

21 October

9(2)(a)

Dear 9(2)(a)

Thank you for your email of 16 September 2021 requesting the following under the Official Information Act 1982 (the Act):

OIAD-121

"Hi under the OIA please may I see any feedback you received since this was implemented a year ago, which related to mining, coal, and or rare earth minerals. Many thanks. <u>https://consult.environment.govt.nz/freshwater/managing-</u> our-wetlands/consult_view/"

The Ministry for the Environment has identified 15 documents in scope of your request, as listed in the attached document schedule. Some information within these documents has been redacted for the following reasons:

- Information that is out of scope of the request.
- Section 9(2)(a) of the Act to protect the privacy of natural persons, including that of a deceased person.
- Section 9(2)(b)(i) where withholding of the information is necessary as release would be likely to disclose a trade secret.

In terms of section 9(1) of the Act, I am satisfied that, in the circumstances, the withholding of this information is not outweighed by other considerations that render it desirable to make the information available in the public interest.

You have the right to seek an investigation and review by the Office of the Ombudsman of my decision to withhold information relating to this request, in accordance with section 28(3) of the Act. The relevant details can be found on their website at: www.ombudsman.parliament.nz.

Please note that due to the public interest in our work the Ministry for the Environment publishes responses to requests for official information on our <u>OIA responses page</u> shortly after the response has been sent. If you have any queries about this, please feel free to contact our Ministerial Services team: <u>ministerials@mfe.govt.nz</u>.

Yours sincerely

Signed electronically by Hayden Johnston

Hayden Johnston Director - Water and Land Use Policy

Document schedule

Document no.	Document date	Content	Decisions	OIA sections applied	
1	3 May 2021	Letter: EXPOSURE DRAFT - ESSENTIAL FRESHWATER INTERPRETATION GUIDANCE	Release in part	9(2)(a)	
2	December 2020	Report: Straterra's Position on Policy Issues of Relevance to the Minerals Sector	Release in full	RCL	
3	November 2020	Report: National Environmental Standards for Freshwater – Natural Wetlands: The Impacts on the Extractive Sector and Proposed Solution	Release in full		
4	17 December 2020	Letter: From Waikato Regional Council	Release in part	9(2)(a)	
5	February 2020	Report: Wetlands (Quattro)	Release in part	9(2)(b)(i)	
Co	2 December 2020	Letter: To Waikato Regional Council	Release in part	9(2)(a)	
7	18 September 2020	Letter: To Ministry for the Environment	Release in part	9(2)(a)	
8	14 September 2021	Letter: To the Minister for the Environment	Release in full		
9	14 December 2020	Memorandum: Unavoidable Impacts on Wetlandsfrom	Release in part	9(2)(a)	

		Mineral Development – Drafting Solution		×
10	17 August 2020	Image: Study Area & Wetlands Designation	Release in full	
11	28 August 2020	Letter: To Hon David Parker and Hon Damien O'Conner - Industries adversely affected by Freshwater Regulations	Release in full	
12	N/A	CASE STUDY: BATHURST RESOURCES SULLIVANS MINING LICENCE, WEST COAST	Release in full	
13	N/A	Economic Impact of Regulation 53 of the NES for Freshwater Management	Release in full	
14	18 February 2021	Email: Regulations	Partially Released	Section 9(2)(a) and Out of Scope material
15	28 October 2020	Email: Regulation 53 of the Resource Management (National Environmental Standards For Freshwater) Regulations 2020	Partially Released	Section 9(2)(a) and Out of Scope material



3rd May 2021

Ministry for the Environment Environment House 23 Kate Sheppard Place, Thorndon Wellington New Zealand

By email: freshwater@mfe.govt.nz

RE: EXPOSURE DRAFT - ESSENTIAL FRESHWATER INTERPRETATION GUIDANCE

I am writing in connection with the above draft Guidance Note, on which comment is sought as part of an exposure draft process. We are submitting our comments in light of our ongoing engagement with the Essential Freshwater policy package and its effects on mine life extension plans at both Macraes and Waihi.

We appreciate the opportunity to comment.

OceanaGold has previously submitted in detail on the impacts the policy package is likely to have on future consenting of our operations. Unfortunately, under the draft Guidance Note as it stands, significant uncertainty remains (and would, if anything, increase) around how the Resource Management (National Environmental Standards for Freshwater) Regulations 2020 (NES-FW) apply to the planned mine-life extensions at the two mines (now consented at Macraes and as yet unconsented at Waihi, and directly impacted in the latter case by the policy package).

