do what we're told, so that requires another decision (inaudible 10:17:17) by this court of course, so as far as we're concerned we have to be satisfied that a consent should be granted  
10 for a discretionary consent, on the basis set out in all the plans and other documents, so (inaudible 10:17:29). Now sorry, I just want to say that before you move to your final point, which may involve that issue or it may be something wider.

15 A. No your Honour I guess in asking the question, those were the issues and I think they have been well ventilated. The reasons that Ngāti Manuhiri now seeks the council to go before them, I think the Court is very, very clear about that and it is based on the examinations and objections that have occurred coming up to this point where they had understood that the council's support for the decision was stronger than (inaudible  
20 10:18:14) so now, to the extent that they would – that's why when I made the application for the amended cross examination order I didn't make the same application for order of presentation and those sorts of things. It was so that Ngāti Manuhiri could continue to listen to the council and see what those sorts of things were, and I guess the objection to tangata whenua, the way in which tangata whenua questioned around those  
25 coastal processes was the catalyst for this application being made and it's why I signalled it, your Honour. That's (inaudible 10:18:55) –

Q. Thank you Mr Pou.

30 A. Thank you and I guess the other issue your Honour and that's what, this is what I was going on to, I have canvassed with other tangata whenua counsel around the possibility of deferring the marae hearing week into the 28<sup>th</sup>. Our most significant obstruction, well I don't want to refer to Ms Morrison-Shaw as an obstruction but the obstacle was Ms Morrison-Shaw's availability, I understand that she is available now

and so if there is that opportunity, we have commenced those discussions your Honour. (inaudible 10:19:30) –

Q. And that's fine. Thank you Mr Pou, and I think the only (inaudible 10:19:37) suggest is that we take a short break so I can discuss these matters with the rest of the Court and then we will return, I don't think –  
5 well we will communicate through the registrar if we're likely to be longer than 10 minutes but we'll take a break now till 10.30 –

**MS CAMPBELL:**

10 Sir –

**THE COURT: JUDGE SMITH**

Oh sorry, Ms Campbell you wanted to say something?

15 **MS CAMPBELL:**

Yes I did Sir, thank you. Just given that the Court is going to take a short break to discuss these process matters, I've just one other matter that I'd like to put before your Honour, Sir. This morning I received an email from Ms Hopkins with a document that Mr MacRae intends to put to Mr Stubbing, it's a report of  
20 survey, it's titled Sir, and it's dated the 31<sup>st</sup> of March 2023. Looking at the title page which is all I've had a chance to do, it appears to relate to the bathymetric survey that was by Mr Stubbing's company from the 25<sup>th</sup> to the 27<sup>th</sup> of November. So that report, Mr Stubbing's evidence is that they've done three bathymetric surveys and from memory, I think that's the most recent. The report  
25 predates Mr Stubbing's reply evidence and I don't know why it wasn't included in, or appended to the reply evidence, it's 17 pages long and I'm not sure Sir of its content, I've flicked through it, it looks quite technical but I would like the opportunity to consider that. I do have questions about Mr Stubbing's (inaudible 10:21:23) report which he also did not append to his evidence but has been  
30 provided by one of my witnesses, so I may well have questions about this report as well Sir, but I simply don't know at this point, or I may object to its production, I don't know, I need some time to think about that, so it may be that we need to move Mr Stubbing later in the hearing, so that I can consider this additional report and perhaps liaise with Ms Hart if necessary.

**THE COURT: JUDGE SMITH TO MR MACRAE**

Q. So Mr MacRae, obviously this issue about the reports was a key issue, I seem to remember dealing with it more than once and (inaudible 10:22:07) documents had been produced, we can find the documentation if you wish, but now we find this document that hasn't been produced, is that right?

A. This document Sir outlines the methodology, so one of the documents is in the common bundle Sir, already, that's the report on the October 2021 survey and (inaudible 10:22:35) survey which of course was supplied to the (inaudible 10:22:44) of experts at the hearing before the council and so (inaudible 10:22:49) –

Q. (inaudible 10:22:51) I don't know why we're dealing with 2021, this is about a report produced in March 2022, -

A. Yes of a survey in November –

**MS CAMPBELL:**

March 2023 Sir.

**THE COURT: JUDGE SMITH**

March 2023, why was that not circulated given that this issue was raised multiple times before the court?

**MR MACRAE:**

(inaudible 10:23:11) that it has been Sir, but there was discussion (inaudible 10:23:14) the documents that went into the common bundle, and as a result of those discussions I think a number of suveys relating to bathymetric evidence, or a number of documents relating to bathymetric evidence were deleted from what was originally in the common bundle, so the report simply deals with the methodology that has been used since March 2022, to produce heat maps of the kind that have already been produced to the Court some time ago and – sorry, produced to the Court provided to the Court and the parties some time ago, and which I'll ask Mr Stubbing to address and the heat maps Sir are the means of monitoring the progress of the trenches, so this report has been now at least, is now before the Court and the parties on the basis of the questions



that I think yourself and Commissioner Howie asked about how the trenches (inaudible 10:24:20) and how do you know, so the heat maps and the report that explains the methodology used in producing them, are both relevant and it wasn't until till Mr Stubbing, in fact (inaudible 10:24:35) last night, that the

5 relevance of the report to that aspect of his evidence became clearer, so that's why it's produced today and Mr Stubbing is here Sir and has been overnight, there was a possibility he might be called yesterday, and so he came up from Kawerau for that. He is here today and of course he's already been here for the best part of 24 hours, and would like to be dealt with today if that is possible,

10 but Sir I'm in the Court's hands

1025

#### **THE COURT: JUDGE SMITH**

My first point, that Mr Stubbing was supposed to be called last week and, without explanation, we were told he wasn't available. So the answer to your

15 first point that he's here. If he doesn't want to give evidence, then that's a problem for you, but from a practical point of view I cannot see that if you wish to produce the document that we can proceed with him today. It seems to be reasonable, Ms Campbell, that if you have overnight that should be sufficient time, so Mr Stubbing would be dealt with tomorrow morning, and that's the first

20 issue.

As to the (inaudible 10:25:40) document, I can't even comment. My recollection was that Mr Clapshaw in particular kept on insisting that all the information had been provided, and there was numerous exchanges of correspondence, which

25 I can go back, I have quite a thick file on the matter, Mr MacRae, if you say that you never addressed this issue.

#### **MR MACRAE:**

No, Sir, I wasn't referring to the data that was requested and some of which it was suggested might have been redacted, and I'm aware of that discussion.

30 But as far as I'm aware, Sir, this report has never been requested. Mr Stubbing filed his evidence-in-chief where he refers to those surveys back in December of last year and as far as I'm aware no party has requested this report. As I

said, there were a number of reports that were originally proposed for the common bundle but as no party requested that they remain, I don't for sure but this report was included in that list but I'm aware that some were taken out because it appeared that no one wanted to refer to them.

**5 THE COURT: JUDGE SMITH TO MR MACRAE**

Q. I'm not going to address it any further at this stage. I don't know. Quite simply, we won't be dealing with Mr Stubbing today, he'll be dealt with tomorrow. That's a matter for your management, Mr MacRae. He was supposed to be here last week. For no explanation, he was not available, and that is on Mr Stubbing as far as I'm concerned or counsel, so we will deal with him tomorrow. And I'm not exactly sure why Mr Stubbing feels that he can dictate to the Court when he appears.

A. It was simply a matter of unavailability last week, Sir. Mr Stubbing had another –

15 Q. Why? Was he in the High Court?

A. I'm sorry, Sir?

Q. Well this is a court of law. You're expected to be there when you're supposed to give evidence.

A. Yes, Sir. But with respect, Sir –

20 Q. It's of no moment now. I mean the reality is (inaudible 10:27:49). I do not consider it reasonable deal with the matter with him today given the problem with this new document. I know nothing about the document myself. I see that it's been sent by the registrar to us. We haven't even looked at it and we'd be unlikely to look at it till we know whether or not it's going to be produced. And I presume it's going to be produced by you in cross, is that right, or in chief, is it?

A. Yes, in chief, Sir.

Q. So I can't comment on the document itself. I think Ms Campbell's saying she can't.

**THE COURT: JUDGE SMITH**

I assume there might be other parties who have an interest or not?  
 Ms Morrison-Shaw, is it a matter that you were taking an interest in or have  
 you...

**5 MS MORRISON-SHAW:**

Thank you, your Honour. No (inaudible 10:28:28) questions for Mr Stubbing.

**THE COURT: JUDGE SMITH**

Ms Black?

**MS BLACK:**

10 No questions, Sir.

**THE COURT: JUDGE SMITH**

Okay. And Mr Pou? No. I saw the shake of the head so I assume no.

**MR VAN MIERLO:**

Sir, Mr van Mierlo. I do have some questions for Mr Stubbing but I haven't  
 15 reviewed this document yet. I've just got it on my desk, haven't read it yet.

**THE COURT: JUDGE SMITH**

Right. So I'm assuming you need to have a look at it. So that's dealt with that  
 issue. I'll just check if anyone disagrees. Judge Warren, are you content with  
 that direction in respect of the calling of Mr Stubbing? For some reason, I'm  
 20 not catching your vocal at least. We'll take a break and we can discuss that  
 there too. I won't make a final direction till we come back but that's my thinking  
 and I just want to check with Judge Warren. We'll take a 10 minute  
 adjournment. It's now going to be till 10.40. Thank you.

**COURT ADJOURNS: 10.29 AM**

**COURT RESUMES: 10.41 AM**

**LEGAL DISCUSSION**

**THE COURT: JUDGE SMITH**

I'll just check with Judge Warren. Was there anything you think I've omitted or  
5 wish to add, Judge?

**THE COURT: JUDGE WARREN**

No thank you, Judge. No thank you.

**THE COURT: JUDGE SMITH**

So, I think that decision means for the moment we're moving to Mr McCallum  
10 anyway, whatever happened I think. So, if there's no other preliminary issues,  
I'd be inviting Mr MacRae to re-call Mr McCallum. Any other preliminary  
issues?

**MR MACRAE:**

15 Just one small matter, your Honour. I just wanted to assure you, having spoken  
to Mr Stubbing, that no disrespect to the Court of course was intended by his  
non-availability last week. Having conferred directly with him now, which I was  
unable to do last Thursday, I, or not in detail at least, briefly to him, I understood  
20 he just had another unavoidable commitment. In fact, it was a matter of a sick  
child, Sir, who was at school, had to be taken home and looked after by  
Mr Stubbing in the absence of his wife. So, it was one of those situations that  
arose very quickly. There was no prior notice and the main point I wanted to  
make, Sir, is that neither he nor of course of the appellant or myself intended  
any disrespect to the Court.

25 **THE COURT: JUDGE SMITH**

No, and this, and I wasn't suggesting that, and it is good to know the reason  
and we accept that is an entirely valid reason. So often we just don't know what  
the reasons are.

**MR MACRAE:**

Yes, I didn't at the time, Sir. I was tactless in the way I put it, but my knowledge was limited.

**THE COURT: JUDGE SMITH**

5 Yes, well I understand that can occur too. So thank you for, I think the explanation helps us understand better and thank you for communicating that to us. Now, we've got Mr McCallum with us again I think. Madam Registrar, given that there's been a break I think we should re-affirm Mr McCallum's evidence, or his evidence will be in accordance with the codes. Sorry, the Act.

10

**MR MACRAE RE-CALLS****CALLUM FRASER McCALLUM (RE-AFFIRMED)****THE COURT: JUDGE SMITH**

Now as I understand it, the only reason was so that Ms Campbell could ask the relevant questions and that's my intention to move there, unless somebody has an objection. Thank you, so Ms Campbell, do you have questions of this witness?

15

**CROSS-EXAMINATION: MS CAMPBELL**

Q. Now Mr McCallum, in your evidence in reply, and is it Mr Garton this morning, Mr MacRae or –

20

**MR MACRAE:**

Sorry, no, I meant to advise the Court. Ms Harnett is with us today.

**CROSS-EXAMINATION CONTINUES: MS CAMPBELL**

25 Q. So, I'm hoping that Ms Harnett's got her scrolling game on this morning and I'd like her please to take us to Mr MacRae's reply evidence. It's paragraph 84, EB1A16. When it comes up, Mr MacRae, you'll see that at the bottom half of paragraph 84 you're talking about the Mt Rex yard and I just want to ask you just a simple question about that material.

30

**MR MACRAE:**

The problem with names (inaudible 10:52:00), Sir. Ms Campbell's addressing Mr McCallum, I think.

5 **MS CAMPBELL:**

Who did I say? Don't even answer. Yes, that is who I meant.

**THE COURT: JUDGE SMITH**

So, this concerns the Mt Rex yard which is the last part of that document I think, of paragraph 84?

10

**MS CAMPBELL:**

Yes, that's right. Yes, that's it. Thank you.

**UNKNOWN MALE SPEAKER (10:52:20):**

15 Perhaps that was one of the documents that she sent out, was it?

**MR MACRAE:**

Yes, that's in reply. Not the ones they sent out (inaudible 10:52:31).

**THE COURT: JUDGE SMITH**

20 What's happening now? Mr McCallum, you were asked a question by Ms –

**MR MACRAE:**

Just looking for it.

25 **UNKNOWN MALE SPEAKER (10:52:43)**

Assisting Mr McCallum to find his evidence in reply.

**THE COURT: JUDGE SMITH**

I see. It's his evidence in reply, paragraph 84, A1.

**CROSS-EXAMINATION CONTINUES: MS CAMPBELL**

30 Q. So, when you find that place, Mr McCallum, just let me know.

A. Yes, I've found it. I'll just read it through again.

**THE COURT: JUDGE SMITH**

Q. There is a change to it you made as well.

A. Yes, Sir.

5 Q. I think.

A. Yes, Sir, there is.

**THE COURT: JUDGE SMITH**

You may not have been there for that, Ms – would you like me to read it to you, Ms Campbell?

10

**MS CAMPBELL:**

That would be very helpful, Sir.

**THE COURT: JUDGE SMITH**

15 “The Mt Rex yard where the sand is distributed can only operate from four in the morning until 6 pm in the evening which limits (inaudible 10:53:28) trucking movements through peak hours 7.30 am to 9.30 am and 3 pm to 6 pm.”

**MS CAMPBELL:**

Thank you, Sir. That's very helpful.

20 **THE COURT: JUDGE SMITH**

It may or may not answer your question. I don't know whether it does, but that's the full sentence now.

**CROSS-EXAMINATION CONTINUES: MS CAMPBELL**

25 Q. Thank you, that's very helpful. And the question's a simple one. You do talk there, Mr McCallum, about the operational constraints in terms of the Mt Rex yard and its hours of operation, as his Honour's just taken me through. There's nothing particular to stop Mt Rex from securing a new yard or having altered hours of operation. I understand the normal

resource management process (inaudible 10:54:10), but there's nothing particular to prevent Mt Rex from finding some flexibility, is there?

A. Well, what we've stated is that is the yard where the sand from Mt Rex's and Winston's sand consents is distributed from currently. There's no talk of them shifting. They've got a lot of infrastructure set up there. We were surprised when we originally talked to them about it that there are the restrictions on trucking movements and, you know, I think as the addition to the paragraph 84 that the Judge told you, is the issue is totally about trucking. And if you know what (inaudible 10:54:59) motorway is like, both morning and night is just a dog's breakfast. So ideally if we were to be doing a lot of trucking from that part of the world we'd be trying to do it during the evening when there is no trucking, but we're restricted from 6 pm to 4 am with no trucking movements in the consent. And that is the current situation. Whether they can increase those hours, the truck paths actually through the township of Helensville and past houses. Yes so I don't know but that's what we've got to work with at the moment.

Q. All right. If you could take us to EB17 please which is paragraph 59 of Mr McCallum's evidence-in-chief. Thank you. And you'll see then Mr McCallum that you've said that the offshore sand is preferred in turf applications, beach replenishments, drainage mixes and for equestrian surfaces. Ms Grant says, and I think these figures are (inaudible 10:56:28) which predate the application. So I think these figures may be from 2018. That's 45 tonnes of Pakiri sand is used for those industrial turf and landscape applications. Do you accept that or can you give us a more recent figure for that?

A. Not off the top of my head. I believe that's a figure in the vicinity of what we were supplying a couple of years ago.

Q. Yes so let's work (inaudible 10:57:01).

A. Somewhere around sub-50,000 tonnes.

Q. Yes and so 45,000 tonnes I've asked, because I need help with these conversion matters, that converts to about 25,000 (inaudible 10:57:13) is that right?

A. Yeah, tonne, 1.8 is 45,000 on the dot.



Q. So just to be clear you don't extract sand from anywhere other than Pakiri?

A. No.

5 Q. And you did have an application before Auckland Council to extra sand from the ebb tide delta of the Kaipara Harbour in 2006 didn't you?

A. That is correct.

Q. And that was to take up to 300,000 cubic metres per year wasn't it?

A. Yes it was something in that vicinity.

Q. And to shift the sand through to Onehunga?

10 A. That's correct.

Q. But you've not advanced that application?

A. No well at the time we were restricted in our vessels in terms of, we had the old girl the *Coastal Carrier* which is a 53 metre vessel and while there's a very good resource of sand on the West Coast, as we're all  
15 aware the restrictions due to waves and weather is quite large. And for a small vessel like a 53 metre vessel we basically – we went down quite a long way down that application route but worked out that for the infrastructure which we owned at the time it wasn't applicable. Then we renewed (inaudible 10:58:52) inshore consent and we got access to the  
20 Kaipara offshore consent so that sort of fell by the wayside to tell the truth.

Q. Ms Harnett could you take us to the common bundle please, 1256. And you should find us at condition, the conditions of the existing offshore consent. And if we could look at Condition 1 on page 1256 Ms Harnett. Thank you. So this Condition 1 Mr McCallum of the existing offshore  
25 consent gives the council the ability to access the barges and boats and unloading facilities and storage areas that you used for the resource consent. Has the council ever sought to come out on a dredge during the operation of the offshore consent?

1100

30 A. I'm not aware. I can't definitively state yes or no, but I'm not aware.

Q. And do you know whether the council's ever come into the unloading facilities in the storage area at the Port of Auckland?

A. (inaudible 11:00:24) once again, I'm not aware. It's not the sort of place you can just walk into. In fact it's super security in terms of Customs and

access. So if we have a visitor, for instance, we've got to give the Port of Auckland the reason the person – people want to come to the vessel, we've got to give them a couple of days' notice and we go through all sorts of rigmarole including, you know, just everything. So really it's a two or three day process to get people onto the port who don't already have (inaudible 11:01:04) through the port system.

Q. So you've not been through that rigmarole on the part of the council?

A. No. Not that I'm aware of.

Q. And Ms Harnett, if you could scroll down please to condition 10. Mr McCallum, that condition requires you to: "Provide on request company records documenting the volume of sand extracted including wharf unloading records where available." Do you see that?

A. Yes, I do.

Q. Has the council ever asked you for records?

A. We send the volume of sand extracted to them every quarter, and we have done since the beginning of that consent, or since we've started extracting.

Q. Do you also provide the wharf unloading records?

A. We haven't been requested for those. So there's obviously a timing issue between extracting a load of sand and the sand leaving the Port of Auckland for instance. We run a number (inaudible 11:02:31) down there. One's on a vessel sort of four odd thousand tonnes and then on a (inaudible 11:02:36) wharf of (inaudible 11:02:40) sands, the inshore or the offshore, historically this is. And so the sand might be sitting there up to a week, depending, before it's actually trucked out. So we have a record on our waybridge of that, just never been requested for it.

Q. So you have the records, the council's not requested them. I'll ask this question although (inaudible 11:03:16) it's unlikely. Can you tell us how much sand you've unloaded using your waybridge records under the offshore consent?

A. Well it's going to be – and this goes back to about 2006, it's going to look roughly about 3.6 million tonnes roughly so doing the maths on 1.8 times (inaudible 11:03:46).

Q. But you don't, and I'm not being critical, but you don't know and you don't have those records at your fingertips, do you?

A. They go back to 2006 so, no, I don't.

5 Q. Ms Harnett, CB1457 please. It's the inshore consent and it's really just to show Mr McCallum that there's the same access condition. So condition 24, this is one of the two inshore consents, Mr McCallum, and condition 24 there, the second paragraph, is for all intents and purposes the same as the condition 1 in the (inaudible 11:04:46). So the council has access to those –

10 A. Same response. Same response. I'll just add that we have had Ngāti Wai on the vessel a number of times, I believe the Friends of Pakiri people or from southern Pakiri have been to the port and looked on the vessel, and then we've had Te Uri o Hau on the vessel as well.

15 Q. So, my question was though whether the council had ever come, in this case out on the vessel as it conducts the inshore extraction.

A. No, not that I'm aware of.

Q. And I think your answer in relation to a visit to the port probably just generally (inaudible 11:05:32), is that right?

A. I believe they haven't.

20 Q. Right. Now, I need to return to some difficult questions from yesterday with you, Mr McCallum. Were you here yesterday when I was asking questions with Mr Todd?

A. For some of it. I was certainly in a different room.

25 Q. Well, you were asked a question by Commissioner Myers and you answered by saying MBL was seeking extraction to commence two kilometres from mean high-water mark but Mr MacRae's opening submissions said consent was being sought for extraction as close as 1530 metres to 1810 metres from mean high-water mark. And Mr Todd's evidence says that the extraction area starts between 1.5 and 2.1 kilometres from mean high-water springs. Now, this is your application so I'm hoping you can tell us where the extraction area starts.

30

A. I'm not sure of the exact (inaudible 11:06:59) I said that. So, where I'm aware that the (inaudible 11:07:04) is that two kilometres for the existing offshore consent is from mean high-water spring that the greater the

distance of two kilometres from mean high-water spring or 25 metres depth. That is for the current –

Q. Mr McCallum, can I –

5 A. Can I just finish and then I'll put it in context? So, that is the current offshore consent. The temporary consent which we were granted a couple of weeks ago is two kilometres from mean high-water so that's where the two kilometres comes into that again. The 25 metres is inside of that. In terms of our actual application currently, it's the one we inherited from Kaipara Limited and it's for depths greater than 25 metres  
10 which some of the areas it's two kilometres but, as Mr MacRae said or somebody said, it ranges from I believe 1530 up to 2.1. So, that's quite clearly articulated in one of the maps that was brought up yesterday afternoon which has got the extraction and the monitoring cells, it's got the depth of water where we are. There was a map produced yesterday  
15 which didn't have an author on it which showed distances that we're determined to produce that map. It was not Mr Todd, it was Mr Todd's helper and apparently Mr Todd was absent at the time so I believe they are reproducing that map with the Jacobs footnote and author on it. So, that gave clear distances from mean high-water mark I believe to all of  
20 the three applications. Obviously only two of them have been given away and we're only dealing with the offshore.

Q. So, you understand, Mr McCallum, that the Court needs to assess the application that you've made and a very basic step in doing that is to understand what the application is that you've made. And you've given  
25 me three answers in that answer. You've told me that you are seeking to extract sand below the 25 metre contour which, as Mr MacRae said, ranges from 1530 to 1810 metres offshore. You've told me that appendix 4 to the draft conditions of consent that you've circulated maps that. And you've told me that the untitled Jacobs map maps that. So, if  
30 those three things do in fact align then I'm quite clear. If they don't align, and I don't know whether they do or don't, but if they don't, is the answer simply that you're seeking to extract sand deeper than the 25 metre contour wherever that might be. Is that the answer?

**MR MACRAE:**

Just before the witness answers, Sir, I didn't want to interrupt my friend, Ms Campbell's question. But I didn't say that the 25 metre contour was more than two kilometres from the mean high-water mark. In my submissions I was

5 referring simply to the inner boundary of the proposed extraction and gave the minimum and maximum distances from the mean high-water mark to the boundaries. Both inner and outer boundary.

**THE COURT: JUDGE SMITH**

Q. To understand even the question or what you're saying there's a couple

10 of points. One is, what is the distance from the 1530 and the 1810? I am no wiser at this stage whether we're talking MSL, mean high-water mark or mean high-water springs. In fact, the two kilometres Mr McCallum mentioned a moment ago just said it was from mean high-water. I don't even know what that is. So, is that another figure yet again or is that

15 mean high-water springs or mean high-water mark or is that something else?

A. It's mean high-water mark as I understand and the 25 metres –

Q. Okay. Well, we don't understand it at all at the moment –

A. The 25 metres below –

20 Q. Are we talking 25 metres below chart datum or are we talking 25 metres by something else?

A. Yeah, we are, below chart datum.

Q. So, that's very unclear. I haven't seen any diagram that shows us at the time at all and of course we don't actually know what the mean high-water

25 springs is on the chart datum at the moment. So, that may, as I pointed out, we really just don't have any information at the moment. But the question, as I understand it now, can I reframe it, Ms Campbell?

**MS CAMPBELL:**

Please, Sir.

**THE COURT: JUDGE SMITH**

Q. That it's 25 metres below chart datum or 1530 to 1810 metres from high water mark seaward.

5 A. Yes. And to that effect, we have placed longitude and latitude, so positional markings so that the box as it were of the area applied for is delineated. So, the real issue which we've had over the years is people trying to position the dredging extraction box using distances from mean high-water springs and/or depth of water. And obviously the water and extraction depth change and that was particularly so for the inshore consent. So, on the tidal cycle there's a couple of metres difference which might change the position of the five or 10 metre mark by 100, 200 metres. So, what we want to do and what we've applied to do is apply for a fixed area all which we believe is deeper than 25 metres below chart datum and it is bounded by coordinates. So, that can be plotted on 10 our vessel so as to ensure that extraction takes place in that area and similarly if anybody wants to work out where we are, they actually know. They can also have the box plotted and then work out where the vessel is inside it or not.

**CROSS-EXAMINATION CONTINUES: MS CAMPBELL**

20 Q. So, in terms of that then, Mr McCallum, is it your preference to have the extraction area identified by these co-ordinates and so to the extent that there is conflict or might be conflict between any of the various starting points of numbers given we should, as a priority, look to the plotted points as describing what you seek consent for?

25 115

A. That's correct and I believe those coordinates are on that appendix 4 that you referred to early?

Q. Yes. Sir I'm going to take this witness to appendix 4 and to the conditions of the consent. I'm not sure whether your Honour would like to take the morning adjournment before I do that or after Sir.

30

**THE COURT: JUDGE SMITH**

I need to take a break at 11.30, so I wonder if we shouldn't at least start and we'll break just before then, thank you.

**CROSS-EXAMINATION CONTINUES: MS CAMPBELL**

5 Q. That's very helpful Ms Harnett, just leave that there while I ask one question, I don't think we need to go there yet. Yesterday I asked Mr Todd about the co-ordinates that define the extraction area on page 2 of the draft conditions of consent and he said that he did not provide those co-ordinates. And I'm wondering Mr McCallum whether you provided  
10 those co-ordinates?

A. I believe one of our, I imagine through Mr Hay, provided the northings and eastings and the lat-longs in page 2 of the conditions. Bio researchers, the author of the map that's up now, and apparently the map automatically or the programme automatically generates from the positions MCB0127  
15 and the EA127. The programme generates the positions on the map in terms of (inaudible 11:17:23) longitude but as decimal of the degrees. So 36 degrees .18239 for the top one and similarly with the longitude. And then also northings and eastings. So those are generated from bio researchers. I believe one of our guys provided the lat-longs relating  
20 to the page 2 table, which rather the northings and the eastings are identical to the map in question. The latitude and the longitude are also depicting the same, identifying exactly the same spot. It has just got a slight, rather than have a decimal of the degrees, it has taken it through from degrees, minutes and seconds and decimal for the seconds. It has  
25 actually brought more – it is done most accurate way of doing it, but it appears to me from talking to different people, looking at some of the marine farm maps, it seems that the normal way of depicting them is what is on the bio researchers' map here, in terms of decimals of a degree and the lat-longs versus minutes, seconds and decimals of a second. So they  
30 all basically give, well they all give you the same point. So what we're seeing in the table 2 as well as the bio researchers' table, there are three methods in play here to give you the exact position of the MCB01-7 and the E(inaudible 11:19:34).

Q. So just to pick up on two things from that answer Mr McCallum. You said: "One of guys, one of our people generated the information in table 2." Who do you mean?

1120

5 A. Mr Garton. You can go into, for instance, there is a website which if you put the northings as in the NZTM numbers in there, it will spit out longs for them and, similarly, and it can go down to degrees, minutes, seconds or to a decimal point of a degree. And so we've been talking this morning and we're just trying to work out which latitude and longitude method or  
10 which presentation of the position is the most appropriate for this. They all say the same thing.

Q. Yes, and is there also, I imagine there is, there's a website to convert everything, a method by which you can convert, you can put in a lat and long with the sexagesimal minutes, degrees, seconds and have that  
15 converted into a (inaudible 11:21:04) per appendix 4 to the conditions? There's a simple conversion that one can undertake is that right, Mr McCallum?

A. Correct.

Q. And have you done that for these seven points shown on appendix –

20 A. I haven't personally. I know that it's been run over and they all seem to tie up. We did that – not we did that, Ms Hopkins did that last night on the same method as what you said. They all seem to give you the same point.

Q. And you said, and I think we reached the conclusion yesterday, that  
25 Bioresearches generated the map. You've told us this morning the map generated, autogenerates those numbers in the table. Do you know who did that at Bioresearches?

A. I believe it was Simon West. I believe that is what we came up with. There's "SW" there next to the Bioresearches in that box just to the left,  
30 so "SW" we'd imagine –

Q. Did Mr West tell you that?

A. I haven't asked him personally. I'm not too sure if one of our people did this morning. But I believe it's Simon West. I've got no reason to think it's anybody else from Bioresearches working for us from the initials "SW".



Q. Now, you can take that picture down, Ms Harnett, for the present moment, thank you. Mr McCallum, you've said in both your evidence-in-chief and reply that it takes *William Fraser* some time to get ready to dredge. How long does it usually take to prepare the dredge in fine weather once you

5 slow down in proximity to the extraction area?

A. Oh, look, it's a variable. I won't put a number on it. Could be 10 minutes, could be quarter of an hour. It depends where they start. There's no rhyme or reason.

Q. So, I'm not looking for, unlike the latitude and longitude I'm not looking for

10 four decimal places of accuracy. Would it be fair to say less than half an hour?

A. Thank you. Yes. Yes, it could be. Look, it could honestly be...

Q. Does it take longer in heavier seas?

A. Most things do.

15 Q. Longer than half an hour?

A. And there's two, between two and three skippers who work on it, so they have their different idiosyncrasies. What we're trying to do to reduce this and we mentioned, or I mentioned to the Court (inaudible 11:24:00) and we just literally started off on this new process, we've got another GPS

20 associated with the vessel recording and this GPS is triggered, as I said last week, when the drag head literally hits the deck, hits the bottom and it starts recording. When the drag head's lifted, it ends recording. We

then download the, the tracks get downloaded onto an SD card through GPS co-ordinates and we haven't seen the output yet, but we envisage

25 the output will be able to be placed within or in relative position to the extraction box with the co-ordinates as in appendix 4, and so what we are hoping and we hope we could get something to the Court, ideally this

30 week, to show how this works, from our point of view we just want to try and stop all these insinuations and get (inaudible 11:25:22) which we can't and our crews can't manipulate and so what we're hoping and as I

said we hope is that we will have dredge tracks of when the dredge hits the bottom to when it lifts up and that is when the sand is coming onboard. So even if they have got the drag head in the water, which they do to start up with, they (inaudible 11:25:50) the, the pipe moves horizontally to the

side of the vessel and is lifted up and over into the water, then the pump is turned on while it's still just pumping water. So that won't show up until the dredge head physically hits the bottom and the weight comes off the swell compensator and then the track will start being recorded, so it's sort of watch this space, but we got our first reading out of it this morning, but we've just got to get another programme to decipher it and once we've done that, hopefully we're in a position to accurately tell the Court where the drag head has been on the bottom for every trip.

**THE COURT: JUDGE SMITH**

10 I don't think that was an answer to your question at all but -

**MS CAMPBELL:**

No, no, thank you Sir –

15 **THE COURT: JUDGE SMITH**

Nevertheless, (inaudible 11:26:50) in due course, I think we're at 11.26, I think one more question would probably tip us over the edge, so I'd rather – I just want to raise one question –

20 **MS CAMPBELL:**

Can I –

**THE COURT: JUDGE SMITH**

Oh sorry you want to say something Ms –

25 **MS CAMPBELL:**

I just wanted, exactly Sir, the one question I would like to put to this witness before we break and hopefully it is a shorter answer was, thank you Mr McCallum, my question was, does it take longer than half an hour to ready the dredge once you arrive in the extraction area in heavy seas?

30

**WITNESS:**

It could do, I'm not going to give you a number because I don't know. It could do or it could be less.

5 **MS CAMPBELL:**

Okay, thank you.

**THE COURT: JUDGE SMITH**

Before we break, I am now confused, I need to ask my salty dog our next  
 10 commissioner about it, but I don't know what the difference between chart  
 datum and MSL is, I see appendix 4 is expressed an MSL as at 2016 NZDV  
 something or other, have no idea what that is, but the short point is that  
 whatever it is, it looks like it has to be a fixed point, so I wonder why we're not  
 using chart datum but maybe they're the same thing. Whatever they are, you  
 15 can't argue that the Ms – my understanding is the MSL can't vary, it has to be  
 fixed for the period of a consent or (inaudible 11:28:13) of consent, so I just  
 want to make that point. Again, it's the problem we don't actually know what  
 these things mean, why they are set in a certain way as opposed to another  
 way. The reason I raise it is Mr McCallum's answer was that it was based on  
 20 the chart datum, you might recall I specifically asked that, but this appendix 4  
 talks about MSL, NZDV something 2016. Perhaps you could have a look at  
 that in the break, Mr McCallum, I've got to say I'm entirely mystified, I'll probably  
 be enlightened by Mr Howie but apart from that, I'm lost. We'll take the morning  
 adjournment. We'll recommence at 12. Thank you.

25 **COURT ADJOURNS: 11.28 AM**

**COURT RESUMES: 12.02 PM****CROSS-EXAMINATION CONTINUES: MS CAMPBELL**

5 Q. Ms Harnett, if you could take us to EB1A 10, that is Mr McCallum's reply evidence, and paragraphs 44 to 46. Now Mr McCallum, you've talked here about AIS and you've said here that because the Leigh Station is frequently offline, vessel positions are sometimes communicated via satellite, do you see?

A. (inaudible 12:03:13).

10 Q. And I'm just wanting to confirm that while that might result in lags in the data, the vessel's position, perhaps not the timeliness, but the position remains accurate, that's your evidence, isn't it?

15 A. No, it's not. Not necessarily accurate. The AIS – satellite AIS is renowned to have trouble with bad reception, reception and that, so what we frequently see is vessels disappearing, appearing, vessels, as I said the other day, vessels – tug behind the barge when it should be the other way around. So, yeah, it's not great.

20 Q. The evidence that you gave us the other day, I didn't understand you to be saying that your vessels were never in those locations. It's just plain that the timeliness of the provision of that data was wrong and that could explain the swapping of the position of the tug and the barge also, couldn't it?

A. That's right. Sometimes the vessels don't actually show it. Yeah, it's a hotch-potch of results.

25 Q. But when vessels are recorded – they may not be recorded, as you say, but when they are recorded, the position is accurate, you'd accept that?

A. I'm not a – I don't – I'm not an expert on this. I haven't been told that. I've been told that this is not a method to determine accurate positions of vessels.

30 Q. And you've had a particular emphasis on its inapplicability for navigation, that the case?

A. Yes. I read the terms of use of AIS and I read that out to the Court last week, so read that. It's pretty definitive.

Q. And that's at least in part to do with the timeliness of the data, correct?

A. And it says accuracy as well.

Q. Ms Harnett, if you could take us to EB2235 please. This is Mr Clapshaw's evidence. Just for the transcript could we scroll up so we can see which attachment this is to Mr Clapshaw's evidence please. Appendix L. I understand you've read Mr Clapshaw's evidence, Mr McCallum?

A. A while ago.

Q. So this image series shows the AIS vessel positions in a purple colour and shows DML scans in grey with trenches shown in grey. You'd accept, wouldn't you, Mr McCallum, that the AIS tracks shown in purple does seem to neatly align with the scans of dredge marks in the seabed by DML?

A. They might. I'm not – I don't know where this is actually. Whereabouts is box?

Q. That's not really relevant to the question that I'm asking and Mr Clapshaw can tell us about that. But I'm just asking that you agree that there seems to be a correlation there between the purple AIS data and the scan images?

A. I don't know where the purple lines – I haven't seen the evidence or where they came from. I haven't seen this on an MBL map.

Q. Well Mr Clapshaw explains in his evidence how he's generated these images, and if you don't recollect what he says you can refresh your memory later. But I'm just asking whether you accept that there's a good correlation between those purple lines and the grey trenches? If you don't know, that's fine, please just say you don't know.

A. Yeah, I don't know. I don't have enough detail to give you that.

Q. So if I've understood your evidence correctly, Mr McCallum, since mid-2006 no one else has extracted sand in the offshore area, it's all been done by MBL?

A. Yeah, I believe it's around about that date, yeah.

Q. So this application that we're here for today, it started life as a renewal of an existing consent by Kaipara which held that consent, didn't it?

1210

A. Yeah, the original offshore consent was obtained by Kaipara. Prior to that, Kaipara had extracted sand on the inshore, within the inshore area,

and for the first number of years Kaipara did the extraction on the consent. We came in, I was going to say somewhere three to 500,000 cube into it. I haven't got the exact numbers.

5 Q. So my question was, that this application that we're here to talk about today, started life as a renewal by Kaipara, not by your company, isn't that right?

A. Yeah, correct.

Q. But you had the exclusive right to exercise the consent from Kaipara, didn't you?

10 A. We did.

Q. So your continued offshore –

A. After they stopped extracting it.

Q. At the time this application was made?

15 A. Yeah at the time of this application, we had the exclusive rights for the original consent.

Q. So your continued offshore extraction depended on the success of Kaipara's application, didn't it?

A. In the offshore region, as you're aware we also applied –

Q. Yes –

20 A. – for a midshore consent.

Q. Yes, all right I should ask the question that way. Your continued offshore extractions operations, depended on the success of the Kaipara application?

A. Yep.

25 Q. Now Jennifer Hart gave coastal process evidence to the council hearing on the offshore consent application for Kaipara, when it was the applicant, didn't she?

A. Correct.

30 Q. And I've sent you a copy of her evidence to refresh your memory from. Have you had a chance to have a look at that document Mr McCallum?

A. Had one for Shaw Mead's. I didn't have Jennifer Hart's, I had Shaw Mead's, got that there.

Q. I did provide a copy of Jennifer Hart's evidence but Ms Hart, we're not going to get into the detail of it. You would have read her evidence at the time of the hearing?

A. Yeah, previously I have.

5 Q. And you accept her evidence is dated 12 February 2021, does that sound about right to you?

A. I thought evidence-in-chief could be earlier, going from –

Q. Well –

10 **MR MACRAE:**

It might help my learned friend if I give Mr McCallum a copy of Ms Hart's evidence.

**MS CAMPBELL:**

15 It would help very much, yes. I provided it on Sunday Sir so that Mr McCrae could do that.

**MR MACRAE:**

Yeah, 12<sup>th</sup> of February '21.

20 **CROSS-EXAMINATION CONTINUES: MS CAMPBELL**

Q. And it doesn't mention deep trenches that have been caused by dredging at all, does it?

A. I'll take your word for it, I'd have to read it again, I'll take your word for it. I was under the impression Jennifer Hart didn't know.

25 Q. And a week later, back in February 2021, you filed your own statement of evidence in support of the application didn't you. I've sent a copy of that through to Mr MacRae as well?

A. Yes, yes.

30 Q. So you didn't mention the existence of the trenches in that evidence to the Commissioners, did you?

A. No.

Q. Even though you'd known about them for more than two years at that time?

A. Yes, correct, since December/January '19, December/January '19.

Q. And yesterday Mr Todd said that you hadn't told him about the trenches either. Were you here to hear that part of his evidence yesterday?

1215

5 A. I heard that and I wasn't sure whether that was right or wrong. I would've imagined Mr Todd had been told at some stage of the evidence when the evidence was found. I don't know the date, and I can't get to the bottom.

Q. Well Mr Todd's evidence is that he wasn't told and he's on oath or on (inaudible 12:15:16). So I have to assume that that's correct?

10 A. The first time. Yes so I agree with Mr Todd, that's fine.

Q. So he was your coastal processes expert who was giving evidence for you in relation to a resource consent application that you would be exercising if granted, and you didn't tell him about the presence of these trenches up to 2.4 metres deep?

15 A. I'm not aware whether we told him or not and obviously something slipped up and we –

Q. He says he wasn't told.

A. – and we didn't, if he said we didn't then we didn't. So we slipped up.

Q. Because that would affect his ability to give you appropriate coastal processes advice wouldn't it?

20

A. Maybe, maybe not.

Q. Well Dr Mead (inaudible 12:16:06) evidence of those deep trenches to the council hearing and it's fair to say that their existence became an issue of some significance to the council's commissioners didn't it?

25 A. Yeah it certainly was a surprise for them.

Q. And you said in answer to questions from Ms Ulrich that Kaipara then worked with the council to establish in 2021 an exclusion zone. So that the existing deep trenches wouldn't be the subject of further extraction, is that right?

30 A. That's correct. That's after the hearing. Previous to that we worked with Kaipara and put our own exclusion zone in around it.

Q. Right, now the statement of evidence that I provided to you, that's your rebuttal evidence, there's a document, it's got the name EV76.@Mccallumrebuttalevidencecorporate, and I wonder if Ms Harnett



could bring that one up on the screen please. Yes that's it, when you open it up it's actually called Statement of Evidence in Reply of Fraser McCallum and it's dated the 23<sup>rd</sup> of February 2022. So this is roughly a year after your first statement of evidence when the hearing was reconvened, I think it was interrupted for COVID and other reasons. Do you recognise this Mr McCallum?

A. Yes I do.

Q. If Ms Harnett could please take us to paragraph 17. Thank you. If you could just read that to yourself Mr McCallum, just familiarise yourself with your evidence again. And let me know when you're done.

A. Yes.

Q. So in here you, in response to Dr Mead's February 2021 evidence, you've acknowledged that some turning with the dredge sheet down had been undertaken haven't you? And that you've spoken to your skippers?

A. Yeah, wider turn and sharper turns.

Q. And sorry I asked you a double question then. And so you raised the matter with your skippers you say in your evidence?

A. Yeah.

1220

Q. Ms Harnett if you could please bring up for us EB2638, it's part of annexure 8 to Dr Mead's evidence. So that's an excerpt from a DML scan, isn't it, Mr McCallum?

A. Yes.

Q. And are you familiar with how the title to the document works? Do you see the numbers at the end, that's a date backwards, isn't it?

A. (no audible answer 12:20:17).

Q. So the numbers at the end say "2022/03/28". Do you see those?

A. Yes, the 28<sup>th</sup> of March, it must be.

Q. 28<sup>th</sup> of March 2022. Do you accept that?

A. Yes. Well, I imagine that's what it means.

Q. And so this image we can see here, sort of in the centre of the page and the teal green segueing into the blue, this image shows us those circular dredge tracks, doesn't it?

A. It appears, yes.

Q. If we scroll down to the next page, Ms Harnett, you'll find it's in the same orientation, so you don't need to rotate, thank you. This one here has got the end date "2022/11/27". That's a scan by DML from 27 November 2022, isn't it?

5 A. Think so, yes.

Q. And that also shows circular dredge tracks on it as well, doesn't it?

A. It appears to.

Q. So Ms Harnett, if you could take us back to EB14 please which is Mr McCallum's evidence-in-chief. It actually starts at the bottom of EB13, page 13. It's Roman paragraph (i). Yes, if you could bring up the whole of that paragraph, Ms Harnett. I really want the end, but I'll give the witness the opportunity to read the whole thing. Thank you, perfect. So I'll let you read that for a moment, Mr McCallum.

A. Yes, I've read (i).

15 Q. So, when you say at the end there: "No sand is extracted during this manoeuvre," by which you mean turning manoeuvre, that's not true for every dredge, plainly, is it?

A. No. No, what, as I said back in the previous evidence, the statement of evidence, the turns when the dredge head is on the bottom are generally big, wide sweeping turns and so most of those have been done generally around the exclusion area. And more recently the skippers tell me that one of them particular, so there's up to three small (inaudible 12:23:24), those were all turns within the area. But to do a tight turn is pretty tough on the gear, especially if there's a sea running, with the drag head on the bottom. So, as I say, most of the tight turn, or the tight turns are done with the drag head lifted.

Q. Ms Harnett, could I impose upon you please, and there's going to be a little bit of document, moving around in various documents in the next (inaudible 12:24:17) but if you could please take us to EB1A11. It's paragraph 55 of Mr McCallum's evidence in reply. Just want to start there. And here, Mr McCallum, you're responding to some of Mr Clapshaw's evidence, and if you just scroll down a little further please, Ms Harnett. Paragraph 55, the whole – thank you, perfect. So you say you didn't admit to dredging out of the consented area. So I think you

responded to Mr Clapshaw's paragraphs 72 and 73 and I'll just read it to you, to save a lot of trawling through the documents.

A. Mmm.

5 Q. Mr Clapshaw says: "At the reconvened offshore hearing in February 2022," which is the statement of evidence I just took you to: "Evidence was produced at that hearing by Mr Mead where the third party (inaudible 12:25:45) sonar scan picked up dredge marks less than two kilometres offshore. They were conceded by the McC's." And then Mr Clapshaw gives a reference to your evidence. So could we go back and look at that  
10 rebuttal statement of evidence that we just had up a moment ago. And if we go to paragraph 16 please Ms Harnett, and see you do (inaudible 12:26:26) that there are out of boundary tracks and you say you can only assume that a temporary failure of the technology occurred. Do you see that?

15 A. Yes that's interesting, from our dredge track records we haven't seen the vessel, and particularly when Mr Clapshaw complains to the Auckland Council and we send through (inaudible 12:27:09) associated with, we haven't seen evidence from those on using a proper navigational system to mark the boundaries of the consent, we haven't seen evidence of the  
20 vessel being out of bounds and I think this was also verified by DML when they did the caucusing, the work for the caucusing group and did not find any dredge tracks outside the consented area. So once again, I'm not sure about Mr Clapshaw and Mr Mead's accuracy and if they're using AIS to position things, I don't know where they get their mean high water  
25 spring mark from. But once again -

Q. Well Mr Clapshaw – you continue.

A. Once again, DML were the ones who went and did multibeam, and a proper multibeam, not the side scan sonar, of the area and surrounding the consented dredging areas and did not find any dredge trails outside  
30 it, so that confers with our understanding.

Q. So you don't accept that there's evidence that you have dredged outside the consent boundaries, is that what I take your answer to be?

A. I think if Mr Clapshaw or Mr Mead, Dr Mead sorry, was using AIS to position vessels I don't have faith in that. From our evidence and from all

our tracks we've returned to the council, when either Mr Clapshaw has made his complaints and there have been numerous ones of those, it appears from our tracks that the vessel was within the boundary.

Q. Well Mr Clapshaw –

5

**THE COURT: JUDGE SMITH**

Q. Potentially, the question Mr McCallum is a straightforward one. Do you accept that the dredge dredged sand outside the boundaries of the consent? I don't think we've had an answer to that question yet.

10 A. Yeah look your Honour, I haven't seen from our evidence (inaudible 12:29:42)–

Q. (inaudible 12:29:42) I'm saying do you accept it or not, it's a yes or no I would have thought.

A. I haven't seen (inaudible 12:29:51) consented area.

15 Q. That doesn't answer the question.

A. I have not seen that.

Q. I'm going to have to require you to answer the question. Do you accept that the vessel has dredged sand outside the consented area?

A. No, not that I'm aware.

20 Q. Thank you. Carry on Ms Campbell.

**CROSS-EXAMINATION CONTINUES: MS CAMPBELL**

Q. Mr McCallum, the document that you had to hand earlier was Dr Mead's evidence that I provided a copy back to you. Ms Harnett that's titled "EV67.sub (inaudible 12:30:34) supplementary statement dated 28 January 2022." That's it, thank you. If you could turn to paragraph 4.12 of that please. In that paragraph Mr McCallum, it's Dr Mead's evidence that the dredged trenches are on the shoreward side of the area boundaries and estimated to be up to at least 80 metres shoreward. Do you see that?

30 A. Yeah I read that.

Q. So when you say that you're not aware of a non-compliance of dredging outside the area, you're alleging that Dr Mead is mistaken by, in the order of 80 metres, is that correct?

A. As I said I'm not aware that our vessel was dredging there, I haven't seen evidence from ours, I do not know the accuracy of Dr Mead's evidence.

Q. Ms Harnett if you could please return us to page 1A11, EV1A11 which is the reply evidence. Paragraph 55 again thank you. So you said there  
5 that the marks Mr Clapshaw talks about may well have not been outside the consented area, as the fluidity of the boundaries with a distance from the mean high water springs mark and/or 25 metres depth is subject to mean high water springs. Now I have to confess I don't quite follow that, so it would help –

10 A. I can't explain –

Q. – it would help if we could have – I'd like to ask you a question rather than just having a long explanation. If we could have CV1256, the relevant consent condition up. This is for the offshore consent. Just scroll down a little bit please Ms Harnett, looking at special condition 1, the area  
15 approved for extraction. The extraction area is defined by condition 1 of the offshore consent, as a line running parallel to the coastline, two kilometres from mean high water springs. Do you see that Mr McCallum?

A. Yeah I do.

Q. So that's quite certain, isn't it, that point?

20 1235

A. Yes as long as you can identify mean high water spring. So the dredge, where we dredged in, as I said before, in the EMMPs we were given coordinates for dredge boxes which we then inputted into the MAXSEA and that's what we dredged to, so if you go for instance to EMMP1 and I  
25 think the – it's quite clear, the picture, I think B2 is the bundle, page 561. Yeah, that one. So that was the EMMP designation of the area we were allowed to dredge in and so those are the coordinates we inputted into our MAXSEA and we worked with – you must understand that to be on a vessel at night and to try and estimate where two kilometres is from mean  
30 high water spring would be pretty tricky and contours and things like that. So that's the whole line of attack of ours is to get co-ordinates around dredging boxes so that we can see whether the vessel strays across them or not and to make sure that we actually have definitive lines. So the problem we've got with a lot of Mr Clapshaw's evidence is, as you see

from a lot of his pictures, is he's scaling out from what he purports to be the mean high water spring and comes out a number of metres and, you know, says in some instances we're 35, 40, whatever it might be, inside or outside, sorry, whereas the way we're operating is to the EMMP which was approved by council and all I imagine, and we ran with these co-ordinates. So that's a definitive way of navigating a vessel, not trying to work out where mean high water spring is or the depth of water or things like that.

Q. I understand that. Just I'm trying to understand your comment in paragraph 55 of your evidence in reply about the fluidity of the boundaries with a distance from (inaudible 12:36:51) mark and we've looked at the condition 1 of the consent and we've agreed that that's just a line running parallel to the coastline, and you've now told me that the way you –

A. It's not the only – sorry, yeah, it's not the only boundary, the two kilometres –

Q. I understand that.

A. Yeah, so there's two – this is one of the things, there's two (inaudible 12:37:13) 25 metre seafloor depth contour and whichever's the furthest out.

Q. Perhaps if we could focus on – Mr McCallum, I'm just going to have to ask you, please, to focus on the questions that I'm asking because we are hopping around all over the show and if I could just get some answers to the questions we'll get there but I fear not today at our rate of current progress. I was just trying to sum up so that I could pick up the next line of questions about the 25 metres. So I've now forgotten where I was so I'm going to have to start again. So I'm trying to get to the bottom of your statement about the fluidity of the boundaries with a distance from mean high water springs mark and we've gone to condition 1, we've seen that that gives us a line running parallel to the coastline two kilometres from mean high water springs, and that seems quite certain. You've just given me a long answer from which I drew that the practical way you try and make sure (inaudible 12:38:14) with that line is to input co-ordinates, because I agree, night-time, distances offshore, it's impossible, so you use those co-ordinates to try and make sure that you're complying with

the boundary set as a two kilometre distance from mean high water springs, is that a fair summary?

A. You're also missing out the 25 metre seafloor depth contour.

Q. Yes, I know, I'm going to come to that next.

5 A. You've got to bring both those together so it's not a line as such from the mean high water spring because that obviously moves in and out with the shoreline. It's the distance furthestest between that, so there is that line, but there's also a line (inaudible 12:38:59). We've got to be deeper than both those points.

10 Q. Yes.

A. So at some stage, two ks is further away. At some stage, 25 metres depth is further away. So you've actually got to use two of those points at the same time. But what we did to try and actually use it, like I said we use those – that (inaudible 12:39:26) which you can see that we present – well, came from the EMMP.

15 Q. Yes. So in addition to having to be further away than the two kilometres from mean high water springs, you must also be in water that's below the 25 (inaudible 12:39:40) contour, that's what you've just told me, isn't it?

A. Yes.

20 Q. And that's also a fixed point, and I'm almost afraid to add this last part, but it's a fixed point relative to chart datum, isn't it?

A. Yes.

1240

25 Q. So there might be parts of the box that starts two kilometres offshore that aren't deep enough, so you can't dredge those.

A. That's correct.

Q. So, those are two quite certain requirements, aren't they?

A. They are but the most accurate way to position a vessel is to do what the EMMP came up with and we never wrote the EMMP. Dr (inaudible 12:40:29) Professor Healy did and it gave the five coordinates of the box which we could then input into our navigational system so that the vessel could navigate within that area.

30

Q. And so that catches both of those obligations, does it?

A. As I'm aware.

**THE COURT: JUDGE SMITH**

Q. Just to be clear, your understanding is that that EMMP box is at least two kilometres from MHWS and at least 25 metres deep from chart datum.

A. Yes, your Honour, that's what I'm aware of.

**5 CROSS-EXAMINATION CONTINUES: MS CAMPBELL**

Q. Just to finish that off so that we are crystal clear on this. I think that's the opposite to one of the answers you gave to Commissioner Myers where you said that the consent we inherited was from 25 metres so out from – well, it's actually outside the closure depth of 25 metres so some of that is within two kilometres. So, that's not correct based on what we just discussed, you can't extract sand from water that's deeper than 25 and –

A. I totally agree and, as you say, it's conditions one and two here.

Q. Which part did you totally agree with? Just to be clear.

A. Conditions one and two. Twenty-five metres or two Ks, whatever's furthest out.

Q. Mr Todd says that he's given you advice in relation to your last inshore consent application since 2003. You accept that?

A. Yeah, it could've been earlier even. Yeah, it certainly was a long time ago.

Q. So, he gives you his professional assistance in relation to coastal processes and you rely on his advice in that regard.

A. Yes. (inaudible 12:42:37) yes.

Q. Ms Harnett, could you please take us to EB55? Mr Todd's evidence at paragraph 38. So, I'll just let you read that and please tell me when you've done so I don't need to read it all out to the Court. I think in the middle Mr Todd uses "evaluated" and I think he probably means "elevated water levels." Have you finished reading that, Mr McCallum?

A. No. Yep, thank you.

Q. I don't mean to rush, I've read it. So, that's Mr Todd's view of the way beaches work here that you rely on. Are you aware that Ms Hart gives evidence to the same effect that the nearshore area receives an exchange of sand on and off the beach. Do you accept that general



concept that there is sand movement between the nearshore area and the beach?

A. I've got no reason to doubt it.

5 Q. So, in answer to my friend Ms Ulrich, she asked you questions about dredging after Cyclone Gabrielle, do you remember those questions, Mr McCallum?

A. Yes, I do, thank you.

10 Q. And in answer to one of her questions you said: "We'd been up to the beach and seen that there'd been erosion. It's sort of meaningless in terms of what we were then going to do. We were permitted to extract sand and, for us, extracting sand after a cyclone or after a storm doesn't (inaudible 12:45:05) and nobody's put it forward that that would affect anything in terms of beaches or any effect." Do you remember that answer, Mr McCallum?

15 A. Yes, along those lines so I suppose you're correct.

Q. But Mr Todd tells you that storms erode sand off the beach and put it in the nearshore area or the bar and then in calmer periods the beach is rebuilt, Mr Todd tell you that, doesn't he?

A. Yes. He does, you're right.

20 Q. So, you took sand from the nearshore area straight after Cyclone Gabrielle anyway because you were entitled to do that by your resource consent. Is that right?

A. Well, certainly our consent conditions didn't have any conditions which said we couldn't.

25 Q. No.

A. And we're taking most of the sand further out towards the 10, probably the eight to 10 metre mark, a reasonable distance from the shore.

30 Q. So, on the 2<sup>nd</sup> of June this year, you amended the inshore consent application that was still on foot at that time to limit sand extraction to be north of Te Arai point, that's right, isn't it?

A. Yes.

Q. But you continued to extract sand from the area south of Te Arai point using the rollover rights that you had on the expired inshore consents, didn't you?

A. That's correct.

Q. And as the (inaudible 12:46:51) to this appeal, negotiated the swap, if I can call it that, of those rollover rights for the temporary offshore consent. You still continue to exercise those rollover rights, didn't you?

5 A. We did. We certainly reduced the extraction towards, when we could see we actually were going to get a deal. As you're well aware, we've been supporting moving offshore away from the inshore consent since basically almost the date after we got the inshore consent originally and able to do it, the council wanted us to acyt go through a whole new  
10 consenting process and we couldn't afford to do it and, yeah, totally. So, we've always wanted to move away from the inshore.

Q. So, you accept that you continued to exercise your rollover rights on the inshore consent on the nights of 28 and 29 June even, wouldn't you?

A. I can't tell you the dates but I know we were exercising those rollover  
15 rights as we were well entitled to do.

Q. This weekend just been, the 22<sup>nd</sup> and 23<sup>rd</sup> of July, do you know where dredging occurred this weekend just been, Mr McCallum?

A. It's offshore obviously at the moment. And I couldn't tell you exactly where it is. But we can get the extracts tomorrow, if you want them.

20 Q. Do you not know where the dredging was at the present time though?

A. No, it basically is taking the whole area from the southern area, missing exclusion zones up north and then we, depending on the day, where they're tracking back or not. So, we're trying to cover the whole area with an equal proportion from the south to the north. So, no, I can't tell you  
25 but I can find out if you want.

Q. You don't know.

A. It's all recorded.

#### **MS CAMPBELL ADDRESSES THE COURT – TIMING (12:49:32)**

#### **CROSS-EXAMINATION CONTINUES: MS CAMPBELL**

30 Q. Ms Harnett, could you please take us to EB2227E. It's Mr Clapshaw's appendix J, just close to where we were before. And if we could start with

photos 3 and 4 on 2227. 2227(e) I'm sorry. Thank you. That's the Coastal Carrier isn't it?

1250

A. No it's the Pauanui.

5 Q. Oh it's the Pauanui, thank you.

A. Yep.

Q. So that vessel's 55 metres long is that right?

A. It is 55 metres long.

10 Q. Perhaps Ms Harnett if you could just scroll out so we can keep an eye on both the images on that page please. I know these photos are in a oblique angle but would you agree that using the length of the vessel as a measure, the bow of the vessel appears to be in the order of 75, perhaps 100 metres offshore depending upon which bit of the beach you take your measurement to?

15 A. Well it's interesting because I've got that very photo in front of me which I'd – just scrap paper I'd written on the back of it, but I've gone through this as well and we worked out, first of all we were trying to work out whether the nearshore bar, potentially it's somewhere where the first big wave is. You know, so you can sort of see where there's a broken wave  
20 right on the beach, one that seems to be breaking and one that seems to be standing up, three waves. So when we scaled it off where the extraction point was on the vessel which is about half way down. This is a very old photo by the way, you can tell by the way there's no golf course. We reckoned it was at least at a minimum of 180 plus 130/140 from that  
25 breaking wave.

Q. So just to be clear when you're talking about the breaking wave you're talking about, and the three waves, you're looking at photo 4 aren't you? And those three waves that I see in that image is that right? Mr McCallum?

30 Q. Yeah. I think, it appeared from the photos there's a helicopter flying around and taking photos at different angles. And we had another angle which might be a bit further down which shows part of the helicopter door.

A. Yes. Yes so that one there. See so that one there seemed to be the clearest one to actually try and determine where the nearshore inshore

bar might be compared to where we would (inaudible 12:53:37). So in this vessel the drag head is about half way, sorry it's not a drag head it's a stationary dredging, so this probably between I'd say up to most 2015, oh it could have been earlier than 2015, maybe '12 or something like that.

5 So the actual extraction point is about, is to the left to where the white water is coming out of the vessel. And so when we scaled off, the bin size is 25 metres, when we scaled off from that we got at least 118 metres (inaudible 12:54:20) the sand started to get dark outside that breaking wave.

10 Q. That's with reference to photo 5 is it Mr McCallum?

A. Number 6.

Q. Photo 6?

A. I think I've sent that through to someone, I'm not sure who I sent it to.

Q. So if we go back to the one with the helicopter door because we've talked about that one. So it's your evidence that the point of extraction on that vessel is what does (inaudible 12:55:07) the breaking wave that we see there? Just to be clear.

15

A. So the front of the breaking wave, probably 150-ish. Once again this photo's at least eight to 10 years' old.

20 Q. Oh yes.

A. It could be older.

Q. Mr Clapshaw says that it was taken in 2006 so there's no question it's not a recent photograph, that Pauanui's not dredging anymore is she?

A. Ah no, no not like this for sure. She's not dredging at the moment.

25 Q. And so you've said, you've given an answer about the location of the initial bar in these photographs, how were you locating the initial bar on the photograph Mr McCallum?

A. Probably like everybody, a bit of a guess without getting in the water and measuring it. It appears that the waves are (inaudible 12:56:28). It's –

30 who knows? Nobody can tell you the exact position that I'm aware of.

Q. The waves aren't breaking on the shore then you don't think?

A. Well the waves generally start breaking, it's a surf beach, it's obviously a lovely flat calm day but they don't break on the beach initially they're

breaking further out. You know start with surface, or don't end up on the sand all day long.

- Q. Now we've done this for the offshore consent, I just think it might be worth having a look at the conditions on the inshore consent just to complete the picture. Ms Harnett could you bring up –
- 5

**JUDGE SMITH ADDRESSES COUNSEL/PARTIES – ADJOURNMENT**

**COURT ADJOURNS: 12.58 PM**

**COURT RESUMES: 2.19 PM****CROSS-EXAMINATION CONTINUES: MS CAMPBELL**

- Q. Now, Ms Harnett, could you please bring up CB1454. It should be one of the inshore consents. I just want to be clear about the controls on the inshore consent, Mr McCallum. We had a question, you had a question from Commissioner Myers and you answered by saying that the inshore consent was based on water depth and maybe distance from mean highwater springs. So, thank you, Ms Harnett. This is one of the inshore consents and there we can see in condition 2 the area extraction is defined. Actually, if you could scroll down just a touch please, Ms Harnett. Thank you. So, there's no reference in that definition to mean highwater springs is there, Mr McCallum?
- A. I agree. I don't think I would have said that. I only know about the nearshore like we discussed just before.
- Q. Sorry, Mr McCallum, if you gave an answer to that question, I at least didn't catch it.
- A. Sorry. No, as I'm aware I wouldn't have mentioned the mean highwater spring as I said, and working through that picture you had I'm aware of the nearshore –
- Q. I'm actually not hearing at all, Mr McCallum.
- A. – bar and the 100 metre –
- Q. I don't know whether other people can.

**THE COURT ADDRESSES MS CAMPBELL (14:20:58)****CROSS-EXAMINATION CONTINUES: MS CAMPBELL**

- Q. So, Mr McCallum, I asked you whether, there's no reference to mean highwater springs in that definition of the inter-extraction area, is that right?
- A. I agree with you.
- Q. Sorry, did you say you don't agree with me?

**THE COURT: JUDGE SMITH**

He does.

**CROSS-EXAMINATION CONTINUES: MS CAMPBELL**

5 A. I definitely do agree with you. And I said before that I wouldn't have thought I would reference mean highwater spring with this consent because we talked about the nearshore bar and 100 metres from that.

10 Q. There is also a reference to extraction, a reference to water deeper than five metres, but again that takes us back to the actual water depth measured at the time of extraction, which is a different measure from, measured from chart datum isn't it, Mr McCallum?

A. Correct.

Q. And are you happy to accept from me that the two inshore consents have the same definition of the extraction area, don't they?

A. Correct. Different volumes.

15 Q. Same definition of the area though. Now, I want to (inaudible 14:23:03), Mr McCallum, something that Mr Todd said you'd said because we shouldn't take it from him when we have you here to ask. So last week I understand that in response to a question from Special Advisor Howie, Mr Todd answered that he understood from you that the deeper trenches  
20 did penetrate into the plasticine sands and that the sand hadn't been compacted. It was just as extractable as the Holocene sand. Is that correct that statement?

25 A. It appears to be. At the time of extraction, we weren't aware we were dredging into the plasticine sand, not until our two divers went down and actually visually inspected (inaudible 14:23:57) and could see the plasticine which was quite, it wasn't compacted.

Q. So, when the sand came up the dredge you couldn't see that it was a different colour, or you couldn't see anything different from the Holocene sand?

30 A. No, the sand properties are very similar. We couldn't discern between them. Same particle size, same colour within, yes, there was no noticeable difference.

1425

Q. If we turn to your reply evidence, it's EB1A4 para 15, thank you Ms Harnett. It said there at the tail end of that paragraph, you said that up to that time you'd understood the conditions of the offshore consent encouraged dredging in concentrated areas. That's a reference to condition 3 of that offshore consent, isn't it Mr McCallum?

A. Exactly.

Q. And Ms Harnett, if you could take us to that it's CB1256. I don't think we're in the right bundle Ms Harnett, we're at 128, and I'm after 1256. It looked like you picked on the right think, I don't know what happened, that's it, that looks better, thank you. So that condition does indeed, as you say, talk about best endeavours to extract sand by means of smaller deeper extractions. But it also goes onto say that you were to endeavour to limit those extractions to no deeper than the thickness of the active sand layer doesn't it?

A. Correct.

Q. Do you accept Mr Todd's characterisation of the active sand layer as the thin veneer of Holocene sand?

A. I don't know if it's thin necessarily, it's the Holocene on top of the Pleistocene, depends where it is, how thick it is.

Q. Yes, and Mr Todd gave us a hand annotated version of a figure that became ex 5, that showed us those depths of the active sand layer, which he equated with the Holocene sand, you remember that?

A. Yes.

Q. So not given for us in your evidence, any systems that you use to avoid extracting beyond that active sand layer. And you've told me just now that you couldn't tell visually. So what did you do to avoid breaching that active sand layer?

A. So when those trenches were dug and that could well have been 15 plus years ago, the vessel was the *Coastal Carrier* which had a dredge (inaudible 14:28:13) rather than a draghead, it was only 300 mils wide and would penetrate the ground about 300 mils to the bottom sorry. Got now is new technology, well it's not new but it's new for us of a draghead which is about 1.6 metres wide and penetrating the ground roughly around about 100 mils. So the problem with the old technique was the



guys would come in, set the GPS to end up at, around about that 30 metre mark of the contour, drop the gear and start dredging. And inadvertently, they dredged the trenches which nobody knew was there until early 2019, because the sand wasn't any different, there didn't seem to be any difference in anything, so that's how that all happened.

5

Q. So you've made changes to the current application to avoid that problem continuing?

A. Correct, so we've upgraded the gear, we've extraction cells so that we can monitor where we are and spread the extraction. We've got all those extraction cells, reporting cells. So the idea has changed, in the early 2000s it was to concentrate dredging, we had the similar sorts of comments on the inshore. But since a number of years ago, it's been worked out to have a larger even extraction, it's more beneficial so that's what we engage in now.

10

15 1430

Q. Right, so I just had one final thing on that topic to clarify. In answer to a question from Special Advisor Howie, you told us that it's a very big resource of sand, in the billions of cubes, now would you accept that the Pleistocene sand are billions of cubic metres and the Holocene sand, the (inaudible 14:30:32) thin veneer, is in the order of 82 to 142 million cubic metres, would you accept those figures?

20

A. That's what I've read.

Q. Thank you.

A. (inaudible 14:30:46) billions with the pricing and the Holocene.

25

Q. Ms Harnett could you take us please to the proposed conditions? Condition 18. Now when we get there Mr McCallum, you'll see that this is the condition – there we are, that says that extraction must be limited to no more than 20,000 cubic metres from any cell in a 12 month period. That's in the context of an annual extraction of no more than 75,000 cubic metres, isn't it?

30

A. Where does 75,000 come from sorry?

Q. Actually just in the condition of (inaudible 14:31:50) –

A. Oh sorry, sorry. Yes sorry so you're talking about inside the 30 metre isobath, 75,000 cube?

- Q. Yes, in terms of condition 17 there, sand extraction between the landward boundary of the extraction area, which is the troublesome point we've been discussing, and the 30 metre isobath must not exceed 75,000 cubes of sand during any (inaudible 14:32:19), that's right. That's a good point
- 5 Mr McCallum, so there's no limit, other than the ultimate two million cubic metres on the total amount of extraction beyond that 30 metre isobath, is there?
- A. Well there's not but the issues are obviously the 20,000 cube in each cell but also the longevity of the consent and you know it's pretty pointless to
- 10 think that we'd want to dredge the consent volume two million out in a handful of years rather than try and get some (inaudible 14:33:01) out of it, it's a bit expensive to go through this process every four or five years.
- Q. Yes, so allowing for that you could take a total of 100,000 cubic metres per year for your 20 years?
- 15 A. On average.
- Q. Yes, if you were to spread it out over the 20 years in a consistent-ish sort of fashion (inaudible 14:33:28) –
- A. Yeah, and once again it depends on things like the market, there's a whole lot of issues and any other available sources.
- 20 Q. So it's unlikely that it would be an even 100,000 you'd have some years where the market was busier and you'd extract a bit more and then you'd have to have some years where you extracted a bit less to even that out to be an average of 100,000 a year over the life of the consent, is that right?
- 25 A. Yes, the goal is not necessarily an average of 100,000.
- Q. No. So returning to my question on paragraph 18, about the 20,000. And looking at extraction in that area landward of the 30 metre contour, you could (inaudible 14:34:27) cubic metres a year from just four cells, couldn't you? 20, 40, 60, 80?
- 30 A. You could if you weren't intending to extract evenly over as much of the area as possible, and that's our intention.
- Q. Yes I understand you've said that multiple times in your evidence, it's just that I'm trying to see what the conditions require Mr McCallum, so I'd just like you to humour me while we walk through this. So –

A. We reduced the 80,000 to 20 to try and be a bit more balanced in that way.

Q. Yes, so you could extract your 75,000 from just four cells and then the condition would require you to rest them for 12 months, wouldn't it?

5 A. Correct.

Q. So you could take sand from cells 1 to 4 in year 1, then you might take it from cells 5 to 8 in year 2, and then you could come back to cells 1 to 4 in year 3, couldn't you?

A. If you felt like it I suppose you could.

10 Q. Yes, so you could exercise the consent and I acknowledge you said this isn't your intention, but in terms of what the consent conditions require, you could exercise the consent extracting out of just eight of the cells landward of the 30 metre contour?

A. You probably could but as I say, we haven't got that plan in our minds.

15

**MR MACRAE:**

(inaudible 14:36:02) to the witness Sir, I wonder if Ms Campbell would care to scroll down to the next condition, or scroll up to the next condition. Condition (inaudible 14:36:18).

20 **CROSS-EXAMINATION CONTINUES: MS CAMPBELL**

Q. (inaudible 14:36:45) turn to this question about the 30 metre isobath Mr McCallum, but before I do, I'd just like to get another couple of questions out of the way. Mr Todd has said, and I feel you have to, but I'm not sure where, that the dredge works best in longer runs. So I wonder whether  
25 you could scroll down please to annexure 4 Ms Harnett, to the map that we've looked at previously. So you could exercise the consent by dredging out of cells 1 to 5, the zero series, the front row and if you did that, you'd have five cells with a maximum of 20,000 so you could theoretically extract your 100,000 from those five cells, couldn't you?

30 A. Well you could but that's not the intention –

Q. I understand that.

A. – and the issue with us in terms of trying to get to the deeper water, is there will be times when (inaudible 14:38:11) is low and probably the

vessel is low in the water, that we'll be trying to get out to that 40, the 40 row, that's – until we actually get the vessel out there where it's partially loaded, we won't exactly know whether we can dredge it, but that's – we're hoping that we can get into the 40s and then spread it, basically depending on the weather, the tides and where we've been, spread it from the zeros, the ones, the twos, the threes and the 40s.

Q. If you did extract from that front row, the zeros, one to five, you'd have extracted 15,000 cubic metres in a 12 month period, so on that basis to reach your 75, you could just keep using those five cells and no others, couldn't you?

A. I suppose you could if you wanted to. We're not intending to. Once again.

Q. Yes, so –

**THE COURT: JUDGE SMITH**

(inaudible 14:39:25) correct Ms Campbell that it only applies below 30, then cells 3 and 4 appear to be partially, if not mostly above (inaudible 14:39:37) depth, so in fact the same (inaudible 14:39:41) be talking about two and a half cells that you could – the other cells wouldn't haven't any limit on them, well only – I'm not sure how it would work, because it's not clear in the conditions, it seems to be another major problem with the wording of the conditions, but –

**MS CAMPBELL:**

And I think you –

**THE COURT: JUDGE SMITH**

– does it apply to any portion of any cell being below 25 or 30 metres, then that's, I agree with you and that may even effect Cell 12 but it's a bit hard to tell from here.

**MS CAMPBELL:**

Yes. I think Sir we're all alive to the fact that these conditions are problematic so I probably don't need to ask anymore questions along that line. But I think there is just one arising from what Mr McCallum said earlier. And it's something that comes up in his evidence in reply as well. He says that -

**CROSS-EXAMINATION CONTINUES: MS CAMPBELL**

Q. And you've just mentioned this Mr McCallum, it seems to me you've just told us that you're going to have to see how you go with the 40s series and so they may or may not be able to be extracted from with the present technology. So if we are limited, we can do this both ways with an included expert, but if we're limited to the zeros, there's the 20s and the 30s, that means, that's only 20 cells there that you might be able to extract from. And if we include the 40s series then that would give us 25 potential cells to extract from. Do you agree with that?

10 A. Well that's how we see it, somewhere in that number. It might be up, it could be maybe looking at 53, 54. Once again I will tell you when we've actually tried.

Q. All right. So in your evidence in reply at page EB1A12. It's paragraph 58. You've said in the second to last line there, you've explained this difficulty with the deck and said: "This still leaves 35 cells to extract from" so that should be corrected to 25 as I understand your answer. Could you just consider that Mr McCallum and let me know?

15 A. Yeah look it could be, it's in that range. Sort of the 25 to whatever it is. Sorry this was actually – yeah he we go. There were previous to us reducing the southern boundary, there were another two sets of cells. So there weren't, there was actually seven cells long. So I think that's where the 35 comes from. And then of course, yeah we should have changed that.

20 Q. That's all right, if you could just consider that and just let us know if that just needs a correction to be 25 as you and I just discussed. Just take your time and make sure you've got the facts straight and let us know please.

25 A. Yes. Yes that was when previously, as I say previously in the southern boundary went down to the (inaudible 14:43:21). And it's moved north four kilometres.

30 Q. So you accept that that we're left now with the reduced area with approximately 25 cells to extract from?

A. Yes thank you.

**RE-EXAMINATION: MR MACRAE**

Q. Mr McCallum you were cross-examined on paragraph 59 of your evidence, that's page 17 I think from memory, yes 17. And you were referred to a figure of 25,000 tonnes, I think you converted back to 25,000

5 cubic metres of sand supplied for, as the paragraph says, turf applications, beach replenishments, drainage mixes et cetera. But I think you said in answer to that, was the position some years ago. What is the current position, how much sand can you now supply for those purposes?

A. Currently pretty much very small amount, a very small amount if not zero.

10 What we are doing, we are purchasing sand from further afield and trucking it in for some applications. But none of the Pakiri sand, all the Pakiri sand is currently going for concrete production that I'm aware of, maybe a little bit to landscapes, but very little.

Q. And you're concentrating about the trenches and Ms Campbell raised with you, Mr Todd's statement but I think what he actually said was he didn't know about them, when he prepared his statement of evidence, rather than that you hadn't told him, but the difference may be slight. (inaudible 14:46:17) in respect of advising Mr Todd I think. So far as the council's concerned, what was your state of knowledge about what

15

20 Kaipara had told the council or did tell the council about the trenches back at that time?

A. Sorry, could you just re-ask that question, I didn't quite get it?

Q. Yes, referring to the council and its knowledge of the trenches, what was your state of knowledge about what Kaipara might or might not have told

25 them at the time you were told about them in late 2018?

A. We had no knowledge of the council knowing who Kaipara told. Kaipara were the consent holder, we were the extractor and they looked after the monitoring, the running of the consent and the paying of the royalty to iwi. So that was not part of our business and they made it perfectly clear that

30 was their business.

Q. Did you have role in reporting to the council at all about aspects of your extraction operations in the offshore?

A. No, we reported to Kaipara.

Q. So are you aware of when the council first learnt of the (inaudible 14:47:50) of the dredges?

A. No.

5 Q. You were asked questions about condition 3 of the existing offshore consent and you said that the Pleistocene sand was, to put it in a nutshell, equally extractable to the Holocene sand. Is that your understanding of what's meant by the term "active sand layer"?

10 A. As far as I understand, the active sand layer is the sand that's mobilised by either storms, currents or some other physical factor. As I said to Ms Campbell, we had no idea that we'd actually breached the Pleistocene level because it didn't appear any different to us and the properties of the sand appeared the same. There was no marked colour change that a particle size distribution, exactly the same. So no, we had no idea that the dredge dredged, so it appeared to be of a similar sort of  
15 compaction and physical properties to what we've always dredged.

#### **QUESTIONS FROM THE COURT: COMMISSIONER MYERS**

Q. Good afternoon Mr McCallum, can you hear me okay?

A. Yes thank you Commissioner.

1450

20 Q. Just to follow on, on the – video's just frozen, I think I'm back again. The two kilometre boundary, just to clarify, in, so the map in the consent for the application, is the inner boundary the co-ordinates for that, the latitude, longitude, is that at least two kilometres from mean highwater mark?

25 A. Are we talking about the appendix 4 map in the conditions? Is that the map we're talking?

Q. Yes, the appendix 4 map, thank you.

30 A. No, I don't – that, those, that inner boundary relates to the 25 metres or more depth datum. It's, some of the area is within two kilometres from mean highwater mark I believe they've measured and by default I'm sure it will be around about two or within two from mean highwater spring. Mean highwater spring is a bit further up the beach from mean highwater mark.

Q. So, the mean highwater spring, it would be at least two kilometres from that. Is it at least two kilometres from mean highwater spring, not mean highwater mark?

5 A. I think it's actually, we inherited this inner boundary, or this application and I believe the actual inner boundary moved into the 25 metres above, below, sorry, below datum which was actually in some areas closer than what it had been. So, when we have that temporary consent or we've got, sorry, we have the temporary consent, some of those inner cells we cannot use because they are two kilometres, within two kilometres of  
10 mean highwater spring, I believe that is.

Q. Did you just finish, it cut off?

A. Yes, yes. Thank you.

Q. So, mainly it's based on the 25 metre depth, is that correct?

A. Yes, yes, the closure depth.

15 **QUESTIONS FROM THE COURT: SPECIAL ADVISOR HOWIE**

Q. Just following on from Commissioner Myers there, Mr McCallum, if you go to A3 of the common bundle. There's a map there. Do you have that?  
Coming up, there we go.

A. Just coming up now.

20 Q. Yes, there we go. That shows the grey area as the temporary, as the extraction area for the temporary consent?

A. Yes.

Q. And the inner boundary of that is at least two kilometres seaward of the mean highwater mark, as I understand. Is that correct?

25 A. Yes, I think it's, so the mean highwater mark or the mean highwater spring but it appears that we're using mean highwater mark now whereas in the past we used mean highwater spring.

Q. Mean highwater mark would push it a wee bit further offshore, wouldn't it?

30 A. Correct.

Q. The outer boundary of the temporary area is, what, at the maximum reach of the current dredge, is that right?



A. That related to the outer or the seaward side of the two areas we'd been extracting from in the previous consent. So, the idea being that we'd extracted from the whole of the temporary consent area and didn't have time to (inaudible 14:54:39) et cetera.

5 Q. The outer boundary of the grey area would be, what, something metres depth?

A. Yes, early thirties, 30 to mid-thirties.

1455

Q. And you can dredge down to what depths? Comfortably.

10 A. Look roughly about 36.

Q. About 36?

A. Yes 35 to 36 depending whether the barge is full or empty or whether there's a bit of a sea happening and the state of the tide.

Q. Yes of course. Couple of metres in the tide I suppose?

15 A. And a couple of metres in the draft of the vessel.

Q. Yes, yes. So if you went out to – so what would that take you out to, about 38 or something like that would it?

A. Oh look I still think we're talking still about that 36.

Q. Where was the 36 (inaudible 14:55:37) map then?

20 A. Well we were thinking it's outside, around the, in the 40s.

Q. In the 40s, yes okay.

A. Yes.

Q. So if that grey area went out to the other edge of the 40s and the inner area there, that would cover all of your proposed extraction area would it?

25

A. Yes, like I've said we think we'll be dredging out for five of the cells so yes the 01s, 001s, the 30s and the 40s. We think that will be within reach of the vessel. But until we actually get out there, there'd be something in the 36s, 37s, something like that.

30 Q. Mhm, fair enough. But the inner boundary there, is this two kilometre distance from the Mean High Water Mark is acknowledging the sort of return trip as it turns isn't it?

A. That's correct.

Q. So would you still be interested in using the five cells, the 01 et cetera?

A. We would be at night when the fairy terns rest at night.

Q. Oh okay.

A. So we would be at night if that was acceptable.

Q. Oh okay.

5 A. We proposed a night-time condition on that last week.

Q. And just one other topic. There was a bit debate about how coordinates are recorded. You know whether they use decimal degrees or eastings and northings and westings and you name it. What does the (inaudible 14:57:46) on the vessel record it as?

10 A. It's decimals and point decimals.

Q. So degrees and decimals or degrees?

A. Degrees and decimals. But look I'm probably sure you could – look I can't say for sure whether we could change that to degrees, minutes and seconds. But I'm pretty sure at the moment it's in decimals of degrees.

15 Q. Now I'm just –

A. It seems the easting and northing thing is more of a surveying type arrangement. It's not really a nautical one.

Q. Yes, quite. I'm just thinking that if a condition establishes the coordinates, it ought to do so in the same terms that your instrument reads it in?

20 A. Yes please.

#### **QUESTIONS FROM THE COURT: COMMISSIONER PRIME – NIL**

#### **QUESTIONS FROM THE COURT: JUDGE WARREN – NIL**

#### **QUESTIONS FROM THE COURT: JUDGE SMITH**

25 Q. I only have a couple of issues I just want to discuss with you briefly Mr McCallum. The first is what your obligations were as the operator of the consent on the offshore consent. When did you start operating for Kaipara on the consent? Was it after – you said about three to 500,000 cubes in, so do I take it was about –

A. 206,000 I believe. Something around about 206,000 your Honour.

30 Q. Thank you. Were you aware of the conditions of consent?

A. Yes your Honour.

Q. Did you consider yourself to be obliged to comply with them?

A. Yes your Honour.

Q. Because you were asked about various things you mentioned for example, the EEMP or the EMMP, you must have been aware of those  
5 because it appears to have been inserted in a format that you then continued to dredge in, is that correct?

1500

A. Yes the first one, EMMP came out with the consent in the early days, so we inherited Kaipara but that was only for extract south, basically south  
10 of Te Arai Point, down to Pakiri river. And then we were keen to spread the extraction into the northern region. And so I think that EMMP is dated 2012.

Q. So I must express my surprise that you would suggest you wouldn't be bound to report non-compliances to the council, is that your view after you  
15 acquired the entire consent from Kaipara?

A. In 2021, after we acquired the purchase of consent we dealt directly with the council, so we reported to the council –

Q. So you can explain to me what's the distinction in terms of your legal obligation, when you're the operator of the consent but you don't hold the  
20 consent, do you have none of the obligations in the consent?

A. No, we've got obligations in terms of consent conditions, but we were reporting to Kaipara, we were paying Kaipara and Kaipara were dealing with the monitoring. We had nothing to do with the monitoring and there was a gap in information, which is why we were very keen to purchase  
25 the consent to bridge that gap.

Q. So did you provide all of the reports that are required to be provided to the council to Kaipara and Kaipara then supplied them to the council, is that what you're saying to me?

A. No, no your Honour, Kaipara undertook all the reporting.

30 Q. Yes, so I'm saying did you supply them the information, because you had all the base information on your boat, you had to supply it Kaipara didn't you?

A. No your Honour, what we supplied to Kaipara were the dredged, the volumes and the sea state, just the day-to-day reporting that had to be

done. All the monitoring in terms of bathymetric and any other biological monitoring, Kaipara undertook.

Q. So it's an interesting concept to me, so any person can overcome the obligations they have under the consent, they're simply getting a contractor to undertake the work?

A. I don't think that's the case your Honour.

Q. So why would you think you had no obligation to report to the council the trenches?

A. Your Honour we reported, well we didn't know the trenches were there in the first instance. Kaipara told us that in late 2018, early 2019, as I say after that we took our people and went and physically went and dived on the trenches to make sure the bathymetric survey come up was truthful. And then we sat down with Kaipara to work out what we were going to do, well what to be done. Kaipara did refer to the EMMP2 conditions, which were the updated EMMP stated that the whole level of the dredge area could be dropped. Once it was dropped by a metre and a half average, the second tier monitoring would begin and the council would be notified, which was different to the EMMP1 which we were of the opinion was the one. Because that stated that when any dredge trail of any dredging of loads 1.5 metres, that was when the second level of the monitoring was to be instated and the council were notified.

Q. Just given that Ms Campbell spent so long on this and I think other parties addressed the same issue. I just want to give you to explain again why you didn't disclose this to the council when you gave evidence to them?

A. We didn't give the evidence to the council your Honour, we reported the volumes that we were extracting, where and when to Kaipara, who then passed those onto the (inaudible 15:04:57), passed on the royalty amounts to the iwi. So we don't have a direct relationship with the council

—

1505

Q. I find a lot of your, your answers to questions have been concerning because they seem to take what is a clear question and turn it into something else. You gave evidence to the council did you not, Ms

Campbell went through your brief to the counsel, for the application for consent.

A. Oh sorry your Honour, no I was talking about the day-to-day running –

Q. I'm not interested in –

5 A. Yeah okay, sorry.

Q. – I'm interested in my question, not what you want to talk about.

A. Yeah sorry.

Q. I want to give you an opportunity to explain to the Court why you didn't disclose that to the council in your evidence?

10 A. So we didn't, we were the (inaudible 15:05:51) –

Q. Please don't use the word "we" I'm talking about you Mr McCallum. Why did you not –

A. McCallum Brothers Sir.

Q. – disclose it to the council?

15 A. Because we weren't the consent holders Sir. And the consent holder was confident that they hadn't breached the consent conditions.

Q. Now I want to turn now to the question of various datum that have been used throughout this by various parties and firstly I want to check with you, is chart datum lower than (inaudible 15:06:29) NZVD (inaudible 20 15:06:32)?

A. As I'm aware Sir, by about 1.6 metres.

Q. So is it –

A. I'm aware that this is not my specialty.

Q. So the consents in the past that use 25 metres, you told me was based 25 on chart datum, is that correct?

A. Yes, the contour line which I believe was chart datum, below chart datum.

Q. So (inaudible 15:07:03) –

A. (inaudible 15:07:04) on the chart.

Q. A 20 metre chart datum would now be, as I understand it, 21.74 or 21.6, 30 something of that order? In MSL NZVV 2016?

A. Yes.

Q. Was that decision to seek to increase or whichever way you look at it, that you could extract from the (inaudible 15:07:34) in other words you could move from 25 metres would become 23.4 metres in the old chart datum?

A. No I don't believe that was the case, as I say we inherited this inner coordinate of this – well we inherited the whole of the consent application and as I had been made – well as I was informed, it was still the 25 metre and talking about the closure depth was the inner boundary. The MSL (inaudible 15:08:15) seemed to have, to supersede when we're talking about shoreline position, because that, as Mr Todd was saying, you can actually plot that on the coast of New Zealand.

5

Q. So I'd like you to look at appendix 3, or A3, perhaps that could be brought up again and I'm interested in the box at the top left. So could you blow up the box on the top left please? We can see there that the (inaudible 15:09:01) are based on MSL, NZVV 2016. Do you see that?

10

A. Yes Sir.

Q. So the 20 metres would be, in the chart datum about 18.4 or 18.3, do you agree?

15

A. Just the – the chart datum is going to be deeper than the MSL (inaudible 15:09:34) –

Q. I don't know what you mean by "deeper" by deeper you mean it commences deeper or commences shallower?

A. Commences deeper. Oh, this is slightly confusing. Yeah so the -

20

Q. So to achieve a 20 metre depth with chart datum, you'd be about 18.3, 18.4 on the MSL wouldn't you?

A. No, no. No it's the other way round.

Q. It's the wrong way round is it?

A. I think you're subtracting rather than adding.

25

1510

Q. So you're saying that chart datum, 20 metres, which would be 21.6 metres chart datum?

A. No.

Q. Well, that's the point. Which is it?

30

A. I think you add that 1.6 don't you, Commissioner Howie? To the chart datum to get the distance so –

Q. This is the MSL that I've got in front of me.

A. So, Sir, the 20 metres chart datum I believe is 21.6 or whatever it is depth below sea level.

Q. Well, perhaps I better ask Mr Howie first because I'm asking about MSL, not chart datum. So, what is 20 metres MSL in chart datum, Mr Howie?

**THE COURT: SPECIAL ADVISOR HOWIE**

It'd be 18.4

**5 THE COURT: JUDGE SMITH**

Yes, well, that's the point I put.

**THE COURT: SPECIAL ADVISOR HOWIE**

It'd be – oh, below chart, 20 metres below mean sea level would be 18.4 below chart datum.

**10 THE COURT: JUDGE SMITH**

Q. Yes, so essentially as I see it, 1.6 metres is being gained in depth that you can extract to by utilising MSL over chart datum, Mr McCallum?

A. I think it's the other way round. It's the other way round. So, the average depth at 25 metres below chart datum is 26.6 below mean sea level.

15 Q. If you can extract 25 metres below sea level, you're saying that's less you can extract, is that correct? I need to work out the mathematics. Sorry, I've got confused myself (inaudible 15:11:56).

A. The water is deeper.

Q. Which is deeper than the other? MSL is deeper than chart datum?

20 A. No, chart datum is below MSL. So, MSL is a level there, chart datum is about 1.6 metres below it and then so 20 metres below chart datum is 21.6 below MSL. I think I've got that right, Commissioner Howie.

Q. Well, that's what I understand too. So, if that's the case it does seem to me that – we'll come to it later. I'll work it out. There are other people giving evidence who can deal with the issues. There's also various measurements given for MHW, SWM, and there's also the Mt Eden meridional circuit projection, known as the NZGD datum. I don't think anyone other than the EML have utilised that. Are you aware of anyone else that's used the Mt Eden projection datum?

30 A. No, Sir.

Q. So, each of these methods results in different outcomes, doesn't it?

A. Apparently there is a reason for using MSL which is being standardised around the coast. But Mr Stubbing will be able to look and tell us a lot more than I can on this. This is not my cup of tea.

5 Q. Okay, thank you. Those are my questions. I think Mr MacRae was seeking to give some evidence to me or something or you had a submission, Mr MacRae?

**MR MACRAE:**

No, Sir, just (inaudible 15:14:01) but Mr McCallum has covered it. Mr Stubbing  
10 will be called in the morning. He can –

**THE COURT: JUDGE SMITH**

Well, that's right. I'm asking questions around Mr Stubbing's report. That's what I thought would be quite clear, so I can try and understand what's going on but it sounds like I need another lesson from Commissioner Howie on how  
15 to calculate depths.

**QUESTIONS ARISING – NIL**

**THE COURT: JUDGE SMITH**

Now, we're back on track now as I understand it and we move back to your witnesses, Mr MacRae. Unfortunately Mr Stubbing we need to keep over until  
20 tomorrow so... Obviously still struggling through the DML report, struggling more than I thought I was but we'll keep working on that. Who are we going to call next?

**MR MACRAE:**

Mr Officer, Sir, and Ms Hopkins will call them.

25 **THE COURT: JUDGE SMITH**

Thank you, I think they're both in volume 2, I recall. So, Mr Officer first, is it?



**MR MACRAE CALLS**

**ROBERT CAMPBELL OFFICER (AFFIRMED)**

**EXAMINATION: MS HOPKINS**

Q. Can you please confirm your full name is Robert Campbell Officer?

5 A. It is.

Q. And you have filed two statements for these appeals; an evidence-in-chief dated 21 December 2022 and a statement in reply dated 12 May 2023?

A. Yes, that's correct.

10 **THE COURT: JUDGE SMITH**

Ms Bieby did you have any questions of Mr Officer?

**MS BIELBY:**

No Sir, not of this witness thank you.

15

**THE COURT: JUDGE SMITH**

Thank you, Mr Van Mierlo did you have questions of this witness?

**MS SUTHERLAND:**

20 (inaudible 15:16:53).

**THE COURT: JUDGE SMITH**

Oh sorry, I can't see everyone on my screen so I missed you there Ms Sutherland, apologise. And then Ms Campbell?

25

**MS CAMPBELL:**

Sir as we discussed last week, I had a conversation with Mr Littlejohn on Friday night last week and we agreed that he will take the lead in cross-examining these witnesses and I will follow. So if I could be after Mr Littlejohn please Sir.

30

**THE COURT: JUDGE SMITH TO MS CAMPBELL**

Q. Okay well I'm come back to you shortly then if that's all right.

A. Thank you.

**THE COURT: JUDGE SMITH**

Ms Morrison-Shaw?

**MR POU:**

- 5 Sorry Sir I was just racing to get to the button. We're Ms Morrison-Shaw at the moment until she comes back and have no questions for Mr Officer.

**THE COURT: JUDGE SMITH TO MR POU**

- Q. Right for either yourself or for Ms Morrison-Shaw is that right?
- 10 A. Nothing for Ms Morrison-Shaw, I've got one question.
- Q. Okay we'll come to that in a moment then, sorry, just making sure, I don't want to miss you out on the go-through.

**CROSS-EXAMINATION: MS BLACK – NIL**15 **THE COURT: JUDGE SMITH TO MR POU**

So we are at you Mr Pou, you had a question of this witness?

**CROSS-EXAMINATION: MR POU**

- Q. Yes Mr Officer, I was just – your evidence discusses (inaudible 15:18:19), yes?
- 20 A. Yes. In Auckland we trade as Allied Concrete but the actual company name is AML Limited.
- Q. And you say you've got 45 concrete plants, is that throughout the country?
- A. Yes that's from Waipapa to Invercargill.
- Q. Yes and you have four in Auckland?
- 25 A. Yes. Silverdale, Avondale, Penrose, Mt Wellington and Bombay.
- Q. Bombay?
- A. Bombay, yes.
- Q. So there's sprinkled around the outskirts of Auckland.
- A. Two in the centre, one at either end.
- 30 Q. Yes. So to the extent that sand necessarily needs to come from Central Auckland you could quite easily, if there was alternative sands, get them

from say South Auckland or from outside of Auckland without necessarily needing to go into the middle of Auckland?

A. Yes we do that to some extent. So we have four plants as I said and we produce of the order 350 (inaudible 15:19:45) concrete annually. Of that about 280,000 (inaudible 15:19:53) metres is from the plants at Avondale and Penrose, the relatively central plants. And then of the balance perhaps 30,000 at Bombay and 40,000 at Silverdale.

1520

Q. And perhaps probably fairly to yourself your evidence does refer to one of your plants is dedicate to the Pakiri sand, which one is that?

A. The two central ones both have Pakiri sand, the Avondale and Penrose plants. Bombay had Pakiri sand until around about 18 months ago when it became apparent that the availability of that might be (inaudible 15:20:39) and the Pakiri offshore sand is a critical component in the mixes we are supplying to the central rail link project and it was vital to us to maintain sufficient supplies to complete that project.

