Cultural Impact Assessment Report

Potential effects of the Chatham Rock Phosphate proposal on Ngāi Tahu values and interests related to marine mammals on the Chatham Rise.

Prepared for Chatham Rock Phosphate By Dyanna Jolly (Wītaskēwin), on behalf of Te Rūnanga o Ngāi Tahu *July 2014*

Cover images

1. A beaked whale fossil found on the Chatham Rise. Photo credit: Greg Summerton.
2. Ngāi Tahu whalebone taonga. A chevroned pendant from Kawatea held at Canterbury Museum (photo used with permission from Canterbury Museum).
3. Parāoa off the Kaikōura coast. Photo credit: Dy Jolly.

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Disclaimer

This CIA report is specific to the enduring relationship of Ngāi Tahu to marine mammals. To avoid misunderstanding, it should be noted that the report is not a full assessment of potential impacts of the Chatham Rock Phosphate (CRP) proposal on Ngāi Tahu values and interests. The written response of Te Rūnanga o Ngāi Tahu and evidence presented at the Environmental Protection Authority hearing for this marine consent application will together constitute a full assessment of the potential impacts of the CRP proposal on the interests and values of Ngāi Tahu whānui. This CIA report should be considered as one part of a larger package of information provided by Te Rūnanga o Ngāi Tahu to the decision-making committee of the Environmental Protection Authority.

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Executive Summary

Chatham Rock Phosphate Ltd (CRP) has lodged a marine consent application with the Environmental Protection Authority (EPA) to mine phosphate nodules from the crest of the Chatham Rise. The application applies to a 10 192 km^2 area that includes both CRP's existing mining permit and those areas covered by applications for further prospecting licenses and permits.

Te Rūnanga o Ngāi Tahu has concerns about the potential impact of the proposed mining activity on Ngāi Tahu existing interests associated with marine mammal taonga species. To address these issues, it was agreed that Ngāi Tahu would prepare a Cultural Impact Assessment (CIA) report to provide CRP with an understanding of Ngāi Tahu marine mammal related values and interests associated with the Chatham rise, and the potential effects of the activity on these.

The findings of the Cultural Impact Assessment report highlight two key issues for Ngāi Tahu with regard to the CRP proposal and marine mammal taonga species:

1) The proposed mining footprint includes a defined area of marine mammal fossil bone beds, identified by Ngāi Tahu as a *wāhi tawhito* (ancient place) with tapu associations. The cultural significance of the area is directly related to the contemporary value of the Chatham Rise as fishing grounds. It is highly likely that the mining activity will destroy these fossil beds.

2) There is significant uncertainty with regard to the effects of the proposed activity on whales as a taonga species and the wider environment and ecology that they depend on, and this is inconsistent with the protection of these species. The presence of the fossil beds indicates that this has been an important area for whales for a very long time.

Ngāi Tahu have an obligation to protect whales and their ancestral remains. This obligation is derived from whakapapa, and expressed through kaitiakitanga. Whales have continued through time to provide for the iwi, and in turn the people must provide for the whales. It is critical that the relationship between Ngāi Tahu and these marine mammals, living and ancient, are afforded appropriate weight by both CRP and the Environmental Protection Authority.

"Our path and the whale's path have continued to reconnect throughout the ages, as it is inherently meant to."[1]

[1] Te Rūnanga o Kaikoura, 2013. The Ngati Kuri/Ngai Tahu Relationship With Whales.

1. Introduction

Chatham Rock Phosphate Ltd (CRP) has lodged a marine consent application with the Environmental Protection Authority (EPA) to mine phosphate nodules from the crest of the Chatham Rise. The application applies to a 10 192 km^2 area that includes both CRP's existing mining permit and those areas covered by applications for further prospecting licenses and permits.

Te Rūnanga o Ngāi Tahu has significant concerns with the potential impact of the proposal on existing iwi values and interests with regard to Ngāi Tahu Fisheries Settlement assets and whānau business, mahinga kai, and taonga species. These concerns were raised in a 2013 submission on CRP's mining permit application, and in subsequent discussions with the company.