Constructed Wetlands, including those in and around constructed water-bodies

Part 5 of the Guidance Note acknowledges that constructed wetlands may develop values over time and provide ecosystem services. However, activities that affect constructed wetlands are quite correctly removed from the protections of the legislative scheme, because, in simple terms, created environments are likely to have been created for a purpose. And that purpose will not always be consistent with leaving any wetland that may have formed to function untouched over time:

Constructed wetlands are intended to include waterbodies that have been deliberately constructed by artificial means for a specific purpose and that may require maintenance over time (for example, vegetation or silt removal) to continue to fulfil that purpose.

Consistent with this approach, it seems to be accepted that constructed wetlands include not only deliberately constructed water bodies, but also associated or adjacent wetland environments that water-retaining structures give rise to (deliberately or otherwise). That much seems to follow from the list of specific categories of water-body "with areas of wetland habitat in or around them" that Part 5 of the Note deems included in the constructed wetland category, including: hydroelectric dams, water storage dams, fire-fighting reservoirs, landscaping, stormwater management, drainage channels and "hunting".

Given that preserving the function of any existing or future structure forms the rationale for excluding constructed wetlands, we think the treatment of wetlands "in and around" water-retaining structures needs to be spelt out in the Guidance Note more clearly than it currently is, to avoid the appearance of being confined to the specific list in Part 5 of the Note. Part 5 should be amended to expressly include, within the class of constructed wetlands, <u>wetlands formed or induced in and around a deliberately constructed structure or feature in the landscape</u>.

Oceana Gold (New Zealand) Limited (Incorporated in New Zealand NZBN 9429 0377 53023) 22 Maclaggan Street Dunedin 9016 New Zealand PO Box 5442 Dunedin 9058 New Zealand Telephone: 64 3 479 2922 Facsimile: 64 3 477 6708 Website: www.oceanagold.com The Guidance should avoid any suggestion that determining subjective intent or upkeep of any structure is necessary when applying the test, a process that would introduce unworkable uncertainty and complexity both to the treatment of existing features and to confidence levels of those involved in developing wetland environments in the future. For that reason, the test for a "constructed wetland" should not depend on function or upkeep, and needs to simply be determined on the basis of whether the feature exists because at some point someone has constructed it, or caused it to be there.

Given that one consequence of a wetland not being considered 'constructed' is that activities that directly affect it may be prohibited, it seems reasonable that this extreme approach should not be extended to apply when there is doubt about a wetland area's history. Only in instances where a wetland is clearly not constructed or induced should an outright prohibition on affecting activities result. This would be in accordance with the normal rules of interpretation that requires very clear and explicit language when rights or opportunities to seek consents are to be constrained, or in this case entirely removed.

Finally, the non-exhaustive list of purposes for which water-bodies with associated wetlands may have been constructed in Part 5 includes "conservation or biodiversity offsetting". This is confusing and should be reconsidered given that the exclusion in the definition for constructed wetlands expressly does not apply to wetlands constructed as an offset. If the bullet point was changed to "conservation and/or biodiversity offsetting banking" it would be more logical. One could imagine a situation where a wetland was constructed so that it could count towards an offset in the future. Until formally included in an offset such a wetland would fall within the exclusion as a constructed wetland.

Culverts & Induced Wetlands Generally

Inexplicably, given what is said in Part 5, Part 6 of the Guidance Note puts "induced wetlands" generally, including those induced by culverts, in the natural wetland category:

Wetlands that have been unintentionally induced through man-made activities, for example, because of in-stream works such as culverts, are not considered constructed wetlands because the term 'constructed' reflects a deliberate course of action.

This is not the test applied in Part 5 of the Guidance and it is inconsistent with the approach taken there to other water-bodies "with areas of wetland habitat in or around them". Part 5, based on the examples listed, excludes constructed wetlands from the protections of the NES-FW because wetlands or their associated structures have *a specific purpose and that may require maintenance over time*. On that basis, there can be no justification for treating differently, in Part 6, culverts and other built features requiring maintenance, alteration or removal to preserve or vary their ongoing function.

Nor does it follow that the values of unintentionally induced wetlands exceed those of wetlands contemplated as part of a structure's intended function; or that the need for maintenance, alteration or removal of the structure is somehow reduced by having formed an unintentional wetland. In fact the opposite is often the case: water management structures like culverts, bridges and weirs frequently create a wet environment, conducive to the emergence of wetland values, precisely because they have not been maintained in accordance with their intended function. Wetland environments are often associated with under or poorly performing culverts, for example, that require active maintenance to prevent water pooling, the very thing that has produced a wetland in the first place.