Q. Do you supply sand for – his Honour has asked other witnesses about some of the infrastructural building that's occurring north of Auckland. For instance, around the Warkworth area. Do you supply concrete there?

A. No, we did what was called our (inaudible 15:21:18). The Orewa to Puhoi or Silverdale to Puhoi section. We did that about 12 or so years ago and we continue to be active in that Silverdale/Orewa area. But as I refer to in my evidence in response, most of our concrete is delivered – the average travel distance for us to deliver concrete in Auckland is about 15 kilometres from each of those sites. So, 15 kilometres north of Silverdale doesn't take you very far towards Warkworth. It doesn't get you past Puhoi really I think.

Q. I was trying to do some calculations in my head but probably my head is a bit blown from the questions your Honour asked the last witness around survey things.

A. You and me both.

Q. Your South Auckland plant, does it source sand from Waikato for instance?

A. So, the Bombay plant was the one which we changed off Pakiri sand 18 months ago and we changed that on to Tuakau sand which is I guess north Waikato. It's just next to Pukekohe there, the source. It's a standard sized site.

5 Q. And Tuakau, that would be a lot closer as well, wouldn't it?

A. It is a little closer. It's more expensive, so...

**CROSS-EXAMINATION: MS WIKAIRA – NIL**

**CROSS-EXAMINATION: MR LITTLEJOHN**

10 Q. Mr Pou's blazed a trail and taken some of the things that I was going to talk to Mr Officer about. Good afternoon, Mr Officer. So, more at a high level really because I found your evidence quite helpful from the perspective of someone who is actually a customer of this raw material. I guess the starting point is, Mr McCallum has confirmed that your company or Allied or AML as you noted it, is a purchaser of McCallums sand and I think that's quite plain from your evidence. But can you just confirm that? You are a customer of McCallums?

15 A. Yes, we purchase quite a lot of sand off McCallums every year.

Q. As I understand the table you put at paragraph 6 of your reply evidence of your, I think what you've referred to as your North Island plants.

20 A. Yeah.

Q. You've got four in Auckland and of those two at the moment are taking a supply from McCallums from the sand, from the offshore area, is that right?

A. Yes, that's correct.

25 Q. And interestingly that's not always been the case, as your table points out. In fact, you've used (inaudible 15:25:07) central city plants, sand from Windstone sourced from the Kaipara Harbour.

A. Yeah. I mean, this table was really a – so, that's correct, we have used sand from other sources. This table is really in response to the evidence of Dr Sharp and what was the lady's name, sorry? I've forgotten it. Sorry, two pieces of evidence (inaudible 15:25:35) which did quite a thorough job of identifying potential sand sources or alternative sand sources

30

across sort of the upper North Island. And really the point I'd like to make is that we are (inaudible 15:25:51) of sources, have tested many of those sources, and in many instances have used those sources or are using those sources. And yet for our central Auckland plants and actually for Bombay as well, if there were sufficient (inaudible 15:26:07) the Pakiri offshore sand would be our preferred sand.

Q. But while that might've been the intention of the table, it actually quite usefully shows how a concrete producer shops around for its raw materials, doesn't it?

10 A. Yeah, I suppose so. I mean, I would just say that we haven't – the Penrose plant I think – please don't hang me if I (inaudible 15:26:37) wrong here but I'd say we've been on McCallums sand at Penrose and also at Avondale since about 2006. So, while we do move around when necessary, we don't do it lightly or every day.

15 Q. Well, I think that date of 2006, if I recall what Mr McCallum said, coincides with a point in time when they acquired rights to operate in the offshore area. So, obviously McCallums increased its offshore or its Pakiri sand supply at around about that time. The other thing you say in emphasising this point in your reply evidence at paragraph 7(a), and I think it's quite revealing, because concrete in its constituents are low value, high volume commodities. Allied is always looking for the closest affordable source that meets its supply volume and technical requirements." So, at present as we've been led to believe, the offshore sand from Pakiri is particularly well-suited to some of the high-density concrete products (inaudible 20 15:27:57) for the central interceptor and for the City Rail Link, is that right?

25 A. Yep, that is correct. Yeah.

Q. And is it a reasonable assumption that the majority of the concrete that you are supplying for those jobs is coming out of the Avondale and Penrose plants?

30 A. Yes, that's – it's coming exclusively out of those two plants.

Q. Okay. Your evidence-in-chief and this is in section 4 where you're talking about the national sand picture, I think is the heading you put up there, at the bottom of paragraph 4.2 you talked about an estimated need for 600,000 tonnes of sand for concrete across Auckland annually but that

under a scenario where concrete production needed to increase, it would lead to a doubling in that amount up to 1.2 million tonnes. Given that concrete, and is generally speaking, you can correct me if I'm wrong, about 40% of the volume of the concrete product, does that mean you're also going to need to produce significantly greater volumes of the other core ingredients? The aggregates and the cement.

1530

A. Yes, yes. So, actually sand, I think we should – it does mean that, can I just clarify a few – some terminologies that I will be using. So, in concrete we have coarse aggregates, which are the bigger stones, they may be crushed or natural stones. And then we have fine aggregates which are just below five millimetres. down to a nominal bottom size of 75 microns. And that's fine aggregate when it's also known, referred to as a "sand component". Now sand can be natural sand and it can be a natural sand like you have in Canterbury which is, covers that full range of materials or it can be a fairly single size sand like the Pakiri sand is or indeed some of these other sands which are only very much single size. They are like one millimetre. Can be nothing in a typical delivery of Pakiri sand that is retained on a two millimetre sieve and nothing that goes past a 600 micron sieve, so it's very much a single sized product. And then you can have manufactured sands and that, and those are just crushed materials that come out of quarries. We use – and that may be referred to as "man sand". Typically, in New Zealand we call it "PAP" and sometimes you might also hear about "crusher dust". Crusher dust is to me very similar to PAP except it's made with lower quality rock and it's made with different crushing technology. PAP goes through (inaudible 15:31:33) crusher and that's quite a nicely shaped product and between. So roughly for concrete, most concretes in New Zealand are about 48% sand being a combination in Auckland of PAP and a fine sand, in our case Pakiri sand, well Penrose goes to Pakiri. So, I'm not sure if that helps or not but I'm just trying to get some of that terminology –

Q. It's all very fascinating as an amateur weekend chemist mixing my own ready-mix concrete already, just pour in the water and make your fencepost. It's actually, it's very interesting to know how much goes into

it. I guess the point I was talking to you about (inaudible 15:32:16) from Mr McIlrath in particular about the demand for growth, how growth in Auckland is going to have a proportional demand in raw materials, concrete being the main one and that translates through to a requirement for there to be secure sand supplies. So, the point I wanted to get you to confirm though that it's not just about the sand, is it? It's going to be about all of the raw materials that are necessary to make concrete?

A. Absolutely. All the raw mat – you know, we'll be seeking, we will need all the raw materials, for sure. Coarse aggregate, fine aggregate, sand, cement.

Q. Where is cement made in New Zealand? Is it made in New Zealand or is it imported?

A. Yes, cement is made, so Golden Bay have a cement plant in Whangarei or just out of Whangarei at Portland. There's a company called HR Cement who import clinker who is the raw material of cement and grind that in Tauranga and Holcim Cement import from Japan and (inaudible 15:33:40) Auckland and Timaru.

Q. So those, supplies of those products are going to have to increase if we're going to grow the city as well, isn't that right?

A. Yes.

Q. The last point I just wanted to talk to you about, and I think it's self-evident from the evidence you've given in your reply, at paragraph (inaudible 15:34:22) of your evidence-in-chief under the heading "Alternatives", you talk about and you say it in the past tense here, you say: "If Pakiri sand was not available, Allied would need to obtain alternatives. Allied has investigated and used alternate sand supplies for the Auckland plant over the years, including Tomarata, Waikato, processed recycled glass and Kaipara Harbour." And then you go on and you look at a list of items there that you would have to consider in the event that this source of sand wasn't available. It seems to me, Mr Officer, you can respond, that as a concrete producer, where you have a range of raw materials that you need to bring together, your core business is going to be interested in ensuring that you can continue to make concrete, isn't it?

- 5 A. Absolutely it is and that's I guess why we are – we had a look at these products in the past, we have (inaudible 15:35:38) happily on Pakiri, if Pakiri's not, we will revisit those, if it's not available, we will revisit some of those alternatives and will continue to and have been investigating others as well.
- Q. Now thank you for your answers Mr Officer, that was very helpful, thank you Sir.

**CROSS-EXAMINATION: REMAINING COUNSEL – NIL**

**RE-EXAMINATION: MS HOPKINS**

- 10 Q. Just two points. Mr Officer you were asked by Mr Pou, about whether Allied is supplying concrete for projects happening north of Auckland. Is there any public infrastructure projects coming up for Allied where concrete maybe supplied?
- A. North of Auckland or in Auckland?
- 15 Q. In Auckland.
- A. Yeah, so there's a – the government keeps talking, well is proposing to build a light rail system, we'd certainly be interested in supplying concrete to that. There's a second harbour crossing, is maybe 10 years in the future, but that's something which we would be of interest. And just in the
- 20 last two or three weeks, we've been asked to put together a proposal for how we would supply concrete for approximately 500,000 metres of concrete airport and that over the next five years. And that's basically twice as high as what would go into CRL if we were to be successful with that. So yes there's definitely (inaudible 15:37:55). And you Allied
- 25 Concrete in Auckland do it, most concrete companies do a little bit (inaudible 15:38:06) in a residential subdivision anywhere in Auckland, you'll find, if you stay there for a wee while you'll see just about every brand of concrete truck turn up. The one you'll probably see the least of is actually Allied, we are much more into the big infrastructure projects,
- 30 the high rise commercial, the big industrial floors that sort of stuff which is near the, you know that's what been (inaudible 15:38:32) I guess, it's



integral stuff, it's (inaudible 15:38:34) interest, that's where the qualities of the and the reliability of the Pakiri sand is important to us.

Q. And can you just explain a bit about the mixed design?

A. So I mentioned earlier that we changed the plants around and including  
 5 actually Avondale and Silverdale, Avondale and Penrose, you'll see they've both got concrete – well one's got concrete sand, one had (inaudible 15:39:01) sand but now has Kaipara sand. And that is to preserve the availability of the offshore sand for the CRL project in particular. The mixes for the CRL project had about a four to five month  
 10 proving process before we were allowed to supply those. So having to (inaudible 15:39:30) not just a matter of, you've no longer got access to that sand, you can change long-term, this other product. It's a drawn out process and as I mentioned in my evidence-in-chief, actually in the past and the Newmarket Viaduct is probably the highest profile one of these,  
 15 our ability to meet the specifications for these projects has been the difference between winning and losing and even when you haven't necessarily been the cheapest supplier of concrete and there's a lot of testing goes into reading those mixes and just a little bit more context in the CRL project we were questioned on a number of occasions where the  
 20 amount of concrete that was supplied didn't match the volumes they were expecting. You know, we supplied 412 metres into one wall they expected 415, we had to explain the difference and if there had been a problem with wall our potential liability was \$20,000,000 so it's very important for us to have faith and confidence that the projects we are  
 25 using in those big projects are consistent and going to perform as we need them do.

1540

#### **QUESTIONS FROM THE COURT: COMMISSIONER MYERS**

Q. Good afternoon Mr Officer, you – so the mixes I understand are different  
 30 if you're using the sand source from the Waikato as opposed to the Pakiri source is that right, so the mix is different.

A. Yes so this is simple analogy, making a concrete is a little bit like baking a cake or baking biscuits, you know you take a number of ingredients and

they're set ratios and you put them in, you know, with the flour and the eggs and the milk or whatever is going in your baking and you turn out cake. In concrete you put aggregate sand, cement, auto – add mixtures to that concrete. If you – the ingredients you will get a different outcome so changing from Pakiri sand which the mix design is set up for to sand from another source would be a little bit like changing I don't know high grade flour to wholemeal flour in your cake. You will still get a cake, you might still do some of what you're expecting but its likely to be not quite what you were aiming for in the first place so we would – and also it becomes more and more critical that you got the right ingredients actually to get in this higher and higher more highly spec'd concretes. If you're just supplying concrete for a standard stand-alone residential house floor on good concrete, you know, 20 MPA concrete that's a measure of strength, you know, your ability to interchange materials is reasonably good. When you get into \$20,000,000 worth of diaphragm wall in the city rail link or you're wanting to pump 1.2 kilometres into the Hunua dam project you've got to have the right ingredients.

Q. Thank you, so is the Waikato, the mix from the Waikato is that more costly than the mix that is made up of the Pakiri sand.

A. So if we were, right off the top of my head I'm not quite sure what the price of sand in the Waikato is compared to the price of sand a Pero's' just as an example but I'd be absolutely confident that if we were using Waikato, you know, sand from Cambridge which is where some of those sandpits are at Penrose it would be more expensive because instead of carting it about 15 kilometres from our perspective from the Ports of Auckland we'd be carting it 120 odd kilometres from Cambridge and, you know, road cartage in a truck and trailer and 30 tonne loads is about \$5 a kilometre so it's going to be an extra \$20 give or take per tonne for that sand into central Auckland.

Q. Thank you, so it's based on the transport costs, no thank you.

A. Yeah so we buy sand at a depot or a supply point and then we pay extra to get it delivered to our location so our sand price is different at Penrose to Avondale to Bombay even when we were using supply point.

**QUESTIONS FROM THE COURT: SPECIAL ADVISOR HOWIE – NIL**

**QUESTIONS FROM THE COURT: COMMISSIONER PRIME – NIL**

**QUESTIONS FROM THE COURT: JUDGE WARREN – NIL**

**QUESTIONS FROM THE COURT: JUDGE SMITH – NIL**

**5 QUESTIONS ARISING – NIL**

**COURT ADJOURNS: 3.48 PM**

**COURT RESUMES: 4.16 PM**

**THE COURT: JUDGE SMITH**

We're at our next witness which I think is tab 17 for us, Mr Gaimster, is that correct, Ms Hopkins?

5 **MS HOPKINS:**

No, Sir. We're calling Mr Donaghue who is tab 14A. The Court may recall Mr Donaghue is providing expert evidence for technical aspects of concrete in replacement of Mr Eatson who become unwell during these appeals.

**THE COURT: JUDGE SMITH**

10 Thank you very much.

**MS HOPKINS:**

I've got Mr Donaghue sitting next to me.

**MS HOPKINS CALLS**

**PAUL DONAGHUE (AFFIRMED)**

15 Q. Can you please confirm your full name is Paul Donaghue?

A. That's me.

Q. And you have filed one statement of evidence in these appeals which consists of evidence-in-chief and evidence in reply dated 12<sup>th</sup> of May 2023.

20 A. Yes, correct.

Q. And very briefly, Mr Donaghue, within your statement of evidence can you just confirm you've provided evidence about manufactured sand.

A. Yes, there's some evidence there, discuss various sands that are in use.

Q. And in questions put to Mr McIlrath yesterday Mr Williams asked him  
25 about a manufactured sand produced by a company called Kayasand. Are you familiar with this company?

A. Yes, I'm familiar with Kayasand, I had a meeting earlier this year with (inaudible 16:18:26) who's the general manager of Kayasand. They have

a system for producing sand from whatever source they can find and they use – would the Court like an explanation? A brief explanation.

**THE COURT:**

I don't know. Ms Hopkins, do we?

**5 EXAMINATION CONTINUES: MS HOPKINS**

Q. Could you confirm, are there any plants operating?

A. No, they have one plant operating in (inaudible 16:18:58) in Sydney, in Australia. There are none in New Zealand.

10 Q. And you've mentioned you've met with one of the representatives. As part of that, are you familiar with how they create that sand?

A. Yes, they take a sand sample, a production line of sand, whatever sand it is and put it through a process where it's blown through a cyclone arrangement and that cyclone arrangement tumbles the sand and separates into the various particle sizes as well as shaping the sand and  
15 then the sand is assembled into whatever grading, if I can call it that, we call it grading. And they supply the sand according to that grading. When I say grading, if we take a sample of sand we'll put it through a set of sieves that starts in five millimetre, the opening on the sieve. But like the sieve you would use a colander almost or a sieve in a kitchen. The first  
20 opening on the top sieve is 4.75 and it drops approximately in half each sieve size as you go down till you get to 0.075 millimetres. We'll shake a sample of sand through that set of sieves and that information, the percentage retained on each size of a sieve will give us what we call a gradian or a picture of the particle size distribution of that sand. And that  
25 particle size distribution is critical to the performance of the concrete. Now, Kayasand (inaudible 16:20:41) give you – match any particle size distribution you want. I haven't seen the technology, the technology doesn't exist in New Zealand. They haven't got it to work yet. There are operational issues that make it very difficult to use. First of all, there's no  
30 waste crusher sand for them to use that they say is their preferred option and any sand that comes from natural (inaudible 16:21:13) or sand that comes out of a quarry is at about 6 or 8% moisture. It's just naturally

adherent and it's come out from underground. That material needs to be dry because the cyclone operation only works when the sand is maximum 1.5% moisture content. So, any (inaudible 16:21:35) put through the sieves you would have to spend a lot of time and effort and money drying that sand before you can use it. So, it's not a cost effective efficient way of producing a sand.

**CROSS-EXAMINATION: MS BIELBY – NIL**

**CROSS-EXAMINATION: MR VAN MIERLO – NIL**

**CROSS-EXAMINATION: MS BLACK – NIL**

10 **CROSS-EXAMINATION: MS WIKAIRA – NIL**

**CROSS-EXAMINATION: MR POU – NIL**

**CROSS-EXAMINATION: MR LITTLEJOHN – NIL**

**CROSS-EXAMINATION: MS CAMPBELL**

15 Q. Just one question, really just arising from the evidence that you just gave, Mr Donaghue. Could you please be able to say something so that I can get you to come up on my screen?

A. Yes, I'm here, hello. Can you hear me?

20 Q. Yes, I can hear you and now I can see you as well, thank you very much. It's always disconcerting asking questions into something of a void. And you just talked about Kayasand and you said they didn't have any plants in New Zealand. Does that include, do you know, whether they have a demonstration plant in the Waikato?

25 A. There was talk of a demonstration plant but nobody that I'm aware of – I haven't been invited to see it. Mr (inaudible 16:24:35) has been working with the Fletcher (inaudible 16:24:38) research and development people as well. They were invited to see it and I'm also on the Aggregate and Quarry Association technical committee and the New Zealand Concrete

Ready Mix Sector Group Technical Committee. Sorry, that's a big mouthful. None of us have been invited to see this plant.

Q. Okay, thank you.

A. So, I can only assume that it's not working yet.

5 1625

**THE COURT: JUDGE SMITH**

Ms Downing's not here, Mr Muldowney wasn't here and I don't know if Ms Scharting's here. Are any of those people here? I did ask you, Ms Black, if you had any questions did I, or did I miss you somehow?

10

**MS BLACK:**

You did ask, Sir, and I (inaudible 16:25:24).

**RE-EXAMINATION: MS HOPKINS – NIL**

**QUESTIONS FROM THE COURT: COMMISSIONER MYERS – NIL**

15 **QUESTIONS FROM THE COURT: SPECIAL ADVISOR HOWIE**

Q. In your conclusion, the second sentence, you say: "This sand is a very high quality product," and you base that conclusion on your paragraphs, in paragraph 17 or other factors?

A. Yes, paragraph 17.

20 Q. So, the answer is yes, the reason you say it's very high quality is as given in paragraph 17?

A. It's one of the reasons that it's a high quality sand, yes. There's a number of reasons it's a high quality sand. It's very consistent, it has a good shape to it, a good cuboid shape, it's non-reactive in terms of (inaudible 16:27:08) and it provides good workability and good compaction if used

25

Q. So, they're the main factors that make it high quality for concrete?

A. Yes, very consistent.

**QUESTIONS FROM THE COURT: COMMISSIONER PRIME – NIL****QUESTIONS FROM THE COURT: JUDGE WARREN**

5 Q. No questions, although I did find interesting your conclusion at 38 about Auckland remaining a world class city. One assumes that (inaudible 16:27:58)

A. I'm from Hamilton, Sir.

Q. Yes, well I'm in Hamilton too so I guess I shouldn't say too much given the amount of lawyers domiciled in Auckland but (inaudible 16:28:08) I have no questions.

10 **QUESTIONS FROM THE COURT: JUDGE SMITH – NIL**

**QUESTIONS ARISING – NIL****WITNESS EXCUSED**



**MS HOPKINS CALLS****WARREN HENRY SCOTT (AFFIRMED)**

Q. Mr Scott, can you confirm your full name is Wayne Henry Scott?

A. Yes, that's correct.

5 Q. And you have filed one statement of evidence, evidence-in-chief dated (inaudible 16:29:35) 2022?

A. Yes, that's correct.

**CROSS-EXAMINATION: MS BIELBY – NIL****CROSS-EXAMINATION: MR VAN MIERLO – NIL**10 **CROSS-EXAMINATION: MS HIEW**

Q. Do you have a copy of your evidence before you?

A. Yes I do.

Q. I will take you to it eventually, but I have a few questions. So the Aggregate and Quarry Association, shall we call it AQA for short?

15 A. Yeah that's fine.

Q. The AQA it is an incorporated society that's correct?

A. That's correct.

Q. Thank you and in your evidence, you refer to AQA as the (inaudible 16:30:57) body that represents construction material companies is that correct?

20

A. That's correct.

Q. And McCallum Brothers, the applicant in this proceeding is one of these companies?

A. Yes they are.

25 Q. Do the construction material companies have to pay membership fees to be a member of AQA?

A. Yes they do.

Q. And just off the top of your head, do you know how much this membership fee is?

30 A. That varies depending on production size and I'm not familiar with what McCallums would be paying in terms of their fee.

Q. That's fine, thank you. I'm just going to bring you to paragraph 15 of your evidence, Ms Harnett if we could bring that up, that's in EV487 page 487. Mr Scott are you at paragraph 15 as well?

A. Yes I am.

5 Q. So at paragraph 15 Mr Scott you point to (inaudible 16:32:04) factors that you say contradicts the most pressing issue facing the aggregates industry, which is the availability of (inaudible 16:32:14) relative to demand, correct?

A. Correct.

10 Q. Could you please read out paragraph 15(b) for me please?

A. "Resources being located within or in close proximity to areas of urban development and consents being unable to be granted for them to be extracted."

15 Q. Thank you, so AQA members not being able to obtain the necessary consents to extract aggregate and sands, that's sort of one of the bigger issues that your – not your sorry, AQA members face?

A. Yes it is one of the biggest issues that the sector faces.

Q. And being the industry body that represents the aggregates (inaudible 16:32:59) AQA do to assist the members with this?

20 A. We generally do some advocacy work with central Government and local authorities, we do some work with the infrastructure commission, and bodies like that, to make them aware of the issues around proximate resources and the ability or inability to get consents to extract them.

25 Q. Thank you that's very helpful. Ms Harnett can we please go to paragraph 5 of Mr Scott's evidence please. Mr Scott (inaudible 16:33:42) the role of AQAs, I can see seven points there, so (a), (b), (c), (d), all the way to point (g), is that correct?

A. That's correct.

30 Q. Ms Harnett I'm not sure if you've got a copy of a document I've sent through to Ms Hopkins, it's the AQA website document, it's a document named the Aggregate and Quarry – that's it, that's it thank you. Can we please go down to page 2, the bottom of page 2 please. Mr Scott, does this look like the website for AQA?

A. Yes it does.

Q. The bullet points that are on the heading what we do, are these the same bullet points in paragraph 5 of your evidence?

A. Yes they are.

Q. They are? What about that first point?

5 A. Oh the first point –

Q. The first point on the website, sorry, yes.

A. Sorry the first point's not there, you're correct.

Q. That's correct, but helpfully you've mentioned it as well in one of your answers, the AQA's role is to (inaudible 16:35:10) and lobby central and  
10 local Government.

A. That's correct.

Q. So as part of representing the aggregates industry, you (inaudible 16:35:22) lobby for the members, is that what you're doing here in this current court proceeding? Lobbying and advocating for your members?

15 A. What we're doing is we don't normally get involved with individual resource consents, unless there is a national significance to them, and in terms of this one we saw there being a national significance to this, both from a perspective of marine extraction and from a perspective of the importance of this resource to Auckland.

20 Q. So you are advocating, you're advocating for McCallum Brothers?

A. We're advocating for the sector as a whole, because the inability of this sand would give to the industry as whole.

Q. I can't take that point any further, thank you. Thank you for answering my questions Mr Scott. Thank you your Honour.

25 **CROSS-EXAMINATION: MS CAMPBELL – NIL**

**CROSS-EXAMINATION: MS BLACK – NIL**

**CROSS-EXAMINATION: MR POU – NIL**

**CROSS-EXAMINATION: MS WIKAIRA – NIL**

**CROSS-EXAMINATION: MR MULDOWNY – NIL**

**RE-EXAMINATION: MS HOPKINS – NIL****QUESTIONS FROM THE COURT: COMMISSIONER MYERS**

Q. Just one Mr Scott, good afternoon. In paragraph 21 you talk about the producing manufactured sand and it possibly requiring five to 10 years to, for lead in time. Do you know anything about the (inaudible 16:37:39) sand and how long that might take to come online.

A. No I'm not familiar with the (inaudible 16:37:44) sand technology, and my experience with manufactured sand has been in Australia where we did not use the (inaudible 16:37:52) sand technology, so yeah I'm not familiar with the (inaudible 16:37:58) sand technology other than a few brochures I've seen of theirs.

Q. Okay thank you, so in Australia were you using that manufactured sand for projects like (inaudible 16:38:11) infrastructure projects or what was it used for?

A. It was used in general concrete supplies, it very seldom, wasn't allowed in high strength concrete mixes, but certainly in general concrete supply it was quite common to use a blend of manufactured sand and natural sand. I worked in New South Wales and Queensland and regional areas and it was quite common for us to use maybe (inaudible 16:38:37) manufactured sand but we used a different process than the (inaudible 16:38:42) process.

**QUESTIONS FROM THE COURT: SPECIAL ADVISOR HOWIE – NIL****QUESTIONS FROM THE COURT: COMMISSIONER PRIME – NIL****QUESTIONS FROM THE COURT: JUDGE WARREN**

Q. Thank you Mr Scott for your evidence. So you're the chief executive officer, there's a board in place, so in preparing this evidence (inaudible 16:39:16) the board met and went through the application and the evidence supplied by the appellants here?

A. Um, they would not have gone through all the evidence supplied by the appellants, they certainly saw mine and what I was proposing to give evidence on.

5 Q. Oh so this is your – you didn't have instructions from the board to give this evidence? This is simply your view of the application and its implications?

A. I had instruction maybe a too stronger word, but certainly the board's support make a submission based on the information I give in here.

10 Q. Yes, so in your conclusion where you say: "AQA supports environmental measures MBL's proposing," I mean that's again just your view, you're no environmental expert are you?

1640

A. I'm not, no.

#### **QUESTIONS FROM THE COURT: JUDGE SMITH**

15 Q. I really only have one question, it's very similar to the others but taking a slightly different tack, given my recent experience with all of these issues. Are you aware that in Auckland a huge amount of building material, including concrete material and rock and dirt, is sent to landfill?

20 A. I'm certainly that there was some, the numbers that the Ministry for the Environment put out on construction demolition waste.

Q. And what were the figures they gave?

A. I think it was in the vicinity of close to two million tonnes a year goes to landfill.

Q. And of that, a goodly percentage comes from Auckland doesn't it?

25 A. That would be correct, yes.

Q. Now some of that material is cementitious material isn't it?

A. It is.

Q. Are you aware of any attempts to remanufacture that, in other words to utilise it as a mix in other products?

30 A. Yeah certainly, probably the largest concrete facility is in Auckland at Atlas' facility in Albany, they have two recycle facilities for primarily concrete waste. In Wellington there's quite a significant one now for concrete and asphalt recycling. So we are seeing an increase in the

amount going to sites for recycling, which is a good thing and we're encouraging that. And I think the waste levies that came in on the 1<sup>st</sup> of July will help that process because there has been actually disincentives for people to actually bring material to work and to recycle.

5 Q. Yes, and I won't go into my recent life on this very topic, but suffice to say that there was almost an incentivisation to place everything in major landfill, rather than recycle. But there is a good prospect of sand and cementitious material being recycled for concrete, do you agree?

10 A. Yes there is, we currently recycle about 2% of demand, so that 2% of our national demand is recycled products. If we could recycle the majority of the two million tonnes, we could get that up to 4%, 4 or 5% which is still quite a bit short from, I mean the UK run at about 11% they're probably the best in the world at it. But you know the problem here has been the availability of that feed.

15 Q. And it's not because, it's just because it's not recycled at the moment and there's no incentive to recycle?

A. That's correct.

Q. And the other point which I'm not taking any issue with is that it will never replace the need for other materials as well in the production of concrete?

20 A. No, that's correct, there just won't be enough of it.

1645

### **QUESTIONS ARISING: MS HOPKINS**

25 Q. Just a couple of points of clarification. Mr Scott, Commissioner Myers asked you about manufactured, your experience of manufactured sand in Australia and you mentioned, I believe it was an amount of 20% that was used in the mix. Now can you just clarify, did that also, does that mix still include natural sand?

A. Yes it does, yes, so it would typically be up to a maximum of 20% of the sand content in the mix.

30 Q. And the question put to you by his Honour Judge Smith about recycling concrete. Now you are aware of the type of product it can be recycled into, for example the type of concrete it can be used for?

A. I'm not that familiar with the types of concrete that it can be used for here, once again which was in Australia, it was used in lower grade concrete mixes, typically footpaths, driveways, so the 20 MPA type mixes. It wasn't used in structural concrete.

**5 THE COURT: JUDGE SMITH TO MS HOPKINS**

Q. Who was next on your list Ms Hopkins?

1645

A. Sir, I've run into a bit of a wall, originally we did not think we were going to get through these witnesses as quickly and Mr Gaimster is now not  
10 available in the last (inaudible 16:45:01) day. So, we had intended to call Mr Stubbing tomorrow morning along with Mr Thompson, Mr Styles, and move through the list that way.

**THE COURT: JUDGE SMITH**

Q. That's fine. Well, why don't we look at –

15 A. Mr Gaimster being called Thursday.

Q. Why don't we look at starting at 9.30 tomorrow to let Mr Stubbing get through his evidence and move on. We don't have enough time to conclude him today. I'll just check with counsel but I had something in the order of an hour. Can I just check who had questions? I don't think  
20 you had any questions, Ms Bielby.

**MS BIELBY:**

No, Sir.

**THE COURT: JUDGE SMITH**

Q. Mr van Mierlo, you had some questions, did you?

**25 MR VAN MIERLO:**

Ten or 15 minutes possibly.

**THE COURT: JUDGE SMITH**

Thank you and Ms Campbell?

**MS CAMPBELL:**

Yes, I'm the same, Sir. I think probably 15 more like 20. Fifteen to 20. Depending upon whether Mr van Mierlo steals all my thunder or not. But I remember from the last time you asked, Sir, that I think we're the only two with  
5 questions for Mr Stubbing so...

**THE COURT: JUDGE SMITH**

I had a third and I can't remember who that was so I'll just see. Ms Black, did you have any questions?

**MS BLACK:**

10 No, Sir.

**THE COURT: JUDGE SMITH**

Mr Pou or Ms Urlich, Morrison-Shaw and Manuhiri?

**MR POU:**

Your Honour, I think we're having that we can't hear you thing but I can tell you,  
15 it looks like you can hear me. After listening to your questions, your Honour. We have no questions of Mr Stubbing. We'll go off and on to come back for the karakia.

**THE COURT: JUDGE SMITH**

Ms Wikaira, did you have any questions?

20 **MS WIKAIRA:**

No, your Honour, thank you.

**THE COURT: JUDGE SMITH**

Mr Littlejohn, did you have any questions?

**MR LITTLEJOHN:**

25 No thank you, Sir.



**THE COURT: JUDGE SMITH**

It may be that – I don't really have anyone else that I'm aware of. Is anyone else wanting to ask questions because it may be that there was an indication that you may be 10 or 15 minutes, Ms Hopkins, or Mr MacRae, to introduce that

5 document and some other points.

**MS HOPKINS:**

That would be about right, Sir.

**THE COURT: JUDGE SMITH**

That's fine, I'm just checking. So, I think we're going to have to hold him over

10 till tomorrow so I'm happy to deal with him first, let him get away, if we start at 9.30. Seems a reasonable compromise and Ms Campbell that should give you sufficient time to check. I think there was at least one other party that wanted to have a look and I'm, as probably now evident to everyone, I'm now struggling with my ins and outs and closer and nearers and all the rest of it. So, I'll need

15 to think, get my head straight by tomorrow morning. I'll just check with the Court, is the Court happy to start at 9.30 tomorrow? I'll take silence as assent.

**THE COURT: JUDGE WARREN**

Yes, no problems, Sir. Can I just get an idea of when Antony Thompson and Tame Te Rangi are likely to be on? Do we have a sense of that? Is that later

20 in the week?

**THE COURT: JUDGE SMITH**

Ms Hopkins?

**MS HOPKINS:**

Sir, we had intended for them tomorrow, starting tomorrow. Depending on how

25 we proceed with our last few witnesses.

**THE COURT: JUDGE SMITH**

Thank you and what about Mr Styles, was he going to be tomorrow too?

**MS HOPKINS:**

Yes, your Honour. We had intended to call Mr Stubbing, Mr Thompson, being Mr Mike Thompson, and then Mr Styles.

**THE COURT: JUDGE SMITH**

5 And then Mr Gaimster or Mr Gaimster is now Thursday, is that right?

**MS HOPKINS:**

That's correct, Sir. So, before Mr Haye.

**THE COURT: JUDGE SMITH**

10 So, Judge, I think I'm relatively confident we'll get to at least one if not both of those witnesses tomorrow.

**THE COURT: JUDGE WARREN**

Ka pai, thank you.

**THE COURT: JUDGE SMITH**

15 This is the other Mr Thompson, Antony Thompson and Mr Te Rangi tomorrow sometime. I think we will start at 9.30 and it doesn't look like the Court has any problem. Does anyone else have a difficulty starting at 9.30? Thank you.

**KARAKIA WHAKAMUTUNGA**

**COURT ADJOURNS: 4.51 PM**

**COURT RESUMES ON WEDNESDAY 26 JULY 2023 AT 9.37 AM****THE COURT: JUDGE SMITH**

Now my understanding is we were moving to Mr Stubbing this morning is the  
5 first witness, unless there's any preliminary issues. Does anyone have  
preliminary issues before I invite Mr MacRae to call his next witness?  
Thankyou. Mr MacRae? Do you have any idea of what number of brief he is?

**MR MACRAE:**

10 Yes Sir, evidence bundle tabs 5 and 5A. Starting at page 170 I think Sir.

**MR MACRAE CALLS****DECLAN STUBBING (AFFIRMED)**

Q. Mr Stubbing, have you produced statements of evidence in this appeal?

15 A. Yes, I have.

Q. Have you produced a statement of evidence-in-chief and a statement of  
evidence in reply (inaudible 09:38:36)?

A. That's correct.

Q. And do you have copies of those with you?

20 A. I do.

Q. Mr Stubbing, there was an issue raised during cross-examination of  
Mr McCallum yesterday, concerning the 25 metre water depth as it  
appears in conditions of the existing or still current offshore consent.  
Have you seen that document?

25 A. I have yes.

Q. If Ms Harnett could bring up that document which is C1 in the common  
bundle, tab C1 beginning at page 1254. Yes just pausing briefly there,  
you'll see from the date below the signature of Chris Carter who was then  
Minister of Conservation that this consent commenced in February 2003,  
30 can you see that Mr Stubbing?

A. Yes.

Q. And so perhaps if we go two pages further down, thank you, and just  
scrolling down to the conditions, in condition 2, you'll see that there's a  
reference to the 25 metre seafloor depth contour, have you had an

opportunity to read around this paragraph other relevant parts of the consent, Mr Stubbing, and if so what do you understand is meant by that reference?

5 A. Yes I have had a chance to read it, and I understand the reference to the 25 metre depth, seafloor depth contour to be in terms of chart datum, based on the chart references description, I believe it's on the previous page.

Q. Thank you. And –

#### 10 **THE COURT: JUDGE SMITH**

Q. Can I just ask a supplementary question Mr Stubbing, just while you're there, do I take it that the 30 metre isobath mentioned in condition 4 also relates to the same chart datum?

15 A. Yeah that's unusual language for a depth contour, but yes isobaths are contours.

#### **EXAMINATION CONTINUES: MR MACRAE**

Q. Mr Stubbing, at the time the consent was issued was there a chart or any other publicly available form of reference from which the 25 metre seafloor depth chart datum could be ascertained?

20 A. The chart that covers the area NZ 522 does not have a 25 metre contour on it, that's an unusual contour for that scale of chart, so from the chart there is no way of determining exactly where the 25 metre seafloor depth contour is.

25 Q. So at the time, what would you as a (inaudible 09:42:18) needed to have done to ascertain the 25 metre seafloor depth contour? 25 metres chart datum?

A. We would resurvey that area –

Q. Using what equipment?

30 A. In 2003 it would have been a single beam echosounder and we would have attempted to establish a tide station nearby to the area, so possibly in the Mangawhai Heads region and then from a nearby standard port, which the nearest is Marsden Point we would have transferred the chart

datum value to the new tide gauge and linked it back to shore based tide gauge benchmarks.

**THE COURT: JUDGE SMITH**

5 Q. Again, could I just ask a supplementary question which might assist us all and save time. When you're talking about the Marsden Point tide datum is that referred to elsewhere as the One Tree Point vertical datum?

A. No, One Tree Point 1964 I believe it is, is a local vertical datum and so that was the level of mean sea level in 1964, it's not, they're not really  
10 mean sea level datums, because mean sea level changes but it is a reference datum when mean sea level was at that level in 1964. The chart datum value is directly linked to the tide gauge record at Marsden Point.

Q. Thank you.

15 A. It's also the gauge in which the predictions for all tides in that area are calculated from.

Q. Thank you, Mr MacRae, again it just rounds things out without us having to go back over the ground again later.

**EXAMINATION CONTINUES: MR MACRAE**

20 Q. Mr Stubbing, at the time and through until the present day, has anyone to your knowledge done that work?

A. Not in this area, no.

Q. So is it the case that the position now remains as you described it in 2003?

A. The position of the 25 metre depth contour?

25 Q. The position as to ease of – or information or lack of information as to where the 25 metre chart datum (inaudible 09:45:04) contour is?

0945

A. So it would still need to be resurveyed if you had to establish where that 25 metre contour was, you would undertake a survey and still link it to a  
30 nearby chart datum value which is recoverable from land based benchmarks.

Q. Thank you. Could I take you to paragraph 25 of your evidence? It's page (inaudible 09:45:36). You explain there that you've undertaken three

surveys for the appellant, McCallum Brothers, and the first was in October 2021. Could you just briefly explain the purpose of that survey?

A. I understood the purpose of that survey was to establish a baseline multibeam echosounder survey of the (inaudible 09:46:10) area 1 and area 2 which I believe to be the offshore consent area.

Q. And did the survey focus on any particular features?

A. Yes, we were very interested in reported trenches, deep trenches in the area.

Q. Sir, the reference to the material that is in the common bundle about the October survey is common bundle C3 commencing at page 1342. And then, Mr Stubbing, you undertook two further surveys and you state what the purpose was and primarily it was to update the status of the dredge trenches, is that correct?

A. That was our understanding at the time, yes.

Q. So, the first of the two further surveys was undertaken in March 2022 and have you produced the heat maps that the survey gave you the data for that indicate the trenches and their state at the date of that survey?

A. Yes. I certainly produced the – I drew the November one and my colleague Bevan – sorry, the other way around. I drew the March one, my colleague Bevan drew the November one.

Q. So, those are the surveys referred to in your paragraphs 25(b) and (c), are they?

A. The survey areas are, yes.

Q. This document, Sir, was supplied to the Court on the 19<sup>th</sup> of July and it's headed with the date 23/07/19 MDL March 2022 offshore exclusion area heat map." And it was produced at the same time as the third one, a third map that I'm going to refer to. And I think Ms Harnett can bring them up, Sir, so Mr Stubbing can confirm that those are the maps he's referring to.

**MS CAMPBELL:**

Your Honour, I'm loath to interrupt my friend's flow but we did get these maps a couple of days ago, Sir, by email and I wasn't clear why they hadn't formed part of the evidence and why they were being provided at this time.

**THE COURT: JUDGE SMITH**

Sorry, I don't quite know where that takes us. Is that an objection or what is that?

**MS CAMPBELL:**

5 Sir, it is an objection, yes.

**THE COURT: JUDGE SMITH**

So, you don't want them produced?

**MS CAMPBELL:**

Well, there doesn't appear to be any reason why they weren't included with the witness' evidence at the time that he prepared both his evidence-in-chief and his rebuttal. So, I don't think they should be produced to the Court unless there's good reason why they are to be produced now.

10

**THE COURT: JUDGE SMITH**

Anyone else in the same position as Ms Campbell? Okay, so, Mr MacRae, why weren't they produced earlier?

15

**MR MACRAE:**

I think we covered that to some extent yesterday, Sir. The reports were originally proposed and listed in the draft list of documents to go into the common bundle and they were specifically requested by – so, the reports show the heat maps. But the – as I understand it, Mr Stubbing, is that correct? The reports show the heat maps, the reports have the heat maps in them.

20

**WITNESS:**

Not the first report, these were only undertaken for the November 2022 and then March 2022 surveys.

25 **MR MACRAE:**

Yes, thank you. So, the reports were initially requested and then the parties of course were all given the chance to indicate whether or not they wanted those

documents in the bundle, no one else did. I think it was Ms Sutherland who originally suggested they should be. She said she no longer wanted to refer to them. So, the reports were removed from the common bundle and ultimately didn't appear as part of it.

5

The second part is, Sir, that this issue was clearly flagged yesterday and of course it was as a result of the late production of the November report that – well, the late notice in giving that to the Court yesterday that Mr Stubbing's evidence was deferred until this morning was a view to giving the parties time to have a look at the maps and the report and the methodology and I think your Honour indicated you'd spent sometime doing that yourself. And so, I anticipated this morning that when I put this documents to Mr Stubbing everyone had assumed everyone agreed that they should be produced and that's what I'm now asking him to do.

15

The heat maps, Sir, were supplied to other counsel on the 19<sup>th</sup> of July which is a little more than a couple of days that Ms Campbell mentioned.

#### **THE COURT: JUDGE SMITH TO MR MACRAE**

Q. So, my understanding is C3 consists of the report that was attached to the, curiously enough, the joint witness statement and that's a report from – I can't even find the date of it, it must be here somewhere.

20

A. October 2021, Sir.

25

Q. So, the October 2021 is referred to by the parties. Is the reason the 2022 one is not attached as well is that because it wasn't given to the experts or because the experts said it was irrelevant.

A. Well, I don't think either of those quite apply, Sir. It was not given to them because no one requested. It was freely available and initially Ms Sutherland did suggest that it go into the common bundle but no one requested it.

30

Q. So, if you don't seek to rely on it, why are we looking at it? Because if you wanted to rely on it you should've put it in the common bundle.

A. Well, Sir, it comes – it was listed as in the common bundle, Sir, as I say. But the reason they're being produced now, Sir, really goes back to your



Honour and I think Commissioner Howie's questions a couple of days ago about the trenches and your Honour indicating that you would want to understand more about the trenches and about their infill and it related back to Dr (inaudible 09:53:33)'s reservation about the trenches as an  
 5 interceptor of cross-shore sediment transport, initially. And that was discussed, Sir. And it seemed helpful to the Court to now ask Mr Stubbing to refer in more detail to the matters that your Honour was discussing at the time and indicated a strong interest in.

Q. Is there anything else you wanted to say before I revert back to  
 10 Ms Campbell?

A. Well, simply, Sir, that the information is relevant and, in my submission, it will be of assistance to the Court and the issue with the infilling of the trenches is a live issue in this appeal. The way in which things have developed, it is particularly relevant now and that's why they're being  
 15 produced, Sir, and that became obvious on the 19<sup>th</sup> of July and they were produced as soon as it became obvious.

**THE COURT: JUDGE SMITH**

Thank you. Ms Campbell, your response?

**MS CAMPBELL:**

20 Thank you, Sir. When Mr Stubbing provided his evidence on the 23<sup>rd</sup> of December last year he referred to three surveys being undertaken by his company. The October 2021, report which Mr MacRae has just referred to in paragraph 25, in that same paragraph he also referred to the March '22 and the November '22 surveys. So each of those surveys was discussed and Mr  
 25 Stubbing discussed a report from one of those three surveys in his evidence, and it was the first, the October report. That report was put in evidence to the Court by me, by attaching it to a copy of the joint witness statements to Mr Reid's statement of evidence, because I do intend to look at that report Sir. I was unaware and indeed until yesterday morning, I had questions for Mr  
 30 Stubbing about whether there were reports relating to the March and November surveys. We have been provided with the data from those surveys but I was unaware of the existence of – well I'm still unaware of the existence of a report

relating to the March '22 survey, I don't know to this moment that there is one, but yesterday morning we got the report from the November 2022 survey which I have had a chance to look at. I've managed, while my friend was speaking, to find Ms Sutherland's email and she's here and may be able to assist in any

5 event, but she did send an email in relation to the common bundle at the beginning of the month where she said, the request for all the information referred to in the joint written statement from the Coastal Processes Conference including the bathymetric reports referred to in it, which is just the November '22 report is withdrawn. So that information, I don't know why Ms Sutherland

10 withdrew it but it may be because she realised it was already attached to a statement of evidence and thus didn't need to be in the common bundle, I'm not sure. But I had no knowledge of either the March or the November – or I don't know whether there is a March report, but if there is I had no knowledge, still have no knowledge of it, and I didn't know about the November one until

15 yesterday. I've now had time to look at that, and I'm content for that report to come in, I still don't know why it wasn't provided and I'll ask the witness that, but I don't know what these heat maps, where they come from, they're not part of the October 2021 report that is appended to Mr Reid's evidence and they're not part of the November 2022 report that was provided to the Court yesterday.

20 So Sir, I'm just unfamiliar with where they come, how they're relevant, and why they're late. I can't make any –

#### **THE COURT: JUDGE SMITH TO MS CAMPBELL**

Q. Okay, so it seems the issue is slightly different to what I understood it. It's not an issue about the report of November 2022, sometime – I think Mr

25 MacRae referred to it as the methodology report, but your concern is about heat maps which you say aren't included within that report. is that correct?

A. Yes. The document that's onscreen -

Q. And that they have no – you're not aware of their source, genesis or

30 anything of that sort and are they referred – and you don't believe they're anywhere else in the evidence of the parties? Or the common bundle.

A. Correct.

Q. Or you don't know?

A. I don't believe so Sir, but there's a lot of material.

**THE COURT: JUDGE SMITH TO MR MACRAE**

Q. So the issue Mr MacRae is not about the report of November 2022, I gather that Ms Campbell was content with the directions made by the Court yesterday. The question of these heat maps which you're now  
5 producing, which she says she's not aware of where they come from, are they in the evidence, if they're not in the evidence then you have to have leave to produce them. Are they in the evidence?

A. Yes. Well no Sir -

10 Q. Whereabouts? Can you give us the (inaudible 09:59:20) –

A. No Sir, they're not in the evidence unless Mr Stubbing produces them and I did ask him to produce them and he said he produced them from one survey and a colleague produced them from the other, and of course part of the reason for asking him to produce them is to ask him to explain their  
15 (inaudible 09:59:49).

Q. Well so they're not in the evidence anywhere, these are not part of the November 2022 report?

1000

A. No Sir, they're subsequent surveys to look at the state of the trenches as  
20 a result of infilling following the initial 2022 report which (inaudible 10:00:11) then stated the trenches in considerable detail (inaudible 10:00:17) –

Q. When were these further heat map surveys done? What dates?

A. Mr Stubbing could tell us Sir, but they were produced – I'd have to ask  
25 him Sir exactly –

Q. I'm not asking about production date, I'm asking about when they were surveyed?

A. Oh the surveys are the ones referred to Sir, the data for the heat maps came from the surveys referred to in Mr Stubbing's paragraph 25(b) and  
30 (c) that is March 2022 and November 2022.

Q. And that information –

A. The –

Q. – isn't supplied anywhere?

A. I'm sorry Sir?

Q. Well he refers to this information in (b) and (c) is it provided in the evidence anywhere?

5 A. Well the issue Sir is they're not in the report as such, the report explains the methodology, so this is the report that I'm also asking Mr Stubbing to produce, and to which as I understand it, there's no objection. But the data for producing these heat maps and the methodology for doing so are both in the survey data and explained in the report.

10 Q. I'm still struggling a little bit to – it may be that Mr Howie or Judge Warren can follow the argument a bit more. So essentially, you say you provided the raw data but not the heat maps, is that, I'm still trying to follow what you have provided and haven't provided.

15 A. It's proposed to provide the November 2022 report which is a report that relates to the March 2022 survey, which explains the methodology taken in the survey and the methodology for producing the heat maps. The heat maps as such were not produced until later, when it became obvious I think as a result of the caucus of expert coastal, coastal experts, that the infilling of the trenches was an issue at least for Dr Mead. And the extent to which it might interfere with cross-shore sediment transport was an issue for Dr Mead. And so these were produced by Mr Stubbing for the information of the parties and the report to indicate the current state of the trenches since, or at least two points in the development of the current state of the trenches since the 2021 survey and in March 2022 in the case of the central survey and I'm sorry, and, yes, and...

20

25 Q. I can't even follow what (inaudible 10:03:35) saying to me.

A. (inaudible 10:03:37) –

Q. I'm lost completely. Let me try and break it down. You're saying that this information was gathered during the survey of, I think you're now saying something about March '22 and November '22, is that right?

30 A. March '22.

Q. Sorry?

A. March '22 and November '22 Sir, that's right.

Q. March '22 and '22, but the heat maps when were they prepared?

- A. I'd have to ask Mr Stubbing for an exact date Sir but after the survey and I think after Mr Stubbing's evidence-in-chief in which he refers to the surveys.

**5 THE COURT: JUDGE SMITH**

- Q. Let's ask Mr Stubbing. When were the two heat maps prepared, if they were on different dates, can you give me both dates?

- A. So the March survey heat map was produced on the 31<sup>st</sup> of October 2022. There is a drawing date on the March 2022 survey sheet.

- 10 Q. And when was that forwarded to either McCallums or the other experts, do you know?

- A. It will have been forwarded to McCallums on the 31<sup>st</sup> of March, sorry, no I don't have an exact date for what date it was forwarded to them but it would've been soon after the production of the heat map.

15 1005

- Q. So probably November 2022?

- A. Sometime around that would be accurate, yes.

- Q. And the November heat map, when was that prepared?

- A. So the version 2 of that November 2022 heat map, was produced on the  
20 21<sup>st</sup> of December 2022.

- Q. And do you know when it was forwarded to MBL or the other parties, just to MBL or to other parties as well?

- A. No, I don't have that date sorry. But again, it would've been, I mean that's pretty close to closedown at the end of the year so I imagine it would've  
25 been in the following days.

- Q. So it comes back to you Mr MacRae, according to Mr Stubbing's evidence, it was provided to MBL and the question then that Ms Campbell's asking, why wasn't that forwarded to the other parties, particularly the experts.

**30 MR MACRAE:**

I think because Sir at that time Mr Todd's evidence-in-chief and of course we didn't have the evidence from the other parties until some months later, was that the trenches, his advice to MBL and his evidence-in-chief confirmed that

the trenches had been in-filling and his view were not any impediment, any significant impediment to cross-shore transport across the closure depth. So at that stage the status of the trenches as it were any significance was not obvious and it only became obvious following receipt of the evidence of

5 Dr Mead and I think Ms John maybe picked up on Dr Mead's point and then following the (inaudible 10:07:28) of coastal experts in late May, the coastal experts agreed the trenches weren't an impediment, the coastal who attended the corporates agreed that the trenches weren't an impediment to cross-shore transport and Dr Mead separately noted two points on which he disagreed with

10 their overall assessment of the extent of cross-shore transport and the effects of the offshore proposal overall and on the beach and dunes. And at that point Sir, they became particularly relevant. So they weren't in the original evidence of Mr Stubbing because he hadn't or we hadn't MBL hadn't appreciated that the trenches would be in issue and then they became relevant after I think, the

15 receipt of Dr Mead's evidence on the 12<sup>th</sup> of April Sir. At least the issue of the trenches became relevant but of course Mr Stubbing's evidence had already been concluded long before that, his evidence-in-chief.

#### **THE COURT: JUDGE SMITH**

Maybe have to take a break and discuss the matter with the Court. Before I do

20 I'll just try and work out Ms Campbell, I'm really struggling to get my head around what's gone on here. Can I just have a moment to park this, I need to find all of the pre-hearing files that I thought we had, I do have them there. This may only be about preliminary hearing which is already a folder in itself. But I seem to remember there was a lot of preliminary argument and repeated

25 applications by Mr Clapshaw saying that all the data had not been provided from those surveys.

#### **MS CAMPBELL:**

Yes, that's right Sir. I think this is a different issue to the issue Mr Clapshaw

30 raised, which was about, as I understand it, and I'm not speaking for Mr Clapshaw, I'm speaking for Friends of Pakiri Beach. But as I understand Mr Clapshaw's issue, it related to the raw data, which was provided to the parties. These heat maps I suppose are an interpretation of that data. But

Mr Clapshaw's complaint Sir was that in his view portions of the raw data were omitted and indeed I think it is the case that he was certainly provided with portions of the data subsequent to some of us other parties. In terms of the timing Sir, it seems to me that at least one of these documents if I've understood

5 correctly, was produced before Mr Stubbing's evidence-in-chief. But certainly both of them were produced prior to Mr Stubbing's evidence in reply. And I am concerned Sir because the way the hearing's been flexible to accommodate witnesses and counsels' availability. We've heard from three of the coast processes experts already and they've not seen this material or had an

10 opportunity to reflect on it. It was provided to me, my friend's quite correct, I've brought up the email and I've got an email from Ms Hopkins on the 19<sup>th</sup> of July, which seems but a moment ago. And it does indicate that with the leave of the Court they will seek to produce this material as exhibits. And I apologise again for my interruption at the outset, but I had thought an application would be made

15 rather than the material would just be led.

#### **THE COURT: JUDGE SMITH**

Thank you, yes I think I had misunderstood your objection to be related to the report itself and that's because I hadn't understood that the heat maps weren't attached to that report and for that I apologise. I do understand the point now.

20 It does seem to me that the concern I have Mr MacRae is this has the potentially to derail the hearing because if I allow this in or the Court allows this in, we're then faced with the prospect of having to re-call the three coastal process witnesses that have already been heard and the possibility of parties seeking that we undertake further surveys to check whether this survey is correct, given

25 it was produced so late. I don't even know the (inaudible 10:12:10) of it you see, so the difficulty for me is how do we assess whether it is relevant to our proceedings and what its relevance might be. You haven't at this stage even suggested what the purpose of all of this is and I think we're entitled to know what point it is you are trying to advance by the production of this document,

30 because that goes to whether or not we would consider it should be admitted. Is this to prove that there are no trenches left, is that the point?

**MR MACRAE:**

Well not quite Sir, if I just go back to what I think the genesis of your question. It arose out of really, your Honour's interest in the trenches and your questions of Mr Todd. And your indication that the Court would be very interested in what

5 the current state of the trenches are and that would need to be explained to the Court. And it felt that this evidence from Mr Stubbing, which arises directly from his evidence-in-chief as it were, the material referred to there. And again, arises, has its genesis in the original survey –

**THE COURT: JUDGE SMITH**

10 Sorry, I'm just going to have to pause you for a moment Mr MacRae, we've just got large hail falling on the building at the moment and I can't hear anything. So just give us a moment, it won't take long.

**MR MACRAE:**

If it's the same shower I experienced earlier Sir, it will be very brief.

**15 THE COURT: JUDGE SMITH**

Yes it is and it's just finished, so I'm sorry I missed the last sentence, if you could just go back, you were just going back to discuss perhaps we just try and pick up wherever you think you can remember from. I apologise for that but it couldn't be helped.

**20 MR MACRAE:**

No point in me speaking if you can't hear me Sir, I'd rather not. I was saying that the base information was provided in the 2021 survey, October 2021 survey and these maps were produced as a result of data gathered in the two later surveys and the methodology for doing so, as I explained in the report, that I'm

25 seeking leave to produce and it was felt that they would be helpful in assisting the Court to understand what the current state of the trenches is, because of course that is relevant to the point at which you will make your determination.



**THE COURT: JUDGE SMITH**

Yes, well I don't think there's an issue anymore about leave for the November report, that's – the Court allowed that in yesterday and gave Ms Campbell some (inaudible 10:15:00). The question is the heat maps and before we take a short

5 break to consider the matter, Ms Campbell, is there anything further you want to say about it? It does seem to me he could lead questions about from his understanding of the data what that meant for the trenches orally, if you follow me, without the maps. But the question is whether the maps materially would assist us or, in fact, create another area of contention.

10 **MS CAMPBELL:**

Yes, and I don't know the answer to that, Sir. As I'm, well I hope I'm not alone, just struggling with the volume of material and being somewhat taken by surprise by things that I can't understand on their own without that evidence. So, I'm not sure what to make of them. That's all, Sir.

15 **THE COURT: JUDGE SMITH**

Thank you, we'll take a short break – sorry, Judge Warren, yes.

**THE COURT: JUDGE WARREN**

Q. Yes, can I just ask Ms Campbell a question because I may have misheard her. So, you received an email from Mr MacRae with the maps on

20 19 July?

A. Yes, Sir, from Ms Hopkins.

Q. Hopkins. Indicating that it may be used in evidence.

A. Yes, Sir. The email reads: "Please find attached two maps showing the extraction exclusion area and trenches which, with the leave of the Court,

25 will be produced as exhibits by Mr Declan Stubbing." So, yes, I have had

–

Q. So "will be." And did you send those to your coastal process experts?

A. Yes, I did and I've not heard anything back from them. We've been engaged in matters daily and these haven't risen to the top, unfortunately,

30 so I thought that they would be in the report and when I took it home last

night and read it found they weren't, so I was just surprised as to where they'd come from.

Q. Thank you.

A. But I have had them since the 19<sup>th</sup>. I perhaps have not focused on them  
5 as acutely as I should have, your Honour.

**THE COURT: JUDGE SMITH**

Any other questions before we take the break? We'll take a 10-minute adjournment, Madam Registrar, we just need to discuss this and reach a view.

**COURT ADJOURNS: 10.17 AM**

10

**COURT RESUMES: 10.26 AM**

**THE COURT: JUDGE SMITH**

Yes thank you, I'll just do a brief minute on this issue so -

5

**MS CAMPBELL:**

Sir, Ms Campbell here Sir. I'm very sorry to interrupt you Sir, just over the break I took the opportunity because I thought I remembered (inaudible 10:27:21), I didn't want to raise it and be incorrect, but Mr Williams wrote to Mr MacRae and  
 10 Ms Hopkins on the 21<sup>st</sup> of November last year, just before their evidence was due in relation to this very issue. And the letter states, we are aware of the surveys that were being undertaken and says, accordingly the Friends request that you now provide the raw data from the surveys and any others undertaken this year, as well as all other relevant information, to allow us and our experts  
 15 and other parties' experts to consider the data and interpret it. To that end we also request that the raw data is accompanied by that which was provided to the Coastal Processes Expert caucusing group in relation to the survey undertaken for the partial consent hearing, that's the report that was provided yesterday – oh sorry Sir, that's the report that we attached in our evidence.  
 20 Such information will include (a) a description of the survey methodology, (b) confirmation of times and dates of the surveys, (c) survey, (d) locations. We hope that the provision of this information can be provided without the need for us to seek discovery formally etc. So Sir, we have been asking for this information since last year and to have it put to us on the 19<sup>th</sup> of July seems  
 25 quite late in the piece.

**THE COURT: JUDGE SMITH**

Mr MacRae?

30 **MR MACRAE:**

Yes thank you Sir. The position Sir is a little more complicated than that Sir. Mr Williams' request was received, it was put to the experts and the experts discussed the request. The experts for Friends of Pakiri and for the other parties and Dr Mead in particular, did not want the reports, they wanted the raw

data and all the raw data was supplied to the experts, Dr Mead and one of the others who had requested it, the request originally came from Dr Beetham and they were supplied with all the raw data, so that they could rework it and draw their own conclusions from it, they could have done their own heat maps from it. That was supplied in February and March of this year.

**THE COURT: JUDGE SMITH**

Thank you, I'm going to have to draw this to a close at some point. Ms Campbell, anything new?

10 **MS CAMPBELL:**

No thank you Sir.

**MINUTE DELIVERED**

**THE COURT: JUDGE SMITH**

Q. I have got to point out at this stage Mr MacRae, you haven't even produced the original report as an exhibit because it hasn't been produced, nor have the heat maps been produced and they'll need to be produced if you want to rely on them in any way. So, I'll just check with Judge Warren that there wasn't anything he thinks I've missed in that.

1035

20 **THE COURT: JUDGE WARREN**

No, no.

**THE COURT: JUDGE SMITH**

Thank you. That'll be typed up. It may be some time before we get that and I don't think it's of any particular moment given it's an interlocutory ruling.

25 **MS CAMPBELL:**

Thank you, Sir.

**THE COURT: JUDGE SMITH**

So, Mr MacRae, I wonder if it wouldn't be sensible for us to produce both the November '22 methodology report as an exhibit number and also those two heat maps as whatever exhibit we're up to, A and B or 1 and 2.

**5 MR MACRAE:**

Yes, Sir. I think it may be 9A and B, Sir.

**THE COURT: JUDGE SMITH**

Well, we should have the report first.

- 10 EXHIBIT 9 PRODUCED – REPORT OF NOVEMBER 2022 SURVEY DML  
EXHIBIT 10A PRODUCED – HEAT MAP DML MARCH 2022  
EXHIBIT 10B PRODUCED – HEAT MAP DML NOVEMBER 2022**

**THE COURT: JUDGE SMITH**

- So, those are now given exhibit numbers and if you could refer to the exhibit if  
**15** people are asking questions about it so that we can ensure that the transcript maintains a connection with the documents we're talking to. So, you were directing Mr Stubbing I think to the first of those, 10A, was it? Or 10B you were asking him to look at, the heat map.

**MR MACRAE:**

- 20** Sorry, Sir, I'm just – as I understand it, the report is 9, Sir?

**THE COURT: JUDGE SMITH**

That's correct.

**MR MACRAE:**

Yes, I think I was directing him first to the report, Sir.

- 25 THE COURT: JUDGE SMITH**

Q. Okay, thank you. So, report exhibit 9. Have you got that in front of you, Mr Stubbing?

A. Yes, I do.

**EXAMINATION CONTINUES: MR MACRAE**

Q. Mr Stubbing, could you first just briefly give an overview of the contents of the report and particularly the methodology in relation to the heat maps.

5 A. So, the report is essentially a standard document that we produce for every survey that details the survey area, the sea conditions, the vessel, the equipment, the calibration procedures, the conduct of the survey and the calibrations that were undertaken, the results of those calibrations, any post-processing that may have been done on the data and then a  
10 description of – sorry, there's some general comments and results about the area and then there is – this particular report has a description of some volume calculations that were undertaken for Mr Todd but no details of the volumes themselves. And then, what we've called the assessment of swale depth and a methodology based on a request that was put to us  
15 to establish a way of determining where the deep trenches may recovered to within half a metre of the surrounding seabed.

1040

Q. I'm looking through a document which appears to be the document produced, it says the 4<sup>th</sup> of the 4<sup>th</sup> (inaudible 10:40:36) revision. But I  
20 don't see, it's in paragraph numbers with headings, which paragraph are you talking about?

A. So heading 12.

Q. Right, thank you. About volumetric change in swale trench areas, is that what you're talking about?

25 A. No, that's 11, so 12 would be "Assessment of Swale Depth".

Q. So you have a different version of the document to us, that's a major problem for this Court, which one is correct. I have one dated the 4<sup>th</sup> of April 2022?

A. Yes, sorry that's my own copy, yes section 13 is the right heading.

30 Q. "Assessment of Swale Depth"?

A. Yes.

Q. That's page 14 of exhibit 9, and you were saying something about that, sorry I got lost because I couldn't find it?

A. It was a, it came about as a request to look at a way to identify parts of the deep trenches that may have recovered to within half a metre of the surrounding seabed.

Q. So at paragraph 2, you say .4 metre, is that incorrect or correct.

5 A. No, that's, sorry we used the value of it, so that the actual value is half a metre, we used a value of .4 to provide some additional, I guess a buffer for any inaccuracies in the methodology or uncertainties in the methodology. So essentially we were trying to make it look worse than it was. It was developed as a process that could aid that determination, so  
10 what we were hoping to gain from producing these heat maps was it would identify areas for us to further investigate.

Q. So once you start drifting away from what the document says we get lost. The fourth bullet point, sorry the third bullet point says: "The resulting seabed images exported to Gitif format and visualised in QGIS. Is that  
15 the heat maps that are 10A and 10B or 10B in this case?

A. They are, the image of the heat map, yes. So the QGIS software is a GIS package, which we can take the surface that is then produced on the actual sheets, we can take that and essentially zoom in closer to investigate.

20 Q. Sorry, personally I'm trying to stick with understanding what's said in the document rather than the extra. So is 10B in this case, is that the resulting image or is the resulting image something else?

A. The resulting image is in 10A.

Q. Right, so that's exported in a Gitif format and visualised in QGIS is that  
25 right?

A. That's correct.

Q. Now carry on with what you were wanting to say about that?

### **EXAMINATION CONTINUES: MR MACRAE**

Q. Mr Stubbing is the technology in the form of the report for November 2022  
30 survey the same as that for the March 2022 survey?

A. Yes it is.

Q. And does the report in fact contain a copy of the heat map produced from?

A. Yes on the following page.

**THE COURT: JUDGE SMITH**

Q. Let's have a look, if we can just pull that up. So this is the figure 12 is that correct or is that something else sorry?

5 A. They're the same, essentially the same just one has the co-ordinates on it, which has gone through to be the final –

Q. So figures 11 and 12 represent what the March one or the November, I've got a bit lost now, that's November '22 is it?

1045

A. Everything in this report relates to the November '22 survey.

10 Q. So figure 11 and 12 are the November survey. Can you just explain to us how those two figures relate to the heat map 10B?

A. So 10B was produced from the raw data from the March '22 survey using the same methodology outlined.

15 Q. I thought 10B was produced from the March – 10A is supposed to be March, 10B is November, or neither of them?

**MR MACRAE:**

I may have numbered them the wrong way around, sorry, Sir.

**THE COURT: JUDGE SMITH**

10B should be November 2022 and 10A March 2022.

20 **MR MACRAE:**

Yes, sorry, Sir. My mistake.

**THE COURT: JUDGE SMITH**

Because we want them in chronological order, otherwise we just confuse ourselves even further.

25 **MR MACRAE:**

Of course, Sir.



**THE COURT: JUDGE SMITH**

Q. So if you look at 10B now properly identified, is that perhaps a closeup version or just a more detailed version of figures 11 and 12, or different?

5 A. They are slightly different because the revision that is finally produced as the A3 sheet, which is the exhibit 10B, it is the same underlying surface, there's just more information displayed on the exhibit 10B with the co-ordinates of the volunteered exclusion zone labelled.

**EXAMINATION CONTINUES: MR MACRAE**

10 Q. And Mr Stubbing, can you just explain the difference, as it were, or the purpose of exhibit 10A?

A. The purpose was to identify areas in the deep trench area where the seabed may have recovered to within half a metre of the surrounding seabed. Sorry, the seabed in the trench. So the trench is where they had recovered to within half a metre of the surrounding seabed.

15 Q. And do you know the purpose of MBL wanting that information?

A. As I understand it, it is to do with their ability to extract from that area. I don't 100% know the origin of that but I believe it was a council directive or a caucus directive that the volunteered exclusion zone could be lifted or adjusted in areas where – or to include areas where the seabed had, 20 or the trench depths had recovered to the surrounding seabed within half a metre.

Q. And what is the purpose of me seeking to produce this map, what's your understanding of the purpose of producing this map to the Court?

25 A. I believe it's to show that there were in the – between the March survey and the November survey there were some areas of that volunteered exclusion zone that had recovered to within half a metre of the surrounding seabed.

**THE COURT: JUDGE SMITH**

30 Q. Can I just ask an additional question while we're still there. At page 14 at the very last sentence talks about an A3 sized plot of the swale assessment is provided alongside this reported survey. Is that 10B or is that another document again?

A. No, that's 10B.

**MS CAMPBELL:**

Your Honour, just before we carry on, I'm sorry, I have gotten very confused about the number documents. Is this one 10B, this blue one?

5 **THE COURT: JUDGE SMITH**

I thought there was some heat maps. The ones we've seen are slightly different again, they're the ones that have – yes, there's two of those. That other one you have appears to be figure 11 or figure 12 from the 2022 report.

1050

10 **MS CAMPBELL:**

I had this one down as 10B and these two as 10A so I'm really at cross purposes.

**THE COURT: JUDGE SMITH**

I think part of the problem might be that the two heat maps are in A3 so all of us who print in A4 have a wonderful time with those.

**MS CAMPBELL:**

So this blue one, is that not an exhibit, because I was provided that in the email of 19 July?

**THE COURT: JUDGE SMITH**

20 Q. Mr Stubbing are you able to help us?

A. Yes, I believe the blue one is the exhibit 10B from the November 2022 survey, and the two page document is from the March 2022 survey.

**MS CAMPBELL:**

25 All right, I have got that right.

**THE COURT: JUDGE SMITH**

That's very helpful. Is that all Ms Campbell?

**MS CAMPBELL:**

Yes thank you Sir.

**CROSS-EXAMINATION: MS BIELBY – NIL****CROSS-EXAMINATION: MR VAN MIERLO**

5 Q. Good morning Mr Stubbing, can you hear me okay?

A. Yes I can, good morning.

Q. I just have a few questions for you and it's about survey methodology and equipment, so it's quite a different topic to what you've just been discussing with the Court. Discovery Marine Limited has undertaken bathymetric surveys at Pakiri for the Applicant in the past in the midshore and the inshore extraction areas, is that correct?

A. They were included in some of the – yes I believe that's correct, yes.

Q. And your evidence is that those surveys were suitable for visualising changes in bathymetry and seabed morphology due to sand extraction or natural phenomena, that's correct? That's what you said –

A. Yes.

Q. – at paragraph 8 in your (inaudible 10:52:28). Now how close to the shoreline can you safely survey if you're requested to?

A. It's a moving target because it really depends on weather conditions and obviously swell in a surf area, I guess dictates how we undertake the survey, it also comes down to the size of the vessel we are using. So the particular vessel we have used on the three surveys for the last three multibeam surveys at Pakiri, I believe we would have a safe working depth of around five metres under the transducer, on a perfect day. So essentially where you have a swell of less than half a metre and hopefully no wind, but possibly a light offshore.

Q. And is there other survey equipment which would be available and using a smaller vessel perhaps – equipment that can be towed behind an inflatable vessel for example, using different equipment and in the right weather conditions, how shallow could you go, or how close to shore?

A. Well under Maritime New Zealand laws we're not allowed to ground the boat, but we can get very close to it, so we've undertaken surf beach

surveys with small vessels on perfect days before, but typically they are – you typically do that on a rising tide only in perfect conditions. It's getting increasingly more difficult for us to justify putting people into an area, an active surf area like that in a Maritime New Zealand registered vessel and we would look very carefully at the benefit of undertaking that work before we would put our people in that type of area. There are not, as far as I'm aware, in New Zealand, sort of remote vessels that could undertake that work in the Pakiri area, just the sheer size of the area that you need to cover. Also the technology we would use would be very different, we wouldn't use a multibeam echosounder in that area, we would use a single beam echosounder.

Q. So you mentioned beach surveys and again I'm just trying to get a clearer answer. In ideal conditions using a small vessel, how close to the beach could you go?

15 A. I'd say one metre water depth. We don't necessarily measure how close to the beach it would be done purely on depth of water at the time of survey.

Q. And that would be done on a high tide or going into a high tide?

A. We'd try and do it on a rising tide, yes.

20 Q. Are you aware of –

A. It is a very challenging area to survey, I should just say, the beach, beaches are very challenging areas to survey.

Q. Are you aware of the topographic beach profiles, so the beach profile measurements that have been surveyed on land?

25 A. I'm aware of them but I have no knowledge other than knowing that they have been undertaken.

Q. Okay, so would it be possible for your company to effectively extend those profiles from the beach out through the sea, obviously bathymetric surveys out to the offshore extraction area?

30 A. It's physically possible but it would take, I mean it would take a team to be on standby for a long time to wait for the weather window that would be suitable, and then I would have to look at how long that actually would take to achieve, to work out how many days onsite we would need. It is definitely possible.

Q. And to the extent that there's challenges around that, am I right in understanding it's the shallow water that presents the challenges and I think you said from five metres onwards, or even a bit shallower than that, it become easier because you're further away from the beach in deeper water.

5

A. That's where the effectiveness of multibeam survey equipment becomes I guess cost effective for full seabed coverage, it is around five metres is typically what we try and aim for.

Q. Thank you for your evidence.

10 **COURT ADJOURNS: 10.58 AM**

**COURT RESUMES: 11.31 AM****CROSS-EXAMINATION: MS CAMPBELL**

Q. Good morning, Mr Stubbing. Can you hear me all right?

A. Yes, I can, good morning.

5 Q. You're probably being very COVID safe there but could I ask you just to wriggle a little bit to your right? It's just you're slightly out of shot for me at least. Thank you. Perfect. Now, Mr Stubbing, were you here or online when I cross-examined Mr Todd?

A. No, not for the full of it. I was in and out, dealing with other matters.

10 Q. Ms Hartnett, could you please bring up EB173, paragraphs 11 and 12 of this witness' evidence-in-chief, please? Thank you. Mr Stubbing, you've set out in paragraph 11 the purpose of your evidence. I'll just give you a moment to read those two paragraphs. Let me know when you're down.

A. Yep.

15 Q. So, in paragraph 12 you go on to say: "I provide this evidence in support of the appeals of MBL." Do you see that?

A. Yes, I do.

Q. Now, you say in your two statements that you've read the codes of conduct from 2014 and 2023 and that your evidence complies with them.

20 So, you're aware that you must impartially assist the Court and you're not here as an advocate for any party. Are you?

A. Yes, I'm aware of that.

Q. So, we shouldn't take your statement of support at face value, should we?

25 I wonder whether it might be better if we just delete paragraph 12 from your evidence. Because you've set out above the content and the purpose of your evidence. Would you be happy to delete or amend paragraph 12?

A. Yes, I accept that's a clumsy statement and not as intended.

30 Q. Thank you. Now, if Ms Harnett could take us down a few pages to EB178, please. Right there, thank you. Paragraph 23, you say that the overlap between adjacent sloughs is 25% but in your evidence in reply you say there's an overlap of 15% and I'm wondering which is correct, please. That's at EB5A4 at paragraph 6 at the top of that page.

A. Sorry, which page are you referring to?

Q. In your reply evidence where you say that the overlap of the sloughs is 15%, that's at page 5A4 at paragraph 6 at the top of the page.

5 A. Yes, I accept those don't line up and the statement in that evidence-in-chief of "at least 25%" it's very difficult to maintain an exact overlap. So, we aim for around that 25% mark but when we are actually on site and surveying we can actually stretch that out to improve the efficiency of the data capture. So, that is the percentage overlap between the two sloughs of multibeam data. So, in poor conditions, in poor sea conditions, we  
10 bring that right in because the boat is rolling around a lot. In better conditions we can extend that out so I accept those two don't match. They are targets.

Q. So, I had thought there might be a typographic error but what you're confirming to us is that both statements are correct – well, what you're  
15 confirming is that perhaps 23 should be modified so that it doesn't give the impression that you achieve 25% overlap. It's rather an aim for you. Is that fair?

A. It is an aim, yes.

Q. So, when you've said 15%, you mean 15%.

20 A. But again, that is approximate overlap which I think I state in that it's not an exact science with respect to the overlap. It could be anywhere from 15 to 25, possibly more. If conditions are not favourable. And that really comes down to the online operators assessing the quality of data coming on board as it comes.

25 Q. All right. So, these adjustments that you make to accommodate the conditions et cetera, I've tried to understand the TPUs and the TVUs and the LINZ minus one order, final uncertainties. But I think the point that you make is that this is a very – the methods you might use might vary but the output is a very accurate method of survey. Would you agree with  
30 that?

A. In terms of echo sounding, yes, it is.

Q. Could you explain the qualification that you gave to that answer for me, please?

- A. So, echo sounding, by its very nature, is a challenging process. You are projecting a beam of sound through a water column which has various properties that affect the transmission of that. And so, when we talk in terms of bathometric data being accurate, it can be seen to be a lot broader or a lot less accurate than something you might get on land. So, by saying “accurate” – and then there's also the difference between accuracy and precision, sort of in that comment as well. What we are looking to do is produce repeatable data or data that can be repeated between surveys. So, yeah, the statement of TPU, while it is plus or minus – sorry, while it is .15 at the 95% confidence interval, so essentially that's plus or minus 0.15 metres. In terms of bathometric sounding and hydrographic survey, that is at 40 metres of water depth that is considered pretty accurate. Very accurate in fact, sorry.
- Q. Well, this methodology, if I've understood you correctly, forms the basis for our navigational charts, doesn't it?
- A. Not in this methodology, no.
- Q. Understood. So, this is the best method we have for surveying in water though, you'd accept that?
- A. To achieve what purpose?
- Q. Well, the purpose of your evidence is here explained –
- A. In the purpose of this project we're trying to, I guess, identify the effects of seabed sand extraction, I believe that this is the best methodology.
- 1140
- Q. Ms Harnett, if you could take us back to Mr Stubbing's evidence-in-chief, EB178, para 25. Thank you. So, Mr MacRae took you to this paragraph, Mr Stubbing, and you've set out in (a), (b) and (c) the three surveys that your company's undertaken for MBL. The first one you address in paragraph (a) is the October 2021 survey, do you see that?
- A. I do.
- Q. And Ms Harnett, if you could scroll up a few pages to EB174, paragraph 15, you say at the end of that paragraph that you've been involved in the survey and/or report writing of all bathymetric surveys in these areas.
- A. That's correct.



Q. Were you involved in the surveying for the October 2021 survey?

A. Yes, I believe I was, yes.

Q. So you were out on the boat?

A. Yes.

5 Q. Were you involved in the report writing for the October 2021 survey?

A. No, I was not.

Q. So in your paragraph 25(b), we don't need to go back there Ms Harnett, you've told us there was a second survey in March 2022. Were you involved on the water in the March 2022 surveying?

10 A. No, I was not.

Q. Now you told us in answer to a question from Mr MacRae when you were producing the November 2022 report that the reports were a standard document you produce for every survey. So was there a report prepared for the March 2022 survey as well?

15 A. Yes, there is, yes.

Q. And you've not produced that report to the Court?

A. No, I have not.

Q. Did you write that report, Mr Stubbing?

A. No, I did not.

20 Q. Did you review or approve it?

A. Approved it.

Q. Sorry, I missed the beginning of your answer, it just cut for a moment.

A. Sorry, I approved it.

Q. And we've got the November 2022 survey. Were you involved on the water in the conduct of the November 2022 survey?

25 A. No, I was not.

Q. And we've now got a copy of the report for that survey, and you approved that report again, didn't you?

A. Yes, I did.

30 Q. So when you approve a report, Mr Stubbing, could you explain to me please what that means? Did you have a hand in its writing or did you read it once it was complete? Could you just explain to me what the approval role entails please?

A. It's a review of the raw data that provides information that goes into the report around the TPU calculation and the assessment of relative uncertainty through the crossline comparisons and the reference surface checks that we undertake. And then it is a general review of the contents of the rest of the report.

5

Q. So do I take it from that that you check that the data seems like good data and then check that the report is a fair commentary on the data to the extent that it provides such commentary?

A. That is – that's fair, yes. So the big focus of it is to ensure that the statements of uncertainty that we put in the report match the raw data that it's come from or the data that that's come from.

10

Q. So we've got one report where you weren't involved in the writing and two reports where you didn't write them yourself but you reviewed them in the manner you've just described, is that correct?

15

A. That's correct.

1145

Q. So, if I could take you – just Ms Harnett, if you could bring that document back up again, the evidence-in-chief EB172, paragraph 7. If you could just read paragraph 7 to yourself, Mr Stubbing, and let me know when you're done.

20

A. Yes.

Q. So, for the October 2021 survey, you're involved on the boat survey work, you didn't write the report or review it, but you did read it. is that right?

A. I have read it subsequently, yes.

25

Q. But you didn't provide a copy of that report with your evidence.

A. No, I did not.

Q. So, in terms of the report that you produced this morning, the November exhibit 9, if I could get you to go to that report and, Ms Harnett, if you could bring up the first page of that report or just the beginning. Or the very beginning, the first page please, if we could have a look at the whole page. There's nothing too small on there, even for my eyes. So, this surveying took place from the 25<sup>th</sup> to the 27<sup>th</sup> of November last year, is that right?

30

A. Yes, I believe so.

Q. It says down on the bottom of the page that – sorry, it says over on page 1 where Ms Harnett obviously knew better than I did where I was going. Down at the bottom of page 1 it says here that “data post-processing and reporting was completed at DML’s of course in Tauranga between 5 to 16 December.” Do you see that?

A. Yes.

Q. Was that when this report was prepared? Is this report part of the reporting that’s referred to in that sentence?

A. Yes, it is. Yeah, I believe so. The report may have come slightly later than that and I think there was a few revision updates so that date is probably referring to the first version of the report and data that was submitted to McCallum Brothers.

Q. Yes, because this morning the report that we have in front of us is dated on the front page 31 March 2023. But you said you had a different version to the document that was produced to the Court and the parties. Was that one of the versions before 31 March or was it a subsequent –

A. I mistakenly – yeah, I mistakenly had version 2.1.

Q. Oh, I see. This is report version 2.2, I see. So, your signature at the end, his Honour Judge Smith pointed out, is dated the 4<sup>th</sup> of April. Was that the last time this report was amended?

A. Probably. I can't say with any certainty.

Q. Why did it take so long to prepare this report, Mr Stubbing? It’s five months from the November survey and it’s a relatively short report.

A. Yeah, it is. So, I think it was to do with the addition or the review of the swale assessment that we have done. So, that didn't form part of the original report and so that was then added at a later date at the request of McCallums.

Q. Why didn't you provide a copy of any of the reports along with either your evidence-in-chief or your rebuttal evidence? Which was the 10<sup>th</sup> of May, over a month after this report was prepared.

A. I honestly was not aware that it wasn’t already entered in as evidence. But I have no reason to think that they – these were not produced as evidence as such. They were produced as reports of survey and I guess I didn't know that they should’ve been included.

Q. Ms Harnett, if you could take us to the evidence bundle, EB1838. That's the evidence of Mr Reid where Mr Reid produces these survey reports. That's it, thank you. You may not be aware of this, I just want to give you the picture, Mr Stubbing. Your survey reports ended up being appended to the joint witness statement that the various coastal process experts wrote for the council level hearing of this resource consent application. So, that's how it comes to be at the end of this other document. So, Ms Harnett, if you could scroll down to EB1846 which is after the actual caucusing statement. And I think you said you've read this. 1846 is your survey methodology that Mr Cox was of DML proposed to the caucusing group. Is that what that is, Mr Stubbing?

A. Yes, and I've seen that, yes.

Q. And if you could scroll down a few more pages, Ms Harnett, to EB1853. This'll probably seem like a silly question to you, Mr Stubbing, but this is all new to me. That's an example of an output of your survey, is that correct?

A. Yes. That appears to be the Tauranga ebb tide delta.

Q. This is what the results that we expect from your survey look like, that's right?

A. It's one of many products that can be derived from the data.

Q. Thank you. Like Mr Pou, I'm trying to understand these things. So, if Ms Harnett could move through to EB1859 please. Actually, 1860, 1859 I just a heading, it's not very helpful. 1860. That's the report of the October 2021 survey that you refer to in your paragraph 25(a), the one that Mr Cox prepared and that you subsequently read, is that right?

A. No, he did not prepare that report. I believe that was done by, he's no longer with our company, but it was Dan Inglis.

#### **THE COURT: JUDGE SMITH**

Just for the record, Ms Campbell, I think you mean CB, common bundle, not evidence bundle.

**MS CAMPBELL:**

No, Sir, I'm actually in the evidence bundle because I put this document in evidence attached to the evidence of Mr Reid.

**THE COURT: JUDGE SMITH**

- 5 Oh, I see. Right, that's fine. It seems to be the same one that's attached but that's fine, thank you.

**MS CAMPBELL:**

- I think it I one of impressively few double ups but I think this is one of them, Sir, and I'm just familiar with this one. I'd worked on this one so I'm sorry I've taken  
10 you to the evidence bundle instead.

**THE COURT: JUDGE SMITH**

No, that's fine, it's not a problem. Evidence bundle is fine. As long as it's correct, that's all right.

**CROSS-EXAMINATION CONTINUES: MS CAMPBELL**

- 15 Q. I see at the end of the document that unsurprisingly you are correct, it was prepared by Dan Inglis and I thought it had been signed off by Mr Cox but it's been signed off by Jimmy Van der Pauw. I'm not sure how you pronounce that.

A. Yeah, Van der Pauw, that's correct.

- 20 Q. This is the document that Mr Cox presented to the joint caucusing experts, is that the case?

A. I wasn't involved in that. It's very likely because that was the first survey that was done and I know a lot of that data went to that caucusing group.

1155

- 25 Q. Well, at paragraph 7 of your evidence-in-chief, I don't think we need to go there, Ms Harnett, you've said: "DML provided its hydrographic expertise to the expert caucusing panel at the offshore consent hearing so that the results of the October 2021 survey could be compared to survey results presented during the hearing. This expertise was provided by Greg Cox,  
30 the former managing director of DML. I have read the report of survey he

presented to the expert caucus panel as well as the joint witness statement the panel of experts provided.” So, is this the document that he presented to the expert caucus panel?

A. No, I don't believe it was. I think he reported to the expert caucus – sorry?

5 Q. We are looking at the output of the joint witness caucusing and this is an annexure to their – perhaps we need to go back up to see what the joint expert witness panel says about it and I think, from memory, Ms Harnett, if you could take us to paragraph 16 of the joint witness statement, if you'd just scroll up it should be somewhere after 1846, paragraph 16. So you think there was another document that he presented to the joint, the expert caucusing panel, do you, Mr Stubbing?

A. I know he provided a lot of information comparing or attempting to compare the previous surveys that were done for DML so I understand it was the eco single band echo sound survey and the survey works surveys. I believe he did a lot of work with cross-sections, trying to compare those two, or those three data sets.

15 Q. Yes, that's right. These are all appended to the expert caucusing statements, so at paragraph 15, just a little further up, the experts jointly say: "The survey was undertaken on 9 to 11 October. Mr Cox provided the following results, a report of survey refer to attachment 3. And then if Ms Harnett you could go down to page 1859, there's attachment 3 and that's the report that we're talking about. So this appears to be the report that your Mr Cox presented to the panel, the expert caucusing group?

20 A. That's the one that's referred to there, yes.

25 Q. And if Ms Harnett could scroll down to EB1874-1876. Start with 1874. These are examples of presentation of data from that October 2021 survey, is that right?

A. I have no reason to not believe it. I can't quite read the layer names on the left-hand-side, it's a bit blurry but I'm sure they're part of that report. There was only one survey at that time so that must be it.

30 Q. And so if we could go down to the next one, perhaps if we go to page 1878, Ms Harnett, and I think your orientation will still be correct. So the different colours here represent that gradations from shallow, the left-

hand orangey end to deeper being the green end on the right-hand-side, is that correct?

A. That's correct, yes.

5 Q. And in the image in the middle we can see a number of curves around the number minus 31.27 minus 32.19, around there you can see a curve, there's others?

A. Yes.

Q. In your expert opinion, is that where the dredge has turned while dredging?

10 A. It appears from the bathymetry to show a mark similar to what we would expect to see from the dredge head.

Q. There's similar of those out to the right, near to that minus 32.75 number, aren't there?

A. Yes.

15 1200

Q. And these aren't deep trenches are they? These are just, you may not have heard us talk about this but sort of ordinary tracks from ordinary day-to-day operation, would that be right?

20 A. Yeah if compared to the deeper trenches yes they would appear to be those.

Q. Are you able to tell me by looking at this image how deep that turning track would be?

A. No.

Q. Would you be able to find that information in this report?

25 A. In the report of survey?

Q. Yes.

A. No I don't believe we've commented on that.

Q. So to interpret the data to answer this sort of question, you'd need to be able to interrogate the data itself wouldn't you?

30 A. You could colour band it to make it quite obvious and if there was a colour scale associated with it you could determine it. But it's much easier to do in a GIS package or a software package that can visualise the raw data.

Q. So once you have the data you can dream up whichever questions you like and look at the data to see what the answers to those questions are,

but they're not necessarily reflected in the reports or the particular diagrams that are sampled into the report?

A. No, the intention was not of those reports or surveyors not to comment on the, in this case not to comment on the data, it was more around  
5 generally looking at it from a much higher scale, a much larger scale, does the area – what is the general kind of contour of the area and obviously the summary of the equipment and the methodology.

Q. Ms Hartnett if you could just whip us down to the very last page of this document, it's EB1922. So Mr Inglis you've told me, wrote this report so  
10 did he calculate these figures? Did he pull them out of the survey –

A. No he would not, he wouldn't have done that, no not for that survey.

Q. So who would have generated these –

A. I believe Mr Cox would have.

Q. So have you gone back and checked this figures against all the raw data?

15 A. No.

Q. So you can't tell us whether these figures are correct or not?

A. No I couldn't, not without investigating their location myself.

Q. I just want to –

A. I would, I mean –

20 Q. I just wanted to correct, the question I put to you was slightly wrong because this isn't part of the same report. You said in one of your earlier answers that Mr Cox presented a range of reports and this is indeed the subsequent report that Mr Cox has asked to prepare by the joint caucusing experts, giving them the comparison of the depth changes over  
25 time. So I didn't mean to put you – you still answered the question right even though I framed it clumsily, so my apologies for that. Now you might not have been here and it doesn't matter if you weren't in Court but I did ask Mr Todd about the width of trenches and he referred that question on to you. So I'd like Ms Hartnett to scroll up to the cross-sections that  
30 Mr Cox, or I think in your organisation (inaudible 12:04:37) at the request of the experts, at EB1896 to 1921. They go on to quite some pages but let's start at 1896 please. So this is labelled Pakiri cross-sections 1A and it says that the vertical scale is 1 to 50. Is that at A4 or is that at a bigger size?



A. I believe it's A1, it's labelled there A1.

Q. Well I thought that too but I think those are the names of the cross-sections –

5 A. Sorry, that's the cross-section number, yes. Yes, my apologies, that's the cross-section number.

Q. Easy mistake to make.

A. No, so you can't tell.

10 Q. Just to give us an idea of how far they go but we can work with the document because it has chainage in the bottom boxes. And as we move from left to right, we come to a line labelled "Chainage 70" in the bottom box. Seventy metres from what? What's the chainage measured from, Mr Stubbing?

A. Well it's from the origin of the line used to draw the cross-section from.

Q. I'm almost afraid to go here but is this chart datum or MSL or...

15 A. No, that's a horizontal distance, the chainage, and the depths –

Q. Yes, but from which point?

A. It's from the – it's a point in space essentially. It's not linked to a datum.

#### **THE COURT: JUDGE SMITH**

20 Q. If you look through your 1874 onwards, you'll see that there are lines with dots at each end, essentially just in the middle of the sea.

A. My understanding was those cross-sections were created sort of arbitrarily to match the alignment of the single (inaudible 12:07:09) lines that were run. They were not run to, or we didn't have the information or Greg didn't have the information to sort of indicate where the start of those  
25 lines were, so I believe they just drew lines to match them as best they could.

#### **CROSS-EXAMINATION CONTINUES: MS CAMPBELL**

30 Q. So on this page 1896, when we come to chainage 70 there's a trench shown in the pink colour from September 2020 starting at about that point at about chainage 70, do you see that? Is that a fair starting point?

A. Yeah.

Q. And that trench goes to about chainage 85, do you agree with that?

A. Yes.

Q. So I'm assuming that chainage is in metres, so that trench is about 15 metres wide?

A. That would be correct.

5 Q. And if we go down to the next page, 1897, there's a green line here which is from the March 2021 survey, and if we look at chainage 102.5, there's a trench that sort of starts at about 102.5 and that extends to about chainage 112.5. Do you see that?

A. I do, yeah.

10 Q. So that's about 10 metres across that trench, is that correct?

A. Yes.

Q. I'm not going to take us through all of these but I did want to go to one that was a survey that you'd undertaken. So if we go down to page 1905, the blue line on page 1905 is your October 2021 survey, isn't it?

15 A. According to that, yes.

Q. And so that shows a more gradual trench starting, say, around chainage 125, somewhere around there, it's more gradual so it's not as abrupt, and it extends to around chainage 152.5, doesn't it? So my maths makes that a trench or a depression of about 27 odd metres or so, is that right?

20

A. Yes, that looks right.

1210

Q. And acknowledging that there might be differences between the surveys in terms of accuracy, et cetera, but taking this chart for what it shows, with reference to the green line, in particular from the March 2021 survey, that trench had previously been much more acute and it's getting smoothed out would be how I'd describe it, would you agree with that?

25

A. Yes, it's becoming less, I guess the profiles not as deep according to those true data sets.

30 Q. It's not as deep but it's sort of widened out a bit, according to the diagram we're looking at?

A. Mmm.

Q. So, in the report that you provided to us today, exhibit 9, if I could ask Ms Harnett, please, to take us to page 12 of that report. In the third

paragraph under heading 11 Comments and Results you've noted long trenches approximately two metres wide. Now, to be very fair to you, this is a report that's a year later than the report we were just looking at, but you'd accept that at least a year previously the trenches were substantially wider than two metre, weren't they?

A. Yes, I believe that comment's made in relation to the new dredging, new evidence of dredging, not necessarily the deeper historic trenches which appear to be in-filling.

Q. Ms Harnett, could you take us please to EB179 figure 4 which is from Mr Stubbing's evidence-in-chief. If we could also see the paragraph above it, please, Ms Harnett, thank you. So this is an output from one of your surveys, isn't it, Mr Stubbing?

A. Yes.

Q. Which one, are you able to tell us?

A. I believe it's the March 2022 survey. It was provided as a visual of the raw data as a typical bathymetric surface, so I don't refer to it directly anywhere.

Q. So, when you say in paragraph 26: "In this case the MBS bathymetry clearly shows" I'm relieve to hear you say that you're not referring to figure 4 because I couldn't figure those things out from figure 4?

A. So, the multi-theme bathymetric, unfortunately it's really difficult to visualise the different dredge tracks in a static image like that because it's scaled so you really need to have the ability to interrogate the raw data to see the evidence of those dredging. You can see the deep trench in that one but the scale is just not sufficient to see the actual dredge tracks.

Q. I can see on screen, my printer is obviously giving up the ghost because I certainly can't see it on the printed page. So when you say, in your second sentence there, when you show what the bathymetry shows evidence, which other materials are you drawing on? Are you drawing on, well I won't suggest it to you, but could you please tell us because you haven't set out there what you're drawing on in making those statements, if it's not (inaudible 12:14:52)?

A. I'm drawing on our ability to visualise that data at a much smaller scale so that's probably about a 1 to 50,000 scale image we can look right in.

Essentially, the data is scaleless when we have it in a GA package where that screenshot would've been captured from.

Q. So, I just invite you to just consider the wording of that last sentence, please, Mr Stubbing, because I absolutely accept, with your expertise, that you can look at the raw data and you can see trenches and, because we know what's going on here, you might be able to tell that they're from areas where dredging occurs. But you can't tell by looking at the bathymetry whether those dredges were lawful or not, can you? Because you've said on-going permitted dredging operations?

10 A. No, I've re-read that in the last couple of days and accept that it's a very clumsy way of saying – I was trying to make the comparison between the deeper trenches and the trenches that are tracks but I've not made that very clear.

Q. So perhaps we should delete the word permitted and then, the first part of that sentence is probably okay, would that be fair?