A specific matter identified by Te Rūnanga is the potential impact of the proposed mining activity on Ngāi Tahu associations with marine mammal taonga species, particularly whales. Ngāi Tahu have a strong cultural connection with whales, and this is expressed through whakapapa, mahinga kai and kaitiakitanga traditions.

The proposed mining footprint includes a defined area of marine mammal fossil bone beds. Ngāi Tahu identify this area as a *wāhi tawhito* (ancient place) of cultural significance. The cultural significance of the area is directly related to the value and productivity of the Chatham Rise fishing grounds.

In discussing these issues, it was agreed that Ngāi Tahu would prepare a Cultural Impact Assessment (CIA) report to provide CRP with an understanding of Ngāi Tahu marine mammal related values and interests associated with the Chatham rise, and the potential effects of the activity on these.

This CIA is prepared in accordance with the Te Rūnanga o Ngāi Tahu Act 1996 and the Charter of Te Rūnanga o Ngāi Tahu, which recognises Te Rūnanga as the representative of Ngāi Tahu whānui able to speak on behalf of the collective to protect iwi interests.

In providing this report, Te Rūnanga recognises the mana moana status of imi and iwi from Rēkohu/Wharekauri.

2. Purpose of this report

A CIA is a technical report documenting Māori cultural values, interests and associations with an area or a resource, and the potential cultural impacts of a proposed activity on these.

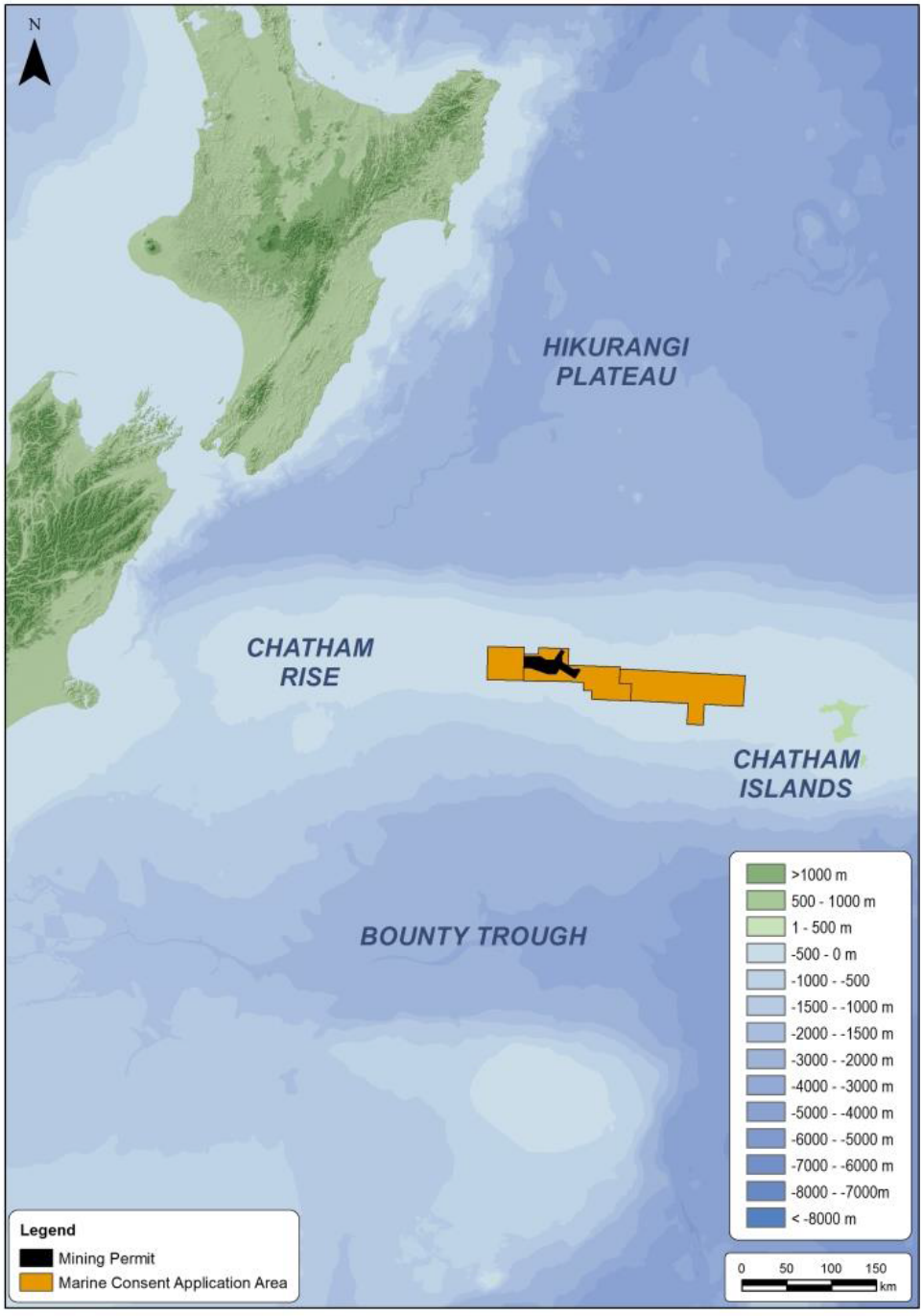
The purpose of this CIA is to assess actual or potential effects of the proposed mining activity on Ngāi Tahu values and interests associated with marine mammals on the Chatham Rise environment, specifically with regard to:

a) Ancient marine mammal fossil bone beds located in the eastern extent of the proposed mining area;

b) The use of the area by whales and the ecological significance of the area as whale habitat.

The CIA provides the information required by the applicant and the EPA to understand and manage the impacts of the activity on the existing interest of Ngāi Tahu with marine mammals as a taonga species.

Map 1: The Chatham Rise and CRP's marine consent application area (Source: CRP marine consent application and environmental impact assessment).



3. Methodology

The following methods were used to prepare this CIA report:

a) Review of written sources detailing the relationship of Ngāi Tahu with marine mammals, including the WAI27 claim and the Ngāi Tahu Sea Fisheries Report 1996.

b) Review of information provided by Te Rūnanga o Ngāi Tahu, including meeting notes and submissions.

c) Review of marine mammal sections of the CRP Environmental Impact Assessment.

d) Hui with tāngata whenua with expertise about the relationship of Ngāi Tahu to whales and the cultural significance of fossil-bones found on the Chatham Rise.

e) Review of information provided to Te Rūnanga o Ngāi Tahu by external experts - Dr. Ewan Fordyce (paleontologist, University of Otago) and Anton van Helden (independent marine mammal researcher/expert, formerly of Te Papa Tongarewa).

Photo: Clockwise from left to right – Dr. Ewan Fordyce (University of Otago), Bradford Haami (Ngāi Tahu), Maria Bartlett (Te Rūnanga o Ngāi Tahu), Greg Summerton (Ngāi Tahu), and Ramari Oliphant-Stewart discuss marine mammal fossils and the relationship of Ngāi Tahu to these. The fossil on the table is the partial skull of a beaked whale, found on the Chatham Rise and held by Ngāi Tahu. According to Prof Fordyce, this particular fossil could be between 5 and 22 million years old. The geological age of Chatham Rise cetacean fossils is difficult to determine because information is so sparse. However, fossils from groups such as the beaked whale or *Ziphiidae* are known to have a time range of 17 million years, or beyond.

4. The relationship of Ngāi Tahu to whales as taonga species

Ngāi Tahu have had an ongoing relationship with marine mammals for as long as they have occupied Te Waipounamu. This is the basis for Ngāi Tahu interests in the protection of these taonga species and their ancestral remains.

The starting point for this relationship is whakapapa (genealogy). Whakapapa explains the origins of all living things, and the relationship between humans and the natural world. Whakapapa binds Ngāi Tahu to the whale, and confirms the status of the whale as a tūpuna (ancestor). As with other iwi, whales are the children of Tangaroa, the god of the oceans, and therefore have an elevated status (Gillespie, A. 1999).