Prohibiting maintenance, precisely because the wetland is unintentional, is back-to-front, raising accidental wetlands to a protected status that deliberately created wetlands do not have.

Put simply, if the words of the regulatory definition (*a wetland constructed by artificial means*) can be read to include a wetland associated with a duck pond or a drain, based on preserving the function of the pond or drain, they can equally apply to a bridge, weir or culvert for the same reason.

Finally, the position adopted in Part 6 is also inconsistent with the rationale in Part 5 that:

The exclusion of constructed wetlands is intended to avoid disincentivizing anyone from undertaking wetland construction or maintenance in an existing constructed wetland, for purposes such as nutrient attenuation <u>or any other reason where there can be a positive impact on biodiversity and other values over time</u>. [emphasis added]

Again, culverts are a good illustration of the issue. Culverts are used to maintain connectivity of creeks and streams that would otherwise be compromised by, and would in turn compromise, other structures such as roads and bridges. The ongoing maintenance of culverts will ensure they continue to protect biodiversity and hydrological values, as part of their intended function. Currently, improvements to culverts are being actively sought by the Ministry for the Environment through the same Freshwater reforms that the Guidance Note forms part of to create more effective environments for fish passage. Section 3.26 NPS-FWM requires regional plans to promote outcomes including:

- [that] the passage of fish is maintained, or is improved, by instream structures, except where it is desirable to prevent the passage of some fish species in order to protect desired fish species, their life stages, or their habitats.
- the remediation of existing structures and the provision of fish passage (other than for undesirable fish species) where practicable.

This draft Guidance Note cuts directly across that part of the reforms.

In summary, culverts and other structures commonly create a localised wetland environment, which is not necessarily an intentional result of their construction but is certainly contemplated as part of their continuing or ceasing to function over time in accordance with their purpose. It is difficult to see how this form of deliberate water management structure, with its associated damming or diversion of water, does not fall within the class of waterbodies that have been deliberately constructed by artificial means for a specific purpose and that may require maintenance over time.

To address this issue, Part 6 of the Guidance Note should be removed, and the clarification to Part 5 added (as suggested earlier) to differentiate between wetlands with no associated man-made purpose and wetlands created as a result of structures that have the effect (intended or not) of creating a wetland as part of the structure's function, ie: natural wetlands should exclude wetlands formed or induced in and around a deliberately constructed structure or feature in the landscape.

The removal of Part 6 also avoids creating the impression that the test is one of subjective intent. For the reasons discussed in relation to improved pasture, a test of subjective intent is unworkable, particularly when paired with a prohibited activity.

Improved Pasture

Again, the Guidance Note is inexplicably narrow in its treatment of improved pasture, and in fact purports to narrow further the parameters for improved pasture that already sit in the NPS. The NPS-FM defines improved pasture as:

...an area of land where exotic pasture species have been deliberately sown <u>or maintained</u> for the purpose of pasture production, and species composition and growth has been modified <u>and is being managed for livestock grazing</u>. [emphasis added]

In practice no farmer actively ploughs, weeds or seeds every square metre of their pasture – parts that are inaccessible by tractor (fence-lines, gullies, depressions) are allowed to self-seed and maintained in pasture through the act of grazing.

This makes the Guidance Note ambiguous, with the risk of an interpretation that is unduly, and unrealistically, prescriptive in providing that:

The definition of 'natural wetland' does not exclude areas with wetland characteristics <u>where</u> <u>some pasture species have self-established</u>. The definition can only apply to improved pasture areas that were being actively managed for livestock grazing and pasture production at the commencement date of the NPS-FM [emphasis added] The regulatory definition of improved pasture refers to an area where exotic pasture species have been deliberately sown <u>or</u> maintained for the purpose of pasture production (emphasis added). The Guidance, on the other hand, reads as if the requirement is that the exotic species must be both sown <u>and</u> maintained. That's not what the definition says, and for good reason. The Note may be representative of high maintenance pasture (dairying), but a lot of NZ grazing land is not actively maintained at all, especially upland non-dairy country where stocking rates are correspondingly low.

Active seeding of pasture with pasture species, and active intervention to maintain that pasture, is especially unreflective of common farming practice in the types of environment (such as gullies and depressions) where wet and boggy areas risk unwarranted inclusion in the natural wetland definition. Beyond sowing, ploughing and weeding, pasture management practices are myriad and far wider than the drafters of the Guidance Note seem to appreciate.