A. Yes, I'd accept that, yes.

Q. So, in terms of that last sentence there you've agreed with me, I think, that we'll delete the word permitted, is that correct?

A. Yes, absolutely.

20 Q. So, in paragraph 35 and this is my last set of questions, again here you say that the survey results have shown significant change in in-fill in the extraction exclusion zone. Again, which data are you drawing on to make that statement?

A. The comparison of the three raw data sets.

25 Q. So those are, for example, the profiles that we were just looking at?

A. Not those particular profiles. So, again, in our software we have the ability to visualise particular areas by cutting ad hoc cross-sections to show that.

Q. So, are you relying on the report that Mr Cox put to the expert witness panel or Mr Todd's figure? No? So you're just referring to the data gathered and held by you in your software?

30 A. Yes, the raw data or the data that has been supplied.

#### **THE COURT: JUDGE SMITH**

Now, my records show that nobody else had questions of this witness.

**MR POU:**

No, your Honour but just given some of the responses I do have one question.

**CROSS-EXAMINATION: MR POU**

5 Q. Kia ora Mr Stubbing, my name is Jason Pou. I was just listening to your evidence and listening to responses that you are giving, in particular, the discourse when Mr MacRae was leading you and his Honour Judge Smith was discussing with you measuring techniques. But, I'm interested in this 25 metre isobar contour. Does it shift over time, is it dynamic?

10 A. The chartered position does not shift until a new survey is undertaken but because of the dynamic seabed it has the potential to shift, yes – not vertically but horizontally it would shift.

Q. Do I understand that what is the 25 metre depth would be the 25 metre depth but where that 25 metre isobar is might be in a different place over time, is that what your evidence is?

15 1220

A. Yes. So the chart – I mean it's a snapshot in time when we undertake a survey, so we get a snapshot of where the contours are at that particular time. So a survey 10 years later might position that 25 metre contour somewhere else. It may not, it may be very similar, but – and as the technology improves, our ability to map accurately also improves, and so that can have some impact on where those contours are ultimately positioned.

Q. Do we have an understanding of how far the 25 metre depth has shifted horizontally over time, in say the last how long it's been surveyed?

25 A. So unfortunately the charts are a cartographic depiction of the underlying data that the survey was captured with. So I believe the chart data on NZ522 was captured in 1965, so it is quite old, and the technology they used in 1965 is completely different to what we use now. So that ability to – or our ability to understand the uncertainties associated with the depth measurement have improved. Also the horizontal positioning of the surface vessel that captures that data has improved. And so they may impact – so the reality is the depth contour may not have actually

30

changed but the ability to map it has changed, but also the contour could change with moving sand or tectonic movement or...

Q. Are you able to say whether or not this one has changed over time?

5 A. No, I am not. I could look at the three surveys that we've undertaken and plot that, but I don't have any way of knowing. Other than interpreting a 25 metre contour on the chart, and then comparing that to where it is now, but that's fraught with inaccuracy.

Q. Is that not the issue though? If the 25 metre – where the 25 metre mark is changing, aren't we uncertain as to where our boundaries are?

10 A. Yeah I'm not sure I'm qualified to answer that. I can provide the data that shows where it could be at this very point in time.

Q. And that's what your data, is where it could be, not where it is?

A. It is where it is with the technology and methodology that we have used to map that contour. The reality is it's impossible to know exactly where  
15 it is because every measurement we make have an associated uncertainty, regardless of whether you're using a tape measure of an echosounder, there is always an element of uncertainty with every measurement. So the truth depth is – it's an impossible thing to know. Given the uncertainties associated with the methodology that we've used,  
20 that is where we believe the depth to be in that area. The true depth.

Q. Thank you Mr Stubbing.

#### **RE-EXAMINATION: MR MACRAE**

Q. Mr Stubbing, Mr Van Mierlo asked you some questions about undertaking surveys based on their historic profiles to depths of water and this  
25 question's related to some extent to the inshore and further out. So extending those profiles bathymetrically as it were. If that were required as a condition of consent, how useful would the data be in relation to offshore extraction? Are you able in a position to answer that?

1225

30 A. I can't answer that, no, that's coastal processes I would imagine. We can provide the data but we can't interpret it for this purpose.

Q. How costly would such an exercise be?

A. It would depend on the frequency of profiles that were required and how much – I mean it's related to how much time we would need to spend onsite. There would be a fairly significant contingency for weather downtime, and that would include sea conditions as well as wind, so I can't really answer off the top of my head that question.

Q. Would you regard it as a relatively costly form of survey compared with surveys which didn't have to cope with the same elements in the same way?

A. It's sort of an open ended, yeah I mean inside a harbour in confined ah, on a lake for instance, it would be much easier than in the surf zone or in that coastal margin.

Q. Ms Campbell asked you questions about your reports, and the ones you authored and the ones you reviewed, and you described the process that you went through. Is that the standard process for reviewing reports at your company, DML?

A. Yes, we have a checklist of things for the approver to look at and make comment which gets returned back to the author.

Q. Was there anything in your description that didn't cover words in that checklist?

A. I can't remember exactly what I said to be honest. I mean most of it is around the accuracy of the – the review is around the accuracy of the calibration data and the reference surface and crossline information, which ultimately dictates where we estimate the total propagated uncertainty to be, so that's to do with the quality of the raw data and then making sure that that is published adequately in the report.

Q. Do you have experience of practices of other firms in your area of expertise? In relation to review of reports?

A. Not recent, no.

Q. Does your profession have professional standards for the review of reports?

A. Not for the review of reports.

Q. What does it have?

A. It has some guidelines as to content of reports, but ultimately that's driven by the client requirements for each individual report, so they do change depending on who our client is.

Q. So the standards you work to are they DML standards?

5 A. The standards of the data that we capture are set by the International Hydrographic Organisation and then Land Information New Zealand take those international standards and they've tailored them for New Zealand conditions and coast, and so we refer to those LINZ standards for hydrographic surveying.

10 Q. Was part of your job as a reviewer to ensure that those standards were met?

A. To review the information that went into calculating whether we had met a particular standard or whether we'd passed a particular standard, yes, I didn't review the actual calculation of it. But the information (inaudible  
15 12:29:22) it's an automated process that we put the data into and it comes out with the results.

Q. Ms Campbell referred you to two or three reports I think, concerning the depth of trenches and she referred to one I think it was in – and I've lost track of whether it was EB or CB to be honest but page 1905, which I  
20 think she asked you to agree with something like 27 metres wide, are you able to say whether that was a deep trench of the kind made by the *Coastal Carrier*?

1230

A. No, no, I can't, no.

25 Q. What else might it have been?

A. Oh I don't know.

Q. Might it have been a natural feature?

A. Without seeing where it was in relation to the volunteered exclusion zone, I wouldn't be able to comment. I imagine those cross sections were all  
30 drawn over areas of interest, which I think were generally agreed as being caused by dredging, but I can't be sure.

Q. And the focus of the study was what features, on the seabed?

A. Of the survey?

Q. Of the survey.



A. Was to look at the deep trenches.

Q. Thank you.

**QUESTIONS FROM THE COURT: COMMISSIONER MYERS**

5 Q. I just have a question about the confidence limits of the survey and I think you put a lot in there around the uncertainty. But from what you explained I think you're looking at whether there's a .4 metre change, is that right?

A. What would be the confidence intervals around that?

10 Q. So the confidence interval is – it's a tricky thing to – so essentially every sounding we record, so every time our multibeam echosounder pings it records 800 seabed depths. Each one of those has an individual uncertainty attached to it. It's impossible to report on each individual sounding, so we generalise it down to a statement that indicates sort of a worst-case scenario where we've looked at all the systematic uncertainties, all the random uncertainties that might be occurring through  
15 the area that we're surveying and then we come up with that value and then we obviously state that. What we also do is test the repeatability of those individual soundings against each other, so when we say that there's, the uncertainty is plus or minus .15 it's very unlikely that two soundings side by side would be separated by .3. They are much tighter,  
20 they are much tightly aligned in a precise way across each individual swath. Those raw soundings are then reduced further into a one metre gridded surface where something like 40 to 50 individual soundings would be averaged and then that average value becomes the grid node which is the imagery and the ultimate product that being delivered. So the  
25 standard deviation of all of those soundings within that one grid cell is likely to be in the order of five centimetres, so closely aligned with soundings either side of it, and then beyond that the cells that extend out are also closely aligned. So that generalised plus or minus .15 is the uncertainty from the true depth that might be there. The reality is we  
30 minimise the systematic uncertainty as small as we can, so that we can get a repeatable product survey on survey, but also that allows soundings either side of others to be within a certain standard deviation range for each ping. So it is, I totally accept that it's a confusing concept and it's –

5 we use it in a generalised way because we need to make a statement of the uncertainty of the overall uncertainty and so long as we are able to present evidence of repeatability between surveys, in this case that's the more important component as to whether we know the true depth or not and that's evidenced in that reported survey with the comparisons to the reference surface that we undertake.

A. Thank you, that's a really helpful explanation. I think you say somewhere that the .15 is the worst case scenario?

1235

10 Q. Within the 95% confident interval, so there's likely to be outliers beyond that, but from our investigation of the individual surveys that the value we come up with.

Q. Thank you.

#### **QUESTIONS FROM THE COURT: SPECIAL ADVISOR HOWIE**

15 Q. I'd like to start just with the chart datum and I think we were advised that the chart datum is the lowest astronomical tide, is that your understanding.

A. It is in modern times, it wasn't in the 60s so what used to happen when they would establish chart datum they would take an observation periods  
20 of tides and they would be able to transfer sounding datum or transfer chart datum from an established nearby chart datum but then depending on the time record of tidal observations often the hydrographer would add a safety margin to that because of the shorter period of tidal observation. Nowadays we are blessed with at least 19 years of tidal observations at  
25 a lot of our standard ports which allows us to extract the constituents of the tide and then predict forward to establish what LAT is and now LAT is generally used as chart datum.

Q. And is that the case in this instance in location.

A. Its really difficult to know exactly what chart datum value has been used  
30 on a chart. So the chart reports has a little diagram in it that states that the offs or what the distance between a benchmark and chart datum is and in the case of NZ522 there are four locations which are the Mokohinau Islands, Great Barrier Island, Kawau Island and there's one

other that I can't remember off the top of my head but interestingly it doesn't state Marsden Point which is the nearest standard point. The chart adjacent to that one NZ521 is – states Marsden Point and so without reading the individual survey reports that went into the building the data sets that have gone into the chart its difficult to standard where their chart datum is based from. I would assume that the origin of it is Marsden Point or yeah Marsden Point but you can't tell for sure from looking at the source diagram or the chart itself. Chart datum is a little bit like mean sea level in that it varies along the coastline significantly so depending on whether your standard port gauge is upper harbour where it might be constrained or constricted through the tidal cycle or whether its on the open ocean they can have quite a big effect on what chart datum is. So its difficult to know exactly how to recover chart datum and in particular location without possibly establishing your own value linked back to tidal benchmarks or link back to shore-based benchmarks.

Q. And the contours or bisymmetry contours that are shown on the chart would be relative to whatever its chart datum was I suppose.

A. They say chart datum yes. They say refer to chart datum, again they are a cartographic interpretation of the underlying survey data so when a mariner is approaching a coastline like that they want to know where is the first possible opportunity that I might cross that contour and so they are often offset because the cartographer that's have drawn them may have drawn loosely around those features if there are seabed features to give forewarning to the mariner approaching that there is a contour change coming and so when they use the tide tables to establish the tide for themselves to try and understand how much water they've got they would be looking for predictions from the nearest predicted tidal site which would be one of those benchmark chart datum locations that I had mentioned before. I haven't checked myself. I would imagine those are all secondary ports which are then linked back to a standard port, which I can only assume would be Marsden Point at that point. So the predictions that would be available for Marsden Point would be used at – it would be calculated at one of those other tidal sites and then applied to

the data or, as the mariner approaches, applied to the tide if they're in that area?

Q. Your explanation there was about the location of, say, the 25-metre or 30-metre depth but that 30-metre would be relative to that data, wouldn't it?

A. Yes.

Q. And in this instance mean sea level I think we're told is 1.64 metres above chart datum, do I understand that correctly?

A. That is at, I believe that is at One Tree Point. So, again, it means sea level varies along the coastline and it's typically where you see a mean sea level value it's linked to a physical benchmark or survey mark on the shore –

Q. On the shore, yes.

A. – or anywhere in fact, yes. Mean sea level's a tricky one because mean sea level refers to the mean level of an observation period and so I mentioned before the vertical datum, One Tree Point vertical datum was the mean sea level in 1964 based on a period of observation. I've seen through the evidence there are other mean sea levels quoted. I believe one is the mean sea level of a wave climate. So the use of mean sea level almost needs to be attached to a period of observation or an epoch otherwise it's quite confusing as to what value that actually means.

Q. We're told that the depth of closure for significant sand transport onshore is something like 25 metres. If that's the case and you've surveyed this shore quite thoroughly, I just wonder whether from your data you can identify the contour that would be 25 metres below chart datum. Could you do that?

A. Yes we can, definitely, yes. So we would apply just a physical – sorry a single point shift to the data based on the nearest chart datum value that we had and then the software allows us to just extract a contour at any level.

Q. And if you plotted that 25-metre contour could you assign co-ordinates to it?

A. Yes, it's a geographically referenced line string is essentially what we would have.

Q. And then if the 25-metre contour shifts the contour's right, do you see what I mean?

A. Yes.

Q. So, the co-ordinates, I'm sorry, the co-ordinates wouldn't shift even if the 25-metre line shifted with time?

A. It would (inaudible 12:44:20) shift horizontally.

Q. Yes, yes. But if you had – where it is at the moment was explained in co-ordinate terms then the co-ordinate terms could be definitive in terms of the area?

A. For that snapshot, yes. For that snapshot in time.  
1245

Q. Now, just looking at exhibit 10A which is that blue one that Ms Campbell held up, helpfully, and I've just brought that up on my screen and enlarged it a bit and it shows a series of red lines some of them in red dots and things, what do they symbolise, do they symbolise the trenches below a certain depth or what.

A. Yes so the red, there's a colour scale in the bottom left-hand corner of that sheet that indicates. Anything that is orange is between .4 and .5 metres distance from the bottom of the trench to the surrounding seabed or approximation of the surrounding seabed and then red indicates five to one metre and the brownie red is one metre to two metres or in fact probably whatever the maximum depth is.

#### **THE COURT: JUDGE SMITH**

Q. Can I ask a question about that, how do you determine the flexion point in other words where the trench starts. You said surrounding material, what surrounding – how do you determine when the trench starts, is it where the inflexion point exceeds a certain percentage.

A. So it's a really difficult I guess problem to solve exactly so what we – the methodology that's described in the report of survey what we've done is we've tried to approximate what would be a general seabed by creating a really large gridded surface so a 10 metre gridded surface and through a little bit of experimentation we found that that approximated the tops of the trench sides so it essentially created a grid cell that covered,

completely covered the whole width of the trench and then from that approximated surface we could do a surface difference comparison to the high resolution one metre surface so its not an exact I guess representation of where it is but what it has allowed us to do is then go and investigate in the data, in the raw data and look at those areas in more detail.

Q. Thank you carry on.

A. So I guess the inflexion point is the ridge on each side of the trench so the shoals point or the shallowest point on either side of the trench.

10 **QUESTIONS FROM THE COURT CONTINUES: SPECIAL ADVISOR HOWIE**

Q. I notice also on that diagram where your co-ordinates that you've identified are in eastings and northings, is that what you prefer over degrees and minutes and seconds and so on.

15 A. Yeah where we have a plan so a flat representation of the data we would always use a projection so an easting and a northing it's just much easier to follow because you can measure distances on those plans based on the scale.

20 Q. And when you're on the vessel and you're using your equipment, your location devices in terms of eastings and northings as well or in terms of degrees and minutes and seconds.

25 A. Raw GPS data comes in in terms of degrees, minutes, decimal minutes but this hydrographic acquisition software we use has the pre-set conversions between WGS84 which is the native co-ordinate system of GPS to any number of the New Zealand datums. So what our surveyors see in real time is in fact in eastings and northings yes.

Q. So if you were out on the boat on the water and you were navigating within this confined area would you follow degrees or eastings and northings.

30 A. We have fortunate ability to do both so we would do whatever is easiest at the particular time but we do have the ability to navigate using degrees, minutes, seconds or degrees, minutes, minutes so we can choose. No there's no difference between the two of them.

1250

Q. No advantage one way or the other?

A. No the advantage would be on a vessel that didn't have the software that we have, that is able to do that conversion in real time and present that information in real time, so if you had – like every, most standard chart plotters or navigation systems ECDIS, ENC navigation on vessels is in terms of degrees, minutes, decimal minutes most likely.

5

Q. Yeah that's my experience, yeah. Okay now if we can go back to exhibit, that was exhibit 10A, now if we go to exhibit 10B, which is two pages of – I've got the wrong one.

A. 10A I think it is.

10

Q. Well there are two charts, they're plain with red dashes all over them.

A. Yes.

Q. Yeah that's the one. That's the same sort of thing is it?

A. It is yes.

Q. And that's the March one, so there's a lot more of them in the March than there is November, is that the point of the two?

15

A. Yes.

Q. And is the scale the same?

A. No, I don't believe it is, one to 5,000 and one to 25,000.

Q. Okay and what about depth?

20

A. They are different scales.

Q. Depth scale.

A. The depth is the same datum.

Q. Now I'd like to go to those pages of the evidence bundle 1894 and so forth. I think you were referred to these, to the long sections showing trenches and so forth, but I was looking at page 1894.

25

A. Is it possible we could get that brought up?

Q. Yes that's the one. And two things here, one is that these are shore parallel profiles, so these are profiles running along the shore and different distances off the shore presumably, as shown in figure 14, the page before. Is that correct?

30

A. Ah, I – yeah they say shore profiles, shore parallel, so that would indicate parallel to shore. I'm not exactly sure of their location though.

Q. Well the page before, 1983, is figure 14, that one there.

A. Oh yes, okay, yeah.

Q. They're the location of those profiles aren't they?

A. Yeah I would believe that, yes.

Q. And I can't read the scale on the left-hand side of it, notwithstanding having my handy magnifying glass, so perhaps you could help me?

**5 THE COURT: JUDGE SMITH**

Q. Perhaps Ms Harnett can bring it right up and we can have a look there. 24 to 31 on the top one, the green. What's the next one Ms Harnett? Can't see the top number, it looks like about 27 through to 34 and a half.

A. Might be 28 maybe. Yeah they look like a half metre –

10 Q. There's no particular moment because there's nothing in that, the active range seems to be between 29 and a half and 32 or 33 perhaps. The colour code gives us a general idea that we're running out from below 30 to 30-odd, 33, then the next blue one I think is 35, 36, could we go down one? Oh it's still 33 there. Is it? Yes, 33, there's 35 and I presume the  
15 last one must be a greater depth than that is it? 35 onwards, or perhaps 34. It's a bit hard to tell.

A. 33.5 I think that is to 39.

**QUESTIONS FROM THE COURT CONTINUES: SPECIAL ADVISOR HOWIE**

Q. The relief that we're seeing in those peaks and hollows is what, about  
20 two or three metres is it?

A. The sort of macro sized peaks and not the small narrow ones, the wide –

Q. No, range from your peaks to high, to troughs and those four profiles, what's the range of the peak to trough?

A. I would say it's closer to two metres.

**25 THE COURT: JUDGE SMITH**

That was my general observation, I think, I mean it's hard to know exactly but that does seem to be the range. I think that was your question wasn't it Mr Howie?



**THE COURT: SPECIAL ADVISOR HOWIE**

Yes, I couldn't read the left-hand column, so I didn't have any idea what scale this was and –

**THE COURT: JUDGE SMITH**

5 It's a compressed scale longitudinally clearly, so...

**THE COURT: SPECIAL ADVISOR HOWIE**

Yeah it was just the vertical scale that –

**THE COURT: JUDGE SMITH**

Yes vertical changes, yes.

**10 QUESTIONS FROM THE COURT CONTINUES: SPECIAL ADVISOR HOWIE**

Q. So the vertical changes along the profile there, you reckon are around two metres do you?

A. The ones between 4,000 and 5,000 metres along the horizontal scale, I would say are around about 1.5 to two metres.

15 Q. So if you look at the third profile, on page 1894, just reduce that, there we go, that third one, see that one in the middle there is quite deep and quite tall, what's that one? In the middle of that one, can you bring it up a bit further?

A. That might be closer to three metres.

20 Q. What's that one?

A. It's nearly 37 to 32.5.

Q. Yes so it's what, 2.5, four metres?

A. Yeah.

25 Q. Okay good, I'll just write that down. We can put that away now. Thanks very much Mr Stubbing.

**QUESTIONS FROM THE COURT: COMMISSIONER PRIME – NIL****QUESTIONS FROM THE COURT: JUDGE WARREN – NIL**

**QUESTIONS FROM THE COURT: JUDGE SMITH**

Q. If I'm the only one with any questions, I'm happy to carry on if everyone else is, to let Mr Stubbing get home. Does anyone object to that? No, and I'll tell you what the issue is for me, is the variable issues about calculating water depth. So you'll be aware and you agreed at the beginning that the consent, the old consent operated on a chart datum which was set, it is a fixed point and it required no more than 25 metres beneath that point. Do you agree?

A. Yes.

Q. So I don't know if you've appeared in front of the Court before or been involved, but the Court requires certainty and that certainty was achieved by fixing chart datum and saying you couldn't excavate below 25 metres below that point. Now I don't want to spend a lot of time unless it's necessary, it is quite clear from your reports that you've used MSL, you have stated that that is 1.74 metres higher than chart datum, correct?

A. We have used the New Zealand vertical datum 2016 and the offset to chart datum is quoted for at Marsden Point.

1300

Q. Do you want me to read it to you? Your report says – I'd rather we didn't spend time on things that aren't in dispute, but you do say – because you deal with the question of datum points, and your 4.2 vertical datum “depths were reduced from GRS ellipsoidal 2016” et cetera, et cetera. “It should be noted that chart datum is approximately 1.746 metres below NZD2016. Therefore, a value of 1.74 metres needs to be deducted from NZD2016 depths to refer them to chart datum.” Is that not correct?

A. No, that's correct for, yeah, at Marsden Point.

Q. Well why did you dispute the point with me?

A. Sorry, I didn't realise I did.

Q. So we need to adjust your MSL figures by 1.74 to get chart datum for the purposes of your report, don't we?

A. Yes.

Q. So I'd like you to go to 1879, and I think this is the March '22 report. Now that shows a photo without further explanation but inserted on what appears to be a chart. Is that a chart or is that something else?

A. That is a chart, yes.

Q. And it appears to have overlaid on it photographic data. Is that data that you produced?

A. That is the backscatter data, yes.

5 Q. But it's showing the area that you undertook your surveys on overlaid on a chart, isn't it?

A. Yes.

Q. Did you adjust all the depths on that chart to MSL or are they left as chart datum measurements?

10 A. That is an image of the nautical chart. So we can't adjust the numbers on it, it's just a tiff image used as a backdrop.

Q. So I'd like you to turn to 1874. Now this along with many others, and I don't want to spend a lot of time on them all, shows outputs of your data visually displayed on a chart, doesn't it?

15 A. Yes.

Q. And the chart shows chart datum of 20 metres.

A. It shows contour of 20 metres, yes, that chart datum, yes.

Q. Well it's chart datum of 20 metres, isn't it? Am I wrong, is –

A. Yeah, no, that's correct.

20 Q. And then there's a white line shown further in, it's more clear if you've got a physical copy of your report, through the orange and yellow area. Is that a contour line that your system generated, or is that something else?

A. No, that will be – it looks like a contour line that's been automatically generated.

25 Q. And is that generated in chart datum or is it generated in MSL?

A. No, it's the datum of – it's VD16, so the datum of the data.

Q. So that's MSL?

A. I don't want to call it MSL because it's not mean sea level datum but it's an approximate mean sea level datum.

30 Q. Well could I turn to exhibit 1, CB1. Sorry, CB2, I apologise. CB3. So I have different maps in my system. Ms Harnett, could you go back to exhibit 1. Exhibit 1 for me at least shows something quite different.

**THE COURT: JUDGE SMITH**

We're going to need to sort this out, Mr MacRae. I have a picture with a whole series of cells on it for A1.

**MR MACRAE:**

- 5 I know the map you mean. I think it's appendix 4 to the –  
1305

**QUESTIONS FROM THE COURT CONTINUES: JUDGE SMITH**

- Q. Rather than spending a lot of time on it now, can we turn to 3 then please.  
So this is a similar map. It says, and I know it's not preferred by you, but  
10 it says the lines, the contour line, depth contours, are based on the DML  
survey at 20 metres depth below MSL. Is that incorrect?
- A. It's got VD16, 2016 written after it but those are, I believe those are from  
our data, extracted from our data.
- Q. Yes but you just told me that MSL wasn't correct, is that not correct stating  
15 that it's below MSL?
- A. For the purposes of this, it is an approximation of mean sea level.
- Q. Approximations are a problem for this Court. Is it correct or incorrect?
- A. It's correct to say that it's New Zealand Vertical Datum 2016.
- Q. Right. That of course represents as they all do, just a fixed point in space  
20 don't they?
- A. The datum? The vertical datum or the contour?
- Q. NZVD 2016 is a fixed point in space? We could call it Fred it makes no  
difference, it is just a point?
- A. It's actually, it's vertical datum based on gravity measurements. So it's  
25 not like a mean sea level datum linked to benchmarks and tide  
observations. It is within point 1 at Marsden Point of the mean sea level  
datum.
- Q. I'll ask my question again. The datum point is a point in space, or a plane  
if you want to call it that, but it is simply an arbitrary point based upon  
30 whatever reasoning people want to adopt and there are many different  
datum points that can be used. We've had hundreds of cases with  
different datum points being relied on?

A. Yes just explain, yes.

Q. Just needs to be a point that's able to be settled certainly?

A. Yes.

Q. Do you agree?

5 A. Yes.

Q. So it seems to be quite clear that where we've inserted depths using chart datum and then depths using MSL, that is incorrect? Do you agree? They are not equivalent.

10 A. They are not equivalent no, mean sea level and chart datum are not the same.

Q. And I just want to discuss how greater difference that makes. Because looking at the slopes you've provided in the various diagrams through 1874 through to 1900-odd, it appears to me that once we're over the 20 contour we're looking at about one in 100? One metre for every 15 100 metre offshore? Would you agree?

A. I couldn't confirm that without seeing them.

Q. Well you can have a look at them, they're all in front of you. 1874, have you not got the report?

## 20 **THE COURT: JUDGE SMITH**

Mr MacRae could you give the witness the evidence of Mr Reid, page 1874 continuing?

### **MR MACRAE:**

Ms Hopkins assistance, yes I think so Sir.

25

## **QUESTIONS FROM THE COURT CONTINUES: JUDGE SMITH**

Q. There's one example but there are many others. Your report goes through a whole series of them and given that we've got a depth of about 40 metres four kilometres offshore, and about 20 metres a little less than 30 two kilometres offshore, one assumes that we're talking something in the order of one to 80, to one to 100?

A. Ah yes.

Q. So a 1.74 metre offset would be around about 150 or more horizontally towards shore wouldn't it?

A. Based on those numbers yes.

5 Q. Were you aware that there was a real issue about the distance from shore for the taking of sand?

A. No I was not completely aware, I know it's been discussed.

Q. Were you aware that this information was being relied on to suggest that the chart datum figure was the same as the MSL by putting it on the same diagrams?

10 A. No I was not aware of that.

### **QUESTIONS ARISING – NIL**

### **WITNESS EXCUSED**

**THE COURT: JUDGE SMITH**

We'll take the luncheon adjournment and the witness is released of course, thank you for your evidence Mr Stubbing. Who do we have after lunch? I can't remember now.

5

**MR MACRAE:**

Mr Thomson Sir.

**THE COURT: JUDGE SMITH**

10 Both Mr Thomson and Mr Thompson with a P, is that right? Or just one?

**MR MACRAE:**

It's Mr Thomson without the P Sir.

15 **THE COURT: JUDGE SMITH**

He's first, and then after him would we be having the other or?

**MR MACRAE:**

No we'll be having Mr Styles after that Sir. Perhaps this is a good time to  
20 mention that Mr Gaimster is not available this afternoon and so we'll call him if that's acceptable tomorrow when he is available and go on with Mr Te Rangi and Mr Thompson.

**THE COURT: JUDGE SMITH**

25 Thank you. I suspect Mr Thomson will probably occupy us for the afternoon, the estimates are somewhat incorrect otherwise Mr Stubbing would be home by now. But we can but try. So we're going to recommence at 2.30 and we're hearing from Mr Thomson without a P, is that right?

30 **MR MACRAE:**

Correct Sir.

**COURT ADJOURNS: 1.11 PM**

**COURT RESUMES: 2.32 PM**

**MS HOPKINS CALLS**

**MICHAEL JAMES THOMSON (AFFIRMED)**

Q. Can you please confirm your full name is Michael James Thomson?

5 A. Yes, that's right.

Q. And you have filed or prepared one statement of evidence for this matter?

A. Yes.

Q. Dated 23 December 2022?

A. Yes.

10 Q. And you've got that document with you today?

A. Yes.

**CROSS-EXAMINATION: MS BIELBY – NIL**

**CROSS-EXAMINATION: MS SUTHERLAND – NIL**

**CROSS-EXAMINATION: MS CAMPBELL – NIL (MR POU ON BEHALF OF)**

15 **CROSS-EXAMINATION: MS MORRISON-SHAW – NIL (MR POU ON BEHALF OF)**

**CROSS-EXAMINATION: MS BLACK – NIL**

**QUESTIONS FROM THE COURT: COMMISSIONER MYERS**

20 Q. Good afternoon, Mr Thomson. I was just wanting to check, there's a map in your evidence, so the off-loading of the sand, is that at Shelley Beach?

A. No, that was just if you were going to bring in a bigger barge to do the sand you'd need to look at Shelley Beach because after Shelley Beach it's getting too shallow to get barges up there.

Q. So where does it get off-loaded at the moment?

25 A. At the moment it's on the corner of Kaukapakapa river and the Kaipara, you can see it just in the bottom of that chart, you can just see that little corner?



Q. Yes.

A. So further up from there is, you'd be lucky to get anything over probably two and a half metres now.

**THE COURT: JUDGE SMITH**

5 That's two and a half metres draft, is it?

**WITNESS:**

Sorry, two and a half metres draft.

**THE COURT: JUDGE SMITH**

That's pretty small.

**10 QUESTIONS FROM THE COURT CONTINUES: COMMISSIONER MYERS**

Q. So is it fairly restricted in terms of tides getting in and out of the harbour?

A. That's right. So, yes, your big issue is going to be just that the, where the headland starts at the end of Kaipara river, can you see it down in the corner on the – so just there, you usually end up, we need to be going  
15 over there at, say, about mid-tide, you need a draft of about 2.8 to get over there. Anything over there it starts to get a bit questionable otherwise you have to leave it later. So that's as good as you can do, that's the sort of best way for the distance travelled. If you go into Atlas' yard, now, which is off Kaukapakapa river and Kaipara river, on that  
20 corner, you don't need as much time to be up there as early as mid-tide. You could get up there, say, closer to the top of the tide because, so it means you could have a deeper barge, but it won't be a hell of a lot deeper, only a little bit because they have issues with time restricted to get the barge unloaded before it starts grounding.

25 Q. And Shelley Beach, so there's no facilities there or is that –

A. No, no, that was just my suggestion if you had something bigger because your big problem is you won't get anything much up – and have the time to unload it before it starts grounding.

Q. What about the Port Albert side, like around that, is there anything around  
30 there?

- A. That's pretty bad. Port Albert is – no, it's even worse than Kaipara river, yes. Kaipara river's probably your best chance and after that Shelley Beach is your best option.

**QUESTIONS FROM THE COURT: SPECIAL ADVISOR HOWIE**

- 5 Q. I was just looking at your figure 1, Mr Thomson, and that's at low tide and you're getting down to .4 of a metre on the channel up there. What's the tide range?
- A. Well, it's been a while since I've been there. So we would be crossing there, I can't tell you without looking at an almanac, so we used to use  
10 the tide tables for New Plymouth and that was basically what we used for there but you probably had, it's probably around, I could get this completely wrong it's been a while but I'd say it would've been around two, two and a half, somewhere around there.
- Q. Two metres?
- 15 A. Tidal range. I'm only guessing because it's been so long so we used to work on there, the Taranaki's tidal, because Kaipara's a secondary port so you have to use another port. Onehunga, we don't – for some reason it's Taranaki that they use as the primary port for Kaipara being a secondary port. But it pretty much worked out to be about 10 minutes  
20 difference in time, yes, I think it must've been somewhere around there, I can't, without looking at a chart, tell you, a tide table to tell you.
- Q. And further up the harbour like that it might be less than it would be in the open sea?
- A. Yes. So it did vary because the Heads is right open to the entrance and  
25 then Kaipara Rubber had issues with, so like the water coming down and, yes, I'm guessing. I can't really say because we only used to berth in the Kaipara river so that was the issue there and that was affected a lot by the fresh water coming down the river.
- Q. And at Shelley Beach you've got 15 metres at low tide?
- 30 A. Yes.
- Q. Quite a depth there?
- A. Yes.

**QUESTIONS FROM THE COURT: COMMISSIONER PRIME – NIL****QUESTIONS FROM THE COURT: JUDGE WARREN – NIL****QUESTIONS FROM THE COURT: JUDGE SMITH**

5 Q. Just a couple of questions, I remember doing an oyster farm there 10 years ago or more and we took some form of cruise boat all day, quite a large one and you had to pick your tide even then. My understanding is you were getting a lot of sediment coming down there still and it's probably building up rather than going down at the moment?

A. Oh for sure, yes.

10 Q. And we've heard that evidence in *Waste Management* too, to be fair to everyone, that there's still a lot of silt coming down. Now the sand, is that the Tauporo bank which is opposite the beach, is it?

A. That's right., yes.

Q. Is that where all the birds are, too, or are they further up?

15 A. The birds, well where we probably dredged was quite a way off because it's quite shallow coming off there, I'm guessing it was about a mile off. So we never had any, so while we were contracting to Winstones we never had any, they would do all of our, what we needed to know and all that and we never had anything with that so I don't really know about that side of it.

20 Q. No, but you never had any problems yourself with the birds?

A. No.

Q. And that's sandier but there are many other areas of the harbour you just couldn't dredge because it's too much silt, is that right?

25 A. Yes, that's true, yes.

Q. It tends to be around the mouth that the sand is cleaner?

A. That's for sure. You can get some clean sand off Pôuto but it's very fine, it's not very good for their building products, they never liked that.

30 Q. And it would be fair to say that the, you've got to pick your time because you're so close to the mouth there, there can be times when it gets quite rough, is that correct?

A. Yes.

Q. Good west coast set and you're in trouble?

A. Yes, if you went too far out. So, we could work I some high winds because we were sheltered, you know, sou-westerlies. We could work in high winds but as soon as you cleared that head and came into the Te Poura bank you'd get stung pretty bad with a big set coming across. So you could get out there but what you did after that wasn't always a sure thing.

Q. And, finally, I don't think they ever went ahead with those power generators in the channel there, did they?

A. No.

10 1445

A. No.

Q. I couldn't remember what had happened, but I don't seem to remember there was ever any power out of it.

#### **QUESTIONS ARISING: MS HOPKINS**

15 Q. Just one question, your Honour. You asked Mr Thomson about whether there were any issues with birds where they were dredging, but were there any other animals you had to be aware of out there?

A. Yep. Those little dolphins that they worry about getting gillnetted all the time. That was a big issue, so we –

#### **20 THE COURT: JUDGE SMITH**

Q. I think that's the Māui dolphin, is that right?

A. Yes, one of those little ones, yes. I can't even remember the name. And they were always worried about if we saw one and there's something to do with the speed and the issue of how fast we're going affected them or something, so we had like to watch out for them and record any of those while we were there. That was it.

25

Q. Anything else?

A. No, just those.

#### **30 MS HOPKINS:**

Thank you, no further questions, your Honour.

**QUESTIONS ARISING: REMAINING COUNSEL – NIL**

**WITNESS EXCUSED**

**MS HOPKINS CALLS****JON ROBERT STYLES (AFFIRMED)**

Q. Can you please confirm that your full name is Jon Robert Styles?

A. Yes, it is.

5 Q. And you have provided one statement of evidence dated 23 December 2022?

A. That's correct.

Q. And you have a copy of that with you?

A. Yes, I do.

10 Q. Very briefly, Mr Styles, as a result of a change to the offshore area with the southern boundary moving further north by approximately four kilometres, have you considered about how the effect of this change, the effect that this change would have on the noise assessment you've undertaken?

15 A. Yes, I have. I have carried out some noise level predictions for the new area and, unsurprisingly, they show very similar results for the area of coastline adjacent to the area that will be dredged. But to the south the noise levels and noise effects will be substantially significantly less in the vicinity of the Pakiri Stream at that southern, very southern end.

20 **THE COURT: JUDGE SMITH**

Q. I appreciate it's an approximate only, but are we talking about a halving, quarter, the perceived volume?

A. Significantly less than 20 decibels, your Honour. So, very, very, very, quiet.

25 Q. You mean the noise will be less than 20 decibels?

A. That's correct.

Q. Is that Leq?

A. That's right.

Q. I see. I thought you meant a drop of 20. Thank you.

30 A. It may be, it may very well be a drop of 20. It's a significant reduction.

**EXAMINATION CONTINUES: MS HOPKINS**

Q. Just to confirm, by "Pakiri Stream" you mean Pakiri River?

A. Yes, that's right, yes, sorry.

**CROSS-EXAMINATION: MS BIELBY – NIL**

**CROSS-EXAMINATION: MS SUTHERLAND – NIL**

1450

**5 THE COURT: JUDGE SMITH**

Now Mr Pou or Ms Urlich who represents multiple parties.

**CROSS-EXAMINATION: MR POU**

Q. I've got one set of questions probably, but maybe only one question, and it relates to the ambient noise monitoring that you discuss in your evidence. So tangata whenua have referred, in particular those ones down at the south end, have referred to the droning that they hear, it's constant, they hear it from (unclear 14:50:38). Now your paragraph 28 you talk about noise conditions but you refer to during the day. is noise or the perception of noise different in the night? Why have you qualified your statement?

A. That statement was qualified, I think – sorry, I'll start my answer again that was pretty messy.

Q. Probably reflects the question.

A. Not at all. My experience is that the wind speeds are generally higher during the day and if there is an onshore wind it will generally be at a higher speed during the day than it will be at night and so the noise levels on the shore from wave action will generally be higher during the day than at night. By generally a small margin, it's highly variable, and it's certainly not, I suppose, certain enough to be worthy of differentiating day and night in this case. Does that answer the question? It's effectively such a small and variable amount that the qualifier's almost irrelevant, to be honest.

Q. Measurements that were taken in the daytime so that's just the clarification that I wanted to get from you. Thank you. I should probably say that question is my question because I don't want to attribute it to anybody else.

**CROSS-EXAMINATION: MS BLACK**

Q. Good afternoon Mr Styles.

A. Afternoon.

5 Q. So where exactly on Pakiri Beach was the onshore ambient noise monitoring undertaken?

A. We conducted quite a number of surveys on a number of different days in different weather conditions and they were undertaken in a range of positions mainly to get away from people that were on the beach at those times. So I can't show to you on a map exactly where they were, they were highly variable and up and down the beach and on some days multiple positions were used during those surveys.

10

Q. And what times of day was the monitoring undertaken?

A. The measurements were undertaken, again, at a variety of times, predominantly early morning and then also I think mostly mid afternoon. What I have found, if it's helpful for context, is we have done a long term surveys at other parts of the coastline for other projects and the noise levels vary only slightly between day and night. Very, if at all.

15

Q. And just to clarify, your evidence only relates to the noise of the William Fraser, doesn't it, it doesn't relate to any other vessels that MBL might use?

20

A. That's correct.

Q. Is the volume and frequency of the noise of such a vessel expected to remain the same over the 20 year term of the proposed consent?

A. I don't know the answer to that question. I have assessed the effects based on the vessel being there and being present for the entire period that it would be there over one night. Do you mean in terms of I guess dredging intensity in any given year or do you mean the same vessel in any given year?

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1455

30 Q. The same vessel. I'm just mindful that sometimes machinery can get louder as it gets older.

A. Right, I understand. And that certainly may happen in this case, that can happen in any case where there's machinery with motors and hydraulics and all of those things. Generally it's reasonably easy to identify and in



most cases it's dealt with quite quickly because failure to deal with those sort of issues generally indicates that something is going to fail at some point soon. In my experience, those sorts of issues are identified much quicker on vessels at sea than they would be say on an excavator in a quarry or something like that, because the consequence of a failure is generally much greater.

Q. Yes, so turning to your evidence, if I could take you to your paragraph 13 and I'm just going to ask you a couple of questions about 13(b) and (c).

A. Sure.

10 Q. So at 13(b) you talk about obtaining noise measurements from the *William Fraser* where did those noise measurements take place in relation to the vessel? Were you onboard, were you in a boat next to it, was it at a wharf, was it out at sea?

15 A. I could tell you it took some considerable organising, it was not easy. The measurements were taken from another vessel, I was on the bow of another large vessel that was stationary with engines not running and for that to occur we had to be downwind of the *William Fraser* because we didn't want to be blown into its path, but the windspeeds were so low that actually drifting because of the wind was minimal anyway and then the  
20 *William Fraser* was set in the dredging mode, essentially when it wasn't dredging, it was pumping, but the drag head was not on the seafloor, and it came past following a very straight transect and using a rangefinder and standing on the bow of this other vessel, I was able to measure its range as it came past quite accurately and correlate that with a recording in one  
25 second interval measurements of the pass by. We did that several times to get averages and to understand the variability of each pass by, they were very consistent between pass bys. That information was then, a relatively long process, but turned into sound power levels for use in the computer noise model.

30 Q. Thank you. And just in terms of that noise model, at 13(c) you talk about those, and am I correct – have I understood correctly that you've only modelled the noise from the *William Fraser* in the offshore, you didn't take measurements from onshore while the vessel was extracting sand in the offshore area? Do I have that right?

A. That's correct.

Q. So the paragraph 28 that Mr Pou referred to, talking about ambient noise levels on the beach and the conditions during the day, my clients say that they can hear extraction in the offshore inside their homes and it can be enough to prevent them getting back to sleep, if they wake in the night. If that is their evidence, based on their experience, do you accept that this is possible?

A. I accept and I make a point of saying in my evidence that it's definitely likely to be audible onshore. Whether it is enough to have the effect that you describe on a person, I think it would be unlikely, but having said that the population that we assessed the effects against, has a very wide degree of sensitivity to noise. We typically work within the 95% of the bell curve of sensitivities and so there will be people at either end that are either completely insensitive and just won't care and people at the other end that will be very sensitive. It may be that your clients are at one end of that spectrum, I don't know, but I absolutely accept that it may be audible.

1500

Q. So you're accepting then that it's up to the community speak as to what effects are acceptable to them and in particular if there's a cultural dimension?

Q. Addressing the first part of the question first, generally with noise effects it's generally accepted that you don't – it's certainly not typical to design things to be acceptable to the very most sensitive person or group of people. If we were to do that then it would be nearly impossible to do anything. So I think the answer to your first question is no, not in a very direct absolute way, but that's not to say that the views of the community should be excluded, simply that if I could put it crudely the community aren't necessarily the decision maker in a case like this. About noise effects. In terms of the cultural aspect, that's not an area that I'm an expert in, so I can't give you an answer there, sorry.

Q. So with respect to Pakiri Beach are you familiar with how much of the beachfront land is Māori land and how much is general land at all? I'm

asking to get an idea of whether you understand who the majority of the community are there?

A. No I haven't done that exercise, no.

Q. And just for the record, you haven't slept the night in any of my clients' homes have you, while the *William Fraser* has been operating in the offshore area?

A. No I haven't no.

### **CROSS-EXAMINATION: MS HIEW – NIL**

### **RE-EXAMINATION: MS HOPKINS**

Q. Just one point of clarification, one question arising. Mr Styles, Ms Black referred you to your paragraph 28 and about noise levels and in answer to that question you talked about them being audible onshore. Are you able to clarify whether you meant on the beach or further inland?

A. Bear with me. At paragraph 28 of my evidence, I am talking specifically about on the beach. There are other parts of my evidence that talk about the effects further inshore.

Q. And just so I've got the terminology right, I'm asking specifically about inland from the beach area, it's just your answer talked about it being audible onshore. Is it audible further inland as well?

A. Yes.

### **QUESTIONS FROM THE COURT: COMMISSIONER MYERS**

Q. Good afternoon Mr Styles, just following on with that question about where it's audible. In paragraph 41 you talk about the noise from the offshore extraction may be audible in the hinterland. Is that what you're talking about in terms of further back from the shore?

1505

A. That's exactly right and I was scrolling through my evidence trying to find that paragraph just as you said paragraph 41, and I found it at the same time, that's correct.

Q. All right, so what would the – I think you explained there what the noise levels might be as well?

A. Yes so for the offshore application as it was when I wrote my evidence, I say at the end of paragraph 41 I expect the noise level will be no greater than approximately 20 to 25 decibels LAeq.

Q. Okay, thanks, I just found that so thought I'd ask. So thank you very much.

### QUESTIONS FROM THE COURT: SPECIAL ADVISOR HOWIE

Q. Hello Mr Styles.

A. Good afternoon.

Q. I was just interested in the different effects of different frequencies. What makes me think of that is that you can often hear the bass drum from some outfits through walls and miles away and so on. Is it one of those kind of cases?

A. Potentially, yep, it could be. I would say probably not to the same extent of the examples you gave. But it is possible that the low frequency nature of diesel engines can propagate I guess further than some of the higher frequency sounds. And I just want to emphasise here that that particular effect is taken account of in my predictions, it is based on the low frequency of the measured level of the vessel. Sometimes those lower frequencies are harder for buildings to reduce than higher frequency sounds. And so when you go into an enclosed area the higher frequency sounds from outside can be reduced considerably and the lower frequency sounds still reduced but not by as much, and so they may become, just finding the right words, I suppose more noticeable inside.

Q. And does the noise from the operations include frequencies that would give that sort of effect?

A. As I mentioned at the start of my previous answer, not to the extent of the examples you gave with say bass drums or those much lower frequency sounds, I would say that in this case the effect we're talking about would be small but definitely there. So there is enough low frequency energy to create this potential effect that we're talking about.

Q. Do the noise guidelines have any standards for indoor sleeping criteria for low frequency sound?

- 5 A. Not in a case like this. I just want to reiterate that the levels we're talking about are very very low, in the order of 20 decibels give or take. In some cases you may have, or you would always have in fact, the possibility of adding five decibels to your measured or predicted noise levels for a situation where the sound exhibits a special audible character, so in other words it's more annoying than another sound at the same level. And the typical non-annoying sound would be distant traffic, that's an example I always as being a sound that may be say at 30 decibels, or 40 decibels even but probably wouldn't annoy most people. But if had a bass drum playing, you know a song playing with a strong bass beat at 40 decibels, that would be probably much more annoying to most people. And so you add that five decibel adjustment to it. And you would report 45 as the measured or the predicted level. In this case I don't think that adjustment would apply simply because the prominence of any particularly low frequency issue is just not strong enough to qualify. It has to really stick out above all the other things that are in the environment to be an issue. Even if it did, we are still talking about levels overall that are below 30 decibels, well below 30 decibels, LAeq, and that is subjectively more than half of the permitted limit.
- 10
- 15
- 20 1510
- Q. Less than half you mean, do you?
- A. Less than half, yes.
- Q. Yes. Have you, you haven't made any measurements in properties affected?
- 25 A. No, no I haven't.
- Q. Could that be done?
- A. It could be, I think it would be logistically challenging because the weather conditions would be very important to get right and I could see that there would be potential to lose a lot of time undertaking this with a lot of travel and getting up there and finding that actually the weather conditions or the swell height or, for some such reason, is just not measurable on that particular occasion. I think it would be very challenging to, in fact I think it would be impossible, to find a situation where the noise from the vessel is actually able to be measured accurately and cleanly, if you like. I think
- 30

it's going to be so close to the background or ambient sound levels that an accurate measurement would be, I hesitate to say impossible, but it's getting, it's definitely tending towards impossible, very difficult.

Q. Yes. So you wouldn't set up an automatic system in somebody's bedroom to switch on at night and switch off in the morning and give you long record what it recorded, apart from snoring I suppose?

A. That's right. I think the challenge would be, I think you would have to be there to determine it and localise it with your own ears to make sure that that's where it was coming from and that it wasn't say, a hum of a fridge or some other noise source in the area or in the house. It would be necessary to have a person there attending throughout that whole measurement.

## **QUESTIONS FROM THE COURT COMMISSIONER PRIME – NIL**

### **QUESTIONS FROM THE COURT: JUDGE WARREN**

Q. Thank you for your evidence Mr Styles. Just to ask probably a trite question but, it was your colleague who gave evidence at the council level hearings, correct?

A. Yes.

Q. I've read that decision and it seems to me that the Commissioners there didn't take too much issue with noise effects. Is that your understanding of the decision?

A. That's correct, yes.

Q. Is there anything that you have assessed since reviewing your colleague's work and any other evidence that has come in to change your view on those effects?

A. No, no I've carefully considered the material that has been made available and the comments in evidence and, as I mentioned earlier, I've revised my knowledge level predictions for the revised area. So I have made a change to my assessment of effects in the vicinity of the southern receivers at the Pakiri river but, generally, I remain of the same views.

**QUESTIONS FROM THE COURT: JUDGE SMITH**

Q. I have a few questions around this. I am sorry, it becomes a blur over the decades but you've been involved in a number of Port cases and ones involving water I think haven't you, either as a reviewer or a main party?

5 A. Yes Your Honour, yes.

Q. So you are well familiar with airports and ports about how we are now looking, using noise contours to try and identify those areas that might be affected?

A. Absolutely.

10 Q. Did you become involved in North Port, I can't recall, for the latest round of –

A. Yes.

Q. You were involved in that one as well, right.

A. Yes.

15 Q. You will remember that there was an issue and I think acceptance generally by the experts that sound can propagate across water, particularly in still conditions, quite a long way and, if you recall, the contours in the end we adopted were ones at the high water mark, essentially where people might be present. I have got to say there is a  
20 fairly compelling logic here to adopt a boundary condition here too on the shoreline. Would you agree that that might be a sensible way forwards?

1515

A. Yes, I would, and I don't have it in front of me but I think that the proposed condition set lists the shoreline as an assessment point.

25 Q. Yes well I'm really thinking rather than an assessment point to fix an LAeq15 at the shoreline, and I'm assuming you would suggest an LAeq15 as being –

A. Yes.

Q. – the appropriate – yes.

30 A. That's right.

Q. And do I take it that you would have the same day/night, so it wouldn't be a day/night weighted, it would be a single at all times?

A. Single, that's correct.

Q. Is that what you're saying?

A. Yes.

Q. So then we get to what level that might be to be reasonable. You've calculated something under 30. I mean I must confess I've never adopted 30 for anything so far, but one would have thought if you were achieving 35 at the shoreline, then the UN35 LAeq15 for sleep would be met, even if people were sleeping in the open, if you're with me?

A. If they were sleeping in the open, yes, yes, that's right.

Q. Well that's right, onshore in the open because there'll be some attenuation between the shoreline and a couple of hundred metres will attenuate it somewhat, won't it?

A. Yes. Absolutely. And especially with the dunes and the foliage on the shore, that's actually quite acoustically absorbent, so you do get a reasonable amount of attenuation.

Q. So I mean it does seem to me that one simple way, rather than us getting into all the cost of modelling, et cetera, would be just to adopt something like a 35 LAeq15 at the shoreline?

A. I think the proposed – the proposed condition sets a limit of 40DV LAeq at the shoreline and at any notional boundary. Clearly if it complies at the shoreline it should comply at a notional boundary too because it's further away. I think – the reasoning for having both locations in is because measuring at the shoreline would generally be very difficult because you've got the –

Q. The concerning factors with the waves I'm assuming.

A. That's right. And so –

Q. No, okay, well look, I'm happy with that. I just wonder why 40 rather than 35. I mean I'm always one for people putting their money where their mouth is. If the reality is that you're not getting anywhere near that figure, then it should be easy to comply.

A. I think 40 came from originally it was the council's proposed condition and that's reflected the emitted standard that applies at night on that zone interface.

Q. The only other thing, removing it four kilometres to the north would mean that the attenuation between the generation point and – the nearest generation point and Pakiri would be such that it would have fallen to



background levels by that, wouldn't it? Four kilometres is a long way, even on water.

A. That's my assessment. That's correct.

5 Q. Now there's a waypoint which curiously enough at the moment has stayed in the same position as it used to be. I'm assuming that common sense will see us move it to somewhere closer to the area to be excavated if we get to that point. But you would agree that navigation waypoint shouldn't be such that it would in itself create noise effects to the south? It would be illogical, wouldn't it?

10 A. Sorry, I'm not following your Honour. Maybe I missed this part in our conversation.

Q. Can I ask Ms Harnett to pull up – now I've got confused about which one's which – what I have as 1 but she has a different one. It's showing the cells but with a navigation waypoint also displayed.

15 **MS CAMPBELL:**

Sir, I suggest appendix 4 to the draft conditions may assist.

**THE COURT: JUDGE SMITH**

Does that show the navigation waypoint?

**MS CAMPBELL:**

20 Yes, it does, your Honour.

**THE COURT: JUDGE SMITH**

Okay, excellent.

**QUESTIONS FROM THE COURT CONTINUES: JUDGE SMITH**

25 Q. Thank you, Ms Harnett, if you could pull up appendix 4 to the conditions. You'll see off to the right there you'll see down to the south you'll see navigation waypoint which, in itself, seems (a) unnecessary and might in itself propagate noise towards the shore. We were told it can be an hour of setup getting everything going.

A. Right.

Q. Would you agree?

A. Yes, it is a long way offshore at that point as well, nearly twice, just by eyeball, twice the distance of the nearest inner track, so it is a long way off. But, yes, I agree that having the vessel down in that area is going to be I suppose an additional effect. But –

5

1520

Q. Well even we know there's a psychological element to sound as well and even its mere presence with lights might generate a response of course. Because this is about the people's sensitivity to – and it's a mix not only of sound but other effects, isn't it?

10

A. Beyond my area of expertise, the other effects, but commonly that's the case yes.

Q. You obviously haven't had to sit through the psychological evidence I've had on noise over the years. So I don't know what else more I can say. Obviously the time that's going to be the biggest problem is when it's closest to the shore. I thought that was fairly obvious.

15

A. Yes.

Q. So if there was somehow in which we controlled the amount of time they could harvest near the shore that would reduce the overall effect, wouldn't it?

20

A. Yes it would. I mean my opinion is that the effects are already so low that further reducing them in a manner like that is not necessary but of course it was.

Q. No, that's fine, thank you, I think I am starting to clutch at straws now, so thank you very much and I appreciate your evidence.

25

A. Thank you.

Q. Are there any questions arising?

**QUESTIONS ARISING – NIL**

30 **WITNESS EXCUSED**

**MS HOPKINS CALLS****ANTONY BOYD THOMPSON (AFFIRMED)****EXAMINATION: MR MACRAE**

Q. Mr Thompson we'd better give your full name on this occasion because  
5 we have three Thompsons. Your full name is Antony Boyd Thompson?

A. Yes correct.

Q. And you've produced a single statement of evidence in this appeal dated  
the 23<sup>rd</sup> of December 2022, it's tab 19, is that right.

10 **THE COURT: JUDGE SMITH**

Yes we have it in front of us. Thank you very much. And would you like to  
proceed with your additional questions, if any?

**EXAMINATION CONTINUES: MR MACRAE**

Q. Yes, thank you Sir, just on one topic. Mr Thompson, during earlier, in fact  
15 I think during my submissions there were some questions about the  
cultural liaison agreement which has been agreed in principle between  
Te Uri O Hau and the applicant and the appellant, and I advise the Court  
that the terms of that at this date are confidential. But are you able to  
indicate in general terms to the Court how that agreement provides for  
20 input on Matarangi Māori values and recognised as the kaitiaki tangata  
status of Te Uri O Hau and provides their input to operational monitoring  
and other aspects of the exercise of the consent if it were to be granted?

A. Kai ora Tatou. I think it's three-fold in terms of Te Uri O Hau. So the first  
component is the environmental unit that Te Uri O Hau Environs, there'd  
25 be a monitoring and maintenance kaupapa that Environs would have, not  
unlike what they're currently doing with a number of other projects around  
the community and the district and the region with councils and other  
organisations et cetera. The second component would be with our  
taumata, our kaumatua, our (inaudible 15:24:58), who are the cultural  
30 repository and who give guidance at a kaupapa tikanga level. The third  
component would be the governors or the trustees, which is the part  
where I fit in, making sure that as governors or as trustees of Te Uri O

Hau Settlement Trust, the kaupapa is followed correctly, is by instructions from our taumata, our frontline services through Environs etc are delivering the services and the kaupapa that they deliver in a good timely manner. And then finally as trustees that we make sure that at a governance level we are following stringent rules that the Settlement Trust have put in place. Kia ora.

Q. Yes Mr Thompson, at a practical level, who would provide the input for monitoring and how that might take into account mātauranga Māori values, reporting to the council and operating the vessel in ways that would meet with Te Uri O Hau's concerns and values?

A. Ideally it'll be done through the Environs unit, they'll be pretty much the heavy lifters, with work that they're already currently doing, they've got mechanisms in place where we have kaitaki, kaitaki from our local marae, kaitaki who are part of the Environs system itself. They would monitor, maintain and basically observe at a certain level what was happening, the functions etc, from that point they do have reporting mechanisms as with the Kaipara District Council and RC for example, we've got measuring indicators etc that they do abide by. Again it would be an agreement, a collaborative agreement what those would be, but basically they'd report back on a monthly, quarterly or six monthly basis.

#### **CROSS-EXAMINATION: MS BIELBY**

Q. Kia ora Mr Thompson, my name is Ms Bielby and I'm for the Auckland Council. Can you hear me okay?

A. Yes.

Q. I'm just going to start with some introductory questions. So it's my understanding Mr Thompson, based on your evidence, that the evidence that you're presenting to the Court in this hearing is on behalf of the Te Uri O Hau Settlement Trust, is that correct?

A. Yes that's correct.

Q. So would I be right then in saying that the evidence that you're giving today and in your written statement as well, you're speaking on behalf of the Te Uri O Hau Settlement Trust only?

A. As a trustee, that's correct yeah.

Q. And so you aren't – the evidence that you're giving isn't, you're not speaking for any others beyond Uri O Hau who may have an interest in sand extraction at Pakiri or of Pakiri generally, is that correct?

A. Correct.

5 Q. So now I just want to work through a little bit and so you are obviously familiar with the proposed sand extraction area?

A. Yes.

Q. And including as it's been amended by McCallum Brothers in the context of this appeal, is that right?

10 A. Correct.

Q. And am I correct that Te Uri O Hau's interest, I'm sure it goes broader than this, but when we're looking at just the sand extraction side, am I correct that Te Uri O Hau's rohe is the area that is (inaudible 15:29:34) sand extraction area that is north of Te Arai Point, is that fair?

15 A. That's correct, yes.

Q. And am I right and correct me if I'm wrong and it's not so blunt as this, but am I right that Te Uri O Hau's rohe does not extend south of Te Arai Point?

A. That's correct.

20 Q. So it's about, I mean in fairly general terms, it's about sort of half of the sand extraction area, is that correct?

A. Correct.

1530

25 Q. And so when we're looking at the effects, we're looking at obviously all of the effects of the sand extraction and so you'd accept that it's the whole area that we're looking at, isn't it? North and south of Te Arai Point?

A. Yeah.

30 Q. And so would you also accept that – and whilst not saying for a moment that Te Uri O Hau's interest isn't what it is, but would you accept that there's others, other people, other groups who are represented in this proceeding that also have an interest in the sand extraction area?

A. Yes that's correct.

Q. I just want to now talk a little bit about the effects, and I thought a good place to do that might be to take you to paragraph 39 of the evidence that you've helpfully prepared, and Sir that's EB522.

A. Yes I'm with you.

5 Q. So in paragraph 39 there's two sentences and I'll come to both, but I do just want to start, to keep it simple, I did just want to start with the first of those sentences. And that's where you say that it's difficult to see how many of the reported cultural effects described by the (inaudible 15:31:42) are occurring.

10 A. Yes, I think this journey began with us in 2018, we had a lot of interaction between McCallum Brothers and Te Uri O Hau Settlement Trust, our taumata, we visited as well. At that time we had our own internal environmental specialist, so Stephen Brown was one of our internal scientists and experts that we had to give us advice. At the same time,  
15 the evidence was presented to our taumata, who also made comments and that's really where that sentence originated from, 2017, 2018, our initial taumata hui that we had with McCallum Brothers and then after that, the one on ones we did have with them at the board level as well.

Q. Yes just so I understand that, the Mr Brown that you refer to is that – was  
20 he internal to Te Uri O Hau or McCallum Brothers?

A. Yes. Yeah, he was the environmental manager at that stage.

Q. And Mr Thompson, did you attend the council hearing of this offshore application?

A. Yes. Ah, I was at the Warkworth hearing and I also was on the online.

25 Q. Yes –

A. There was one other pre-Covid as well, I can't remember the date.

Q. Yes and so you heard the evidence that was presented by those other persons or groups, Ngāti Manuhiri, who have an interest in the sand extraction area?

30 A. Correct.

Q. But am I right that it's still your position as you said in paragraph 39, that despite hearing that it's still your view, you're still struggling to see how those cultural effects are occurring?

A. Yes and we can agree to disagree on that as different parties as well.

Q. Yes, yes, no, absolutely. So my reading of your evidence, and we've been looking at paragraph 39, but I've also looked at paragraph 38 and it's my reading of your evidence that the reason that you've arrived at that position in terms of the struggle to see the effects on other persons with an interest in this area, is that it's a result of the technical assessments that have been undertaken, the sort of more tangible or non-indigenous effects, is that what's led you to that (inaudible 15:34:32) –

A. Not really, it's a combination.

Q. Okay.

10 A. At the time Stephen gave his report in brief to our kaumata, our cultural (inaudible 15:34:40) kaumata, so with the evidence and the information that he gave, and their whakauru or their explanation of how they saw it. Now again I'm coming from the paradigm of Te Uri O Hau, I can't come from anyone else's lens, so that was where we started back in 2018.  
15 2019 when we did the follow up, again we had done the same processes in place, going over the scientific evidence that was presented to our Environs unit and Stephen, and then assessing with our kaumata feedback as well, but again, it's a bit of the scientific and then mātauranga Māori.

20 Q. Yes, so it's that balancing exercise and that's the position that Te Uri O Hau arrived at, that's what I'm hearing. Te Uri O Hau did that work, looked at it from a scientific perspective but also from a mātauranga Māori perspective and that was, that's the position?

A. Correct.

25 Q. So can I just come back to that sentence because I'm still struggling a little bit with that paragraph 39. I can fully understand how Te Uri O Hau have arrived at the position that it has but my reading of the first sentence of paragraph 9 is that extends broader than Te Uri O Hau and I just want to get clear, I'm very clear as to Te Uri O Hau's perspective and fully  
30 understand that but what I'm also hearing is that you're not giving evidence beyond Te Uri O Hau?

A. Actually, yes, that's correct. We're only giving evidence from Te Uri O Hau perspective. To give it from another perspective, for example, Ngāti Whātua, you'd have to talk to Ngāti Whātua reps to give it from their

perspective of the local marae, you'd have to get the local marae perspective so, yes, you're absolutely correct, it's from the Te Uri O Hau perspective.

Q. And so I suppose you would accept, based on that then, that a proposition  
 5 that, it's possible, and we haven't heard all of the evidence yet from the other parties but it's possible that different persons and different groups with an interest in Pakiri might experience effects, they might do that balancing exercise that you've just spoken about, they might do that differently, is that fair, they might arrive at a different conclusion?

10 A. Yes, again, I can accept that we've all got different paradigms and lenses so, again, I can accept that we can agree to disagree on certain topics. For example, mātauranga Māori, yes, there's a kawa across the whole rohe but our tikanga practices may (inaudible 15:37:37) or differ. It really depends, again, and it comes back to the Te Uri O Hau lens, a Ngāti  
 15 Manuhiri lens, a Ngāti Whātua lens but, again, it's those differences and our agreement, you know, on those differences that sort of bring us together.

Q. That's exactly right and that's really helpful, actually, that's a really helpful  
 20 explanation and I think that's certainly a hugely important part of this case is that everyone's looking at this with their own personal and varied lens. I think with that – I had a few extra questions on that but I think I can probably move on because we seem to be in agreement that you're speaking for Te Uri O Hau and there may be others and I'm sure we'll hear from others who have a different perspective.

25 A. Kia ora.

Q. I think, based on our questioning, your answer will – I think I can guess  
 your answer to this question but just moving to paragraph 40 of your evidence, and that's when you talk about when sand is taken or placed or used in another area there's a transformation of the mauri and the mana  
 30 is lost and that this could cause offence?

A. Yes. I spoke about that in Warkworth as well. The sand, everything has mauri. Now disclaimer first, I'm not a cultural expert by any means, I'm still too young to be, however through our teachings and through our mātauranga everything has mauri or a life force and therefore the sand,



yes, it has a life force. If sand is move from one location to another then that life force is transformed, there's a transformation. Yes, it's still there but it becomes something new and we accept that. The same examples can be brought up when we have the felling of trees, for example. When a tree is grown on a plot of land in Kaipara or Te Uri O Hau that's a sapling, it's a tree, it grows. When that tree is felled and cut down, the mauri of the tree is still there, however it's transformed, there's a transformation because the three has moved its ships, it's put on a boat and sent overseas. The mauri is still there, there's a transformation, it becomes something new, that's what the explanation is.

Q. And so in that same paragraph I think you go on to talk about how that loss can be addressed or counted and you talk about the fact that with the, or Te Uri O Hau's view, that when that transformation occurs, and we're talking about the sand at this point, but when the transformation occurs with the blessing of iwi that tapu is lost, is that correct?

A. Correct. So that's why we have karakia, we have the karakia at the beginning of a process and we also have it at the end to open and close, for example. The mana through the karakia is lifted, the tapu is lifted and there are great cultural experts out there that could go into detail about this but what I'm trying to explain is the mana is lost and that transformation is changed again. Similar to what I was talking about earlier with the Māori there's a transformation from one state to another. You don't see it but we acknowledge and we, as Māori, accept it.

Q. Is it possible, Mr Thompson, that – and I absolutely hear you there – but is it possible that there could be an effect that's so, so fundamental, so significant, that even with that blessing the mana is still lost?

A. Where anything's transformed, there will be a loss of mana, there'll be a loss of mauri. The change, however, is the important thing, the transformation. When that transformation occurs it may be more or less. Generally, it's less to begin with because you're in the movement. When that movement's changed and the (inaudible 15:42:11) for example, take the sand again, it's changed into something else, there's a new mauri that's created. Māori Marsden explains this is the *Way Of The Universe*, very clearly, very well. I can't quote the page number but his texts explain

this and Sir Mason Durie explains this as well, (inaudible 15:42:30) Māori. Yes, there's a transformation, yes, mana is lost during that transformation. Later on, however, there's a new transformation, Te Puna – sorry, the Spring appears.

5 A. I'm learning a lot just talking to you now. So, moving on from that, my take on your evidence and my take on Te Uri O Hau's position is that any cultural effects associated with McCallum Bros' proposal here, that they've been appropriately mitigated. Is that correct, is that a fair summary of Te Uri O Hau's position?

10 A. Yes, correct.

Q. And a part of that, and I don't know how significant or otherwise it is, certainly a part of the reason for that view that there has been an appropriate level of mitigation seems to rely on the cultural liaison agreement that we've just spoken about, is that correct?

15 A. Yes.

Q. And it's through, and I think you touched on this at the outset, but it's really through that agreement, and I don't know how firmed up it is but on the terms, anyway, as they currently exist, it's through that agreement that Te Uri O Hau is able to exercise kaitiaki over its rohe, is that right?

20 A. Yes, correct.

Q. What I'm aware of at this point in time is that there may be other tangata whenua involved in this application and who oppose McCallum Bros application, who don't have a similar agreement that Te Uri O Hau have with McCallum Bros. Is that your understanding as well?

25 A. Yes, and again I think, as I explained earlier, we're all different, at different levels so we're going to be at different levels on everything as we go along.

30 Q. And so do you – I mean the fact that there aren't those other agreements do you, would you accept, based on what you've seen so far in your involvement through the hearing and what you've read in the evidence that there may be, and again I'm cautious here because we need to hear the evidence, but there may be other groups or persons who feel that even an agreement like Te Uri O Hau has here, even with such an

agreement the affects are just so fundamental I suppose that they can't be addressed through an agreement?

1545

A. Can you explain that. Sorry, I didn't quite understand that question.

5 Q. So, what I'm saying is that Te Uri O Hau has a cultural liaison agreement with McCallum Brothers and that it's Te Uri O Hau's view that through that agreement or because of that agreement, the affects of this proposal are considered to be acceptable or appropriate. Do you – no, that's okay, you go.

10 A. Yes, yes, sorry, I get what you're saying now. Yes, Te Uri O Hau, and again it's back to the lens or the paradigm of Te Uri O Hau, again I can't speak for any other organisations, any other hapū, any other iwi and I actually don't know what stage or what progress they've made as well because again it's confidential. I'm not privy to anyone else or what level  
15 that they've made agreements with. So, it's a bit hard to gauge that at the moment. Maybe if we had a bit more information we could probably comment on that, but at this stage, you know, we've got to do what's best for Te Uri O Hau because that's the only group that I speak for on behalf of at the moment.

20 Q. So do you, would you accept though, even just at a hypothetical level, Mr Thompson, that there may be some instances where effects are just so fundamental and of such significance and importance that even with an agreement, those effects just cannot be mitigated?

A. I guess again we'll have to wait and see. It's hard for me to gauge that.  
25 What I can say is, you know, I look at the confiscation of land and Māori. That's a good example for me. Some iwi, some hapū did very well with private agreements with the Crown. Other iwi and other hapū did very badly. The confiscation of land is a good one because our land was lost through the same processes that we're pretty much going through today.  
30 So how do we mitigate that? I don't have the answer. What I do know is we've still got to figure out the best track and pathway for the group that we speak for.

Q. I understand, just moving to another topic, so I understand and I think you said this at the outset as well but it's certainly in your evidence that you're

also in the role of director of a company called Environs Holdings Limited. And am I right that that's, in sort of broad terms, what we would call the resource management arm of Te Uri O Hau?

A. Yes, the environment and protection arm, correct.

5 Q. And I think it's within our common bundle as well and I might just turn to that now but there is the, Environs Holdings Limited has prepared an environment management plan, is that correct?

A. Yes, correct.

Q. And you'll be familiar with that document, won't you?

10 A. Yes, yes. The, I can't remember the dates. It's an older one, older version.

Q. I think it might be, is it 2011? It's been around a wee while.

A. Possibly.

15 Q. So, I might just get, Ms Harnett, would you be able to pull that document up.

#### **THE COURT: JUDGE SMITH TO MS BIELBY**

Q. I'm just wondering, Ms Bielby, since we're moving into a new topic, it's time for our afternoon adjournment and I'm wondering if we shouldn't take that and then come back to this topic afterwards.

20 A. That's absolutely fine, yes.

Q. How much longer have you got to go?

A. Probably only 10 minutes, 15 minutes max.

25 Q. I still feel we should perhaps take the break and then come back and deal with it afterwards I think, thank you. So we'll take a break. We'll recommence at 4.20, thank you.

**COURT ADJOURNS: 3.50 PM**

**COURT RESUMES: 4.20 PM****THE COURT: JUDGE SMITH**

Thank you Ms Bielby. You are just moving on to a new section I think with some reference to documents?

**5 MS BIELBY:**

Yes, yes Sir I was, but I have changed my mind over the break thank you.

**CROSS-EXAMINATION CONTINUES: MS BIELBY**

Q. Thank you Mr Thompson, I have reflected over (inaudible 16:20:32). You have been really clear this afternoon that, and this was one of my big lines  
10 of questioning but you have been really clear that I should, when I read your evidence I should be reading it through the lens of Te Uri O Hau only and that, so when you do say in your evidence that the effects are acceptable then you are really, you are speaking for Te Uri O Hau only and that the effects that others may experience as a result of this activity  
15 or the proposed activity, they may well have a different view. I think we are on the same page there.

A. Kia ora.

Q. So that's, so I don't need to take you to that document. I do just have two short lines of questioning or clarity for you and then I will be done. My  
20 first is, I am just wondering Mr Thompson, have you, I'm not sure if you heard the evidence, probably last week now actually, or you've read the evidence of Mr Stephen Brown, that's McCallum Brothers' landscape architect. Have you read that or did you hear that?

A. No, no. You are saying landscape architect?

25 Q. Landscape yes, that's correct.

A. A different Stephen Brown to the one I am associated with.

Q. Yes.

A. Yes, yes okay. Sorry, bit of a panic there.

Q. I was confused by that as well. So landscape.

30 A. Yes sorry, yes, apologies. No I haven't yet.

Q. No, no, that's absolutely fine. The reason I ask is that in his evidence Mr Brown, landscape Mr Brown, discusses this concept of what's called the cultural landscape. He raises that in his evidence but he actually, he says that he would need to turn to you to, for evidence on that. I am aware from reading the evidence of other parties, and I know for instance Ms Haddon for Te Whanau O Pakiri, has specifically addressed this question of the cultural landscape. But am I correct that, on my reading of your evidence, this isn't a topic that you delved into?

A. No, no. The deeper cultural competency I guess you would call it, not my area of expertise.

Q. Understood thank you. So final point and it's just one of clarity really and I can probably take you through it very quickly. It's around paragraph 49 of your evidence and I don't know if you have got that in front of you, but effectively I think what you are saying is that the council's decision to decline the offshore application didn't take into account Te Uri O Hau's that any negative impacts on cultural values have been mitigated.

A. Yes that is correct. Although the relationship between the council and Te Uri O Hau has been up and down to say, nevertheless. And I guess, you know, in paragraph 49 there, it basically just outlines exactly what I've said. You know, it doesn't take into account consideration of Te Uri O Hau's belief. I think that's the really important thing this the lens that Te Uri O Hau brings to the table sometimes gets ignored and we just need to make certain that our voice is heard. That's really what I'm directing that paragraph to.

Q. Yes, and I, you know, I don't question that. I just, I wanted to, I've had a read of the Commissioner's decision and I might just take you to a couple of paragraphs but I just want to, I want to, I suppose, just understand that, that comment a little bit more with reference to that, that part of your evidence, because my reading is that they did but they found that there were other, there were still nevertheless adverse cultural effects on other tangata whenua. But they did actually take into account that Te Uri O Hau lens. I might not, if you are familiar with those sections, but that's your view nevertheless that's fine and I don't need to take you there. I just wondered if it would help to take you to those specific sections

where the council or the Commissioners sorry, in their decision, they do factor in, or they appear to anyway, consider that Te Uri O Hau lens or perspective?

5 A. Yeah and again it's been an up and down journey with council. I think it's just a rare occasion where we do get (unclear 16:25:25), not just on this kaupapa but a lot of other things we do with interactions as well.

Q. Yes, no, no, understood. Those are my questions Mr Thompson, thank you very much.

**CROSS-EXAMINATION: MS VAN MIERLO – NIL**

10

**THE COURT: JUDGE SMITH**

Thank you. Ms Campbell did you have questions of this witness or is Mr Pou still parentis in locus, can't remember the phrase now. Are you still wearing multiple hats Mr Pou?

15

**MR POU:**

I am, sir, but we'll ask our questions after the other people have asked, I think after Ms Black, and Ms Urlich has some questions and Ms Urlich is Ms Morrison-Shaw this afternoon.

20

**THE COURT: JUDGE SMITH**

That's an interesting substitution. So perhaps if I just ask Ms Black if you had any questions?

25 **MS BLACK:**

I do, Sir. The council has cleaned up most of them. I should just note that the batting order we'd agreed among ourselves involves Ms Wakaira going after me and before Mr Pou and Ms Urlich.

30 **THE COURT: JUDGE SMITH**

Thank you. Carry on.

**CROSS-EXAMINATION: MS BLACK**

Q. Tena koe Mr Thompson, I think I only have one question. You've already confirmed with my friend for the council that your rohi is north to Te Arai, will Te Uri O Hau benefit from sand extraction south of Te Arai?

5 A. No, not to my knowledge. Only the area that's within the rohi of Te Uri O Hau. But could you be a bit more clearer on when you say what kind of advantage?

Q. So it's probably reasonably common knowledge that there's an MOU between Ngati Wai and originally Kaipara and that involved payment of a  
10 royalty. Is there that sort of benefit because I'm just thinking of the boat going up and down in these straight lines across the dredging area and I was wondering if there's something like a royalty associated with sand extraction how you would quantify what came from your rohi and what came from south of Te Arai?

15 A. Yeah more te reo. It really depends and there's been no formal agreement on that at all so to date Te Uri O Hau has received no royalties, you know, from sand extraction in the Kaipara. We would like to talk about that, that could be a discussion going further. However, at the moment, specially for the area that we're talking about those are still in  
20 negotiation, there's no yay or nay and at the end of the day I think, you know, we're still trying to get through this process now to see what the outcome is before we can make any firm decisions, so nothing's in concrete.

Q. Kia ora.

25 **CROSS-EXAMINATION: MS WIKAIRA**

Q. Yes please. Tena koe. So as you can imagine I'm upset so excuse me, but so my first question is, did you listen to the council hearings at Omaha Marae?

A. I didn't listen to the council meetings, the audio, but I did read the report  
30 afterwards.

Q. And at the Pakiri Hall as well?

A. Yes, sorry no, only at Warkworth.



Q. So listening to the parts you have listened to you'll see that inter-generational trauma, it's caused between the Hau Kaianga who live along the coast and has done so since pre-1840. That's a yes?

A. Yes, yeah, I understand that, yeah.

5 1630

Q. So would you agree that the unique difference between Te Uri O Hau and us, the Hau Kaianga, is that we live there?

A. I think the question really is would you agree that Te Uri O Hau and the Hau Kainga working or where does Te Uri O Hau boundary stop and the Hau Kainga begin? I think those are bigger questions to ask, because you're talking about the decolonisation of our area, of our kaupapa, so I think that might be a bigger question.

10

Q. So I guess what I'm asking is we've lived on the beach coast, we've lived there the whole time, so the difference between your people and us is that we have lived there, is that a yes or a no?

15

A. I think – I have to acknowledge, yes, you definitely lived there in Pakiri, but at the same time I can only speak for Te Uri O Hau and we've lived in the Mangawhai area. We're basically neighbours, that's what I'm trying to say. And again I have to go back to say I can only speak for Te Uri O Hau.

20

Q. Have Te Uri O Hau ever tried to facilitate a hui with us, with the Hau Kainga in Pakiri, since – like you've been talking since 2018 with McCallums. It's 2023 now.

A. I guess the bigger question is was there any conversation facilitated before this process? I just finished talking to the previous speaker about how Te Uri O Hau were not part of any Royalties Commission, so this goes on forever. And when I say "forever", it's the last 20 years. So I think it works both ways. Now have Te Uri O Hau had their own meetings? Yes. From 2017 when I came on the Te Uri O Hau Trust Board, I was part of the original project, and that mainly dealt with Mangawhai, the Te Uri O Hau rohe, because that's the only area we can operate in and, you know, we can kōrero in. If we have to kōrero with our neighbours, that's a different story. Now have we facilitated any

25

30

meetings? Not to date. However, before that there were meetings facilitated pre-2019.

Q. With who?

A. Before my time.

5 Q. With who?

A. Between Te Uri O Hau, at the time back then it was Ngāti Wai and Ngāti Manuhiri.

Q. I'd have to look that up because I don't know. When was the last time you visited and walked along Pakiri Beach?

10 A. Last month.

Q. Down the south end or which?

A. On south side? Last night we went up – because of what's happening here, you can't make comments on something you don't go see, touch, feel, experience. Part of the projects we were doing pre-2019 was the work along Mangawhai from the heads down to Pakiri. So, yeah, last month was the latest that I'd been up to the beach and had a look around. I didn't catch when the boat was in but we saw the container ships and, you know, took photos of that stuff.

15

Q. Is that down the south end by you guys or down by our end, down the southern –

20

A. Both sides.

Q. Sorry?

A. Yeah, both sides. Oh, the south side of Mangawhai going into Pakiri.

#### **THE COURT: JUDGE SMITH**

25 Q. Can I just check, because I get confused about that answer. Te Arai Heads is a good division point, so did you go to the area between Mangawhai and Te Arai Heads and then the area between Te Arai Heads and Pakiri River, is that what you mean?

A. Yeah. Travelled down the coast, yes.

#### **30 CROSS-EXAMINATION CONTINUES: MS WIKAIRA**

Q. By car or by walking? Like how did you get down our end?

A. We drove down the coast. Yeah, we drove the coast and then stopped along the way.

Q. And then my last question is could you please explain how saying a karakia will fix the devastation at Pakiri Beach that I see? So I'm one person. I can assure you that lots of us are going to wonder how saying a karakia is going to fix what we've been watching and seeing?

A. How can saying karakia not?

Q. Like you know when you were talking you were saying when the mauris moved and, you know, you can say a karakia, that's how sometimes it can change stuff and it can lift it and take the tapu away. I just want to know how does a karakia make me, I'm 52 and I've watched it all my life, how does a karakia, like you've offered as one of the ways to make things better, how does that make me, how's that going to repair me?

1635

15 A. And again, I have to say how does it not.

Q. Well, we take that sand, we take it to the marae when our people pass away. We put it in the graves. We do lots of things. I watch it. Words of a karakia are not going to make me forgive all and be happy. That's what I'm saying and you're saying: "Why won't it?" Is that what you're saying?

20 A. Yes.

Q. Okay, it just won't. It's not going to.

A. I don't know how to fix your scenario, your case, because the practice of karakia means different things to different people. I think you'd agree with me, you agree with me on that case, don't you? So –

25 Q. Not of – yes.

A. Yes, karakia means different things to different people and it's the context and the placement of karakia that matters.

Q. So, what is your placement? So, how do you see it fixing me then? Which way are you talking? How do you see it fixing the (inaudible 16:36:31)?

30 A. I can't fix you. I actually don't know how to fix you, that's what I'm trying to say. Karakia is important to those that say it, to those experience it. Again, I can't fix your scenario or your, this context that you're talking about.

Q. Okay, I kind of don't get it, but okay. Thank you.

**CROSS-EXAMINATION: MS URLICH**

- Q. So, I had a few questions by both Ngāti Manuhiri and for Te Whānau O Pakiri. Now if we can start with Te Uri O Hau's support for the application. Now your evidence indicated that Te Uri O Hau supported the application on the basis of the evidence it had reviewed up to the date of producing your statement, is that correct?
- 5
- A. (no audible answer 16:37:40).
- Q. And since –
- A. (inaudible 16:37:43).
- 10 Q. Sorry, what was that?
- A. Oh sorry, yes.
- Q. So since filing your statement there's been a number of changes to the application, hasn't there?
- A. There's been a number of changes, correct.
- 15 Q. And evidence has been exchanged?
- A. Are you talking about evidence here today or..?
- Q. So evidence for Te Whānau O Pakiri, for DOC, for Friends of Pakiri, there's been a number of experts that have, they've had a chance to consider and contribute their views on what the effects of the application might be. Would you agree with that?
- 20
- A. Yes, I accept there's been evidence presented.
- Q. Has Te Uri O Hau had the opportunity to review and consider that evidence?
- A. I think from the initial interactions, 2019ish, there's been review or brought up since then. The most recent was earlier this year. I don't have the date, sorry. But again, that came through the Board and we have a taumata kōrero. So, our taumata meets at Te Hana to discuss matters of tikanga, kaupapa, et cetera.
- 25
- Q. So has the taumata had the opportunity to discuss the changes to the application and the evidence that's been provided? Yes?
- 30
- A. Yep, three occasions the taumata have met.
- Q. And you mentioned in response –
- A. Yep, to discuss that.
- Q. Sorry, I think I might have (inaudible 16:39:28) –

A. Sorry, there's a bit of a delay, yes.

**THE COURT: JUDGE SMITH**

Yes, I've had exactly the same problem. I think we seem to be having more lag today than normal, I'm not sure why. So, it's probably good to just give a few  
 5 two or three seconds between the question and the answer and then not add something to your answer after you stop, and I'm guilty of exactly the same problem so I'm not criticising anyone. I'm just simply saying how we might progress a little bit more evenly. So, perhaps I'll ask you, Ms Ulrich, to just complete your question or reframe it if you wish and if you can give two or three  
 10 seconds before you respond, Mr Thompson, that'll enable us to overcome the lag. Ms Ulrich.

1640

**CROSS-EXAMINATION CONTINUES: MS URLICH**

Q. Thank you, Sir. Trying to cast my mind back to where we were. Perhaps  
 15 if we leave it at the former question, has the taumata had the opportunity to review and consider opinions that have been provided following the filing of your statement?

A. Yeah they've met three times, I can't remember the last time they've talked about this year, but I can get that if you need it.

20 Q. In response to one of the questions from my friends at council, you mentioned that there had been no review of the landscape report for example. Were there other briefs or reports that Te Uri O Hau didn't consider?

A. Are you talking bout in the last six months, or the last 12 months?

25 Q. My takeaway from your response was that Te Uri O Hau hadn't read Mr Stephen Brown's landscape evidence at all, is that correct?

A. No, I hadn't read the landscape from Brown report.

Q. And are there other reports that – okay, perhaps if I reframe that. Which reports did you or Te Uri O Hau consider in reaching its decision to support this application?  
 30

A. Those are Environs reports from Environs dating back to when our Stephen Brown had the initial report and then the update from that report.

Q. And Stephen Brown was the inhouse scientist was he?

A. Yeah the Te Uri O Hau, Stephen Brown was the manager for Environs at the time, inhouse.

Q. And he's an ecologist isn't he?

5 A. Yes correct, he's got some letters behind his name, I don't know the details, but we can get back to, yeah.

Q. Can you tell me which area he specialised in?

A. Ecology, oyster farming was one of his strengths, so he was looking into a number of oyster farms on the Kaipara for us and the viability of getting  
10 old oyster farms that had been run down and stopped working, back up to I guess viable working order. Shellfish was one of his specialties and the little fish, not snapper or, you know, snapper and mullet definitely, but the little fish is called the goby and something about you know, goby fish, yeah.

15 Q. Big eyes, I don't think I've seen a goby fish.

A. Big eyes, yeah, apparently they're everywhere but I call it sprats.

#### **THE COURT: JUDGE SMITH**

A big favourite of the fairy tern apparently.

#### **CROSS-EXAMINATION CONTINUES: MS URLICH**

20 Q. Oh that's helpful thank you, and does Mr Brown, so the ecologist scientist inhouse Mr Brown, whakapapa to Te Uri O Hau?

A. No, no, and he did finish working for us halfway – or just before COVID around, I think – he's no longer with us anymore, I don't know the date sorry.

25 Q. Now I did have some questions I wanted to revisit around the side agreement or the hapū liaison agreement, kaitiaki liaison agreement. Now there's been some discussion at a high level around it providing sufficient mechanisms for Te Uri O Hau to exercise kaitiakitanga, and for Te Uri O Hau to get an income stream, hasn't there? Is that right?

30 A. Yeah still early days in discussions at the moment.

1645

Q. Can you tell me whether that agreement has any provision for rehabilitation, for example (inaudible 16:45:15) of moana?

5 A. I don't know the exact clauses sorry, it's a bit too much detail for me, but at my level it's an agreement, generally an agreement for kaitiakitanga, for Te Uri O Hau to monitor and maintain for example. The details I'm not too clear on the details or privy to them at this stage. That's more an operational Kaupapa for us, we make sure, at my level that there's a relationship, that we create the relationship and we look at the best interests of Te Uri O Hau.

10 Q. Okay.

A. Once we get further down the track, you know, the detail will come. I'm pretty sure that, we're just not at that stage yet.

Q. So to your knowledge, you don't, you can't confirm that there's any provision within that agreement to rehabilitate?

15 A. Not at this stage, no.

Q. And can you tell us whether there are any mechanisms within that agreement to mitigate or address the effect that might occur in terms of fairy terns, dotterel, kai moana?

20 A. Again the detail, yes there's provisions that we do look after the ecology and the environment. Again to what detail, that's still not in concrete at this stage.

Q. Have you had a chance to look over the latest set of conditions for this project –

A. Very briefly.

25 Q. – or proposed conditions? Would you agree that those conditions don't provide for rehabilitation? Of bird habitat or kai moana –

A. I think the current conditions start the process to negotiate that, and I accept that you have to start somewhere, there's give and take and so you've got to negotiate that.

30 Q. Based on the conditions or the agreement?

A. The agreement and the relationship.

Q. Now I wanted to (inaudible 16:47:58) the rohe Te Uri O Hau and rohe of Ngāti Manuhiri a little further and I think the easiest way to do that would be to visit the map which is in your evidence, figure 1, if Ms Harnett you

could bring that up, that would be helpful. The reference is EB517. So the area that we see highlighted green, is that the rohe of Te Uri O Hau?

A. Yes that's based on the settlement of Te Uri O Hau. On the right-hand side will be the settlement area of Ngāti Manuhiri. So these are both  
5 legislated as well.

Q. (inaudible 16:49:08) –

**THE COURT: JUDGE WARREN**

Q. Sorry Ms Ulrich, can I just orientate myself, because I have been looking at this map a fair bit. The red dots as I understand from a quick website  
10 search, are the Te Uri O Hau Marae?

A. Correct.

**THE COURT: JUDGE WARREN**

And Ms Ulrich is there a map that shows the overlap between the area of interest between the two tribal groups?

15 **MS URLICH:**

We don't have a map as such Sir, but I was just about to step through that overlap verbally with Mr Thompson.

**THE COURT: JUDGE WARREN**

Q. That would be helpful, thank you.  
20

**MR POU:**

What might be helpful your Honour and it's just, I recall that a map showing the overlapping areas, correct me if I'm wrong Judge Smith, but I recall that the general manager of Ngati Whatua Rūnanga provided such a map. If that would  
25 be helpful, I mean all it does is, it's not controversial, it just overlays those settlement areas, if you think that that would be helpful I can go and try and dig it out overnight.



**THE COURT: JUDGE SMITH**

Well I definitely think it would be. As you are well aware, this is sort of the inverse of the last argument we had. So the relationship between Ngati Manuhere and Te Uri O Hau and Ngati Whatua as well, of course, are  
 5 matters of some interest. I will leave *Ngāti Hine* out for the moment.

**MR POU:**

Yes, that's everything

**THE COURT: JUDGE SMITH**

Q. I am also interested in checking with the witness whether or not, because  
 10 I cannot recall, even though I was involved in the case where the golf course is, this is south of the Mangawhai Spit. I think that was Waitangi Tribunal settlement lands that were restored to Te Uri O Hau and subsequently entered into a joint venture I think with the now owner in some way, it was a combination of purchase and joint venture I seem to  
 15 recall. Is that correct Mr Thompson?

A. Yes that, yes Your Honour correct. The land in question is a bit contentious issue with Te Uri O Hau but you are correct.

Q. Well it will be quite interesting to know where that is because there's now another golf course south of Te Uri O Hau point and I'm not sure if that  
 20 was part of the restored lands or not and whether it was restored to Te Uri O Hau or somebody else. I assumed it may be another settlement.

**THE COURT: JUDGE SMITH TO MR POU**

Q. Mr Pou, are you able to tell us if that land was restored to Ngati Manuhere or someone else?

25 A. Yes Your Honour. I can give evidence from the Bar on this one in particular. So along the coast of the Pakiri-Mangawhai coast there was a forest. In that forest there's a Crown Forest licensed forest that was Te Arai, it was call Te Arai Forest. The northern section of the forest, Te Arai north, was purchased by Te Uri O Hau through their settlement,  
 30 so was offered to them for purchase through their settlement, it was commercial.

Q. I see, right yes.

A. But Te Arai south plans were offered to Ngāti Manuhiri for purchase and formed a commercial part of their settlement. So that's the relationship. North of Te Arai –

5 Q. Well it would be quite interesting to have that on a map that we can understand, because of course, I am going on a failing memory and it would be quite useful if that overlap could be shown. Judge Warren obviously has an interest in how they fitted in. The Ngati Manuhiri settlement is in itself is in itself interesting because it goes, that's why it was relevant for Waste Management, because it goes just short of Wellsford as I recall but comes down and then cuts across to Omaha and I think just north of Omaha Beach, is that right?

A. No Your Honour. So there are different mechanisms within the settlement. You will remember one was an exclusive right of first refusal area, which was an exclusive –

15 Q. Right , yes you are quite right.

A. Then there was the rohe, and the rohe which is set out in the attachments to Mr Hohneck's evidence shows an area of interest that goes up to the Bream Tail, just above Mangawhai Heads. So the overlap is that coastal area there and where the Te Uri O Hau received statutory acknowledgements around Mangawhai, Ngati Manuhiri received a statutory acknowledgement over the coastal area going from Bream Tail, because the Heads up above, Bream Tail down to I think Takapuna.

#### **THE COURT: JUDGE WARREN**

25 So Mr Pou, just so I am clear and perhaps the witness could clarify, Te Uri O Hau doesn't claim any customary interest, certainly via its settlements south of Te Arai Point, so the black area, that is Ngati Manuhiri; but Ngati Manuhiri claims customary interests in the green area together with Te Uri O Hau. Is that correct?

#### **30 THE COURT: JUDGE SMITH**

Mr Thompson, is that correct, your understanding too?

**WITNESS:**

There is still some debate on that.

1655

**THE COURT: JUDGE WARREN**

5 Q. Just in terms of the Treaty settlement paperwork that you understand, is that where things landed in both of the respective iwi settlements or hapū and iwi settlements.

A. I'd have to double-check that. Again it was something that wasn't clear and I can't –

10 **THE COURT: JUDGE SMITH**

I've got to say I think there was a subtlety to all of this about an unsettled Waitangi Tribunal claim and we spent a day or two, a happy day or two going around and around on that one in Waste Management and my understanding is that that was still some area of, is it Te Uri O Hau claim or Ngāti Manuhiri claim which is yet to be resolved?

15

**MR POU:**

No, no your Honour, so Te Uri O Hau and Ngāti Manuhiri have settled. And within the settlement are deeds, they set out their respected areas and there's an overlap between Ngāti Manuhiri and Te Uri O Hau from the Bream tail down to Te Aria Point, coming inland as your Honour, sweeping down around Wellsford. The unsettled claim was the Te Rūnanga O Ngāti Whatua mop up claim which Mr Riwaka was talking about where he was saying, this is the area that – the unsettled areas that Ngāti Whatua as a whole have interests in. So it sets out, you'll have more overlay your Honours than just Ngāti Manuhiri and Te Uri O Hau. It's a Te Arawhiti document just setting out where those things are. From recollection from Waste Management where it seems a long time ago.

20

25

**THE COURT: JUDGE WARREN**

30 Yes but the point Mr Pou is that that outstanding claim, where there is nonexclusive redress like statutory acknowledgements, the Crown can't offer

anything better than that to the Rūnanga, and where it's exclusive redress, like a exclusive right of first refusal, well that can't be up settled. So that redress remains. It can just be added to through nonexclusive instruments I guess.

5 **MR POU:**

Because the matters that were being provided for in settlement were referred to by Mr Riwaka and that case. No land interests were being sought within this area. I think from memory, because I specifically asked Mr Riwaka a question on this and he said they took the money. They also refer – and I don't know, 10 this is a question that I was probably going through with Mr Thompson, that relationship between Te Uri O Hau and Ngāti Whatua, they see that Te Uri O Hau have achieved redress for the wider Ngāti Whatua collective within there. So it's about addressing those areas, an offer, claim was about addressing areas that untouched by the Ngāti Whatua Te Kaipara, Te Uri O Hau and 15 Te (inaudible 16:58:04) claims. It was about those other issues.