The whale features in migration history of Ngāi Tahu as an iwi. Tahu Pōtiki, the founding ancestor of Ngāi Tahu, was a son of Paikea, the legendary figure who arrived in Aotearoa/New Zealand on the back of a whale (Tau and Anderson, A, 2008).

Whales also figure in Ngāi Tahu oral traditions as kaitiaki (spiritual guardians) or providing assistance in times of need. The name *Te Ara a Kiwa* (Foveaux Strait) comes from the story of the navigator Kiwa, who became tired of having to cross the land isthmus that joined Murihiku (Southland) with Rakiura (Stewart Island). Kiwa requested an obedient whale Kewa to chew through the isthmus and create a waterway so that he could cross by waka. The whale bit through the land, creating Te Ara a Kiwa. The crumbs that fell from his mouth are the islands in Foveaux Strait, Solander Island being *Te Niho a Kewa,* a loose tooth that fell from the mouth of Kewa (Schedule 104, Ngāi Tahu Claims Settlement Act 1998).

The Ngāi Tahu ancestor Te Rakaitauneke is said to have had a kaitiaki whale named Matamata, a sperm whale who dwelt in the sea opposite Te Rakaitauneke's home in Tahuna Tōrea/Goose Bay, near Kaikoura. Te Rakaitauneke's love for Matamata is said to have been as great as the whale's love for him. According to Ngāti Kuri traditions, the whale continued to protect Te Rakaitauneke's descendants long after his death (Schedule 100, Ngāi Tahu Claims Settlement Act 1998).

The Ngāi Tahu claim to the Waitangi Tribunal (WAI27) confirmed the status of whales as taonga, and a resource of special significance in traditional times. Evidence provided by the late Rakiihia Tau (Ngāi Tūāhuriri) likened the whole of the Ngāi Tahu takiwā to the body of a whale. The dividing of a whale carcass, with specific parts of the whale being allocated to particular Ngāi Tahu hapū, was used as a metaphorical statement of the relationships between different hapū. As concluded by Habib in his 1989 report to the Tribunal:[2]

> "*This kind of symbolic relationship between the whale and the Ngāitahu social order was rooted in the real importance of the whale resources to Ngāitahu people." (p.185)*

The Habib report and the Tribunal's 1992 *Ngāi Tahu Sea Fisheries Report* noted the long term and on-going interaction between the iwi and whales. The Tribunal concluded that the use of marine resources, including whales, was a fundamental feature of Ngāi Tahu mahinga kai prior to the Treaty, of importance to the tribe's economy and social and spiritual life (p.87). Stranded whales were considered a gift from the gods, providing a source of iwi (bone), rei

[2] Dr George Habib was commissioned by the Waitangi Tribunal to provide an overview report of Ngāi Tahu fisheries evidence.

(ivory) mimiha (ambergris), hihi (baleen), uaua (sinews), hinu (oil) and kiko (flesh) (Te Rūnanga o Ngāi Tahu, 2003).

He taoka no Takaroa	*This whale cast on the beach*
I waihotia mo tātou	*is the treasure left to all of us*
Ko te tohora ki uta	*by the great god of Takaroa.*

The Ngāi Tahu Claims Settlement Act 1998 recognises six marine mammals as Taonga species, and three of these are whales (Table 1). It is important to note that that Taonga Species schedules in the NTCSA are not exhaustive as not all culturally important species were able to be included, for a number of reasons. Ngāi Tahu consider all whales taonga.

Table 1: Marine Mammal Taonga Species as per Schedule 97 of the NTCSA 1998.