**THE COURT: JUDGE SMITH**

Yes and it would be fair to say that the issue is complex and I'm reluctant to start importing too much evidence from another case into this one. 20 Nevertheless, there are subtleties to the whole issue, not least of which is the Ngāti Manuhiri and the Omaha Marae don't see eye to eye on the Waste Management case either. So, I don't know that we can take too much from it, but I don't think there's any doubt, and I don't think Mr Thompson is about to say that Ngāti Manuhiri claim an interest north of Te Arai Point and I think, and 25 you haven't commented, but do you accept that have claims as far as Bream Head or Bream Tail I think it is.

**MR POU:**

I think it's the Tail Sir.

30 **THE COURT: JUDGE SMITH**

Q. And what's your understanding? Do you understand that Mr Thompson too, or is that –

A. Yes that's my understanding, I do have to double-check. Again I'm not 100% certain.

Q. I understand that Ngāti Manuhiri claim the sea out to at least Hauturu and I don't know that Te Uri O Hau has made a claim to the water. That's not  
5 marked on the map or is that included in your general rohe statement?

A. In the general. I haven't got the water markings so that's something I do have to look into and check with our unit.

**MR MACRAE:**

10 Figure 2 of Mr Thompson's evidence might provide some assistance.

**THE COURT: JUDGE SMITH**

Yes I thought that was the case, there was some claim to some of that water area. It didn't go quite out to Hauturu.

15 1700

**WITNESS:**

And again we'll have to check the settlement trust agreement which is where this has come from.

20 **MR POU:**

Look, your Honour, I think it's important to note and sorry to interrupt, but these are talking about different things. Those applications only go out 12 miles because that's the extent of marine and marine area coastal applications. Te Uri O Hau did settle before Ngāti Manuhiri where the ability to get particular  
25 mechanisms, Judge Warren will be familiar with the fact that over time redress changes in tenor and what people are able to achieve becomes different but for the avoidance of doubt, and I know we're getting along, EV3445 sets out the statutory acknowledgement that was achieved by Ngāti Manuhiri which just sets it out, it goes out to Aotea, it goes right out around the Great Barrier Island. But  
30 as Judge Warren's also highlighted that's non-exclusive redress and is not, and should not be taken to exclude any other group, for instance Ngāti Rehua, I'm not sure how far down Patuharakeke come and those sorts of things, it's just a

line where the Crown has recognised that in an RMA process Ngāti Manuhiri need to be notified, get notice.

**THE COURT: JUDGE SMITH**

- 5 And I seem to recall is also an overriding, not overriding but another interest which is Ngātiwai which as I recall you've told us goes quite a way up and down the East Coast here, doesn't it?

**MR POU:**

- 10 Yes, your Honour and I guess that's, if you, you will have seen in the old cases that the Rangatira Laly Haddon was the chair of Ngātiwai and he was the Omaha Marae representative, the Ngāti Manuhiri representative on the Ngātiwai Trust Board and those sorts of things so there's that relationship that sits there as well who is similar to Te Uri O Hau and Ngāti Whatua if I'm not  
15 going too far in terms of those, so there are some complexities. Ngātiwai of course is another one of those claims that remains unsettled, unmandated and unsettled, at this point.

**THE COURT: JUDGE SMITH**

- 20 Yes, and of course Ngātiwai was a party to the Bay of Islands issues and we're going to be hearing from Mr Ngaparahima again in relation to this matter so clearly they've maintained an interest down this far and I think even further you've told me in another case, I can't remember which one.

25 **MR POU:**

- Well, your Honour the Great Barrier, Aotea their marae has a representative on the Ngātiwai Trust Board, you know, if we're going to be open about those sorts of things, so to a certain extent the deed of settlement for Ngāti Manuhiri reflects their relationship with Ngātiwai and their relationship with Waikato, Tainui where  
30 Manuhiri tūpuna comes from but reflecting his relationship with the people that he married into up here.

**THE COURT: JUDGE SMITH**

And there are extensive whakapapa relationships as I recall and also intermarriage between the various hapū and relatively strong relationships between Manuhiri and Te Uri O Hau and Ngāti Whatua, that I can recall, but..

5

**MR POU:**

I mean one of those convergences is Te Arai (inaudible 17:03:59-17:04:02) is a common tūpuna Te Uri O Hau and Ngāti Manihu.

10 **THE COURT: JUDGE SMITH**

My brain is hurting and Mr Thompson probably wants to reflect on the issues we've just been talking about before he faces more questions from Ms Urlich and I wonder if we shouldn't take the break now and rejoin Ms Urlich with your questions in the morning, is that acceptable to you?

15

**MS URLICH:**

Sounds perfect, thank you Sir. I thought you were asking me?

**THE COURT: JUDGE SMITH**

20 I was asking Ms Urlich. And it would also be helpful Mr Pou if you could circulate some documents that might assist the Court to understand what I think we would all agree are relatively complex overlapping interests and the subtleties of which are, you know, I've been listening to for a long time now, but I still don't fully grasp all of the relationships and the ways in which the various hapū and  
25 iwi work together.

1705

**THE COURT: JUDGE WARREN**

Judge, one of the things that perhaps Mr Thompson could reflect on because I certainly want to understand this is that it's certainly my interest in the maps  
30 and the settlements is not to determine who's manu whenua and who has the biggest share and that sort of thing, it's very much to understand the relationship of the area and what was Te Uri O Hau's position on the Ngāti Manuhiri settlement when they would have received information from the Crown as to

the area Manuhiri claimed. Because I do think it gives rise where there is genuine agreed overlap and there'll always be the breaks on the margin how we deal with issues where the iwi or hapū don't agree on environmental effects on any different project, what are the protocols and tikanga that should be applied as opposed to gloves off in our camps and we'll stick to what we know. That's my interest.

**THE COURT: JUDGE SMITH**

And I've got to say that's exactly the same interests we had in the last case in *Waste Management* where we've been told by a number of witnesses, Mr Thompson may not have been involved and able to comment, that they agreed between them that they had overlapping interests and who would look after, as I recall, being the key words, look after which area. So Mr Hohneck obviously will be able to comment on that in due course because I think he was a party to those discussions. But it will be interesting to see the maps and I agree with you on the margins, for example, the Hoteo was one of the areas where there is disagreement on the margins as to how the relationship with, on the river itself. Whether that applies here I don't know, I've never really had a dispute about the overlapping interests or whether there's a dispute on the margins beyond – in other words, we've never actually had to grasp with any arguments about mana whenua, in this area, particular area. Are we going to be facing those, Mr Pou or is there an acceptance as there was with a lot of the area for *Waste Management* about overlapping interests as opposed to mana whenua?

**MR POU:**

Not from Ngāti Manuhiri, your Honour. They accept the map that was negotiated and the ability of Te Uri O Hau to outline the boundaries. They understand that reflection and I guess this is different to the Hoteo where in the Hoteo the issue was who has a say over a site but Ngāti Manuhiri were reflecting that Ngāti whatua definitely and Te Uri O Hau definitely had a right to have a say on what flowed down the river and I guess this comes to that, those questions that Ms Bielby was asking, Mr Thompson's clearly saying he speaks for the impacts of Te Uri O Hau and Ngāti Manuhiri, while the settlement trust



are not saying that Te Uri O Hau don't have the right to say that their interests are reflected for want of anything. I did not understand, because you'll recall, your Honour, I put this to the kaumatua that gave evidence and Te Uri O Hau mentioned that we were going to be switching places and those sorts of things,  
 5 and my recollection from that was that, yes, they respected the overlap, reflected the overlap, and the overlap reflected their whakapapa, a convergence.

**THE COURT: JUDGE SMITH**

And I also seem to remember, and we'll find out in due course, that Mr Hohneck  
 10 in that case, in the other case, said well it's for us to speak for Manuhiri and others to speak for themselves. And I think that's what Mr Thompson's saying and I think the difficulty that Judge Warren is discussing is one that unfortunately we face in many cases, in the north and in the Bay of Plenty, where these overlapping interests exist and each party can speak for  
 15 themselves how do we measure those and that's a matter for submission, not a matter for evidence, it seems to me.

**MR POU:**

He's quite right, your Honour. Because basically, when you negotiate a claim the Crown's not going to define your rohe for you and when you go through into  
 20 the settlement processing, go through the select committee or have to deal with the overlapping claims processes you sometimes get complaints by neighbouring iwi that say we think you're over-stretching. But where it comes to the assertion of an area of interest it's usually the settling group that gets to say that because it's a non-exclusive area and those things. So the point that  
 25 Judge Warren's raising is probably quite an appropriate one in terms of did Te Uri O Hau, because they settled first, and they were in existence for settlement trust, what was the opposition, if any, to Ngāti Manuhiri's assertion of interest to the (inaudible 17:10:31).

**THE COURT: JUDGE SMITH**

30 Well, I don't know if we can take it any further today and I think we'll just have to deal with questions tomorrow. If you did have any maps that might assist us

it would be helpful. Those who didn't sit on that case are going to be very confused about most of this conversation now and those counsel who weren't engaged. So it would be helpful to have a bit more information for everyone to come to grips with the issues.

**5 WITNESS:**

I'll try and dig it out, your Honour.

**THE COURT: JUDGE SMITH**

Judge Warren, was there anything further you wanted to ask or comment on in relation to that?

**10 THE COURT: JUDGE WARREN**

No. I think that covers it and I thank Mr Thompson for his evidence thus far and the way in which counsel and Ms Wikaira have asked the questions of this witness in particular, very respectful and helpful.

**THE COURT: JUDGE SMITH**

**15** I think we're finding this very helpful. If complex, it is still helpful, so we do appreciate your assistance to date, Mr Thompson and anything else you can do to assist us with this would be gratefully received.

**THE COURT ADDRESSES MR MACRAE – WITNESS UNDER CROSS-EXAMINATION**

**20 KARAKIA WHAKAMUTUNGA**

**COURT ADJOURNS: 5.15 PM**

## COURT RESUMES ON THURSDAY 27 JULY 2023 AT 9.31 AM

### KARAKIA TĪMATANGA

#### THE COURT: JUDGE SMITH

- 5 Thank you so much. Now Mr MacRae, we were part way through Mr Thompson and I assume we recommence that. Are there any preliminary issues before we address that?

#### MR POU:

- 10 Yes, your Honour. One preliminary matter. First acknowledge you, Cherie. Thank you for the karakia and not easy doing the karakia for your iwi in such a public forum. I'd just really like to acknowledge that in your stepping up. Your Honour, yesterday I referred to a map that was provided in the landfill case. I went and I found the map.

- 15 There are two issues that have arisen. I've sent an email through around to counsel last night. The first issue that arose is the map set out the overlapping settlements of the Ngāti Whātua affiliated claims. So, for instance it had Te Uri O Hau, Te Arau, the Te Rūnanga o Ngāti Whātua settlement area and those  
20 sorts of things. So, it didn't show any of the overlaps with anybody else, for instance Kawerau a Maki, Ngāti Pāoa or Ngāti Whanaunga or Ngāti Manuhiri, so we can't really use it for the purposes that I was discussing yesterday.

- The other issue, probably more significantly, your Honour, is the exhibit which  
25 was exhibit 48 in the landfill case had: "Exhibit 48 – non-publication." So, for that reason, I didn't circulate that as well. That being said, I'm sure going through some of the material that's on the record already around the attachments that have been put in the evidence of Mr Hohneck, we should be able to show the overlap with these. And I don't think it's as complex as those  
30 maps that you had to go through for the landfill because of course the overlap that's, the only overlap that's asserted is that post-line between the Bream Tail and north of Te Arai Point.

**THE COURT: JUDGE SMITH**

Thank you. Judge Warren, did you want to make, have any questions or comments about Mr Pou's position there? We seem to have lost your microphone at the moment. I'm not sure why. You're showing as if you're on.

5 This may require the famous exit and re-entry I suspect.

**MR POU:**

I was reading his lips. It seemed he said: "Absolutely agree with everything Mr Pou said."

10 **THE COURT: JUDGE SMITH**

We'll find out in a moment, Mr Pou, how good your lipreading is.

**JUDGE SMITH ADDRESSES JUDGE WARREN – SETTINGS (09:34:29)****THE COURT: JUDGE SMITH**

I think in the meantime we'll assume that if there's an issue about that, Mr Pou,  
15 we'll come back to it later in the morning.

**MR POU:**

Yes, your Honour. Perhaps, however given the witness that we're cross-examining, it is probably important for Judge Warren to be engaged and  
20 able to interrupt as he sees fit.

**THE COURT: JUDGE SMITH**

You're with us, Judge. Wonderful. Now I'd asked if you, Mr Pou told us in your absence that you agreed with everything he said so I don't know how good his lipreading is.

25 **THE COURT: JUDGE WARREN**

On this occasion I do, only on this occasion. That's fine. I simply for today's purpose want to understand in a geographical sense the extent of the overlap between Ngāti Manuhiri and Te Uri O Hau and I think we can probably work it out through existing maps relative to the offshore application area.

**MR POU:**

And I think your Honour Mr Thompson quite fairly and squarely puts a map in his evidence. The one I would draw your attention to is the one that highlights the MACA claim because as I said when they, they were one of the first, one of

5 the early cabs off the rank when they settled and as your Honour Judge Warren will know, redress has modified substantially since they settled, so – while we do have coastline and those sorts of things, so the claim that Te Uri O Hau makes which spans the area that comes straight off the coast of the map of the area of interest, and the other one is, and I referred to it yesterday, it's one of

10 the attachments of Mr Hohneck which sets out, I'll just try and find it.

**THE COURT: JUDGE SMITH**

Yes, if you could just give us the bundle number then Ms Harnett can bring it up for us.

15

**MR POU:**

It's bundle F, EV3445.

**THE COURT: JUDGE SMITH TO MR POU**

20 Q. Let's see if we can bring that up, that might help us all to understand. My understanding was that the Ngāti Manuhiri area did go inland as far as Wellsford but I don't know if it went quite as far north as here. Inland I mean. I don't mean north of the coast.

A. Okay.

25 Q. 3445.

A. Let's go to EB3438.

Q. 38.

**THE COURT: JUDGE WARREN**

30 Yes, I've got that one Mr Pou, that's the area of interest map.

**MR POU:**

Yes, yes your Honour, which shows an area of interest going up to Bream Tail. So EB3438 first.

**THE COURT: JUDGE SMITH**

Can I just see how far inland that goes. If we could just get that page up Ms Harnett and blow it up a bit more? Yes so it seems to come in towards the coast up towards Mangawhai?

5

**MR POU:**

Yes so you'll see that that top point is the Bream Tail.

**THE COURT: JUDGE SMITH**

10 Yes.

**THE COURT: JUDGE WARREN**

And in relation to figure 1 on Mr Thompson's evidence it would be good to point out where that green tail marker is on his map? If Mr Thompson could do that.

15

**MR POU:**

So if we can blow up to the Mangawhai area of that.

**THE COURT: JUDGE SMITH**

20 Yes, I'm not sure how large we can go but can we get more amplification there Ms Harnett? Yes that's good, that's good. We can see Te Arai Point, Bream Tail, Mangawhai Head. Bit too much now. Te Arai is mentioned there. Te Arai Point. Yes that's good.

**25 MR POU:**

Just a little bit up to the top. That's right. And then if you have a look at that figure 1 of Mr Thompson you'll see his map goes up a little but further along the coast than the Bream Tail.

**30 THE COURT: JUDGE SMITH**

Yes.

**MR POU:**

You'll see – so where Ngāti Manuhiri's cuts in at the Bream Tail on the point Te Uri O Hau's goes a little bit further around the corner into the next bay.

**5 THE COURT: JUDGE SMITH**

Right.

**MR POU:**

But if you go down to the next there the MACA one, which is the next figure on the next page. Yeah. And there you see the way in which they've depicted their asserted claims to the marine and coastal area.

0940

**THE COURT: JUDGE SMITH TO MR POU**

15 Q. So there's a triangle, as far as I can see, with a tip at Mangawhai Head for Te Arai, that forms a triangle pretty much down to that line with Te Arai Point, which would be common area of interest, going inland to Te Arai, which isn't marked on this map, a little further in.

A. Yes Your Honour.

20 Q. So there's some inland portion to it, wider at the Te Arai Point end than it is at the Bream Tail where it's simply the Head itself, as I understand it?

A. Yes, Your Honour. So if we go back to that EV3438.

Q. Yes, that's where I am looking at, yes.

A. And there you see it, that's the triangle there.

25 Q. Yes.

A. For the purposes of this application it's that area shooting out to the east, north of Te Arai.

Q. Yes.

A. And south of the Bream Tail. So it's the entire application area is over-linked.

30

Q. Right. So have you got, yesterday we heard that 50% of Te Uri O Hau's rohe or pakiwa was part of the offshore application and 50% obviously wasn't.

A. Yes.

Q. But is it the Ngāti Manuhiri evidence that 100% of the offshore area is claimed by Ngāti Manuhiri?

A. Yes, yes, Your Honour.

Q. Right.

5 A. If we could go to that 3445.

Q. Yes, thank you Ms Harnett sorry we are throwing you all over the place at the moment. Yes, that was the one I think wasn't it?

A. No, no, no, 3445, carry on.

Q. Sorry.

10 A. That one there. Now you will have to rotate it back the other way. That's the coastal statutory acknowledgement area.

Q. Right.

A. So that's the area for which a particular coastal statutory acknowledgement exists and there are statements of association with that area that are set out in the evidence of Mr Hohneck.

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Q. Yes. It would be perfect to get an overlaid map of the claimed areas of interests.

A. Yes.

Q. And the offshore consent application area, that would be most helpful. I don't know how we could source these as evidence but someone from –

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A. Look Your Honour I understand that Mr Carlyon is on the, I'm sure somebody from the Catalyst Group would be able to overlay those areas of interest and he is used to me volunteering him for things without his consent. The one rider I would place is that you see that there's Great Barrier Island over there, that's, of course, that was of course, subject to a deed of settlement, an unnotified deed of settlement for Ngāti Rehua.

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Q. Yes.

A. Ngāti Work and Income Kiautia. So there are, there is a layer of complexity that won't be recorded in these maps so I, I just mention that for completeness. They aren't participating either for or against, I'm not sure that they are relevant for the, or one of those matters that this Court necessarily needs to have regard for in terms of the test, but I wouldn't

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want this to come out and then they say, hey Mr Pou is ignoring Ngāti Rehua or those other iwi.

Q. And my understanding is Ngāti Wai also maintains an interest in the coastal portions, probably almost to the extent of *Ngāti Manuhiri* or further.

A. So Your Honour, yes as I mentioned, Ngāti Rehua, the group is Ngāti Rehua, Ngāti Wai Kiautia.

Q. All right.

A. So they, there is Ngāti Wai. Ngāti Wai are the mandated iwi organisation for fish assets for Ngāti Manuhiri. So there's the overlap in responsibility. So while Ngāti Manuhiri have a mandate to represent the Ngāti Manuhiri hapū, because that came after the passing of the Fisheries Act which statutorily mandated Ngāti Wai, Ngāti Wai continues to be the fisheries, the mandated fisheries iwi authority for Ngāti Manuhiri and Ngāti Manuhiri participates within the Ngāti Wai Trust Board. Omaha Marae has a representative on Ngāti Wai and that's how Mr Laly Haddon was a member of the Ngāti Wai Trust Board as its chair when the last application was being made. And I think the people that were making submissions were Mr Laly Haddon, but he was, he said he was giving evidence for Ngāti Manuhiri but – as he was still the trust board, and Mr Hori Parata was there as well.

Q. The one additional issue is Ngāti Whātua, I know they have obviously some unresolved Treaty claims but I'm not sure if they also assert claims in the sea north of Orewa or not? I think it may be further south.

A. Sir, I can – cutting across Judge Warren's rider about all the evidence that I am giving this morning, Ngāti Whātua have a marine and coastal area application that goes all the way into Whangarei.

Q. Right, yes I thought that had come up in – yes, that's right. So, it goes as far as Whangarei but not into the harbour I think, is that right? That's (inaudible 09:45:59).

A. No, they're participating in the harbour hearing as well. That's going to be convened by Justice Lang Harvey. The nature, again, the nature of the relationships, there are some like Te Parawhau, Patu Harakeke, where they appear in Ngāti Whātua and Ngāti Wai and Ngāpuhi identities

and those sorts of things. So, it is around that sort of fringe that things start getting a bit Bay of Plentyish, your Honour.

Q. Yes, the sinking feeling. Yes, I just wanted to, there are layers through here and it could not be said to be that there is no contest about various relation – well, often the relationships are accepted but the question of mana whenua is a more hotly debated topic, would you agree?

A. Look, your Honour, the relationships are definitely there. We, you know, Te Kiri is Ngāti Whātua. You've heard evidence about that, those sorts of things. It's about the manifestation of those relationships and of course that's the \$60 million question.

#### **THE COURT: JUDGE SMITH**

Judge Warren, before we sink in a miasma of information from the bar, is there anything further that you think we should explore at this point?

#### **THE COURT: JUDGE WARREN**

No. No, I think that's been helpful. It would be good to get a map at some point, but I think we can work with what we've got for today's purposes and give Mr Thompson his opportunity to address the issues.

#### **THE COURT: JUDGE SMITH**

Yes, and I've got to say I think we've now pretty much laid out much of the information that was given to us for the landfill, so we can say that we at least understand the layers through this part of the coast. And we revert now to Mr Thompson. You're on your oath from yesterday, Mr Thompson. And I should give you an opportunity before Ms Ulrich continues on, having heard Mr Pou's treatise on this, if there's any points of significant disagreement or comments you want to make.

#### **ANTONY BOYD THOMPSON (ON FORMER AFFIRMATION)**

#### **MR MACRAE:**

Could I address that point, your Honour, and one other briefly. With respect, Mr Pou has given a lot of evidence from the bar and some of it is a description

of Te Uri O Hau's position and I appreciate your Honour's indication to Mr Thompson to indicate any points of difference but, with respect, I think that in fairness to the witness Mr Pou should also put those matters to Mr Thompson in cross-examination, unless Mr Thompson's able to deal with pretty much everything on his own account now. So that was my first point, Sir. Secondly, I do have a number of I think preliminary in essence matters to raise with the Court but concerning the applicants' case, but I don't want to interrupt the flow now and if I might address those possibly after Mr Thompson's evidence, that would be helpful.

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And thirdly, Sir, just so far as the order of witnesses is concerned today, Mr Gaimster has some difficulties this afternoon. He's the witness out of turn. His evidence will be very brief. I think there are only one or two parties who want to cross-examine him and then fairly briefly. It would be helpful if he could be slotted in after Mr Thompson and before Mr Te Rangi, hopefully this morning.

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#### **THE COURT: JUDGE SMITH**

So, my thinking would be that we deal with Mr Thompson then deal with Mr Gaimster, then come back to the other issues you wanted to raise and then move on from there. That seems, because that means Mr Gaimster's got some certainty and we can move him through as quickly as possible. Are you happy with that?

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#### **MR MACRAE:**

Indeed.

25

0950

#### **THE COURT: JUDGE SMITH**

So the reason I suppose Mr Thompson when he was asked about this one Ms Ulrich yesterday say he wasn't involved in the, you know, discussions between parties as to the areas, he would be aware that we have heard from Te Uri O Hau matua about what was discussed et cetera and their understandings of the arrangements. So I mean I don't see the point in

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re-calling those witnesses if there is agreement. To be fair, in the Waste Management there was no real disagreement between the parties except in relation to the (inaudible 09:50:43) itself and Te Uri O Hau's position was it maintained an interest in it but acknowledged other people did as well. So it was probably very similar to the position that Mr Thompson has expressed for the area of Te Uri O Hau's interest in the coast from Mangawhai to Te Arai Point.

But I do want to give him an opportunity to comment because I think from what he was saying yesterday he was going to go away last night and have a look at it and then may have got some firmer views as a result. So I do agree that to the extent that any of these matters touch upon Te Uri O Hau Mr Pou when he comes to his questions should make sure that any potential disagreements are addressed. Largely the points he put to me I understood to be non-contentious and that's because of the evidence we've heard for Te Uri O Hau and the Waste Management case. but Mr Thompson may, if Mr Thompson has a concern that he's aware of then it would be helpful to us to know, so I will invite you Mr Thompson firstly to comment on Mr Pou's tretis and any concerns or points of agreement or disagreement or any comments generally. So I invite you to do that now, Mr Thompson?

**WITNESS:**

Kia ora tatou I think, you know, we can agree that we've all got interest in the area in particular. The real concern I think yesterday was getting some detail and I was unable to get some detail yesterday we just had people off sick at the moment in our office, so I couldn't get that. We are going to get that, just make sure that – we're confident that there's some government department somewhere that has paperwork that will explain something, you know. We've been having a lot of hui (inaudible 09:52:29) between ourselves, Ngāti Whātua, Ngāti Wai, Ngāti Manuhiri, so there will be a record somewhere, an official record, that will outline and basically highlight everything we've been talking about this morning or you've been discussing. So that was the first point I think. Yes we've all got interest, to what level and what degree, you know, that's still to be clarified. Number one.

Number two, Te Uri O Hau, yes we are directing, we are negotiating directly with the Crown in terms of MACA so the figure 2 that we had there is part of that as well. So I think that's, you know, pretty straightforward. And then number three, basically, you know, just want the opportunity to go back and double-check and get the right information. For me to say that yes or no today is a bit hard when I don't have that detail at the moment. That's all I just wanted to comment on this morning.

**THE COURT: JUDGE SMITH**

10 Thank you very much, and unless there's any other matters that we need to deal with first I'll invite Ms Ulrich to continue with her interrupted cross-examination of Mr Thompson.

**CROSS-EXAMINATION CONTINUES: MS URLICH**

Q. (unclear 09:53:50) Mr Thompson.

15 A. Morena.

Q. So I did have a line of questioning around your rohe, the Te Uri O Hau rohe, but I am actually going to park that and leave it to Mr Pou to pick up later on. But one of the things that would be useful to get clear on before we move to the next round of questions is the rough boundaries. And so I take from the map at figure 1 that Te Uri O Hau haven't (unclear 09:54:29) in Kaipara Harbour, is that right, in the west coast, or Kaipara Moana (unclear 09:54:32)?

A. Āe, correct.

Q. And then over in the east coast where we're looking at Te Arai Point around Langs Beach or Langs Bay, is that right?

A. Correct.

Q. Thank you. Now I wanted to revisit one of the paragraphs that counsel talked to you yesterday which is at paragraph 38 of your evidence-in-chief, reference EV522. Could you please bring that up Ms Harnett. I'll give you a moment to refresh on that paragraph. Can you please let me know when you've had a chance to read it?

A. Āe, yeah, kei te pai.

Q. Thank you. So the questions that I have relate to the bit in brackets there, so the reference to information imparted to Te Uri O Hau from various experts including your own inhouse. Can you tell me who you're referring to when you mention experts?

5 A. Yeah, when I say inhouse that was our own, at the time, Environs manager, Steve Brown, Stephen Brown, for Te Uri O Hau, he was the ecology expert that we had inhouse, so he explained not just to the board but to our tangata the effects and the impacts that would happen both inshore, midshore, and offshore and then in collaboration with our  
10 taumata hui, we had with the Environs hui as well, that was back in 2018, then 2019.

Q. Okay and when you mention –

A. Sorry and there were a number of other reports that were with Stephen's report as well.

15 Q. So there's Stephen Brown and you reference to various experts, who is that? Or who are they?

A. I can't remember the names off the top of my head but it's in the minutes of our taumata hui that we had back then.

Q. Do you recall whether they were technical experts?

20 A. It was a combination. There were some ecology reports that were with Stephen as well, that weren't his, that he made comment on and presented to the taumata and there were also other reports that he had as well, that had been collaborated and those were presented to the board.

25 Q. So just reflecting on the map that we looked at earlier, and the interests that Te Uri O Hau has in over in Kaipara, would you support sand mining in Kaipara as an alternative if experts found that there were low to no effects, technical experts?

A. I just lost you for a second there, can you say that question again?

30 Q. Just reflecting on the map of Te Uri O Hau here which extends to Kaipara, yes?

A. Yeah.

Q. If technical experts were to consider that there'd be no or low effects of sand mining in that area, would Te Uri O Hau support sand mining over there as an alternative?

A. We'd have to take that into consideration.

5 Q. Alongside what other matters?

A. The location for example, where that would be, who would be doing it, you know, the quality of the reportage and again has our taumata been consulted, has our environmental unit been consulted, has our board? It's a whole approach.

10 Q. So you mentioned it would depend on who was undertaking it. If it was MBL, would that be acceptable?

A. Again it would really depend on who was actually completing the report. Would we do the report ourselves or would we have our own internal mechanisms to put a report together?

15 1000

Q. I'm going to hand you over to Mr Pou now but thank you for your evidence, Mr Thompson.

### **CROSS-EXAMINATION: MR POU**

20 Q. Kia ora Mr Thompson. Look Mr Thompson, the korero that I've put before the Court was referred to his Honour as a treatise which exactly it was and I hope no offence was taken in terms of the way in which I was trying to reflect things, so I will put a series of questions to you about those matters just to get your view and those things. Please be assured that my questioning is nowhere fit to trap you in anyway, or to takahe on the mana of Te Uri O Hau. They are just questions seeking clarification and answers. Ke ti pai?

A. Yeah.

30 Q. The first document I would like to put to you is the Te Uri O Hau Kaitiakitanga o Te Taiao, hapū management – iwi management plan. Iwi management plan or hapū management plan?

A. Hapū management plan. It depends on which kaumatua you're talking to if it's an iwi or not, so I'll say hapū today.

Q. It's that vexed relationship with Ngāti Whātua and I guess before we get there, this is a Te Uri, you're here for Te Uri O Hau, have you engaged with Ngāti Whātua around the position?

A. No, this is solely for Te Uri O Hau.

5 Q. Ke ti pai. I would like to take you to EV number 2048, now it's the part of your hapū management plan that refers in particular to minerals and sand extraction. So you see that?

A. Yes.

10 Q. And I mean that's quite fairly and squarely saying that Te Uri O Hau are willing to engage in this issue around sand extraction and those sorts of things, and that it's not necessarily something that you would oppose?

A. Correct.

15 Q. Now I'd just like to take you down to the objective which is just a little bit further down. You'll see that the objective that's set out in this management plan is that all future sand extraction is land based. This application isn't land based is it?

A. No, no, this is sea based, correct.

20 Q. But Mr McCallum gave evidence, he said, he questioned the cultural reasons for why people might prefer land based as opposed to offshore based, but it's quite clearly the Te Uri O Hau objective is that all future sand extraction be land based?

A. In this document it definitely says that.

Q. So this application is inconsistent with that management plan?

25 A. Remembering that this management plan was billed back in 2011, so (1) I think you know, yes it definitely needs to be updated, being well over 20 years old, (2), you know, 2011 is very different to 2023. So while the plan is exactly saying that, I think we need to be considerate in the point that times do change, while our paperwork hasn't changed, the context of which we operate and work does.

30 Q. Yes, that's fair and I just wanted to put – I mean this is a document that has to be had regard to, taken account, and that's what it says.

A. Yeah.

Q. Now in the policies it said support that adverse effects of land use on coastal marine area are avoided, remedied or mitigated in the process of



the extraction of sand. Now aside from the relationship, my understanding from your answers is that you can't give evidence on exactly how the avoidance remedy or mitigation is going to occur for the purposes of Te Uri O Hau?

5 1005

A. Correct.

Q. It's more we've got a good relationship with McCallum Brothers and we are confident that we can get conditions developed at some later time?

A. That's correct, in a governance level.

10 Q. Yes. At that governance level that development of mechanisms will only be about mitigating and avoiding effects on Te Uri O Hau values, not for instance Ngāti Manuhiri values?

A. I actually can't speak for Ngāti Manuhiri values. So for the Te Uri O Hau lens, the aspects of our governance, our operations and then in our  
15 environmental unit, that's correct.

Q. I will put some of those questions to you. If we could go back, that bit that I was discussing this morning, if we could go to EV3445 and it's Mr Hohnneck's evidence, it's that coastal statutory acknowledgement. You would be aware that that's the coastal statutory acknowledgement  
20 that sits within the Ngāti Manuhiri deed of settlement?

A. Yes that's what is in the Manuhiri settlement.

Q. Yes. When did Te Uri O Hau settle?

A. Back in 2000, began around '98, 2002, yes, at the bottom signing.

Q. Yes. Ngāti Manuhiri settled some 19 years after the Te Uri O Hau  
25 settlement occurred?

A. I'm not too sure though because that (inaudible 10:07:18) –

Q. Sorry. It's Ngāti Manuhiri settled in 2011, that's the date of their Settlement Act. So that's, but you're aware that Ngāti Manuhiri settled sometime after Te Uri O Hau?

30 A. Yes.

Q. And should actually reflect Te Uri O Hau, you know, we are amongst the trailblazers in terms of treaty settlements, getting this *take* sort of before things. Now Mr Willie Wright was one of the negotiators for Te Uri O Hau was he not?

A. Yes.

Q. This is just a question that aims to maybe help you find the information that you might want to and Mr Willie Wright might, would, therefore, be one of those people that was engaging in the overlapping claims issues  
5 around Ngāti Manuhiri and Te Uri O Hau. Are you aware of that as the negotiator?

A. He would be a key, he would be a key figure, correct.

**THE COURT: JUDGE SMITH**

10 Yes, I think that he was also a witness in the Waste Management case as well. So we hear directly from him.

**MR POU:**

This is not to mine that evidence Your Honour, this is just so Mr Thompson, sometimes it's a lot faster going to those people within your iwi that have the  
15 information rather than trying to get that records of Te Arawhiti.

**CROSS-EXAMINATION CONTINUES: MR POU**

Q. When Ngāti Manuhiri were settling, the select committee sat at Whangateau. Te Uri O Hau did not make any submission, adverse submission against the claims of Ngāti Manuhiri that you are aware of did  
20 they?

A. Not that I'm aware of, no.

**MR POU:**

Look, Your Honour if Mr Thompson does find that there is that information after casting around I will not object to it being put, given the way that this  
25 conversation is occurring.

1010

**CROSS-EXAMINATION CONTINUES: MR POU**

Q. Just I want to go to, I want to bring up, I want to move on to the council hearing and one of the responses that you have given was that – if we  
30 could take that map down please – is that in prior applications

Te Uri O Hau views have not been taken into account properly and those sorts of things, is that a fair reflection of an answer that you gave yesterday to either Ms Bielby or –

A. Yes. Again, we agreed to disagree on certain topics.

5 Q. And this is not about whether or not Manuhiri or Te Uri O Hau disagree, it's whether or not Te Uri O Hau views have been taken into account in prior consents. In particular, you mentioned the Ngatai Wai cultural liaison agreement and those sorts of things, do you recall those?

10 A. I didn't talk about the Ngāti Wai cultural liaison agreement yesterday, sorry.

Q. I thought you referred to the fact that you didn't have a cultural liaison agreement like Ngāti Wai and that Te Uri O Hau wasn't really reflected in earlier consents that had been applied for and granted in this area?

15 A. No, no, no, I was actually referring to consents that Te Uri O Hau should've been considered for or included in but I didn't really bring up Ngāti Wai in that scope.

Q. Now, in terms of this application were Te Uri O Hau engaged with Kaipara, when they were making the application?

A. In terms of Kaipara District Council?

20 Q. No, no, no, the name of the people, the name of the applicant originally before McCallums was Kaipara Limited, it's a company called, I don't know if it's Kaipara Excavators Limited?

A. Bit before my time. I came on as a trustee in 2018.

25 Q. So you had no engagement, you had, your only engagement on these has been with McCallums?

A. Correct.

Q. And McCallums could only have engaged with you on this offshore consent after they assumed it following the, during the council hearings which span that (inaudible 10:12:30)

30 A. We started in late 2017/2018, that's when we came, or that's when I particularly came on board and I was a trustee then and then I've been part of the project for Te Uri O Hau.

Q. Have you been engaging with McCallums since that time?

A. Since 2018. The first presentations to our taumatua, our board and then, on from there.

Q. Now, this is an extract from the council decision. If we could pull up EB1174, it's in the common bundle. Do you see there's a particular heading in the council decision about Te Uri O Hau?

A. You're talking about paragraph 193?

Q. Yes. Well, the heading, the heading above is Te Uri O Hau?

A. Correct, yes.

Q. And it reflects that Te Uri O Hau were not a submitter on the offshore application?

A. Yes, that's what it says.

Q. And for any of those prior applications that MBL might've had for the inshore application, for the inshore consent that they had been exercising Te Uri O Hau hadn't been a submitted on those ones or a party to any litigation?

A. Before anything from 2018 onwards I've been a part of, before that I haven't.

Q. Now, I just want to step through some of the things that the independent commissioners reflected. They reflected that you weren't submitters but that you put in a cultural effects assessment, do you see that?

A. Correct.

Q. And that was prepared by Byrons and it was tabled, that would've been used, the chair tabling a letter?

A. At that stage, yes.

25 1015

Q. That CEA reference, the special relationship as mana whenua with an association to Mangawhai?

A. Yes, we had a relationship, correct.

Q. I understand you had the relationship, I'm just stepping through the extent to which the Te Uri O Hau interests were reflected and taken into account in this. You'll see it reflects on both of the statutory acknowledgements that Te Uri O Hau have?

A. Yes.

Q. And it transcribes a part of the letter that you tabled?

A. Correct, yes.

Q. And at paragraph 185 it refers to the cultural liaison agreement that you were developing?

A. Sorry, I'm just refreshing on 195. Correct, yes.

5 Q. And it says that the panel concluded from Te Uri O Hau's perspective any potential cultural effects of the proposed sand extraction activity are acceptable, do you see that? And that's your position, isn't it?

A. Correct, yes. That was presented at our taumata and then through the board.

10 Q. So quite clearly that panel did take into account, have regard for the views that you put because it reflected them in its decision?

A. Correct.

Q. Now, in the time that Te Uri O Hau have expressed support for these consents, Te Uri O Hau, those were consents that included the inshore and the midshore?

15

A. At that stage there was inshore, midshore and offshore. The preference was primarily for offshore with the other two behind it, correct.

Q. But you've not opposed any of those applications?

A. It was more a best case priority rather than opposition. We wanted to have a look at all of the options.

20

Q. Perhaps if we could take that page down Ms Harnett. But your letter of support, that was support for the offshore but the letter of support was supporting the other applications that were being made as well, weren't they?

25

A. All the applications, correct.

Q. Now, in answer to questions you've said you rely on Mr Stephen Brown, Mr in-house Stephen Brown, you relied on him and you considered his reports, that's correct?

A. Yes, correct.

30

Q. Those reports were all pre the decision, weren't they?

A. Yes, starting at 2018.

Q. So to the extent that other, that further evidence has been developed since that council hearing into this proceeding Mr Brown's reports don't consider those matters, do they?

A. Basically we have just stuck to Stephen's reports only at this stage, yes.

Q. So where experts from – that had been commissioned by people like the Department of Conservation and those sorts of people, where those experts have come and said that those inshore applications, midshore applications, and this is post Stephen Brown, would have an impact on the fairy tern, for instance, that hasn't been a consideration in the maintenance of the position that you have here?

A. Sorry, can you say that again, there was quite a bit in that last question.

1020

10 Q. So, Te Uri O Hau established the position prior to the council hearing. That was based on Stephen Brown's reports and, quite fairly, and I suppose because this is an online hearing you have to say "yes" rather than nod and I've got to stop reacting to your nods so that we can get your answers on questions.

15 A. Sorry, yes.

Q. It's my fault probably more than yours. So, Stephen Brown did an assessment of all the information and all the expert reports that would have existed prior to the council hearing?

A. Correct.

20 Q. And then he left his employment, I think you said in the COVID time, which was in the middle of the council hearing?

A. Yes.

Q. The independent Commissioners considered what Te Uri O Hau said alongside the Ngāti Manuhiri. And when I say "Ngāti Manuhiri", I'm saying Whānau O Pakiri, Omaha marae, all of those people who affiliate to Ngāti Manuhiri. And they declined the offshore consent that we've just gone to, that's correct?

A. Correct.

Q. A different panel declined the inshore consent?

30 A. Correct.

Q. And that same panel that declined the inshore consent granted a midshore consent north of Te Arai?

A. Yes.

Q. Since then, a number of appeals were made, in particular one by Ngāti Manuhiri, it's correct?

A. Correct, yes.

5 Q. And different groups have taken various positions and further expert evidence has been commissioned, including that from DOC, which set out particular effects that would occur and I want to, even though this isn't about the inshore because we're talking about your position, those DOC reports highlighted the impact that an inshore application, an inshore consent was having on the fairy tern and the potential for further impacts on those fairy terns. You're aware of that?

10 A. Yes, I'm with you now, yes.

Q. In the face of all of that evidence, Te Uri O Hau still maintained that it just relied on Mr Brown's evidence to support an inshore application. Is that the position?

15 A. Yes, correct. The position hadn't changed.

Q. And because you'd only relied on Mr Brown's assessment, and look, I'm not criticising you for initially relying on Mr Brown's assessment of those expert reports, but his reports cannot have engaged in all of the evidence that came later?

20 A. Correct.

Q. And so, your position would have been maintained notwithstanding the expert evidence that might have said contrary, for instance ecology and kaimoana and those sorts of things?

25 A. We've just continued to maintain the position, yes, based from that time onwards.

Q. Just stepping back to, and for the avoidance of doubt, and I'm not going to take you there, are you aware that the Crown made particular acknowledgements in the Ngāti Manuhiri settlement around the Mangawhai purchase?

30 A. The Crown make a lot of acknowledgements. Whether they stick to them is another question, I guess. But, yes.

Q. No, no, stop. Stop. A settlement is made up of a number of components. There's a historic account, then there's an acknowledgements section.

You're aware that there's an acknowledgement section where it acknowledges particular aspects that breached the Treaty?

A. Yes.

5 Q. And the apology that the Crown gives is based on those acknowledgements?

A. Yes.

10 Q. And I'm asking you, are you aware that, and I'm not going to take you to the particular part of the deed of settlement, that particular acknowledgements were made by the Crown to Ngāti Manuhiri about the failure to provide reserves within the Mangawhai block?

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A. Yeah, I don't know the detail, you're right.

15 Q. It was important for me to put that to you 'cos Mr Hohneck will talk about it when he steps through those matters, if it becomes an issue. Now in terms of feeling the effects the cultural effects, on the beach you said that you took a drive down the beach recently?

A. Yeah, correct, yeah, about a month ago I stayed up at Pahu, Old Mangawhai, for a night and then moved down to Pakiri.

Q. Did you drive across the Poutawa Stream?

20 A. What's the road called, it doesn't go over the Poutawa it goes alongside it but I can't remember the road.

Q. So this is just a question because I got the impression from you that you were driving along the beach. Were you driving along the road that goes along the beach, and I know you can't drive –

25 A. Yeah, yeah, yeah motorhome. Alongside the river, oh the creek sorry.

Q. Okay. Be quite impressive if you could get a motorhome around the Te Arai Point so –

A. Yeah, no.

30 Q. – that explains a few things. Now, in terms of Te Uri O Hau my understanding is you've heard, you've been questioned by Ms Wikaira about the – I'm sorry Mr Thompson your camera seems to have sort of moved to the side and I'm just getting half of you, if you could sort of neke. Thank you very much. And you're aware that Ngāti Manuhiri's marae is



right on the coast. It sits there, it overlooks the area, you can look up the coast from it?

A. Yes.

5 Q. Yes, works for me as well, just so long as we can hear it. My understanding is that the closest to your Te Uri O Hau Marae is Te Punga which is about 25ks inland?

A. I'm not sure of the exact distance, Ōruawharo or Te Punga, are the two closer.

Q. And those are more towards the centre of the Island, aren't they?

10 A. Left-hand side of Highway 1 yes.

Q. That's not put forward as a criticism to assert that you have no interest in the coast by the way, it's just asking the question. So in terms of that though, in terms of understanding the day-to-day effect of sand extraction and the erosion of the beach over time feeling the changes intergenerationally that was referred by Ms Wikaira those people that are living down there on the beach probably have a better appreciation of the impacts than you might do who have just come to see it once or twice, would that be fair?

15

A. Are you talking in terms of the marae, where they're located, or...

20 Q. Your marae are off the beach so you're not going to the beach regularly, you went down, you took a drive down the coast. If, and I'm just talking about – and you got to experience the beach in your drive down, in terms of understanding the impact over time, watching it over time on a day-to-day basis every year, every day, every year those people who are living down there on the coast are trying to protect the coast – trying to stop dogs, horses and those sorts of things going up there, would probably have a better appreciation of any impacts over time than somebody who would just visit it from time-to-time. Would that be fair?

25

1030

30 A. I think it depends on context. We all experience loss the same way, we all experience gains the same way. It's the context of that experience that really matters. The whānau who lives in Auckland still have a connection, do they not? It matters, yes, if you live local, but it also matters if you have a connection as well.

- Q. I think, and I'm not trying to minimise that, I'm not saying that there's no – that's why I'm saying I'm not trying to erode the mana whenua or anything or what that's been (inaudible 10:30:39). There's a saying that goes: if a tree falls down in the forest and nobody hears it, does it make a sound? It's about that perception of those sorts of things. But if you're there on the beach feeling the erosion and seeing the change in the atmosphere, surely you would understand the nature of the change more than somebody who just comes to visit from time to time? It's an ahi kā (inaudible 10:31:16) really.
- 5
- 10 A. Yeah, you're right, you know, that experience is shared, yeah, correct.
- Q. The experience is shared because those people who are seeing and feeling the effects are sharing it with their whanaunga that have their connections to that place as well, that's correct, isn't it?
- A. So, yeah, we all share it, correct.
- 15 Q. But we experience it differently, don't we?
- A. Yeah, we all have different experiences.
- Q. Now his Honour Judge Smith has raised the Fairy Tern case which I'm not sure – are you aware of the Fairy Tern case and –
- A. Yes.
- 20 Q. – where that was put in the Te Arai stream?
- A. Yes.
- Q. Now when I read that case, I read that that occurred on land that was subject to a reservation and vested in the council, is that correct?
- A. Correct.
- 25 Q. But there was a management plan and that management plan was I think it's signed, it's at the end of the judgment, by a company Te Arai – I should find it. I'll get it out.

#### **THE COURT: JUDGE SMITH**

It's one of the Te Arai Group interests I think Ms Scharting represents.

**CROSS-EXAMINATION CONTINUES: MR POU**

Q. This is a Te Arai Group but I went to have a look at the shareholding of that particular group. Are you aware that the Renaissance Group which is Te Uri O Hau's – that's Te Uri O Hau's commercial arm, isn't it?

5 A. Renaissance Group Limited, yes.

Q. They're a 25% owner of that company that was doing the reservation management, weren't they?

A. Yes, I don't know the dates however. I'm not part of the commercial (inaudible 10:34:05).

10 Q. The name of the group is called Te Arai Coastal Lands Limited.

A. I'm not familiar with it. Are you able to bring that up, sorry? I don't have a copy.

Q. Yes, Ms Urlich will bring it up.

**MR MACRAE:**

15 Could Mr Pou identify the document that he's asking to be brought up, Sir?

**THE COURT: JUDGE SMITH**

It's the Fairy Tern Trust against the Auckland Council, an application for enforcement orders against the council and there's a decision associated with it.

20 **MR MACRAE:**

Thank you, Sir.

**WITNESS:**

And Te Uri O Hau were in that document, sorry?

**MR POU:**

25 Well not ostensibly but what we are going to do is we are going to go right to the beginning so Mr MacRae can see what it is.

**MR MACRAE:**

I have it Sir, it has been supplied.

**THE COURT: JUDGE SMITH**

It is a document attached to the back of the decision of the Court, because of these type of issues arising. And as to who was responsible for what ...

**CROSS-EXAMINATION CONTINUES: MR POU**

5 Q. It's this case, it relates to some – if we go down to that reserve management part where we were at before. So Te Arai Coastal Lands Limited, and I am just going to put it to you because I haven't got the company document, I can supply it later. Te Arai Coastal Lands Limited is a company where Renaissance Limited are 25% shareholder. Are you  
10 aware of that?

A. No sorry, that's not part of my portfolios. I am aware of RGL, or Renaissance Group Limited but not the smaller companies. It looks like Russell Coutts signature is there as well, he sits past.

Q. Yes.

15 A. I don't know who the other signature is there.

Q. I guess, but I guess the issue is, in terms of, and this is probably an unfair question but, in terms of that arrangement and those sorts of things, you'd be unaware of, because I guess, the evidence that you are giving here is that the relationship, through the relationship we can manage effects on  
20 ecology and all of those sorts of things. You wouldn't have any awareness of what was being proposed at this time to managing the impacts of these applications or these, not these applications but of these developments on things like tara iti?

A. Correct.

**25 THE COURT: JUDGE SMITH**

Could we have some context.

**CROSS-EXAMINATION CONTINUES: MR POU**

Q. Do you know what the date is on this?

A. Yes, there is a date.

30 Q. It's one of Judge Smith's so it could be in the early eighties, sort of, sorry Your Honour.

**THE COURT: JUDGE SMITH**

Well it was not long before you joined me so what does that say. So this is 2019. Just to give some context, yes that agreement is older than that. The context is, of course, to do with the golf development, I can't remember the gentleman who owns it, but as you pointed out yesterday, I think I am going to answer my question, that was land that was originally acquired apparently by Te Uri O Hau as part of its settlement and then they entered into a sale of part and then agreement in respect of management or some continuing interest in the development company I think. This relates to the water consents that were associated with the property in the name of Cooper might ring a bell with you, I'm not sure, but that's my recollection as it had been, when it was part of the arguments operated, so water extraction in that way and these interests were acquired and then this agreement I think was part of the way in which they developed the water supply for the golf course. You will remember there's a few large lakes associated with it as well, storage lakes sorry I should say. I do not know if it has really taken us anywhere, I note just as a matter of record.

1040

**MR POU:**

No, no, and it's just a matter that I wanted to put to Mr Thompson because I might make submissions on it.

**CROSS-EXAMINATION CONTINUES: MR POU**

- Q. I just want to put a – probably to even a few things up, yesterday I referred to the Te Arai Forest that was received in as commercial redress by, part by Te Uri O Hau and part by Ngāti Manuhiri, that forest was called the Mangawhai Forest wasn't it, not the Te Arai Forest, are you aware of that?
- 25 A. Mangawhai or Mahurangi?
- Q. No, no, the Mangawhai Forest, the Crown forest licence lands that are referred to in your fellas deed of settlement, the cultural redress and Te Uri O Hau purchased Mangawhai North and Ngāti Manuhiri purchased Mangawhai South, that's correct?
- 30 A. Correct, yes.

Q. In the north Te Uri O Hau have entered into relationships with developers and developed a golf course called Tara Iti? That's correct?

A. A bit before my time again, I wasn't part of that, yeah.

**THE COURT: JUDGE SMITH**

5 It's relatively complex Mr Pou, again a series of decisions – I think again my division on applications for housing along it and then there was some application for the golf course and some were granted by the council without reference to the Court, in other words non-notified. To say that it's complex would be an understatement.

10

**MR POU:**

Oh look your Honour I was just trying to put something so that Mr Thompson could fairly respond to it.

**CROSS-EXAMINATION CONTINUES: MR POU**

15 Q. All I was going to say is, you'd be aware that in the Mangawhai South area, Te Manuhiri have entered into relationships with developers and they've developed their own golf courses down in their area as well?

A. Yeah, correct.

Q. I just, I didn't want to be seen your Honour as pointing the finger one way  
20 without actually balancing it up, that's –

**THE COURT: JUDGE SMITH**

Well no, and it's very obvious to us during our helicopter visit that the – I can't remember the name of the billionaire who owns the one to the north or entered into those relationships, but quite a similar development has also occurred  
25 south. That was based upon a plan change which I was involved in as well where quite a large portion of land was given in the centre near Te Arai stream I think, as reserve. Look, I don't know that Mr Thompson's familiar with all of this and it would have occurred probably in the early-2010s sometime between 2010 and 2015 I think, but given Ngāti Manuhiri settled later, they're somewhat  
30 behind if I could put it that way, so the golf course to the south is at a much earlier stage than that at the north.

**MR POU:**

Yes your Honour and to the extent that people are mentioning golf courses and stuff and I'm just trying to fairly and squarely put and say that Te Uri O Hau have their developments. I don't want this court to gain the impression that I'm  
 5 criticising Te Uri O Hau in any way –

**THE COURT: JUDGE SMITH**

They're very similar developments at both ends, they both involve housing as well, we took particular note of that and are quite large homes at that, but that was the price I think paid for the development and to enable the matter to make  
 10 sense to the parties. So it as agreed to by the council and I think in the end it was resolved by consent order in this court, I never had to hear that plan change. Anyway, look I don't know that Mr Thompson is really going to be able to help us with that, so I think we should move on.

**THE COURT: JUDGE SMITH**

15 Q. Unless I'm wrong, Mr Thompson, have you got any familiarity with what's been happening in that area?  
 A. No.  
 Q. That's really Renaissance Group I gather is it?  
 A. Yeah.

**20 CROSS-EXAMINATION CONTINUES: MR POU**

Q. I guess the last issue and it's possibly something – you understand that this application has an impact on Ngāti Manuhiri?  
 A. Correct, yeah.  
 Q. You understand that, and you understand that Ngāti Manuhiri have a  
 25 history where neighbouring iwi have made deals and sold lands that have created, and in doing so, have sold the Ngāti Manuhiri interests in those lands? Are you aware of that?  
 A. I think all iwi and hapū have the same complex interests being sold, there's not one specific case.  
 30 Q. But Ngāti Manuhiri have a particular, and it's reflected in their deed of settlement, and I'm just going to ask Ms Ulrich to pull up and it's the deed

of settlement, page 7. Ngāti Manuhiri deed of settlement, it's just a map there. All this is the Mahurangi purchase. Sorry Ms Urlich thought her tasks were over and she had disengaged.

**THE COURT: JUDGE SMITH**

- 5 Again, this is a matter that was covered at considerable length in the hearing with various – with the more important chiefs being mentioned as to the arrangements entered into or not entered into and copies of the Māori Land Court documents and other matters of interest.

**CROSS-EXAMINATION CONTINUES: MR POU**

- 10 Q. And I'm not going to go into ownership and those sorts of things, your Honour, those issues relating to the (inaudible 10:46:49) block and how (inaudible 10:46:53) interests were used to pay off surveyors and those sorts of things. But you see that, that's the boundary of the Mahurangi purchase, which goes up to Te Arai Point. Do you see that? Go up a  
15 little bit please Ms Urlich.
- A. Yes.
- Q. Just go up a little bit so we can see the title –

**THE COURT: JUDGE SMITH**

- Q. It is difficult to read but – do you recognise that Mr Thompson where we're  
20 talking about? Given the very poor?
- A. Yeah, not the greatest, but yeah I get it.

**CROSS-EXAMINATION CONTINUES: MR POU**

- Q. And Ngāti Manuhiri's deed of settlement reflects that these lands, and I'm not asserting they were sold by Te Uri O Hau, that these lands were sold  
25 by Ngāti Pāoa and Ngāti Whanaunga, but that Ngāti Manuhiri's interests were considered to have been sold because of the actions of others who might have only been talking for their own interests. Do you understand that as a history?
- A. Oh sorry, yeah, again another complex situation.



Q. And to the extent that Te Uri O Hau might have formed a relationship with MBL to achieve a commercial benefit, the potential is that history can be repeating itself if the Ngāti Manuhiri interest is overridden. You would agree? If the Ngāti Manuhiri interest is overridden.

5 A. It depends on the paradigm and the lens you're looking from.

Q. But if Ngāti Manuhiri are experiencing a loss, it's for Ngāti Manuhiri to say, correct?

A. And if Te Uri O Hau experience a loss it's for Te Uri O Hau to.

10 Q. And if the Te Uri O Hau are to experience a gain in an overlapped area where Ngāti Manuhiri have interests, and they're experiencing a loss, it's history repeating itself.

A. The same could be said if Ngāti Manuhiri experience a gain where Te Uri O Hau experience a loss, it works both ways.

15 Q. Exactly, thank you for your evidence Mr Thompson. That's all I have to ask you. Thank you for your answers.

#### **CROSS-EXAMINATION: MS HIEW – NIL**

#### **CROSS-EXAMINATION: REMAINING COUNSEL – NIL**

1050

#### **RE-EXAMINATION: MR MACRAE**

20 Q. I'll perhaps start with the point that has just been the subject of cross-examination, and that is Mr Thompson, the relationship between Te Uri O Hau and MBL, Mr Pou put it to you that that relationship is designed to achieve a commercial gain. Is your relationship with MBL, or has it been limited to commercial matters?

25 A. No, and again it comes back to our taumata, our operations unit and our governance all working together, it's not solely for commercial. There's an element of our taumata or our kaumatua providing guidance. There's an element of our operations providing that monitoring and maintenance and it's the rule of our board to maintain the relationship, so it's a holistic,  
30 social relationship as well, not just solely commercial.

Q. Is the overall perspective that Te Uri O Hau brings to the matter essentially a mātauranga Māori perspective?

5 A. And really that's our taumata and our environmental unit working together to prove that monitoring and maintaining, to be part of the environmental protection that they do provide. That unit has done a lot of work in the Kaipara and the rohe of Te Uri O Hau in regards to work that it's completed and working with our marae, with river quality testing, with work that it undertakes with different agencies, and different Government departments.

10 Q. Thank you. Mr Pou put to you that you didn't live on the beach and as I understood it, you don't.

A. No I don't, not on Mangawhai no.

Q. Does that affect or disadvantage you in understanding the mātauranga Māori issues that this proposal raises from a Te Uri O Hau perspective?

15 A. I think it supplements more than advantage or disadvantage, in the respect that not everyone lives on the coast, so we don't experience the day-to-day frontline experience but whānau are still connected and you can be connected while not living in a specific area or place. Sometimes living away from an area is more looking at a large picture or the bigger picture, where you're not living in the circle, you're living outside of the circle and can see other things. So it's a supplement, it assists.

20

Q. Mr Pou put to you that your relation to the offshore application which essentially is the application with amendments being pursued before this court, that you place primary reliance on Mr Brown's earlier reports, Mr Stephen Brown, your inhouse man. Did you give evidence at the offshore application hearing before the council, before the commissioners?

25

A. That's the Warkworth? Sorry?

Q. Yes.

30 A. Yes, at Warkworth I gave evidence to that effect.

Q. And well sorry, when you say "to that effect" you gave evidence in relation to the application?

A. Yes.

Q. And did Mr Te Rangi give evidence?

A. Yes.

Q. And in your case was that evidence given on behalf of the Trust board?

A. Yes.

5 Q. And prior to giving your evidence, did you obtain the approval of the Trust board?

A. Yes.

1055

Q. And prior to giving your evidence were you full informed to your satisfaction of all the issues relevant to Te Uri O Hau raised by the case?

10 A. Yes.

Q. And what were they in that case?

A. The evidence that was presented by our environmental unit, the support from our taumata at a number of different meetings and then confirmation in our board and our (inaudible 10:55:29) meetings.

15 Q. And to what extent were you briefed on the proposal itself – sorry, you gave evidence on behalf of MBL, did you?

A. Yes.

Q. Were you briefed by MBL on the proposal itself?

A. No. Primarily the work that we did in-house.

20 Q. You were asked questions about the Te Uri O Hau management plan, I think Mr Pou referred you to common bundle 2048, there's no need to bring it up, but all of its objectives stated that Te Uri O Hau primarily supported or supported, rather, sand extraction on land and you said that needed to be taken into account. Was it taken into account to your knowledge in considering the current offshore proposal?

25

A. Yes, when we presented to our, again, our taumata and from our operations unit and then at governance level.

#### **QUESTIONS FROM THE COURT: COMMISSIONER MYERS**

Q. Ata maria, Mr Thompson. Can you hear me?

30 A. Yes.

Q. You talk in your evidence, and there's been some questions about, I think Mr Stephen Brown, who was your ecologist, was he the ecologist advising Te Uri O Hau?

A. Yes.

Q. Was he doing his own ecological assessments, were they incorporated into his reports –

A. His report as well – sorry.

5 Q. So were his reports, were they based on the existing, the information from McCallum Bros or was it his own ecological assessments?

A. Both. Correct.

Q. So would he have incorporated mātauranga Māori into his ecological assessments?

10 A. As part of his environment report he did.

Q. So is the intention that Te Uri O Hau would be involved in the ecological monitoring of the consent?

A. That's our wish, our hope.

#### **QUESTIONS FROM THE COURT: SPECIAL ADVISOR HOWIE – NIL**

#### **15 QUESTIONS FROM THE COURT: COMMISSIONER PRIME**

Q. Tēnā koe Koru. Can I take you first to paragraph 7 of your primary evidence. So, just to be clear, is the settlement trust the actual registered voice for Te Uri O Hau?

A. Yes, yes, it is.

20 Q. Ka pai. And how many registered beneficiaries do you have for that organisation, or the (inaudible 11:00:09)?

A. We 14 marae. We have four tūpuna marae with another 10 whānau marae, in total 14 marae. We have approximately, and we can't go by the 2013 census, there were some issues there, but our last count  
25 internally was approximately five and a half thousand to six and a half thousand uri on our beneficiary list.

Q. Okay. Thank you for that. Can you tell me roughly how much of the Te Uri O Hau coastline is sand extracted by MBL?

A. You mean in this case?

30 Q. Yes, in this particular area. None?

A. Yeah.

Q. Okay.

A. Roughly in this application 50% of the application is in the Te Uri O Hau area.

5 Q. Okay. You've actually answered quite a few of my questions with the other counsel. In paragraph 9 you talk about the application for customary and marine title on I think you partially answered this before, what is the status of it right now?

10 A. Te Uri O Hau have direct negotiations with the Crown in terms of the MACA claims. Our application was formed in 2015/2016 before the change in legislation. I think Te Uri O Hau are the only Tai Tokerau or north of Auckland hapū iwi to be in that case bowl where everyone else has to go through the High Court to my knowledge.

Q. Thank you for that. Can you tell me is Stephen Brown of Te Uri O Hau?

A. No, no he's not.

Q. He's not. So he was just a consultant for you.

15 A. Yeah.

Q. Ka pai, thank you. You've already answered the royalty bit I think. You don't get any. Can I take you to paragraph 30 of your evidence please? Can I ask what's the source of your observation? Right at the end you say rapidly colonise the disturbed sea bed. Where has that come from?

20 A. That's come from our Stephen Brown report.

Q. You've already answered that question. Just bear with me. Thank you very much, much appreciated.

#### **THE COURT: JUDGE SMITH**

25 Thank you, Mata. And Judge Warren did you have any questions of Mr Thompson?

#### **QUESTIONS FROM THE COURT: JUDGE WARREN**

Q. Tena koe hou. (Maori 11:04:04)

A. (Maori 11:04:16).

30 Q. Just to understand the basis of your evidence, I think you said yesterday you do not consider yourself a pukena or expert of tikanga and its related principles and values, is that correct?

A. I'm still an (unclear 11:04:42) novice, Judge, still getting there.

Q. Ka pai. So I guess I'm just asking can I ask you about some of those values or are you...

A. Āe,

Q. I can, ka pai. Te Uri O Hau is a hapū of Ngāti Whatua, correct?

5 A. Correct.

1105

10 Q. So, I just want to understand the political context in terms of developments within the Te Uri O Hau pakewa or rohe. Is it Te Uri O Hau that engage with any applications or does it refer back to the runanga or the mother ship to seek advice of guidance, or is it very much a hapu-driven approach in your area?

15 A. In this case, in the Ngāti Whātua case our hapū and, our different hapū have different strengths and weaknesses. Our iwi has strength and weaknesses. In this case Te Uri O Hau have one of the more, I'm trying to find the right word, I don't want to say on to it – but our environmental unit is one of the better units within the Ngāti Whātua scope. However, the runanga has one of the better (inaudible 11:06:14) units with Dr (inaudible 11:06:17) et cetera. So, we've got strengths and weaknesses, Te Uri O Hau doesn't have a strong hauora entity. Te Uri O Hau have a stronger agricultural entity, so we all have our strengths and weaknesses. In terms of environmental, Te Uri O Hau are one of the leaders within the Ngāti Whātua rohe so it's working in partnership. While there's kaitiaki at the runanga, for example, Te Uri O Hau provide more guidance because of its larger set-up and organisation. In terms of health, because the runanga has doctor clinics, et cetera, Te Uri O Hau uses those as its strengths.

20

25

Q. So, it's a horses for courses approach?

A. Pretty much, yes.

30 Q. And so where I may see Te Rūnanga o Ngāti Whatua submitting on a particular resource consent application, it doesn't necessarily follow that that has been supported by Te Uri O Hau?

A. Correct. When a separate hapū or iwi makes those applications you'll generally know because they've added it into their application. If it's not in there, for example, Te Uri O Hau supporting a kaiteaki kaupapa for the

runanga then you can take that as, well, they haven't talked yet or they're still in negotiations.

Q. Have there been any examples to your knowledge where Te Uri O Hau has not agreed with the position taken by the likes of Te Rūnanga o Ngāti Whātua on a resource consent application and there's been internal debate about the positions adopted?

A. Not so much resource consents to my knowledge in the last five years. However, there are differences of opinion with MACA, with Wai claims, which is not uncommon, and that's between Te Uri O Hau and other hapū and our iwi as well.

Q. I just want to understand the nature of the customary interests across the Te Uri O Hau claimed area of interest. If we could just bring up figure 1 from Mr Thomson's evidence please. Mr Thompson, based on that map, the location of the marae and some of the reading that I've done in terms of the Te Uri O Hau management plan and some of your treaty settlement documents I gain a strong impression that, I'd better be careful of the words I use, but – that the stronger relationship for Te Uri O Hau is around the Kaipara harbour. Is that a fair assessment?

A. Yes. I'm not going to disagree with that.

Q. That would be my words, the homeland, the heartland of Te Uri O Hau?

A. Āe, ae, around our marae, our marae are the centrepiece that is of everything we do.

1110

Q. As I say, in reading the management plan and some of the statements in there, it's quite clear that the focus from a resource management or environmental perspective is the Kaipara Harbour, more so than Mangawhai. Is that fair?

A. More leaning towards Kaipara, correct.

Q. And is that because that's where the ahi kā is, around the Kaipara that's where the stories of the past and the wahi tapu and of course, in today's terms, the marae are located and it's the food basket for Te Uri O Hau?

A. I, you know, I guess it depends and I don't know what the decisions based on what happened in 2002 were, but it also included our whakapapa, our connections to different areas, for example Te Ika-a-ranga-nui occurred

on the east coast, one of our bigger battles. Yes, I won't go too deep into that but, you know, there's a reason why we have a connection to the eastern coast, not just through that battle but through a number of other things as well. So, it's a combination of all of what you've just said.

5 Q. Because I, in the documents I've read it seems that there's more of a spiritual connection to Mangawhai, it was a seasonal gathering area. There are (inaudible 11:11:35) which suggest it wasn't a permanent location for Te Uri O Hau historically. Is that fair?

A. Yes, I can't disagree with the historical accounts.

10 Q. And in terms of Treaty settlement redress, does it then follow that most of the cultural redress is in and around the Kaipara Harbour as opposed to Mangawhai?

A. It depends on what the redress was I suppose.

Q. Well, return of properties, those sorts of things.

15 A. Āe, in some of the material I do know is what was in the original redress was cut down significantly in the final settlement. So, the final settlement wasn't what was the intention or the original application.

Q. I totally understand that. And the oyster reserves redress, that was only in relation to the Kaipara Harbour, wasn't it, as opposed to the Mangawhai Harbour?

20

A. Āe, correct.

Q. Just the sort of, the impression one could draw from all of that, Mr Thompson, is that the Mangawhai area is not really the heartland of Te Uri O Hau and it's more palatable for the tribe to allow this type of extractions and other developments than it would be closer to the Kaipara Harbour. Would you agree with that, or do you have a different view?

25

A. I think all whenua, all awa, all moana, are a tāonga. So, to put more emphasis on one than the other, it is a little unfair. What I can say is we treat and we accept everything as being significant and special as a tāonga to us.

30

Q. I mean, just drawing again on your growing knowledge as pūkenga, is that really the position that traditionally Māori saw every area in the same sort of tapu or tāonga status, that there were certain areas that could be clearly developed and used for cooking food and all the rest of it and



others were more tapu? I mean, your proposition is that everything's sort of equal. That's the starting point.

A. I think what I'm trying to say is everything is important as a (inaudible 11:14:25). The quality depends on the context, and again I always put back to the paradigm or the lens that Te Uri O Hau currently have. I can't say what they decided in 1840, but you can see the changes from that period to now and so we should, and we must, treat everything as important.

Q. I can't recall where I read, it might be in your management plan that I thought, and you mentioned the battle. What was the name of the battle, sorry? Te Ika?

1115

A. Te Ika-a-ranga-nui. Almost 200 years ago.

Q. And I think it's in your management plan where the document records that the area of the battle between Mangawhai to another point, which escapes me, is considered tapu? Is that heading further north, is it?

A. Correct. Might want to talk to Tame Te Rangi about that. Again, I'm still learning and the whakapapa that I'm currently going through is centred around the northern (inaudible 11:15:43). But I'm sure Tame could answer that.

Q. But conceptually if that's accurate that it is considered by Te Uri O Hau hapū and we know the application I don't think extends to this area but if there was, Te Uri O Hau's position might be somewhat different than it is today?

A. Possibly. If the outcome of that battle was different, there'd be a different emphasis. Who am I say that there were no Te Uri O Hau marae around Mangawhai back then. Yes, the food gathering was an important part of that area but we just don't know. We could only take the historical accounts that have been written after that period.

Q. Are there any no-go places within Te Uri O Hau's heartland that there'd be no development, no exceptions given, or is it all open subject to the context as you say?

A. Again, yeah, definitely subject to context. And it would be dependent on where it is, who's there, et cetera, exactly the same process that we've taken in this case.

5 Q. So if it was close to one of the coastal maraes, that would be important matter of context, would it not?

A. Āe, yes.

Q. Are there any examples that you know of Te Uri O Hau in the way it's currently structured post your Treaty settlement where it has actively opposed developments or resource consents?

10 A. Rarely, and the biggest one was the implementation of ocean turbines in the Kaipara Harbour, that was way back –

Q. Yes, I saw a little bit in the media about that. And what was the reason for the opposition there, Mr Thompson, that you can recall?

A. Yeah, I was only a kid back then but –

15 Q. Right.

A. – primarily, yeah, the allocation of the turbines, where they were placed and the access to them, including wanting, you know, ecological reports, et cetera.

Q. So were there cultural issues at play to the extent of your knowledge?

20 A. I believe so. There's a lot of written material on that period and those consents. I'm sure there's a Ministry somewhere that will have something.

#### **THE COURT: JUDGE SMITH**

I can also indicate, Judge, that they were separately represented in the Waste  
25 Management hearing, as was the (inaudible 11:18:32). So although they had some degree of overlap, they were separately represented. So they opposed that application and I don't want to put words into their mouth but a key concern of all the witnesses was the effect on the Kaipara, or potential effect on the Kaipara and the (inaudible 11:19:01).

#### **30 QUESTIONS FROM THE COURT CONTINUES: JUDGE WARREN**

Q. Stephen Brown your ecologist there's been sort of slight well criticism may be too strong but sort of probing with a theory that the board or Te Uri O

Hau tamauta considered, what, non-cultural effects through the work he did, and whether that's right or wrong, are you with me in the sense that Māori in expressing tino rangatiratanga are well within their rights to give weight to technical ecological evidence as part of exercising their tino rangatiratanga?

5

A. You know, and again like I said previously, you know, we can agree to disagree. It's up to the lens and the paradigm of each individual organisation or rūpū. So yeah I completely agree with that.

1120

10 Q. But equally that as Ms Wikaira and I think Mr Pou put to you, that those living and experiencing the impacts, whatever they may be, ecological or cultural, they are sometimes the best placed people to be listened to, given that I think you said in regards to the ocean turbines that it was location being one of the key concerns.

15 A. Yeah the location of the turbines in the harbour was a definite concern but again, yeah, we all have an interest to a certain level, it may not be because we live there, but there's still an interest and I think you're right, we need to (inaudible 11:21:01) that up.

Q. (inaudible 11:21:01) ahi kā element, isn't there –

20 A. Āe.

Q. – that is an important tikanga in the sense that even today we hear a lot that ahi kaa is still important, those that look after the area in a physical sense as opposed to on the zoom or visit frequently, the ahi kaa still have an important role to play in resource management, in a Māori sense, you'd agree with that?

25

A. Ahi kaa is definitely important.

Q. I think Mr Poe tidied up my questions arising from Ms Bilby's discussion with you yesterday, because it was quite clear to me that the council had acknowledged the CEA that had been filed by Te Uri O Hau, but one of the references in there and I just wanted to get real clarity is, it's at 1174 is the common bundle reference. Just scroll up a little bit thank you, and it's the quote from you Mr Thompson. "Our decisions to submit conditional support," and I just want to better understand the conditional

30

support. So conditional upon the development of the relationship arrangements with McCallum Brothers, correct?

A. Correct.

Q. And the current status, so I'm clear, is that there is no final agreement  
5 between the parties as envisaged –

A. No.

Q. – and therefore is the support still conditional?

A. It's definitely still conditional, yes.

Q. But there is nothing in the evidence that you've read from other mana  
10 whenua groups or any other witness, to change Te Uri O Hau's mind as to its conditional support?

A. Correct.

Q. Mr Poe put to you the management plan and the policy around land with  
15 extraction of sand versus sea with, and I drew from that that Te Uri O Hau saw a distinction between dry land and wet land. Some tribes don't, but am I correct in saying Te Uri O Hau see a distinction?

A. I'll have to check with our environmental team, but I'm surmising after  
20 reading that, that in 2011 there was no (inaudible 11:24:37) consideration for sea or wet sand extraction, so possibly it could have been, or it was never considered 20-odd years ago.

1125

Q. And just finally then, just this notion of mauri and mana, at paragraph 40  
25 you talk about mauri and mana being lost as a result of the transformation of sand being taken. So is it Te Uri O Hau tikanga that mauri can be lost, some iwi I think have a view that it's never lost, it's just put into a different state, from a rākau being felled to a waka, to its final resting place, the mauri continues, but I got the sense from your evidence that you're saying it can be lost but that's fine, through rituals and karakia etc, the balance can be achieved. I just want to understand what exactly you're saying  
30 there?

A. Yeah, that's correct, and it's what I've been taught and I acknowledge we're all different and we have different teachings, but again it's that transformation or that transformative move.

Q. There's that term, obviously te he mauri ora, which we hear often but there's also that other term which I'm sure Commissioner Prime will have more knowledge than I, te he mauri mate and some say that's a new term, but do you have any knowledge from Te Uri O Hau's perspective on, is that what they're talking about, that the mate is gone or do you agree with some commentators that it's been made up in recent times?

A. It really depends on which kaumatua you are talking to, what time of day it is, and if they've taken their Metformin or not, let's be honest. It really does depend and you know, for us we accept our kaumatua, their teachings have been passed on to us, which may be very different to Ngāpuhi, to Ngāti Hine, to Ngāti Wai to Ngāti Manuhiri.

Q. Those are my questions. Thank you for your answers and (Māori 11:27:16).

#### **THE COURT:**

15 Thank you Judge, I want to revert to Commissioner Prime who's realised he had some more questions he missed.

#### **QUESTIONS FROM THE COURT CONTINUES: COMMISSIONER PRIME**

Q. Yes apologies for that. (Māori 11:27:39). I actually hesitated to ask these questions earlier because you said you weren't a pukenga and in listening to your responses to many of the questions actually, I consider you are pukenga so I'll fire ahead with the questions. They actually come out of your Te Uri O Hau Kaitiakitanga o te Taiao report and on the first page it mentions the hapū of Te Uri O Hau and the first one there is Ngāi Tāhuhu.

A. Āe.

Q. Is that the same Ngāi Tāhuhu that occupied (inaudible 11:28:27) in about the time (inaudible 11:28:32) wife was born, so that's probably about 400 years back?

A. A little above my pay grade there, Matua. Our whānau (inaudible 11:28:49), my (inaudible 11:28:50).

Q. And the Ngāti Rangi, is that the same Ngāti Rangi that occupies in the (inaudible 11:29:08) area?

A. I don't know, that's a Ben Hita question or a Willie Wright question that one. I don't know the connection between the two areas.

Q. And the Ngati Kura, is that the same Ngati Kura that occupies (inaudible 11:29:30) around the Rawhiti area?

5 A. Āe, I believe so, yes.

Q. It is. So these connections actually go way, way back all these different hapū connections like my thinking was it could have been that they just took a name of a tupuna, hapū and named, or a tupuna and named the iwi but it's seems you still have those, you had those historic connections at different parts of the country, in Tai Tokerau.

10

Q. To the detail, I am still being versed on Matau, but the general terms I tautoko.

A. (Māori 11:30:14).

Q. Thank you, Sir.

15 **QUESTIONS FROM THE COURT: JUDGE SMITH**

Q. My questions, and it was very brief, is just so you know is around whanaungatanga issues, which seem to be very strong within Te Uri O Hau. Did you mention just a moment ago that you come from Puatahi Marae?

20 A. No, no, that's the area where Matua asked where Ngāti Rehua come from.

Q. Right.

A. Yes, from roughly Port (inaudible 11:30:46) to Uluwatu.

Q. Right. You will be aware that Puatahi is in itself is an interesting marae and that it has connections with Ngāti Hine and through that to *Ngāpuhi*, to *Ngāti Whātua* and to Manuhiri?

25

A. Yes (inaudible 11:31:02), the centrepiece.

Q. Well it's just a, I do not know if I would call it a centrepiece but it shows the whanaungatanga issues that I think were being explored a moment ago by Commissioner Prime also. That Te Uri O Hau, through intermarriage, through whakapapa, is able to relate to many of the iwi and hapū in both Northland and further south to Ngāti Whātua and even beyond in some cases.

30

A. Yes –

Q. Plus the connection with Tainui, connection with Ngāti Wai, connection with Napui, connection with Ngāti Hine and much of what has happened before the distortions created through the Waitangi Tribunal and the need to make a claim, was based upon those relationships wasn't it?

A. Correct.

Q. One assumes that there were whanaungatanga relationships with Ngāti Manuhiri and, in fact, the owners of the properties along the Pakiri beach area as well. Is that the case or not, I have, haven't explored –

10 A. There's connections, yes there is interconnections everywhere, yes.

Q. Right. So many people can whakapapa to both Te Uri O Hau, to Ngāti Manuhiri, to Ngāti Wai, and we see this littering many of the issues through the Māori Land Court and Mr Laly Haddon, of course, also being associated with Ngāti Wai, et cetera. This is nothing unusual or exceptional about this is it?

A. No, definitely not.

Q. do you think it would be fair to say, that Te Uri O Hau stresses the whanaungatanga aspect of its whakapapa?

A. Again, it's complex but, you know, you have to acknowledge the inter-relationships between ourselves.

Q. I do not think I need to explore it any further. I think Commissioner Prime did that far better than I could every do it and I apologise, I did not, I am not wishing to create any offence at all. I am just wishing to stress the connections rather than the disconnections, if I can put it that way. I really want to thank you for your evidence. I think we have appreciated your honesty and especially your humility in areas that you seem to know a lot more than most about and we have appreciated your assistance on this occasion. So thank you for your evidence.

# **MR POU:**

30 Before Mr MacRae goes, probably because I have some matters arising Your Honour. It is probably more appropriate that I go before Mr MacRae.

**THE COURT: JUDGE SMITH**

Yes, I agree.

**QUESTIONS ARISING: MR POU**

5 Q. You were asked a question by Commissioner Prime and a question by Judge Warren. Judge Warren talked about, he referred you to that letter where you talked about conditional support and Commissioner Prime was referring to a royalty. You confirm that you weren't getting a royalty. Is part of the condition that you will get a royalty moving forward if this consent is granted?

10 A. It all depends on if the consent is granted to be honest and then we will have those relationship talks and those negotiations. Until then it is still pretty much, I don't know what the word is, verbatim. So we don't know until we find out the outcome of this whole process.

15 Q. So you've supported, you don't know, you are not clear on the mitigation and you are not clear on the commercial, the commercial benefits yet?

A. Well what I was saying is, we have to wait until the end of this whole process before we move to the next step. Yes, we are having conversations but you can't confirm anything until the consent is either granted or declined.

20 1135

Q. Okay, I understand that now. My last question is probably a cheeky one that comes in on the tails of Commissioner Prime. I too was interested in the hapū groups and I note that there a Ngāti Kaiwhare there. I'm a Mahurehure who used to be Te Uri o Kaiwhare. Is there a connection  
25 between Ngāti Kaiwhare, Te Uri Kaiwhare and Te Arawa or sometimes called Te Arawa Kaiwhare, re those connections?

A. I believe so, however that's a Tame Te Rangi question. I'll leave it with (unclear 11:35:38).

Q. I was going cheekily ask you if that makes you a hapū of Ngapuhi?

30 A. I think Ngapuhi are hapū of Whatua, but I'll double-check that.

Q. Kia ora, Mr Thompson.



**THE COURT: JUDGE SMITH**

Q. Sorry, Mr MacRae.

A. Not at all Sir, I just wanted to touch on the same point. Judge Warren will this time, though, not Mr Pou's last point, the earlier one.

5 **QUESTIONS ARISING CONTINUES: MR POU:**

Q. Judge Warren asked if the agreement or at least the proposed cultural liaison agreement that you've discussed with MBL was conditional and of course you've confirmed it was, it is, and you've confirmed that again just now. How would you rate your level of confidence, that if consent were  
10 to be granted that agreement would be reached on the matters that you referred to.

A. Pretty well. I think, you know, depending on the outcome of everything that happens we can start to look to the future to see what happens next. So is that a metric?

15

**THE COURT: JUDGE SMITH**

From the Court's point of view given the way the Court works if it decided that a consent might be granted it would be conditional on being satisfied that certain key matters, one of which would be the relationship agreement between  
20 yourselves and MBL and any other party who wanted to have a relationship agreement was entered into and they were normally looking for something in the sort of three months. Mr Pou will know that we've had ones where we wait two years and we come back in the end where the res no agreement. So I think the metric we're talking about, are we talking in short term and that, and I  
25 appreciate in hapū and iwi terms is almost instantly three months. Are we that close? That's the metric I think we're interested in?

**WITNESS:**

Definitely once we finish talking because we have to take back to our kaumatua,  
30 environs and back to our board so three months I guess is – first time talking about this sort of thing, so I guess that's a good timeframe.

**THE COURT: JUDGE SMITH**

That helps us just understand the metric, I'm not saying it's three months to the date. What we're looking for is a fairly rapid decision to be made. Thank you.

5 **MR POU:**

Thank you for re-defining the metric, Sir, or defining a metric.

**THE COURT: JUDGE SMITH**

Yes. Wish is a fine thing in this area unfortunately. We've had to wait quite commonly for nine months but we're finding that very difficult for a lot of parties.

10 Thank you and thank you for your assistance Mr Thompson, you're more than welcome to continue on and watch us or depart, as you need to.

**WITNESS EXCUSED**15 **THE COURT: JUDGE SMITH**

That takes us to morning adjournment very late, but hopefully with a bit of liquid my headache might abate. We're moving next to Mr Gaimster again, was that the decision, I think, as I recall. And then after that we'll come back to the issues you wanted to raise, Mr MacRae and then if we have time move to start  
20 Mr Te Rangi and perhaps deal with your preliminary questions. That's as I understand it. Is that correct?

**MR MACRAE:**

Well Sir, I don't expect to be long because I don't want to interrupt the hearing,  
25 just some points that I want to – two points that I want to give a progress report on and indicate that they will need to be dealt with from the applicant's point of view at least and the leave of the Court will be required at the appropriate time I think, possibly. And then to raise two legal matters that have been discussed earlier but which, and which your Honour indicated that I should deal with at  
30 some time and discuss when that might be. So that's all I wanted to achieve Sir.

**THE COURT: JUDGE SMITH**

So we'll do that after Mr Gaimster and if we have time after that well move to commence Mr Te Rangi before lunch and we're probably looking at breaking for lunch about 1.15, so it will be a fairly short period of time between  
5 recommencing and coming back again. I think we'll recommence at 12.05 so a slightly shorter morning tea, and come back with Mr Gaimster.

**COURT ADJOURNS: 11.40 AM**

**COURT RESUMES: 12.16 PM**

**THE COURT: JUDGE SMITH**

So we were dealing with the next witness, which was Mr Gaimster, is that right?

5 **MR MACRAE:**

Yes, that's right, Sir. Ms Hopkins will call Mr Gaimster, Sir. I may ask a question in re-examination.

**THE COURT: JUDGE SMITH**

That's fine. I'll just see if I can find his brief. That's 17 in our book, I think.

10

**MS HOPKINS:**

Yes, correct, Sir. Folder 2.

**MS HOPKINS CALLS**

15 **ROBERT GAIMSTER (AFFIRMED)**

Q. Mr Gaimster, can you please confirm your full name is Robert Gaimster?

A. Correct.

Q. And you have provided one statement of evidence dated 23 December 2022?

20 A. Correct.

Q. And do you have a copy of that document with you?

A. I do.

Q. Could I please get you to turn to page 3 of your evidence to paragraph 10. We don't need this brought up, but if you could have that open in front of you, Mr Gaimster. In that paragraph you mention about the involvement Concrete New Zealand has with producing CO2 emissions to net zero by 2050. Has there been any further work done on this since you completed this statement?

25 A. Good afternoon. Yes, there has. So just very briefly for background, my industry, we've been on a journey to decarbonise. So between 2005 and 30 2015, sorry 2018, we've reduced our emissions by 15%. But we're not stopping there, so we're about to launch our road map to deliver a net

- carbon zero concrete industry for Aotearoa New Zealand for 2050 and it forms part of a wider global cement and concrete initiative which has been endorsed by the UN. And, indeed, I was in a meeting of industry, concrete industry leaders in Zurich last month and that was addressed by the Secretary-General of the United Nations, António Guterres, who acknowledged the work that the concrete industry was doing around the world. Our road map is, has been produced independently, so we haven't written it. It's been funded through the Ministry of Business, Innovation & Employment and the Building Research Levy and indeed Concrete New Zealand and if we succeed with our ambition by 2030 we'll have taken about 560,000 tonnes of CO2 per annum from the country's emissions which I think you agree is pretty significant. We have seven levers as part of the roadmap and one of those levers is optimising our cement contents because you're probably aware that cement and concrete is the most energy intensive ingredient so we need to be very careful about how much we use and one of the ways we can optimise our cement content is using high quality materials like Pakiri sand which is transported by ship into Auckland, which is a very, very efficient way of transporting concrete aggregates in terms of CO2 emissions. In fact, it's between four and 10 times more efficient than putting aggregates onto our roads. And we estimate that if we had to go somewhere else for a high quality aggregate for Auckland then that could put anywhere between an additional 5,000 tonnes and 15,000 tonnes of CO2 into the atmosphere at a time when we're looking to decarbonise.
- 25 Q. You mentioned about the high quality materials, what does that mean for concrete using those high quality materials?
- A. So it means that we can keep our cement contents to an absolute minimum to give us, we still need cement and concrete because it gives us the strength and the durability but I say it does provide most of the CO2 in a concrete mix design would come from cement and by utilising higher quality materials like Pakiri sand we can keep our cement contents to an absolute minimum and therefore our carbon footprint.

#### **CROSS-EXAMINATION: MS BIELBY – NIL**

**CROSS-EXAMINATION: MR VAN MIERLO – NIL**

**CROSS-EXAMINATION: MS CAMPBELL – NIL**

**CROSS-EXAMINATION: MS MORRISON-SHAW – NIL**

**CROSS-EXAMINATION: MR POU – NIL**

**5 CROSS-EXAMINATION: MS BLACK – NIL**

**CROSS-EXAMINATION: MS HIEW**

Q. Well, it's really good to hear that the concrete industry is taking lots of steps to reduce the carbon footprint. So, in paragraph 3 of your evidence you say that the purpose of Concrete New Zealand is to advocate for concrete as an essential material for building a resilient New Zealand, correct?

A. Correct, yes.

Q. So that means Concrete New Zealand advocates for concrete being the main material in the construction industry?

15 A. Our role is to share the industry knowledge, facts and technical information about concrete and we do that at a kind of national level so, for example, we provide national statistics around ready mix concrete production.

Q. Also in paragraph 3 you mention that Concrete New Zealand is active in advocacy, is that correct?

A. Yes.

Q. Is that advocacy for concrete as a material or is it advocacy for the concrete industry?

A. Actually both.

25 Q. So Concrete New Zealand has, I think, in your evidence, about 500 organisations as members?

A. We have 500 members so that could be a very large corporate or it could be an individual person so they're not all organisations.

Q. And so their activities drive the organisations priorities, that's what you say, paragraph 4 of your evidence, right?

A. Yes, correct.

5 Q. So if your members were interested in getting a steady supply of sand, would you be advocating for them in that regard?

1225

A. Well surety of aggregate supply is quite important to the concrete industry.

Q. But it is your work here, isn't it, it's to advocate –

10 A. Without –

Q. Sorry.

A. Without aggregates, we can't produce concrete, so it is important.

15 Q. I understand that Mr Gaimster, but your role, or should I say Concrete New Zealand's role, in this proceeding is it to advocate for the McCallum Brothers?

A. No. My role is to share information and knowledge and technical information, the kind of, from a national perspective which is why I've discussed the decarbonisation strategy which we're now following.

20 Q. Thank you. Is Ms Harnett, do you have access to a document attached to Mr Hopkins, I think a few days ago? It should be called "The Concrete New Zealand" that's the one. Mr Gaimster do you recognise this document?

A. Yes I do.

Q. Yes. Could you tell us what it is please?

25 A. It's the rules of Concrete New Zealand.

Q. That's correct. Ms Harnett could you please take us to page 9 of this document?

### **THE COURT: JUDGE SMITH**

30 Q. We should give that an exhibit number what are we up to Madam Registrar?

A. 11.

Q. Thank you.

**EXHIBIT 11 PRODUCED – CONCRETE NEW ZEALAND INCORPORATED  
SOCIETY RULES**

**MS HIEW:**

I think we've gone too far, it's page 9 of the actual PDF document, Ms Harnett,  
5 thank you.

**THE COURT: JUDGE SMITH**

Which paragraph are you wanting us to look at?

**MS HIEW:**

10 Paragraph 1.3, that's the objects of Concrete New Zealand as an incorporated  
society.

**CROSS-EXAMINATION CONTINUES: MS HIEW**

Q. I just want to put to Mr Gaimster paragraph 1.3.2, it says that: "The objects  
of Concrete New Zealand are to institute, promote and support or oppose  
15 legislative or other measures or proceedings affecting the interests of the  
industry." So would you say that it is in the interests of the concrete  
industry to be able to excavate sand or dredge sand?

A. We need fine aggregate for concrete so yes.

Q. But is it in the interests of a member of Concrete New Zealand to be able  
20 to access and extract sand?

A. Well I think it's, that's also a yes.

Q. Thank you. No further questions, thank you Mr Gaimster.

**THE COURT: JUDGE SMITH**

25 Thank you. Ms Waikara did you have any questions? No response.

**CROSS-EXAMINATION: MS SCHARTING – NIL**

**CROSS-EXAMINATION: MR MULDOWNNEY – NIL**



**RE-EXAMINATION: MR MACRAE**

Q. Mr Gaimster, Ms Hiew asked you about the objects of your association with Concrete New Zealand. Turning though to your evidence, just to summarise, I think paragraphs 1 to 3 you introduce yourself, paragraphs 4 and 5 you explain something about Concrete New Zealand. From paragraph 5 on, is there any part of your evidence, statement of evidence that is not factual?

A. No.

Q. And whose knowledge were you relying on and are you relying on now in putting together your statement of evidence?

A. My own knowledge and that of my team.

Q. When you say “your team” who is in your team?

A. I have a number of technical experts in my team, so I have a structural engineer, and I have an architect and I have a comms person and the sustainability person.

1230

Q. Is there any aspect of their input into your evidence which is not factual?

A. No.

Q. Under whose supervision are the members of your team, Mr Gaimster?

20 A. Under my supervision.

Q. You have a review role in relation to the information with which they provide you?

A. Correct.

**QUESTIONS FROM THE COURT: COMMISSIONER MYERS – NIL**

25 **QUESTIONS FROM THE COURT: SPECIAL ADVISOR HOWIE – NIL**

**QUESTIONS FROM THE COURT: COMMISSIONER PRIME**

Q. In paragraph 17 of your evidence you talk about the ingredients for concrete. Can used concrete be sort of crushed and reused in concrete?

30 A. Yes, it can be and sometimes it is. But generally recycled aggregate is used for lower grade applications. You know, you wouldn’t use lower

grade recycled concrete in, say, the Auckland market for example unless it was to a low grade fill sort of application.

Q. So, the quality of the concrete is a lot lower when you reuse crushed concrete?

5 A. Yes, it depends on the quality of the recycled aggregate, but generally it's inferior and we have to increase the main contents to generate the same strength.

Q. That's clear, thank you very much.

**QUESTIONS FROM THE COURT: JUDGE WARREN – NIL**

10 **QUESTIONS FROM THE COURT: JUDGE SMITH – NIL**

**QUESTIONS ARISING – NIL**

**WITNESS EXCUSED**

**THE COURT: JUDGE SMITH**

You had more than two matters you wanted to raise with us, so perhaps we'll deal with those now, Mr MacRae.

**5 MR MACRAE:**

Yes, thank you, Sir. They're divided into two issues relating to the maps that are part of MBL's case and several of the maps and that in respect of the first appendix 4 to the proposed conditions of consent is clearly appreciated now, Sir, although it wasn't earlier I have to say, is unsatisfactory, does not form a  
 10 satisfactory basis for outlining the terms of the proposal, or at least representing the terms of the proposal that MBL is relying on. And so that's the map in particular, Sir, that shows the 25 metre contour as Mr Stubbing explained as being referenced to mean sea level and, as Ms Campbell's cross-examination originally drew attention to, some of the references to the co-ordinates on that  
 15 plan are inconsistent.

Sir, the applicant entirely accepts that mean sea level is not an app way of depicting the 25 metre water depth and of course it's not aligned, as the applicant, as the appellant now realises, which could be used to ensure that  
 20 there was no dredging over the 25 metre closure depth because mean sea – the tide rises I think in (inaudible 12:34:32) Pakiri at least a metre above mean sea level and up to a metre below. So, it's accepted, Sir, that the appropriate measure is, depiction is the 25 metre line to chart datum and as that's approximately 1.74 metres beyond the 25 metre line as depicted by mean sea  
 25 level, it would ensure that no – that dredging does not encroach over the closure depth and, of course, it gives an accurate and referenced basis for ensuring that that line is not exceeded as it were, in the shoreward direction.

1235

**THE COURT: JUDGE SMITH**

30 Just before we move on, I want to ask a question about that which has been concerning me and may be concerning members of the Court. When we granted the temporary consent, of course, we thought we were dealing with chart datum. Because we have been conservative in moving it further out and

that was adopted in the grey area, it does appear to be that no portion of the temporary area is within the 25 metre chart datum. But I do want that confirmed because that is a matter of some importance to myself and I think other members of the Court. And similarly, we want to be assured now in light of

5 what has happened with that, that we are 10 kilometres from the mean highwater mark. I must say, looking at the diagrams that appears to be correct, but you can understand our nervousness now about the documents and I do not want to find that it is two kilometres from the mean highwater springs, which are different, as we know. So I just want, that is all I want to say about that and

10 I am pretty confident that the answer to both of those questions is more than 25 metres from chart datum and that there is two kilometres from the mean highwater mark. But I think we want some reassurance on that because we granted the temporary consent on that basis and if it is wrong we want to re-call it.

15 **MR MACRAE:**

Of course, Sir.

**THE COURT: JUDGE SMITH**

But I am, I have got to say, my – I will just check with Commissioner Howie because I think he has been looking at the same issue. It does look to me as

20 though they are beyond those two figures. Commissioner, have you any reason to think there is a problem there?

**THE COURT: COMMISSIONER HOWIE**

No, I am in tune with what you are saying Sir.

**THE COURT: JUDGE SMITH**

25 Yes. So we are pretty confident, it is just a question of being reassured, if I can put it that way, that those various datum points, sorry what are they called, the GPS points are correctly beyond that and the lines connecting them are too. But I must say that we do not, at this stage we have no cause for concern but we just want to check. So that is all I wanted to add to that comment and we

can move to your next issue unless there was something further you wanted to say on the same issue.

**MR MACRAE:**

Well there is Sir. First of all Sir, I am assured that, no I am instructed, that your  
 5 confidence is well placed and that there is no impact at all on the temporary  
 consent area. There is, however, Sir a marginal impact on the inner boundary  
 of the proposed consent area. Normally significant impact, well perhaps  
 significant is an overstatement. The greatest impact is oppose Te Aria Point,  
 but that is well at all points, the 25 metre chart datum line contour is well within  
 10 two kilometres and is well clear of the temporary consent area. However Sir,  
 having said that, those are my instructions, I haven't seen the maps yet. There  
 has been an urgent attempt to convert them and ensure that they are right. So  
 dealing first with appendix 4, that has involved input from Mr Stubbing who, by  
 reference to the last input datum point, has identified to the extent of the data  
 15 available, there are one or two gaps in the line Sir and you will see those. But  
 has identified where chart datum of 25 metres is. Then secondly, by research  
 is Mr West who, having received Mr Stubbing's map, will superimpose or has  
 been asked to superimpose the worst of the features on, shown in appendix 4  
 on that map. And then to correct the coordinates in association with Mr, with  
 20 information provided by Mr Stubbing. Now Sir to produce that map properly  
 would require the input through witnesses unless it's accepted by consent,  
 would of course require some evidence, leave to produce it and some evidence  
 from Mr Stubbing and Mr West, if the provenance of the map were to be further  
 questioned. So my proposal Sir is to circulate the map at the earliest possible  
 25 opportunity, I hope by tonight, ask whether there's any objection to it and if there  
 is to ask for leave to produce the map and if necessary recall Mr Stubbing and  
 Mr West to address what concerns there may be by the Court or other counsel.  
 1240

**THE COURT: JUDGE SMITH**

30 I think what you're suggesting is sensible. We may leave any such application  
 to a later point because there's another issue I want to raise with you given the  
 way the case has come and I appreciate this is a secondary argument to many

of the parties or the parties entirely but it does appear to me, and I haven't had a chance to talk to the rest of the Court yet, that we are now going to require an on-the-water visit which was always contemplated, if you recall. But I suspect we're going to want some form of GPS, accurate GPS system given that you

5 now tell us AIS isn't, which I find surprising, but nevertheless, we need an accurate GPS system to align ourselves with the co-ordinates and also if we feel, find some other co-ordinates which appear to us to be more appropriate. Now, that means we either need somebody who can operate a proper GPS piece of equipment or it's a piece of equipment that our in-house salty dog can

10 operate and check. So, the other question I asked myself and I haven't had a chance to ask the others, is whether or not we need some form of range fibre to try and identify, as best we can, the mean highwater mark and therefore understand how far we are from the shore at any point in time. Obviously, just as a casual boatie, I thought things like depth sounders gave you that

15 information and GPS units that are on almost every vessel nowadays were accurate. I'm quite surprised to hear that they can be so inaccurate but, anyway, we'll need something that we can be satisfied is accurate for our purposes and that's within half a metre or so, which I'd always thought GPS units were so there we are, it just shows how far away I am from the real world.

20 So that's my only comment. I think we're going to have to have a site visit, we'll probably want to combine that with seeing the *William Fraser* in operation just so we understand how it operates on the ground but that will mean another vessel that we can travel alongside and don't waste the time of the dredge while we work out where we are and what's happening, what the GPS points are. So

25 I'm assuming there must be some vessel available from Mangawhai or from Omaha that can get to the site in reasonable time.

**MR MACRAE:**

I think MBL have such a vessel, Sir. And of course the offer to the Court that was made earlier was an open offer and I appreciate that the exact purposes

30 for which it's now been accepted have differed a little from what was envisaged at the time but of course the appellant will do everything it can to solicitate that process.

**THE COURT: JUDGE SMITH**

Well I'm assuming we would try and choose a good day but that we may transfer from our – I'll call it the survey vessel – but what I mean by that is our vessel to look at things to the *William Fraser* so we can see it in action on board, if that's possible, we don't know. I'm assuming it will be somewhat easier than last time I was lurching from a 2,800 TEU carrier from the pilot vessel in about one and a half metre swell. So we will need to choose the right day but assuming that can be done. Obviously, my thinking, which I haven't again discussed with the Court so this is the first time they're hearing this as well, that we might try and do that after we've had the marae visit because we'll be up that way anyway and if we had another day up there I don't know if it would cause any particular problems. So, tentatively, we might be looking at doing that on the 23<sup>rd</sup> of August. Failing that, we may have to try and find another time after but, because of this issue about the maps and things it would be more helpful if we did it before the hearing end, I think, rather than coming back to the parties and asking for further information. So, I'll ask for the Court's comments later but I think, firstly, we should let you respond to that and then move to the next issue. Are you content with that as just a probable at this stage and we can look at that in detail later?

20 **MR MACRAE:**

Absolutely, Sir.

1245

**THE COURT: JUDGE SMITH TO MR MACRAE**

Q. So where would you like to go to next, Mr MacRae?

25 A. Just to finish on that issue, Sir. There are some other maps which have been produced which have been produced which having been sourced, at least so far as co-ordinates are concerned, from appendix 4 of the proposed conditions, have inconsistent or to a very small degree a matter of decimal – I think two decimal points, some inconsistencies in the co-ordinates shown on those maps. I won't specify exactly what they are at the moment, Sir, if you don't mind because until I see the maps and know

30

where those inconsistencies lie, I don't know, but it may well be appropriate to produce corrected copies of those maps too.

Q. Well I think again the idea is to produce them and circulate them and we can then see if there's an issue in due course.

5 A. Yes, yes. Absolutely Sir. Sir I'd like to go to another map, which I've just called "the distance map" and that's the map that, as yourself and particularly I think Commissioner Howie mentioned, has no tolerance because the preparer of the map is not acknowledged and it doesn't have a title. Now Mr Todd was unable to help the Court to any extent so Sir,  
10 the one that I'm talking about is CB2.

Q. Yes the one with the large sort of brownish square for the application area. Yes so I've been spending a bit of time pouring over that, as I suspect Commissioner Howie and the other members of the Court too, to try and understand where the distances are calculated from and how it's  
15 scaled. I won't go into it but I've been sitting there quietly trying to scale things off, so it's probably better that I don't worry my head about it at the moment.

A. Well it might be, Sir, because I accept that a copy with proper indications of attribution, who drew it, the date, and all the usual things that should  
20 have been on the plan, is produced, and that work, Sir, was in fact Jacob's work, Mr Todd unfortunately (inaudible 12:47:13) Jacobs due to pressure of time, and that is what has infected, if I can use the word, in that sense, this process that was really a rush after the temporary consent and too many cooks involved which has led to the confusion and errors, they are  
25 errors Sir –

Q. Again my –

A. – and Mr Todd –

Q. – my over impulsive brain hasn't seen any major faults with its scaling at the moment, assuming it is measured –

30 A. I don't think there are any Sir.

Q. – from the mean high water mark which it appears to be based upon the mean high water mark, although that isn't stated but if it is, it appears to be around about correct, so that just needs to be checked, but the scaling



doesn't appear to be wrong, if I can put it that way, so it's (inaudible 12:48:04) –

A. (inaudible 12:48:07) yes, yes. But I think in fairness to the other parties, and the Court, a replacement copy is needed and it will be Jacobs who  
5 can produce that and Mr Todd is absent Sir, for some weeks from New Zealand I mean, and Ms Kate McDonald who is his assistant, the assistant he referred to will check in all respects and prepare the replacement map, and she would be available (inaudible 12:48:41) –

Q. Again if that could be produced as soon as possible and circulated  
10 because if you, you realise Mr van Mierlo is starting next week and his witnesses are going to no doubt have prepared on the basis of separation distances and the matters of this sort, although as you know they oppose the application generally, so I think the sooner we can have that circulated the better, if it doesn't differ significantly from the existing, it may be that  
15 the parties don't have any trouble, but I don't want to make any supposition as to how they may react, at this point in time. So that's fine, if you could include (inaudible 12:49:18) –

A. Yes so I'm hoping to have that map tonight Sir.

Q. Yes thank you. So where would you like to move to next?

20 A. Well Sir there are two matters of submission that are outstanding –

#### **THE COURT: SPECIAL ADVISOR HOWIE**

Excuse me a moment, just while you're on that map. On the map that you're going to reproduce, is there any line on it which I think is the 25 metre lines, is that right?

#### **25 THE COURT: JUDGE SMITH**

I got the impression it was the old consent but it doesn't seem to follow that line either. Perhaps it will be useful to know what that line is.

1250

#### **THE COURT: SPECIAL ADVISOR HOWIE**

30 Well I thought that and also that it's relevant relative to the chart datum, the new location of that line.

**THE COURT: JUDGE SMITH**

I'm not sure. I agree with you, Commissioner Howie, I thought it was the original offshore consent area but the inflexion at the northern end tends to put paid to that argument.

**5 MR MACRAE:**

Thank you for the point, Mr Howie. My understanding is that that map shows the exclusion area within the boundaries of the original area consented. So that area was excluded because of the – it's either that or areas 1 and 2 and –

**THE COURT: JUDGE SMITH**

10 I thought we were talking about – can I check with Commissioner Howie, I have to take off the background to get you to be able to see. I thought the red line is the one that Commissioner Howie's referred to which is shown on this map, you can see there's a long red line right from north to south so we're not sure what that is.

**15 MR MACRAE:**

So as I understand it, Sir, and the reason that it's not and it should have been, is not in the legend, as I understand it, it's the two kilometre line, two kilometre from mean highwater mark.

**THE COURT: JUDGE SMITH**

20 Thank you for that. Perhaps if that could be clarified it would help us.

**THE COURT: SPECIAL ADVISOR HOWIE**

I'm not so sure about that, Mr MacRae. If you have a look at some of the distances from the high water mark out to that red line it varies a bit, 1960, 1950 and so on. It seemed more to me like a contour line rather than that distance  
25 line from the coast.

**MR MACRAE:**

It was my mistake in hazarding an answer to your Honour and Mr Howie. I shouldn't have done so. I should wait until I know and of course that will be made clear.

**5 THE COURT: JUDGE SMITH**

If they could specifically review that issue, I think, is the point we would like because it is a bit confusing what it is.

**THE COURT: JUDGE SMITH TO MR MACRAE**

10 Q. Now carry on, you were moving to your next issue, the first legal issue, I think.

A. Yes, Sir. It's a relatively straightforward one I hope and that is the transfer of the application from Kaipara Limited to the current appellant, McCallum Bros.

15 Q. Can I mention before – just to see if you, I had legal research do some work on that and, sorry, I'll just pull that up. There is a case on point and that's a High Court case which is binding on us which says that essentially, and I'm not commenting my view on whether it's right or wrong, says that the parties need only advise the consent authority for a change of name so that seems to be the ruling decision. Can I just get  
20 these citation for that in case anyone wants to look at it and argue the point in their submissions. I thought I had marked it. One moment, please.

A. It's Pacific Sun Villas v Bay of Plenty Regional Council, I think, Sir.

25 Q. Yes and can you give the citation as well, Mr MacRae? Just in case anyone wants to look at it?

A. *Pacific Sun Villas Timeshare Resort Body Corporate v Bay of Plenty Regional Council* and the citation is NZ2002 NZRRA 561 and there is another citation – no, that's it.

Q. And I think that's the High Court decision, isn't it?

30 A. It is, Sir. Justice Hansen.

1255

Q. Thank you. So the parties can look at that, that appears to be, as I understand it, the only major case in this area, certainly the only appeal case. It is the same case I have cited; paragraphs 8 to 15 are the ones that are relevant to this issue. So it might have been in a slightly different context. Nevertheless the wording of those paragraphs seems to be sufficiently broad to cover the case. I think that is sufficient for the moment Mr MacRae unless you wanted to say something further and we can see if anyone disagrees and you can re-join in reply at the end if it's necessary.

10 A. Well yes Sir. Just to add that that is the case that the appellant relied on when the consent, when the application was transferred and it was felt prudent to make, advise the council in the form, in a modified form, of the form that the council requires for a transfer of a consent. And so that was done in the same way and the Court might be interested in the documents and if so Sir I can provide those to you.

15 Q. It was a matter raised by the Court. At the moment that case seems to answer the point and if anyone else wants to re-join then we can deal with it in due course. It was not raised by other parties and we have not even got to their openings yet. Your next issue Mr MacRae?

20 A. Yes. That was, of course, section 135 Sir. The next issue is submissions in respect of section 290(a) and Your Honour simply said, I think if I recall Your Honour's statement at the time correctly, is that you will need to deal with this at some time and I am not in the position to deal with it now Your Honour but I can be in the position to deal with it at relatively short notice. I do need to do a little bit more work on it but I am able to deal with that at the Court's convenience.

25 Q. I think in the circumstances the Court raised it because it was not raised by you in opening. The other parties having the chance to discuss the issue and you can address it in reply if it becomes an issue.

30 A. I am happy with that Sir.

Q. I think the point I stated is that, as a matter of law, we must have regard to that decision but we are not bound by it and so if other parties agree with that then the question is, what does having regard to the decision mean. Many of the counsel in front of us here have discussed this issue

with the Court on a number of occasions so we will obviously be looking at that and you can respond in reply it seems to me. Is that the sort of thing –

A. I am entirely happy with that Sir.

5 Q. Thank you. Was that everything?

A. That was everything.

**THE COURT: JUDGE SMITH**

Given that we are nearly at 1 o'clock, would it be easier to reset and take luncheon now and start at 2.15 and call Mr Te Rangi then. What is your feeling  
10 Judge Warren, do you think we should start and carry on or just accept we have had a short break?

**THE COURT: JUDGE WARREN**

Well I wonder whether we could get through the preliminaries now for Mr Te Rangi if there is any, sort of, further evidence-in-chief or deletions from  
15 evidence and then take the break at that point and commence with questioning.

**THE COURT: JUDGE SMITH TO MR MACRAE**

Q. Are you content with that course Mr MacRae because it seems evidently sensible?

A. Yes, it will be very brief Sir, Mr Te Rangi's evidence it is not proposed to  
20 amend or delete it, it can be read just as it is and I think it is a fairly general statement of evidence, which includes particular conclusions at the end but they are easily distinguishable as to what's relevant and what's not given the change in the application. So it will be a matter of simply introducing him, having him refer or rather introduce him and asking him  
25 to read the questions I think.

Q. Well let's just see, if it is that straightforward, you have not got any questions of him at all?

A. Well Sir, I should say that the other reason for preferring an earlier adjournment is that I have not had a chance to talk to Mr Te Rangi since  
30 Mr Thompson's evidence and it might be helpful, well it will be helpful if I could do so. And that may lead to one or two questions that have arisen

that are not expressly covered in his evidence, some matters which have been referred to in cross-examination and, particularly, in Judge Warren's questions are possibly, in some respects, better covered by Mr Te Rangi who has an extensive historical knowledge of the area and I would be keen to identify those with Mr Te Rangi if that is convenient.

**THE COURT: JUDGE SMITH**

Well I think, on that basis, we take the luncheon adjournment now.

**MR POU:**

10 Your Honour, Your Honour.

**THE COURT: JUDGE SMITH TO MR POU**

Q. Yes Mr Pou.

A. Just before you do that, and I make, I just make a few comments, as Ms Campbell, and it goes back to the initial discussion you had with Mr MacRae and the changed position and around that, which arose out of Ms Campbell's cross-examination. She is away at a – she has had a family emergency, that is why I am trying to be Ms Campbell, failing in terms of this, and find myself not really able to respond to any of these. All I am asking Your Honour is that Ms Campbell be able to consider the discussion that has occurred and maintain some, with your leave, to raise any issues that might arise out of that discussion right at the start of it. That's all Your Honour.

Q. So the only thing I think at this stage I've said is, circulate the amended maps to everyone and then that will then lead us to a position where we, I will check whether people have had a chance to consider them. It seems to me it is unlikely we can address that before Monday, but it would be nice to know what the position is before Mr van Mierlo has to call his witnesses, that would be all.

A. Yes.

30 Q. But I do not anticipate having that discussion tomorrow because I am anxious that we conclude the applicant's case with Mr Hay. So if there is

going to be further engagement on the issue before the Court, then it would be Monday I would have thought at the earliest.

5 A. Look, and Your Honour, and it might be that she decides that she can do it during her submissions and those sorts of things. It's just all I wanted to do is I didn't want to see that the issue is closed off in her absence given those were the particular matters she was raising in cross-examination, that's all.

Q. Thank you.

**JUDGE SMITH ADDRESSES COUNSEL/PARTIES – TIMETABLING**

10 (13:02:06)

**COURT ADJOURNS: 1.05 PM**

**COURT RESUMES: 2.10 PM**

**MR MACRAE CALLS**

**TAME TE RANGI (AFFIRMED)**

Q. Mr Te Rangi, have you produced statements of evidence in this case, a  
5 statement of evidence in chief, dated 23<sup>rd</sup> December 2022 and a  
statement of evidence in reply dated 11 May 2023?

A. Yes, I have.

Q. Do you have those statements with you?

A. Yes, I do.

10 **MR MACRAE:**

On reflection or rather as a result of discussion with Mr Te Rangi, I won't have, after discussion, we thought that it would be best not to ask any questions from the outset. It would be better if he answered from those who probably understand the issues better than I and can direct their questions accordingly.

15 **EXAMINATION CONTINUES: MR MACRAE**

Q. Mr Te Rangi, would you answer any questions please?

A. Yes.

**THE COURT: JUDGE SMITH**

Ms Bielby.

20 **MS BIELBY:**

Thank you Sir, it will be Ms McGrath who is with me today who will be asking the questions for the council of Mr Te Rangi.

**CROSS-EXAMINATION: MS MCGRATH**

Q. Tēnā koe, Mr Te Rangi.

25 A. Tēnā koe.

Q. My name is Ms McGrath and I'll be asking you a number of questions on behalf of Auckland Council.

A. Kia ora.



Q. I wanted to start today just by clarifying your role in this proceeding as a witness for MBL just to understand where you fit in the picture. So, on my reading of your evidence, I understand that you are engaged by MBL as a relationship advocate, is that right?

5 A. That's right.

Q. And you've helpfully provided a job description of sorts in your evidence-in-chief. I won't read all of that out, but my understanding is that you advise MBL in relation to Māori cultural issues?

A. Relationship advocacy

10 Q. Relationship –

A. – and advice also includes what you have stated. And it's quite an important distinction that I happen to be a Māori as well.

Q. Yes, of course. And I understand that you also are engaged to represent MBL at council hearings and Environment Court hearings?

15 A. If that were to be the case in question, yes.

Q. And I think you did in fact represent MBL at the council hearing in relation to this application?

A. Yes, I did.

Q. You provided a statement in rebuttal?

20 A. Statement of evidence?

Q. Yes.

A. In reply?

Q. Yes.

A. Dated the 11<sup>th</sup> of May 2023?

25 Q. Yes, thank you, Mr Te Rangi. That's what I'm referring to. And I understand that McCallum Brothers only took over the application clearly late in the piece, so I just wanted to clarify whether you were present for the delivery of the cultural evidence that was presented during the council hearing.

30 A. You'd have to give me some dates and I can confirm whether I was there or not.

Q. So, there were a number of places in which evidence was presented, cultural evidence was presented at the council hearing stage. Do you recall attending Omaha marae to hear cultural evidence?

A. Yes, I do.

Q. You do. And were you present at the Pakiri Hall?

A. Yes, I was.

Q. And the Warkworth presentations as well?

5 A. Some of them I was present, but I'd have to see the dates you're talking about if we're going to be specific.

Q. I understand, but what I'm hearing from you is that you did hear the presentation of the cultural evidence at the council stage?

A. Yes, I did.

10 Q. One thing that on reading your written evidence it was not entirely clear to me was whether you had a particular personal or cultural connection to Pakiri Beach. My understanding is that you don't currently live in or near Pakiri, is that correct?

A. That's exactly right. I live in Mangakāhia. I think I state that somewhere.

15 Q. Yes, you do. Yes, you do. You've said that at the very beginning of your evidence-in-chief. And this is something that I've inferred from Mr Hohneck's evidence so please let me know if I have misunderstood, but am I correct in understanding that you do not whakapapa to Ngāti Manuhiri?

20 A. I don't claim to have any tātai links to Ngāti Manuhiri.

Q. And is that also true for the iwi Ngāti Wai? I understand these relationships are complex.

A. I have to be careful here. I have to be careful here. Are you going, how far back would you like to take this –

25 Q. That's a very good question.

A. – in your logical connection?

Q. Yes, I understand.

A. It is a rather open question. I can give you a tātai that will link me to both Ngāti Wai and Ngāti Manuhiri, but I guess I would answer it this way,  
30 Ms McGrath. I am not currently registered on the membership list of Ngāti Manuhiri or Ngāti Wai. But I am sure I could produce a tātai that would satisfy someone who is interested in the genealogical links of my DNA.

Q. And I think we've heard earlier today that there is a lot of overlap and close relationships between the various groups, so I do appreciate that that it's complex.

5 A. I think I would rather, I take the view that in its right context there is a place for it, but I guess the context of your question is more about: "Are you a member of these two entities that are currently engaged in matters of natural resource management?"

Q. Yes, that's right.

10 A. I would tell you I'm not a member of either of those entities, but I can produce a tātai that will show you how I personally connect to both Ngāti Manuhiri and Ngāti Wai.

15 Q. No, I understand, and I think that's absolutely right. That is the purpose of the question is simply to understand your relationship to Pakiri Beach and where you fit in because we've heard from a lot of people with differing views and different relationships to Pakiri. And I am, I understand this is in your evidence that you do whakapapa to Ngāti Whātua. That's correct, isn't it?

A. That's right. (inaudible 14:19:27) "tātai" is the term I prefer to use.

20 Q. Thank you, that's helpful to understand. And one thing, and I think this may be what you were touching on, Mr Te Rangi, is that you've stated in your evidence that in providing the evidence that you have, you have endeavoured to be a neutral party in the discussion regarding cultural effects, is that right?

25 A. Tried to, yes.

1420 Q. Mr Te Rangi, were you present for the questioning of Mr Thompson who presented evidence towards the end of yesterday and this morning?

A. Yes I have been.

30 Q. I thought that Mr Thompson put this quite well yesterday and I wanted to see if you agreed with the statement that he had made. Mr Thompson said something to the effect that he could only speak for the views of Te Uri O Hau because every iwi or hapū has a different paradigm or a lens through which they see things and also that different groups tikanga practices may differ. Do you agree with that statement?

A. I think that is a statement that is understandable coming from Mr Thompson. If I can provide you with a little bit more context to that. my role was not necessarily to step outside of the kind of relationships that could make the applicants quest for considerations of their proposals to make that pathway a lot clearer in the context of their application for resource consent and the choices made of Te Uri O Hau with its deed of settlement and Ngāti Manuhiri with its deed of settlement constituted the level of advice to MBL or McCallum Brothers Limited at the point where my services were being considered. I think subsequent to that we've seen what had transpired and what had been produced for the court for the Environment Court and in consideration of the three applications in question. I would rather prefer that the court, the Environment Court considers the response as opposed to what I might think of Mr Thompson's response or Mr Hohnneck's response. I think getting the application to consider both Ngāti manuhiri and Te Uri O Hau simply because they've gone through quite a rigorous process to achieve a deed of settlement which sets those two groups at a slightly different level to anyone else that may have an interest in that embayment.

Q. Yes and I think that's something that you do touch on in your evidence is there potentially different roles of the settlement entities to other groups.

A. Yes, I sort of make reference to the journey that Te Uri O Hau had taken and from that I think the nuances of hapū within an iwi that's Te Uri O Hau within Ngāti Whatua sets it at a slightly different level of complexity. So you have Ngāti Whatua with Fisheries rights and interests based on the 1992 Ngāti Wahtua part of the Fisheries settlement, Te Uri O Hau as a hapū has a historical deed of settlement but between the two levels of treaty settlement there has to be consideration of how the iwi interacts with the hapū and how the hapū interacts with the iwi. In the Ngāti Whatua Te Uri O Hau context I speak of that with a certain amount of certainty given my own associations with both of those groups.

Q. Yes. And I think in terms of Te Uri O Hau it's clear that certainly you have quite a deep level of knowledge. I think Mr Thompson touched on that earlier, that he felt that that was an area where you had particular knowledge.

A. I try and retain that as more about understanding who I am as opposed to promoting it as a level of knowledge. So my identity and upbringing has led me to understand certain connections and how that shapes my own identity.

5 1425

Q. Yes, yes, I understand. Turning then to, we've already touched on the fact that you've heard cultural evidence obviously in the context of the council hearing, I understand from your evidence in reply, you provided a statement of evidence in reply in this proceeding and from that I understand that you have read and considered the statements of evidence of Mr Stevens for Te Whānau O Pakiri and Mr Brown for Ngāti Manuhiri, is that correct?

10

A. Mr Tamati Stevens?

Q. Yes.

15

A. And Mr Ringi Brown?

Q. Yes.

A. Yes I have.

Q. And have you also had an opportunity to read the evidence of Ms Wikaira, the written evidence?

20

A. No I haven't.

Q. And what about the evidence of Mr Wayne Greenwood for the Pakiri G Ahu Whenua Trust?

A. No I haven't.

25

Q. That's helpful. I just wanted to clarify that because I noted that your evidence in reply hadn't specifically mentioned those witnesses. So you haven't had opportunity to read their statements. There have also been a number of will-say statements which are not evidence but will say statements that have been provided by a number of other witnesses and they did come in a little bit later in the piece. Have you seen any of those, they're all on behalf of members of the Pakiri G Ahu Whenua Trust?

30

A. No I haven't.

Q. I appreciate you haven't read the evidence Mr Te Rangi but would you accept that in terms of your understanding of Te Whānau O Pakiri as a group and in terms of your understanding of Ngāti Manuhiri, the hapū,

that those entities or those parties have an association with the whenua at Pakiri?

A. I'm a little bit reluctant to accept the definition of those without seeing an actual list.

5 Q. I see. I understand. Perhaps I could re-phrase the question. Mr Tamati Stevens, would you accept that that witness has an association with the whenua at Pakiri?

A. I understood from the submissions he made at the Pakiri Hall that he was providing evidence as someone who had conducted diving surveys and  
10 an exercise where he was making a contribution to the customary harvest of people living in that Pakiri embayment. I didn't understand that Tamati Stevens, the individual, had a tapae connection to Pakiri.

Q. I see. And what about Mr Ringi Brown?

A. Oh I know Ringi Brown is a different case. He, I know Ringi personally  
15 and have always regarded and understand clearly how and what part he plays in all of Ngāti Manuhiri's developments for the last pretty much duration of his life.

Q. Yes.

A. Kia ora.

20 Q. And then in terms of the Pakiri G Ahu Whenua Trust I appreciate you haven't had a chance to read the evidence of the will-say statements, but are you familiar with this group, this entity?

A. I have seen references to the group. But as I said I haven't read anything specific to these hearings from the Pakiri G Ahu Whenua Trust.

25 1430

Q. I see. Mr Te Rangi, I'm not sure if you were here when we, there were some questions asked of Mr Thompson about the evidence of MBL's expert, Stephen Brown. Were you here when those questions were being asked?

30 A. Are you talking about Mr Antony Thompson?

Q. Yes, yes, Mr Antony Thompson.

A. Are you talking about Mr Stephen Brown, the landscape architect?

Q. The landscape architect, not the Te Uri O Hau ecologist, yes.

A. Yes, I was.

Q. So, you'll be aware then that there was a discussion yesterday with Mr Thompson regarding some evidence that Mr Brown, the landscape architect, had given regarding the cultural landscape. Do you recall that discussion?

5 A. Yes, I think I'm familiar with that part of yesterday's deliberations.

Q. Prior to the hearing, had you had an opportunity to read Stephen Brown, the landscape architect's evidence, Mr Te Rangi?

A. Yes, I had.

10 Q. So, you'll be aware then that Mr Brown effectively deferred to Mr Thompson and yourself in relation to potential effects on the cultural landscape?

A. He does make mention of it, yes, in his evidence.

Q. And I think Mr Brown's view is that he didn't feel that he had the relevant expertise, so that's why he deferred to Mr Thompson and yourself.

15 A. As I understand, yes. As I read it as well.

Q. And we heard from Mr Thompson yesterday when he was questioned on this, but he personally did not feel that it was within his expertise to speak to what the cultural landscape looks like for Te Uri O Hau. Were you there when Mr Thompson gave that answer?

20 A. Yes, yes.

Q. I believe however that your evidence does discuss the cultural landscape of Pakiri, doesn't it?

A. Are you referring to anything in particular?

25 Q. Yes. It might be helpful if I take you to where I believe you're discussing the cultural landscape. So, do you have your evidence-in-chief in front of you, Mr Te Rangi?

A. Yes, I do, yes.

Q. So, if I could take you to paragraph 28 and that is, everyone else has referenced that as EB533.

30 A. Paragraph 28, yes.

Q. I'll just give you a moment to have a read over that section and perhaps refresh your memory.

A. Yes.

Q. I don't know that you, you may not specifically use the word "cultural landscape", but would you say that that is a description of the cultural landscape there?

5 A. I, well, I suppose the missing part is that reference in number 28 has come from an intimate knowledge of the Hauraki Gulf. I was part of a working group or reference group that collated information for the sea change, the marine spatial plan for the Hauraki Gulf. So whether paragraph 28 is a cultural landscape statement or not is, I'm not so sure because I would stand by that statement as being an actual indicator of the area or the  
10 space commonly referred to as (inaudible 14:34:44) Tikapa Moana or Hauraki Gulf. Whether that is a cultural landscape or not, I'm not too sure.

1435

Q. Yes, yes, I think certainly at the very least on my reading, it's a description or an explanation of why the Hauraki Gulf, why Te Moana-nui-a-Toi is of  
15 significance to the local mana whenua. Am I reading that correctly?

A. Yes.

Q. But if we return to Mr Thompson's statement and I appreciate that you (inaudible 14:35:27) as Mr Thompson's statement of course, but that every hapū or iwi will see the world through a slightly different lens. Would  
20 you agree that there may be different ways in which people perceive the cultural landscape, or the landscape from different iwi or hapū's perspective?

A. I'd have to agree. I mean I did make a note when this question was being articulated that in terms of architectural practice in this country, the late  
25 Rewi Thompson led a reference to the principles of Māori architecture for the adoption in the professional practice of mainstream architecture in this country. It wasn't till he had passed away that those principles were adopted by the architectural profession in this country and I started to wonder is this the same that's going on in the evolution of landscape  
30 architects as a component of architecture that we've come to understand it in 2023. So yeah, not to complicate things but I do take the point that's been raised, that was raised by Stephen Brown the landscape architect when it comes to the cultural component and if we are talking Māori cultural component, that there are aspects of it that are probably driven



by the professional practice and the society that is seeking to develop best practice or good practice as guidelines for their membership.

Q. Yes and I think, that's right, that it's an evolving field certainly and we've heard from – so far we've only heard from Mr Brown but, that there are different approaches to how those guidelines should be applied. But just turning then to the evidence that I know that, I believe you have considered, Mr Hohneck I believe described, or dedicates a section of his evidence to the cultural landscape from Ngati Manuhiri's perspective and the effects that Ngati Manuhiri says are being experienced on that landscape. Are you familiar with that?

A. I'm familiar with, and I make reference to it into my evidence in reply, about certain sections of Mr Hohneck's evidence around the negative changes occurring at Pakiri Beach. I make reference to that in my evidence in reply at paragraph 8.

Q. Yes and I believe Ms Haddon has done something similar in her evidence, describing the cultural landscape from the perspective of Te Whānau o Pakiri.

A. That's right.

Q. I just want to take you now to some statements that you made in your evidence in reply after considering the evidence that you did of the other witnesses, do you have your evidence in reply in front of you Mr Te Rangi?

A. Yes I do.

Q. May I ask you to please turn to paragraph 14 of that evidence?

A. Yes, that's the conclusion?

Q. Yes that's right, the conclusion, and there you have stated that it is difficult for you to understand or accept the cultural evidence presented by some of the groups who oppose this application.

A. That's right.

1440

Q. And in that same paragraph, you've pointed to the fact, and we've heard this from Mr Thompson as well, that Te Uri o Hau is satisfied that their cultural concerns can be addressed.

A. That's right.

Q. And I think the comment that you've made there is that Te Uri O Hau is satisfied and it's difficult for you to understand why other groups might feel differently?

A. That's right.

5 Q. Would you accept, Mr Te Rangi, that there are groups some of whom are represented here today, that have interests in the whenua that are distinct from those of Te Uri O Hau?

A. Yes.

Q. Sometimes those interests overlap but they are different, aren't they?

10 A. Well, we've come to learn that some of these interests are exclusive, inclusive, shared, sold, traded, rented, and on and on it goes, so what is difficult is that the basis upon which the cultural paradigm is being scrutinised is the driver that I was making reference to here, and the position that Te Uri O Hau have taken was to follow the advice of an  
15 ecological expert, that took them through their processes and they've arrived at their position and Ngati Manuhiri are going through their process and they have arrived at a different point. But I think I say it quite clearly there that's my difficulty, I'm not expressing it as a difficulty of anyone else. It is difficult for me.

20 Q. Yes I think that's very clear and I think you made a similar statement earlier, Mr Te Rangi, that ultimately, as you say, the Court will be the decider in this and we're going to hear from some of these other groups that have different views to those of Te Uri O Hau over the course of this hearing, and I think, would you agree with me that we need to hear from  
25 those groups before we can fully understand their perspectives on the issue?

A. By all means, yes I do.

Q. Thank you, Mr Te Rangi, I have no further questions.

### **CROSS-EXAMINATION: MS BLACK**

30 Q. Tena Koe Mr Te Rangi, I act for the Pakiri G Ahu Whenua Trust that the counsel has been referring to. Pakiri G is located just south of Te Arai Point, so when I talk about the Hokianga and whenua I'm mainly talking

about the owners of Pakiri G and their (inaudible 14:43:41). In your role with MBL did you contact Omaha Marae or the Hokianga?

A. By email in the early attempts to try and facilitate some meeting and I think that arrangement was virtually handed back to MBL themselves to pursue that line of contact with Te Omaha Marae.

Q. Why was it handed back in that way?

A. Well the relationship that had been reset following the acquisition of the Kaipara consent, meant that MBL had the direct association with Ngāti Wai Trust Board and Omaha Marae. My role was more to MBL as opposed to third parties such as Omaha Marae or Ngāti Wai Trust Board.

1445

Q. Do you recall roughly when those emails were sent?

A. I think a bulk of them would have gone certainly prior to the hearings that took place, I would suggest probably the bulk of 2022 as we were working towards the evidence-in-chief, or statements of evidence. Those were sort of completed towards the end of 2022.

Q. My clients say that they hadn't received any contact from you. Just be interesting to follow that up with them. Just before we move –

A. Can I just check. You say your clients. Are they Omaha marae or Pakiri G?

Q. Pakiri G Ahu Whenua Trust is instructing me, but obviously they affiliate closely with Omaha marae and I think I'm right in saying that one of my clients is the Chair of the marae, in other hat that she's wearing obviously. Just before we move to your evidence, can you confirm for me whether the Ngāti Whātua Takutai Moana application encompasses this consent application area?

A. No idea. Are you talking about the coastal marine?

Q. The marine and coastal area application.

A. Sorry, sorry, I couldn't – I suspect it does because my understanding of that application is it runs from Manaia to the mouth of the Okura River on that eastern seaboard, yes.

Q. Does that application include application for customary marine title?

A. My knowledge of it is only really around the 2017 application and, yes, it does as at 2017, but it could have changed.

Q. It's certainly an evolving area.

A. (inaudible 14:47:48).

Q. So just turning now to your evidence-in-chief at 23.

A. Yes.

5 Q. So, towards the end of that you say that sand extraction at Pakiri is able to co-exist with local tangata whenua alongside keeping their Māori cultural values intact. You said to my friend from the council that you'd not read the evidence and will say statements that were filed for the Pakiri G Ahu Whenua Trust, but if you attended the council level hearings you probably won't be surprised to know that they oppose it vehemently. Do you consider it appropriate to substitute your views on the matter for those of the haukāinga?

10 A. I don't, I've made that statement there based on my own understanding, what they've seen and heard and that was made back in December of last year. I do submit that as my evidence-in-chief.

15 Q. So, my question is, is it appropriate to substitute your view for the views of the haukāinga?

1450

20 A. I don't consider it appropriate and my views, as I'm stating there, are following the development of those proposals and as I come to understand in the last two weeks as well that they are also evolving and further changes have been made, so that could well affect the final position in due course.

25 Q. Thank you. Taking you to paragraph 27, and you say that the *William Fraser* is a significant improvement in terms of environmental impact over the vessels it replaced, is that right?

A. That's right.

30 Q. Are you aware that the proposed conditions provide for the use of those replaced vessels or other vessels when the *William Fraser* is unable to operate?

A. No I'm not.

Q. Turning to paragraphs 35 to 40?

A. Yes.

Q. You're talking there obviously about mātauranga Māori.

A. Yes.

Q. Do you agree that mātauranga a hapū also exists?

A. Yes I do agree. In fact my preference is to talk about korero tuku iho and that brings it right down to the individual and their upbringing. The  
 5 problem with this term as I see it is that it is ending up in a domain that is foreign to the individual uri and the place that they have come to know and understand. It marks their own identity and so even if you were to use the term mātauranga hapū and someone is living away from the place that has given them that iconic identity marker it is yet another abstract  
 10 concept. So the choice or the option to use that term is trying to inform the integrity of the process that we're dealing with here.

Q. So are you saying with that answer that the term mātauranga Māori perhaps suggests a degree of interchangeability with mātauranga in te au Māori that that really doesn't exist. Have I understood that right?

A. No. What I'm trying to get to is that knowledge is one thing, understanding is another and the context of the understanding is the critical component of the knowledge. So to establish the understanding place becomes critical. The marker of the identity of the individual becomes critical and it's the subtlety that is perhaps overlooked and what I mean by that is that  
 20 the mātauranga Māori track is very laden on knowledge without necessarily building the same kind of understanding. It's a little bit like with the theory or the concept comes the practice and if you have too much theory and little practice the format is rather questionable.

1455

25 Q. So that more specific knowledge, whether it be mātauranga a hapū or did you call it mātauranga a uri, did I get that right?

A. No I called it korero tuku iho.

Q. You did. That korero tuku iho.

A. (unclear 14:55:29) mātauranga hapū, mine was korero tuku iho, how the  
 30 understanding has been built on the place and the connection of the individual to the place.

Q. So that korero tuku iho is, would you agree, specifically relevant in the rohe of the hapū or the person who carries that mātauranga?

A. I think it is at an individual uri level, Ms Black, that it sort of emanates from there and never able to – I try and rationalise it by thinking across a generation line as opposed to following an empirical line that says from one generation to the next to the next to the next. And it gives you this sort of empirical sense as opposed to trying to connect people and place across a generation.

Q. Okay.

A. And that is the sort of rationalising that goes on in terms of korero toku iho and you find that narrative coming through in terms of chance, papakura, moteatea, these are historical accounts. Then what's behind that is what gives the depth of integrity.

Q. Thank you. I'm going to take you now to your paragraphs 49 and 50 and I'm not entirely sure that I've grasped what you're saying here so my first question really is just to check my understanding and to be corrected. So you're talking there about a contemporary interpretation of mauri and a traditional approach. So in these paragraphs are you saying that a traditional approach is purely spiritual or metaphysical and a contemporary approach incorporates, is more physical, can incorporate western physical interventions. Have I understood that right?

A. What I'm trying to portray there is that with the traditional application it involves a premise, I suppose, based on the connections that come through that same realm that we were discussing earlier about the individual and how they fit into a particular place. So the idea of kaitiakitanga in terms of the natural resource gives its starting place on the connection of the individual to the resource and with that comes a realm of responsibility that goes with that resource so the more value and cultural value placed on the resource the higher the mauri protection mechanisms are going to be. And it not the domain of anyone who may want to just try it out or like it's not the sort of domain of people who may be curious. And if you think about how currently there is a lot of repatriation of our human remains, ancestral human remains that have been brought back and placed with various hapū, iwi, some of the challenges in that process involve those that were pilfered, acquired by stealth, those that were sold and traded and those that were gifted, so I

would suggest that there are three distinct processes to ensure that that repatriation is not just a simple let's take a trip to Te Papa, talk to some official down there and you can gather these remains up and bring them home and put them on your mantelpiece, how do you propose to continue the essence, the life force, the mauri of the (inaudible 15:01:30), the tāonga, the artefact, how do you restore the pathway that would have seen the acquisition of those pieces by some means that perhaps we have no knowledge of. And some of these are starting to present issues that need some serious consideration and it's not a domain where people should go in there uninitiated.

Q. Thank you, that explains that well. In those paragraphs you talk about mitigation, do you accept that mitigation is not always possible?

A. Yes.

Q. So moving to the next paragraphs, at 51 you say damage to mauri has been difficult to assess, at 52 you talk about the local knowledge in relation to mauri and at 54 you talk about tohunga being best placed to assess the state of the mauri and consider remedies and that's, I suppose when I'm thinking about that statement, that's really what you were getting at, in your previous response to me wasn't it?

A. Yes, that's right.

Q. So in terms of the appropriate tohunga, would you accept that it's tohunga who are mana moana and members of the relevant kaitiaki group who are the appropriate tohunga to make that assessment?

A. I think if we're going to – I view the local patriarchy iwi as having a big part in that decision, making that decision, whether they actually conducted themselves or have a big hand in the choice and the selection and the briefing of it, I think it's important that they are connected somehow to that process, because within it is a level of clarification and resolution, if something has been mismanaged or plundered to the extent that it's struggling for its own survival, I think having local influence over remediation and rehabilitation and to that extent maybe some kind of restoration, to revive it all, there's an opportunity there.

Q. So when you say they'd need to be connected to it, they'd need to be reasonably central wouldn't they, if they are the kaitiaki?

A. Yes.

1505

Q. So I think you've sort of partly answered my next couple of questions but I am going to ask them just for pinpoint clarity. At 53 you say that  
5 damaged mauri can be restored and you accept at 55, don't you, that mauri can be destroyed beyond metaphysical repair?

A. Yes.

Q. So do you accept that the kaitiaki of an area are obligated to do their best to prevent further damaging activities before the damage or damages  
10 reach the point of destruction?

A. I guess the option should always be tested to ensure that you have a harmonised sort of balanced approach to it all and part of the difficulty that I was drawing in my conclusions was around that, how can we get the kaitiaki at sort of the ends of the continuum as it were, a little closer  
15 to the middle, to understand that there are options to resolve what has been seen in some cases as a transgression of the (inaudible 15:07:03).

Q. Okay, I think I'll probably come back to that point or points close to it when we get to your evidence in reply. Turning to 55, you say that if mauri is affected traditional methods are suitable to restore it. That there is no  
20 evidence suggesting the presence of "foreign activities" would not allow the mauri to be re-established and you give rahui as an example of a common ritual solution. Could you just explain to me what you mean by "foreign" do you mean tauiwi or something else?

A. Well foreign in terms of anything invasive, you know, apart from what has normally gone on there, so I suppose foreign is probably the – on  
25 reflection is given what we've come to learn about (inaudible 15:08:31), maybe invasive would have been a better term than foreign. Something starts off like with the intention of providing the beauty of gorse, as a hedging plant, I don't know whether the people of Wellington would  
30 appreciate that definition now, but it's quite stunning when you going down Transmission Gully to see the sea of yellow and I think that really, on reflection, is probably my poor choice of word. English is my second language.



Q. Yes, okay. Well that's a much bigger answer than I was expecting, I have to say. Because you've talked about activities rather than objects, for lack of a better word, and (inaudible 15:09:55) is a thing, not an activity, so –

1510

5 A. I guess, Ms Black, the point about that is the efforts to get on top of that are looking at the kind of sea-based activities that we get into. How did it arrive there? On the hulls of vehicles. What's the difference between a recreational one and a commercial fishing boat? That's really the context of that reply.

10 Q. That gives me a better understanding, thank you. So rāhui as a ritual solution can have quite physical results, can't it? Regeneration of marine life?

A. (no audible answer 15:10:55).

Q. At 58.

15 A. Yes.

Q. You talk about the use of the *William Fraser* and the conditions of consent sustaining life in that area and you say: "This must be a sound basis for key regard to any conflict with Māori cultural values in respect of the consent application area." My question, if you had read the will say  
20 statements and the evidence associated with my client's case was going to be...

## THE COURT ADDRESSES COUNSEL – RE-ESTABLISHING CONNECTION

(15:13:29)

### THE COURT: JUDGE SMITH

25 Anyway, we are started again so we'd finished the sort of invasive question and you said that was a surprising answer and I think I lost any focus after that, as soon as we clicked out so it might be useful if you could start the next question again.

**MS BLACK:**

I'm just looking at the question because Mr Te Rangi hasn't read the evidence or the will-say statements so I might leave it there and possibly come back to it at the end.

**5 CROSS-EXAMINATION CONTINUES: MS BLACK**

Q. So, Mr Te Rangi, I'll take you to paragraph 60 of your evidence-in-chief?

A. Kia ora.

Q. And you say there that meaningful constructive engagement with the tangata whenua is the key principle by which the benefits have validated mātauranga can be applied to the extraction activity. So, for the mana whenua why is engagement with the applicant necessary for them to apply their mātauranga, can't they simply apply it and advise the applicant that there's no need to meet because any abstraction is opposed?

A. I guess that point at paragraph 60 was trying to continue with what had been started under the guidance and leadership of the late Laly Haddon and what he saw as an option and an opportunity for the people of Pakiri and the continuity of it was trying to bring it into the new realm or the new context, new technology, new innovation, new options, new opportunities. That's not to sort of say try and achieve a harmonised response with parties in isolation from one another. And so my role in terms of a relationship advice to the applicant was to start with that approach of engaging with Te Uri O Hau and Ngāti Manuhiri as two entities that had gone through a rigorous process to arrive at a deed of settlement with the Crown and its various arms. That's the sort of idea of trying to build on what had been achieved in that time where things had got to. It seemed that sand extraction were at some kind of cross-roads, if you like, and that idea there was to say well is there an opportunity to bring those parties together and the starting point was engagement of those two entities (inaudible 15:19:37) achieved a deed of settlement each and focused on the area that the MBL applications were focused on.

1520

Q. So, continuing with that theme, at paragraph 61 you talk about MBL stepping up efforts to engage and do I understand that you're previous answer relates to that stepping up as well?

A. Yes.

5 Q. So in terms of the purpose of that engagement have the Hokianga advised during such an engagement if such had happened, that the extraction was opposed because the effects were more than minor and couldn't be voided, remedied or mitigated and your understanding was a possible response that MBL would a possible stepping up response by  
10 MBL include withdrawing the appeal and surrendering the consent?

A. I hadn't gone down that pathway, Ms Black, the idea and opportunity was to present the proposal with the idea of engaging both of those two entities in the way the resource consent proposal could be worked and remembering it had been staged over three distinct applications and there  
15 were also some adjustments based of the historical resource consent and the ownership of the consents had changed as well and it seemed the opportunity to submit all of that refreshed information to a panel for consideration was the quest, wasn't as though my role was to try and arrive at a conclusion that said this is going to be all too hard don't bother  
20 applying.

Q. The reason I'm asking about the purpose is because the impression I have from your rely and from things Mr McCallum said last week is that the purpose of the engagement was really to get the Hokianga to shift their position, it wasn't about MBL agreeing to the option of withdrawing  
25 the appeal and surrendering the consent. It was about making the consent happen not understanding why it shouldn't, would you agree with that?

A. Well I think there is certainly as far as the options that we were exploring about getting those two parties to the table was about the continuity and  
30 the continuation of and extraction. Now whether that constituted a reduction in opposition or an increase in support, you know, my view was to do as much as we could to get both of those entities connected with MBL and their applications and to see what could work and what couldn't. So I wasn't in a position and have never been in the position to decide

the wider impact, if you like, of the successor otherwise of the applications. My role was really around the relationships and how MBL could be conducting its sand extraction proposals and with that there is some tweaking of the options inshore, midshore, offshore in terms of locality, the opportunity to alter, if you like, the cells at which extraction had been conducted. A lot of emphasis was to go onto the reporting and the mechanism that MBL would be using in the monitoring of the areas that had been included in their application. And all the way through that it, whether that constituted those that were opposing the application withdrawing their opposition or not, I couldn't and, you know, that wasn't my role. Mine was simply to try and facilitate it and activate an engagement between MBL as the applicant, Te Uri O Hau on one side and Ngāti Manuhiri on the other.

Q. Moving to paragraph 66, you talk there about the involvement of iwi and hapū and a community liaison group allowing the exercise and practice of kaitiakitanga. I'm quite interested in this because my experience of community liaison groups is that they are multiple voices. Do you accept that participation by mana whenua in a community liaison group puts them in the position of being just one voice in amongst community voices, other community voices?

A. I have to say it really depends on purpose and function of the liaison group or the reference group, and I've used the experience and the approach that has been taken in the work of Watercare in the construction of the interceptor. So cultural outcomes formed part of a whole range of management plans and what we, I mean what was established there was a reference group that was predicated on the relationship between Watercare and the 19 entities of what was the area of operation across Tāmaki Makaurau. So that group forms the nucleus. From there emerged the cultural outcomes group that has a direct involvement in the cultural management plan, the archaeological management plan and a number of other management plans to do with the overall project. I guess the distinction there is the involvement of iwi and hapū and the community liaison group is really the grouping, if you like, that Auckland Council tends to associate with. So, these community liaison groups that tried to cover

off where the stormwater division of Auckland Council, Healthy Waters, interacts with the drinking, waste and trade waste arm of Auckland Council, Watercare, and then you have the various forms of – some of these are transitional, Ms Black. Some of these groups are ratepayer-driven citizen groups who have transferred or transitioned into community liaison groups, so then those range of purposes and then tagged in with them is representation from those 19 mana whenua entities. But I guess if you were to assess it based on numbers, it would appear like iwi one voice and the line up of those with community interests across those groups that I've described already. But the intent in looking across the cultural liaison agreements is really one that – paragraph 66 is not the sort of criteria, if you like, for setting one of those up. It raises points that should be considered in the creation of such an option, such a reference group. I hope that's helpful. Kia ora.

15 **JUDGE SMITH ADDRESSES MS BLACK – TIMING (15:31:10)**

**COURT ADJOURNS: 3.32 PM**

**COURT RESUMES: 4.01 PM**

**THE COURT: JUDGE SMITH**

Ms Black, you had another line of questions to come?

5 **MS BLACK:**

I did Sir, but just before we go there, I spoke with Ms Campbell over the break. In addition to her family emergency she has been diagnosed with acute appendicitis and subject to a surgical assessment she is going to be in surgery tonight or tomorrow. So I understand she is going to send her questions for  
10 Mr Hay to Mr Pou and Ms Ulrich, that Mr Williams will present the legal case for Friends of Pakiri next week, Ms Campbell will have to present her legal submissions at a later date.

**THE COURT: JUDGE SMITH**

Yes I'm shocked to hear that and I'm very sad to hear it. If you can pass on our  
15 best wishes to her and hope that she makes a speedy recovery and the family emergency, which I assume is children of some sort, also abates and I'm sad to hear that. Well that's very reasonable of her, if on reflection to wants to apply for an adjournment of course it does seem to me that that's another matter, but I think we can proceed at least in the short-term given that she'd already  
20 instructed Ms Ulrich and you said Mr Williams will now appear will he, for Ms Campbell?

**MS BLACK:**

I believe so. In terms of leading the evidence yes Sir.

25 **THE COURT: JUDGE SMITH**

Oh right, that's a little way away though isn't it?

**MS BLACK:**

I understood it was next week but I could be wrong about that.

**THE COURT: JUDGE SMITH**

Yes you're right, it is next week. Whether there's anything you might be able to do to help with that. Oh no because you're on the marae of course so that can't be done.

5

**MS BLACK:**

That's right. I have made the offer to her Sir and I'm sure everybody will step up in any way they can.

**THE COURT: JUDGE SMITH**

10 Yes if there's any way, I mean it does seem to me that there might be the prospect of Mr Littlejohn assisting in some way.

**MS BLACK:**

Yes I think the issue is that she hasn't written the legal submissions yet and  
15 that's where the delay is going to –

**THE COURT: JUDGE SMITH**

Yes well that's what I'm saying, if we can find a way to put her into the August dates, after the marae, that would be helpful. Look I can't see an immediate solution but Mr Littlejohn is well experienced in these issues and he may be  
20 able to assist. We've already had the discussion with Ms Bielby so I don't really want to revisit that but we do have submissions from Te Arai Group and the EDS and that might be possible. I don't think Ms Downing can help us because she's still overseas I think into next week. So the only people I could see who could possibly help would be Mr Littlejohn, EDS and Te Arai, and the other one  
25 of course is Pakiri Te Whānau and I'm not sure what was happening with that, that was Ms Morrison-Shaw wasn't it?

**MS BLACK:**

Yes they're presenting on the marae as well.

**THE COURT: JUDGE SMITH**

Yes but they might be prepared to do their opening prior, if you follow me. If we could have, if we had the case for Mr Littlejohn, because he's got two witnesses, I think that'll probably take with presentation a day and if we have  
5 then three sets of submissions that would probably be another day, if you follow me, that's three days on top of the Director-General who says two to three days, my estimate's around two, just perhaps a bit over. It all depends a little – if this evidence drags into next week, then it's more and more likely that we wouldn't need to go beyond those people. These are just suggestions that I'm hoping  
10 somebody will take up with the relevant people in the break, to try and keep things moving and give Ms Campbell a proper chance to recover and present her case in an ordered way.

**MS BLACK:**

15 I can do that Sir.

**THE COURT: JUDGE SMITH**

What I'm trying to point out is the Court's more than happy to accommodate it if the parties can find a way to do so.

20 **MS BLACK:**

Thank you Sir, and I'll pass your good wishes on to Ms Campbell.

**THE COURT:**

Yes and thank you for keeping us informed too, I appreciate that. So I know you're having to change gears now Ms Black, but if we could go back to your  
25 questions.

**MS BLACK:**

Certainly Sir, I've cut them down to three and I'm hoping at least one is a yes, no answer.



**CROSS-EXAMINATION CONTINUES: MS BLACK**

Q. Mr Te Rangi, at paragraph 67, you talk about Ngati Manuhiri having a Takutai Moana application, Marine and Coastal area application. Are you aware that the owners of Pakiri G and a number of other blocks also have a Takutai Moana application that covers the consent application area?

A. I couldn't confirm exactly or precisely Ms Black, I am aware at one stage there were 46 applications in that area I made reference to from a Ngāti Whātua perspective, I think there were probably five or six applications in that Pakiri Mahurangi area right out to (inaudible 16:06:18) as well.

Q. Thank you. So turning to paragraphs 94 to 101 and 103, forgive me I'm also scrolling. So those paragraphs deal with the agreement between Ngāti Wai and MBL and the involvement of Omaha Marae, do you have personal experience of these matters, why they came to be and how they functioned in practice?

A. Only to the extent of my involvement with the applications, so post-June 2021. And then of course the two meetings that took place with Ngāti Wai Trust Board representatives and MBL.

Q. Final question, just one question from your evidence in reply, if I could take you to paragraph 11 of that document.

A. Yes.

Q. You say in there that if there's no adverse effect on the environment then it follows that there will be less effects on cultural values associated with those environments. Would you accept that being prevented for 80 years from carrying out kaitiakitanga obligations effectively over an area is a cultural effect unrelated to physical effects on the environment?

A. I don't think I'm qualified to make that judgement. I'm not sure what your definition of prevention means. If there's no active arrangement, is that a prevention or is that, is that (inaudible 16:08:51) -

Q. So in terms of – sorry. Carry on.

A. No, kei te pai.

Q. I'm thinking in terms of, particularly in terms of input into environmental management under what's now the RMA. Actually let me withdraw that last statement, I'm not entirely sure that is what I mean. Thank you, Mr Te Rangi. Kia Ora (inaudible 16:09:26) korero. I've really enjoyed the

discussion that we've had this afternoon and it's been a real pleasure.

Kia Ora.

1610

**CROSS-EXAMINATION: MS WIKAIRA**

5 Q. Tena koe Mr Te Rangi.

A. Tena koe.

Q. You said you attended the hearings at the Omaha Marae and the Pakiri Hall?

A. Yes.

10 Q. So you would have heard the trauma this 80 plus years of sand mining has caused on the Hokianga?

A. Yes, I heard those references.

Q. You said that you did not read the will-say statements of the Hokianga or my evidence. As the most affected of all the applicants in this proceeding and as your role for MBL and relationship advocate why did you not read them?

15 A. I did not have access to the will-say statements.

Q. And my evidence?

A. I didn't, I didn't have access to it, I didn't read it.

20 Q. And just to confirm, from Ms Black's earlier question, did you reach out to the Omaha marae?

A. It wasn't my role to reach out and overstep the applicant's MBL. The agreement with Omaha marae and Ngāti Wai Trust Board was a written agreement between McCallum Bros Limited, Ngāti Wai Trust Board and by implication for Omaha marae. So they, in fact their operations –

25 Q. Okay so, no, you didn't reach out?

A. It was not my place, Ms Wikaira.

Q. So, I'm just going to take that as a no, you didn't, yes or no?

A. No, I didn't.

30 Q. Thank you, Mr Te Rangi.

**CROSS-EXAMINATION: MS URLICH**

Q. Tēnā koe Mr Te Rangi.

A. Tēnā koe.

Q. My name's Ms Ulrich and I have some questions for you on behalf of Ngāti Manuhiri and Te Whānau Pakiri and when I've worked out my questions I'll hand over to Mr Pou, here. I'd like to start by dialling right back to the scope of your role and I'm interested in understanding or having a better understanding of the advisory component, of the role that you have for MBL. So, that part of your role involves advising MBL on cultural matters, does it?

A. That is a part of the function associated with the relationship component.

Q. So would you agree that mātauranga, and here I use mātauranga in the sense of customary knowledge that a hapū has in terms of their relationship and practices in the area to which they are whakapapad to so would you agree that mātauranga is important and relevant to processes such as this?

A. I'd have to qualify what I've said earlier in a response that also contained understanding. So knowledge is one thing, understanding is another. It's a little bit like all theory and no practice so the application of the concept or the theory is critical. And I guess the systems that they're trying to promote here is striking a balance or harmonising or aligning knowledge with understanding.

1615

Q. So would you agree that knowledge, understanding and practice in accord with the particular hapū who are, in our case, for Ngāti Manuhiri is a relevant consideration in processes such as this?

A. I preface the scope of the role as aligning the application to two distinct groups who had been through a rigorous process to achieve a deed of settlement with the Crown, Te Uri O Hau and Ngāti Manuhiri. So we are looking to build, if you like, the kind of relationships that takes this proposal, or this application, forward.

Q. I think we may be talking at cross purposes. I'm not referring to mandate here, I'm talking about tikanga and how that fits or whether you would agree that tikanga is relevant when you consider dredging or an application to undertake dredging in Ngāti Manuhiri, Te Uri O Hau rohe?

A. As I've said, the consideration was for two groups that had tested, if you like, all of their processes with the Crown, with the area, and I don't think it, I'm trying to stay away from the question of mandate, myself.

Q. I'm definitely not talking about mandate here.

5 A. Definitely not.

Q. No, I'm actually just talking about tikanga practices, knowledge, understanding and how that might be relevant. I'm wondering if you consider it is relevant in this process. So perhaps if I give an example. You've read Mr Hohneck's evidence, haven't you?

10 A. Yes.

Q. So he discusses the depletion of kaimoana and their inability to (inaudible 16:18:10) in relation to harvesting kaimoana because stock are depleted, isn't he?

A. Yes.

15 Q. So it's that kind of understanding and process and knowledge that I'm trying to understand whether you consider it to be relevant to this application for dredging?

A. It is relevant.

20 Q. And would you agree that that understanding factors in knowledge still in the same context is best provided by Ngāti Manuhiri and Te Uri O Hau though we're not speaking for them at this time?

A. I was trying to give you that very context by making reference to two groups who had gone through a rigorous process to achieve a deed of settlement.

25 Q. So perhaps if I move that question away from particular hapū and reframe it or do you agree that hapū (inaudible 16:19:41) are best placed to speak to their understanding, knowledge and practices as they pertain to tikanga?

1620

30 A. Well, Ms Ulrich, I can attest to this scenario. If there is not an entity that is sufficiently structured to carry the aspirations of their uri, then you're on a hiding to nothing. Unless there is some structure and some form of organisation that gives certainty to the uri and you really are setting yourselves up for a popularity contest.

Q. So, if we go with your example for the purposes of this question, who or which entities would be best placed to speak to the knowledge, understanding and practices that apply to the embayments of Pakiri and Mangawhai?

5 A. The two entities that I made reference to at the start of my answer, Ngāti Manuhiri and Te Uri O Hau.

Q. So just moving back to, or revisiting the initial kind of vein of this question which relates to the scope of your role as it relates to advising MBL, did you at any time give advice to MBL witnesses as to how they might engage with the entities or tangata whenua that have mātauranga that's relevant to this application?

10

A. Yes, there were times I did engage with MBL witnesses.

Q. And did you advise them on how they might obtain mātauranga, information about understanding practices and knowledge?

15 A. I'm unsure if you're asking about the complete list of all of MBL's witnesses, each one of those specifically, or are you asking about a general position that I could have taken with that? I did not engage with each and every one of those witnesses that MBL have listed.

Q. Which witnesses did you engage with?

20 A. Principally, Callum McCallum.

Q. And how about David Thompson, the avifauna witness?

A. Not directly.

Q. And coastal processes, Derek Todd?

A. We did have our discussions, but not in terms of preparation of his evidence-in-chief.

25

Q. Did any of those discussions relate to how he might consider or look to understand cultural values at play?

A. Not as far as I was concerned.

Q. How about the landscape expert? Is it Mr Brown?

30 A. Are you talking about Stephen Brown, the landscape architect?

Q. Yes.

A. No, I didn't have any discussion with him.

Q. And Dr Clement, the marine ecologist?

A. No, no engagement.

Q. No engagement. And what about Mr West? So, he's the kai moana man. Well, ecology (inaudible 16:24:28).

A. Marine ecology?

Q. I think so, yes.

5 A. I didn't have any direct engagement with him. I've read his evidence.

### THE COURT: JUDGE WARREN

10 Q. Ms Ulrich, may I ask a question for fear that we might all forget the context come tomorrow. Just going back to the line of questioning put to Mr Te Rangi in regards to the two tribal entities. Well firstly, tēnā koe, Tame.

A. Tēnā koe.

15 Q. (Māori 16:25:08). Is it your evidence, Mr Te Rangi, that based on your experience and knowledge that these two settlement entities are well placed to make a judgement call on whether they support or oppose an application such as this?

A. Tēnā koe, your Honour, that is certainly the case and the opportunity to do so manifested itself in the kind of agreement that MBL, McCallum Bros, have ended up with to engage my services.

20 Q. There's no reason to suggest that Ngāti Manuhiri, for example, don't have the personnel, the resources and the knowledge and went through a robust process that I think you described in a treaty settlement context but in a resource management context to make a considered decision on the application. You've got no reason to doubt they had that ability?

A. That's correct, your Honour.

25 Q. And what we've got here is both groups having that ability, one saying conditional support and the other saying absolute opposition?

A. That is correct, your Honour.

Q. But we can't impeach the processes they went through, they've simply landed on a different outcome for the reasons no doubt we'll hear shortly?

30 A. Tēnā koe your Honour, that is correct.

Q. And I'll come back to that tomorrow in terms of then how do we resolve that because as you will know, Mr Te Rangi, that's not an uncommon situation?

A. Tēnā koe, Tēnā koe. Thank you, your Honour.

**CROSS-EXAMINATION CONTINUES: MS URLICH**

Q. The only questions I had were like more to your variance and background so I see that you have extensive experience in treaty settlement negotiations, is that right?

5 A. Yes, I have experiences in treaty negotiations, not so much in settlements. There's only been five of those.

Q. Would you agree that the output of those negotiations, so agreed historical accounts, statements of association, statutory  
10 acknowledgements are important considerations including, well firstly, important considerations or relevant considerations to processes such as this?

A. Yes, I've regarded those processes as the rigor and the quest by the applicants to achieve a settlement is a major milestone. I have some  
15 personal reflections on matching expectations with outcomes, I've seen high expectations created and minimum or minimal outcomes generated. So from that angle it is quite a complicated process.

Q. So when we do get outcomes which, I mean it seems to me that it's not uncommon that it is minimal, those outcomes are quite important, aren't  
20 they?

1630

A. Very much so. What it has generated in my experience is an insight into what is possible in terms of a direction that the claimant groups saw and in both of these cases hapū-iwi relationships are tested ultimately. I'm  
25 not so sure whether we achieved that in a sort of Ngāti Whatua context when you take the responses from Te Uri O Hau earlier today and where Ngāti Whātua is heading as a collective across its tribal rohe. But again it does open up and set out options and opportunities to test some of these considerations of the various uri entities. I will try and conclude that  
30 answer by suggesting that one of the travesties of the Treaty claims process is the fact the Crown got as far as Tamaki and didn't continue the Mahurangi coastline in terms of their hearings. So what you see is the kind of outcome that we're dealing with here right now, not really

concluded in a manner that brings about the connection between those groups that are say Whangaparaoa south to Tamaki and Te Arai north to Manaia. I'm making reference here to definitions applied by the Crown of partially settled groups and it's no wonder you have references to groups that are looking like they're only half there because in the context of the process that they've gone through it's this partial settlement and then it's complicated even more by a reference to a group and tagged with that group is the location, or is a locality so te tau te Tamaki, te tau te Kaipara, te tau Mahurangi. Where does this te tau group generate its sort of identity from? And before we know it the new found members of that same group are starting to apply those tags, tena kotou my name is so and so, I am te tau Te Tamaki. Who's the tūpuna for that hapū? Nobody knows. Why? It's just been created out of this process that we've – and I'm glad to make reference to that because sitting beside you is someone who has acted for one of my closely related hapū groups, Mangakahia called Kaparawhau and Kaparawhau have been dissected and spread across the mid-North like sprinkling of black pepper. And that's the travesty about these processes, that you don't achieve the, if you like, the (unclear 16:33:48) that goes with the production of patai and the markers of the iconic identity. Hope that's useful. Kia ora.

**THE COURT: JUDGE SMITH**

Not quite sure what's happened Mr Pou or Ms Ulrich, you're on mute. I don't know if you were actually asking questions or having a chat.

**MS URLICH:**

No, I was conversing to myself unknowingly. Sorry Sir.

**THE COURT: JUDGE SMITH**

That's fine, we all do it. You have more questions I assume?

**MS URLICH:**

Yes I did.



**CROSS-EXAMINATION CONTINUES: MS URLICH**

Q. So my question is specifically in relation to the outcomes that were achieved through the Ngāti Manuhiri settlement process and they relate to the statements of association contained in the Ngāti Manuhiri settlement deed. Have you had a chance to look over those?

5 1635

A. Yes, I have.

Q. And did you share or provide advice to MBL on those statements of association?

10 A. Yes, I have drawn their attention to options in both deeds of settlement and some particular reference to where the Crown had conducted its redress process in the Mahurangi north and south Crown forests and led the discussion down the pathway of MBL taking note of how the different approaches were applied by both of those groups.

15 Q. That's helpful, thank you. How about the statements of association that relate to, for example, (inaudible 16:36:17) or what's now known as Pakiri, so the glistening white sands of Pakiri, have you read that statement of association?

A. Yes, I have.

20 Q. And did you discuss that with MBL?

A. Yes, I did.

Q. I did want to revisit paragraph 14 of your rebuttal evidence which is EB20A5.

A. Yes.

25 Q. Now, Ms Black helpfully covered some of this ground or the ground that we wanted to cover and Judge Warren touched on it too and the point Ms Black made, and I think you accepted, was that it's not open to you to substitute your view for that of tangata whenua or (inaudible 16:37:46), is that right?

30 A. Well, what I'm trying to articulate is that both of those groups have landed in two different spaces and places and my role, like my role was not or is not to pass judgement on how correct either of them are.

Q. So, you're not looking to substitute your view, you're just making observations, is that fair?

- A. Well, it's, it is what it is in terms of going through a process and providing that assessment or evaluation, if you like, of the cultural values connected with the application. One group has arrived at a point to say they support it and the other is at a different space. What I haven't had the opportunity of is rationalising the changes in the transfer of the area of interest or application four kilometres to the north and how does that impact. For instance, I understand that there are some provisions that have been made in the last short while, the last two or three weeks, that may alter that. What I'm providing here was written on the 10<sup>th</sup> of May this year.
- 5
- 10 Q. So, would you agree that the values of hapū are shaped by their different history, experiences and values?
- 1640
- A. Yes, I would.
- Q. And they have different relationships, don't they?
- 15 A. Yes, most definitely.
- Q. And I'd like to be clear here that when I talk about relationships I'm not just talking human to human relationships I'm talking about the relationship that they have with their whenua, their taonga, so it's not exclusive to humans, is it?
- 20 A. That's right.
- Q. So if different hapū can have different values it would make sense that those values, or they might experience different effects of those values, does that make sense? I can reaffirm that question if you would like?
- A. Well I guess that is really the motivation behind the advise to MBL, is to focus their proposals on these two groups, you're dealing with two
- 25 descriptives of their world views, their values, their cultural frameworks as opposed to a longer list of hapū. And I'd like to say that in terms of this proposal and the pathway followed by the applicants was to encourage them to keep their engagement at that level with these two hapū, iwi, iwi
- 30 entities. I just don't want us, well, I don't want my answer to be misconstrued as being a blueprint for all hapū, particularly the ones that I connect to in the Mangakahia valley, one marae, nine hapū.
- Q. Understood, thank you.

**THE COURT: JUDGE WARREN**

Q. Just on that point, if I may, on values. Paragraph 14 of your evidence-in-reply, Mr Te Rangi, I think Ms Ulrich was asking you about there being different cultural values yet it seems to me you're saying that

5 Ngāti Manuhiri and Te Uri O Hau are all part of the same culture and values?

A. Yes, your Honour.

Q. So you don't agree that hapū have different values, you're saying it's all the same but how one uses them or interprets them is different?

10 A. Yes, I think that's the subtlety in how each of these two hapū apply their outlook, their world view, their position. Sorry, your Honour, if I could qualify that even more. Another lay of complication is that if you go beyond 1840 and the Deed of Settlement you'll probably find there's a (inaudible 16:43:54) connection between Te Uri O Hau and Ngāti

15 Manuhiri and Manuhiri's a tūpuna and (inaudible 16:44:03) tūpuna of Te Uri O Hau are pretty close in terms of the generation line from which they descend and that's the subtlety that is rather complex to articulate in black and white terms or in such a manner that is succinct and to the point.

1645

**20 THE COURT: JUDGE SMITH**

Q. Can I ask an associated question and I know that it's an issue that I think has been troubling the Court for some particular time. Is a cultural value a shared value?

A. Your Honour, I believe it is a shared value.

25 Q. And if so, is it shared at a whānau hapū iwi level or even beyond iwi?

A. I think so. I think it is beyond that but the difficulty is the starting point of it tends to be in this loose familial association, so people who belong to the same nuclear grouping suddenly constitute a unit, a whānau whereas if you take a tātai perspective of it it is critical that the individual

30 descendant has their place articulated or can articulate their point of connection. And so you have a number of descendants who connect to a particular ancestor, may object to being called whānau, they may see themselves as hapū and the difficulty that I was trying to articulate here

is for these two groups at some point in their genealogy they're inextricably linked genetically. Manuhiri, the descent lines and Te Uri O Hau descent lines do intersect at a critical point if you take the individual person or the personnel that have promoted, if you like, these cultural groups.

#### **THE COURT: JUDGE WARREN**

Q. So Mr Te Rangi that would at a basic level create a whanaungatanga relationship responsibilities obligations but that doesn't translate, so that's a shared value, but that does not translate into a right of veto or you must support our opposition or support our support for an application such as this.

A. (unclear 16:47:10)

Q. It doesn't extend to that level but one must turn their mind to the relationship –

A. Yes.

Q. – and the impact that any decisions would have on that?

A. Kia ora. Thank you. Thank you your Honour.

#### **20 THE COURT: JUDGE SMITH**

Thank you. This is very helpful because these are issues we are wrestling with broadly and I appreciate your commentary on this. So sorry Ms Ulrich but these are obviously the issue of who is iwi is particularly hot topic at the moment one would have to say given some of the more recent events and we are of course, along with others, wrestling with these very issues of how this fits with tikanga. Do you want to make any comment between cultural values and tikanga in this context of who holds them and how they're shared? I'm just asking you if you'd like to comment on that before we move on. You may not want to but I just thought I'd ask.

30

#### **WITNESS:**

I think it is important to note what Judge Warren has articulated because apart from our inherent rights and interests is the ability to exercise, if you like, those rights. And exercising those rights is critical in terms of like you can belong to

a kin group, hapū but if you're living away or outside of that traditional area of interest there's even a variation of what that constitutes for the individual, so some of those that, I mean those that are living at home in amongst the places of significance that are given rise to marking that identity, identifying these  
 5 places and the degrees of significance tend to hold a higher degree of responsibility and obligation and I think the reference to shared values in the context of whanaungatanga is probably commented, you know, I want to add to that, sorry, at this time.

**10 THE COURT: JUDGE SMITH**

Thank you very much. Ms Ulrich?

1650

**CROSS-EXAMINATION CONTINUES: MS URLICH**

Q. Thank you, Sir. Well, that actually wraps up my line of question for this  
 15 particular paragraph. If we could go to paragraph 10 of your reply evidence please, so EB20A4. I'll just give you a chance to refresh on that paragraph and I did want to ask some questions around your response to Mr Hohneck's evidence, which is neatly summarised at paragraph 9.

A. Read it.

20 Q. So, first I would like to understand what you mean by "significant effect". Are you able to explain that a little further to me?

A. I guess the scale or idea came out of how matters before the Environmental Court was following the graduated reference of minor, less than minor significant and so on and on it goes. I think I was trying to  
 25 adopt a similar context for the adoption of that term "significant" as following that same graduated scale, if you like.

Q. That's useful. So, is this a term that's been adopted from MBL's evidence or is this a term that you've used in your role as a cultural advisor?

A. I've used it in my own evidence based on what I've read and my  
 30 understanding of, as I said, the graduated scaling of effects.

Q. And that's stated in relation to McCallums' experts. Now, given that that reference follows and we've had Mr Hohneck's mention of their perception or their understanding of how dredging have affected tohorā

and kaimoana, are you referring to experts as in Mr West and Dr Clement?

A. Simon West, Derek Todd, Deanna Clement, David Hay, Matthew Pine or Matu Pene. I'm not sure. That's probably the list of experts that I would have included in that listing at paragraph 10.

1655

Q. That's sensible, thank you. So, I did have some questions around paragraph 8.6 or your response to paragraph 8.6 of Mr Hohneck's evidence. You've partially stated or restated it there, so maintaining the same state of degradation cannot sensibly be seen as being of no effect. Now, I'm happy to cite the reference if you would like to read the paragraph, but do you otherwise recall or agree that that statement was made in relation to the loss of feeding habitat for tohorā?

A. No, I can't say that off the top of my head.

Q. We can go to his evidence which is EB3421, are you able to put that up for us please, Ms Harnett? And if I could zoom on paragraph 8.6. And it might also be useful to refresh 8.5 of that evidence because it provides a bit more context. Have you had the opportunity to read through those two paragraphs?

A. Yes, I have.

Q. So on revisiting Dr Clements' evidence on her addresses marine mammals for MBL she says that MBL has been dredging for more than 75 years, these areas are not pristine or unimpacted. Would you agree that yes there has been impact from dredging on feeding habitat?

A. Well if you look at 8.6 my reading of that is that it's across the entire (inaudible 16:58:20) as opposed to the Pakiri Mangapai embayment, so I have to agree with that statement, and the findings of the Hauraki Gulf sea change plan precisely pointed that out.

Q. Perhaps it would be useful for you to read 8.5 again. Would you agree that paragraph 8.5 indicates that Mr Hohneck is actually talking about the area that is subject to the application?

A. I couldn't say that because 8.6 refers to the rich biodiversity of (inaudible 16:59:30) .

Q. So sand extraction isn't occurring right throughout (inaudible 16:59:45) is it?

A. Well, I'm not aware of other areas.

Q. Okay, so let's focus on 8.5.

5 1700

**MS URLICH**

Actually I'm mindful that we're at 5 o'clock. Would you like to pick this up tomorrow?

10 **THE COURT: JUDGE SMITH**

Yes, I think we should take the adjournment now and we'll pick this up tomorrow. I'm not sure who was going to do karakia to finish today. Is there a volunteer.

15 **MS WIKAIRA:**

I can do it Judge.

**THE COURT: JUDGE SMITH**

Well done, thank you Ms Wikaira.

20

**MR POU:**

Sir before that occurs, sorry, I just left the room to tell, my kids to shut up, they're next door. I have been in touch with Te Arawhite, they have agreed to provide a map of the overlapping redress areas and those sorts of things. I know  
25 Mr Carline was going to do it and I'm not sure if the Court would rather it just be sent straight in or if they send it to me and I just provide whatever they give but I thought that might be the best way forward rather than me giving evidence about it, your Honour. I just thought I'd (unclear 17:01:24) I sent the (unclear 17:01:26) that Carline was going to do it.

30

**THE COURT: JUDGE SMITH**

My preference would be the same as I suggested to Mr MacRae is it's sent to you, you send it to other counsel first, see if there are any major issues and if

there's no issues then you can present it. Otherwise you can tell us where you've got to and the Court will make further directions or take it, as I've said before using a quaint Latin phrase pro tanto, for the time being until we sort out the reality of it. But I think that's the best way to see if the parties can agree on its production.

**MR POU:**

No, no, that's fine, Sir. I always thought pro-tonto, it's something to do with the loan ranger, but I take your Latin.

**THE COURT: JUDGE SMITH**

It could very well. I don't know if that means it's a silver bullet does it Mr Pou?

**MR POU:**

No silver bullets in that, it's actually nothing controversial Sir, it's nothing that's not publicly available in those sorts of things.

**THE COURT: JUDGE SMITH**

Thank you.

**KARAKIA WHAKAMUTUNGA**

**JUDGE SMITH ADDRESSES COUNSEL/PARTIES – TIMINGS (17:03:10)**

**COURT ADJOURNS: 5.06 PM**



## **COURT RESUMES ON FRIDAY 28 JULY 2023 AT 9.31 AM**

### **KARAKIA TĪMATANGA**

#### **THE COURT: JUDGE SMITH**

Thank you very much Ms Haddon for your words and your introduction. Before  
 5 we progress with more questions of Mr Te Rangi can I just check if there are  
 any preliminary issues.

#### **MR POU:**

Yes, there is just one, one preliminary issue. First thank you for the karakia  
 Ms Haddon. Hupe's karakia, uncharted territories, settlements, we are talking  
 10 about those things, uncharted for Ngāpuhi I suppose. Your Honour, I have  
 had a call from Ms Scharing. She understands that she has come and go  
 leave. She is home sick at the moment. She has asked us to stand in for her  
 just to help as you are going through the questions and those sorts of things.  
 She is just maintaining a watching brief as we go. She just wanted to be clear,  
 15 you might see her on the screen but not her face, it will just be on and she will  
 be listening. That's the only preliminary Your Honour.

#### **THE COURT ADDRESSES OTHER COUNSEL/PARTIES – PRELIMARIES**

(09:34:26)

#### **20 TAME TE RANGI (ON FORMER AFFIRMATION)**

#### **CROSS-EXAMINATION CONTINUES: MS URLICH**

Q. Ata mārie, Mr Te Rangi.

A. Tēnā koe, Ms Urlich.

Q. Now, yesterday we were discussing paragraph 10 of your reply evidence  
 25 and I fear we will be here, or you'll be stuck with me all day if we actually  
 work through that question in the manner that I'd anticipated, so I thought  
 we might explore my questions around this in a different way. Now  
 yesterday you mentioned that you had read the Ngāti Manuhiri deed of  
 settlement and the statement of association, didn't you?

A. Yes, I did.

Q. And do you, or you would agree that those statements of association include comment and detail on the relationship that Ngāti Manuhiri have with tohorā?

5 A. Well, I'd probably refine that to at its widest possible point, Te Moana Nui-ō-Toi, given one of the outstanding features of that deed of settlement was the inclusion of Hauturu and the fact that Ngāti Manuhiri was quite innovative in securing an arrangement that included all of Hauturu when the detail could be pointed to a particular spot on Hauturu.  
 10 So from that angle it meant its relationship extended beyond the specific part of Hauturu to include all of Hauturu and what was happening there, much the same way as rather than a focus on tohorā that its concern is with all of Te Moana Nui-ō-Toi. My focus was not on the detail of specific mammals that frequent Te Moana Nui-ō-Toi, rather the holistic view that  
 15 Ngāti Manuhiri takes of that general area given all of the activity that goes on in that area and the example I use is their focus on Hauturu and the concerns that they have based on their interest in Hauturu from that one particular site to the wider future, management, governors, decision making on Hauturu. I view Te Moana Nui-ō-Toi in the same manner. So,  
 20 I didn't get down to the mammal management plan that Ngāti Manuhiri may have that looked at specific creatures, but are very interested in the Ngāti Manuhiri position on the Hauraki Gulf with this points of engagement, either the Gulf Forum, the impact on fisheries, commercial activities, the economic developments that have been ongoing inside Te  
 25 Moana Nui-ō-Toi.

0950

Q. And you are right, Ngāti Manuhiri do tend to take a holistic view and those other stresses like the fishing, scallop dredging, et cetera, are additional stresses *on Te Moana Nui-ō-Toi* aren't they?

30 A. Yes.

Q. So can I take from what you have said then that you haven't actually looked in detail at the relationships or specific relationships that Ngāti Manuhiri have with particular species or features within their rohi?

- A. Well to the extent that I am aware that they have been involved in translocation and relocation of a number of former species, kiwi and birdlife and so on. So they have been very active in that space. But I couldn't tell you the detail of the specific species related to that overall programme. I guess for me it's how do you replicate what Manuhiri have achieved in that treaty settlement space to the same degree as we could perhaps replicate on the West Coast. Coming back to that question of how do Manuhiri and Te Uri O Hau connect, well if you go beyond the deed of settlement there is an obvious link there that connects both groups and I think the exercise here is replicating the lessons learned by one and transposing it into another situation that is in dire need of that kind of intervention. We would like to think that we could have the same kind of translocation programme occurring for different species on the western side of the rohi as well. That's not unique to the East Coast only.
- 15 Q. You are aware that Ngāti Manuhiri do have relationships with particular species. Is that right?
- A. Yes I am aware, so.
- Q. So (audio missing 09:52:52 to 09:53:21) source and provide kaimoana is important for Omaha marae in terms of manākitanga for (inaudible 09:53:38) the guests that go there.
- 20 A. I would probably say for marae that have provided that level of kai in their profile.
- Q. There is some detail about provision of kaimoana at Omaha marae in the settlement deed but we won't go there now in that position. Would you agree that if Ngāti Manuhiri are unable to undertake their kawa, their protocols that relate to harvesting kaimoana, or perhaps not harvesting in times where sources or populations are depleted, that that would be a negative effect?
- 25 A. Given the location of Omaha marae and its proximity to Te Moana Nui-ō-Toi as well as Leigh Fisheries, I would make the connection between the whole three and probably search for indicators of why that was not being delivered.
- 30

**JUDGE SMITH ADDRESSES REGISTRAR – MUTING MICROPHONE**

(09:55:53)

**THE COURT: JUDGE SMITH**

Did you want Mr Te Rangi to repeat that or did you hear?

**5 MS URLICH:**

Yes, please, Sir. I missed a fair amount of that.

**THE COURT: JUDGE SMITH**

If you could pick up where you talked about given the proximity to Te Moana Nui-ō-Toi and then you carried on from there and it started to break  
 10 up a little. Are you able to repeat as best you can recall, this is about the Omaha marae and its proximity to Te Moana and you then went on to mention other things as well?

**CROSS-EXAMINATION CONTINUES: MS URLICH**

A. Yes, certainly, your Honour. The proximity of Omaha marae to  
 15 Te Moana Nui-ō-Toi and the fact that there is a working processing plant in the neighbourhood that utilises the products of a iwi-based national fisheries settlement that has provisions for customary harvest of fin fish as well, if that wasn't sort of evident in how Omaha marae were able to provide that level of hosting you'd start to look at indicators of which parts  
 20 were not working, was it a question of access, was it a question of choice, was it a change in diet – have they become vegan or it could be a range of reasons for it.

Q. So, I'm not wanting to explore perhaps every variable that might play into these kinds of situations but as a general proposition would you accept  
 25 that if no or depleted kaimoana population that Ngāti Manuhiri wouldn't be able to undertake customary harvesting?

A. I'd have to say yes.

Q. If Ngāti Manuhiri feel that they can't exercise rangatiratanga in their rohe, is that an adverse effect or a negative effect?

30 A. I'd have to say there's a little bit more to rangatiratanga than kaimoana.

Q. Sorry, I should've clarified that. That's not specifically in relation to harvesting kaimoana, that's a more general level of being able to exercise tino rangatiratanga over the rohe.

5 A. I think there are a number of ways that those conclusions can be drawn and I wouldn't like to say that the ability or inability of Ngāti Manuhiri to expect tino rangatiratanga is based on the discussion we're having now. I think there is a far wider manner in which Ngāti Manuhiri have exerted their tino rangatiratanga than I am familiar with. I don't think it comes down to these points of discussion that we're conducting here now.

10 1000

Q. So is it correct to say then that you don't see activities appearing in the rohe as having any relevance to Ngāti Manuhiri tino rangatiratanga or the exercise of their rangatiratanga?

15 A. I see it the other way. I see and I know of the activities that Ngāti Manuhiri have become involved in post settlement as an expression of their rangatiratanga and it's precisely the reason why the advice was delivered to MBL, McCallum Brothers, to seek an engagement with both Te Uri O Hau and Ngāti Manuhiri, both entities have gone through quite a rigorous process over an extended period of time and have come out with the results that they are working with now and I know in both cases of the exercises that both entities are engaged in to achieve a better outcome for their respective members.

20

Q. To your mind does being able to practice or exercise kaitiakitanga connect to tino rangatiratanga?

25 A. Very much so.

Q. Okay. The other questions I had for you, and these do relate to kaimoana, were around Mr West's oral evidence. Were you online listening to that?

A. Mr Simon West's evidence?

30 Q. Yes.

A. I did catch large portions of it, I couldn't say that I heard all of it in total.

Q. Right. Were you online or did you hear him when he accepted that dredging harmed hūruoa, or horse mussels?

A. No I wasn't. What I have seen are the indications of where those horse mussel beds are located relative to the inshore, midshore and offshore areas of extraction.

5 Q. Okay. In the (unclear 10:03:19) survey that Mr West relied on and in drawing opinions about those areas weren't there?

A. Yes. Yes that's right.

Q. Okay. So which report are you referring to?

10 A. It was a map that showed the location of the horse mussel beds to the shoreline, the shoreward side of the inner boundary of the inshore area of extraction. And those maps, what I read, didn't show any horse mussel beds beyond the outer line of that inshore track then out to the midshore, then out to the offshore. And I would say that I've never been in the water at those depths and I would rely heavily on the indications from the marine ecologist as the expert in this area.

15 Q. Were you online when Mr West advised that the surveyors wouldn't pick up mussels that were medium to large in sizes in smaller populations, the one to two horse mussels?

1005

20 A. I couldn't be, I couldn't answer that, not in terms of the specific points that he was making there.

Q. Did you hear Mr West discuss how long it would take for hururoa to be established and he accepted that it would take 15 to 30 years?

A. Put it this way, I've read what he had prepared in his evidence as opposed to what I heard him say online. I've read that point.

25 Q. And your evidence is based on what he wrote, is that right?

A. What he has provided as the marine ecologist and the expert in that area.

Q. Now I did want to move to my final series of questioning which is around sand extraction. It's in your evidence in reply at paragraph 12. So that reference is EB20A5, so paragraphs 12 and 13.

30 A. Yes, I have that in front of me.

Q. Now, I see no mention of Mr Hohneck or Mr Hohneck's evidence or of the statements of association contained in the Ngāti Manuhiri trust deed, but you have read that evidence and reviewed that statement of association, haven't you?

A. Yes, I have.

Q. And you're aware that the traditional name of Pakiri is (inaudible 10:07:36)?

A. Yes.

5 Q. And that means glistening white sands, doesn't it?

A. That's one of the meanings that's been stated, yes.

Q. Are you aware that there is a finite supply of glistening white sands at Pakiri?

10 A. I've been following the profiles that have been provided by coastal experts like Mr Todd, Mr Derek Todd, and there seems to be a line of thinking or a line of profile that talks of the resource that are derived in the time that the Waikato River drained into Te Moana Nui-ō-Toi and then volcanic activity rearranged that landscape to have the Waikato River draining to the West Coast. And then there's another line of thinking that starts to  
15 differentiate between the two types of Holocene and Holocene sand and I'm yet to arrive at a point to conclude which of those two categories does the glistening white sand reside. Is it referring to both types of sand that's been used by the experts or is it sand in general that's located at Pakiri and does it go back to the period of geographic, geological formation  
20 pre-Tarawera or pre-Central North Island eruption? I'd have to leave that for the coastal experts to give a definitive answer, Ms Ulrich.

1010

Q. Would you agree that for sand to glisten it would need to be the sand on the top?

25 A. At any given point in time, yes, it would have to be, unless there is another tikanga that sees you do it at the height of the storm, pre-Gabrielle, post-Gabrielle, anything that's displaced.

Q. I guess when we look at the statement of association these are accounts that are drawn from kōrero over the time which preceded cyclone  
30 Gabrielle, so we have certainty in that sense at least. Now, do you hold a view that if something is a tāonga it can't be used?

A. No, I don't. I think the value associated with the term tāonga has to fall into the realm of function, purpose, usefulness. I think there's a category that talks about aesthetic beauty or something that is perhaps abstract

and I'm not so sure the contemporary modern application of the term tāonga is understood in its proper way. Like, if it's a case of just endearment someone could do and, as a pet that you can buy online, is that tāonga. To some people they could regard it as something precious but I think the tāonga application in this context of markers of identity and the part it plays in enhancing who the individuals are or who the uri are is a different definition, it's a different kind of line-up of those values.

Q. And Mr Pou will explore this particular subject with you further but do you accept that the effects of extracting sand inland are different from extracting sand in coastal areas or from the sea?

A. Land-based extraction, is that what you're talking about, compared to the coastal, I guess that's the part I was trying to arrive at in terms of the coastal process when you have the experts talking about sand arriving from a wider part of the ocean, of the moana, compared to what you see on land and I base a bit of that on some of the efforts that have gone on, well maybe to an extent in the planting of the Mahurangi forest and the raisings that central government had in the past of planting marram grass to retain the sand and following that up with rows and rows of pinus radiata and they did that up and down the Northland peninsula, and certainly on the Mahurangi, west coast and Woodhill up to Taupiri in particular. That was sort of done as an effort to try and hold the sand from encroaching onto pasture land. So mining sand on land I think has a range of considerations, one of which is the source of the sand. If it's windblown off the coast I think there's a different set of drivers that look at options to manage that compared to a pit in the middle of a pastoral area that you simply dig out, excavate, and then replace it with some other material to try and remediate the landscape. I think there are those differences. But it still comes back to that natural process being closed or open. As I said, the coastal processes in my mind and what I've read and come to understand don't draw a full conclusion that it is one or the other, open or closed. Partially open, partially closed, I'm not so sure. But it's become a closed process after the Waikato River was diverted because of natural geographic or geological disruptions or does it remain



partially open where sand is drawn or arrives here with ocean and Hauraki, well Te Moana-nui-a-Toi currents bringing material into the area.

Q. So in terms of coastal processes and in the offshore feeding the inshore and the inshore feeding the beach, would you defer to coastal process experts for that?

5

A. Yes, I would. And in doing so Ms Ulrich, it's much like the discovery, if you like, of navigation by the stars. Those same currents that brought our (inaudible 10:17:44) into this part of the Pacific have a superficial effect. There must be an underwater effect. So the relativity of believing in the power of those currents by navigation is one aspect. But if you were to dive down into the depths of that same ocean you would find a different transfer of what nature has provided, one of which could be the material that we are talking about here today.

10

Q. That is helpful, thank you Mr Te Rangi, I will hand over to Mr Pou now, thank you for your evidence.

15

A. Tēnā koe.

#### **CROSS-EXAMINATION: MR POU**

Q. Kia ora ngati rua miu.

A. Tēnā koe, tēnā koe (inaudible 10:18:44).

20

Q. Kia ora ngati hoehu.

Q. Tēnā koe, tēnā koe te mahurehure.

A. (inaudible 10:18:55).

Q. I do have some questions to raise with you. It might feel like I am jumping around all over the place because a lot of people have picked holes in the questions and I don't want to re-traverse too much ground.

25

#### **MR POU:**

Your Honour, because I am going to be jumping around in those things, there is no objection or if Your Honours want to, to maintain context and ask questions over the top, I'm comfortable with that, either Your Honours or any Commissioners as we go through, just because I will be jumping around in a few things.

30

**CROSS-EXAMINATION CONTINUES: MR POU**

Q. Ms Ulrich asked you about, had an interesting discussion around tāonga with you. Do you recall that?

A. Yes.

5 1020

Q. It was around usages and those sorts of things. Where things, and you refer to the Wai 262 report in your evidence: “Where things start to become rare, sometimes the perception of importance can increase.” That’s what Wai 262 says, doesn’t it?

10 A. Kia ora, āe. Yes, it does.

Q. And sometimes we need to preserve these tāonga so we can use them, like te reo?

A. Kia ora, very much so.

Q. And in terms of tāonga, just because something’s a tāonga doesn’t mean it’s tapu. It just means it has to be protected. Would you agree with that?

15

A. Tēnā koe, yes, very much so.

Q. Now there are many ways that we can look at manifestations of behaviour to see what a tāonga is, you’d agree with that?

A. Yes.

20 Q. One of the ways is looking through deeds of settlements and those sorts of things where people negotiate things?

A. Very much so, as –

Q. One of the ways is looking at, as you said, kōrero tuku iho and how they manifest in carvings?

25 A. Very much so, āe.

Q. So when we go to Pakiri Marae, to Omaha marae and we see a whale in the carving, it’s an indication of the close connection that Manuhiri try to maintain with that species, I’ll call it a “species”, at the time?

A. Āe.

30 Q. Look, Mr Te Rangī, I don’t know what’s happening with your camera but at the moment I’ve only got one handlebar in the right-hand (Māori inaudible 10:21:46) and I would like to have all of you. If you could turn the – thank you. I just find it easier to engage when I can see all of you. So, just getting back to that question, where you see a carving which

particularly reflects a whale on the (Māori inaudible 10:22:13) of a marae at Omaha marae, that's an indication of those close connections to that species?

A. Very much so.

5 Q. And I guess we talk about generic things we generally understand a whale to be a tohorā but Māori have many names for whales, don't they?

A. Yes, they do.

Q. And the names that have come up in this one are the (Māori inaudible 10:22:37) and the tohorā and the maki.

10 A. Āe, yes.

Q. And I guess one of those connections to the maki, which is the killer whale, is the fact that Manuhiri's father was named for that whale, wasn't he?

A. Āe.

15 Q. So, in terms of identifying something as a tāonga, those are key indicators. We can go into the deed of settlement where they mention those particular whales, but we can look at the clear manifestations which sit within things like marae and names that underpin the identity of Ngāti Manuhiri. Those are other ways to highlight the tāonga status of things?

20 A. That's right, kia ora.

Q. And when we go into that deed of settlement and they talk about the sand, they don't call it "Holocene sand" or "Pleistocene". I don't even know how to pronounce the other one. I don't want to call it "plasticine sand" because I know that's wrong. But Manuhiri don't distinguish, do they?

25 They just call them the sands on their beach that are in the sun of the white glistening sands?

A. Kia ora.

Q. And it is the surface sands because things don't glisten in the dark, do they?

30 A. Unless they've got phosphorus in them, Mr Pou.

Q. But in terms of these glistening sands, they are quite clearly talking about the surface of the sand that they can see, the things that Manuhiri connect to that when they see they know that they're coming home?