Name in Māori	Name in English	Scientific name
Ihupuku	Southern elephant seal	*Mirounga leonina*
Kekeno	New Zealand fur seals	*Arctocephalus forsteri*
Paikea	Humpback whales	*Megaptera novaeangliae*
Parāoa	Sperm whale	*Physeter macrocephalus*
Rāpoka/Whakahao	New Zealand sea lion/ Hooker's sea lion	*Phocarctos hookeri*
Tohorā	Southern right whale	*Balaena australis*

The status of whales as tribal taonga has remained constant through time. For Ngāi Tahu hapū such as Ngāti Kuri, whales are an important base of contemporary cultural and economic well being. The hapū looked to their ancestral relationship with the whale to address economic disparity in Kaikoura in the 1980's:

> *"Whale Watch was formed in 1987 at a time when Maori were casualties of Kaikoura's declining economy. At this time of difficulty, Kati Kuri leaders like Bill Solomon believed the local Sperm Whales held the answer to the unemployment problems of the Maori community. They knew their ancestor Paikea had journeyed to a new life in New Zealand on the back of the whale Tohora. It seemed appropriate for Paikea's descendants to again ride on the back of the whale to a new life."*[3]

As an iwi, Ngāi Tahu are strong advocates for the protection and sustainable utilisation of whales. Ngāi Tahu leaders have been active participants in Hui-a-Iwi addressing Maori customary rights to whales, and also in international hui addressing indigenous interests in whales. Te Rūnanga o Ngāi Tahu drafted a *Beached Marine Mammal Protocol (2003),* and *Interim Guidelines for the Initial Notification and Contact between the Department of Conservation and Ngāi Tahu over beached marine mammals (2004)* to outline the processes for managing beached marine mammals in the takiwā.

[3] WhaleWatch, www.whalewatch.co.nz

5. Ngāi Tahu values and interests associated with marine mammals and the Chatham rise

Ngāi Tahu identify two specific interests on the Chatham Rise with respect to marine mammals:

1. Marine mammal fossil bone beds located in the mining footprint, recognised by Ngāi Tahu as a wāhi tawhito with tapu associations.

2. The value of the Chatham Rise as marine mammal habitat.

These interests reflect the cultural connection of whales to Ngāi Tahu (see Section 4), and the kaitiaki responsibility to protect these taonga species and their ancestral remains.

In accordance with Mātauranga Maori, Ngāi Tahu identify the ancient fossil bone beds and the use of the area by whale species as existing interests on the Chatham rise pursuant to sections 33 and 59 of the Exclusive Economic Zone and Continental Shelf (Environmental Effects) Act 2012.

5.1 Ancient marine mammal fossil bone beds

The eastern extent of the proposed mining area contains an area of known marine mammal fossil bone beds. Ngāi Tahu identify this area as a *wāhi tawhito* (ancient place) and have a relationship to it that is defined by whakapapa traditions, tapu associations and kaitiaki (guardian) responsibilities. It has also been described as a Tauranga Ika Moana, reflecting the importance of the area as both a fishing ground as well as a whale resting place.[4]

According to Ngāi Tahu views of Te Ao Turoa (the natural world), these ancient fossils are recognised as tūpuna (ancestors). There is an intrinsic *tapu* associated with their antiquity and the location where they are situated.[5] The mana (prestige) of these *Taonga Tangaroa* (marine treasures) provides a tangible link between the atua (gods), tūpuna and their living descendants:

> "*Ko te tapu te mana o nga atua*" - The power of the tapu comes from the gods.[6]

Ngāi Tahu fishermen identify 'hotspots' within the proposed mining footprint where fossilised whale bones occur. Together they comprise an area known as the 'graveyard', where fossilised whale bones have been recovered on fishing gear (e.g. longlines) for at least the last two decades.

[4] Haami, B. pers.comm.
[5] Tapu is defined by Mead (2003) and others as the state of being set apart, restricted, under *atua* protection.
[6] This phrase was provided by Ramari Oliphant Stewart, with reference to the J. White (1887) manuscripts that attribute the phrase to Ngāi Tahu. MS Papers 75 John White B36 Envelope 35. Alexander Turnbull Library, Wellington.

"You can get 10 skippers around this table and they will all say the same thing – that this is the graveyard. There is a likelihood when you are fishing in this place that you will pull up fossilised whalebone."[7]

The tapu status of the fossil bones is felt and sensed by the fishermen. For example, crew on one Ngāi Tahu fishing vessel will not touch the fossils when they are brought aboard. The crew informs the skipper who then ensures the taonga is handled appropriately. For Ngāi Tahu, these taonga are koha (gifts) from the sea.