A. Right.

Q. And if they say it's a tāonga to them because those are the things, and we'll hear the songs about those sorts of things, sand as a tāonga, you wouldn't dispute that sand is a tāonga to Ngāti Manuhiri?

A. That's right.

5 Q. Now, you've drawn a distinction around, and Ms Ulrich went to you about this about onshore, whether or not it's different to – before I go there, I was interested in, you had a discussion with Ms Ulrich and she took you to the place in your evidence where you reflect Olivia Haddon's evidence where she talks about scraping the "skin of Papatūānuku". You recall  
10 that?

1025

A. Yes.

Q. I'm interested because his Honour has reflected that sometimes mātauranga and – well I don't feel that I'm allowed to call it western  
15 science anymore or even science because mātauranga is science, that the coastal experts when they talk about layers of sand it seems to be Olivia saying on one hand something that kind of aligns, that we have different layers, one's a skin layer and those sorts of things. Do you see that there's a sort of a similarity in the description there, the Holocene,  
20 the Pleistocene, the whatever's underneath, and then you've got the "skin of Papatūānuku" and the layers?

A. I was looking more at the way the coastal process had talked about the origins of the sand as opposed to the landscape continuity if you like. Like I view Papatūānuku as going from here to the other side of the world, as  
25 opposed to what's outside the macro metropolis of Mangakāhia. Like Papatūānuku is across the globe, and so that idea of following where the coastal process experts were taking the discussions was to give some explanation of the sources of the various types of sand and then looking at the business of, or the end use of the resource, Mr Pou, it was to understand – I mean sand is sand at the start of the process in my own  
30 mind but then to understand that there are different values that are used – sorry, that are being applied or being sought for the end use of the particular sand, high strength concrete, replenishment of the glistening sands of the east coast suburbs of Auckland, landfill, for landscaping

processes, and then lower grade concrete for foot traffic all require different grades and types of sand.

Q. So that's in terms of the commercial uses of different grades and types of sand, but you're also aware that tangata whenua in this region, Te Uri O Hau and Ngāti Manuhiri, have given different sorts of values in terms of the sand in the water and the sand out of the water, you're aware of that, aren't you?

A. That's right.

Q. And in particular, because you would have considered the hapū management plan of Te Uri O Hau which says their preference is for onshore sand.

A. No, I understood the preference in the Te Uri O Hau context for offshore.

Q. This is a matter – I don't want to have bring up the hapū management plan but it's a matter that I put to Mr Thompson, their hapū management plan. So there's a preference if there is going to be in the water that there be offshore extraction –

A. That's right.

Q. – but the hapū management plan specifically references a preference for on-land sand extraction. Were you aware of that?

A. Well I'd answer it this way, that I'm not so sure whether we were looking at the same plan but the one that I'm familiar with is dated 2011.

Q. That's the one, and I put it to Mr Thompson. Mr Thompson said that perhaps that particular section relating to sand extraction is outdated given that it was from 2011, but it has a particular section relating to sand extraction, and we'll put it to you. It's CB2048.

#### **THE COURT: JUDGE SMITH**

Mr Garton, if you can just pull that up that would be helpful. 2048 of the common bundle.

#### **CROSS-EXAMINATION CONTINUES: MR POU**

Q. Now, I'd just like you to move down to the objective. What it set out in 2011 for Te Uri O Hau is that "all future sand extraction is land-based", do you see that?

A. Yes, I do.

Q. So, the cultural preference when you've been doing your assessments is for land-based as opposed to dredging the seabed, isn't it?

5 A. Well, my engagement with Te Uri O Hau in arriving at deposition followed the track of Mr Stephen Brown, the in-house manager of Te Uri O Hau Resource Management Unit environs stepped it out from this point in 2011 and it followed a whole chain of changes, some of which had impacted on the land holding that Te Uri O Hau had in Mahurangi Forest.

10 Q. Mr Te Rangi, I would be the last lawyer that could come to this court and assert that you can't change your mind, that an iwi can't change its mind in terms of a position. However, what this does show is that iwi are ascribing different values to land-based extraction and sea-based extraction, isn't it, that's what this shows?

A. That's right.

15 Q. Now, just while we are talking about the land-based stuff, you've mentioned that in your evidence-in-reply that Ngāti Manuhiri have commercial interests in a land-based extraction process. Ms Ulrich took you to it, I think it's paragraph 13 of your brief of evidence-in-reply.

A. Yes.

## 20 **THE COURT: JUDGE SMITH**

Yes, 20A 5 if that could be brought up, paragraph 13 Sandglass Corporation.

## **CROSS-EXAMINATION CONTINUES: MR POU**

25 Q. Now I've checked with Ngāti Manuhiri, they have no interest in Sandglass Corporation, they hold no consent to extract. I understand the extraction points are approximate to land that they own or may have been on land that they might've received in settlement, I'm not sure about that, but my instructions are that there are no commercial arrangements in place with that entity. Are you able to provide us with what you base that assertion on?

30 A. Not immediately. I could come back to you with the background to that point.

Q. Mr Hohneck will give evidence saying that Ngāti Manuhiri have no interests in that and I just thought it was fair to put that question to you, Mr Te Rangi, rather than waiting for you to go and giving you a nautara, a stab in the back. But my instructions are that they don't have any commercial interests in that.

**THE COURT: JUDGE SMITH**

Can I just check what's meant by that because that, in itself, raises as many questions. Are you saying they derive no benefits whatsoever, so that the point or are you carefully wording that question?

**10 MR POU:**

They've got no benefits whatsoever, your Honour, they don't hold the consent. I understand it was held by –

**THE COURT: JUDGE SMITH**

If you could just put to the witness that the Ngāti Manuhiri position is they derive no benefits whatsoever from that site or the operation of the sand extraction, if that's the point I think we should put it to the witness squarely so he can answer it.

**CROSS-EXAMINATION CONTINUES: MR POU**

Q. That's the question. I'm not going not going to restate the question, you heard it, Tame. Do you have a response?

1035

A. I accept the statement from yourself on behalf of Ngāti Manuhiri that that is incorrect, point 13, as stated there.

Q. No disrespect meant in putting the question, I just think it's important to put the question to you. We can take that down now Mr Garton. I know you are here giving evidence as a cultural liaison officer but the politics of Ngāti Whātua are engrained within you. Does Ngāti Whātua have a position on this process?

A. Ngāti Whātua, the iwi, I think, sorry, Ngāti Whātua across its entire rohe are interested in the question of sources of sand for the future of

infrastructure within the (inaudible 10:36:27) rohe and it's not so much Ngāti Whātua interest in Pakiri per se, that's entirely between Manuhiri and Te Uri O Hau but we've often heard of references to the Kaipara and there are a lot of activities concerning Kaipara moana and one of which is current activities around sand extraction.

5

Q. Does that answer mean that Ngāti Whātua wouldn't necessarily be opposed to Kaipara as an alternative sand extraction point to Pakiri?

A. There has been a particular different pathway adopted by those activities and the operators of those resource consents and would like to get prepared and be prepared for the time when those consents are up for renewal or review and to be in a better position to inform those processes.

10

Q. I just want to tell you why I ask that question, it's not about putting you on the spot. Ngāti Manuhiri don't want to argue that Kaipara should be considered as an alternative because then we would just be passing the ball, your hospital pass out to Ngāti Whātua and then this Court ends up in the same process where the thing – and that's why I was just, but it's an option that Ngāti Whātua are considering. Is this, is that something that Ngāti Whātua Rūnanga might defer to say Ngā Maunga Whakahii as they have with Te Uri O Hau in this position?

15

20 A. Most certainly Mr Pou it's to support the hapū in their quest to progress matters within their locality. In saying that, we also –

Q. Sorry I cut you off, I didn't mean to cut you off.

A. In saying that it's, will also built the understanding that sand alone isn't the desired ingredient for high class concrete. At the broader end of Ngāti Whātua you have the Portland Cement Works.

25

Q. Yes.

A. Across the rohe of Ngāti Whātua you have various aggregate pits, Atlas Concrete and the Brynderwyns, Hukatere quarries at the Tinopai end of Kaikōura Moana. Flat Top quarries at the back of Waitoki. So if we are to give it proper consideration you have to at some point try and connect a few more of the dots rather than repeating ourselves every 20 years into these kind of discussions. That's the track.

30

Q. That's the importance of relationships.

1040



A. You're right, very much so.

Q. Now in terms of that response around – and I don't want to get into the overlapping claims issue between Ngāpuhi and Ngāti Whātua when you're claiming Auckland and those sorts of things, or Ngāti Wai, but  
5 where you've said Ngāti Whātua as an iwi might have an expansive area over Papatūānuku, different hapū have responsibilities for different localities relating to Papatūānuku?

A. Exactly, Mr Pou. I guess the challenge at an iwi level is the appropriate time to offer leadership and direction and the appropriate time to hop in  
10 the back seat and offer support to the hapū.

Q. And I guess when Ngāti Manuhiri therefore are talking about Te Moana-nui-a-Toi, they're talking about their particular part of Te Moana-nui-a-Toi?

A. Kia ora.

15 Q. And that part is highlighted in their deed of settlement in the coastal statutory acknowledgement that you considered?

A. Very much so, āe.

Q. And that goes all the way up to Bream Tail north of Mangawhai?

A. Āe.

20 Q. Then why in your evidence did you say at paragraph 106 that it's Te Uri O Hau in the north, north of Te Arai, and Ngāti Manuhiri south of Te Arai? It's EV548.

A. Can you repeat your question?

#### **THE COURT: JUDGE SMITH**

25 Which paragraph?

#### **CROSS-EXAMINATION CONTINUES: MR POU**

Q. It's paragraph 106. You talk about CVA consultation and, look, you highlight the need to talk to Te Uri O Hau and Ngāti Manuhiri, and Ngāti Manuhiri agree with that. "They also have coastal MACA claims  
30 over the offshore area with Te Arai Point being the distinction between the two."

**THE COURT: JUDGE SMITH**

That's clearly related to the MACA claims.

**WITNESS:**

Yes.

**5 THE COURT: JUDGE SMITH**

That sentence is about the MACA claims.

**WITNESS:**

That's right.

**THE COURT: JUDGE SMITH**

10 I can't read it any other way. I looked at it carefully.

**MR POU:**

The MACA claim for Ngāti Manuhiri goes to Bream Tail as well.

**THE COURT: JUDGE SMITH**

So that's the question. Does the MACA claim for Ngāti Manuhiri go to Bream  
15 Tail?

**CROSS-EXAMINATION CONTINUES: MR POU**

Q. You understand that Ngāti Manuhiri's MACA claim goes to Bream Tail?  
It follows their coastal statutory acknowledgement area. And I guess the  
reason I raise this, Mr Te Rangi, is because then in paragraph 112 of  
20 Mr Hay's evidence, he reflects that Te Arai is a boundary, and I don't  
know if he's picking up on this, this separation, but it would be wrong to  
suggest that Ngāti Manuhiri are not asserting mana north of Te Arai,  
wouldn't it?

A. Yes, it would be. Can I perhaps elaborate a little on Te Arai as a  
25 boundary?

Q. Yes.

A. I don't know whether it's common knowledge but Auckland Council, Northland Regional Council, use Te Arai as that boundary, and the context of the CVA consultation in 106 was talking about the track that Te Uri O Hau had followed for their CMA or MACA application and that they had received or had an agreement with the Crown to conduct their application in a direct negotiation process.

1045

Q. You've been a part of Crown negotiations and you would understand that that negotiation with Te Uri O Hau would necessarily be subject to overlapping claims?

A. That's right.

Q. And you understand that Te Arai as a boundary was the boundary that Ngāti Pāoa defined as the northern boundary of the Mahurangi purchase?

A. Yes, certainly, yes.

Q. Where all of Manuhiri's interests were sold in their absence?

A. Yes.

Q. You would agree with me though, and I don't need to push this any further, that this application area in its entirety, because you're aware of the post or statutory acknowledgement in the MACA claim for Manuhiri sits within, entirely within the boundary that Manuhiri say is theirs?

A. By all means, yes.

Q. And if it is granted, it would constitute a consent granted within the rohe of Ngāti Manuhiri that is opposed by, not of the Manuhiri Settlement Trust but every member of Ngāti Manuhiri that's ever spoken about this? And I am talking about this application.

A. This application. Yes, yes.

Q. Well, I'll put the question in another way. Is there any Ngāti Manuhiri that you know of that has come in and expressed a support for this application in its form?

A. Not to myself, no.

Q. Can I ask you another question. Te Uri O Hau's support for this consent was conditional. When Mr Thompson gave evidence, he said those conditions were to be worked out when we knew that the consent was going to be granted. Are you aware of whether or not those conditions

have been worked through for the temporary consent given that one has been granted?

A. No, I'm not entirely clear on the degree of discussions with Te Uri O Hau on the conditional consent. Oh, sorry, the consent, conditions of the conditional consent. I'm not aware of any of those discussions.

Q. The conditional support for – I think you've got my bug mixing up the words. They've offered conditional support for a consent and a temporary consent has been granted. The temporary consent was granted –

A. Yes, it's the second part that I'm not, yes, I'm not sure on the second part.

10 Q. So given that a consent has been granted, notwithstanding in a temporary form, and there's some certainty on that, I was wanting to know if you had any knowledge of how those conditions, whatever those conditions are, might have been satisfied now or be being satisfied now that a consent is crystalised?

15 A. I understand that they will be part of discussions in the next 10 days.

Q. Because I did note that when we established an expert committee and to put people on, Te Uri O Hau chose not to put anybody on that expert committee. You're aware of that?

A. No, I'm not. I'm not aware of that, Mr Pou.

20 1050

Q. Now, you had a really interesting conversation with every one of the lawyers about the practise of tikanga and the theory of tikanga. Do you recall that, and your answers were: "We are really, really interested." You said: "It's important for there to be the theory but also the practice to maintain the theory so that it's on the ground." Is that correct?

25 A. Kia ora, kia ora, yes.

Q. So the reason for doing something and the doing something.

A. That's right.

Q. Mr Thompson referred to Māori Marsden and that is God and the Universe are, you say: "Māori Marsden said, the roadway to Māori tanga through abstract interpretation is a dead end." In your own way you seem to be reflecting that, it's not just abstractedly interpreting the concept, it's about how it manifests on the ground.

30 A. That's my assertion yes Mr Pou.

Q. So we get a more well-rounded understanding of because of the constructs, the theories, the values that underpin the actions that are taking place.

A. Yes, that's correct.

5 Q. So for instance, and something that's been referred to in this case and His Honour Judge Smith will have heard it about some of the things further north, we understand that the moki is protected because of its relationship with the koura, they have got a relationship with each other, so it's not just protecting them, the moki, it's knowing why you are doing that protection?

10 A. That's right.

Q. Similarly with the horse mussels, have you ever tasted a horse mussel?

A. I've tasted the ones that have come out of the Te Puna estuary in Tauranga and those that have come out of the Whangārei Harbour.

15 Q. Do you like them?

A. They are seasonal and when I, I want to sort of add another dimension to it. Our mother used to open scallops for a small fishery in Whangārei and I know of some of the practices of leaving the open scallops in brine and they would be then sold per 100 grams, up to 30% of which was liquid or water. The other practice was slipping in the odd horse mussel when they were in peak, prime condition, in amongst the scallops because the hinge of a horse mussel and the hinge of the scallop pretty difficult to distinguish when you are dealing with a kilogram of scallops. The only way you would find out whether you were eating a scallop or a horse mussel was the taste in your mouth, it felt like you just emptied half the pepper shaker down your own throat. They are not, I believe they, in prime condition they are not too bad eating and fried with copious amounts of Anchor products or butter or even the old Ngāpuhi tomato source cream.

25 Q. I was going to say the Ngāti Hine tomato source.

30 A. It is an acquired taste Mr Pou and I must say when they are out of condition, be select where you find them.

Q. I guess that's the issue for some people, for us, when I'm in the Bay of islands horse mussels are an invasive species. But for the different people who practice the tikanga associated with them and know

about them a little bit more they have a different appreciation for them don't they?

A. That's right.

5 Q. My aunty used to work at Mariwai Oysters as well, but that's absolutely nothing to do with this case. I guess that's the importance of understanding the connection ahi kā, in particular those who harvest, those who eat, those who miss, it's the importance of understanding that if we're to understand the value and connect the practice back to the theory, you'd agree?

10 1055

A. I agree.

Q. Now, your evidence – I mean, this application's evolved and you've made much, many comments about the way in which this application's evolved. It used to be three applications and it's now one?

15 A. You're right.

Q. Your evidence was supporting all three applications, wasn't it?

A. Well, I was following the notion that it really depended on the outcome of the relationship that the applicant could make with both of the post-settlement entities of Te Uri O Hau and Ngāti Manuhiri.

20 Q. So to get to that, notwithstanding your skill, and I don't mean that facetiously, notwithstanding your skill as a communicator, cultural liaison negotiator, a relationship wasn't able to be arrived at with Ngāti Manuhiri, that's correct, isn't it?

A. That's correct.

25 Q. With anybody in Ngāti Manuhiri?

A. That's correct.

Q. But notwithstanding that your evidence, because it was given at a time, was in support of all three applications, wasn't it?

30 A. I'm not so certain that my final outcome was based on supporting one, two or three of those applications as opposed to the agreement that I came to sign off with MBL group on pursuing a relationship with both of those two entities.

Q. So then should we limit your evidence then as not being in support of the applications but being in support of the necessity for a relationship to agree, for a relationship to exist, sorry, or the proposal to proceed?

5 A. Well, I base my response on the agreement I had reached with MBL. I didn't canvass them to say I want to be involved in three applications for resource consent on sand extraction –

10 Q. I want to stop you there, Mr Te Rangi, because I'm asking some particular question. So, you were engaged by MBL and my understanding from your evidence is because of your skill as a communicator, to try and see if you could facilitate relationships between Te Uri O Hau and Ngāti Manuhiri?

A. That's right.

Q. But also because of your knowledge as a pūkenga to give them some assistance on understanding mātauranga Māori?

15 A. Yes, that's right.

Q. And that was to support them in their application that they were making for consents in the inshore, midshore and offshore area?

A. Yes.

Q. That's correct?

20 A. Yes.

Q. So, your evidence, though it's now in support of one application, when it was drafted and when you were responding to Mook and Olivia, was in support of all of the applications?

A. Yes.

25 Q. And that was notwithstanding the impacts that experts were saying is going to happen in the inshore and the midshore, in particular on the horse mussels, on the fairy terns?

1100

**MR MACRAE:**

30 Sir, I think for Mr Te Rangi to answer the question, he needs to know which experts Mr Pou is referring to. There are a lot of experts involved in this case.

**THE COURT: JUDGE SMITH**

I've got to say, I think the question could be reframed more simply. If the witness looks at evidence bundle 553, 134 if that could be brought up. This is I think the issue that has concerned Mr Pou and Ms Ulrich in many of their

5 questions and I want to see if the witness is still supporting that statement or changing it because I think that gives us a quick and simple answer to the issues. If it could be brought up, Mr Garton, paragraph 134, page 553. If you could just take a moment to read that and you'll see I think, then understand why the questions have been focused in the way they have. That expresses

10 an opinion about the effect on cultural effects, and we're clear now that that relates to Te Uri O Hau and Ngāti Manuhiri. And I suppose the question Mr – I'd better check with Mr Pou, but the question really seems to be are you still supporting that statement or do you resile from that statement?

**MR POU:**

15 That's the question, your Honour.

**CROSS-EXAMINATION CONTINUES: MR POU**

Q. Yes, Mr Te Rangi, can you consider that and tell me whether or not you still agree with that statement?

A. Well I guess the position drawn at that time was around the evidence I'd

20 considered and following the hearings and processes that people have made since then. Would have to probably retract from talking about the three sites as related in 134 there, in that paragraph, and would have to obviously modify it.

**THE COURT: JUDGE SMITH**

25 Q. If we could change the wording then to "that the sand extraction from the offshore site", do you still support the rest of the statement? I think that's the core issue that is driving all of these questions.

A. Yes. Yes, your Honour.

Q. Thank you.



**CROSS-EXAMINATION CONTINUES: MR POU**

- Q. So you've had a number of discussions around rangatiratanga. Would you agree that we could boil it down to something – and I don't want to simplify it too much, the exercise of rangatiratanga is the exercise of mana, it's the exercise of authority? Would you agree?
- 5 A. Rangatiratanga being the exercise of mana, being the exercise of authority, yes I would agree with that.
- Q. And all hapū want to exercise rangatiratanga throughout their rohe? That goes without saying, doesn't it?
- 10 A. Yes, it does.
- Q. And where something happens in your rohe that you can't control or is directly against your wishes and all of your people's wishes, that's an infringement on your mana and exercise of rangatiratanga, isn't it?
- A. That's right.
- 15 Q. And just in terms of that, your evidence is that that exercise of rangatiratanga can be exercised within partnership and relationships?
- A. Yes, it is.
- Q. And you're aware that Ngāti Manuhiri have done that in the past, for instance in the establishment of reserves around Whangateau, around Leigh, you're aware of that?
- 20 A. Yes, I am.
- Q. I mean settling a treaty claim is an indication that hapū have matured to that extent where they can exercise mana and rangatiratanga and relationships with the Crown who have caused them intergenerational grievance?
- 25 A. That's right, correct.
- Q. And it's in that context that we should look at Ngāti Manuhiri rejecting the relationship with McCallums for this extraction process, shouldn't we?
- A. Yes, by all means.
- 30 Q. Thank you, Mr Te Rangi. I could ask you questions for all day specifically on that comment that you make that there are many barriers to mātauranga but that would be for my benefit rather than the Court's, so I think in terms of this I'd really like to thank you for the answers that you have given to me this morning.

A. Tēnā koe, Mr Pou. All the best.

**THE COURT: JUDGE SMITH**

Thank you, Mr Pou, and I think that ends the questions in cross, unless I've missed someone. Speak now. Mr MacRae, I'll revert to you for any questions  
5 arising. I'm assuming they're relatively short, but if they're longer we might take the break now. How long do you think you'll be?

**MR MACRAE:**

I think I'm likely to go past quarter past 11, Sir.

10 **THE COURT: JUDGE SMITH**

Why don't we take the break now and recommence and you can ask your re-examination, then any questions of the Court and I suspect there may be a few. So we'll take a half hour break. It's 11.05 now, so 11.35 we'll recommence, thank you.

15 **COURT ADJOURNS: 11.07 AM**

**COURT RESUMES: 11.35 AM****RE-EXAMINATION: MR MACRAE**

Q. Mr Te Rangi if we can all go back to Ms McGrath's cross-examination, do you remember that. She asked you whether at the council's hearing of the offshore application you appeared as a representative of MBL and I think you didn't disagree at least with that proposition. Do you remember who from MBL, that is company MBL, gave evidence at that hearing?

A. Callum McCallum.

Q. Did his evidence speak for the company and its views on the application and its operations, do you recall?

A. Yes it did.

Q. Were you representing MBL in the sense that Mr McCallum was?

A. Not directly in terms of MBL as an organisation and its activities associated with sand extraction.

Q. So whose views do your evidence state, whose views are stated in your evidence?

A. My own as the agreement, or my service has been set up, established, along the lines of relationship advocacy.

Q. Did anyone at MBL attempt to influence your views or the way in which you expressed them in your evidence?

A. I certainly had discussions with Callum McCallum and his operations officer at the time, Shane Alsop. That was pretty much the extent of discussions. We did cover off opportunities to see the sand extraction activities first-hand or in action and that involved taking a sand extraction trip on the *William Fraser* from its berth at the Port of Auckland out to the area of the activities of sand extraction and return, getting first-hand directed insight into how that vessel goes about its activities. That's about it.

Q. Did that involvement help inform your understanding of the application and your views on it?

1140

A. Yes, certainly did, informed the process of the numbers of steps involved in the preparation, the journey and, of course, the points at which stages

of that journey were recorded out to the site, the activity involved in recording where exactly the vessel had gone to volumes extracted, the weather conditions and everything else insofar as that activity, and then of course the handover between those that had a direct part to play in the activity like navigation and (inaudible 11:40:55) of the vessel. It wasn't as though it was in the hands of one person, there were several different roles and functions throughout that process that we were able to observe as part of that field trip.

Q. So, just coming back to an earlier question. Given that information, whose is the views expressed in your statement of evidence?

A. Those are my views as I've set out in the two statements of 23<sup>rd</sup> of December and the 11<sup>th</sup> of May 2023.

Q. Can I take you forward a little to a question from Ms Black. She asked you whether you thought it was appropriate to substitute your views for the views of others and she was referring, particularly, I think, to her client, as the Pakiri G Trust and people associated with the trust, and I think you said, no, that wasn't your intention, but is that what you're asking the Court to do, to substitute your views for the views of others?

A. No, it's not.

Q. So, how are you asking the Court to consider your evidence?

A. Can you rephrase, I mean re-set the question again, please?

Q. In what sense are you – sorry if I wasn't clear – in what sense are you asking the Court to consider your evidence, as a substitution for other views or in some other way?

A. I guess from certainly the December 2022 (inaudible 11:43:24) of evidence and responses made in that statement of the evidence the scope of the applications has changed and by that what I understood in December of 2022, being three distinct applications, have now progressed into a possible proposal that had reduced the three down to one, just area of activity or area of interest for that application is certainly different without what was there in December 2023 and I guess the consideration of those opinions aligned to the refreshed application, the comments that would've been attributed to the inshore component back

in December, for instance, are no longer valid in light of where the proposal had been re-focused or refreshed in July of 2023.

1145

5 Q. Taking into account those changes, are there any conclusions in your evidence that you have changed or you consider you should change?

10 A. I think the point that was raised and it's at paragraph 134 on page 553, I think brings that into direct focus. My opinion that the sand extraction activity from three sites overall, I think that needs to be amended to now read "from the offshore site". And I mean that offshore site without the detail of co-ordinates or adding another question of a map to the already complicated context.

15 Q. The changes of course have had complications for a number of witnesses and to some extent that's been covered prior to them giving their evidence. In your case the distinctions that you make in your evidence are perhaps not quite so clear and so I'm just asking you really in response to some of the questions you've been asked in cross-examination whether any of the other conclusions in your evidence need to, at least you consider you have changed will need to be amended to take account of the changes you've just referred to.

20 A. You have a direct answer for all of the evidence that I've submitted other than the alignment with that paragraph 134 and so far as the offshore proposal as at that December date.

Q. Is there any other conclusion stated in your evidence that you feel you need to reconsider that springs to mind as a result of the changes?

25 A. I couldn't give you an immediate answer to that. I haven't gone through that statement of evidence to draw that same conclusion.

Q. Well, by all means, Mr Te Rangi, just refresh your memory briefly on the topics that you've covered and advise the Court whether there's anything you wish to revise or change?

30 A. Well, I do make reference to the application areas and the activities. But paragraph 26 talks about three applications with different depth and boundaries. I guess I would have to suggest that there's possibly 26(a), 26(b) are no longer relevant. Is that the degree of response we should be giving?

Q. My question, Mr Te Rangi, is really addressing your conclusions rather than the detail of the applications. So, your conclusions I think are summarised at the end have stated on an issue by issue basis through your evidence. Is there anything that occurs to you that you wish to change?

A. (no audible answer 11:49:15).

**THE COURT: JUDGE SMITH**

I don't know that this is assisting us, Mr MacRae. I've never had questions in re-examination essentially asking the witness what bits of his evidence he wants to change, otherwise it's opened up for cross-examination again. So, I think given his hesitation I think he's made the point that he accepts that there's different areas but, as I understand it, most of the other issues have been discussed in cross-examination and I think it would be far too complex for him or I must say anyone else to ever try and reframe his evidence on that basis.

That's what cross-examination is for.

1150

**MR MACRAE:**

Well, Sir, quite. And I'm endeavouring to cover what has now become a slightly difficult issue because, as with a number of the applicant's witnesses, we haven't attempted to correct in examination-in-chief some of the obvious –

**THE COURT: JUDGE SMITH**

I don't understand that to be the issue in this case. The issue in this case is the opinions that were expressed about the effects on Ngāti Manuhiri in particular. That's been covered by cross-examination. Unless you've got some question to ask about the specifics of that, we should move on.

**MR MACRAE:**

Yes, all right, Sir. thank you. I'll move on.

**RE-EXAMINATION CONTINUES: MR MACRAE**

Q. Mr Te Rangi, you were asked quite extensively by Mr Pou, and the matter had arisen earlier in the evidence of Mr Thompson, about the overlapping claims by Te Uri O Hau, Ngāti Manuhiri and some other groups, north of Te Arai, south of Te Arai, over the Mahurangi, over to Kaipara and further north. What is the basis on your – and particularly, sorry, they're focused on the boundary, Mr Pou's questions particularly focused on the boundary that you defined in your evidence north and south of Te Arai Point, so as Te Arai as a boundary. In what sense is Te Arai a boundary from a Te Uri O Hau perspective?

A. The prominence of the area and like in a number of geographic markers the name Te Arai talks about a natural barrier. In this case and in the case of Te Uri O Hau they have used it as their marker of an area of interest that they hold. I guess what has happened over time is that it has also been adopted by local government to distinguish an area of interest between two bodies, Northland Regional Council, Kaipara District Council to the north, and of course Auckland Council. So there's a part that Te Uri O Hau associate with Te Arai and it's in the outgiven of providing a genealogy spread that identifies who and how Te Uri O Hau are connected. So in this instance, Te Arai is also a landing point area for the waka *Moekākara* of which the ancestor Tahuhunui-o-rangi and his descendants arrived there. Ngāti Whātua as the iwi group to which Te Uri O Hau connect with, also shares in the inclusion of Ngai Tahu or the descendants of Tahuhunui-o-rangi in their profile. So we get to a point if you like about Te Arai in one context is viewed as a boundary that separates one group from another, or it is also used in reference as a point where there is likely shared interests. And I'm not so sure whether we do justice, we collectively as society, do justice to making proper reference to areas that are shared compared with areas that are exclusively one over the other. And if Te Arai is to be viewed in its totality, my thinking is that it is a point where there are obviously shared interests. If we come down through the ages and I'm expecting some of these questions will arise, to 1825, Te Arai, Mangawhai, is also the area where the waka under the command of the Te Puna Hōne Heke, landed and

that group made their way inland from the east coast right through Kaiwaka and of course the accounts taken there of that major battle. So over time there have been markers, if you like, of the significance of these places and if the current point of significance is to denote the separation of one local government territory from another, then you move back to a period of definition of an area through a deed of settlement. Here you have two groups that have obviously exercised shared interest in that particular area and then you move to a period pre-treaty and go right back into the time of ocean and coastal travels of the forebears who make reference to previously around ancestors such as Tau Rarangi and the waka *Waikaraka*. The other part of that is Ngāti Whātua also has its own history, it talks of their waka *Mau Ki To Rangi*, or not their waka, but the waka *Mau Kaia To Rangi* making a journey from the South Pacific, arriving in Mauri Whenua in sight of an area called Nuku Noa, which is not Aotearoa or New Zealand, but Nukunonu. So that account talks of the waka *Mau Kaia To Rangi* travelling south, calling in to Rakau Mangamma, latterly called Cape Brett. Calling into Manaia. Calling into *Te Moanaui-ā-Toi*, without being specific calling into Tauranga Moana and calling into the mouth of the Waiapu River. And then making its journey back up the East Coast, around the Cape and then entering into Kaipara Moana which, incidentally the identity has, the identity of Ngāti Whātua has been attributed to the Kaipara based on the path that the waka *Mau Kaia To Rangi* traversed. And I think there is, sort of, comparisons between one group having identity markers of both eastern and western seaboard as opposed to other groups who have just a single coastal identity. But Te Uri O Hau for instance have showed their area being spread across that middle region out Te Arai. I think the point about Te Arai as a boundary marker in modern times needs to also connect with the traditional references to Te Arai and I would hazard a guess that each of Te Uri O Hau and Ngāti Manuhiri will have their own narrative that runs with Te Arai as well. What I'm articulating and trying to relate here is the position that we have come to take as dependents of Ngāti Whātua. Kia ora.



Q. Did the battle of 1825 have effects of Te Uri O Hau?

A. I contextualise it by referring to the period when the (inaudible 12:00:32) or the implements of encounter were of a magnitude that looked at one side having 100 muskets and the other side having two. Te Uri O Hau were part of the group that had two muskets and the accounts that we have of that engagement, or that encounter, talks of the change of fresh water colour in the Waimauku Stream and would suggest that the biggest impact would've come from, or would have been upon the descendants of Te Uri O Hau being the principal group within that Kaiwaka area. And just to give it more context, it is sort of in the proximity of a kilometre from the Four Square shop in Kaiwaka, as you travel the Kaiwaka Mangawhai link. One of the outstanding components of the impact of that engagement, or that encounter in 1825, was the retreat, if you like, of Ngapuhi from that battle. There is nothing to suggest that they would've exercised their victor rights or their rights of victory by the acquisition of any land holdings. So, it's completely understood that a battle did take place and Te Uri O Hau would've definitely been at the higher end of impact from that encounter.

Q. And, in terms of the on-going impact that you've described, does that have any relevance to the absence of a marae or the relatively sparse representation of Te Uri O Hau at Mangawhai and in the Mangawhai Pakiri embayment?

A. The Ngāti Whātua narrative of that area, of the Mangapai area, certainly gives an account of the period from 1825 and the battle that took place at Te Karanganui. I think we'd like to follow through with a connection to those places that were utilised to lay to rest, if you like, those that perished in that encounter. So, as opposed to looking for structural presence of buildings or complexes that we understand in this contemporary time I think there are places that are certainly referred to in the Ngāti Whātua narrative. They talk about the significance of areas that were utilised to lay to rest those that perished in that encounter. And if you were to follow the direct route from Kaiwaka out to the Mangawhai coast, there are places that are hosting, if you like, grounds where those who perished

were laid to rest. But I dare say if there were some of, all people from both sides would have been laid to rest in those places.

**QUESTIONS FROM THE COURT: COMMISSIONER MYERS**

5 Q. Tēnā koe, Mr Te Rangi. I just had a question around you, I'd just like to acknowledge your kōrero just before. It was very enlightening. You talk about kaitiaki or the role of kaitiaki in protecting cultural values and your paragraphs from 50 going onto 55, there's a lot of discussion there around mauri and restoration and I was just wondering from Te Uri O Hau what Te Uri O Hau sees as opportunities for restoration in the  
10 Pakiri-Mangawhai embayment?

A. Thank you, Commissioner Myers. I think it's important that, well my response is predicated on what Te Uri O Hau and the descendants of Kaipara moana have swung in behind a reduction of the sediment or the impact of sediment on Kaipara, Kaipara moana. And that is really trying  
15 to manage that impact from the headwaters of the catchments and working towards the centre of the moana perhaps. I would probably offer a response that followed the same kind of pattern working off the riparian margins of the main river systems, including the tributaries and follow the steps of excluding livestock, encouraging the growth of natives, selected  
20 native plants that are hardy enough and capable and have the growth capacity for such areas. And the last component is finding creative ways to keep an alignment with a economic return or a productive return towards the land use, decisions or methods being applied there. And in both instances we've seen areas that have been tried in the quest of  
25 managing the advance of sand dunes. So both Mahurangi Forest, Woodhill Forest, Mahurangi Forest, Pouto Peninsula Forest and the work of the Farnsworth family and on and on it goes, both went down the same track, plants of marram grass followed up with *Pinus radiata*. In some instances, it hasn't worked too well, and I guess this idea of  
30 re-establishing the native cover seemed an option that would provide far more opportunities to encourage the biodiversity, the ecosystem, the song, you know, the bird song, the chorus and the presence of what would sustain that. And it's quite a holistic cyclic way of following through with

that. And I guess with Te Uri O Hau and Ngāti Manuhiri, both groups have been involved at different ends of that what used to be the Mahurangi State Forest. I'm more familiar with how we've tried to work that model out in the Kaipara moana context and Te Uri O Hau has certainly been a big part of that exercise. Kia ora.

Q. Kia ora, thank you. From reading some of the other evidence, I think so Te Uri O Hau and Ngāti Manuhiri are involved in predator control as well along that coast, I think particularly for the tara iti?

A. Yes. That's right. If I can make a comment about tara iti and the work that's going on with that entity, the Tara Iti Trust. From a Ngāti Whātua perspective and from a sort of coastal management perspective, this remediation effort that we talk about from the Kaipara moana perspective, there's the Papakanui sites the tara iti are occupying, there's also the Manukapua sites that tara iti are occupying, and then you have Pakiri, then you have Waipu. Well our interest is to try and look at the complete area of Ngāti Whātua as opposed to the four individual areas, and what we're trying to do is find similarities on what has worked with those particular species and to look at possibilities of the same measures and steps for other varieties, for other types of the, you know, line-up of these creatures and native birds.

Q. Kia ora, thank you for your responses. Those are my questions, my pātai, thank you.

#### **QUESTIONS FROM THE COURT: SPECIAL ADVISOR HOWIE**

Q. Good afternoon, Mr Te Rangi.

A. Tēnā koe, Mr Howie.

Q. I would like to just have your response on the area of interest of Ngāti Whātua. Is it sort of a large part of Auckland and a bit of Northland?

A. Yes, it certainly is, Mr Howie. My narrative goes like the Maunganui Bluff out on the west coast south of Waipoua Forest running down that western seaboard to the north head of the Manukau, following the northern coastline of the Manukau Harbour and to a point on the Tāmaki River, going out the Tāmaki River to the north head of the Tāmaki River, and following the eastward seaboard all the way to Mount Mania as a

landmark, and then in a line that goes from Mount Mania inland in a north-westerly direction to a place called Whatitiri, just north-west of Whangarei, and from Whatitiri in another line that goes to the highest peak in Northland, Tutamoe, and from Tutumoe back out to Maunganui Bluff. That's the narrative that I'm familiar with and I've understood to be the area of interest for Ngāti Whātua.

1215

Q. You said that Ngāti Whātua was concerned or interested, concerned really, I suppose, about the supply of materials, aggregate and sand and cement and so forth for the Auckland and construction in general, in the area. Have I got that right?

A. Yes. Yes, you have, Mr Howie.

Q. And you also mentioned, I think, that there were occasions where Ngāti Whātua should lead and there were occasions when Ngāti Whātua should support, have I got that right?

A. That's right, Mr Howie, that's right. But I was trying to discern or differentiate between the tribal affairs across that entire area and the kind of direction and strategic thinking and leadership that a governance group could provide as opposed to the business as usual, the day-to-day activities, the on-the-ground implementation and operation and at this level of discussion here there would be an overall Ngāti Whātua position on infrastructure. But where it concerned the area of Te Uri O Hau as they've portrayed as being their primary area of interest that would then defer to Te Uri O Hau to be directly involved in the primary decision-making supported by iwi. It's a constant challenge to encourage our kin folk to understand the time to perhaps take a secondary position and defer to those that are in residence and located right where the infrastructure, where the activity is being focused on. And, Mr Howie, we've exercised this is a couple of projects and one that I must refer to is the Waiwera to Warkworth highway where five hapū groups came together and created a relationship based on engagement over the construction of that piece of infrastructure. A whole range of management plans were put together but, primarily, there was Te Uri O Hau represented, Ngāti Manuhiri represented, Ngāti Rongo through the

people of the Kaipara were represented, Ngāti Whātua were represented by Te Runanga O Ngāti Whātua and, at the outset, space and an invitation was also extended to Ngāti Pāoa. As the relationship took shape Ngāti stepped back in preference to apply a higher priority for other activities and the relationship continued right through till the completion of that project between Manuhiri, Te Uri O Hau, Te Rūnanga o Ngāti Whātua on behalf of Ngāti Whātua and the people of Kaipara. That relationship was between Waka Kotahi as their role and function as a Crown agency and then the third party was the joint venture public-private partnership of the Fletcher (inaudible 12:20:09) Group. We understand that there will be some political decisions on the next leg of that State Highway from Warkworth to the northern side of Te Anau, that's one such opportunity that is still amongst all of these same parties Mr Howie.

Q. Yes, thank you very interesting. Just coming back to the concrete, if I could put it that way, issue and the overall supply of materials for concrete from area that Ngāti Whātua is interested in. Does it have, has Ngāti Whātua developed an understanding or a desire for a certain grouping of those supply sources, has it got a strategic plan in respect of the supply of those materials?

A. It's at a very infant stage Mr Howie. We have been tending to deal with these sources, or the resources, in isolation from one another and the motivation behind engaging with Mangawhai Head and Te Uri O Hau is to try and encourage a more connected approach to infrastructure. When you look at that same area that I've described you have the cement being produced at the north-eastern corner at Portland.

Q. Yes.

A. Then you have the pockets of aggregate pits or quarries happening throughout that same area and low and behold you have the east coast sands of Pakiri and the Kaipara sands of Kaipara Moana. The only ingredient missing is fresh water and there's a fair bit of that floating around the place right now.

Q. Yes, that's right. So at this stage it's too early for you to say that Ngāti Whātua has got a, well I might say global plan for this material, you

know, for instance, if Auckland requires a certain amount of sand for concrete it can't get it from say Pakiri, it goes over to Kaipara, then you have sort of one part of Ngāti Whātua being affected by another part and you haven't really approached –

5 A. I guess.

Q. – that as a resolution yet?

A. We are definitely working on that Mr Howie and, in light of the growth and the patterns of growth, that one has come to understand since the amalgamation of the seven councils to form Warkworth Super City, we think, we have thought along the lines of the area that would likely be utilised for further development are leaning more to the north-west than what we have come to see probably heading into the growing areas of Pukekohe and South Auckland. So that already starts to generate the need, if you like, and the drive as motivation to create a sort of global plan that utilises these natural resources. We did consider for instance the conversion of the 700 tonnes of sediment that end up in the Kaipara Moana per day into some kind of material for the infrastructure required for that area. But our expert advice led us to believe it would be a very costly exercise. Far cheaper to retain that sediment at the point of source or at the source points than it is to extract it once it gets into the middle of the harbour.

1225

Q. Yes, fair enough. Do you have a timescale on when you might reach some kind of global view of these things?

25 A. We give ourselves 18 months.

Q. Yes.

A. There's a couple of factors that are driving this. One is the pending deed of settlement that Ngāti Whātua has with the Crown for its final historical claims which, interestingly, has a portion in it that looks at the remediation of the Kaipara Moana as part of the legislation. Then, of course, there's the growth if you like, or the emergence of a post-settlement governance entity to take on the job of connecting and promoting that thought of the time to lead and the time to support. We are not quite sure whether we

should start the genetic breeding programme now to grow the next generation of leadership Mr Howie.

Q. Yes, fair enough. Thank you Mr Te Rangi, that's very interesting. Thank you Sir.

## 5 QUESTIONS FROM THE COURT: COMMISSIONER PRIME

Q. Tēnā koe e kare.

A. Tēnā koe Kevin (inaudible 12:26:40).

Q. I have got a number of questions and many of them have already been answered so I will just go through them as, in the order that I have them.

10 Can I refer you first to paragraph 23 of your evidence-in-chief. How do you feel that the applicants have kept Māori cultural values intact?

A. I think the organisation, McCullum Brothers, have promoted a lot of their activities around the relationships that they have formed from their base in the Clevedon area and that association, they have sort branched out if you like from their activities in the aggregate business, the coastal shipping and barging and then the aquacultural activities that their group, McCullum Brothers Limited, have been involved in. Yes, I think their efforts have been focussed in that area, in those areas in those activities. And that paragraph was talking about their quest as an organisation to continue that pathway, to continue that approach, if you like, of building and strengthening the relationships that they have with groups such as those at Pakiri and those that would be involved in their sand extraction proposal.

15

20

Q. Can I take you to paragraph 29 of your evidence please. I just want to know what is the sort of era that Toi was around?

25

1230

A. The era of Toi-te-huatahi, I would suggest he was post-Kupe and probably (inaudible 12:30:13).

Q. Ka pai. No, I know, yes, so he's post-Kupe. I understand (inaudible 12:30:27) in that era. Ka pai. Can I take you to paragraph 38 please of your evidence.

30

A. Āe.

Q. It's really more generic really. I just want to ask do you feel that your advice has assisted in breaking down the barriers in recognition of mātauranga Māori? Your advice to MBL I mean.

5 A. I think, Commissioner Prime, it's certainly provided context that the same kind of relationships that they've been striving for in their business as a family, I've been encouraged by the results of that, the nature of how staff or their employees have prospered under their time with the McCallum Group. It, my response is really built on providing the context of strength in relationships and keeping an alignment with the kind of activity that they  
10 have been involved in as a family and as a group spread across the aggregate extractive industry, coastal shipping, trucking or transport and then of course marine farming and aquiculture and the sort of areas that have a high degree of uri, hapū and iwi involvement, we look across these coastal areas. And I think that relationship/partnership idea is one that  
15 hopefully will grow from this. We've talked about, Commissioner Prime, we've talked about the need to grow matters and technical environmental managers, if you like, who have that sort of insight and operate from that premise.

20 Q. (inaudible 12:33:35), kia ora, (inaudible 12:33:36). Thank you. Can I refer you to paragraph 41 please.

A. Āe.

Q. And I wondered if you can give examples of when MBL have taken into consideration and adapted accordingly, as you put it in that, have you specific instances?

25 A. I think their transition from Kaipara Limited, the previous consent holders and the kind of relationship that that group had with Ngāti Wai through that liaison agreement and the attempt that they made to follow through with what the agreement was actually talking about, putting some flesh on the performance indicators or the criteria or the references within that  
30 agreement of raising concerns, having face-to-face meetings and looking at aspects that could be changed or should be changed in the way they were going about their business. I think there's that angle of how they were trying to alter and change a sort of profile of the sand extraction business from how it used to happen under the former consent holders.



Then, within that, is taking into account what practices were happening on the new vessel, the *William Fraser*, how that also followed on from taking some of the advisors and leadership of Ngāti Wai out onto that vessel from a time when Witi McMath and Hori Parata were involved.

5 They were on a vessel that is not so much, you know, it's not so active in sand extraction, but they were able to utilise some of the advice that came through that exchange with Hori Parata and Witi McMath in those early years of their operations as the extractors.

10 Q. Thank you for that, and did you feel that natural transition because the marae of Ngāti Manuhiri gravitates more to Ngāti Wai that that naturally transferred over?

A. I think in the, when MBL, when McCallums took over that agreement it was to confirm and to ensure that that was happening. The indicators weren't so clear of it happening in the past so this time around it was making sure that McCallums followed through with the engagements, direct engagement, kanohi ki te kanohi, face-to-face with Ngāti Whātua Trust Board who essentially held the agreement and that agreement was based on a relationship arrangement with Omaha marae and McCallums have been really seeking to make sure that that does happen for the duration of that agreement.

20 Q. Ka pai. Can I refer you just down the page to paragraph 44. Are you aware of any such tapu areas identified by the manu whenua in that area that you refer to?

A. Not in the marine space.

25 Q. Ka pai. I'll move on, thank you. Can I refer you to paragraph 46 please. As a very fluent Māori speaker I tend to agree with you in that paragraph very much so but as a fluent Māori speaker what's your definition of the word tāonga as you understand it in your general understanding of te reo Māori?

30 1240

A. Kia ora. I think the first point about tāonga is the degree of preciousness and that precious value is really driven by how unique it is, how rare it is, how sacred it is. Yeah, Kevin, pai kē pea kia kōrero pēnei atu au ki a koe, māku e whakapākehā a muri ake. Ka kōrerohia te kupu 'taonga' ki te

taha o te kupu 'tāhae' ki tā ngā uri o Mātaatua, o Ngāti Awa, o Tūhoe ka kōrero: "Anei taku tāhae." Ki a tāua ki te wā kāinga ka kōrero o tātou karani ka kōrero: "Anei waku taonga waku mokopuna." Nā, ka haere atu te taringa kāhore e tino mārama ana ki te kupu 'tāhae' e whakamahi ana e ngā uri o Te Urewera ka pōhēhē kōrero kē ana mō tētahi korokē tutu he tāhae te mahi, erangi ki a rātou ana ko momoe e kōrerohia nei: "Tēnā koe e taku tāhae," kua pā ki te rākau, kua pā ki te whatumanawa. Ana pērā i ngā kōrero a o tātou karani e kōrero ai: "Anei waku taonga waku mokopuna."

10 Q. Kia ora.

A. He tino uaua kāre anō koe i tērā reanga e kōrero ana mō a rātou ake tamariki he taonga, erangi ka puta te reanga tuarua kē pea kātahi anō ka puta te whakaaro e mea nei: "A, anei te momo o te taonga." So I guess that value or that connection of whatever is being described to the individual has quite a personal angle to it and the personal angle can be something that develops over time. Unfortunately, that gets taken over by the material value that's loaded on to these items, and I was using the explanation in a dialectical sense that the people of Ngāti Awa, Whakatōhea, Tūhoe region have a dialectical term called 'tāhae' which talks about endearment of a descendant and in the northern dialect if you're described as a 'tāhae' it hasn't got very pleasant connotations to it and they are at the extreme ends of this continuum that we're talking about. Unfortunately, the concept of taonga can be overtaken by the monetary value that's loaded on to the item. The last painting of Goldie, of Te Hau Takiri Wharepapa was publicly valued at 1.8 million to the uri o Ngāti Horahia and Kevin. Ko te hua o tērā 1.8 million ko te hua ki ngā uri o Ngāti Horahia. Āe marika, ko te tupuna tēnei ko Te Hau Takiri Wharepapa. Nā, kei konā te wāhanga e kōrerohia nei it's pretty difficult if it's not contextualised properly I think is what I was trying in paragraph 46.

30

Q. So, would you say then, like you've just given an example of the Goldie painting of Te Hau Takiri Wharepapa, that would be a tāonga definitely to the uri, to the descendants of that person if someone's prepared to pay a million dollars plus for it, it must be a tāonga to them as well?

A. That's right, yes.

Q. Okay.

A. (Māori 12:44:41) Pākehā.

Q. Yes.

- 5 A. It'll be ko te – yes, but the motivators for that they must be seen in two different contexts. One is seeing the pure material value, monetary value, and the other is seeing the value of who that person represents.

1245

- 10 Q. Ka pai. No, thank you. Some of the questions have already been asked so I am just ripping my pages. Can we go to paragraph 52 please? I just want to ask, what are some of those taonga species that you refer to right at the end of that paragraph? Have you got examples?

- 15 A. Yes I do. Some of them are certainly in the marine space is tuna and when I talk about tuna in the marine space it's the passage and the pathway that tuna take to go from places like Pakotai all the way to Tonga and come back as a reinvented, reincarnated elver. The right time to catch the tuna, if you are seeking the premium steak of the tuna, is when they are heading out to the ocean. And of course that is a very concentrated period of time that relies on waterflow and it also relies on
- 20 the state of those species to make that journey so they're in prime condition. Then there are other times outside of that period where depending on the season will also give you an indication of where and which species should be targeted for harvest. Tuna is probably, eel I'm talking about, is one such example. Unfortunately, I never got to see and
- 25 have yet to see piharau in the natural state in the Mangakāhia River, but our mother used to talk about it, our grandmother used to talk about it, and they would use markers of that species being torewai. Once the torewai disappeared, I can remember seeing torewai in the Mangakāhia River, but it's been a long time since torewai have grown in
- 30 the river. Commissioner Prime, our grandmother and mother used to say: "Once the torewai disappeared no more piharau," and I guess that's the kind of mauri restoration exercise that one could engage into. There's no way that the piharau are going to just drop out of the sky and suddenly appear.

Q. No. Ka pai.

A. You've got to create the right conditions.

Q. Kua mārama.

A. Āe.

5 Q. Kua pai, kua mārama ana tō whakautu. Yes, thank you that's very clear.

A. Yes.

Q. I appreciate that. Can I take you to paragraph 58 please?

A. Thank you, āe.

Q. Are you very familiar with the mechanism that actually takes up the sand –

10 A. Yes, I have been–

Q. – on the William Fraser?

A. I have been on the William Fraser and observed that process, yes.

Q. Is it capable of sucking up – all I've got here are scallops, pipi, fish, is it capable of sucking up such species as those?

15 A. What I've seen in terms of the drag head, there are thin protection mechanisms in there that you would have to be a pretty sort of slim piece of shellfish to make its way past the head itself. I would say it would disturb them more than draw it up through like a vacuum cleaner.

1250

20 Q. So, it would have to be very small to get through the, I was going to say filter. It's not a filter. It's more a grille.

A. Drag head.

Q. Ka pai. Has that CLG, in paragraph 66, sorry, has that CLG been informed yet, the group?

25 A. No, it hasn't.

Q. But it'll only be informed if the consent is granted?

A. That's right.

Q. Paragraph 104.

A. Yes.

30 Q. Right at the end of that you refer to "which had benefited Omaha marae significantly by virtue of their links to Ngāti Wai". Can you reference documentation in the evidence that shows that?

A. I can't directly show the reference document other than perhaps making a comment around the agreement, the liaison agreement that MBL took

over from Kaipara Limited and I would have to ask counsel MacRae if that document is referenced anywhere in the evidence.

**MR MACRAE:**

5 It's in the bundle, your Honour.

**QUESTIONS FROM THE COURT CONTINUES: COMMISSIONER PRIME**

Q. Could you tell me where? I actually was trying to find it, but I couldn't find it.

A. We're getting that for you, Commissioner.

10

**MR MACRAE:**

C4 and Ms Hopkins will get the page. 1405 is the first page.

**THE COURT: COMMISSIONER PRIME**

15 CB1405 was it?

**MR MACRAE:**

Yes.

20 **THE COURT: COMMISSIONER PRIME**

That's fine I can check it myself after. It doesn't have to be brought up. I can just keep them there.

**QUESTIONS FROM THE COURT CONTINUES: COMMISSIONER PRIME**

25 Q. In paragraph 107 that refers solely to Te Uri o Hau rohe, doesn't it, the reference there?

A. Āe.

Q. No, kua mārama. No, that's okay. There was a question I asked Mr Thompson yesterday was the Ngāi Tāhuhu that he refers to in the kaitiakitanga report for Te Uri o Hau, is that the same Ngāi Tāhuhu that occupied the Pouerua area from memory?

30

A. Hika mārika.

Q. It is?

A. Āe.

Q. Kia ora.

A. Āe.

Q. So that was where Rāhiri's wife came from Te Ahuaiti.

5 A. If you're Ngāti Rangi and Te Uri Taniwha I would say I could agree with that, but if you're like you and I with links to Mangakāhia the claims are i Pakotai kē ā Ahuaiti e noho ana ko te ingoa o te pā ko Te Matā i raro iho o te tarai o Rāhiri. But it's the same tupuna Commissioner Prime.

10 Q. Yes. You've said the same for Ngāti Rangi was the one around the Ngāwhā area that's currently occupied?

A. Āe, the same.

Q. Kia ora. What about—

A. Unless you're Hone Sadler and he'll start claiming: "Oh, no, no, it's everything revolved around Moerewa, and Ngāti Moerewa and Tautoro.

15 Q. Āe. The Ngāti Kura, was that the same one at Rāwhiti like these days in Ngātiwai?

A. Āe.

Q. Kia ora.

20 A. Commissioner Prime I think that Ngāti Kura is probably the narrative that is often overlooked when you think of the path that Mahuhu-ki-te-rangi took. Ko ngā kōrero e mea ana i peka atu ki Rakaumangamanga and so Ngāti Kura kei konā tonu ngā kōrero. I peka atu ki Manaia so there is that link and connection, Commissioner Prime.

25 Q. Kia ora. Thank you very much. I really appreciate your answers and the frankness. Kia ora.

A. Tēnā koe.

**JUDGE SMITH ADDRESSES COUNSEL/PARTIES – TIMING ISSUES**  
(12:57:06)

**COURT ADJOURNS: 1.05 PM**

30

**COURT RESUMES: 2.15 PM****THE COURT: JUDGE SMITH**

Judge Warren, you had some questions for Mr Te Rangi.

**QUESTIONS FROM THE COURT: JUDGE WARREN**

- 5 Q. Tēnā koe, Tame.
- A. Tēnā koe, Judge Warren.
- Q. I want to start by having a discussion on tikanga and just running some concepts past you to get an understanding from your expertise about tikanga. Would you agree with me that when we look at this concept of
- 10 tikanga on the one hand, there are tikanga values or principles and on the other hand there are customary practices. Do you agree with that?
- A. Yes, I do.
- Q. Many of these values are constant and remain the same but the way in which they are implemented or manifest can be different for different
- 15 groups and different environments.
- A. And localities Your Honour yes.
- Q. So customary practices can change but those underlying principles and values remain in place, steadfast.
- A. Yes Your Honour.
- 20 Q. On occasions, depending on the context and we will have a chat about context in a minute, those practices can change quite quickly. For example, in the COVID context where *Harirū* and hongī by many tribes was suspended for obvious reasons.
- A. Yes, most certainly.
- 25 Q. There's flexibility and an adaptability but again it's seeking to achieve those underlying principles and values that are generally common throughout Maoridom?
- A. Yes.
- Q. I think in your evidence you are saying in this context the values and
- 30 principles seem to be the same but in this case Ngāti Manuhiri and Te Uri O Hau come to the table with a different perception on how they manifest in the embayment area?

A. Yes, that's correct.

Q. Fundamentally, whatever those tikanga principles or values are and the customary practices they reflect those values, as a Court we shouldn't look at those in isolation, they are connected, there is an holistic lens that one should look at in understanding how they are applied and the relationship that those people have with area in question?

A. Yes, that's correct.

Q. You might have heard something I was well aware of in practice and that's the Privy Council decision of *Maguire* where I think it was either directly or quoting Lord Stern Sir. In the law context is everything and, of course, our Supreme Court has come out and said in tikanga context is everything. Would you agree with that statement?

A. Yes I would agree with that entirely.

Q. So I think when you were talking to others about taonga and those sorts of things it's context dependent as to whether an individual or a group labels something as a taonga or tapu or Noa, it depends on their context?

A. Yes, I would agree with that.

Q. The same with mauri, if we start with the proposition that everything has a mauri, whether it has been lost or can be mitigated or looked after, even if something has been developed, it's really comes back to the context in which we are looking at the mauri in question, or the resource in question?

A. Yes, that's correct.

Q. So all of those things, whether it's a taonga, whether it's tapu, the nature of the mauri, what tikanga values, what customary practices apply, all have to be considered and weighed to understand the relationship that the Māori groups with the particular resource or site?

A. Exactly, yes, I would agree with that Your Honour.

1420

Q. And the people best placed to determine those things are those who are connected to the resource through whakapapa, through ahi kaa, have that on-going relationship?

A. Yes, that's correct.

Q. I mean, there's a comment you made at paragraph 73 which I just want to pick up on in relation to the answer you've just given. You say: "Whilst



it is acknowledged that the relationship between manu whenua and their tikanga and tāonga is subjective, as is their appreciation for their ability to exercise kaitiakitanga,” you're not making a criticism there, are you, that somehow a subjective lens is a bad thing in tikanga terms?

5 A. No. Just trying to point out that across the relationship that manu whenua conduct there's also their ability to deliver on obligations and responsibilities they have as that group holding the status of manu whenua.

10 Q. So you're not suggesting that outsiders should come in with tikanga expertise and offer a view that the Court should give considerable weight to that evidence in an objective way like you would get an ecologist who's independent of the parties, you're not suggesting that at all?

A. No, not at all.

Q. So, it is what it is in terms of being subjective?

15 A. Yes.

Q. And that's one of the challenges?

A. Yes, exactly.

20 Q. Kai pai. So, I think we're all on the same page in terms of that context is really important and I just wanted to quickly go through with you, so I get a clear understanding, as to why you landed on the opinion that you did in your evidence on the application before the Court. So, we know and agree that there is more than one tribal group claiming customary interest in the extraction area?

A. Yes.

25 Q. And that's not uncommon?

A. That's right.

Q. And I think at paragraph 31 you do tell us that from your assessment all of the groups in front of this court hold the Pakiri embayment in high regard, that's not in question?

30 A. That's right.

Q. Would you agree with the evidence given by Mr Thompson yesterday that seemed to suggest that Te Uri O Hau's relationship with the Pakiri Mangawhai area was more on a seasonal extraction occupation as opposed to something more permanent?

A. Probably relative to the Pakiri area there would be those times that there would've been seasonal visits there. The frequency of Te Uri O Hau presence is probably more at the Mangawhai end of the embayment, like a more sort of regular, permanent – well, not permanent, but regular access and visits and times. Because their Deed of Settlement, your Honour, has a component of what they termed, in the late 1990s, nohoanga, where they were trying to capture this idea of groups setting off for harvesting purposes whether it was raw material or kai and they would go to certain parts of their rohe and those places became prominent or became significant in their Deed of Settlement and they decided to use the term nohoanga.

Q. But there's no doubt that we have Māori land in the Pakiri region, the still owners of that today, they seem to be aligned to Ngāti Manuhiri?

A. Yes.

Q. And Omaha Ngatiwai?

A. Yes.

Q. And I think his evidence was that in terms of the extraction area they claimed about 50% of that area, in terms of their customary domain. You don't disagree with that?

1425

A. No.

Q. And Ngāti Manuhiri are claiming 100%, you don't disagree with that?

A. No.

Q. So, we all know that both groups have completed historical treaty settlements and some of the early treaty settlements, obviously, and I didn't get a sense in the questioning to date or in the evidence that I've read that there were significant underlying treaty settlement politics at play. Am I right in that assessment, between those two groups?

A. That would be correct. That is correct but I guess that underlying component of it is the – it's more in the Ngāti Whātua context of the hapū going about their processes of claims and settlement and then the iwi plan coming in behind that and the underlying currents in that are aspects that were approached differently through those hapū (inaudible 14:26:30) Te Uri O Hau.

Q. But a far cry from the Auckland City context?

A. Yes.

Q. Where resource management processes were colliding with treaty settlement aspirations?

5 A. That's right, yes.

Q. So, we don't really have that context here?

A. No.

Q. And of course, no dispute, we know sand extraction's been coming out of Pakiri for at least the last 70 years and you wouldn't refute that these  
10 being historical protest by Māori, in particular, Ngāti Manuhiri, in regards to that sand extraction and that has continued to today?

A. That's right.

Q. And we know, of course, MBL have reduced their extraction area in the application. What's your assessment in terms of the context about the  
15 engagement? My lens on this, standing back from it, is it's pretty good, there's no major issues that people are raising about the nature and extent of the engagement by McCallum Bros with the various groups representing manu whenua?

A. I would agree with that assessment. There's been an attempt to perhaps  
20 change the nature of that early agreement, that liaison agreement that Kaipara Limited, or the Kaipara group had, to try and add more traction and currency, get more dialogue happening with Ngāti Wai and, of course, Omaha marae, yes, that challenge that has arisen and the commitment given by MBL to at least honour the duration and the points  
25 of agreement through that mechanism.

Q. But how would you assess it? I mean, a few examples, obviously the – and I think it's public knowledge that Waka Kotahi's engagement of the East/West link project was considered, we'll give it an A-plus type thing  
30 whereas on the Americas Cup consent there might've been a C-minus. Where would this fit in your experience, having been involved in all of those things over the years, in terms of engagement?

A. I think it would sit about the middle of those two projects. The positive parts of it is that in both cases there have been some quite solid examples of progress made by either of the two groups, Te Uri O Hau and Ngāti

Manuhiri in how they have approached similar issues. And when you look at the Mahurangi Crown forest and what each of the entities achieved in their settlement, or post settlement, I'd have to say the pathway that was taken by Ngāti Manuhiri had a stronger inclination of benefits for their members than the pathway that Te Uri O Hau took for their members. And I guess in trying to rationalise both of those it sort of leads to that position of saying between those two examples of the America's Cup and the East-West Link, I think the MBL relationship path with Manuhiri and Te Uri O Hau probably sits, yes, probably closer to the middle of both of those examples.

1430

Q. So there will be other matters of context but those were the main ones that stuck out to me, in factoring all of that in we know that Te Uri O Hau have landed in a position of initial support and Ngāti Manuhiri and other groups oppose. So if they agree that the engagement was, you know, a B+, all of the reports have been done, they have had advice, but they still land on opposition, what do we make of that in a tikanga concept looking at those values. I mean, and I guess fundamentally for me, why did you decide to offer an opinion on the application given your role as a relationship advocate?

A. I guess the underlying reason for that is something that Mr Howie raised around the future for infrastructure across the region. Having seen the growth and having had an active part in the first 10 years of the new Auckland Council, combined with what was promised in terms of State Highway One heading north, I'm not sure that we would be able to improve that status if we aren't going to devote some time into connecting these opportunities a little better than we have in the recent past. I guess, someone has already made reference to forces of this raw material or this natural material being the Kaipara Moana. I think in time we are going to have to really address what it is that we are wanting to do with the development and the infrastructure that's required if we are going to continue his path of growth and development across the Northland/Auckland region.

Q. So your lens on it probably is a wider one and that's partly why you gave the opinion?

A. Yes.

5 Q. Just coming back to this context. So we know in evidence that Te Uri O Hau came to the view that there would be limited or minimal cultural effects and you've agreed with that. But no one is saying, including you, that there are no cultural effects, they simply can be mitigated by the measures being offered by McCallum Brothers?

A. Yes, that's correct.

10 Q. Do you agree with the proposition that mauri is a taonga in and of itself? As distinct from the resource that is being spoken about, whether it be the coastal marine area or sand or a wahi tapu?

1435

15 A. I guess the difficulty with looking at mauri as a resource is trying to quantify it and I take the view that I think recognition of the state of mauri is probably the paramount position to be in as opposed to being in command of mauri. Like, do you know when things are not looking good and you can sort of get an indication that it's heading the wrong way. I think that is something that can be improved and we should encourage  
20 an understanding of at an individual level and people that hold positions of responsibility and, I guess, appointed obligations, should understand that as well.

Q. It's not how I –

A. I think it's, yes.

25 Q. So I read the evidence of Ngāti Manuhiri and others in particular as the sense that yes it's difficult to measure the comings and goings of mauri but it's that sense that you all get is *hau kāinga*, that if the resource goes under watch that is the biggest impact. If you are a tribe known for the best oysters, the best kinas, protecting Tara Iti, whatever, the horse  
30 mussels, and that goes under your watch, that is a significant and spiritual and psychological impact on the hau kāinga. Do you agree with that proposition, that there's that niggle in the back for those living on the coast, that they have that obligation and it is a heavy one in a modern context?

A. Yes, I certainly agree with that Your Honour and I think it's the ability to respond to that situation and the measures and steps that are taken to bring about a, well restoration in some cases, remediation in some other cases, revival in other cases. So I guess what I struggle with is this idea that we can commodify or quantify mauri in the same way. So, if I can just use this example Your Honour of the demise of the toheroa and in that context a critical indicator of the state of that toheroa or the state of that tāonga is the absence of pingao, and when you look at pingao and toheroa, to the uninitiated absolutely nothing connects the two, until you understand the process of the seeding pingao tumbling off the sand dunes, skipping across the frothy plankton that washes up in the king tides up into the dry area above the mean highwater mark and that encourages toheroa to spawn. So the pingao tumbles across that picking up the toheroa spat and seeding it along the frothy coast or the frothy part of the high water mark. But once the pingao was removed and marram grass replaced the pingao, that natural process was short-circuited. So we spend time and money blaming motorcars and dune buggies and all sorts of vehicles for the demise of toheroa. So there's that natural process alongside the photographic evidence of three furrowed ploughs being dragged along the length of the beach to convert that tāonga into canned toheroa soup because Queen Elizabeth had some when she came out on her Coronation visit. Now that's, you know, do we sort of lament the loss of the toheroa or the demise of the toheroa or do we try and get on and find out how to connect the components that bring about the restoration of the toheroa, and I think that's the level of encouragement that these types of relationships should be heading in my opinion.

1440

Q. Just on that and to finally just in terms of the mitigation being offered by MBL which in principle has been accepted by Te Uri O Hau, it's clear that you're supportive of that and it addresses the minor cultural effects that you say may exist in respect of the application. Having now listened to the questions and responded to them and replied to some of the evidence is there anything missing from that suite of options that you think could be

of assistance to the concerns being raised, in particular by Ngāti Manuhiri and those other groups that have submitted before us?

A. I couldn't give you a direct answer here and now. I've made age amount of notes in the time that I've not only tuned in but from material that I've read as well and I think there are some steps in there. I would probably take the opportunity to look at that question in the next round of discussions and after hearing the next two weeks of submissions but off the top of my head, apart from a purely rohe centric response to something that Mr Howie talked about having a global infrastructure development plan and the point about that is we know that there is another source over in the Kaipara but I think we don't want to end up being on the other end of the discussion and being the recipients of a hospital pass from the east coast to the west coast without having a better game plan than what we're dealing with now. So apart from that I'd like to say there is and there should be some adjustments or additions or amendments to the mitigation plan, a couple of other factors around that is the changes that have been made to the adjusted area of the activity out in the 25 to 40 metre region offshore and I just haven't quite got my own understanding of where that sits at the moment, your Honour. Kia ora.

Q. I'll leave it there and it may be that Judge Smith and the Court has a discussion about whether we can get that information from you at some point but (Maori 14:43:44).

A. (unclear 14:43:49), your Honour.

## 25 **QUESTIONS FROM THE COURT: JUDGE SMITH**

Q. Thank you Mr Te Rangi I'm pursuing a slightly separate line and to do so I need to talk to you first about Te Moananui ā Toi or Te Mana O Toi, are they the same thing?

A. Te Moananui ā Toi is the Tikapa Moana Hauraki Gulf, your Honour and –

30 Q. Yes I know but what I'm asking is whether there's a distinction between the Moananui and Te Mana because some people talk about Te Mana O Toi. Is it shorthand for Te Moananui?

A. I would say that when people make the reference to Te Mana O Toi they're talking about the influence that the same ancestor would've had over his descendants and over the area.

1445

5 Q. Okay. And so the area as I understand it is roughly that described I presume in the Hauraki Gulf Marine Park Act which starts off, just given the description I've got here, essentially starts from Mangawhai Heads over to Aotea, well on a north-west tangent so well above Aotea actually, then comes right around the outside of the Coromandel, it looks almost  
10 down to Waihi, and then includes all of the Firth of Thames, the Auckland Harbour. Is that what you mean by the Hauraki Gulf or is it a smaller subset of that area?

A. It's that wider descriptor, your Honour. There's probably an even broader description of that that was used in the Sea Change Hauraki Marine Plan.

15 Q. Well that's what I was going to move onto because Sea Change considered this very issue, didn't it?

A. Yes.

Q. About what is meant by Te Moana-nui-a-Toi and the Hauraki Gulf, and did it describe it more widely to include the Hen and Chicks as well or  
20 not?

A. Yes, it did. It went up as far as the Hen and Chicks and it even pretty much went to the north head of Tauranga moana. And it followed that Waikato Regional Council area that sort of goes on the western side of the Kaimai Ranges.

25 Q. So the short point is it's a very large area indeed, isn't it?

A. Yes, most certainly.

Q. And I mean I don't want to set percentages, but the Pakiri embayment would be a small portion of that total area?

A. Yes, your Honour.

30 Q. One assumes there are particular interests in relationship, so Ngāti Manuhiri in particular, between Aotea and Pakiri Beach and Cape Rodney and Bream Head if we can call it that, would you accept that, that if we see that as a sub-embayment if I can call it that?

A. Yes, most certainly.



Q. And that would have been because of the connections not only I presume for Te Uri o Hau but Ngāti Manuhiri in Hauturu, Aotea itself and obviously all of the smaller islands and fishing and other opportunities that arose in terms of kai moana?

5 A. Yes, yes your Honour.

Q. So my next question is you must be aware, because you obviously had a lot of experience in these sort of fields, that this Court has been faced with many concerns expressed by tangata whenua in relation to the degradation of kai moana generally and of course the condition of not only the Hauraki Gulf but many of the East Coast and West Coast of New Zealand, and I'll name two examples which you may be familiar with: the Mimiwhangata Bay of Island coast that's recently about seeking controls against fishing which –

A. Yes, yes your Honour.

15 Q. – involved a lot of tangata whenua and in fact the Māori Fisheries and a number of other groups including the Minister of Fisheries, et cetera. And that was argued on the basis that although that had been a marine reserve for some considerable time, it still wasn't adequately protecting the reefs or the sea life, you'll be aware of that?

20 A. Yes, your Honour, I am.

Q. And another good example is the Motiti case as it's called but again seeking protection of certain reefs because of the kina barrens, the loss of fisheries and the highly degraded state of the ecological environment in that area around Tauranga?

25 A. Yes, your Honour.

Q. And I'm assuming Ngāti Whātua has had similar experiences with degraded state not only of the Kaipara but other areas in which they're interested in a similar fashion, would that be fair?

A. That's correct, your Honour.

30 Q. And so that is essentially a national programme, and I won't go into the role of Fisheries in all of that or anything of that sort at the moment, but it must be said that we are starting from a situation where the fishery stocks in New Zealand are marginal at best one would have to say given the way they've been managed over the last 30 years or so?

A. Exactly, your Honour, agree with that.

Q. So we would expect, and I'm assuming your experience on Sea Change and for Ngāti Whātua, that the Hauraki Gulf with I've got to say the blazing light of the Goat Island Reserve, shows the same sort of degradation and similar problems with the ecological condition of the gulf interest, would you agree?

1450

A. Yes, I would agree with that.

Q. And you'll be aware of the study that showed that most, a goodly proportion of the fish found within the Gulf had genetic connections back to the Goat Island Reserve et cetera?

A. Yes, I would agree with that.

Q. And I'm assuming Ngāti Whatua and other groups are seeking to increase, and I presume Sea Change was one venue for that, improved protection and ecological improvement for the Gulf as a whole?

A. That's correct, yes your Honour.

Q. So to that extent there is no real difference between tangata whenua as to their concerns about the Hauraki Gulf or the coast of New Zealand at the current time as I understand it. I've never heard a dissenting voice on that issue?

A. That'll be correct, your Honour.

Q. And of course the Fisheries settlement that adds another complication and that obviously so now by being able to conduct fishing they gain a benefit for tangata whenua but at the same time individual hapū, particularly those on the coast, feel that sometimes they suffer the consequences without the benefits, I'm not asking you to agree or disagree just that you're aware of that complaint?

A. I am, I am definitely aware of that complaint, your Honour. If I could suggest that one of the gaps in that 1992 settlement is the alignment with places that are located in that coastal area or the lack of connection.

Q. Yes and you'll be aware that one of the issues that came up in the Bay of Islands case was the complaint that although the fisheries had got the money and they accepted that they were intending to distribute it down to hapū little or nothing has happened to date?

A. I would agree and concur with that statement.

Q. So what the Court has found is that many of the tangata whenua on the coast feel marginalised, they see the effects of the, and I'm not saying it's the Māori fisheries that cause it, but they're seeing the effects on the environment of the loss of fisheries, kai moana and feel that they are paying the price without any benefits being received at all. Would you accept that that's a fairly commonly held view?

A. Yes I would agree.

Q. So in that regard the concerns that tangata whenua Manuhiri, in this case, are expressing are not ones unfamiliar to this Court, they come up in almost every case involved in the water because they like everyone else see the loss of fisheries. We've heard about Piper in this case and other fisheries loss, the horse mussels and they don't understand why it's been lost and see no benefits at all from the loss. You'd agree?

A. Yes I would.

Q. One of the things that the New Zealand Coastal Policy Statement says is that where the environment is degraded, and this includes the cultural I've got to say, the provision for this as well, that we should look at restoration, you use the words, and I'm going to, I thought they were excellent words and I'm going to quote them back to you, restoration, remediation and revival. That's one thing that we should be looking to do where there is a degraded environment and one would hope that in looking at the Hauraki Gulf we should be looking to ways in which we can restore and revive the kai moana and aquatic health generally. Would you agree, the mauri, I'll put it in a broader sense, the mauri of the gulf?

A. Yes. Definitely agree with that your Honour and particularly the devotion and the dedication of a section in that marine spatial plan that talks about harmonising the effort across existing regulations and provisions in law to enable that and it's called ahu moana. Land use talks about ahu whenua, the marine space we were advocating at that point in time ahu moana and the ability to have, well an aligned process between areas that needed protection and encouragement and like you already mentioned, remediation, revival and restoration.

Q. So it seems to me that if, and I'm not at this stage getting into the issue of whether we should grant consent or not because there are real concerns there.

A. Yes.

5 1455

Q. But if we were minded to grant a consent, it seems to be inevitable that we would be looking to how can this area at least be in some way restored from its current degraded condition and improved. That would be a proper concern for us if we were to grant a consent, wouldn't it?

10 A. I would definitely be looking at connection between the work that's gone on at the research development end of that embayment and that area, the Pakiri end of the embayment right up to Te Arai.

Q. And two of the most critical things it seems to me that are particular to Pakiri is the horse mussel beds which were traditionally along the entire  
15 embayment and the second thing is the tara iti who are still struggling, notwithstanding the efforts to date. Would you agree that those are two important aspects of restoration or revival for this area?

A. Definitely agree with that, your Honour.

Q. Now my final question is the most difficult and I say it with respect, but I  
20 want to give you an opportunity to respond and I'm not being critical, but in the end you did proffer an opinion on Ngāti Manuhiri cultural effects and you'll be aware that there's a particular sensitivity in this area now, given recent court cases and other events that have occurred, where in the last case I dealt with there was a comment that it isn't for Ngāti Whātua  
25 to dictate to other parties how they should view their tāonga or what their view should be. Now, that seems to be an interpretation people have put on it. You've made it very clear in your answers to Judge Warrant that wasn't your intent. I just want to give you an opportunity to respond why you would go into what I would see as perilous territory given recent  
30 events and appearing to give such a view as to the strength of the Ngāti Manuhiri case.

A. Your Honour, I have been quite clear in terms of aligning with MBL that that relationship that I have with the organisation and with the family is based on how do we progress the relationships that could make this

happen and I'm particularly mindful of who I am and how perhaps those that are not, you know, that I'm particularly close to and understand my own situation may perhaps perceive my involvement there as a – and it is the sort of perception that I am Ngāti Whātua. Sometimes it is forgotten or generally not accepted or understood that I'm also Ngāpuhi. I can't alter that. My wife is Ngāi Te Rangi and from two or three parts of the Hauraki Gulf. I can't alter that. My children are even more dispersed in terms of their genealogical links. So in offering that statement, I have to maintain that the position I, or the conclusion I made at the end of my evidence was from my position as a relationship advocate for the MBL Group as opposed to sharing a Ngāti Whātua or a Ngāpuhi position.

Q. Thank you very much for that. I felt it only fair to ask you that question. And I want to say thank you. I actually have found your evidence particularly interesting and it's added to some areas that have been worrying me for some time over the last several large cases, and there's been a number of them, and I have a better understanding I think now of some of the subtleties involved and I want to thank you for that. That's been very helpful. So, thank you.

#### **QUESTIONS ARISING – NIL**

20 **WITNESS EXCUSED**

**THE COURT: JUDGE SMITH**

Now Mr MacRae, that probably neatly takes us to Mr Hay and you will obviously have some additional questions. We'll probably deal with those before we take the afternoon adjournment and then move to cross-examination.

**5 MR MACRAE:**

Thank you, Sir. It will just take a moment Sir, to reorganise ourselves here but Mr Hay has come in.

**THE COURT: JUDGE SMITH**

10 Yes I need to get Mr Hay's evidence up so I think we'll all take an opportunity to reorganise ourselves for a moment. While he's coming, Mr MacRae, we've also received a number of amendments. I'm hoping all the members of the court have also received that. Could I just check if – looks like Judge Warren is finding the file. Mr Howie, do you have the amendments that were sent? Thank you. Commissioner Myers, have you received them? Excellent. And  
15 Commissioner Prime? I can't see his finger so I don't know where he is at the moment. Judge Warren?

**THE COURT: JUDGE WARREN**

Yes.

20

**THE COURT: JUDGE SMITH**

Excellent, okay that's good. Commissioner Prime, you do? He has those changes too, so that's excellent. And it's of course folder 3 for us, or I think folder 3. It is for me anyway. 21.

25

**MR MACRAE:**

That's the folder, Sir, Mr Hay's evidence commences at common bundle 554.

**MR MACRAE CALLS****DAVID HAY (AFFIRMED)**

Q. Thank you Mr Hay, Mr Hay is beside me now of course. You produced is it two statements of evidence in this appeal?

5 A. Yes I have.

Q. The first is your statement of evidence-in-chief dated 29<sup>th</sup> of December 2022 and the second your statement of evidence in reply dated 15<sup>th</sup> of May 2023, is that correct?

A. That's correct.

10 Q. Sir I wanted to start with the table and just to ask Mr Hay, or perhaps just to inform myself to start with that the approach that has been taken as with a number of the other witnesses is not to make relatively minor changes when what's intended is obvious. So there are still references throughout the document to the inshore midshore and offshore  
15 applications but it's obvious from the context it is felt, we felt that those will be instantly understood by the Court and the parties. The second thing is that there is a rather unusual aspect of the document in a way as you read through it and that is that you will read through the assessment of effects for the inshore application before you get to Mr Hay's  
20 assessment of the effects for the offshore and it's not apparent as you read through the document why they're relevant, but they are because Mr Hay draws heavily on his inshore assessment in presenting his assessment for the offshore. So that's perhaps the major aspect of the document that helps to understand the approach.

25

**THE COURT: JUDGE SMITH**

I did mention that when we got to this point that it appeared to me several of the witnesses, Mr Hay being one of the key ones, because they're intertwined it's difficult to understand exactly where one finishes and the next one starts, so  
30 that's a matter I presume the parties will pick on if they have a concern about it as we go through.

**MR MACRAE:**

Yes, thank you Sir. I don't think I need to ask Mr Hay to address that.

**EXAMINATION CONTINUES: MR MACRAE**

Q. I will ask him to explain why his evidence in reply has not been amended?

1505

A. Good afternoon your Honour, most of my evidence in reply relates or  
 5 responds to the evidence of the other parties, in particular the planners  
 which they may or may not still regard as relevant and, without knowing  
 that, it's difficult for me to judge what amendments and deletions I should  
 be making. So, I have left as it is. The piecemeal amendments, for  
 instance just removing references to inshore or midshore could make the  
 10 document quite messy and difficult to read. So, I do note that in 4.64 I  
 state that the NPS for indigenous biodiversity has not been released, and  
 that is now of course incorrect.

**THE COURT: JUDGE SMITH**

Q. So, do I change "has been released" and there was a date, or think it's  
 15 been released and takes effective on, what, the 1<sup>st</sup> of August, is it?

A. The 4<sup>th</sup> of August I understand. So "has now been released and takes  
 effect on the 4<sup>th</sup> of August".

Q. And you say it would require a consideration of it being released. What's  
 your position on that?

20 A. Yes, and I've said "and may require consideration under section  
 104(1)b)".

**EXAMINATION CONTINUES: MR MACRAE**

Q. Mr Hay, you'd be aware that the subject, sorry, that the conditions of  
 consent have been subject to some criticism and the Court has indicated  
 25 that in their present state wouldn't really be satisfactory to support a  
 consent, and particular reference has been made to the absence of  
 thresholds, trigger points, levels of response and his Honour has  
 characterised these by reference to the traffic light levels, as it were.  
 What approach has been taken in this case and can you comment on any  
 30 areas in common it might have with the more detailed approach that has  
 been suggested?



A. Your Honour, I went back to my file and the *Rena* condition, the *Rena* decision was sitting there when we started work on these conditions back in 2017. The *Rena* consent, as you know, Sir, has very clear trigger points where further actions are required to be undertaken. For example, there's trigger points relating to the copper (inaudible 15:08:15), contour issues, debris and diver safety. In terms of this application, no specific (inaudible 15:08:27) in terms of physical processes or ecology have been identified which I consider may be used to trigger additional monitoring under the consent conditions. And that's in part due to the potential physical and ecological adverse effects being identified as low. I'll keep the cultural effects to one side at this point. Condition 16 is in effect a red light type condition in that it identifies that a certain benthic species or communities or the mud content is high are identified and that area cannot be approved for sand extraction. The EMMP which provides the more in-depth detail on the monitoring programme under 4.46 outlines for example the additional monitoring required of sensitive or protected biota are identified in a monitoring cell, so this is in effect a trigger but more or confirming the area to be excluded from extraction. Now one area where a gap does, may remain is in respect to the cultural conditions, including appropriate trigger points for further monitoring or reassessment. The original pathway we followed back in 2017 was to first of all explore and focus on whether cultural liaison agreements with Te Uri O Hau and the Ngāti Manuhiri settlement trust may be feasible and would they be the appropriate mechanism outside the consent to largely address the cultural concerns and monitoring and such like. But, as is obvious now, that hasn't fully progressed. The introduction of the expert panel condition goes some way to potentially better address cultural concerns but during the course of the hearing it may become more evident what cultural concerns may now be appropriate and/or trigger points for further investigation and/or ceasing of extraction and certain areas may be identified. Just going on from the question you had to Mr Te Rangi, some form of restoration fund or whatever may be, you know, one mechanism that has been used and could be used to address in part those cultural effects that have not otherwise been addressed.

Q. Are there conditions Mr Hay that, in your view, would require, sorry the circumstances I am sorry if I put it this way, are there circumstances that might arise and be detected by the existing structure of the conditions of consent that might properly give rise to a review of conditions, in your opinion. And if so, does the review of conditions clause adequately address that issue?

A. I will start off by saying, when we originally developed the review condition we were linking it to the outcomes of the sand extraction monitoring report, so that would be prepared, peer reviewed by the appropriately qualified person, it would now go to the expert panel, and then it would go to council. I don't think, well it's my opinion now that that condition isn't quite fit for purpose. First of all, I think it should, the review should be linked to both the SEMR and also to the four adjoining beach monitoring survey outcomes. But the review should have two parts, first of all, it's looking is the monitoring conditions appropriate and secondly, it should be addressing adverse effects on the environment.

Q. Mr Hay, did you hear the evidence from some parties, just to take an example, Ms Wikaira about the same points being put by Ngāti Manuhiri, that they consider they have been prevented from carrying out their kaitiaki role on the beach for many years, even decades? You said that you were involved in the development of the applications since 2017, what is your understanding of the provisions that were made kaitiaki taonga and the exercise of the relevant groups' kaitiaki role when the consent was granted in 2003?

A. I am aware of and have read on numerous occasions, both the memorandum of understanding between the Ngāti Wai Trust Board in Kaipara and also the subsequent project agreement. Now it's my understanding that in terms of the kaitiaki responsibilities, through that agreement these were vested in part to the Ngāti Work and Income Trust Board under the 1998 project agreement and Omaha Marae has a representative, yeah has a representative on that board. Now that kaitiaki responsibility is funded by the cultural liaison fee, Sir, that is I think what Mr Pou was referring to when he called it a kaitiaki liaison fee last week

and that's paid to a trust board. I think the agreements are six monthly but I understand that's now paid quarterly. And then the memorandum of understanding under 6.2 is quite clear that that fee can then be allocated to a hapū to facilitate the kaitiaki role of that hapū so for example the Ngāti Wai trust board can allocate that role and some of that funding to Okaha Marae. Now if I recollect correctly, and Sir, when you were at Omaha Marae Ms Bains and Mr Greenwood, yeah, may be able to correct me if I have this wrong, but from the council hearing on Omaha Marae I understood from Ms Bains that approximately 50% of that cultural liaison fee to date has been paid to Omaha Marae but I do note, Sir, I may have recalled this incorrectly.

Q. It might be of assistance if Mr Garton could bring up the memorandum of understanding which starts CB page 1405, mention was made recently. And Mr Hay you just draw attention to the relevant paragraphs of that and of the project agreement that follows it in the bundle.

A. If we can go down to 6.2. You may have the wrong document.

Q. The project agreement is at 141. That's it. Sorry scroll down.

A. Sorry, I think you should be looking at the Deep Water Sand Project Agreement. And now down to 5, this is where the cultural liaison fee is addressed and then 6 is how that cultural liaison fee may be paid, may be utilised.

Q. Thank you Mr Hay. Are there paragraphs of the memorandum of understanding which does start at 1405, page 1405, that are relevant to the kaitiaki responsibilities of Ngāti Wai and your understanding of (unclear 15:18:50)?

A. So we start off, sorry, we're on the memorandum of understanding?

Q. Yes.

A. So that's where it's recognised that Ngāti Wai are the tangata whenua and in the background (unclear 15:19:15) the agreement or the understanding, then we move on to 1 which is the principles guiding that relationship, the consultation requirements, then what the parties undertake, that's in terms of 3.

Q. Is 3.2 particularly relevant.

A. It is because that's where it addresses Ngāti Wai's desire as kaitiaki to undertake the kaitiaki responsibilities.

5 Q. Thank you, Mr Hay. And finally, you've already mentioned that the conditions are not particularly fulsome in covering cultural matters. Did you have some difficulty in addressing that matter when you considered it as an issue that should be included in the conditions?

10 A. We did follow a pathway which I initially thought was going to be successful in terms of addressing the cultural issues through the separate cultural liaison agreements, and certainly that looks like it's going to be a successful approach with Te Uri O Hau, and a couple of times through the last five years we've gone back to them and talked to Te Uri O Hau Environs Limited for them on cultural conditions. It was agreed that they would prefer to keep those cultural matters that they wished to address within the cultural liaison agreement, and I understand they've taken a similar approach for the temporary consent that's been granted, and that's one of the reasons they've not sought to have representation on the panel. In terms of the Ngāti Manuhiri Settlement Trust, again I was working on the basis until probably about March this year that there was a high chance that there was going to be some form of cultural liaison agreement and that hasn't come to pass so we're now looking at the conditions. But apart from the expert panel, it's been difficult to identify if or what type of conditions may be appropriate and certainly no such ideas have come forward from the other planners to date.

20 Q. Thank you, Mr Hay.

25 **COURT ADJOURNS: 3.22 PM**

**COURT RESUMES: 3.54 PM****THE COURT: JUDGE SMITH**

Thank you, we come to questions of this witness, so I'll start with you Ms Bielby.

5 Did you have questions of Mr Hay?

**MS BIELBY:**

Thank you, Sir, yes we do but Ms Fraser who is with me will be asking those questions.

**10 CROSS-EXAMINATION: MS FRASER**

Q. Good afternoon Mr Hay, you've just heard that my name is Ms Fraser and I'll be asking you questions on behalf of the Council. So you've read the statement of evidence of Mr Hopkins, the Council's planner?

A. I have.

15 Q. Great. So the bulk of my questions really are centred around the aspects of your evidence which is slightly different from Mr Hopkins so you probably won't be surprised that a lot of the questions centre around cultural effects and cultural landscape. So my first question is, when you drafted your evidence in relation to cultural effects you relied on the evidence of Mr Te Rangi and Mr Thompson as well as the CBAs is that right?

A. That's correct.

Q. So at the time of drafting your evidence you haven't seen the section 274 parties evidence including that of Ngāti Manuhiri and all the other parties who oppose the application?

25

A. Not for my evidence-in-chief, that's correct.

Q. So in terms of the effects on manu whenua who oppose the application is it fair to say that you relied on the evidence of Mr Te Rangi and Mr Thompson and didn't consider the evidence of those other parties?

30 A. I relied on the evidence of Mr Te Rangi and Mr Thompson.

Q. So at paragraph 314 of your evidence, I don't know whether you want to turn to that?

**THE COURT: JUDGE SMITH**

Q. Sorry I missed the number what evidence page are we talking?

A. It's paragraph 314 and evidence bundle 636.

**CROSS-EXAMINATION CONTINUES: MS FRASER**

5 Q. Have you got that paragraph Mr Hay, in front of you?

A. I do.

Q. Great. So at that paragraph you state that you've addressed the effects of cultural values in the assessment of your intra application, don't you?

A. Yes that's what I state.

10 Q. So does that mean that your evidence in relation to the inshore also applies to the offshore application?

A. 314 I state that I've assessed the cultural values in the assessment for the inshore applications and the following is a further assessment specific to the offshore site. So rather than repeating what may apply I've just clarified that.

15 Q. So your assessment of cultural values and your assessment of the intra application does some of that apply to the offshore application? I just couldn't quite understand what applied, the fact that you've referred back to your assessment of the inshore.

20 A. Yes.

Q. Some of it does apply. Okay. So if you could turn to paragraphs –

**THE COURT: JUDGE SMITH**

Yes was to what? I didn't quite follow the question –

25

**MS FRASER:**

Yes it did apply.

**THE COURT: JUDGE SMITH**

30 Was expressed as a yes question and I don't know what the yes meant. Yes what?

**CROSS-EXAMINATION CONTINUES: MS FRASER**

Q. It did apply, isn't that right?

A. Yes. Yes, part of the assessment of the inshore applications I've also relied upon for the offshore site.

5 Q. Thank you. So if you turn to your paragraphs 223 and 224 of your evidence, and that's evidence bundle 613 and 614, you've deleted those two paragraphs, why is that?

**THE COURT: JUDGE WARREN**

Sorry, counsel, which paragraphs?

10 1600

**THE COURT: JUDGE SMITH**

On page 613 it's 223 and on 614, 224. Both apparently have been deleted which I've now updated my brief with. The question of Mr Hay was why did you  
15 delete them?

**CROSS-EXAMINATION CONTINUES: MS FRASER**

A. When I was going through the deletions I thought that was surplus because earlier on in my evidence I do talk about what CVAs were received and there was a specific CVA for the offshore application which  
20 was received from Environs, there was no CVA received from Ngāti Manuhiri for the offshore application.

Q. I just want to clarify. So you are not saying that a CVA that was received for the inshore application also applied for the offshore application, but the Ngāti Manuhiri's CVA?

25 A. No.

Q. No.

A. No.

**THE COURT: JUDGE SMITH**

Q. Why do you say that?

30 A. There was a CVA prepared by Ngāti Manuhiri for the inshore application, there was no CVA prepared by Ngāti Manuhiri for the offshore application.

Q. But that does not answer the question. Why did you ignore the CVA for the inshore? You are asking us to take into account your evidence on inshore why should we ignore the CVA for the inshore?

5 A. The strikeouts I've done is those matters that relate specifically to the inshore which I didn't think applied to the offshore. So I've considered for the offshore the CVA by Environs. And I didn't consider that the CVA for the inshore by either Environs or Ngāti Manuhiri, was of relevance to my assessment of the offshore application.

10 Q. That does not answer my question, you've just repeated the same thing that you said last time. Why did you ignore the CVA and not consider whether it was applicable to the offshore, just as you have asked us to consider your evidence on inshore, for the offshore application?

15 A. So Environs might be easier to answer because they did separate ones. For Ngāti Manuhiri I didn't consider, I did not consider whether the CVA for the inshore was applicable to the offshore.

Q. Putting it another way. If the Court concludes that then that's an error in your evidence because you have not considered it?

A. Sorry Sir I didn't understand.

20 Q. If the Court concludes that the CVA for inshore is applicable to the offshore, then your evidence, that's a shortfall in your evidence because you have not considered it.

A. That would be correct.

### **CROSS-EXAMINATION CONTINUES: MS FRASER**

25 Q. A reason Mr Hay I was asking these questions is, it is quite unclear from your evidence in terms of the offshore where you say you relied back on the inshore, which parts of your inshore evidence relates also to the offshore. I just wanted to give that clarity. Next if you could please turn to paragraph 320 of your evidence, which is at evidence bundle 637, so the Id

30 A. Was it EB?

Q. 637.

A. 63 sorry, thank you.



**THE COURT: JUDGE SMITH**

If you could just, you are a little bit slow because we have to keep up and with a document this long it is really hard. 637, which paragraph are we looking at?

**MS FRASER:**

5 320.

**CROSS-EXAMINATION CONTINUES: MS FRASER**

Q. You have got that paragraph Mr Hay?

A. I do.

10 Q. So in that paragraph you note that further information from Ngāti Manuhiri would have been helpful for your assessment, effects assessment in relation to the offshore don't you?

A. In relation to the offshore, that's correct.

Q. But you still came to a conclusion in relation to cultural effects didn't you?  
1605

15 A. In relation to the offshore, that's correct.

Q. But you still came to a conclusion in relation to cultural effects, didn't you?

A. I did.

Q. So that conclusion only relies on part of the cultural picture in your opinion, is that a fair comment to make?

20 A. Yes, I relied heavily on the evidence of Mr Te Rangi and Mr Thompson.

**THE COURT: JUDGE SMITH**

25 Q. I've got to confess that I have had real problems with this evidence and it's becoming evident now. Did Ngāti Manuhiri provide any CVA at all? You've said they've not provided a cultural impact assessment, so I assume none at all?

A. No, that's under the "Offshore Application" heading. So, for the offshore application they did not provide a cultural impact assessment.

Q. So, shall I add that to the sentence otherwise it doesn't make sense?

30 A. Ngāti Manuhiri has not provided a cultural impact assessment for the offshore applications.

Q. But your next sentence then doesn't make sense, with respect, because they did provide a CVA although it was in respect to the inshore. It's a real concern for the Court because of the artificiality of the inshore, midshore and offshore consents.

5

**MR MACRAE:**

Can I endeavour to assist, your Honour. At page 362 there's a heading, and all this evidence from that heading on, the heading "Assessment of Effects on the Environment Offshore Applications", all the evidence from then on in Mr Hay's evidence refers to the offshore. So, all his statements –

10

**THE COURT: JUDGE SMITH**

Where are you talking, sorry? I didn't even catch, you said 360 and I don't have a 360.

15

**MR MACRAE:**

No, 632, Sir.

**THE COURT: JUDGE SMITH**

632.

20

**MR MACRAE:**

Sorry if I – yes.

**THE COURT: JUDGE SMITH**

Q. I've got to confess it's a major problem with this evidence and it will become more and more evident as we go through because of the way in which they're conflated for some purpose and deconflated for others. So, do I take it your evidence to this Court, which I've got to say I find surprising, and that's probably the calmest word I can use, is that the fact that you had a CVA from Ngāti Manuhiri was irrelevant to the offshore application?

25

30

A. So can I just go back a step. I wasn't involved in the preparation of the inshore or midshore applications. I was, I prepared the offshore

application for Kaipara Limited at that time, so I wasn't party to any CVA at the time of preparing the initial application which may have been supplied to McCallums Brothers Limited for the inshore application.

- 5 Q. Well that's probably an explanation and quite an important explanation, but I can't see it here. Carry on, Ms Fraser. I've got to point out this is a –

**THE COURT: JUDGE WARREN**

- 10 Q. So, if you had have used the Manuhiri CVA from the inshore for the offshore, in your experience that could have been seen as quite culturally insensitive. Is that one of the reasons why perhaps you didn't use it, because you didn't have their permission to take it into account?

- A. That's correct, Sir, and I just, I can't take a CVA prepared for one purpose and apply it to another client for another purpose.

**CROSS-EXAMINATION CONTINUES: MS FRASER**

- 15 Q. I think I've actually got a couple of questions of clarification from what's happened in the last 10 minutes. So, Mr Hay, my first question to you was when you drafted your evidence in relation to cultural effects, you relied on the evidence of Mr Te Rangi, Mr Thompson and the CVAs but you're now telling me that's not quite right. It depended on each application what you relied on?

1610

- 25 A. For the offshore application, by the time I prepared this evidence I had been provided it. It was an unusual CVA in that it listed a whole series of questions. So by the time I wrote this evidence – how will I say – when McCallums Bros Limited – no – so in 2022 when McCallums Bros Limited took over the application from Kaipara Limited, I was asked to continue with that hearing, the council hearing for the offshore application, which I continued until that point. Then afterwards, there were a series of discussions and I had to review many documents to see if I could support the inshore and midshore applications if they progressed to the Environment Court. So it was quite – and then once we had been through that process, I think it was sort of at that point of time where I was provided
- 30

– when I was reviewing all the documentation to see whether I could support the inshore and midshore applications, I would have been provided the CVA for the inshore application at that stage.

5 Q. Just to make sure I understand, in terms of your assessment of the offshore, you did not take into account the CVA for the inshore?

A. Correct.

Q. And in terms of – well it's something Mr MacRae just before, so your assessment of the cultural effects for the offshore are at paragraphs 314 onwards, evidence bundle 636?

10 A. That's correct. With a couple of paragraphs from the inshore assessment.

Q. Would you please let the Court know which two paragraphs they are please?

A. Sorry, when I said a couple, I didn't exactly mean two. Paragraphs 222, 238, 240, 241 through to 245.

15 Q. Great, thank you, Mr Hay, that's very useful. So I'll go back to my line of questioning that we were at before. So I asked you that you came to a conclusion in relation to the cultural effects only having reviewed the evidence of Mr Te Rangi and Mr Thompson, that's correct, isn't it?

A. (no audible answer 16:13:47).

20 Q. And so my next question was do you think it was appropriate to come to that conclusion when you only actually had part of the cultural picture?

A. Yes, at that time. Though the cultural issues situation has become more increasingly complex.

Q. So you said that it was at that time you could come to that conclusion.  
25 What is your conclusion now in relation to cultural effects?

1615

A. As we sit here today, I don't consider that the cultural effects, particularly in respect to Ngāti Manuhiri, have been fully addressed through those consent conditions that have been recommended.

30 Q. So you believe that the effects on Ngāti Manuhiri and the other section 274 parties who oppose the consent, those effects can be addressed by conditions?

A. I'm not in a position to say that yet having not heard those parties in this proceeding yet.

Q. I'm getting quite confused by your answers, Mr Hay. Didn't you say just before that the conditions, you need to look at the conditions in order to try and mitigate those effects, or what are you saying in terms of conditions?

5 A. I am unsure at the current time whether there may be conditions, if we go down the conditions path rather than a cultural liaison agreement, whether there are conditions that can satisfactorily address the concerns of Ngāti Manuhiri.

10 Q. Do you know what the concerns are of those other parties, Ngāti Manuhiri and the other parties who oppose the application in relation to cultural values and landscape, do you know what those concerns are?

A. Well I have my understanding of what those concerns are.

Q. Were you not at the council hearing of the offshore application?

A. I was.

15 Q. Did you hear the evidence from those parties at the council hearing?

A. Yes, I did.

Q. Did you not take that evidence into account when you drafted your statement of evidence?

20 A. Again, I was relying on assistance with that from Mr Te Rangi from his evidence and Mr Thompson.

Q. Were you here yesterday when Mr Thompson gave his evidence?

A. I was online – ah, yes, online and here.

Q. So did you hear Mr Thompson say he was not a cultural expert?

A. I did hear that.

25 Q. Having heard that, do you still think you can rely on the evidence of Mr Thompson?

A. In terms of when he's speaking on behalf of Te Uri O Hau, yes.

Q. And were you here when Mr Te Rangi gave his evidence yesterday and today?

30 A. I was.

Q. And didn't he say that in looking at cultural effects it's all context-dependent?

A. Words to those effects.

Q. And didn't he say that his relationship was an advocate to the applicant?  
An advocate for the applicant.

**THE COURT: JUDGE SMITH**

I think you need to be fair about that. He didn't mean it in the sense that us  
5 lawyers mean it. He was talking about being a relationship advocate.

**MS FRASER:**

Yes.

**THE COURT: JUDGE SMITH**

My understanding of that phrase, and I can check it with Judge Warren, is that  
10 what that means is that they are there to assist the parties establish a  
relationship and, if I can put it that way, ensure that they are connecting  
correctly and not misunderstanding one another. Is that fair, Judge Warren? I  
think that's what Mr Te Rangi meant by that phrase.

**THE COURT: JUDGE WARREN**

15 I think that's the context in which I've understood it. But I think he did say in his  
evidence that he was being asked to give tikanga evidence.

**THE COURT: JUDGE SMITH**

Yes, that's a different issue, but –

**THE COURT: JUDGE WARREN**

20 Yes.

**THE COURT: JUDGE SMITH**

– I think using the word "advocate" barely is a bit of a worry to me, so let's –  
that he was there as a relationship advocate. I'm happy with that as the  
question.

25 1620

**CROSS-EXAMINATION CONTINUES: MS FRASER**

Q. Yes. Sorry, Sir, I had actually written down “relationship advocate”, and I should have used that term as well. But I’ll move on. So I guess I should ask the same question that I asked of you in relation to Mr Thompson.

5 Do you think it was appropriate for you to rely on the evidence of Mr Te Rangi when you made your conclusion in relation to cultural effects?

A. In terms of Mr Te Rangi yes, because I understood and I understand he has two roles, one is to be that relationship advocate but his second role is to provide tikanga and cultural advice as such to MBIE. I was listening to that discussion quite closely about the advocate and role part I saw, I understand, that when he gave his conclusions about what the effects that was putting on his hat as a person with expertise, cultural expertise.

10

Q. If I can get you to turn to the statement of evidence in reply of Mr Te Rangi.

15

**THE COURT: JUDGE SMITH TO MS FRASER**

Q. If you could give us a page number we can get Mr Garton to bring that up, it saves us a lot of time in finding pages.

A. So evidence bundle 20A 3.

20 Q. Which paragraph are you wanting us to look at?

A. Paragraph 6.

**CROSS-EXAMINATION CONTINUES: MS FRASER**

Q. Mr Hay, that second sentence, did you take that sentence into account where he says: “It’s not my place to say whether this or that opinion is correct.” And that he remains neutral. So those two statements, did you consider those when you drafted your evidence?

25

A. I am wondering if we could just have a look at the preceding paragraph so I can just refresh my memory, and further up please, and down. I did consider it but it was my understanding that he is not questioning who is the mana whenua of Pakiri who whakapapa back to the whenua Pakiri. So that sentence is quite, that paragraph is quite specific to what it’s relating to.

30

Q. But looking at your approach that you took in relation to drafting your planning evidence, do you not think that the approach taken by other planning experts might have been more appropriate where they state that they haven't heard the evidence of the cultural parties. Why did you not take that approach?

A. Because I chose to rely on the evidence of Mr Te Rangi and Mr Thompson.

Q. And in your view, your position is still the same, that you are happy to rely on Mr Thompson and Mr Te Rangi?

10 A. Mr Thompson specifically in respect of Te Uri O Hau. Mr Te Rangi on a wider perspective but, as I noted before, I now consider that there are gaps in terms of addressing and if they can be addressed, the effects on Ngāti Manuhiri in particular, through the consent conditions.

15 Q. Is it fair to say that now you consider that potentially the effects on Ngāti Manuhiri and the other parties may not be minor, they may be significant?

1625

20 A. They may be minor; they may be significant. What I am saying is, like the other planners, I'm now in a position too where I would like to hear the evidence of those other parties to see if they can be, if the effects being raised can be addressed through consent conditions.

25 Q. So, just to make that clear, your conclusion then is slightly different than it was in your statement of evidence? You need to hear from those other parties, so you can't conclude that there are no cultural effects because you haven't heard that evidence?

A. It is now.

30 Q. So, in your view, what are the cultural effects on the mana whenua parties who oppose the application? Are you able to have, do you have any idea or having listened to the evidence at the marae for the, at the council hearing do you have any view on what those cultural effects are?

A. Yes, and I think they have been articulated through the process. In very broad terms, it's what they consider are the effects on their taonga and then also the wider effects on the environment. Sorry, and that's in relation to Ngāti Manuhiri.



Q. Is there a reason why you haven't referred in your evidence-in-chief or in your evidence in reply to the evidence that you heard at the council hearing?

A. No, there's no specific reason.

5 Q. So now that I've put that to you, do you think you should have referred to that in your evidence?

A. No, because as a planner I rely on a range of different specialist experts in this case in terms of the cu – for instance, in terms of ecology I've relied on Mr West, Dr Clements, Dr Thompson. In terms of the cultural effects, I relied on the evidence of Mr Te Rangi and Mr Thompson.

10

Q. But Mr Hay, you've just said that you should consider the evidence that's going to be, well, that will be provided by the section 274 parties. So don't you think, and my question was to you, do you think you should have considered the evidence, the best evidence that was before you and that was the evidence that you got at the council hearing, that you heard at the council hearing?

15

A. Yes, I could have addressed it in my evidence.

Q. In terms of your evidence in reply, so that's the evidence that you drafted following having received and assessed the evidence by the section 274 parties, I couldn't see that you've referred to that evidence at all in your evidence in reply, is that correct?

20

A. That's correct.

Q. Why is that?

#### **THE COURT: JUDGE WARREN**

25 Q. It's referred to in paragraph 2.2 that he's read it, so to that extent it's in there. Is that correct, Mr Hay?

A. Yes, that's correct. I had read it. I have to read all the evidence. If the question was why didn't I adversely specific, did I specifically address it then the question is, no I did not.

#### **30 CROSS-EXAMINATION CONTINUES: MS FRASER**

Q. And I'm interested to know why you didn't. You've addressed issues that, well for example Mr Hopkins had in his evidence-in-chief and other

experts, so was there a specific reason why you didn't address the section 274 parties' cultural evidence?

1630

A. I addressed the evidence of the various planners, including Mr Carlyon who was providing evidence for the Ngāti Manuhiri Settlement Trust.

5

Q. You also addressed though the evidence of your own experts, for example, other experts, not just planners from what I can see. Or are you saying you just addressed the evidence of planners?

A. But you are quite correct. I also addressed the evidence of Dr Maseyk because I've wondered into planning territory and I understand Dr Maseyk is not a planner.

10

Q. A more general question now Mr Hay. Would you agree and, particularly having heard from Mr Te Rangi this afternoon, that cultural effects relate to specific mana whenua and to the areas they associate with. Do you agree with that statement?

15

A. Yes.

Q. That some mana whenua might have different views to other mana whenua in terms of cultural effects. Is that correct?

A. Yes, and I've learned that from experience.

20

Q. The Te Uri O Hau say that the effects of the activity on them can be appropriately managed. That doesn't mean that the effects on Ngāti Manuhiri or other groups can be, also be appropriately managed does it?

A. That's correct.

25

Q. I will just move on to a slightly different topic, still in relation to cultural effects and cultural values. At paragraph 320 of your evidence, so that's evidence bundle 637, from my reading of that paragraph you have described the cultural effects as reliant on the effects on physical resources as well as more intangible effects. Is that correct?

30

A. Sorry, I may have misheard what paragraph you are referring to.

Q. 320, or might be, sorry 321.

A. Yes, that makes sense yes.

Q. Yes. What do you mean by "intangible effects"?

A. "Intangible values", is that what you mean?

Q. Yes, sorry “intangible values”, that’s quite a hard word to say.

A. So your physical effects like, is there going to be an effect, like a physical effect. Like, for instance, is a species of fish going to be adversely affected or whatever. Your intangible values, I understand, is related to  
 5 mauri, the, you know, the taonga, those effects that say western science don’t address, well don’t address so strongly, not, those effects that probably as a planner that historically were focussed on.

1635

A. Do you agree that intangible values can occur independent of the effects  
 10 on physical resources?

A. I’m not too sure if I quite understand that question, sorry.

Q. So do intangible values have to relate to physical resource, so tangible value?

A. I would say no but – I would say no but I don’t know if I’m well placed to  
 15 give a more definitive answer than that.

Q. Now from my reading of your evidence, you seem to have balanced these intangible values against the quantifiable tangible effects of the application, is that correct?

A. Yes, the – we went through that – there weren’t strong linkages between  
 20 certain effects that were being identified and then what was being observed or such like.

Q. And so that’s why you’ve concluded in your evidence that adverse – well you conclude in your evidence, don’t you, that adverse effects on cultural values, intangible values, would be minor?

25 A. Again, I think if you’re meaning 328, that’s where the “no more than minor cultural effects” has come from and then I’ve relied on Mr Te Rangi’s evidence for that.

Q. So Mr Te Rangi said they would be minor, is that what you’re telling us?

A. He concludes that overall there would be no more than minor cultural  
 30 effects.

Q. So you’re relying on Mr Te Rangi but for you to put it in your evidence you must also consider that that’s correct. So do you mean there that tangible effects as a result of effects on physical resources outweigh intangible

effects on cultural values? So have you done a weighting exercise between tangible effects and intangible effects or values?

A. No, I haven't done that balancing exercise and I don't think I'm qualified to do that without some guidance.

5 Q. And who would provide you that guidance?

A. Mr Te Rangi. Oh, sorry, generally, are we talking about this application specifically or generally or –

Q. Yes, all my questions relate to this application only.

A. Mr Te Rangi would, if I was to explore it further to see if he had undertaken  
10 such a balancing effect when he was preparing his evidence.

Q. Let's move on to another topic but unfortunately Mr Hay's still relating to cultural effects.

#### **THE COURT: JUDGE WARREN**

Q. Counsel, sorry, just before you leave that topic. Paragraph 331, Mr Hay,  
15 the last sentence, I think you do acknowledge the other adverse effects on cultural values?

A. Yes. Yes, Sir. Thank you for pointing that out, I'd forgotten that I had put that in.

1640

#### **20 CROSS-EXAMINATION CONTINUES: MS FRASER**

Q. Actually that paragraph, 331, so you took in to account the cultural effects assessment. Who provided that cultural effects assessment?

A. Because this is relating to the offshore application that's Environs Limited for Te Uri O Hau.

25 Q. Thank you. In your evidence-in-chief you note quite a few times that discussions were continuing with Ngāti Manuhiri regarding the application and potential liaison agreements, don't you?

A. Do.

Q. And you thought that those discussions might have resulted in a cultural  
30 liaison agreement with Ngāti Manuhiri, is that correct?

A. Up until March this year that's correct.

Q. You drafted your evidence-in-reply in May though didn't you?

A. I presume so, it was around then yes.

Q. In that evidence in reply do you say that those discussions didn't eventuate with such an agreement?

5 A. I'm looking back now so the discussions our client were involved in seemed to be stalling in March and again in May they were still hopeful they would be, or I was advised they were still hopeful they would be re-commenced. They weren't subsequently and it's really just the – in more recent times that I understand that they're not progressing at all now with Ngāti Manuhiri Settlement Trust, yes.

10 Q. Which is why –

A. (unclear 16:42:58) delay.

Q. So you did state that in your changes to your evidence, didn't you that those haven't eventuated, those discussions are complete?

A. I don't know if complete is the right word.

15 Q. Well it might not be the right word but they –

A. But as of today there is no agreement and there is no planned discussion going on with the settlement trust.

Q. Right, I will now turn to the cultural landscape topic. In your evidence don't you conclude that there would be no adverse effects on cultural landscape?

20

A. Can you please point me to a paragraph?

Q. EB671, paragraph 524.

1645

25 A. Could you please repeat your question because I'm not quite too sure I understood the scope of what you were referring to.

Q. Do you conclude in your evidence that there were no adverse effects on cultural landscape values?

A. No, and that's not what I'm saying in 524.

30 Q. But don't you say at the second bullet point that the proposal is not inappropriate, it's not an inappropriate development which includes cultural landscape values and it's not –

A. Before – my apologies.

Q. Sorry, what were you apologising for?

A. I interrupted you by accident. Sorry, I forgot about the lag.

Q. So, don't you say that with the part in brackets "(cultural landscape values)" are not being, they're adverse effects including on cultural landscape values?

5 A. What that's relating to is the specific outstanding natural feature, outstanding natural landscape and high natural character overlay areas, not cultural landscape values as a whole across the whole embayment as such.

10 Q. So, what you're saying is in terms of those ONLs and high natural character, those do not include cultural landscape values or have I misunderstood you?

A. No, I'm not saying they include cultural landscape values.

Q. Sorry, I haven't understood, didn't understand your answer.

15 A. Those ONLs, high natural character overlay areas are not within the sand extraction area, okay. My opinion we're not having an effect on them and when we talk about "them", ie, those areas, those overlays, that also includes any cultural landscape values that they may have.

Q. Did you read the Commissioners' decision in terms of the cultural landscape?

A. For the offshore site? (inaudible 16:48:00).

20 Q. My questions only relate for the offshore decision and the offshore application.

A. Yes, I would have at the time it came out and probably subsequently.

Q. So, in terms of the cultural landscape, I'm now slightly confused as to what your conclusion is varying the adverse effects on cultural landscape.

25 A. First of all, what you are pointing to initially under 524, that was related specifically to those overlays, none of which are within this area.

### **THE COURT: JUDGE SMITH**

30 I've got to say, Ms Fraser, I'm struggling to follow what your question's about given it seems to be 524 is very clear, well understood in RMA terms the difference between an ONF, an ONL and an HMC which are overlays in the plan, that's what the discussion in 524 is, the cultural landscape is not contained because this plan, for whatever reason, does not have any overlays for cultural landscape. Many plans do, but Auckland Council's seen fit not to include any.

So, I think the simple answer is to ask Mr Hay that: “You accept there is a cultural landscape which is different or may include aspects of the ONF, ONC and – sorry, HMC and ONLs, but is different in its scope and extent to those overlays?”

5

**MS FRASER:**

Sir, my last question –

1650

**THE COURT: JUDGE SMITH**

10 Q. I just want to check what Mr Hay says to that because that would help us.

A. Yes Sir. You are correct. Just because we go outside an overlay doesn't mean there is no cultural landscape.

Q. So when you are talking about the cultural landscape you are talking about the whole of Pakiri embayment I assume and its land-based component, the cultural landscape?

15

A. Is that to me Sir?

Q. Yes.

A. Yes.

**MS FRASER:**

20 Yes Sir, my last question didn't actually relate to paragraph 524, I was moving on from that and talking about cultural landscape generally, as opposed to the ONLs and those policies and objectives that are referred to in paragraph 524.

**THE COURT: JUDGE SMITH TO MS FRASER**

Q. You need to ask the question again because I was lost.

25 A. It wasn't a question, it was just a comment Sir that my last question which you said I shouldn't have asked didn't relate to that paragraph 524, it was a general question about landscape, natural landscape.

Q. Natural landscape?

A. Sorry, cultural landscape, sorry Sir.

30 Q. Well I think Mr Hay has clarified that in answer to my question.

A. Yes.

Q. So we can move on.

A. Yes.

**CROSS-EXAMINATION CONTINUES: MS FRASER**

5 Q. So not referring at all to paragraph 524 Mr Hay, I just want to ask you some general questions about cultural landscape. You consider that there is a cultural landscape within the application area?

A. I do.

Q. What did you rely on to form that view?

10 A. I would think every part of New Zealand has some form of cultural landscape.

Q. But in relation to this particular area what is the cultural landscape?

15 A. It's how the seafloor is perceived as such, the seafloor, the sand, I'd probably say the waves, you know, holistically looking at it rather than one specific island or (inaudible 16:52:36), something like that. And that was addressed to some degree by Mr Brown, Mr Landscape Architect Brown.

Q. Yes. Doesn't Mr Brown in his evidence in reply state that he is not qualified to assess the effects on a cultural landscape?

20 A. He does in his reply but at the time of writing my evidence-in-chief, in paragraph 264, I did rely on his evidence.

Q. Do you correct that in your evidence-in-reply?

A. Sorry, in what way, I haven't said in my evidence-in-reply that Mr Brown is not qualified to address landscape cultural effects.

**THE COURT: JUDGE SMITH**

25 There is plenty of level of subtlety here Ms Fraser that I am missing entirely. Your first question is, what is a cultural landscape? Then you said Mr Brown had said that he could not assess the effects on cultural landscape. You have moved somehow from, what is a cultural landscape, to what are the effects on the cultural landscape, and I am not sure how the, I just cannot get the  
30 connection and it may be me and I will be sorted out by the rest of the Court after we break. But I am just not following where we are coming from and I have got to confess that I am getting more and more confused the further we



are getting into this. One of the issues I always find in these areas is the lack of clarity is where we can get really, I get submissions at the end that say that X has said Y and the other side say, well no he did not say that at all, he was answering a different question. So are we asking questions about what is a cultural landscape at the moment or are we asking questions about effects on a cultural landscape, which are very different things.

**MS FRASER:**

Effects on cultural landscape and the point I am getting to Your Honour is that Mr Hay has relied on Mr Brown in relation to assessing the effects on cultural landscape but Mr Brown has stated that he is not qualified to make that assessment.

1655

**THE COURT: JUDGE SMITH**

Q. Well let's just ask Mr Hay. Have you relied on Mr Brown and the assessment of effects, and I think you said you did in your evidence-in-chief and I now understand that what she is asking you is did you rely on Mr Brown's assessment of effects on that landscape in your reply?

A. In my evidence-in-chief I did. In my evidence-in-reply, I don't think it was a matter I addressed but I may be wrong.

**MR MACRAE:**

With respect to Mr Hay Your Honour, surely Ms Fraser should point to something in Mr Brown's, in Mr Hay's reply that is relevant if she wants him to address the question properly. He can't be expected to trawl through evidence without having some reference. I object to the question as it is going.

**THE COURT: JUDGE SMITH**

I am assuming that's where we are going now otherwise I agree with you. So I do not mind setup questions although it is not my favourite thing in life but everyone seems to love them, too much *Perry Mason* in my view. But, nevertheless, that is where we need to go now given he did not agree with

general proposition. So he said: "In my evidence-in-chief I relied on Steven Brown but in my reply I don't recall addressing that matter again." I think, was that a fair summary Mr Hay of the last words?

**MR HAY:**

- 5 Yes, that's correct and I am just going through my evidence to see if I can prove myself wrong.

**THE COURT: JUDGE SMITH TO MS FRASER**

Q. Well I think it is for Ms Fraser to take it further if she wishes to. Ms Fraser?

- A. No, I couldn't find it either Your Honour so I didn't know whether I misread  
10 it and I just wanted to get clarity about that from Mr Hay. I have still got quite a few more questions to ask and I see that it is nearly five o'clock.

Q. Yes, how much longer are you likely to be, the estimate was one hour, we have been an hour so how much longer are we now?

A. Maybe another half hour, something like that, maybe a bit less.

- 15 Q. Yes.

**THE COURT: JUDGE SMITH**

- I agree with you, we should cease there. I am a bit concerned about the estimates for time as well. I have had, Mr Pou will be fed up with me moaning about this issue, but I think, my preference is that you address the question. If  
20 you get the wrong answer I am happy for you to drill down further. There's many matters which I do not think have actually largely been contentious that we seem to have spent a lot of time on. Nevertheless, it is what it is. We are going to come back on Monday and it looks to me as though we are going to be most of Monday now, unless everyone else has over-estimated. That starts  
25 to fill up the time. I have just asked the plaintiffs if they continue in discussion although at this stage we assume that Mr van Mierlo does not start till Tuesday, he will be Tuesday and Wednesday. Then we have got Mr Muldowney for Thursday morning and if we could have another witness or two to fill up the day that would be good. Whether we will get onto Friday, I am thinking at this stage  
30 that is unlikely.

**MS BIELBY:**

Sorry Sir, I was just going to offer some assistance there to fill up some time. Your Honour noted or queried whether Mr Morgan, the Council's coastal processes expert, could be available. I have confirmed that and he is available

5 late next week, so that will take some time.

**THE COURT: JUDGE SMITH**

That is very helpful thank you Ms Bielby. The other person I asked about was Mr Shaw Mead but I am not sure who could follow that up. I think the only person is Ms Ulrich who was volunteered by Mr Pou.

10 **MR POU:**

Sir, we did follow it up and we have had a response from Mr Clapshaw saying that his witnesses unfortunately are offshore working next week so Mr Shaw Mead is not available.

**THE COURT: JUDGE SMITH**

15 That should fill at least Thursday, might take us till Friday morning and I think in the circumstances I think the difficulty of us getting to Matakana, especially for those two members of the Court who are remote, just become too much. So I think we will just take an early break on the – sorry has Ms Ulrich got an update for us?

20 **MR POU:**

Yes Your Honour. I will leave it to her.

**MS URLICH:**

So two witnesses, Mr Littlejohn might also be available for questioning, Professor Sharp and Mr Bull.

25 **THE COURT: JUDGE SMITH**

Thank you, Ms Hiew. Ms Hiew's nodding so I gather that she agrees and that would fill us, that would pretty much get us, if we get those witnesses, I think I'd be much happier that we are still moving according to schedule. Just the

question about looking at a vessel visit in August the 21<sup>st</sup> week now, probably the 23<sup>rd</sup> or 24<sup>th</sup> I think. It would be after we'd included the marae time and I think I'd probably like to hear the balance of the – no, we'd probably go and do the site visit next because everyone would be there for the marae visit and I

5 was just looking at where an appropriate place to meet would be. Leigh seems to have a relatively safe harbour nearby. Is that one that your client's able to access, Mr MacRae, or can you investigate that?

**MR MACRAE:**

10 I can investigate that, Sir.

**THE COURT: JUDGE SMITH**

I think that's the fisheries site, but it's a sheltered deep water bay so it should be accessible. Apart from the Salty Dog on the, the rest of us are going to be a little bit worried about a beach access to a boat or going across a bar. So, if

15 you can just investigate the possibilities of that, probably on the 23<sup>rd</sup>, depending on weather of course. That's the other problem. They're always weather dependent. So, is there any other matter anyone wants to address?

**MR MACRAE:**

20 Your Honour, you did ask for my estimate of time on the Department's witnesses.

**THE COURT ADDRESSES COUNSEL – DISCUSSION ON TIMING**  
(17:01:28)

25 **KARAKIA WHAKAMUTUNGA**

**COURT ADJOURNS: 5.05 PM**

**COURT RESUMES ON MONDAY 31 JULY 2023 AT 10.00 AM****KARAKIA TĪMATANGA****JUDGE SMITH ADDRESSES COUNSEL/PARTIES – PRELIMINARIES**

(10:01:53)

5

**DAVID HAY (RE-AFFIRMED)****CROSS-EXAMINATION CONTINUES: MS FRASER**

Q. (inaudible 10:10:39), Mr Hay.

A. Good morning.

- 10 Q. You'll be pleased to hear I've only got a few more questions to ask you this morning so I don't think I'll be taking the 30 minutes I thought might need having reflected over the weekend the questions that I needed to ask you. My first question relates to the planning documents and in particular the regional policy statement which is Chapter B6 of the
- 15 Auckland Unitary Plan, and if I could get you to turn to evidence bundle 671 and 672, and that's your evidence Mr Hay, from paragraph 529. So in those paragraphs 529 to 533 you've assessed where the application is consistent with the objectives and policies of Chapter 6 of the unitary plan and that chapter relates to mana whenua, and you conclude at
- 20 paragraph 533 that you consider that the proposal is not inconsistent with the objectives and policies. Given that on Friday you stated that you needed to hear the evidence of Ngāti Manuhiri and the other cultural parties, do you consider that you may also need to review your conclusion in relation to those objectives and policies having heard that other
- 25 evidence?

A. If I can go through each of those objectives of B6.

Q. Okay.

- A. 2.2. In fact the policies are probably more detailed, so I'll go through them. So 6.2.2(1), that's relating to providing opportunities for mana
- 30 whenua to actively participate in this process. My opinion won't be changing on that. B6.3.1 –

Q. Hang on, Mr Hay, just in case the other parties want to have to those policies and objectives in front of them, the relevant common bundle pages at 1550 onwards.

5 A. Sorry, are we waiting for my answer or for them to be put up on the screen, sorry?

Q. Well I'm not quite sure whether they need to be put on the screen unless...

A. That's okay.

10 Q. It's just so that if anyone wanted to refer to those as you were speaking about each of those policies and objectives.

**THE COURT: JUDGE SMITH**

Yes, the Court would like them up on the screen. Yes, so the first one that was spoken about, was it 6.2.2?

1015

15 **WITNESS:**

6.2.2(1), so that's providing the opportunities to participate as such.

**THE COURT: JUDGE SMITH**

Right, that is helpful thank you and did you want to go further with that Ms Fraser or did we move to the next one.

20 **MS FRASER:**

No, I will let Mr Hay just go through those objectives and policies and just let us know which ones he may want to re-visit having heard that other evidence.

**THE COURT: JUDGE SMITH**

Q. Thank you, he has gone to B6.3.1 next, so if we could move to that.

25 A. In terms of both one and two, the opinion I gave won't be changing. Again, the first one is relating to the decision-making. Then 6.2, sorry, B6.3.23, my opinion won't be changing on that. Sorry, I can't recall if I then went to 6.4 under this as well, I will just check.

Q. Yes, 533 mentions 6.4.1.

A. 6.4.1, my opinion on that won't be changing. B6.5. –

Q. Sorry, so just looking, I just want a moment to look at them please.

**THE COURT: JUDGE WARREN**

Sorry Mr Hay, I didn't quite, can you just go back to 6. B6.3.1?

**5 THE COURT: JUDGE SMITH**

Q. And that was one and two (1) and (2) of that.

A. Yes, so in terms of – so my opinion won't be changing but I do note that that relates more to the final decision-making and, of course, I won't be involved in that decision-making.

10 Q. What about mauri?

**THE COURT: JUDGE WARREN**

So are they enhanced overall?

**THE COURT: JUDGE SMITH**

15 Q. Yes, because you are being quite selective in terms of just saying "number one", but my read of this is it is all of those three objectives.

A. So they won't be enhanced over all, so the question is, is it not inconsistent –

Q. Sorry, I think we are looking at 6.3.1 aren't we and one is mana whenua values.

20 A. Yes.

Q. Are afforded sufficient weight. So you don't think the evidence is relevant to that issue?

A. Sorry, I think we had moved on to 2 B 6.3.12, and whether the resources are enhanced overall. Yes, in my opinion, may be inconsistent but that's  
25 incorrect. I am not saying that they are being, based on the evidence of Mr Te Rangi in terms of the cultural effects being no more than minor. In fact it doesn't address that specifically that objective. So I would exclude 6.3.12.

30 Q. Well I suppose I am, the question that I understood Ms Fraser to be asking was: "Don't you need to hear evidence?" But you seem to be

relying on only the evidence that has been produced in chief by Mr Te Rangi. Her question was: “Don’t you need to hear the evidence from the other witnesses before you can conclude whether these matters are affected or not?”

- 5 A. Sorry, I was going to come to that after I had gone through the various ones so we knew what we were talking about. For that one there, yes the answer is yes it would assist.

1020

- 10 Q. So when you say mana whenua values for example (1), I’m curious as to why you don’t need to hear evidence about what those values are?

A. Sorry, Sir, I’m not saying that. It’s just that relates into the final resource management decision-making. And I’m not the decision-maker here.

Q. I see, you’re saying that’s for us to decide?

- 15 A. Yes, Sir. And B6.3.1, that relates to the scheduling in the unitary plan so again I don’t need to hear the evidence of the other parties. 6.4.1, hearing the evidence of the other parties would assist but in terms of Te Uri O Hau, I think that there’s been adequate evidence for me to come to the opinion that in terms of Te Uri O Hau that it would be supported.

Q. The next one you have listed is 6.5.1.

- 20 A. And then 6.5.1, that would assist if I heard the evidence of the other experts in terms of (1) – no, sorry, I’ll take that back, sorry. This again is relating to the identification, protection and enhancement of cultural heritage features. So in terms of 6.5.1, (1) I don’t need to hear the evidence of the other parties. Or (2), yes, in terms of how they could be  
25 provided for if consent is granted through the conditions. (3), no, because I’ve read that. (4), no. (5), no. And the policies of 6.5.2, again that’s the protection in the unitary plan, so that’s separate to this process. Similar for (2). And similarly for (3). And then (4) of course the scheduling.

### **CROSS-EXAMINATION CONTINUES: MS FRASER**

- 30 Q. Thank you, Mr Hay. So if we sort of summarise your answers, there are some that you still believe the application is consistent with but there are some that you would need to hear the evidence of the other parties?

A. It would help, yes.



Q. Now on a completely different topic, I've got a few questions about conditions, and –

**THE COURT: JUDGE WARREN**

5 Q. Sorry, Ms Fraser, before you move on, can I just clarify with the witness paragraph 529, “paragraphs 380 to 3800”, is that a typo?

A. Yes, it is, Sir, and it is one of the list of alterations. It should be 388.

Q. Thank you.

**CROSS-EXAMINATION CONTINUES: MS FRASER**

10 Q. So Mr Hay, in terms of conditions, Mr MacRae asked you some questions about conditions at the beginning and you stated from memory that you believe that the conditions if the Court was minded to grant the consents they would need to be revisited, is that correct?

A. I think I was talking specifically in respect to the review condition which I consider could be reworded.

15 1025

Q. So, only the review condition? You don't believe any of the other conditions need strengthening?

20 A. Not at the current time but, as I have said earlier, and we went down the path of the cultural liaison agreement, that path hasn't been fully successful therefore there is a gap in terms of if we can address cultural concerns through the conditions instead.

25 Q. So, we'll leave those conditions aside because we don't have any, because we haven't heard the evidence of the other parties. But maybe if we could start with what you consider needs to be changed in terms of the review condition. You said on Friday that you believed that the review condition should deal with adverse effects. Currently, the way that condition is worded it relates to significant unanticipated adverse effects. So, are you saying that the words “significant unanticipated” should be deleted or are you talking about other changes?

30 A. I'm talking about a more comprehensive change so that the review focus is on both the monitoring and survey regime and also the adverse effects but without the words “significant unanticipated”. And then relating it back

to, first of all, the SMER as the current condition does, but also separately relating it back to the foreshore and beach monitoring survey results that are submitted.

5 Q. Now I was going to ask you some questions about the monitoring cells and the potential Tara Iti management plan but we've already heard from other MBL experts in relation to those and that they would be useful conditions to have, so I won't ask you about that. In terms of the EMMP which Mr Hopkins believes, which is the council's planning expert, that the EMMP is very important, do you consider that's an effective and  
10 important tool in terms of managing effects.

A. I can go back a step. Back in 2017 when we first started on this application, one of the questions we, one of the very first questions we asked the team was, were the current conditions set on the last consent still fit for purpose? And we quickly came to the conclusion (a) they  
15 weren't because it's a slightly, it's a much more reduced area. But there were ongoing problems with the interpretation of conditions and Mr West in particular was concerned that the monitoring results they were getting out were not as helpful as they could have been. But in terms of the basic framework of having an EMMP, then the pre-sand extraction assessment  
20 and through that, then the identification of approved sand extraction areas and then the post-sand extraction reporting we considered that that framework was working but could be significantly improved and would be appropriate to carry on, to use that framework for the new conditions as we were working through them. But as part of that, I think problems have  
25 arisen by having different EMPs within the current site, so a single EMMP which was far more detailed and would apply to all future pre-sand extraction areas and sand extraction monitoring reports would be helpful so there would be no inconsistencies at a later date in the monitoring undertaken at the different areas within the site. So the answer is yes.

30 1030

Q. Yes, it is an effective and important tool and it should be robust essentially, as robust as possible to manage adverse effects?

A. Yes, but flexible.

Q. Yes. Thank you. One last question and that's the deemed certification of management plans. What's your view on those, the deemed certification?

5 A. Well at the current time the current consent does have a certain period for council to report back on. Looking back at my files, the idea of having a set period for council to report back on otherwise it's deemed came from the *Rena* decision. But at the same time, there has been – there continues to be significant issues with council reporting back on management plans and monitoring plans for a wide range of resource  
10 consents and particularly in the mineral extraction field, and this was to ensure – because I think it's also very important for other stakeholders and for those iwi that have a kaitiaki role, that there's a very clear paperwork that council is reviewing what has been submitted and is responding on it.

15 Q. And I don't think the council would dispute that, that it is important for it to respond, but if it doesn't respond within I think 20 working days that the management plan is deemed to be certified, do you really think that such an approach is precautionary in such a sensitive coastal environment?

A. I don't know any other mechanism where we can get council to respond.  
20 I've got numerous example of management plans submitted to council where council hasn't responded. And I thought this was – this is a mechanism that maybe council will focus on it much stronger and then, you know, has a period on which to respond to.

Q. Thank you, Mr Hay, those are all my questions.

25 A. Thank you.

### **CROSS-EXAMINATION: MS SUTHERLAND**

Q. Good morning, Mr Hay.

A. Good morning.

Q. You agree on the basis of the expert avifauna opinion that the entire  
30 embayment is significant for tara iti, do you agree with that?

A. That's what they – I can't recall the exact words they've stated but if that's what they've said, yes.

Q. Yes, it's in various places. For example, the avifauna JWS says that the offshore sandmining extraction is potentially used by tara iti for foraging, do you remember that?

A. Yes.

5 Q. And above mean high water springs, the stream mouths, dunes, the sand, shoreline, all significant ecological area for tara iti, do you agree with that?

A. Yes.

Q. All the avifauna experts also agreed that the risks associated with offshore mining to tara iti habitat are likely to be low, do you recall that?

10 A. Yes.

Q. And they also said that the potential lag time means that impacts may not be evident until beyond the 20 year proposed permit duration, do you recall that? So they say it's low risk of –

1035

15 A. Sorry, I'm not quite too sure if that relates to the effects on their habitats, ie from the dune erosional weather, that's relating to the effects on – if there's any effects on their foraging.

Q. I think what they say is the habitat, so are you suggesting that the risks in areas other than their foraging may be low, as not below as well, they say  
20 that it's low across the board don't they, in the foraging areas, in the shoreline –

A. I am wondering if we could have, I think you are correct but I'd have to refer back to the joint witness statement.

Q. Dr Thompson: "The monitoring programme is really important for  
25 managing any risk, low or otherwise, to tara iti" isn't it? The monitoring programme along the shoreline.

A. If that's what Dr Thompson has said yes.

Q. Yes, he said that actually in the Court, it's the transcript on page 2407. He says that: "Notwithstanding" after counsel for Auckland City,  
30 Ms Bielby, put to Dr Thompson: "Do you accept that if there was a low risk and it were to eventuate for tara iti, given how few tara iti there are left at Pakiri, that could carry a high consequence?" Dr Thompson said "Yes" to that. So there could be a low risk but it could have high magnitude of consequence to tara iti is that your understanding?

A. That's my understanding.

Q. So consent conditions in an environmental management plan regime would need to provide for that wouldn't they? They'd need to provide –

A. Yes.

5 Q. Sorry, did you say "yes"?

A. Yes I said yes.

Q. Just going back to what we were talking about earlier, the Avifauna expert said that in regard to the offshore area there might be a potential lag time, meaning that the impacts may not be evident until beyond the 20 year proposed permit duration. Now whether that's foraging activity or otherwise, what I would like to understand from you is, do you agree that there could be a lag time in effects in a 20 year consent duration? That's what the Avifauna experts are saying.

A. I understand it in terms of the potential effects on the habitat areas.

15 Q. Yes.

A. Sorry, without seeing the JWS I can't –

Q. Of course.

A. – recall whether it related exactly to the foraging.

**MR MACRAE:**

20 With respect Sir, if my learned friend wants to rely on Mr Hay's answer he has made it clear twice now that he can't really give an answer until he sees the document and I would have thought it would, I would like you to bring it up.

**MS SUTHERLAND:**

I apologise.

25 **THE COURT: JUDGE SMITH TO MS SUTHERLAND**

Q. Yes, I wonder if we shouldn't bring up the joint witness statement. Do you have a page Ms Sutherland?

A. Yes, it's at common bundle 1423, 1423 that's that Mr Baber has signed his name to. There is one without Mr Baber's signature in the – that's the latest one.

30

Q. Yes, here we go. Well yes, although that's Mr Baber not the others isn't it?

A. It's the same JWS but it's the one that Mr Baber has put his signatures to so it's the latest version.

5 Q. Yes, but that represents the view of Mr Baber doesn't it?

A. It's the same wording and green where Mr Baber has added things. We can go back to the other one, the earlier one.

Q. I am lost. This is not a joint, that is the joint statement there. Where in the joint statement is it you are referring to?

10 A. Yes, that's right. Mr Baber couldn't attend the joint witness conference and was allowed to put his signature to what he agreed to and didn't agree to afterwards and that was subsequently issued, the same JWS with Mr Baber's signature, comments or agreements, initials in green. But we can stick with this one, this is actually –

15 1040

Q. It is either in the joint witness statement or it's Mr Baber's added comments. So let's have a look at the joint witness statement. Where is it there?

A. Can you scroll up please and that'll give his Honour the number. Last  
20 paragraphs above 3, top of the page. Last paragraph there.

#### **THE COURT: JUDGE SMITH**

Q. So, have you seen this before, Mr Hay?

A. I have, Sir, and that's why I had remembered about the tara, about the  
25 lag there. I couldn't recall whether the lag was actually also referring to the foraging effects and it remains, my reading of that, when they're talking about "the lag", they're relating to, again it's relating to the tara iti habitat which I –

Q. Yes, but if you look further down they appear to be using the word  
30 "habitat" and "foraging" interchangeably because at the beginning of 3 they put "(habitat) foraging".

A. Yes, that's why I hesitated there, Sir, because I had thought "habitat" meant just the land-based habitat, but you are correct in 3 they're now talking habitat including foraging. What Ms Sutherland was getting at, I

can now answer that yes, it includes both the habitat (ie, where they breed and live) and also foraging.

**CROSS-EXAMINATION CONTINUES: MS SUTHERLAND**

5 Q. Thank you, Mr Hay. So, there could be a lag in the effects that we are seeing or that we see, do you agree?

A. Yes, and they've said that's low.

10 Q. And also, if you go to the - the coastal process experts also agree that in fact the lag, there could be lag effects on past offshore extraction. Do you recall that? We could go to the last sentence of the coastal process JWS. Sorry, actually we could, CB1425.

**THE COURT: JUDGE SMITH TO MS SUTHERLAND**

15 Q. We seem to be spending a lot of time asking Mr Hay whether he agrees with the experts. Given he doesn't hold the expertise to agree with the experts, I don't know we need to go any further than just putting the proposition to him if the experts say (a) then why, I don't know why we're spending time putting statements by the experts to him. They either say it or they don't say it and I'm not sure why we spend a lot of time trying to find things that if they're not clearly stated in the statements then perhaps they shouldn't be put to the witness.

20 A. I do apologise. I'm a little bit nervous and I lost my place. I apologise, Mr Hay.

Q. Just take a moment to reset.

A. Yes.

25 Q. Are we at CB1425. Is there another paragraph you want to take us to or somewhere else?

A. Yes, I wanted to take you to where Mr Todd discusses that the, it's CB1428.

Q. Thank you. Just scroll down. That's not difficult. We'll get there in a minute. "Mr Todd recognises the risk," that one?

30 A. Yes, that poses a low risk but he also recognises a historical inshore extraction may have contributed to adverse effects on beach stability south of Te Arai Head and it's –

Q. We're just trying to find that so that Mr Hay can look at that. Whereabouts is that? Do you know what number it is?

1045

A. Inshore. Inshore just above.

5 Q. We've got inshore. We're looking "Matters of agreement".

A. Could you move down please. Sorry, I do apologise. Midshore.

Q. Midshore, is it?

A. No.

### **CROSS-EXAMINATION CONTINUES: MS SUTHERLAND**

10 Q. So let's move on please. I apologise. Mr Hay, you've supplied the Court with amendments to your evidence, haven't you?

A. Yes.

Q. And you described your view of the review condition 8. You now appear to say that with some changes it can be made to work, is that right?

15 A. Yes.

Q. Now are you anticipating the timing of it is still going to be linked to an SEMR?

A. No, as I explained before, I think the review clause should have two parts to it. One is linked to the SEMR but the second part is linked to the submission of the foredune and beach monitoring surveys.

20

Q. And is it your recommendation that if the council doesn't respond to that, that the report should be deemed to be approved?

A. No, these are 1 through 8 clauses, so this allows council to undertake a review of the consent conditions if they consider that the – how I've worded it or recommended wording, (a) the monitoring regime or the survey regime needs to change, or adverse effects are arising on the environment. So certification has got nothing to do with it.

25

Q. And you're agreed that significant unanticipated effects is not the correct threshold, is that right?

30 A. Correct.

Q. What is the correct threshold in your view?

A. Well there's two things. Whether the monitoring regime and surveys are appropriate; and then, secondly, when it relates to adverse effects, just



adverse effects. Now that doesn't mean just because there's an adverse effect been identified it needs to be reviewed because the EMMP within it has a mechanism within it to address or make recommendations to changes to the EMMP, ie the surveying and monitoring, and that may be the more appropriate mechanism to make the change, maybe far easier. But for instance, if the consent holder wasn't making those changes which the authors of the SEMR report recommends, then this also provides another mechanism for council to initiate its review under 128.

Q. In your amendments to your evidence, you have said that Mr Todd – not sure if we can get those amendments to your evidence up if that's necessary or I could just read, it's three lines – I'm referring to the amendment to your evidence where you have added: "Mr Todd in his amended evidence as presented to the Court has concluded that extraction from the offshore under the proposed conditions of consent," you're amending your paragraph 300 – thank you – can you just read that for me please just remind yourself of that and let me know when you're done, thank you.

1050

A. I've read it, thank you.

Q. So you were saying that no potential adverse effects have been identified. Is that correct?

A. Not overall. Would not result in adverse effects on the bathymetry of the extraction area. The supply of sand to the mid-shore or on the erosion of the beach dune environments.

Q. Yes. So no adverse effects in relation to the beach dune environment erosion, nothing has been found as a result of this application?

A. In terms of the offshore that is how I read what Mr Todd, what Mr Todd's opinion is in terms of this offshore application going forward.

Q. Yes. Mr Todd discovered an error in the calculations of erosion on the shoreline where Tara Iti nests didn't he? I can take you to it.

A. Yes.

Q. Yes, okay. That error led to a significant change in his conclusions on erosion and meant that you could no longer assess the effects of the

inshore and mid-shore in your EIR, I can take you to your EIR where you say that if that's helpful.

A. No, I remember that well, you are correct.

5 Q. Yes. Fundamental changes to proposals were later made because of it weren't they?

A. Yes.

Q. Yes. So this demonstrates the importance of timely and accurate detection of erosion trends generally doesn't it?

10 A. I don't know if you can link the two. He identified an ER, he identified but I don't know if that implies that means there has to be, sorry the second part of what you put forward. I don't think they are linked.

Q. I am suggesting that accuracy in terms of information, monitoring and analysis of that information is important to understanding erosion on the shoreline. Would you agree with that?

15 A. I agree with that and what we have seen with the drone technology since 2017, a significant or a quantum leap in the information available.

Q. Yes. In fact failure to assess these trends accurately could lead to a significant adverse effect couldn't it for Tara Iti via erosion –

20 A. I don't know if it could lead to it, it could lead to the, it could compose issues with the identification of that effect.

Q. But it's not really correct to say that no potential effects have been identified is it? A potential effect in terms of erosion trend on the shoreline was identified as part of this appeal process wasn't it?

25 A. That's different from what I am saying. I am saying in terms of Mr Todd and his amended evidence has concluded that extraction from the offshore under the proposed conditions, okay so this is going forward, will not result in an adverse effect going on. So Mr Todd is saying what is going to happen under this consent coming up but this isn't referring to what he has found historically has occurred.

30 Q. Would you agree that the finding of a mistake illustrates, demonstrates the importance of accurate information in this, along the shoreline in terms of erosion trends. Would you agree with that, is that fair?

A. It identifies the importance for the correct interpretation of that monitoring information yes.

Q. In your view, are these conditions the best that you can provide?

A. These conditions have had a long and tortured path may I suggest. So like I said before we started in 2017 when it was decided it would be, that the current consent conditions weren't fit for purpose, we drafted up a set  
 5 using, I must say, with significant input from Mr West in particular, also from Mr Healy in terms of the survey and also at that time, and also at that time Ms Hart of course was part of the team preparing the application for Kaipara Limited for the offshore, then went through a legal review by the legal counsel at that time for Kaipara Limited. Post the hearing, we  
 10 then had quite extensive discussions with the Department of Conservation planner Mr Christie, there were discussions with McCallums remembering they were the contractor at this stage, and discussions –

Q. Mr Hay, I'll interrupt you there. For example, a lot of the conditions that  
 15 the Department wanted haven't been brought through into this set. I just wanted your opinion. In your expert opinion, are these conditions the best you can provide?

A. I've said the review condition can be improved, there's issues where we haven't adequately addressed now the cultural conditions, but overall the  
 20 remainder of the conditions I think are good. If you've asked me to look at a specific condition could be reworded, then I'm sure improvements could be made, and the other planners of course may also – who are also all very experienced planners, may also have views on how these conditions can be improved.

25 Q. Yes. So is it a yes or a no?

A. In respect to the question, no, because as I've outlined, certain conditions are either missing or need to be improved.

Q. Were you here for Mr Stubbing's evidence?

A. I viewed it online.

30 Q. Did you hear Mr Stubbing say that the 25 metre contour could shift around?

A. That's 25 metre to chart datum. Yeah, I was aware of that.

Q. So he said something like in 10 years it might not be in exactly the same place.

**THE COURT: JUDGE SMITH**

Sorry, I don't want to confuse ourselves with chart datum because that's why we have fixed points. I think his point was that the bottom is moving and the depth of water at any point in time will vary not only on tide but on the bathymetry at the bottom. Think that's his point.

**THE COURT: JUDGE SMITH**

Q. Which I think you agree with?

A. I do, and that had been my understanding from the start, and that's why in one of the consent conditions when we talked about the extraction area, it also said no extraction below 25 metre chart datum.

Q. Which is a fixed line, you would agree with me, because it's shown on a map? That's the point is the difference between fixing a point and having an ever variable which would of course from the Court's point of view becomes an unenforceable and therefore can't do it. So I just don't want to confuse chart datum with the actual depth of the water, they're not necessarily exactly the same thing. Do you follow my point? And I think that's the question you were being asked. Mr Stubbing was saying well the actual depth of water will vary because the bottom moves.

A. Yes.

Q. And of course the tide moves as well. So at any point in time, the actual depth of the water will vary.

A. Correct.

Q. I think that's the point that was made.

**THE COURT: JUDGE SMITH**

Ms Sutherland, is that the point you're trying to make, because I think the conflation of chart datum with the actual depth of water is where we get into trouble.

**MS SUTHERLAND:**

Yes, it's been quite confusing.

**THE COURT: JUDGE SMITH**

Well the reality is that every time there is a storm, the bottom changes because that's how it lifts up sand and moves it around. So chart datum is a way to – it's a fictional point of time when they do whatever they do for the chart datum or for MSW or whatever it is, it fixes it as at that date, but it doesn't mean it will be that way next week or even the next day, because sand moves. It's quite an important point and that's why the Court pursued it, because the Court must have some measurement, MSL, chart datum or some other way, because you can't measure it every single day, and to rely on depth sounders is not an appropriate or checkable system. So I just want to be clear everyone's...

**THE COURT: JUDGE SMITH**

Q. Mr Hay, do you understand what I'm saying?

A. I do, Sir.

Q. So you're talking about the – that you agree with Mr Stubbing that the bathymetry at the bottom will change regularly? Okay.

A. Yes.

1100

**CROSS-EXAMINATION CONTINUES: MS SUTHERLAND**

Q. So, the experts have agreed that the 25 metre contour is around the depth of closure and that's a really important concept in this case, isn't it?

A. It is, yes.

Q. And in terms of monitoring, we talked earlier about it being, the monitoring information is important and analysis, correct analysis is important. It would be important to monitor the depth of closure in relation to extraction activities, wouldn't it, to make sure that it is as experts hypothesise across a 20 year term of consent?

A. Sorry, I don't think I understood the question.

**THE COURT: JUDGE SMITH**

I'm wondering whether it's a fair question of this witness because it's really getting into the coastal processes issue, and I think he's just relied on the coastal process. I think we've, if I can use the pun, got beyond his depth here

in terms of how we can utilise that figure. So, unless Mr Hay wants to answer it, I would suggest that it's a better question for other witnesses. And there was a lot of questions of Mr Todd for example about this very issue.

## **MS SUTHERLAND ADDRESSES THE COURT – LOST VISUAL (11:01:38)**

### **5 THE COURT: JUDGE SMITH**

You can reframe the question on the – as long as we're not asking his expertise on depth of closure you could ask questions around it. There's no problem with that. I'm not stopping the questions, just assuming that he has the expertise to answer questions on depth of closure.

### **10 CROSS-EXAMINATION CONTINUES: MS SUTHERLAND**

Q. Mr Hay, if there was a way to accurately measure the depth of closure from time to time in this consent, that would be good information to have, wouldn't it?

A. It may be, depending on what it was being utilised for.

15 Q. Would you agree that in regard to tara iti there's no margin for error really, is there? Less than 40 individuals left. Is that fair to say?

A. If one more tara itis dies then it could have a significant effect on the tara iti population.

Q. You supplied the Court this morning with, or was it last night. Sorry, MBL  
20 supplied the Court with revised maps. Have you had a chance to look at those, Mr Hay?

A. No, I haven't.

Q. I wonder if it's possible to bring up map 2.

### **25 MR MACRAE:**

Your Honour, these maps were submitted to the parties for their comment and have not yet been submitted to the Court and they've been provided to the parties on the basis, as your Honour will recall, that the parties' comments on them will be obtained before they're finalised. And that process hasn't occurred.

**THE COURT: JUDGE SMITH**

Moreover, I don't know that it's appropriate to ask the question of this witness if he hasn't seen them and it's probably not really a question about mapping. I don't quite know what the issue is so it's hard to comment any further, but I

5 would have thought we'd have to wait to see what the parties think about the maps first.

1105

**CROSS-EXAMINATION CONTINUES: MS SUTHERLAND**

- 10 Q. Could we go to the coastal process JWS at 1,430. The coastal process JWS records that the experts agree that a full topographical survey is required every six months? Are we on the right area there? Sorry, it's 1431, can you go down a bit thank you. Mr Hay, if monitoring could establish a linkage or lack of linkage with erosion trends on the beach that would be helpful information to have in a consent set wouldn't it?
- 15 A. And that's why beach and foredune monitoring is recommended as a consent condition.
- 20 Q. At 1431 just above – it's on, middle of the page, the experts agree that if only an offshore consent were to be granted the bathymetric survey also includes an appropriate land with buffer. So if monitoring could be detected in the mid-shore that would be useful, sorry if bathymetric changes in the mid-shore could be detected that would be useful information to have too wouldn't it?
- 25 A. Yes, and on the EMMP we had recommended that the survey is undertaken, I think it was 200 metres land would, of the most land would, monitoring cells if extraction was being undertaken in those cells.
- 30 Q. Sorry, I didn't understand your answer.
- A. So I agree with you and in the EMMP we had recommended that if extraction was occurring in the most landward cells, monitoring cells, then bathymetric survey is undertaken landward of the extraction area, and I think from memory it was about a 200 metre width and that would assist in the interpretation, well analysis I suppose, of changing bathymetry in sediment flows between the landward edge of the extraction area going into what was referred to previously as the mid-shore area.

Q. Yes, it's quite an important piece of information isn't it Mr Hay?

A. I can't answer that but from my perspective as a planner, if that had been recommended by the experts as assisting them then it's obviously of some importance to them.

5 Q. Yes, it's in the EMMP but it's not in the EMMP but it's not in the conditions is it?

A. Well no and this is the challenge we sometimes have is how, how detailed should the conditions get, particularly scientific investigations where a degree of flexibility is required in them over time as new monitoring methods or improvements in the monitoring regime are identified.

10

Q. The evidence of Mr West is that stony corals often live in deeper waters than 25 to 35 metres or so where MBL is currently able to extract isn't it?

A. Yes.

1110

15 Q. In your understanding of Mr West's evidence, have potential effects on benthic ecology seaward of the 35 metres depth been assessed for this application?

A. Yes, but the PSEAR process identifies the monitoring that would then be undertaken if monitoring cells, if extraction was proposed to occur in monitoring cells greater than 35 metres.

20

Q. So the consent conditions don't treat areas seaward of 35 metres differently in any way do they?

A. By the consent conditions, no.

Q. On Friday you noted that the national policy statement for indigenous biodiversity was coming into force. Do you agree that it's a relevant consideration to be considered in this appeal?

25

A. In terms of the timing I think that's a legal question. It's my understanding it could well be.

Q. Yes.

30 A. Have you had a chance to familiarise yourself with it?

Q. Yes I have.

Q. I am sorry I missed that.

A. I have.



Q. Would it be fair to say that the MPSIB reinforces protection of critically endangered bio-diversities?

A. In terms of terrestrial broadly speaking, yes.

5 Q. In your evidence in reply, and we can get it up if that's helpful, at EB21A25, it's your paragraph 4.64, you say that Te Mana o Te Taiao is not a relevant matter. Do you recall that?

A. Yes.

Q. This is in contrast to the evidence of Ms Thorne isn't it who said that it is a relevant consideration.

10 A. Yes.

Q. It contains goals and it is in the common bundle, I don't propose we need to go to them but we can if you would like to, but they are goals such as, for example, by 2025 there be no known human-driven extinctions of indigenous species. Do you not consider that sort of goal or that goal in particular to be helpful for a Court to consider as part of an integrated picture of this case?

15

A. I don't know if that's strategy, it's probably up to the Court to determine whether they consider it is a matter that has to be considered under 104(1)(c) but in some ways it's my understanding that argument has now been superseded with the release of the MPS for indigenous biodiversity.

20

Q. Which reinforces and strengthens protection of indigenous biodiversity. Would you agree?

A. It does but there's certain exemptions of when it applies and doesn't apply.

25 Q. Thank you Mr Hay those are all my questions.

#### **THE COURT: JUDGE SMITH**

On my record we have Mr Pou/Ms Ulrich. We will take the morning adjournment and then come to your questions.

#### **MR VAN MIERLO:**

30 Sir could I just take the opportunity to signal I did also have some questions from Ms Downing but I am happy to put those after my friend.

**THE COURT: JUDGE SMITH**

We will deal with those next Mr van Mierlo, I didn't realise you had some separate questions, I thought they were all included in that bundle.

**MR VAN MIERLO:**

- 5 I would think about 10, maybe 15 minutes at most.

**THE COURT: JUDGE SMITH**

We will come back to that after the break thank you.

**COURT ADJOURNS: 11.15 AM**

**COURT RESUMES: 11.41 AM**

**JUDGE SMITH ADDRESSES COUNSEL/PARTIES – TIMETABLING**  
(11:41:42)

**CROSS-EXAMINATION: MR VAN MIERLO**

- 5 Q. Good morning, Mr Hay.  
A. Morning.  
Q. You can see me?  
A. I can.  
10 Q. Just in your evidence in reply paragraph 3.11, and we probably don't need to bring it up but I'll put it to you first and if you want it brought it up on the screen we can obviously do so, you know that Ms Sitarz, who's the Forest and Bird planning witness, "considers that the movement of vessels permitted within the Hauraki Gulf should not be considered as part of the permitted baseline when considering the effects of the *William Fraser* transiting between Auckland and the site", and you say you're not in agreement with Ms Sitarz on that point. Do you accept that applying the permitted baseline is discretionary?  
15 A. I do.  
Q. So I think that was a yes, I just need to be clear.  
20 A. Yes.  
Q. Thank you. And if it weren't for the dredging activity, there would not be an additional vessel in the Hauraki Gulf undertaking 14 trips per month ranging from 16 to 20 hours on a return trip, would you accept that?  
A. Yes.  
25 Q. Now in the JWS marine ecology, the ecologists for the council, Forest and Bird and Te Whānau o Pakiri, agreed that: "It is likely that there are behaviour effects, including those relating to physiology, ie stress, from noise on marine mammals, but the significance of these effects is uncertain." Do you recall reading that in the JWS?  
30 A. I recall reading something to that effect but I'd need to see it on screen but if that's what you're telling me it says.  
Q. Okay. Would you like to see it on the screen?

A. Yes, please.

Q. Okay, that's at common bundle 1437. There it is, under 5, the second paragraph. And in fairness, I think it was Dr Pine who disagreed on the stress question which is noted there in that paragraph. But notwithstanding that –

A. So if I read that correctly, that's – sorry, I was just going to say if I'm reading that correctly, this is relating during the extraction mode.

Q. Okay. And we've also heard evidence that the area or the route of transit that the *William Fraser* takes between Auckland and the site includes areas frequented by whales, marine mammals, would you accept that?

A. Yes.

Q. So in light of this evidence, would you accept that disregarding the permitted baseline would be a more cautious approach?

A. It would be a very extremely cautious approach given the amount of vessels transiting in that area on a daily basis.

Q. Now at 3.16 of your evidence in reply, you agreed with Ms Sitarz that clause 2 of policy 3 of the NZCPS is not captured by the Auckland Unitary Plan. Now clause 2 of policy 3 relates to adopting a precautionary approach to use and management of coastal resources potentially vulnerable to climate change. And we can bring up the policy 3 if you'd like us to, but my question is do you agree that policy 3 of the NZCPS needs to be referred to directly, in other words the Auckland Unitary Plan cannot be relied on in terms of that policy?

A. Yes, that's what I'm saying, but policy 2, it's an interesting wording because it relates to the use and management of coastal resources potentially vulnerable to effects from climate change. And I suppose my question is, is the sand resource itself, being the resource, potentially vulnerable to effects from climate change? Now I haven't addressed that. I say in my evidence in reply it's just when I've gone through it again, I just – there's a degree of uncertainty around that wording. (inaudible 11:49:18) pick up on earlier.

Q. And so that uncertainty is in relation to consideration of the sand as a resource potentially vulnerable to climate change, is that right?

A. Yeah, that's what it appears to say.

Q. Okay. But at paragraph 3.17 of your reply evidence, you do consider tara iti could be considered a coastal resource potentially vulnerable to the effects of climate change?

1150

5 A. Well I did then, but reading it again now, if I superimpose tara iti instead of coastal resource, then it doesn't make much sense because the application is not to use or manage let's say the tara iti.

Q. No. But would you accept that any resource consent needs to manage any potential effects on tara iti?

10 A. I do but I don't think policy 32 is saying that.

Q. Have you read the evidence of Professor Jeffs who was called by Forest and Bird?

A. Yes.

15 Q. Yes. At paragraph 75 he sets out his identification of potential effects of climate change on bivalves and corals. Again, we can bring that evidence up if you would like to see that?

A. Yes please.

Q. So that's EB3752, paragraph 75.

A. Thank you.

20 Q. Then below that at paragraph 76 to 78 he sets out his concerns with the post-sand extraction and climate change in consideration of policy, the NZCPS in this regard. Really the question here is –

A. Just slow down please.

Q. Yes. Then down to 78 when you get a chance to read that.

25 A. And 78.

Q. The question here is whether you would agree that bivalves and corals may also be considered as a coastal resource potentially vulnerable to climate change?

30 A. Yes but again in terms of policy 3.2, this application isn't for the use and management of those, of bivalves and such.

Q. Yes, but would you accept that the dredging activity might disturb bivalves and such?

A. Yes.

Q. Moving to another topic now so we can take that down off the screen. Early on in the hearing there was a question from Special Advisor Commissioner Howie to your legal counsel regarding whether sand extraction was included under the definition of mineral extraction. Your  
5 counsel's response was that it was under the Crown Minerals Act, it was mineral extraction under the Crown Minerals Act. There is also a definition of mineral extraction activities in the Auckland Unitary Plan. Are you familiar with that?

A. I am.

10 Q. That definition excludes the common marine and coastal area doesn't it?

A. It does.

Q. Yes. Are you aware that Commissioners for the Auckland Council in their initial decision on the offshore application consider that RPS7.6 mineral extraction provisions did not apply in relation to this application?

15 A. For the offshore yes, but for the subsequent inshore they didn't express the same view.

Q. But for the offshore they held that RPS7.6 did not apply. Is that correct?

A. Yes.

20 Q. I understand from paragraph 361 of your evidence-in-chief that you do not agree with the commissioners on this point?

A. That's correct.

Q. Ms Sitarz in her evidence she agrees that RPS7.6 objective is relevant but considers that the policies are not. Now you didn't respond to this in your reply evidence did you? I can give you the reference for Ms Sitarz  
25 evidence if that is helpful.

1155

A. Well I can say no I didn't because I had addressed it in my evidence-in-chief.

30 Q. So you maintain your opinion as to the relevance of the RPSB7.6 policies, that they are relevant?

A. I think it's a bit more nuanced on that and in 363 to 365 I give my opinion on the specific policies.

Q. In your overall section 1041 assessment where you conclude the offshore application would not result in any significant adverse effects, do you rely on policy 7.6.24 in terms of your conclusion?

A. Policy what sorry, pardon me, what policy was that?

5 Q. Policy 7.6.24.

A. Not my assessment on effects as such, no.

Q. Just one final matter. At your evidence in reply, paragraph 4.71, this is in relation to section 107(1)(g) of the Act, restrictions on certain discharges, you say that you do not agree that it is uncertain if the discharge will result in significant adverse effects on aquatic life. Do you recall that?

10

A. I say: "I do not agree that it is uncertain if the discharge will result in significant adverse effects on aquatic life."

Q. Yes. Do you accept that aquatic life, as defined in the RMA, includes seabirds, are you aware of that?

15

A. I can't recall, there was an RMA definition but I would assume it would include birds.

Q. Yes. You would have heard the evidence and read evidence from various avifauna experts, and again it's recorded in the JWS, we probably don't need to go there but I will put some words to you, that the majority of the avifauna experts agreed that they are uncertain of the effects on finfish and marine food webs, as presented in evidence, adequately addresses the potential for more than minor adverse impacts on fairy terns and other seabirds, or other bird species sorry. In light of that evidence from avifauna experts, would you accept the potential impacts on seabirds are relevant to assessing potential effects on aquatic life?

20

25

A. Can you just repeat the last, the actual question sorry, at the end.

Q. Yes. Would you accept that the potential impacts on seabirds are relevant to assessing potential effects on aquatic lives?

A. In terms of 107 when it relates to the discharge yes, to the effects from the discharge.

30

### **THE COURT: JUDGE SMITH**

I don't know if it is Ms Ulrich or Mr Pou or a combination again?

**MS URLICH:**

Thank you Sir, we have a combination again.

1200

**CROSS-EXAMINATION: MS URLICH**

5 Q. Tēnā koe Mr Hay.

A. Good morning – I was checking what the time was.

Q. I wanted to revisit some of the responses that you gave to counsel and Judge Warren on Friday. The first area that I wanted to revisit was your responses to Judge Warren's questions around the CVAs for Ngāti Manuhiri. So in those responses to Judge Warren you said there was some sensitivity around the CVA because of the change in applicants. Is that right?

A. I am wondering if it would help to pull up the CVA and look at its timing. So the CVA at the top was paired in, first of all, at the very top I think it has something to the effect of restricted to client only, so at the time of the offshore application MBL wasn't the client, I was providing advice to Kaipara Limited while that CVA was prepared for the inshore application for MBL, so of course, they couldn't provide it to us. As it was in terms of timing at that time, around that time or it may have been just before, we had had meetings with Ngāti Manuhiri and the timeline it was decided to follow for the offshore was that – to the effect of we were advised, and this was reinforced by Mr Tuinda who was then the manager of Kaitiaki Charitable Trust, that once the, say the money issues were sorted, then we would receive our CVA.

25 Q. Mr Garton could I please ask you to pull up the CVA, so the reference for that is CB155, sorry wrong reference, CB3454 and that's in the, no it is not it is EB3454, I apologise. It is attached in Mr Hohneck's evidence. So we see there that the CVA was produced for McCallum Brothers don't we?

30 A. Yes.

Q. At the time of writing your evidence for this round of the proceedings MBL was your client wasn't it?



A. They were and if you go to figure, I think it's 2, it shows the area this assessment was undertaken for and also right near the start there seems to be a disclaimer that this is not cultural values assessment, which has also added a bit of difficulty I suppose.

5 Q. Yes, and I did want to explore the introductory statement with you and so that reference 3456. Do you recall, again in responses to Judge Warren, you mentioned that there was some sensitivity because you weren't sure about the values, inshore/midshore verse offshore?

10 A. I remember a discussion, I, it may have covered that point, sorry I can't specifically remember.

Q. No problem so can you please take a look over the first paragraph there.

A. Yes.

15 Q. It states there that it provides general background information about associations, interests, issues and values that Ngāti Manuhiri have in connection to the area doesn't it?

1205

A. Yes. And it does.

Q. Yes. Would you agree that these matters, in general terms, are important considerations at every stage of the planning process?

20 A. Yes. There may be specific, sorry, there may be specific points raised that mightn't be applicable to the offshore, without going through every point line-by-line, but overall, in general, yes.

### **THE COURT: JUDGE SMITH**

25 Q. Well it seems very clear that this report was prepared as a general discussion of the Mangawhai-Pakiri embayment and the Association's interests and issues. It was not related to any particular application for consent. Where do you say it is related only to an application for consent? Is that because of the map?

30 A. If we go to, because of the mapping and some of the wording. Also at that time remember MBL, sorry, McCullum Brothers didn't have a resource consent application for the offshore site. This is back in 2020 when it was written. I am not saying that this isn't helpful information but, it is, but it was written for a different application.

Q. Yes, it was me that asked the questions about why you had disregarded the one for the inshore, so that's why I am raising the issue.

**CROSS-EXAMINATION CONTINUES: MS URLICH**

5 Q. We can take that document down now thank you Mr Garton. Returning to your response and this time your response is to counsel. You accepted there were gaps in your evidence in terms of the nature and scale of effects on Ngāti Manuhiri, the values, didn't you?

A. I think I said something to the: "I need to listen to the other parties" or something to that effect. So yes, it could be summarised as that.

10 Q. Would you agree that Ngāti Manuhiri are best placed to identify their values and the effects that this project might have on their values?

A. In terms of their rohe yes.

Q. Sorry, I didn't quite catch that, what was your response?

A. Yes, in terms of their interests yes.

15 Q. So would you defer to Ngāti Manuhiri evidence in terms of that assessment of the nature and scale of effects?

A. Mr Te Rangi was commissioned to provide, to assess those effects and then to provide his evidence on it and that is what I've relied upon in my evidence.

20 Q. Just bearing that response in mind, I would like to take you to the AUP policy please, that's 2.2. So this reference is CB1551.

**THE COURT: JUDGE SMITH**

25 Do you mind Ms Ulrich if we have that in front of us, I know that you have it planted firmly in your mind but we need, I need to be constantly reminded of the wording until I am familiar with it. B6.2.2, I can't remember, we did have a number for that page just before.

**MS URLICH:**

We did, so that's CB1551. So we are looking at the 6.2.2 and I would like to focus on (1)(e) please.

**THE COURT: JUDGE SMITH**

It recognises mana whenua, is that the one?

**MS URLICH:**

Yes, thank you.

**5 WITNESS:**

I am wondering if we could just go further up just to get the start of it in there.

1210

**THE COURT: JUDGE SMITH**

There's the participation provision, quite clearly, and in a way that does all of  
 10 the following, so it's an inclusive provision of everything. And (e), and I can say  
 we've had it in other cases and we see it as fairly key to how the relationship is  
 intended to work. So, (e) is: "Recognises mana" – I'm sorry, I'm reading this  
 into the record because it is hard later to find them: "(e) Recognises mana  
 whenua as specialists in the tikanga of their hapū or iwi and is best placed to  
 15 convey their relationship with their ancestral lands, water, sites, wāhi tapu and  
 other tāonga." So that's the provision and I think Ms Ulrich's question, which  
 you'll need to repeat again because you started with that and then came to this  
 provision.

**CROSS-EXAMINATION CONTINUES: MS URLICH**

20 Q. Focusing on this provision, you would be aware, wouldn't you, that  
 Mr Te Rangi is not mana whenua of the Pakiri-Mangawhai embayment?

A. I do.

Q. So, it would be Ngāti Manuhiri that are best placed and specialists in their  
 tikanga, wouldn't it?

25 A. So, if we go to the start of the objective, so this is "providing opportunities  
 for mana whenua". So, the opportunities are being provided. Whether  
 they're taken up or not is a separate story. And you are correct that Te  
 Uri O Hau and Ngāti Manuhiri may have different ways that they want it  
 recognised or not.

Q. And we might just stay with this provision for a moment, and I'd like to make sure we're on the same page in terms of subsection (1). So, it's provide opportunities in a manner that does all of the following, isn't it?

A. There's an "and" after (g) so that's how I would understand it.

5 Q. So, it's not just about providing an opportunity, is it? There's specific considerations or factors that need to be realised in those opportunities?

A. It's providing the opportunity for (a) to (h) to be given effect to if those opportunities are taken up.

10 Q. And in terms of (c), the timely effect of a meaningful engagement with mana whenua, there has been a sense of engagement between Mr McCallum and Ngāti Manuhiri, hasn't there?

A. So, prior to Mr McCallum it was between Kaipara and mana whenua and then when McCallum Brothers took over the application, between Mr McCallum and mana whenua.

15 Q. And we've heard from Mr Te Rangi that there was no engagement, well, Mr Te Rangi and Mr McCallum that there was no engagement between technical experts and Ngāti Manuhiri, haven't we?

20 A. I don't think that's quite correct because very early on I was interacting with Mr, for the offshore with Mr Tuinder, the general manager for, it would be Kaitiaki Charitable Trust.

Q. Mr who, sorry?

A. Peter Tuinder, T-U-I-N-D-E-R.

Q. So, to your knowledge was there any engagement between Mr West and Ngāti Manuhiri?

25 A. Not that I'm aware of.

Q. And I mean we can work our way through the individual experts but would you accept Mr Te Rangi and Mr McCallum's account that there actually was no engagement between technical witnesses and focusing on landscape, ecological, coastal process witnesses and Ngāti Manuhiri?

30 A. Yes, yes. As far as I am aware there hasn't been those interactions.

1215

Q. So, if we can stay with this policy for a moment more, and focusing on (g), so "recognises and provides for mātauranga and tikanga", given the absence of consideration of Ngāti Manuhiri tikanga and values, would you

agree that the application doesn't really inbuild mātauranga or tikanga as they relate to Ngāti Manuhiri?

A. So again the policy is providing opportunities for that to be recognised. Now to date through the draft cultural liaison agreement with Te Uri O Hau, that appears to be going to be addressed through there. In some ways, the expert panel condition that came through on the temporary consent does have that – sorry, and is now recommended for this consent, does provide one avenue for providing for mātauranga. In terms of the actual tikanga, there's not a consent condition at the current time that would specifically address that.

Q. Thank you. So it might be easier to keep this up, I did have some questions around the AUP overlay D21 and your responses to Mr Carlyon's evidence. So this reference is CB1604. Now in your responses to Mr Carlyon's evidence, you stated that if an area is not listed in Schedule 12 it doesn't qualify as a site of significance to mana whenua, is that right?

A. No. I think what I've said, it's not a scheduled site under D21. So it doesn't mean it doesn't have significance to mana whenua, a site, it's just not scheduled there.

Q. Would you agree that this schedule D21 is one mechanism by which the AUP gives substance to the Part 2 RMA principles relating to tangata whenua?

A. Yes.

Q. Now if I can ask you to review the third paragraph down please in the background section.

A. Yes.

Q. So we see there that not all sites of significance to tangata whenua are scheduled, don't we?

A. Yes.

Q. And there might be significant more sites of equal or greater significance to those that are scheduled?

A. That's what it's saying.

Q. And you'd agree, wouldn't you, that there might be instances where sites are sensitive and it's not culturally appropriate to disclose such information?

A. Yes.

5 Q. And that that particular issue is addressed both in the AUP and the NZCPS, isn't it?

A. In the AUPRP, yes. I can't recall in the NZCPS but most likely.

1220

10 Q. Actually we might cover that off while it's on my mind. So, if we can go to the NZCPS please which is CB1554. I'll just double check that reference. CB1497 and we're looking at policy 2(g).

A. Policy 2?

Q. Yes, so we're just focusing on (g)2 there, or 2(g), sorry.

A. Yes, yes, so you are correct.

15 Q. We can go back to the Auckland Unitary Plan, so back to that schedule D21. If we can just scroll up a bit, we're still focusing on the background of this. So, in terms of some sites of significant not being scheduled, that's an explicit gap in the AUP scheduling system, isn't it?

A. Yes.

20 Q. Now I did want to look through or explore some of the policies with you, so if you could scroll down please, Mr Garton, to the bottom of this page. Now just focusing on D21.3(1) and (2), there's no reference to scheduled sites of significance in those provisions, is there?

25 A. Well, this all falls under the heading title. If you go up where it says, sorry, if Mr Garton could just move up to the heading title, so it's within the chapter "Sites and Places of Significance to Mana Whenua Overlay". So it's my understanding this chapter relates just to those sites and places of significance to mana whenua overlay which is scheduled at the current time in the unitary plan.

30 Q. So: "Sites and places of significance in which there is express acknowledgement that those overlays are incomplete." Do you agree with that?

A. It says that it's intended to identify further sites and places nominated by mana whenua, so it's indicating, a bit like probably the SEA overlay, that

that schedule may change over time, or the overlay may change over time.

Q. Yes, that's right. And so it's an iterative process, isn't it?

5 A. Over the life of the unitary plan, yes. I'm just trying to recall, I know that there's been a plan change recently changing the historic heritage overlay where they apply. I think there has been a change previously to mana whenua overlays introduced by a plan change.

10 Q. And of course acknowledging that, as we've explored, there might be some areas that are sensitive and it wouldn't be culturally appropriate to disclose those sites, wouldn't it? That's right, isn't it?

1225

A. Well recognising that but then D21 wouldn't apply to those sites because it's specifically related to the mana whenua overlay.

15 Q. I would like to persist with the line of questioning that I was heading down earlier. So if we could just focus on those, and I acknowledge your view that this schedule is exhaustive and in the sense that it only applies to scheduled sites. If we can scroll back down to (1) and (2) please. Do you agree that (1) and (2) do not mention scheduled sites of significance?

20 A. Those words don't – those – yes, those policies don't have those specific words.

Q. And if we can scroll down again please to the next page. So (1) and (2) can be contrasted for example with the first provision there, so 3(a), which does reference scheduled sites, doesn't it?

A. It does.

25 Q. Now there was one other part of the AUP that I would like to discuss with you. So B6.5.2, and the reference to that is 1554 of this document, and I'd like to focus on policy 1 to begin with. So there's an obligation there, isn't there, to protect mana whenua cultural and historic heritage sites and areas?

30 A. Yes.

Q. And I'd like to be very clear about this because there is a response in your reply evidence to Mr Carlyon's and it seems to conflate (1), (2) and (3). So (1), we have an obligation to protect culturally significant sites, do you agree?

A. In the unitary plan, yes.

Q. And (2), there's discussion about identifying and evaluation places and areas?

A. Yes.

5 Q. Cultural significance, if I can summarise it that way. And then (3) discusses inclusion of those sites in Schedule 12?

A. Yes.

Q. So they're quite distinct functions, would you agree?

10 A. No, it's my reading of it that (1) and (2) is what needs to be done and (3) is how they're going to do it.

Q. But your evidence then that if it's not scheduled it doesn't qualify for protection, culturally significant sites I'm referring to here –

1230

#### **THE COURT: JUDGE SMITH**

15 This is a point that's come up in a whole series of decisions, both before the Court and the High Court, and I'm not sure how we approach it because the consistent position of the council has been that that's exactly correct. And this Court of course was unhappy with that in the *Cabra* case. It was overturned on appeal, but in the final conditions we seem to have adopted something closer  
20 to what you're talking about where it was recognised there may be sites of significance, this is SEA, that hadn't been identified in schedules but could be identified in individual applications for resource consent for, and then relied upon for subdivisional rights. But I've got to say this is a huge legal issue and I'm not sure how we approach a thing of this size. It's a very large tiger and  
25 recognises a point I've made, very unkindly, that a plan is a product of the way in which it was created unfortunately.

So, I don't know what – but I accept, I know the answers and I understand the issue you're raising. I think it's better for submission, but you'll need to have –  
30 there's quite a lot of case law on the point and I'm not sure how we go about it because it hasn't been considered specifically in the *mana whenua* example but for SEAs, and I think in a number of other areas, and this is the case where council was seeking to have, not prohibitions but non-complying activities



where you couldn't get a consent, except in the most exceptional circumstances. So, it's become difficult and represents I think a history of the drafting which was in bunkerisation that various departments prepared provisions. But the wording of these provisions is almost identical to SEAs, as

5 Mr Hay mentioned. So, I'm not sure where it takes us to. All I can point out is you're pointing out a very large problem with the AUP.

**MS URLICH:**

I will address this in submissions, or we will address this all in submissions, Sir,

10 but I did have one point that I did wish to make or to clarify with Mr Hay at this point and it really –

**THE COURT: JUDGE SMITH**

I'm not stopping you in any way, but I think it was important to note it, particularly for the members of the Court who by now are sinking down a rabbit hole with

15 the consequences of all of this which have ramifications right through the AUP. Nobody has taken on the AUP head-on. Unless you're planning to do so, we're still working round the edges of a very large elephant, to be fair. That's all I'm pointing out.

20 **MS URLICH:**

Thank you. Thank you, Sir.

**THE COURT: JUDGE SMITH**

Q. Carry on, I haven't stopped your questions and I'm not stopping them. I'm just pointing out that Mr Hay has, in my view, correctly identified that

25 this is one of the problems the plan has, and a very large problem to be fair. I don't know if you want to make any comment, Mr Hay, before I invite Ms Urlich to continue?

A. I won't provide any additional comment, Sir.

**CROSS-EXAMINATION CONTINUES: MS URLICH**

30 Q. So, Mr Hay, I did want to compare B6.5.2(1) and (4). We have reference in (1) to protecting sites of cultural significance that are not scheduled and

then in (4) there is specific reference to protecting scheduled sites, isn't there?

A. Just come up to (1), if we could go up to (1) again. No, this is again where, my interpretation is that's what the AUP is intending to do and they're doing it via policy 3 or 4.

Q. Can I have your view then on how policy 9, so that's down on 1555, how does 9 fit with the obligations to protect?

1235

A. Sorry, what's the question?

Q. So if some sites might not be disclosed because of sensitive information, how would they be protected?

**THE COURT: JUDGE SMITH**

Very good question.

**WITNESS:**

Yes, that's up to council, how are they or how is that information provided in a manner that let's say planning consultants such as myself in advising clients can identify. Now, when it comes to very specific sites, there can be telephone calls where I'm under no illusion of the sensitivity of a very, very specific site and that's how it's relayed to me, but that's not an AUPOP method of course.

**THE COURT: JUDGE SMITH**

It seems to me, Ms Ulrich, that this must be about, if the council does receive such information it must protect it, and there are cases, as Mr Pou knows well aware, the plans provide that you can have, essentially, a secret file which gives the sensitive information, but the experience has been that, to date, I don't know of any or very many tangata whenua at all, if any, I don't know any personally, Mr Pou may have better information, who are reluctant to provide it. Generally by its nature, if it's that sensitive it is not provided to anyone and we've had a case on that very point. So, that seems to be about protecting information but the point is that getting it, I can't see how the council can require a plan, tangata whenua, to give them information and that's one of the problems with this plan and I've got to say, all plans in New Zealand have the same problem, that you're

to protect those sites of significance and obviously the most important ones are usually secret and unless Mr Hay has some explanation we are left with the tension that that creates, I think. Mr Hay?

**WITNESS:**

5 I prefer to avoid policy work, Sir, so I won't add anymore to that.

**CROSS-EXAMINATION CONTINUES: MS URLICH**

10 Q. We can take that document down now, thank you, Mr Garton. I have some questions for you around the existing environment accumulative effect. So, in your evidence-in-chief you describe the existing environment. Would you agree that the environment which this Court must assess the effects on includes the physical environment that actually exists in worldly terms?

A. Yes, including the effects – including the modifications to the environment that what would've occurred with the permitted sand extraction to date.

15 Q. And when we talk about the environment that includes tangata whenua customs and tikanga, doesn't it?

A. Yes.

20 Q. So in terms of the existing environment would you agree that that includes the 10 million, approximately 10 million metre cube of sand that has been removed from Pakiri and Mangawhai?

A. I don't know if that 10 million is now part of the environment because it's not there anymore but the effects from the removal of that 10 million forms part of the existing environment. For instance, if the bathymetry has changed that forms part of the existing environment.

25 Q. And how about the ventures that have been formed as part of dredging activities, do you consider those to be a part of the existing environment?

A. The trenches?

Q. Yes.

30 A. It's my understanding that those, now this is my understanding, is that those trenches weren't formed illegally so therefore they do form part of the existing environment in their current form as they are today.

1240

Q. And the existing environment would include threats to the natural terrestrial eco systems like habitat loss and degradation to birds like fairy terns and dotterel, wouldn't it?

5 A. No, the environment includes the dotterels and the fairy terns or such like, not the threat. The threat may be an outcome or an issue related to it but the existing environment would include those dotterels or tara iti that live in it.

10 Q. So, we've heard a number of times through this hearing about dogs being present, horses being present, people walking through the dunes which might contain nesting habitat. Would you agree that those kinds of things form a part of the existing environment?

A. Assuming they're all being undertaken legally, yes.

Q. And the same would apply to marine environment, wouldn't it, so species within the Hauraki Gulf, marine species?

15 A. Yes, marine species form part of the existing environment.

Q. So, are you saying that pressures, other pressures, within the Hauraki Gulf are not part of the existing environment, from your perspective?

20 A. The existing environment is what an effects needs to be assessed against so the existing environment is what's in the environment, whether there's stressors or pressures on it is somewhat different from the existing environment but it still needs to be considered when you're assessing the effect.

Q. So would you put that in the assessments of cumulative effects rather than count it as a part of the existing environment?

25 A. So when we assess the effects on the environment we look at the species but then the effect on that species may depend on what other stressors it may be having or other impacts and sometimes that will be cumulative effect or will be considered is well within the cumulative effects, depending how those stressors or pressures you're talking about are arising on that species.

30 Q. So when we look at the environment for marine mammals, for example, we have evidence before us, and including from Mr Te Rangi, that talks about the degraded state of Hauraki Gulf, that's right isn't it?

A. There's evidence, yes, yes.

Q. But are you saying the wider state of the Hauraki Gulf is not a part of the existing environment?

A. No.

5 Q. Now, staying with this, the existing environment and what it does include or doesn't include, would you agree that historic and on-going water quality changes for marine organisms is a part of the existing environment?

A. That the state of the current water quality is part of the existing environment?

10 Q. And not the historic, so not the changes that have occurred over time?

A. They are to contribute to what of the existing environment now that the application is to be assessed against.

1245

15 Q. And I saw in your evidence that you considered the sediment budget was relevant and did form a part of the existing environment. Given the changes in the application, does that still hold true?

A. Yes, the amount of sediment there and its movement within the embayment forms part of the existing environment.

20 Q. Now focusing on cumulative effects, do you accept that cumulative effects are the effects of the other human activities and that they should be considered together?

A. Yes, but quite often in the framework of assessing cumulative effects for a resource consent, we're talking about effects that may be arising from other consents which may be also having an effect on that environment.

25 Q. And predicting the effects on the environment of this application, is it correct to anticipate that they will occur in a future that is also affected by climate change?

A. Yes.

Q. And sea level rise as well, that's right, isn't it?

30 A. Yes, that needs to be taken into account.

Q. Now you did respond to Mr Carlyon's view of cumulative effects and how they should be assessed, so we don't necessarily need to go there but I will remind you of the paragraphs, so we're looking at 4.6 of your rebuttal

evidence which is EB21A 12. So it's 4.6 and 4.7 as well. Actually, if we can focus on 4.6 for now, sorry.

A. Yes.

5 Q. So Mr Carlyon's criticism of – well not criticism but point of disagreement between your and Mr Hopkins' assessment is really about the absence of factoring in cumulative effects as they relate to Ngāti Manuhiri tikanga and cultural values, isn't it?

A. That's one of his concerns, yes.

10 Q. And those specific concerns aren't addressed in your evidence or Mr Hopkins' evidence, are they?

A. Well, again, I'm taking a different view where Mr Carlyon is talking – he focused on the mana whenua or sites of significance to mana whenua overlay. So again, I don't see it of relevance in this case because this site's not within a site of significance to mana whenua overlay or is nearby  
15 to one that may have an effect on it.

Q. So with respect to the final sentence there, protection of mana whenua cultural and historical sites and areas scheduled in Schedule 12 of the AUP, so you are conflating those, and I guess we are revisiting old ground here, but you are treating sites of cultural significance as scheduled sites.  
20 Is that right?

1250

A. In terms of that policy, yes.

Q. Setting that policy to one side would you agree that you haven't undertaken an assessment of the cumulative effects on Ngāti Manuhiri values or tikanga?  
25

A. In terms of cultural effects I am relying the evidence of Mr Te Rangi.

Q. Right, and we established earlier that Mr Te Rangi is not mana whenua didn't we?

A. Yes.

30 Q. We also established that mana whenua, which is Ngāti Manuhiri, at least in, is one of the mana whenua groups, are best place to speak to cultural values and tikanga didn't we?

A. We did.

Q. If we can move to paragraph 4.7 of your reply evidence?

A. Yes.

Q. So Mr Carlyon's observation or evidence is that the MBL assessment or your assessment is forward looking isn't it, though it doesn't take into account effects that have accrued or incurred over the lifetime of sand extraction. Is that fair?

5

A. Well it's the environment as it exists at the current time which may have been modified by the permitted consented sand extraction to date.

Q. Is it your evidence that any cultural effects that have been felt up and to the time of this application can be discounted?

10

A. No, because that's still part that, if mana whenua are feeling a view of the environment which may have or may not have been damaged up to this point by the dredging then that forms part of the existing cultural environment.

Q. Is that existing environment relevant, in your view, for the assessment of cumulative effects?

15

A. They are slightly different things. The existing environment is what we are assessing the effects against. As part of the assessment we have to consider if there are cumulative effects from other activities that may be occurring which may also be affecting the environment.

## 20 **THE COURT: JUDGE SMITH**

Q. If I could just check and try expedite this part. Cumulative effect is a forward looking effect because it has the potential to affect things in the future and, therefore, needs to be included when comparing your activity against the existing environment. Is that right Mr Hay.

25

A. Yes, yes it is.

Q. The existing environment consists of those things which have occurred, some of which may be both cumulative, in other words, may occur in the future and may have occurred in the past but some of which may have already and be complete, or at least their effect is complete.

30

A. Yes.

Q. So cumulative effect can be a past effect that's occurred which becomes part of the existing environment but then it is considered also as a cumulative effect if it continues into the future.

**MS URLICH:**

Thank you for stating that Sir.

**CROSS-EXAMINATION CONTINUES: MS URLICH**

- 5 Q. I did have three more points and the first, or three more areas that I would like to cover you in. The first should be relatively brief, it relates to the national policy statement for unitary development. Could you please Mr Garton bring up that policy statement and we are going to CB1519.
- 1255

**MR GARTON:**

- 10 You were wanting the NPS for urban development, sorry?

**CROSS-EXAMINATION CONTINUES: MS URLICH**

- Q. Yes, thank you. And just while we're bringing that up, you say that this policy statement is relevant to this particular application, don't you?
- A. Fleetingly is probably the best way to put it, and it seems to be –
- 15 Q. Sorry, fleetingly?
- A. Fleetingly, there seems to be a – the different planners have taken slightly different viewpoints but none of us consider it's of major consideration.
- Q. Hopefully we can deal with this briefly then. If we look at 1.3, I'll give you a moment to look over that.
- 20 A. 1.3, yes.
- Q. So you'd accept that this policy statement applies where we have a planning decision by a local authority which relates to an urban environment, doesn't it?
- A. No, no. This is the difference. So it's a planning decisions by any local
- 25 authority that affect an urban development [*sic*]. Now in my view, this decision could affect an urban environment because the provision of sand is of course an essential building block for urban development. Now whether that was the intent of the NPS to cover a matter such as this, I can't answer that, but that's how I read it.
- 30 Q. If we look at (a) all local authorities that have all or part of an urban environment within their district or region, and again there's reference to



urban environment in (1)(b), so if we can go to – well just down from there there's the interpretation, and I'll find the definition. So the definition is on page 1522, or reference 1522.

A. Yes, there it is.

5 Q. So areas of land that are urban in character or intended to be a part of a housing or labour market, that's a summary of the definition, isn't it?

A. It is.

Q. And the area that this application relates to is neither, is it?

A. No. No, it's in the coastal marine area.

10 Q. And if we were to take a broader approach or a more liberal approach to interpreting it, it would mean that this policy statement would apply to things like plantation forestry standards and the like, wouldn't it?

A. I don't know, unless you had an application related to a specific forest that was a predominant supplier of material for construction within an urban  
15 environment, which I don't think would be a case. This is somewhat unique because we're talking about a resource that supplies a fair bit of the concrete market for the Auckland urban environment.

#### **THE COURT: JUDGE SMITH**

Curiously enough, it's not as rare as one might think. *Waste Management* had  
20 the same argument in front of us. So the question about what affects an urban environment, again Mr Pou was involved in the case as to whether or not a provision for freshwater applied to the sea, went to the High Court, overturned this Court on and said that it did. So the curiosity is that loose wording in these documents means that there's always a debate. Again, this is not a new issue.  
25 Mr Pou argued it in the last case and I think you were involved too, Ms Ulrich, so we're sort of just going over old ground on this. I'm happy for it to be addressed in submissions but it's nothing that the witnesses can help us with.