While few of these taonga have been brought into the public sphere, they are held by whānau (families). One Ngāi Tahu longline fisherman holds a number of these, and has GPS coordinates for some of them. This fisherman has fished across the Chatham Rise, but has recovered fossil bones in one area only. Mapping these coordinates provides an indication of the spatial extent of the fossil beds (see Map 1).

There is a clearly defined kaitiaki responsibility to protect the resting place of ancient taonga species. This is because of the whakapapa and tapu associations of the fossil bones themselves, and because of the relationship of the beds to adjacent and associated fishing grounds and marine ecosystems. The cultural significance of the area is directly related to the contemporary value of the Chatham Rise as a highly productive environment. Ngāi Tahu recognise the whale fossil beds as *mauri ika moana* - a symbolic marker that by association represents the abundance that has existed on the Chatham Rise for millions of years.

Map 2: Locations of fossilised whale bones held by one Ngāi Tahu fisherman.

[7] G. Summerton, per. Comm. July 2014.

These *Taonga Tangaroa* connect the past with the present and reflect the continuity of time. It follows that Ngāi Tahu have a kaitiaki responsibility to protect, respect and observe appropriate tikanga with regard to these fossil bones, in order to ensure the continued success of the fishery resource.

> *"By protecting the tapu of the fossil beds, we are gifted with the ling spawning grounds."*[8]

5.2 Value of the Chatham Rise as whale habitat

For Ngāi Tahu, the whale tūpuna were drawn to this environment in ancient times and continue to be drawn here. There are numerous whale species present in the vicinity of the proposed mining activity, including the three taonga species listed in the NTCSA: Parāoa (Sperm whale), Tohorā (Southern right whale) and Paikea (Humpback whale). The presence of the whale fossil beds indicates that this has been an important area for whales for a very long time.

Ngāi Tahu interests in whales extend to the environment they live in and depend on. To protect the whale, you must protect its habitat and food source. This 'whole environment' approach is consistent with Ngāi Tahu understandings of the natural world, and is captured by Ngāti Kuri in a report on the relationship of the hapū with whales:

> *"In order to exercise the principle of Kaitiakitanga with regard to the sperm whale, we must exercise kaitiakitanga and protect all the children of Tangaroa, as "what begets the smallest, begets the largest that is the food web." (Te Rūnanga o Kaikoura, 2013).*

Ngāi Tahu have a strong interest in ensuring that the value of the Chatham Rise as whale habitat is understood and protected. This interest extends to all marine mammals, from the Taonga species in the Ngāi Tahu Claims Settlement Act 1998 to the elusive and data-deficient beaked whale species (family *Ziphiidae*). Whales have continued through time to provide for the iwi, whether as a gift in the form of a beached whale or as a contemporary non-consumptive source of cultural and economic well being. The whales provide for the people, and the people must provide for the whales.

[8] Hui participants, July 1, 2014.

6. Effects of the CRP proposal on Ngāi Tahu values and interests related to marine mammals

Ngāi Tahu identify two key issues with regard to the marine mammals related interests on the Chatham Rise the potential for the mining activity to impact on these:

(1) It is highly likely that the mining activity will destroy ancient marine mammal fossil bone beds identified by Ngāi Tahu as a *wāhi tawhito* (ancient place) of high cultural significance.

Given the methods used, the proposed mining activity will result in the permanent loss of this wāhi tawhito. It is expected that the weight of the draghead during mining operations will destroy the fossil beds and the associated habitat. Larger fossils, such as pictured on the cover of this report will be destroyed. Smaller artefacts such as whale or dolphin earbones will likely be captured with the mining uptake and destroyed or discarded during processing.

The cultural impact of this is the loss of a highly valued ancient place with significant whakapapa and tapu associations. Ngāi Tahu will be unable to uphold their kaitiakitanga responsibility to these whale tūpuna, including the protection of the tapu associations of this place. Given the cultural and spiritual connection between the fossil beds and the fishery resource, there is a risk that the destruction of the fossil beds will also impact the mauri of fish spawning grounds. From a Ngāi Tahu perspective, the loss of this wāhi tawhito will impact the ability of Ngāi Tahu to continue to receive the benefits of a rich fishery resource in this area.