#### **MS URlich:**

No, thank you, Sir. There were two other areas but I'm mindful that we're at  
30 1 o'clock.

**JUDGE SMITH ADDRESSES COUNSEL/PARTIES – TIMETABLING**

(13:00:50)

**COURT ADJOURNS: 13.01 AM**

**COURT RESUMES: 2.15 PM**

**JUDGE SMITH ADDRESSES COUNSEL/PARTIES – TIMETABLING**  
(14:15:27)

**CROSS-EXAMINATION CONTINUES: MS URLICH**

5 Q. Now the next question I had was around the precautionary approach. Would you agree that the policy framework requires, or planning framework requires a precautionary approach with respect to the offshore application?

A. Yes.

10 Q. And a final question and actually, sorry, before I continue and while it's on my mind, I should mention that I'm asking questions for Friends of Pakiri Beach as well as Ngāti Manuhiri at this time or throughout these series of questions and I've merged them together just to make things a little more streamlined. But the final question I had was around your  
15 evidence-in-reply which states that you respond to the evidence of Dr Maseyk but I couldn't actually identify in your evidence where that response was. Are you able to take me to where your respond to Dr Maseyk's evidence?

A. Just looking at my footnotes, you may be correct, you may be correct that  
20 I don't actually specifically address a point in her evidence. Yes, you're correct.

Q. Thank you for your evidence. I'll pass over to Mr Pou.

**CROSS-EXAMINATION: MR POU**

25 Q. Kia ora, Mr Hay. You'll be happy to hear, because you've been going for a long time, that most of the technical issues that I would've wanted to raise have been more than thoroughly exhausted but I do have a couple of questions to ask you. How important to your assessment was the Te Uri O Hau evidence?

A. The evidence of Mr Thompson? In terms of assessing the effects on  
30 Te Uri O Hau in there they used I quite relied upon it.

Q. In terms of assessing the impacts on tangata whenua within the application area as a whole, was it significant evidence?

A. Well I don't know if I can answer that. I can't say they're 50/50 of the area or something like that but in terms of how Te Uri O Hau values it, it was important, and I think he outlined that he wasn't speaking on behalf of the Ngāti Manuhiri values as such.

1420

Q. And in terms of your assessment of Te Uri O Hau being north of Te Arai and Ngāti Manuhiri being south of Te Arai, which you reflect at paragraph 112 of your evidence – I'll let you just have a bit of a check. And that's EV585.

A. Don't think that's quite correct. I'm talking about the precincts that was subsequently formed and developed in the unitary plan. It was my understanding that north of Te Arai Point, the precinct, the area there, that was part of the settlement package for Te Uri O Hau. The Te Arai south precinct covered the settlement package of Ngāti Manuhiri area.

Q. Now I traversed this with Mr Te Rangi and he accepted, and so did Mr Thompson, that the Ngāti Manuhiri settlement goes up to Bream Tail and you're aware of that too, aren't you?

A. I am, but I'm not talking about that there. I'm talking about the precincts.

Q. Without talking about it, you are aware that Ngāti Manuhiri have interests that are asserted within their treaty settlement back up to the Bream Tail?

A. Yes, yes.

Q. And so you are aware that this application exists within, exists entirely within that rohe or area of interest that's been asserted by Ngāti Mahuhiri?

A. Yes.

Q. And Te Uri O Hau have asserted an area of interest that crosses over roughly 50% of this application, you're aware of that?

A. I think we're down to probably two-thirds now, but originally 50%.

Q. There is part of this application that exists outside of the Te Uri O Hau rohe?

A. Yes.

Q. And this is the issue. If, you seem to rely on Te Uri O Hau in terms of the whole application and you seem to reject or not adopt or not accept the

evidence that's been put by Ngāti Manuhiri in the entirety of the region, and I'd ask if you give us some comment on them.

A. I relied on the evidence of Mr Te Rangi.

Q. Instead of the evidence of Ngāti Manuhiri?

5 A. No, not, no. Mr Te Rangi was the cultural expert employed. I relied upon his evidence, similar to Mr Carlyon relying on the evidence of the Ngāti Manuhiri cultural experts. I don't think he referred to Mr Te Rangi's evidence.

10 Q. So, we're not talking about Mr Carlyon's evidence at the moment. He'll have an opportunity to discuss those people that he relies upon. But nowhere in your evidence do you rely on any of the Ngāti Manuhiri evidence, do you?

15 A. Not directly, but I do make a comment, sorry, somewhere talking about, Judge Warren pointed it to, identified it the other day where I've talked about hearing the evidence of the other parties.

Q. I think that's at the beginning of your evidence in reply and that's where, like you say, you've read evidence, like you say you read Dr Maseyk's evidence, but you don't really address it.

20 A. Not specifically. It was around a precautionary approach she was addressing, and I've obviously ended up addressing it via referencing other parties.

Q. I'm just trying to find the paragraph where you refer to Dr Maseyk's evidence and to do it, I'm just trying to figure out how to spell Dr Maseyk's last name. M-A-Y-S.

25 1425

#### **THE COURT: JUDGE WARREN**

30 Q. Just while you're finding that, Mr Pou, just to save me coming in later on, on this issue, in terms of your methodology, Mr Hay, so in writing your evidence-in-chief you read and assessed the evidence-in-chief of Anthony Thomson and Tame Te Rangi, that's the stuff we heard late last week?

A. That is correct.

Q. So that's unsworn evidence when you saw it at the time you prepared your evidence and then when you come to your reply the unsworn evidence of Mr Hohneck and others would've been before you, or before McCallum Bros which could've been passed onto you, which was passed onto you because you've read it?

A. That is correct.

Q. So, from a methodology perspective there is no reason and substance why you couldn't have responded to that evidence in your evidence-in-reply because you're now saying well we've got to wait to hear it. So if you didn't respond to Mr Te Rangi or Mr Thomson at that point you commented on their evidence?

A. So my reply addresses the planning evidence, I've since identified that there are shortcomings in the consent permissions relating to cultural issues which may or may not be addressed in the evidence we're to hear.

Q. Well, it's more than conditions, it's in response to the unitary plan provisions objectives policies as well?

A. Yes, but I don't think Mr Hohneck or Mr Brown directly addressed objectives and policies of the unitary plan, unlike the plan –

Q. Did Mr Thomson?

A. No.

Q. Did Mr Te Rangi?

A. No.

Q. I didn't see anywhere in Mr Thomson's evidence where he addressed the actual detail of the Te Uri O Hau values, it was very much a summary brief of what they'd done and who they'd engaged and relationship agreements. So, when you answered to Mr Pou's question you'd taken into account or given significant weight to Mr Thomson's evidence, was it the evidence or was it the cultural values assessment or the CVA?

A. Both.

Q. Both. And those are the same CVA's that were before the Commissioners at the council level?

A. The CVA for Te Uri O Hau prepared by Environs Limited, that's correct.

Q. And also the evidence from Ngāti Manuhiri and I think there was a group called Ahi Kaa and yet you don't seem to have taken that evidence into

account in your evidence-in-chief, either, and the commentary by the Commissioners on that evidence?

A. I was relying on the evidence of Mr Te Rangi who was brought in as a cultural expert to provide cultural evidence.

5 Q. I'll leave it there. I just wanted to understand the approach and I've got some more questions as to how you then address the unitary plan provisions but I'll come to that later. Sorry, Mr Pou.

**CROSS-EXAMINATION CONTINUES: MR POU**

10 Q. I think Judge Warren's taken that issue as far as I wanted to take it, insofar as the evidence goes but in terms of understanding the cultural values, you will recall that they were reflected somewhat forensically within the decision of the Commissioners, weren't they?

A. Yes.

15 Q. And the decision of the Commissioners set out the values and issues as they related to Te Uri O Hau?

A. I can't recall directly but I presume so.

20 Q. Well, I can take you there. I don't think I need to take you there. I took Mr Thomson through it when he said that the Te Uri O Hau position hadn't been considered, or taken into account, and just for the record, the Te Uri O Hau position is set out in that decision at CB1174. But just after that, in terms of those cultural effects, you're aware that the Commissioners sent out a blub about the Ngāti Wai Trust Board at CB1176 and this is just, I'm just talking about the offshore Commissioners.

1430

25 A. Sorry, I don't recall the decision word-for-word, but if you're saying that's what they did then yes that's what they would've done.

Q. They picked up on the Ngāti Manuhiri description of the sands as Ngā Onehaea, have you heard that term, do you recall that term?

A. Yes, yes.

30 Q. And that's the – how Ngāti Manuhiri refer to the white glistening sands of Pakiri?

A. Yes.

Q. And you'll recall that that's reflected in the Deed of Settlement? Are you aware of that?

A. I've read the Deed of Settlement. Again I can't tell you for word-for-word but if you're saying it's in there then that would make sense.

5 Q. I'm just and I want to take you to paragraph 4.70 of your evidence in response and that's EV21A26 and it's your paragraph 4.70. In there are you suggesting that the Deed of Settlement is not a document, a relevant document that this Court should take into consideration?

10 A. No, I'm just identifying that I'm unsure of what aspects of the deed Mr Carlyon considered required specific consideration.

Q. Did you consider that Deeds of Association and the Statements of Association that are set out in the evidence of Mr Hohneck, copied from the Deed of Settlement?

A. I would've read them. Again, I can't recall the wording verbatim.

15 Q. That's where they're setting out why sand is a tāonga to them and you haven't taken that into consideration? Well you seem to put a great emphasis on the acknowledgement, the apology in the settlement sections but the association with the area is set out in the schedules that have been provided to his Court. Why haven't you considered those within the scope of this paragraph?

20 A. I don't know why I did not address them or specifically list them.

Q. Because in that area, in those schedules, there's a map that highlights the Ngāti Manuhiri rohe as it exists, as being relevant to this application. It just seems to me that your, you've crossed the line into advocacy to try and marginalise a document that would on its face seem extremely relevant for a consideration of any consent in this area and I'd like your comment on that please?

25 A. What I was raising as I wasn't pretty sure what aspects of the Deed of Settlement Mr Carlyon was referring to and then those, you know, I've listed the three sections where I couldn't find, well I couldn't find any reference to the sand mining. So that's the acknowledgement, the apology and the settlement sections which I thought were the relevant sections but I may be wrong there.

30



Q. So, but why in that paragraph have you excluded, for instance, the historic account which sits within the Deed of Settlement, which specifically refers to sand extraction.

5 A. Yes. As I said I may be incorrect here. I may be incorrect. I thought the relevant sections were the acknowledgement, apology and settlement sections.

Q. I want to understand how you got to that position because you've got a Deed of Settlement. Whose advice are you relying on to selectively analyse the Deed of Settlement?

10 A. No one's advice. Mr Carlyon referred to it, I went through those sections which I thought were the relevant sections and, you know, I may now be incorrect if there was another section I should've referred to.

1435

15 Q. I mean at paragraph 5.3 of Mr Carlyon's evidence and that's, I don't have to take you there, he specifically refers to maps and statements of association within the Manuhiri deed of settlement. So you've looked at his evidence, you've looked at Mr Hohneck's evidence, this is their evidence-in-chief where Mr Hohneck has specifically supplied those statements of association and then you've given a response which seems  
20 to suggest to this Court that those aren't relevant documents because you couldn't find references in different place, in selected spaces and it seems that you're artificially confining the scope of what you considered in an attempt to render a document irrelevant. Do you accept that criticism?

25 A. In part. I am not trying to render it irrelevant but it's obvious that I should have referred specifically to those additional sections if they address sand mining.

Q. I am just going to read you a sentence, it's page 44 of the deed of settlement, it comes out of the historic account and it's the third full paragraph and it says: "Sand extraction remained an issue of concern  
30 for Ngāti Manuhiri to the 1990s, led to litigation that was costly, stressful and damaging to Ngāti Manuhiri relationships with their neighbours before it was resolved." So you accept that the deed of settlement in itself refers to sand extraction?

A. The overall deed of settlement?

Q. Yes.

A. Yes.

Q. You will accept, as Mr Te Rangi did, a good way to find out what is special to Māori is to go through their deeds of settlement and look at their statements of association that are referred to by Mr Carlyon. You'd accept that?

A. Yes.

Q. But in your analysis it seems clear that you have excluded an assessment of those things because they didn't appear in the acknowledgement, the apology or settlement sections?

A. Yes. I was raising the question of what parts Mr Carlyon was referring to, I thought they were the three relevant sections. I am incorrect.

Q. Because Mr Carlyon explicitly says that he is including statements of association in paragraph 5.3 of his evidence-in-chief.

15 A. Is that a question?

Q. Well, I am putting it you Mr, notwithstanding the fact that Mr Carlyon explicitly referred to particular sections of the deed of settlement, you've rejected those assessments and you are implying that it is irrelevant because it's not in a different part of the deed. That's correct isn't it?

20 A. Could we have Mr Carlyon's evidence up please?

Q. Yes.

A. Just so I can check it.

Q. It's EV3594, it's paragraph 5.3. You see at the end of 5.3 he explicitly says: "I have also reviewed maps and statements of association from the Manuhiri deed of settlement."

25 A. Yes, I see that.

Q. For your benefit, those maps and statements of association are copied into the attachments to the evidence of Mr Hohnock. Do you need to see them or should I pull them up as well?

30 A. That's five – no, no, that's okay. Can we please go to 8.3 because it appears I may have been addressing a specific point raised by Mr Carlyon.

Q. 8.3 is there.

A. Mmm.

1440

Q. I'll make it easier. Nowhere in Mr Carlyon's evidence does he tell you to limit consideration to the apology, acknowledgement and settlement part of the deed of settlement, you can't point to somewhere he does that, does he?

5

A. No. I don't know what I was addressing therefore because –

Q. Is there an 8.6? So in his evidence-in-chief 8.63.

A. That's the paragraph I'm referring to, I thought that the deed of settlement just covered the acknowledgement, apology and settlement sections and that's why I've addressed it.

10

Q. But if you were reading the deed of settlement you would see where – there's nowhere even in this, nowhere in Mr Hohneck's evidence which tells you to limit your consideration in such a way, though, does it?

A. No.

15

Q. And the fact that we're referring to the parts of Mr Hohneck's evidence-in-chief he's specifically referring to those acknowledgements that you've directed attention away from, isn't he?

A. Right at the start of Mr Carlyon's evidence he does, he does refer to them, yes.

## 20 **THE COURT: JUDGE WARREN**

Mr Pou, I think we get the point.

## **THE COURT: JUDGE SMITH**

Yes, I note the third sentence in that where he speaks, the EIC of Mr Hohneck, sets out the relationships and interests so that seems to answer the point and that's Mr Carlyon's evidence so that must've been clear.

25

## **CROSS-EXAMINATION CONTINUES: MR POU**

Q. So I suppose, the last question you would accept that the deed of settlement insofar as it refers to sand extraction and discusses the connections between Ngāti Manuhiri and the area for extraction are relevant for consideration by this Court, you'd have to accept that, wouldn't you?

30

A. Yes. Yes, I do.

Q. Now I get back to the questions I was on right at the start. You've got a part of the area where Te Uri O Hau are not objecting to sand extraction, you understand that?

5 A. Yes.

Q. And you've got the entirety of the area where Ngāti Manuhiri are opposing sand extraction, that's clear?

A. That's clear.

Q. And you're supporting sand extraction in the entire area?

10 A. I wouldn't say supporting, based on the evidence of Mr Te Rangi and Mr Thomson for Te Uri O Hau I've said that the, I've drawn the conclusion from their evidence that the cultural effects will be no more than minor.

Q. And in the particular bit that doesn't overlap, that just sits within Ngāti Manuhiri's rohe you haven't got any cultural support for sand extraction  
15 in that particular area, have you?

A. Well, there doesn't appear to be any support but Mr Te Rangi was asked to assess the cultural effects and I'm relying on his evidence.

Q. I put it to you, in terms of that – given that you support, where Te Uri O Hau support the application but you also support where Te Uri O Hau  
20 can't give support for, it appears to me, and I'm putting it to you that it makes no matter to this application whether or not tangata whenua support. Because in your assessment, regardless of whether or not there's some support or absolutely no support, your evidence is that the proposal can go ahead anyway, isn't it?

25 1445

A. Well I've relied on the evidence of Mr Te Rangi for that area and Mr Te Rangi was specifically brought in to assess the cultural effects because as is pretty clear from 4.70 when I've wandered into it I've mucked it up in terms of the deed of settlement. So, it's not unusual that  
30 we draw on, well planners all the time draw on a device of specific experts in specific fields.

Q. I understand that, but your evidence is that the proposal should go ahead notwithstanding a complete absence of tangata whenua support in that area?

A. I draw conclusions. I'm not the decision maker, as such.

Q. You've drawn that conclusion notwithstanding a complete absence of support for the proposal by all tangata whenua of that area?

A. Excluding the Te Uri O Hau, yes.

5 Q. Well Te Uri O Hau, I want to be really, really clear and I do want your answer on this –

A. (inaudible 14:46:16).

Q. Te Uri O Hau have said they cannot support extraction in an area that's outside of their rohe.

10 A. Correct.

Q. So for that piece that's outside of Te Uri O Hau's rohe, their support is irrelevant.

A. Correct.

15 Q. And your evidence is that the proposal can still go ahead there notwithstanding a complete absence of tangata whenua support?

A. My evidence is I'm relying on the advice, the expert advice of Mr Te Rangi that the cultural effects are no more than minor.

20 Q. I'm not going to push that any further. I think the point's been made. My last question is, to the extent the application may affect ONFs or ONLs or natural character in Northland, would the Northland Regional Plan be relevant? If there's an impact on ONF, ONL or natural character in Northland, would the Northland Regional Plan be relevant? That's the question.

A. Yes, that's correct.

25 **CROSS-EXAMINATION: MS WIKAIRA**

Q. So, you said that Ngāti Manuhiri would provide a CVA once the money was sorted. You said that today, this morning?

A. Yes, that was my understanding of the approach that was to be taken.

Q. So, you were working on behalf of Kaipara Limited at the time?

30 A. I was.

Q. So, in March 2020, Kaipara Limited sent a letter to Ngāti Wai wanting to facilitate a hui with themselves and Ngāti Manuhiri. In that letter it says: "Can you please liaison with Ngāti Manuhiri and ourselves to agree a

suitable time and location for this meeting to occur. In the interim, to be fair to all parties' interests in this matter, Kaipara will hold the cultural liaison fee in trust until this matter can be resolved." My question is, is that what you were talking about when you said: "We'll send you a CV once the money was sorted"? Is that what that was?

A. In broad terms, in February there were three, let's say, financial related issues. So, one was the current payment of the cultural liaison fee and up to that point there have been concerns raised infrequently from marae representatives to our client in terms of the allocation of the fee to the marae and our client had chosen not to get involved of those sort of hapū/iwi discussions, but at the point of this letter those concerns had risen to a crescendo. So, either good or bad, our client decided through discussions with the Ngāti Wai Trust Board and through the Ngāi Manuhiri Settlement Trust, to put them on hold until the matter was hopefully resolved. Subsequent to that and some of this mightn't have been communicated well to the incoming chair of the Ngāti Wai Trust Board or to the marae representative, but subsequent to that I understand the Ngāti Wai Trust Board raised concerns that the withholding of the fee as such was illegal and our client at that time reactivated the payment of fees, so that was one issue. The second issue was the ongoing cultural liaison fee if there was to be one for this current offshore application and the third issue was the matter of the Crown royalties that had been paid to the Crown and were now sitting there in terms of what was to happen to them in the future. So they're – in broad terms that's the three financial issues that were sitting there. Now I don't – I didn't go into, sorry, I don't know what exactly was meant by (inaudible 1:49:22) money issues were resolved or whether that only related to any agreement in terms of the ongoing cultural liaison fee which might be determined as part of any cultural liaison agreement.

Q. So when I asked when you said that Ngāti Manuhiri would provide a CVA once the money was sorted, is this what I read that or is it not?

A. I don't know. I thought it was just relating to the – any future cultural liaison fee, but Ngāti Manuhiri may have been meaning resolving this

issue as well. I haven't actually thought about it in that context of this letter.

**THE COURT: JUDGE SMITH**

Q. Can I just ask a question arising from that before we go back just because  
5 I don't quite follow your answers. So who was the money paid to, Ngāti Wai?

A. To the Ngāti Wai Trust Board.

**MS WIKAIRA:**

10 We never received anything, Judge, till –

**THE COURT: JUDGE SMITH**

Q. No that's a different issue. I just wanted to know – because you mentioned that about a million dollars was paid but that wasn't to Ngāti Manuhiri that was to Ngāti Wai, is that right?

15 A. That is correct.

Q. I just wanted to check that.

**RE-EXAMINATION: MR MACRAE**

Q. Starting with Mr Pou's, backwards as it were, starting at the end. Mr Hay, Mr Pou suggested that the fact you didn't identify some parts of the  
20 Ngāti Manuhiri Deed of Settlement which Mr Pou says are relevant and which were mentioned in the evidence of Mr Carlyon and Mr Hohneck. He suggests that you were being selective and that that amount I think or he implied that amounted to advocacy. Was there any conscious selectively on your part in relation to those documents or your failure to  
25 mention them?

A. No. I think what it may reflect is my poor understanding now of how these Deed of Settlements work in totality.

Q. And did you have any intention to assume the role of an advocate in the way in which you put your evidence?

30 A. No.

Q. You've said in your evidence that you complied with the Code of Conduct, are you familiar with the way in which it deals with questions of advocacy and partiality?

A. Yes.

5 Q. And to the best of your understanding have you complied with the code?

A. I thought I was complying with the code, Mr Pou may have identified that I haven't fully understood how the Deed of Settlement was to be read in its totality and he could well, it appears he is correct.

1455

10 Q. Going all the way back to Ms Fraser, she, and I think also Ms Sutherland, touched on the point, and possibly indirectly so did Mr van Mielo, they all I think mentioned the possibility of a condition imposing an obligation on MBL, the appellants, to include a fairy tern management plan in the conditions of consent, do you recall that discussion?

15 A. I do.

Q. Do you recall your answer, because I didn't catch it and I'm not quite sure what it was?

A. Nor do I. In fact, I can't actually (inaudible 14:55:56) or being specifically asked did I support a fairy tern management plan.

20 Q. I think you were asked whether it would be useful. Does that ring any bells?

A. Sorry, it doesn't ring any bells directly.

#### **THE COURT: JUDGE SMITH**

I think I speak for the rest of us, we don't remember that either. I remember  
25 Mr Hay speaking about he felt that a far more comprehensive single management plan would be beneficial, I don't remember him talking about more management plans. I think he felt that it might be better to have one plan to rule them all, if I can put it that way. So, I don't know. I could be wrong, somebody else may have picked it up, I don't recall any discussion about  
30 another management plan.

#### **MS BIELBY:**

Sir, if I may for the council, Ms Fraser didn't ask that question.



**THE COURT: JUDGE SMITH**

I'll check with Ms Sutherland. I don't recall her saying that but I may have missed it.

**MS SUTHERLAND:**

5 We don't recall asking that question, either of us.

**THE COURT: JUDGE SMITH**

Let's move on, Mr MacRae.

**MR MACRAE:**

I can assure you, Sir – accept that, Sir, I'll move on, but I can assure you I'm  
10 not just relying on my own memory so we'll have to wait but if Mr Hay doesn't recall he's not going to help me.

**THE COURT: JUDGE SMITH**

Well, we've obviously got group amnesia on the topic.

**MR MACRAE:**

15 I'm not accusing anyone of that, Sir.

**RE-EXAMINATION CONTINUES: MR MACRAE**

Q. Mr Hay, perhaps I'll get it right this time. You said to Ms Ulrich that as far as you're aware there was no engagement between MBL experts, other than yourself, I think you said you had some discussions with Mr Tuinda and Ngāti Manuhiri. Have you any knowledge as to why those  
20 discussions might not have occurred?

A. Your Honour, from my experience, when we get a cultural value assessment report and then if it raises specific issues about that application sometimes in consultation with the party who wrote that report  
25 we then decide if certain experts need to get together or if they need to hear from a particular expert to better understand the proposal. For instance, an ecologist or such like. There were no such discussions with Mr Tuinda at the time but because (a) the CVA hadn't been prepared and

I can't actually recall either the settlement trust or the charitable trust asking to meet, asking to meet or for information from specific team members or experts.

1500

**5 QUESTIONS FROM THE COURT: COMMISSIONER MYERS**

Q. Firstly, in paragraph 50 of your evidence – sorry, 51 actually – I just want to, just to clarify some of the figures, and I think you changed some of this in your table. So there's a figure of 150,000 square metres annual extraction volume. So I understand from like above that page in 49 you've got the 75,000 square metres per annum figure. So is the difference between those two, is that what is over the 30 metres plus depth?

A. Yes. But some years it might be more because not all years, they mightn't go up to 75,000 per annum between the 25 and 30 metres.

Q. And in the paragraph 51 you talk about 140 trips per annum. Is that based on the 14 trips per month type of estimate?

A. So the applicant provided me those figures based on if it was 150,000, if he took that as the extraction volume, then that equates to 140 trips.

Q. So that's based on the 150,000 cubic metres?

A. Yes.

Q. Paragraph 169 and over the page, so in 169 you discuss a proposed comprehensive monitoring and reporting regime and there's different elements of it included there. So for the offshore consent, I suppose I'm just interested in knowing what the triggers are or contingencies might be for like any effects that there might be on tara iti or other threatened species and whether that's been incorporated into this monitoring. I mean I presume it's linked to the foredune and beach monitoring around the habitat, but my questions are sort of a broader one and whether there are like triggers in there, or whether that's something that the experts need to identify?

A. I can answer that in part. In terms of the coral and specific benthic communities which are listed in that schedule, so during the pre-sand extraction assessment report, so that's when an area's been identified that they want to undertake sand extraction from, they do their pre-sand

extraction assessment report, now if that identifies any protected species – I'll just – so sensitive benthic communities listed or benthic species protected under the Wildlife Act or it has a certain amount of mud content, then that area is to be excluded or that reporting cell is to be excluded from the approved sand extraction area. That's then reviewed by a suitably qualified expert and also now it's proposed that that would go to the mātauranga expert panel, before it's submitted to council and the recommended approve sand extraction areas within that area are certified by council. So in terms of let's say the coral or those benthic species, that's the trigger there for that. In terms of tara iti, it is only focused on their land-based habitat as such, and that's through the I think it's six-monthly foreshore and beach dune monitoring, and then the submission of that first of all is shortly after its done to council but then it's also included in the sand extraction monitoring report. Then that then links back to a recommended review condition. Now if during the sand extraction monitoring report, so that's the monitoring reports that are undertaken once sand extraction has commenced, if there's a concern that the monitoring itself is not picking up potential effects adequately or such like then there's a mechanism in the EMMP to make modifications and likewise again it would be linked to the section 128 review if council was concerned that those changes weren't being made or additional changes were required to the consent conditions.

Q. Okay, thank you. The review condition I think you explained that that was one that might need some amendments. I had a question around the review in several parts of your evidence you talk about two review periods, is that what that's linked to or like a 10-year and then a, I can't remember what the other one is it might have been a 14 year.

A. Okay, for the inshore and midshore that was that so because – but because of the higher risk that in effect was going to occur compared to the offshore. So the offshore we don't have that same review but we've linked it, or I recommend it's linked back to the 128 process.

Q. Okay, thank you for that. I just wanted to clarify that because those two review periods still, you still refer to them in several sections, so that's cool, thank you. Just, so paragraph 4.12, you say that it's a well-studied

coastal location and you refer to monitoring that has happened through the existing resource consents. In the JWS for marine ecology, in section 8 of that they've put in some comments on the monitoring including that they think that there should be more statistical rigour, some comments about benthic communities and I wanted to check whether those recommendations have been taken on board. Would you need to look at those?

A. Yes please.

Q. All right, yes. It's the JWS for marine ecology and it's section 8. So it says there needs to be more statistical rigour, anyway I'll let you read that.

A. Yes, no, no. I now remember. It hasn't been incorporated into the consent conditions. I don't think it's been incorporated into the updated EMMP and statistical rigour is way out of my area of expertise in terms of how that could be addressed.

Q. Okay, thank you. Actually this question relates back to the questions that have already been had around the overlays for cultural heritage and the discussion by Judge Smith that it's more a legal submission, probably for legal submissions. But in like paragraphs 5.36 and 5.9 of your evidence you discuss the overlays and the policies regarding those. Are you saying that the SEAs need to be areas that have been already identified in relation to those policies?

1510

A. Yes, that's my understanding.

Q. And you also say you're relying on the evidence of the avifauna, your avifauna expert, Mr Thompson and others. Actually, can I, yes, so if you go to 536, so that's the natural resources chapter, isn't it?

A. B7.2 and the biodiversity.

Q. And so –

A. Sorry –

Q. – I think B7.2.1(1) discusses areas of significant indigenous biodiversity are protected from adverse effects. So, are you saying that those need to be scheduled sites or identified scheduled sites?

A. First of all, I'm just going to correct myself. I put you wrong. B7.2 relates to the RPS level coastal environment. Sorry, I'm just looking up those

specific objectives and policies. No, it's wider than the SEAs. That's areas of significant indigenous biodiversity value. And then – sorry.

Q. So that objective – sorry, you go.

5 A. Then the supporting policy then refers to the areas listed in schedule 3 and schedule 3, sorry, and schedule 4 the SEA overlay areas, terrestrial and then marine. So, as I read it the objectives say those areas need to be protected and again they're being protected in the unitary plan, or identified and protected in the unitary plan through the specific SEA overlay.

10 Q. So, I suppose a question, with the JWS for avifauna they all agree the importance of the whole embayment area for, so they say this embayment is critically important to fairy terns and it's used by many threatened and at-risk species. They also say: "But the extent of their use and importance is unclear and/or unknown for many species." I'm just wondering in this  
15 situation where we have a habitat for a species that's very threatened, how do we interpret the policies around that and do we just limit it to an SEA or not?

A. There's different objectives in different policies, so, but I understand that in terms of the objectives and policies for the SEAs you can, you have to  
20 consider the non-transiency and adverse effects including on those animals, fauna that may use them temporarily, so the tara iti. We can't ignore the effect on tara iti, yes.

Q. I think in, what is it, I think it's the vegetation management, you refer to that in your evidence in reply in, this is EB21A23 in paragraph 4.57. So  
25 that's E15.3.9(a)(i). So that policy's also relevant, is it?

1515

A. Yes, and that's what I was just saying, those non-transitory or more than minor adverse effects we can't ignore because they, yes we have to consider them because again it seems to be related to the SEA so we get  
30 there eventually, how it's tied up is they do visit or have habitat within the SEA so we do have to consider them, yes. Sorry, can consider them when they are outside the SEA, I should also make that clear. So not just the effects within the SEA but when they are outside the SEA.

Q. Thank you very much, those are my questions thank you.

**QUESTIONS FROM THE COURT: SPECIAL ADVISOR HOWIE**

Q. Hello Mr Hay, the first question I had was just to do with the duration of 20 years. Is there any reasoning behind that?

5 A. A simple reason was when we very first started this process in 2017 we thought the current 20 years, carrying on for another 20 years because that was what appeared to be acceptable, the earlier period, and I can't recall since MBL took over, they have never questioned me on that period. So no specific reason apart from the current consent was 20 years.

10 Q. Not to do with return on equity and investment capital and all that sort of stuff. So if you have got a big dam like I am used to you want a long term so you get your money back kind of thing. It's not one of those kind of decisions?

15 A. When I made the decision along with the client at the stage it wasn't. I don't know if the same question was posed to Mr McCullum or not but he would be better placed to answer that question.

Q. Yes, of course. The conditions that I think you circulated on the 7<sup>th</sup> of July and I was going to condition number 17. I am not quite sure what reference other than that I can give you, consent condition –

20 A. This relates –

Q. Consent conditions of the 7<sup>th</sup> July and it's condition number 17 that I'm referring to and just checking out on some of the numbers there. You still settled with 2 million cubic metres over the 20 years?

A. Excluding what is used during the temporary offshore consent.

25 Q. Yes, yes minus that, okay. And that the area between the landward boundary and the 30 metre isobar is limited to 75,000 cubic metres with a 12 month period. Just looking at the appendix 4, which is that map, bio-researcher's map that is going to get changed a bit I think, that area presumably would run from the – have you found it, the map  
30 bio-researcher's map, it's appendix 4 of those conditions. Yes that one.

A. Just to be clear, I wasn't involved in the preparation of this map.

Q. No. But this latter part of condition 17 talks about 75,000 cubic metres out to the 30 metre depth. Now that would be all of sort of cell 1, cell 2,

less than half of three, probably half of four and a bit more than half of five. Is that right, so it's just along that narrow stretch?

A. That's correct.

1520

5 Q. So you get 75,000 cubic metres out of that sort of one, you know, one-fifth or one-sixth of the total area, it's quite concentrated isn't it, do you think?

A. Yes, to some degree, yes. It was originally a 150,000 so it's down to 75,000, yes.

10 Q. Yes, that's right and if that landward boundary was made like the temporary consent, you know, two ks off the midhigh water mark, it would just about remove that wouldn't it?

A. I would think that this condition would have to be reviewed in light of that.

Q. Yes, yes.

15 A. Sorry, a little bit of history there. I understand very originally such a constraint was put in sort of like as a precautionary approach for the very original consent, to give a bit more a buffer from the depth of closure so that all the dredging wasn't, you know, wasn't concentrated on the, you know, on the seaward side of the depth of closure.

20 Q. So that's not really quite as relevant now then is it? The main thing you want is to spread it evenly?

A. Yes, yes.

Q. So perhaps a review of that sort of provision would be appropriate and once the new map comes out?

A. I suppose the question is is it still required?

25 Q. Yes, that it might, yes, yes. Okay, well that's fine, I understand that.

#### **THE COURT: JUDGE SMITH**

Q. Sorry, just before we move on. So, Mr Hay, as I understand these, the way these conditions are drafted there's no limit to the yearly take beyond two million?

30 A. Yes that's my understanding as well.

Q. Okay well that's certainly not the way which was presented to us, so is the intention that you are limited to 150,000 a year or is the intention now

that you're unlimited and if we're unlimited where has been the assessment of the effects of taking say a million cubic metres in one year?

A. In this set of conditions there is no upper annual volume.

5 Q. Do you recognise that as a fault with this consent or not? Are you seriously anticipating that the Court would allow an unlimited take from this area?

A. No I'm not. So that is a fault –

10 Q. As I said there are a number of fundamental problems with this consent. That seems one of the most obvious isn't it? Because at 20,000 per cell you could take 480,000 in a year without even going over the one-year limit, it's actually 28 so it'd be 560 I think.

A. 560, that's correct. So that is an issue with the conditions.

Q. Well it's an issue with the consent, isn't it? Because we've –

A. (inaudible 15:24:43) granted.

15 Q. – got to understand the impact of the consent. You haven't – I don't believe anywhere you have addressed that type of volume being taken in a year, have you?

A. No. Because as I understood it the pre-sand extraction area has to be confirmed first, then – I thought it would be controlled through the PSEAR process. That was my understanding.

20 Q. Well getting into those things is another issue again. It just seems to me that fundamentally your application is for unlimited take, limited only potentially by the fact you can only take for one year at the maximum, and if you take more than 20,000 from a particular cell in a year, so there doesn't appear to be a limit to how much you can take from the cell, you can't do it again for 12 months. So you could take your whole two million in one year, couldn't you?

1525

A. Theoretically, yes.

30 Q. There's been no assessment of the vessel movements, the impact et cetera et cetera, or have I missed something, because I've been looking for all of that and I haven't seen it anywhere.

A. You are correct, Sir, and at some stage I thought we did have a total maximum volume in there per year but –



- Q. To be fair to you, is that an oversight rather than deliberate?
- A. Yes, definitely an oversight and I thought we had put one in some way through this process when I think council officers may have identified it but it's definitely not in this latest set.

**5 QUESTIONS FROM THE COURT CONTINUES: SPECIAL ADVISOR HOWIE**

- Q. The next condition, condition 18, talks about 20,000 out of a reporting cell and those reporting cells were as numbered on that plan so there's quite a few of them. Where did the 20,000 come from, is that a sort of a limit on one cell?
- 10 A. That figure's changed during the course of this as those cells have changed. If I understand correctly, and I think this was maybe more of a question for Mr West, that that's when we're talking about a decrease in the bathymetry by just a couple of millimetres, so it was taken from that, that's what it results so, yes, that was considered reasonable and I
- 15 suspect the 20,000 may be less because I think we were up to 80,000 at one point.
- Q. And per cell, per 12 months, that's quite a substantial amount over several cells, doesn't it?
- A. Yes and my understanding was was when a approved sand extraction
- 20 areas going to be sought through the PSAR it's likely to be a whole series of cells, possibly the whole width of the extraction area because the most efficient way is to go from one end to the other and then back again, rather than jumping between different cells.
- Q. That would spread it, too, as well, wouldn't it?
- 25 A. Yes.
- Q. And just looking at the landward boundary again, the temporary consent is a bit more seaward than the landward boundary shown, isn't it?
- A. That's how I understand, yes.
- Q. And is it your intention to continue with the more shoreward boundary?
- 30 A. Sir, I wasn't involved in the development of that temporary consent. As far as I understand there's no intent, I haven't been advised that this application will now take that two kilometres limit, as such, as the

landward side of the sand extraction area. Does that answer the question?

Q. Well, you don't know yet, does it. Really what you're saying is you that haven't caught up with that particular variation, I suppose.

5 A. I think the client would've advised me or I would've hoped before I came onto the stand if the landward side of the sand extraction area was going to change to that two kilometre line.

Q. Do you have a problem with that at all?

A. I haven't given it any thought as such, not from my planning perspective.

10 Q. And then the outer boundary goes out quite a way, I'm not quite sure what isobaths it would be but it's probably, it's probably getting close to the 40 metres, but they can't dredge that deeply, yet. I think their dredge is only capable of going down to, what, 36 or 38, I think?

A. Mmm. Again, a little bit of history there, back in 2017 they were still using  
15 the coastal carrier, it took a, let's just say we had assumed that when the *William Fraser* came on board it would be dredging a few metres deep and then – a few metres deeper – and then we just added on a few more metres for future technological changes and sort of rounded it up to that 40 metres.

20 Q. And just finally, we had talk about alternative sources of sand and I'm just wondering, from a planner's point of view, what relevant alternative sources have for us?

A. First of all, I'm the planning consultant for the Tomarata sand mine and I notice that Brookby quarry was also raised ago sometime ago in  
25 questioning, or in a response. So the Tomarata sand mine has unlimited capacity, it's probably got 10 to 15 years' life. I think that the issues we face with consenting that sand mine would probably be typical of most land-based sand mines in Auckland where you have, let's say, sensitivity in particular to transportation movements and also the visual effects and  
30 also, depending where it's located dust can be a challenging matter to control for these land-based sand mines. Next door to that is the Northern Resources sand mine that's currently inactive at the moment. They were an original (inaudible 15:32:53), this is not to them but I think Te Arai North on their behalf or something similar to that, because they wanted to make

sure that any future pier or pipe coming from that sand mine, if it was  
 activated, out on the coastal marine area, wasn't going to be, the ability  
 for that wasn't going to be compromised by the off-shore consent. In  
 terms of the Winstones and the Atlas consents which expire, I think it's  
 5 May 2027, I checked with their planning consultant on Friday where they  
 were up to, they haven't commenced work yet which may mean three  
 things, (a) the consents aren't going to be renewed (b) another planning  
 consultant's been assigned to do it but they were going to check and get  
 10 back to me if that was the case or (c) they're a little bit more optimistic  
 than myself how long a consent application would take to prepare and get  
 through. So right at the moment it's unclear what's going to happen to  
 those Kaipara consents. In terms of sand mining the production of sand,  
 so I think Mr (inaudible 15:34:15) may have mentioned Brookby quarry. I  
 was on site there about two months ago, I noticed a large slab of concrete  
 15 in a funny place and I was advised by the director that they're playing  
 around with making sand. So by playing around I took it from there that  
 they haven't got the magic formula yet and then, of course, if they did get  
 the magic formula there's a number of issues, (a) is it economical, (b)  
 does the market want it (c) I suspect at some stage they'll come back to  
 20 me and go, actually are we covered for this by our existing consent. And  
 then when it comes to Brookby I think there's going to be truck movement  
 issues there. I think if you're supplying the Auckland market you're going  
 to see a massive increase in, I would expect, a massive increase in truck  
 movements and that's extremely problematic on the consenting side,  
 25 we're going for a very minor increase on the Saturday movement at the  
 moment and the opposition from Auckland Transport has been strenuous,  
 to say the least. So I think it's not as simple as saying we can go and  
 produce sand somewhere.

#### **THE COURT: JUDGE SMITH**

30 That doesn't count the residents. We've been through this a few times, it's been  
 to the Court a number of times, it is problematic, to be fair. We're at 3.35, did  
 you have anymore questions, Mr Howie?

**SPECIAL ADVISOR: MR HOWIE**

No, I think that just about tidied it up, it sounded as though the alternatives that the economists are talking about have all got similar issues that we're facing in this one.

**5 COURT ADJOURNS: 3.35 PM**

**COURT RESUMES: 4.00 PM**

**QUESTIONS FROM THE COURT: COMMISSIONER PRIME – NIL**

**QUESTIONS FROM THE COURT: JUDGE WARREN**

Q. Tēnā koe Mr Hay.

5 A. Good morning.

Q. Thank you for your evidence. The bundle, document 632, that's the paginated number. So that's where you start your assessment of the offshore applications, correct? It is 632.

A. Paragraph 632.

10 **THE COURT: JUDGE SMITH**

Paragraph 296.

**QUESTIONS FROM THE COURT CONTINUES: JUDGE WARREN**

A. Yes it is Sir.

15 Q. Then if we go to 636, which is paragraph 314, it is there that we find your analysis of the effects on cultural values.

A. Yes Sir.

20 Q. That takes us through to paragraph 331. Is that the analysis that informs your assessment of the, or B6 of the unitary plan, the mana whenua section? Is that the core material that you've looked at and analysed in order to see whether they are consistent or not, or the application is consistent or not with the unitary plan?

A. Generally yes. There may be other objectives, there may be specific policies where I have also considered other matters.

25 Q. Yes. In reading that and you are clearly dealing with cultural values, I couldn't see anywhere where you had articulated what those values were, what the mātauranga was, what the tikanga being expressed by the mana whenua was. You simply go through and acknowledge all of the evidence that you relied on, the MOUs and what not. Is that fair?

A. That's fair because when it comes to the actual assessment of cultural effects I've relied on the evidence of others, Mr Te Rangi and Mr Thompson.

1605

5 Q. So it's common practice just not to set those out as you understand what the cultural values at play are?

A. I thought through the inshore which I think I referred back to – sorry, Sir, I'm just going to go back through a couple of things.

10 Q. I certainly couldn't see it in that section where you assess the effects on cultural values.

A. Yes and I'm just checking, when I – if you go back to paragraph 117 and this is where I'm describing the environment, I've given some consideration then to the cultural history and landscape.

15 Q. Right. And at 122 you do set out the Māori world view including the cultural values.

A. Yes.

20 Q. But what sort of process do you go through to analyse those in the sense of whether the policies or objectives are met or are consistent? Because it just seems at face value simply state what people have said and who's entered into what agreement and then sort of come to a conclusion that there'll be little or no adverse effects on cultural values. I mean there must be more to it than that?

25 A. So this has been a very challenging application, as you can guess, where we were – went down the pathway of trying to address the cultural effects and values through the CVA and then any cultural liaison agreements that came out with that of those.

Q. But that's not your role is it to broker those arrangements?

30 A. No, it isn't. But if there's a cultural value assessment at the end of that process, based on that agreement then I could rely on that or MBL and that was the process we were going through with Kaipara and then the MBL when they took over this application brought on Mr Te Rangi specifically to address the cultural effects, so that's who I've tried to – that's who I have relied upon along with Mr Thompson.

Q. So was he brought on to address cultural effects or to better inform the application as to what they were?

A. Sorry, I probably worded that he was brought on for a couple of reasons, (a) I presumed very early on he identified what the cultural effects were and then how it could be addressed, that's probably his advocacy role, and then to assess what those cultural effects were in terms of the application.

Q. So as I say in that index section the way I read it is, you know, you start off at 315 talking about a MOU and then you talk about some interim report of the Court and then cultural impact assessments, you comment on Ngāti Manuhiri not providing one, you refer to various experts, Mr West, Mr Todd, you talk about some intangible values, then you referred to Mr Te Rangi's overall conclusion and then you offer an opinion that adverse effects on cultural values would not be significant and then right at the end of 331: "I recognise that not all adverse effects on cultural values identified by different parties through submission and the earlier council hearing can be avoided and some parties would consider certain adverse effects are greater than the other parties." Just from again, to come back methodology, it just seems to me you've gone through all of those different things that you'd normally find, MOUs and agreements and CVAs, then come to your opinion and then said: "By the way, there's these other issues out there," which don't seem to inform your opinion. It seems back to front in the analysis because you're clearly aware there were submissions and positions put at the earlier council hearing including a council decision. So, I'm just wondering why in terms of methodology you've approached it in that way?

1610

A. Because it was my understanding Mr Te Rangi was assessing the cultural effects because that's his expertise, so I've relied on his evidence, but I've made it quite clear that there are other adverse, there may be other adverse effects expressed by other people and the way they're expressing them mightn't be able to be avoided. It's very challenging because we're trying to – no, how would I say. In some way I would have thought the analysis of Mr Te Rangi may have been more detailed so I

could have gained, or maybe the Court could have gained a better understanding of how he came to his conclusion that the cultural effects would be no more than minor.

5 Q. And we know what Mr Te Rangi said about his status as mana whenua and those sorts of things and the Court will obviously apply whatever weight it thinks is appropriate. If that cultural values section was part of the basis for looking at the unitary plan and the mana whenua section, if we come to 671, which is paragraph 529, that's where you do your analysis in respect of those mana whenua provisions in the unitary plan as it relates to the offshore application, was that right?

10 A. Yes, yes, sits at the regional policy statement level, yes.

Q. And so you're inviting us to go back to paragraphs 380 and some other, 388 I think it's supposed to be, so we need to look at that to help us understand how you've come to the conclusions at 533?

15 A. Yes.

Q. And I'll come to that in a minute, but there'll be more experienced people than I on this at this hearing. but in terms of doing an analysis of those quite lengthy, I mean the B6 section's 10 pages in totality and there's quite a bit to it, including those provisions that you've identified and yet we've got, other than the intro at 1529, one, two, three paragraphs of analysis before you come to your conclusion and then if we go to 580 there's a little bit more there, but it doesn't seem, and I don't know if this usual, I'm looking for your insight into this, Mr Hay, is where do you go through each provision of B6 that is relevant and answering those in the context of the evidence that you have assessed? I mean, when I first read this I thought: "Well, this must be a summary of something else," because it just seems so skeletal in the context of how important these issues were given where the council or Commissioners landed. Grappling with mauri and those sorts of things that are filtered through those provisions.

25 A. Yes.

Q. Do you have any comment on that?

30 A. Well, it's a fine line between having copious amounts of evidence, and there's been criticism before in the past from the Court about the extent



of evidence, and then trying to make it brief. If you consider it's too light in this case, then that's, yes, I understand the criticism.

Q. I mean, I accept that length doesn't necessarily determine its quality and it's easier to put in a whole lot of stuff and just have a conclusion as opposed to the analysis. But I just thought given the clarity from the Commissioners' decision that this was, these were key issues for them and I've read their decision and their analysis that perhaps I, rightly or wrongly, expected a little bit more, particularly when you identify that sand have mauri and those sorts of things that had already come through the evidence. But it seemed just, none of them are inconsistent but I just would have expected you to go through and step through each of the provisions that the objectives and policies provided for. Again, that might be my naivete in terms of the stuff but I, they are going to be central to my thinking.

15 1615

A. I understand Sir.

Q. Of course, we know that you have not responded to the other evidence that is now before the Court that will be heard in due course and you hadn't factored that in directly to the final determinations you have made on the policies and objectives. Is that right?

20

A. Yes, yes. I am just going to say, and in respect to if there are any appropriate conditions which I've recognised as a gap.

Q. Just to tidy up a couple of things, paragraph 385, that's on page 650, I think what you are doing there is inviting the Court to consider economic and social wellbeing benefits to mana whenua. But obviously as I read the B6, it's a trilogy of things, it's economic, social and cultural. But you are simply highlighting that there's these other two I guess that we need to take into account as opposed to ignoring that third layer?

25

A. Yes.

Q. 388 and again this is sort of your approach of indicating there is no inconsistency with the objects and policies although recognising that some mana whenua may, I think that is supposed to say "form" a differing opinion based on their historic relationship. And it might be just the way I am reading that but, when you say, is it supposed to be historical or is

30

it, when I see “historic” it is those in relationships of the past, those relationships as I understand the evidence, endure?

A. So 388 has been deleted but I –

Q. Apologise.

5 A. I wasn’t meaning historic as in the past no, well historic in the past and continuing on today.

Q. Well that has been deleted, apologies for that.

### **THE COURT: JUDGE SMITH**

10 Q. Has 388 been deleted because you refer to it at 530 and rely on it for your analysis. So have you got no analysis to support your conclusions at 530, I think it is 530.

A. Sorry Sir, I will just check, I may have got overzealous with my crossing out compared to what I, what I have finalised of.

15 Q. Sorry, it is paragraph 529. You say it is applicable, is it no longer applicable? Sorry, I was following you Judge Warren but when he said that they had been crossed out then there is no analysis at all, well...

A. 388 I did cross out. Then if we go back to five –

Q. If you go back to paragraph 529 you will see you, when Judge Warren asked you sometime ago what was 3,800 you told us 388.

20 A. Yes, so I corrected a mistake there, 3,800. But my conclusion, so 388 is the conclusion for the inshore, 533 is the equivalent conclusion for the offshore.

1620

25 Q. Well, with respect, 529 says: “The inshore assessment is applicable.” Now you are telling us it is not applicable. Do we cross them out and cross out 529? I just point out that Judge Warren actually asked you specifically about this issue some time ago.

30 A. Yes. So the way it is structured, I considered that 380 to 387 remain applicable when we’re also talking about the offshore, but then the last one, 388, was a concluding statement for the inshore.

Q. Well I’m not asking for a further explanation. At the moment I’m trying to understand, you told Judge Warren, and I wrote it down, that 529 needed

to be altered to read 380 to 388. Are you now saying that's incorrect and it should read something else? In which case, what should it read?

A. So I corrected an error and it should read 387.

5 Q. Well, yes, that's quite important to the Court. Have you got any explanation why you didn't make that clear when Judge Warren asked you the question?

A. No Sir, I've got 388 scribbled here but then, on my notes, that were submitted on the changes as it's different, I must've corrected the error first and then didn't go back and then re-adjust it again when I removed  
10 388.

### **QUESTIONS FROM THE COURT CONTINUES: JUDGE WARREN**

Q. Finally then, and I know this comes through the unitary plan provisions, there's reference to mana whenua values, mātauranga and tikanga and that's specifically referenced at 530 in your evidence, that's at 671.  
15 Probably comes back to my initial question as to what those values are. Do you understand the distinction between those three Māori concepts, well mana whenua values, there's a pakeha term there, but mātauranga and tikanga, do you know the distinction and the definitions of those in the context of which they are used in the unitary plan?

20 A. Yes, yes, I do.

Q. What was your understanding when you undertook the assessment?

A. Well, I'm just coming down to B6.3 so B6.3, that comes up as mana whenua values, mātauranga and tikanga are properly reflected in accordance sufficient weight and resource management  
25 decision-making.

Q. I understand the latter part of that sentence, I'm asking about mana whenua values, mātauranga and tikanga, your understanding of those three concepts?

A. Yes, so the mana whenua values are the values including cultural values that mana whenua or the area hold or consider for this area. Mātauranga is looking at, well in this case, the effects through the lens of mana whenua, if I can put it that way and tikanga as the process to be followed,  
30 broad terms.

Q. And where do you draw those definitions from, is that just –

A. Off the top of my head, Sir, from what I've understood them to be over the years.

5 Q. You haven't relied on Mr Te Rangi or Mr Thomson in assisting and understanding those concepts or, simply, you've come up with your lens. Because you're saying that you've picked 6.3.1, haven't you, in terms of your opinion, that it's not inconsistent?

A. Well, I consider that sufficient consideration has been given to them, from what I understand, yes.

10 1625

Q. To be clear, you've only looked at it based on the evidence that you have assessed and analysed and that is the evidence of Mr Te Rangi who is not Ngāti Manuhiri, who is not Te Uri O Hau, or certainly not a manawhenua in the Pakiri area, Mr Thompson and Te Uri O Hau CVA and the Manuhiri CVA that did not relate to the offshore. That's the way in which you've assessed mana whenua values, mātauranga and tikanga to come to your opinions?

15

A. Well I've relied on the evidence of Mr Thompson and Mr Te Rangi. They haven't identified to me what values mātauranga tikanga haven't or they consider haven't been properly reflected or such like. So may I suggest is over the last few years in particular this has become an increasingly difficult area for planners or for myself as a planner and starting to rely, relying much more fully now on who I understand are experts in this field to provide, to, yeah, relying on their expert evidence.

20

25 Q. So because they didn't identify them and didn't identify them as being an issue then you simply follow suit and say non issue?

A. We are relying on their evidence because they're the experts in this area. I don't think it's up for me to tell Mr Te Rangi, for instance, that I don't think he's interpreted the mana whenua values correctly or such like.

30

Q. So if hypothetic if they come out with a different position or views you simply would've followed that as well, is that how it works?

A. Well if they had identified significant issues then yes because we're relying on their advice and their expertise.

Q. But we know other groups have?

A. Mmm.

**QUESTIONS FROM THE COURT: JUDGE SMITH**

5 Q. Yes, I'm sorry, we're in for stormy waters, Mr Hay. So I want to put the basic thesis which will be the first issue I'm going to explore with you that you've failed to comply with the code by omitting to consider material facts known to you that would alter to detract your views. Do you accept that?

A. In terms of the Deed of Settlement are you meaning, Sir?

10 Q. No, I'm asking you generally whether you accept that you failed to consider. I can go to – I will be going through them all but do you accept you have which will speed things up or do you want to go through each of them in turn?

15 A. In terms of the Deed of Settlement obviously I didn't fully understand what I had to consider, so yes that's correct. In terms of cultural effects, I've relied on the evidence of Mr Te Rangi who I thought was undertaking the full cultural assessment as such like. If it's considered that I also have to had to consider the cultural evidence for Ngāti Manuhiri then again would be correct.

20 Q. So do you understand the code to only require you to consider the facts you consider that you want to consider rather than all material facts? I'm quoting from 17 page 559 of your evidence where you've said you have not omitted to consider material facts. I'm putting to you, you have and you are saying that the only area you have not is in respect of the Deed of Settlement, is that correct?

25 A. I thought I could rely fully on the cultural evidence of Mr Te Rangi who was assessing the cultural impacts including those views expressed by the experts for Ngāti Manuhiri and –

Q. Is it a material fact that your application for consent was for two million cubic metres with no limit on yearly takes, is that a material fact?

A. Looking at it yes, Sir, and we were working –

30 Q. Did you omit to consider that? I can't find it anywhere in your evidence. Have you discussed that in your evidence, the full take?

A. No I haven't, Sir.

1630

Q. Is that a material fact?

A. Yes, Sir.

Q. So you've omitted to consider that. Do you accept that that would alter or detract from your evidence because you'd have to consider the much  
5 higher volumes that might be taken on an annual basis?

A. I see it more where it hasn't been adequately addressed through, or hasn't been addressed through the consent conditions, limiting it to, let's say the 150,000, which had been the assumption we've been, or I have been working on.

10 Q. So which condition addresses the number of vessel movements?

A. None do, Sir.

Q. Which address the activity of taking more than 20,000 from a cell in one year?

A. Which condition addresses that?

15 Q. Well, my understanding is it means you can't take it, if you take more than 20 you can't take it for another year, but you could take 100, couldn't you? What's the condition that prevents that occurring?

A. There's no conditions setting the maximum volume per annum.

Q. Is that a material fact?

20 A. It is a material fact that, yes, and it should have been covered off by a consent condition that assumption we had used.

Q. Now, I want to join with you in your, it seemed a side comment to the Court, that we restricted the number of pages. Your evidence is 147 pages long. Most of it doesn't deal with the key issues in this case which  
25 go to effects, what the application's for and the cultural effects. Do you accept that those are the three key issues?

A. Yes, Sir.

Q. Now, I want to move through some other issues. Do you accept that consents should have as conditions the standards that must be met or  
30 sometimes refer to trigger values or traffic lights and that management plans are methods to achieve those outcomes?

A. Yes, Sir.

Q. Do you accept that the conditions as they're now addressed do not do that? They do not set those trigger values or standards throughout, for

example, how much might be extracted in a year, the rate of extraction, overextraction, vessel movements, et cetera?

A. Well, I've talked about limiting extracting in certain cells and certain areas, so it addresses that. As we've discussed, it doesn't address the overall  
5 total volume and it doesn't address the, doesn't set a limit or vessel movements which would be tied then to, which would be tied to how much is extracted per annum.

Q. Clearly, those are material facts that need to be taken into account. I want to move to the question of deeming. You rely in your evidence, as  
10 do a number of witnesses, on management plans yet the management plans aren't ones that are subject to any intellectual rigour in that if they're not adopted by the council or commented on within 20 working days, they are deemed to be granted. What's the statutory authority for a council to be able to be held to have approved something without their written  
15 consent?

A. Sir, if I understand correctly that's similar to what's been said on the *Rena* consent conditions. I –

Q. Yes, well the problem's we found out that a number of people have been doing this. I've not been able to find out who started it and why they're  
20 there to fact, to suggest that I'm, because that was at the end the consent memo that I'm bound by it, but it doesn't mean anything to me. I want to know on what basis can you make a council be said to agree to something without their written consent?

A. I thought it was –

25 Q. If you're following the *Rena*, that's fine. If that's what you're saying. I just adopted the *Rena* (inaudible 16:34:02).

A. Yes, that's what I based it on and then through the legal review of the conditions early on, it wasn't identified as an issue.

Q. Okay, thank you. I'll move to the next issue. Perhaps I could just cover  
30 off an issue that Mr Howie asked you about and he asked you most of these questions. There's only the one, I think he may have asked you why did you choose two million cubic metres. That's because you'd had it previously, is that the reason?

1635

A. Yes, Sir.

Q. So in theory then 10 years and one million metres or five years and 500,000 cubic metres are the same parameter aren't they? They're just requiring new consent at the end of each period?

5 A. Yes, Sir, that would be right.

Q. How would you comment on that compared with review conditions? Seems to me greater certainty that the adverse effects would be addressed with a new consent?

10 A. After each set period, well yes because there'll be monitoring undertaken so would be in this situation again but with better monitoring data may I suggest (inaudible 16:36:09)

Q. Well you would acknowledge that the monitoring data to date is particularly poor unfortunately.

15 A. For the benthic, I can't remember the words Mr West had but he's expressed those views.

Q. And because as Mr Howie asked you, because there's not, this isn't an argument where capital can be argued as being a reason for a longer consent that effectively the client already had the asset, they will use it here or somewhere else depending on whether it was consents granted.  
20 So the only difference is that I suppose the complexity of having to go through a consent process in five years?

A. For the client complexity and cost because we'd be starting, well, whoever their planning consultant is would essentially be starting, yes, within the next year on starting that process again.

25 Q. So another device that's commonly used is a staging process, are you familiar with those processes which is another way to do the same thing by a different method?

A. Yes, I don't think I've been involved in one, a consent directly that's used.

30 Q. It seems to be used more for mussel farming or oyster farming but has been used in the coastal environment a number of times and you can only move to stage one if you provide satisfactory reports on stage, sorry, stage two if you provide satisfactory statements on stage one. So it pushes the onus to the operator to make sure that they address the ecological and other considerations. Would you agree, I'm not asking you



to agree that this is the way but the benefit of that would be more certainty as to getting a positive outcome for the environment?

A. In terms of the effects on the foreshore and dunes, yes because you'd be analysing that data as you're going through and it's either accreting or eroding or whatever, it's a clear outcome there. In terms of the effects on benthics, based on the information –

Q. Well we'll rely on –

A. – I understand –

Q. I'll rely on the ecological evidence there. I don't need particularly your comment on that. Now I'm turning to paragraph 320.637 which has been a problematic paragraph for me and we're now moving on to some cultural issues. Now when I think somebody asked you, it was either Mr Pou or Judge Warren, about the cultural impact assessment and you then added for the offshore application but your evidence as it was sent to us and as I read it was that they never provided a CVA, do you accept that that's a normal reading of that sentence?

A. For that sentence there because that's under the heading offshore, assessment of offshore effects, oh, assessment of effects on the environment offshore applications. But I had thought earlier on in my evidence I have outlined what had been provided.

Q. So the reality was that the cultural values assessment clearly addressed the values of Ngāti Manuhiri in respect of the Pakiri embayment, do you accept that?

A. Yes.

Q. And that you're aware of it, both acting for Kaipara and when you came to act for MBL?

A. I don't think I was aware, I knew one had been prepared I don't think I viewed it when I was acting for Kaipara.

Q. But you've seen it before you prepared your evidence?

A. I had.

Q. It's clearly material fact isn't it? What aspect of the report is not relevant to this application?

1640

A. It was written specifically for the inshore applications but the material limit is similar to what I would have expected if they had prepared one for the offshore application.

5 Q. So, my question is a question about what's called "materiality". Is it material to this application? In other words, are the values and relationships expressed in that document relevant for the purpose of this application?

A. Yes, if Ngāti Manuhiri consider that they are, they also apply to the offshore area.

10 Q. Now in respect of the application provided for by Te Uri O Hau, did you look at the hapū management plan which is a statutory document you're required to consider? Did you consider the hapū management plan for Te Uri O Hau?

A. Yes, yes. Oh, the, yes, the iwi management plan, yes.

15 Q. Iwi management plan, yes. And, sorry, iwi rather than hapū. Nevertheless, that specifically addresses sand mining, doesn't it?

A. It does, yes.

Q. Where do you discuss the contents of that management plan in your evidence?

20 A. Well, one example in that same section is in 317 where I, sorry. No, ignore that. That's relating to their assessment, so I'm now going to go to those matters I considered under 104(1)(c).

Q. That's where I'm heading next after this on another topic, but if you can find it there I'm grateful.

25 **THE COURT: JUDGE WARREN**

Is that paragraph 645, Mr Hay?

**THE COURT: JUDGE SMITH**

No, that's another document, not the sea change document.

30 **WITNESS:**

Starting off at 621.

**QUESTIONS FROM THE COURT CONTINUES: JUDGE SMITH**

Q. Thank you, we'll just flip back to that.

A. And then I'm, 622 I specifically state that I'm aware that an objective is that all future sand extraction is land-based.

5 Q. So, there's a number of statements similar to the last sentence and I just do not understand there where they come from as a planner. You're saying you need to rely on the findings of a CVA rather than on the objective of the plan. Where does it say that in the Act? Aren't you required to have regard to both?

10 A. Yes.

Q. Isn't it a material fact that you consider both?

A. Yes.

Q. You don't identify that it's inconsistent with the CVA, do you?

A. No, I don't.

15 Q. Now, I have real problems with section 104(1), 637 onwards, but I don't want to spend forever on it, but you talked, turning to 104(1)(a)(b): "No measures are required to offset or compensate for any adverse effects." As Judge Warren went through with you, you yourself recognised that there are adverse effects, cultural effects, but you say there are no, there's no need to provide any measures for them but you don't have any reasoning to support that thinking. Why is that?

20 A. As this has advanced then it's clear if we're going to go down the consent, if we went down the consent conditions sides rather than a cultural liaison agreement, then now there will be a need for such a condition, if there is such an appropriate condition.

25 Q. The next material factor I wanted you to explain to me is the council decision. Where do you deal with the council decision and why you differ from it, particularly obviously in relation to adverse effects and cultural effects? It may be that it gets lost in the 147 pages, but I couldn't find it myself.

30

1645

A. I haven't specifically outlined why this differs from the – why the application now differs from the council decision as such.

Q. Is the council decision a material fact?

A. It is.

Q. I want to now just address very briefly the question of how you have assessed effects I think and just generally assess the matter. To speak of no more than minor effects which is, as you must understand, is a test for publication of a notice for a consent. It is not a substantive test for an application. Do you understand that or not?

A. I understand that.

Q. So here we have a discretionary application. I will spare you all of the time on the bundling issue because it is no longer relevant. I do not agree with your approach but nevertheless it doesn't matter because we are left with a discretionary application. In that case the Supreme Court has said that we have to take into – we can ignore effects that are ephemeral, transient or temporary. Are you saying all the effects in this case are ephemeral, transient or temporary?

15 A. No I am not.

Q. So there are going to be a group of adverse effects which may vary from very, very small to quite large which have to be taken into account don't they in a discretionary application?

A. They do Sir.

20 Q. Yes. But I do not see the analysis of you identifying those or saying why when you go on to make a substantive decision as though you are the court but everyone does that so I am not going to make any moment of that. But at the end of the day it is the analysis we are interested in not the outcome. So where do you analyse how all of these effects put together, particularly the difficulty to me is that you have not addressed some of the key points, I have gone through them all with you now, or most of them anyway that are relevant, and then simply adopt certain witnesses over others. If the Court did that we would be appealed and overturned in a moment wouldn't we?

25 A. Well yes Sir, but the Court has to balance –

Q. But you have said, for example – I will put it to you baldly because you kept saying it to Judge Warren: “I have only taken, I have gone with Mr Te Rangi and Mr Thompson.” But there is no basis on which you can do that because you do not explain why their evidence is better, by

Mr Te Rangi is better qualified to speak for mana whenua than mana whenua themselves. Why Mr Thompson who, as Mr Warren put it to you, deals largely with engagement issues and – why that overcomes the iwi management plan. And I am left, I have got to tell you, feeling that I can understand why Judge Warren coming into this new is going, what is going on, because none of the things that are required to be done have been done. Do you accept that or not? And I want, you can give an explanation now, so I will be quiet so you can explain further. Because this is really where we get to at the end of the process.

5

10 A. Yes. So in cultural effects, when Mr Te Rangi came onboard I had been expecting that his analysis would have been more broad and in-depth in order to come to his conclusion. You know, he has come to his conclusion and that is what I have relied upon, in some ways I was relying on Mr Te Rangi to work through the different, the difficulties someone like myself may have in trying to fully understand the different effects on mana whenua values and balancing them up.

15

Q. Thank you, is there anything further you want to say. That was the end of my question so if there is any final comment.

20

A. No that, so sorry – you just disappeared off my screen but no Sir, I will leave it there.

**QUESTIONS ARISING – NIL**

**WITNESS EXCUSED**

**KARAKIA WHAKAMUTUNGA**

**COURT ADJOURNS: 4.56 PM**

25

## INDEX

	<b>CALLUM FRASER MCCALLUM (AFFIRMED).....</b>	<b>95</b>
	EXHIBIT 1 PRODUCED – UPDATED MAP .....	96
5	EXHIBIT 2 PRODUCED – PDF SPREADSHEET .....	101
	EXHIBIT 3 PRODUCED – LETTER FROM DAWSON & ASSOCIATES .....	102
	EXHIBIT 4 PRODUCED – AIS SCREENSHOT .....	104
	EXHIBIT 3 WITHDRAWN.....	110
	CROSS-EXAMINATION: MR LITTLEJOHN.....	113
10	<b>COURT RESUMES ON TUESDAY 18 JULY 2023 AT 9.32 AM.....</b>	<b>115</b>
	<b>CALLUM FRASER MCCALLUM (ON FORMER OATH).....</b>	<b>115</b>
	CROSS-EXAMINATION: MR VAN MIERLO .....	115
	CROSS-EXAMINATION: MS MORRISON-SHAW.....	121
	CROSS-EXAMINATION: MS BLACK .....	133
15	CROSS-EXAMINATION: MS WIKAIRA .....	134
	CROSS-EXAMINATION: MS URLICH.....	135
	CROSS-EXAMINATION: MS BIELBY – NIL .....	169
	CROSS-EXAMINATION: MR MULDOWNNEY – NIL.....	169
	CROSS-EXAMINATION: MS SCHARTING – NIL.....	169
20	CROSS-EXAMINATION: MS DOWNING .....	169
	RE-EXAMINATION: MR MACRAE .....	171
	QUESTIONS FROM THE COURT: SPECIAL ADVISOR HOWIE .....	175
	QUESTIONS FROM THE COURT: COMMISSIONER PRIME .....	178
	QUESTIONS FROM THE COURT: COMMISSIONER MYERS.....	179
25	QUESTIONS FROM THE COURT: JUDGE WARREN.....	181
	QUESTIONS FROM THE COURT: JUDGE SMITH .....	186
	<b>DEREK TODD (AFFIRMED) .....</b>	<b>196</b>
	CROSS-EXAMINATION: MS MORRISON-SHAW.....	203
	CROSS-EXAMINATION: MR VAN MIERLO .....	215
30	CROSS-EXAMINATION: MS BLACK – NIL .....	227
	CROSS-EXAMINATION: MS WIKAIRA – NIL.....	227
	CROSS-EXAMINATION: MR POU .....	227
	<b>COURT RESUMES ON WEDNESDAY 19 JULY 2023 AT 9.34 AM .....</b>	<b>235</b>
	<b>DEREK TODD (ON FORMER OATH).....</b>	<b>239</b>
35	CROSS-EXAMINATION: MS DOWNING .....	249
	RE-EXAMINATION: MR MACRAE .....	250
	EXHIBIT 5 PRODUCED – MPPS MAP .....	252
	QUESTIONS FROM THE COURT: COMMISSIONER MYERS.....	252
	QUESTIONS FROM THE COURT: COMMISSIONER PRIME – NIL .....	254
40	QUESTIONS FROM THE COURT: SPECIAL ADVISOR HOWIE .....	254
	QUESTIONS FROM THE COURT: JUDGE WARREN.....	268
	QUESTIONS FROM THE COURT: JUDGE SMITH .....	269
	<b>CLINTON HEALY (AFFIRMED).....</b>	<b>285</b>
	CROSS-EXAMINATION: MR VAN MIERLO .....	295
45	CROSS-EXAMINATION: MS MORRISON-SHAW – NIL .....	296
	CROSS-EXAMINATION: MS BLACK .....	296
	CROSS-EXAMINATION: MR POU – NIL.....	297

	CROSS-EXAMINATION: MS WIKAIRA .....	297
	CROSS-EXAMINATION: MS DOWNING .....	298
	RE-EXAMINATION: MR MACRAE – NIL .....	299
	QUESTIONS FROM THE COURT: SPECIAL ADVISOR HOWIE .....	299
5	QUESTIONS FROM THE COURT: COMMISSIONER MYERS.....	300
	QUESTIONS FROM THE COURT: COMMISSIONER PRIME – NIL .....	301
	QUESTIONS FROM THE COURT: JUDGE WARREN.....	301
	QUESTIONS FROM THE COURT: JUDGE SMITH .....	302
	QUESTIONS ARISING – NIL .....	302
10	<b>SIMON WEST (AFFIRMED) .....</b>	<b>304</b>
	EXHIBIT 6 PRODUCED – AMENDED TABLE 6.1 .....	305
	CROSS-EXAMINATION: MS BIELBY .....	308
	CROSS-EXAMINATION: MS DOWNING .....	313
	CROSS-EXAMINATION: MR VAN MIERLO .....	329
15	<b>COURT RESUMES ON THURSDAY 20 JULY 2023 AT 9.30 AM.....</b>	<b>337</b>
	CROSS-EXAMINATION: MS CAMPBELL .....	353
	CROSS-EXAMINATION: MS MORRISON-SHAW.....	354
	CROSS-EXAMINATION: MS URLICH .....	376
	CROSS-EXAMINATION: MR POU .....	380
20	RE-EXAMINATION: MR MACRAE .....	389
	QUESTIONS FROM THE COURT: COMMISSIONER MYERS.....	394
	QUESTIONS FROM THE COURT: SPECIAL ADVISOR HOWIE – NIL.....	396
	QUESTIONS FROM THE COURT: COMMISSIONER PRIME – NIL .....	396
	QUESTIONS FROM THE COURT: JUDGE WARREN.....	397
25	QUESTIONS FROM THE COURT: JUDGE SMITH .....	399
	QUESTIONS ARISING – NIL .....	403
	<b>DAVID THOMPSON (AFFIRMED) .....</b>	<b>406</b>
	EXAMINATION: MR MACRAE.....	406
	CROSS-EXAMINATION: MS BIELBY .....	411
30	CROSS-EXAMINATION: MR VAN MIERLO .....	416
	EXHIBIT 7 PRODUCED – DOCUMENT AND FISHERIES NEW ZEALAND ADVICE.....	420
	CROSS-EXAMINATION: MS MORRISON-SHAW.....	422
	EXHIBIT 8 PRODUCED – EXPERT EVIDENCE OF DR DAVID THOMPSON ON BEHALF OF TRANS-TASMAN RESOURCES .....	428
35	CROSS-EXAMINATION: MS URLICH.....	430
	RE-EXAMINATION: MR MACRAE .....	433
	QUESTIONS FROM THE COURT: COMMISSIONER MYERS.....	437
	QUESTIONS FROM THE COURT: SPECIAL ADVISOR HOWIE .....	438
	QUESTIONS FROM THE COURT: COMMISSIONER PRIME – NIL .....	439
40	QUESTIONS FROM THE COURT: JUDGE WARREN.....	439
	QUESTIONS FROM THE COURT: JUDGE SMITH .....	442
	QUESTIONS ARISING – NIL .....	446
	<b>COURT RESUMES ON FRIDAY 21 JULY 2023 AT 9.32 AM .....</b>	<b>448</b>
	<b>CLAIRE CONWELL (AFFIRMED).....</b>	<b>449</b>
45	CROSS-EXAMINATION: MS BIELBY – NIL .....	450
	CROSS-EXAMINATION: MR VAN MIERLO .....	450
	CROSS-EXAMINATION: REMAINING COUNSEL/PARTIES – NIL .....	454
	RE-EXAMINATION: MS HOPKINS – NIL .....	454
	QUESTIONS FROM THE COURT: COMMISSIONER MYERS.....	454
50	QUESTIONS FROM THE COURT: SPECIAL ADVISOR HOWIE – NIL.....	455

	QUESTIONS FROM THE COURT: COMMISSIONER PRIME – NIL .....	455
	QUESTIONS FROM THE COURT: JUDGE WARREN – NIL .....	455
	QUESTIONS FROM THE COURT: JUDGE SMITH – NIL .....	455
	<b>MATTHEW PINE (AFFIRMED) .....</b>	<b>456</b>
5	CROSS-EXAMINATION: MS BIELBY – NIL .....	458
	CROSS-EXAMINATION: MR VAN MIERLO .....	459
	CROSS-EXAMINATION: MS MORRISON-SHAW .....	462
	CROSS-EXAMINATION: MS WIKAIRA .....	474
	CROSS-EXAMINATION: MR POU .....	475
10	RE-EXAMINATION: MR MACRAE – NIL .....	477
	QUESTIONS FROM THE COURT: COMMISSIONER MYERS – NIL .....	477
	QUESTIONS FROM THE COURT: SPECIAL ADVISOR HOWIE – NIL .....	477
	QUESTIONS FROM THE COURT: COMMISSIONER PRIME .....	477
	QUESTIONS FROM THE COURT: JUDGE WARREN – NIL .....	478
15	QUESTIONS FROM THE COURT: JUDGE SMITH .....	478
	QUESTIONS ARISING – NIL .....	480
	<b>DEANNA CLEMENT (AFFIRMED) .....</b>	<b>481</b>
	CROSS-EXAMINATION: MR VAN MIERLO .....	483
	CROSS-EXAMINATION: MS MORRISON-SHAW .....	487
20	CROSS-EXAMINATION: MR POU .....	496
	RE-EXAMINATION: MR MACRAE .....	501
	QUESTIONS FROM THE COURT: COMMISSIONER MYERS .....	503
	QUESTIONS FROM THE COURT: SPECIAL ADVISOR HOWIE .....	505
	QUESTIONS FROM THE COURT: COMMISSIONER PRIME – NIL .....	505
25	QUESTIONS FROM THE COURT: JUDGE WARREN .....	505
	QUESTIONS FROM THE COURT: JUDGE SMITH .....	507
	QUESTIONS ARISING – NIL .....	510
	<b>STEPHEN BROWN (AFFIRMED) .....</b>	<b>511</b>
	CROSS-EXAMINATION: MR VAN MIERLO .....	514
30	CROSS-EXAMINATION: MS MORRISON SHAW – NIL .....	517
	CROSS-EXAMINATION: MR POU .....	517
	RE-EXAMINATION: MR MACRAE .....	533
	QUESTIONS FROM THE COURT: COMMISSIONER MYERS .....	537
	QUESTIONS FROM THE COURT: SPECIAL ADVISOR HOWIE – NIL .....	538
35	QUESTIONS FROM THE COURT: COMMISSIONER PRIME – NIL .....	538
	QUESTIONS FROM THE COURT: JUDGE SMITH .....	538
	QUESTIONS FROM THE COURT: JUDGE WARREN .....	541
	<b>LAWRENCE MCILRATH (AFFIRMED) .....</b>	<b>544</b>
	CROSS-EXAMINATION: MS BIELBY – NIL .....	547
40	CROSS-EXAMINATION: MR VAN MIERLO – NIL .....	547
	CROSS-EXAMINATION: MR WILLIAMS .....	547
	<b>COURT RESUMES ON MONDAY 24 JULY 2023 AT 9.59 AM .....</b>	<b>560</b>
	<b>LAWRENCE MCILRATH .....</b>	<b>560</b>
	CROSS-EXAMINATION: MR LITTLEJOHN .....	562
45	RE-EXAMINATION: MR MACRAE .....	569
	QUESTIONS FROM THE COURT: COMMISSIONER MYERS .....	570
	QUESTIONS FROM THE COURT: SPECIAL ADVISOR HOWIE .....	571
	QUESTIONS FROM THE COURT: JUDGE WARREN – NIL .....	571
	QUESTIONS FROM THE COURT: JUDGE SMITH .....	571



	QUESTIONS FROM THE COURT: COMMISSIONER PRIME – NIL .....	575
	QUESTIONS ARISING – NIL .....	575
	<b>SIAN ANKARD JOHN (AFFIRMED) .....</b>	<b>578</b>
	EXAMINATION: MS MORRISON-SHAW .....	579
5	CROSS-EXAMINATION: MR MACRAE .....	589
	RE-EXAMINATION: MS MORRISON-SHAW – NIL .....	610
	QUESTIONS FROM THE COURT: COMMISSIONER MYERS .....	610
	QUESTIONS FROM THE COURT: SPECIAL ADVISOR HOWIE .....	612
	QUESTIONS FROM THE COURT: COMMISSIONER PRIME – NIL .....	615
10	QUESTIONS FROM THE COURT: JUDGE WARREN .....	615
	QUESTIONS FROM THE COURT: JUDGE SMITH .....	617
	QUESTIONS ARISING – NIL .....	621
	<b>GIOVANNI COCO (AFFIRMED) .....</b>	<b>623</b>
	CROSS-EXAMINATION: MS BIELBY .....	628
15	CROSS-EXAMINATION: MR MACRAE .....	631
	RE-EXAMINATION: MS MORRISON-SHAW – NIL .....	634
	QUESTIONS FROM THE COURT: COMMISSIONER MYERS .....	634
	QUESTIONS FROM THE COURT: SPECIAL ADVISOR HOWIE: .....	635
	QUESTIONS FROM THE COURT: COMMISSIONER PRIME – NIL .....	638
20	QUESTIONS FROM THE COURT: JUDGE WARREN – NIL .....	639
	QUESTIONS FROM THE COURT: JUDGE SMITH .....	639
	QUESTIONS ARISING – NIL .....	639
	<b>DEREK TODD (RE-AFFIRMED) .....</b>	<b>641</b>
	CROSS-EXAMINATION: MS CAMPBELL .....	641
25	RE-EXAMINATION: MR MACRAE – NIL .....	660
	QUESTIONS FROM THE COURT: COMMISSIONER MYERS – NIL .....	660
	QUESTIONS FROM THE COURT: SPECIAL ADVISOR HOWIE .....	660
	QUESTIONS FROM THE COURT: COMMISSIONER PRIME – NIL .....	662
	QUESTIONS FROM THE COURT: JUDGE WARREN – NIL .....	662
30	QUESTIONS FROM THE COURT: JUDGE SMITH .....	663
	QUESTIONS ARISING – NIL .....	666
	<b>COURT RESUMES ON TUESDAY 25 JULY 2023 AT 10.01 AM .....</b>	<b>678</b>
	<b>CALLUM FRASER MCCALLUM (RE-AFFIRMED) .....</b>	<b>691</b>
	CROSS-EXAMINATION: MS CAMPBELL .....	691
35	RE-EXAMINATION: MR MACRAE .....	732
	QUESTIONS FROM THE COURT: COMMISSIONER MYERS .....	733
	QUESTIONS FROM THE COURT: SPECIAL ADVISOR HOWIE .....	734
	QUESTIONS FROM THE COURT: COMMISSIONER PRIME – NIL .....	736
	QUESTIONS FROM THE COURT: JUDGE WARREN – NIL .....	736
40	QUESTIONS FROM THE COURT: JUDGE SMITH .....	736
	QUESTIONS ARISING – NIL .....	742
	<b>ROBERT CAMPBELL OFFICER (AFFIRMED) .....</b>	<b>743</b>
	EXAMINATION: MS HOPKINS .....	743
	CROSS-EXAMINATION: MS BLACK – NIL .....	744
45	CROSS-EXAMINATION: MR POU .....	744
	CROSS-EXAMINATION: MS WIKAIRA – NIL .....	746
	CROSS-EXAMINATION: MR LITTLEJOHN .....	746
	CROSS-EXAMINATION: REMAINING COUNSEL – NIL .....	750
	RE-EXAMINATION: MS HOPKINS .....	750

	QUESTIONS FROM THE COURT: COMMISSIONER MYERS.....	751
	QUESTIONS FROM THE COURT: SPECIAL ADVISOR HOWIE – NIL.....	753
	QUESTIONS FROM THE COURT: COMMISSIONER PRIME – NIL .....	753
	QUESTIONS FROM THE COURT: JUDGE WARREN – NIL .....	753
5	QUESTIONS FROM THE COURT: JUDGE SMITH – NIL.....	753
	QUESTIONS ARISING – NIL.....	753
	<b>PAUL DONAGHUE (AFFIRMED) .....</b>	<b>754</b>
	CROSS-EXAMINATION: MS BIELBY – NIL .....	756
	CROSS-EXAMINATION: MR VAN MIERLO – NIL .....	756
10	CROSS-EXAMINATION: MS BLACK – NIL.....	756
	CROSS-EXAMINATION: MS WIKAIRA – NIL.....	756
	CROSS-EXAMINATION: MR POU – NIL.....	756
	CROSS-EXAMINATION: MR LITTLEJOHN – NIL .....	756
	CROSS-EXAMINATION: MS CAMPBELL .....	756
15	RE-EXAMINATION: MS HOPKINS – NIL .....	757
	QUESTIONS FROM THE COURT: COMMISSIONER MYERS – NIL .....	757
	QUESTIONS FROM THE COURT: SPECIAL ADVISOR HOWIE .....	757
	QUESTIONS FROM THE COURT: COMMISSIONER PRIME – NIL .....	758
	QUESTIONS FROM THE COURT: JUDGE WARREN.....	758
20	QUESTIONS FROM THE COURT: JUDGE SMITH – NIL.....	758
	QUESTIONS ARISING – NIL.....	758
	<b>WARREN HENRY SCOTT (AFFIRMED) .....</b>	<b>759</b>
	CROSS-EXAMINATION: MS BIELBY – NIL .....	759
	CROSS-EXAMINATION: MR VAN MIERLO – NIL .....	759
25	CROSS-EXAMINATION: MS HIEW.....	759
	CROSS-EXAMINATION: MS CAMPBELL – NIL.....	761
	CROSS-EXAMINATION: MS BLACK – NIL.....	761
	CROSS-EXAMINATION: MR POU – NIL.....	761
	CROSS-EXAMINATION: MS WIKAIRA – NIL.....	761
30	CROSS-EXAMINATION: MR MULDOWNNEY – NIL.....	761
	RE-EXAMINATION: MS HOPKINS – NIL .....	762
	QUESTIONS FROM THE COURT: COMMISSIONER MYERS.....	762
	QUESTIONS FROM THE COURT: SPECIAL ADVISOR HOWIE – NIL.....	762
	QUESTIONS FROM THE COURT: COMMISSIONER PRIME – NIL .....	762
35	QUESTIONS FROM THE COURT: JUDGE WARREN.....	762
	QUESTIONS FROM THE COURT: JUDGE SMITH .....	763
	QUESTIONS ARISING: MS HOPKINS .....	764
	<b>COURT RESUMES ON WEDNESDAY 26 JULY 2023 AT 9.37 AM .....</b>	<b>769</b>
	<b>DECLAN STUBBING (AFFIRMED) .....</b>	<b>769</b>
40	EXHIBIT 9 PRODUCED – REPORT OF NOVEMBER 2022 SURVEY DML .....	787
	EXHIBIT 10A PRODUCED – HEAT MAP DML MARCH 2022.....	787
	EXHIBIT 10B PRODUCED – HEAT MAP DML NOVEMBER 2022 .....	787
	CROSS-EXAMINATION: MS BIELBY – NIL .....	793
	CROSS-EXAMINATION: MR VAN MIERLO .....	793
45	CROSS-EXAMINATION: MS CAMPBELL .....	796
	CROSS-EXAMINATION: MR POU .....	811
	RE-EXAMINATION: MR MACRAE .....	812
	QUESTIONS FROM THE COURT: COMMISSIONER MYERS.....	815
	QUESTIONS FROM THE COURT: SPECIAL ADVISOR HOWIE .....	816
50	QUESTIONS FROM THE COURT: COMMISSIONER PRIME – NIL .....	823
	QUESTIONS FROM THE COURT: JUDGE WARREN – NIL .....	823

	QUESTIONS FROM THE COURT: JUDGE SMITH .....	824
	QUESTIONS ARISING – NIL .....	828
	<b>MICHAEL JAMES THOMSON (AFFIRMED) .....</b>	<b>830</b>
	CROSS-EXAMINATION: MS BIELBY – NIL .....	830
5	CROSS-EXAMINATION: MS SUTHERLAND – NIL .....	830
	CROSS-EXAMINATION: MS CAMPBELL – NIL (MR POU ON BEHALF OF).....	830
	CROSS-EXAMINATION: MS MORRISON-SHAW – NIL (MR POU ON BEHALF OF) .....	830
	CROSS-EXAMINATION: MS BLACK – NIL .....	830
	QUESTIONS FROM THE COURT: COMMISSIONER MYERS.....	830
10	QUESTIONS FROM THE COURT: SPECIAL ADVISOR HOWIE .....	832
	QUESTIONS FROM THE COURT: COMMISSIONER PRIME – NIL .....	833
	QUESTIONS FROM THE COURT: JUDGE WARREN – NIL .....	833
	QUESTIONS FROM THE COURT: JUDGE SMITH .....	833
	QUESTIONS ARISING: MS HOPKINS.....	834
15	QUESTIONS ARISING: REMAINING COUNSEL – NIL .....	835
	<b>JON ROBERT STYLES (AFFIRMED).....</b>	<b>836</b>
	CROSS-EXAMINATION: MS BIELBY – NIL .....	837
	CROSS-EXAMINATION: MS SUTHERLAND – NIL .....	837
	CROSS-EXAMINATION: MR POU .....	837
20	CROSS-EXAMINATION: MS BLACK .....	838
	CROSS-EXAMINATION: MS HIEW – NIL .....	841
	RE-EXAMINATION: MS HOPKINS.....	841
	QUESTIONS FROM THE COURT: COMMISSIONER MYERS.....	841
	QUESTIONS FROM THE COURT: SPECIAL ADVISOR HOWIE .....	842
25	QUESTIONS FROM THE COURT COMMISSIONER PRIME – NIL .....	844
	QUESTIONS FROM THE COURT: JUDGE WARREN.....	844
	QUESTIONS FROM THE COURT: JUDGE SMITH .....	845
	QUESTIONS ARISING – NIL .....	848
	<b>ANTONY BOYD THOMPSON (AFFIRMED) .....</b>	<b>849</b>
30	EXAMINATION: MR MACRAE.....	849
	CROSS-EXAMINATION: MS BIELBY .....	850
	CROSS-EXAMINATION: MS VAN MIERLO – NIL.....	861
	CROSS-EXAMINATION: MS BLACK .....	862
	CROSS-EXAMINATION: MS WIKAIRA .....	862
35	CROSS-EXAMINATION: MS URLICH.....	866
	<b>COURT RESUMES ON THURSDAY 27 JULY 2023 AT 9.31 AM.....</b>	<b>881</b>
	<b>ANTONY BOYD THOMPSON (ON FORMER AFFIRMATION) .....</b>	<b>888</b>
	CROSS-EXAMINATION: MR POU .....	893
	CROSS-EXAMINATION: MS HIEW – NIL .....	911
40	CROSS-EXAMINATION: REMAINING COUNSEL – NIL .....	911
	RE-EXAMINATION: MR MACRAE .....	911
	QUESTIONS FROM THE COURT: COMMISSIONER MYERS.....	913
	QUESTIONS FROM THE COURT: SPECIAL ADVISOR HOWIE – NIL.....	914
	QUESTIONS FROM THE COURT: COMMISSIONER PRIME .....	914
45	QUESTIONS FROM THE COURT: JUDGE WARREN.....	915
	QUESTIONS FROM THE COURT: JUDGE SMITH .....	924
	QUESTIONS ARISING: MR POU .....	926
	<b>ROBERT GAIMSTER (AFFIRMED) .....</b>	<b>930</b>
	CROSS-EXAMINATION: MS BIELBY – NIL .....	931

	CROSS-EXAMINATION: MR VAN MIERLO – NIL .....	932
	CROSS-EXAMINATION: MS CAMPBELL – NIL.....	932
	CROSS-EXAMINATION: MS MORRISON-SHAW – NIL .....	932
	CROSS-EXAMINATION: MR POU – NIL.....	932
5	CROSS-EXAMINATION: MS BLACK – NIL.....	932
	CROSS-EXAMINATION: MS HIEW.....	932
	EXHIBIT 11 PRODUCED – CONCRETE NEW ZEALAND INCORPORATED SOCIETY RULES .....	934
	CROSS-EXAMINATION: MS SCHARTING – NIL.....	934
10	CROSS-EXAMINATION: MR MULDOWNY – NIL.....	934
	RE-EXAMINATION: MR MACRAE .....	935
	QUESTIONS FROM THE COURT: COMMISSIONER MYERS – NIL .....	935
	QUESTIONS FROM THE COURT: SPECIAL ADVISOR HOWIE – NIL.....	935
	QUESTIONS FROM THE COURT: COMMISSIONER PRIME .....	935
15	QUESTIONS FROM THE COURT: JUDGE WARREN – NIL .....	936
	QUESTIONS FROM THE COURT: JUDGE SMITH – NIL.....	936
	QUESTIONS ARISING – NIL.....	936
	<b>TAME TE RANGI (AFFIRMED).....</b>	<b>950</b>
	CROSS-EXAMINATION: MS MCGRATH .....	950
20	CROSS-EXAMINATION: MS BLACK .....	960
	CROSS-EXAMINATION: MS WIKAIRA.....	976
	CROSS-EXAMINATION: MS URLICH.....	976
	<b>COURT RESUMES ON FRIDAY 28 JULY 2023 AT 9.31 AM .....</b>	<b>991</b>
	<b>TAME TE RANGI (ON FORMER AFFIRMATION).....</b>	<b>991</b>
25	CROSS-EXAMINATION: MR POU .....	999
	RE-EXAMINATION: MR MACRAE .....	1017
	QUESTIONS FROM THE COURT: COMMISSIONER MYERS.....	1024
	QUESTIONS FROM THE COURT: SPECIAL ADVISOR HOWIE .....	1025
	QUESTIONS FROM THE COURT: COMMISSIONER PRIME .....	1029
30	QUESTIONS FROM THE COURT: JUDGE WARREN.....	1037
	QUESTIONS FROM THE COURT: JUDGE SMITH .....	1045
	QUESTIONS ARISING – NIL.....	1051
	<b>DAVID HAY (AFFIRMED) .....</b>	<b>1053</b>
	CROSS-EXAMINATION: MS FRASER.....	1059
35	<b>COURT RESUMES ON MONDAY 31 JULY 2023 AT 10.00 AM.....</b>	<b>1083</b>
	<b>DAVID HAY (RE-AFFIRMED) .....</b>	<b>1083</b>
	CROSS-EXAMINATION: MS SUTHERLAND .....	1089
	CROSS-EXAMINATION: MR VAN MIERLO .....	1105
	CROSS-EXAMINATION: MS URLICH.....	1110
40	CROSS-EXAMINATION: MR POU .....	1129
	CROSS-EXAMINATION CONTINUES: MR POU .....	1133
	CROSS-EXAMINATION: MS WIKAIRA .....	1139
	RE-EXAMINATION: MR MACRAE .....	1141
	QUESTIONS FROM THE COURT: COMMISSIONER MYERS.....	1144
45	QUESTIONS FROM THE COURT: SPECIAL ADVISOR HOWIE .....	1148
	QUESTIONS FROM THE COURT: COMMISSIONER PRIME – NIL .....	1155
	QUESTIONS FROM THE COURT: JUDGE WARREN.....	1155
	QUESTIONS FROM THE COURT: JUDGE SMITH .....	1163
	QUESTIONS ARISING – NIL.....	1171
50		

# Notes of Evidence Legend

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Indicator	Explanation
<b>Long dash –</b>	<p>Indicates interruption:</p> <p>Q. I think you were – (<i>Interrupted by A.</i>)</p> <p>A. I was – (<i>Interrupted by Q.</i>)</p> <p>Q. – just saying that – (<i>First dash indicates continuation of counsel's question.</i>)</p> <p>A. – about to say (<i>First dash indicates continuation of witness' answer.</i>)</p> <p>This format could also indicate talking over by one or both parties.</p>
<b>Long dash</b> (within text)	<p>Long dash within text indicates a change of direction, either in Q or A:</p> <p>Q. Did you use the same tools – well first, did you see him in the car?</p> <p>A. I saw him through – I went over to the window and noticed him.</p>
<b>Long dash</b> (part spoken word)	<p>Long dash can indicate a part spoken word by witness:</p> <p>A. Yes I definitely saw a blu – red car go past.</p>
<b>Ellipses ...</b> (in evidence)	<p>Indicates speaker has trailed off:</p> <p>A. I suppose I was just... (<i>Generally witness has trailed off during the sentence and does not finish.</i>)</p> <p>Q. Okay well let's go back to the 11<sup>th</sup>.</p>
<b>Ellipses ...</b> (in reading of briefs)	<p>Indicates the witness has been asked to pause in the reading of the brief:</p> <p>A. "...went back home."</p> <p>The resumption of reading is noted by the next three words, with the ellipses repeated to signify reading continues until the end of the brief when the last three words are noted.</p> <p>A. "At the time...called me over."</p>
<b>Bold text</b> (in evidence)	<p>If an interpreter is present and answering for a witness, text in bold refers on all occasions to the interpreter speaking, with the <i>first</i> instance only of the interpreter speaking headed up with the word "Interpreter":</p> <p>Q. How many were in the car?</p> <p>A. <b>Interpreter: There were six.</b></p> <p>Q. So six altogether?</p> <p>A. <b>Yes six</b> – no only five – <b>sorry, only five.</b> (<i>Interpreter speaking – witness speaking – interpreter speaking.</i>)</p>
<b>Bold text in square brackets</b> (in evidence)	<p>If an interpreter is present and answering for a witness, to distinguish between the interpreter's translation and the interpreter's "aside" comments, bold text is contained within square brackets:</p> <p>Q. So you say you were having an argument?</p> <p>A. Not argue, I think it is negotiation, ah, re – sorry. <b>Negotiation, bartering. [I think that's what he meant]</b> Yeah not argue.</p>