The loss of this wāhi tawhito is a cultural impact that is permanent and irreversible; it cannot be avoided, remedied or mitigated if the marine consent application is granted in its current form.

It should also be noted that the destruction of these marine mammal fossil beds might also result in a loss of scientific opportunity. While the “graveyard’ is a known area of cetacean fossil remains, very few fossils are held in institutional collections. Ngāi Tahu are considering an opportunity for whānau to present these taonga for expert assessment, to identify the range of species and to contribute further to New Zealand’s understanding of geological pre-history and cetacean fossils on the Chatham Rise.

(2) There is significant uncertainty with regard to the effects of the proposed activity on whales as a taonga species and the wider environment and ecology that they depend on, and this is inconsistent with the protection of these species.

The proposed mining activity has the potential to impact marine mammals, and it is critical to ensure a clear understanding of the full range of species present in the area and the risks to these.

The key issue for Ngāi Tahu is that insufficient attention has been afforded to the value of this area as a significant marine food web and whale habitat and therefore there is

uncertainty about how the proposal may impact these taonga species. Ngāi Tahu do not believe that CRP has used the best available information to assess the full range of marine mammals in the mining footprint and surrounding area, and the impacts of habitat destruction and loss of ecosystem function on foraging opportunity or breeding.

Ngāi Tahu interests in whales necessarily extend to the environment in which these taonga species live and the species they feed on. Hui discussions for the purposes of this CIA identified the connection between the whale fossils, fish spawning grounds, phosphate nodules, upwellings and Ngāi Tahu fishermen. The strong marine upwelling that creates the highly productive marine food web in this area is also responsible for the phosphate deposits (Hughes-Allan, S. et al 2010). It is this unique and highly productive environment that is the draw card for the whales, the fish, the phosphate, the fishermen and CRP as a mining company.

Appendix 20 of the CRP EIA (Torres et al. 2013a) uses two datasets of opportunistic sightings to describe the distribution patterns of cetacean species over the Chatham Rise and within the CRP mining area. Importantly, the report notes that the sighting results are biased due to observational effort, and "cannot be considered as representative of actual temporal distribution of cetaceans over the Chatham Rise" (p.7).

To assess the cultural impact on taonga species, Ngāi Tahu requires accurate information on the species present and the extent to which they rely on this environment. For example, sperm whales are known to feed on the Chatham Rise and have been sighted in the mining permit area. Kaikōura whānau rely on these whales for their whale-watching business – the business provides for the livelihoods for whānau and contributes to the financial strength of the iwi as a whole (Te Rūnanga o Ngāi Tahu 2013). Any impact on these whales would have 'downstream' effects on this whānau business. Ngāti Kuri responses to other offshore development applications suggest that the hapū would not accept any potential impact on these whales given the risk to this highly sustainable business.

The potential effect on beaked whale species is another example; relevant here given the presence of beaked whale fossils on the Chatham Rise. Beaked whales are considered "data deficient" due to the lack of information on behaviour, evolution, population dynamics and habitat requirements.[9] This poses a challenge to understanding the impact of offshore development, and though it is known that they are threatened by anthropogenic activity in other parts of the world (Thompsen et al. 2013). Expert advice provided to Ngāi Tahu suggests that there is a strong potential for beaked whales to be in the area, and that visual surveys alone would not be satisfactory to detect their presence or mitigate adverse effects (see below).

Given concerns about the effects of the mining proposal on marine mammals on the Chatham Rise, Ngāi Tahu commissioned an independent review of the marine mammal assessment in the CRP Environmental Impact Assessment Report EIA.[10]

[9] As per International Union for Conservation of Nature (IUCN) and Department of Conservation standards.
[10] The review was undertaken by Anton van Helden, a marine mammal expert with experience on the biology, taxonomy and distribution of marine mammals in New Zealand. This report can by provided by Te Rūnanga o Ngāi Tahu on request.

Key messages from the review are:

- An interpretation of limited sightings data rather than a systematic marine mammal survey means that the data presented cannot be considered as representative of actual temporal distributions of whales over the Chatham Rise.
- There are additional methods available to understand the full range of species present in the area. Strandings data from the Department of Conservation Whale Stranding Database would be a useful addition to the dataset. There is potential to use Passive Acoustic Detectors (PAD) to determine the presence or absence of beaked whales.
- Beaked whales are a prominent group of cetacean species in the Chatham Islands stranding record, and the lack of substantive sightings data should not be used to indicate their absence from the region.
- It is highly likely that given the year round presence of some cetacean species, this area of the Chatham Rise could be a feeding area for some species. The presence of juvenile animals involved in stranding events around the Chatham Islands suggests that the area may be used for breeding.
- There is no certainty that the process of removing of rock phosphate nodules will not affect the production of squid in the region, noted to be a significant prey resource in the region, and a predominant food source for many whale species, including parāroa (sperm whale).
- The limited mitigation measures offered specifically for marine mammals are not sufficient to safeguard the species present in the area.

A key message from the independent review is there is “considerable uncertainty” in the scope and significance of the adverse effects of the proposed mining activity on the ecology of the marine environment and therefore marine mammals (van Helden, A. 2014).

7. Recommendations to address cultural impacts

Ngāi Tahu believe that whales can carry messages and guidance, or ‘tohu’ (signs) from atua and tūpuna (Te Rūnanga o Ngāi Tahu 2003). It is suggested that the ancient whale bones on the Chatham Rise have presented themselves to whānau to help prepare for the challenges of offshore development proposals and ensure the protection of the Chatham Rise as a unique and productive environment that directly contributes to the cultural and economic well being of the iwi.

Ngāi Tahu are not opposed to mining. However, as an iwi Ngāi Tahu have an obligation to protect whales and their ancestral remains. This obligation is derived from whakapapa, and expressed through kaitiakitanga. Whales have continued through time to provide for the iwi,

and in turn the people must provide for the whales. It is critical that the relationship between Ngāi Tahu and these marine mammals, living and ancient, are afforded appropriate weight by both CRP and the Environmental Protection Authority.

The following recommendations identify the key actions sought by Ngāi Tahu to address the potential for adverse effects on existing marine mammal related interests on the Chatham Rise generally, and the proposed mining site specifically.

Recommendations

1. The relationship of Ngāi Tahu with ancient fossil whale bone beds and whale species that use the area should be recognised and provided for as existing iwi interests on the Chatham rise pursuant to sections 33 and 59 of the EEZ Act 2012.

2. The area defined by Ngāi Tahu as a wāhi tawhito must be protected from destruction. The protected area should be large enough to protect the integrity of the whale tūpuna fossil beds. There would be benefit in having the area surveyed to confirm the spatial extent of the fossil beds, and this should be discussed between CRP, Ngāi Tahu and those with manamoana status in the area.

3. The traditional, spiritual, historical and cultural relationship of Ngāi Tahu whānui to whales and all the benefits derived from that contemporary relationship must be protected.

4. The degradation of habitat and potential adverse consequences for populations of whale species that frequent the Chatham Rise must be avoided. Further work is required to understand the full range of whale species present in the area and the degree of threat posed to these.

5. A precautionary approach to marine mammal protection must be adopted, particularly given the potential effects on a large group of whale species (i.e. beaked whales) that are classified as data deficient.

Papakupu – Glossary of Māori terms

Atua	gods
Hapū	sub-tribe
Iwi	tribe
Kaitiaki	guardian
Kaitiakitanga	the exercise of guardianship by the tangata whenua of an area in accordance with tikanga Māori
Mahinga kai	food resources, and the places and traditions associated with these
Mana	prestige
Mana moana	traditional authority over a marine area
Mātauranga	knowledge
Tangaroa	god of the sea
Taonga	treasure
Taonga Tangaroa	marine treasures
Tapu	restricted, the state of being set part
Tūpuna	ancestors
Wāhi tawhito	ancient place
Whakapapa	geneology

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