For these reasons the description of active management in the Note should be widened to include:

Management of species composition and growth includes fertiliser application, pasture seed sowing, weeding, <u>grazing</u>, <u>cropping</u>, <u>regenerative management of pasture</u>, <u>such as making of hay or silage</u>, <u>periodic fallowing and passive cultivation of species through practices such as natural propagation of species and beekeeping</u>.

The second part of the guidance (seeking to exclude self-established pasture species) causes more confusion than it resolves and should be removed.

The following photo shows an ephemeral wetland, which is impacted by OceanaGold's recently consented Deepdell North mine extension project (discussed further below). In this example, the dominant ground cover species were variously classed as exotic pasture or weeds (propagation method unknown), the terrain meant tractors had not generally entered this area and grazing was the principal tool of pasture management:



Ephemeral wetland F near Deepdell North III pit

Defining pasture use at the commencement of the NES-FW

While it is understood that improved pasture use represents, in effect, a concession to existing-use by the farming and rural community, which is both fair and realistic in principle, in practice this requires the difficult task of defining detailed states-of-being as of September 2020. As time passes this exercise will become more and more problematic in the hands of a consenting authority, which is being asked to choose, without a hearing to traverse the evidence, between accepting a resource consent application for processing or rejecting it as involving a prohibited activity.

Recent experience of the consenting panel and the various participants in the consenting of OceanaGold's Deepdell North mine extension illustrates the issue. Pre-hearing surveys by the various ecologists providing technical evidence in the application, supplemented by impromptu evidence from local farmers presenting submissions in the course of the hearing, left unresolved this issue of whether patches of wetland grazed as part of surrounding pasture met the definition of improved pasture or not. In the words of the Commissioners:¹

The definition of a natural wetland in the NPSFM is:

natural wetland means a wetland (as defined in the Act) that is not: (a) a wetland constructed by artificial means (unless it was constructed to offset impacts on, or restore, an existing or former natural wetland); or (b) a geothermal wetland; or

(c) any area of improved pasture that, at the commencement date, is dominated by (that is more than 50% of) exotic pasture species and is subject to temporary rainderived water pooling)

If that was as far as the definition went, it would be relatively unambiguous. However, some additional words are added which define improved pasture as:

Includes an area of land where exotic pasture species have been deliberately sown or maintained for the purpose of pasture production, and species composition and growth has been modified and is being managed for livestock grazing.

How anybody could reasonably determine this on the larger ephemeral wetland on the Appin Farms property is highly problematic. The wetland is not fenced, and has clearly been grazed. It could be argued it has been maintained for the purpose of pasture production; equally it could be argued that it has not been.

Fortunately we do not have to reach any conclusion on this, as it is not critical to our decision. If it were critical it could have been a close call, and whatever decision we reached would provide fertile ground for expert litigation in the Environment Court....

... No consent authority should be put in a position where a prohibited activity rule, no matter how laboriously worded, is as ambiguous and open to interpretation as this rule would be in this instance.

The addition of highly detailed ecological, hydrological and calendar-based measures (the last down to the level of days-in-a-year) simply compounds the problem. These attempts to add definition in Part 9 of the Guidance Note will achieve the opposite result – in many cases they will make a reliable determination of a wetland's status at commencement of the NES-FW virtually impossible to achieve. The guidance offered by the Note regarding application of the 50% measure for exotic pasture species cover resolves a core ambiguity (is it the number of species types or species coverage?). Apart from that clarification, the Guidance acknowledges that there is no national methodology for establishing 50% cover of exotic pasture species. Given the difficulty practitioners have expressed in this area, and the significance of a finding that an area is 51% rather than 49% exotic pasture species

¹ Oceana Deepdell North Stage III Mine, Decision of independent Hearing Commissioners dated 23 September 2020, p31

(i.e. in the former case the NES applies and in the latter it does not) the position is unsatisfactory and the Guidance is effectively saying "there is no guidance". These parts of the Note (*How should '50% cover of exotic pasture species' be assessed? How can "temporary rain derived pooling" be assessed?*) should be removed entirely.

Across the range of the tests applied to the definition of improved pasture, the approach in *What about cases where temporary rain-derived pooling is not apparent?* is unscientific, but preferable to adding further layers of detail to a test that is already very difficult to apply in practice:

A pragmatic approach to the requirement for temporary rain derived pooling is warranted to avoid identical pasture-dominated areas on a slope and in a flat area being classed separately.

Adopting this approach, the use and condition of the area surrounding an exotic pasture dominated wetland should be the deciding factor and efforts made to avoid classing areas that are managed together as pasture separately. In the same vein, reference to the pasture species list collated by the Greater Wellington Regional Council cannot possibly represent farming practices in other climatically different regions of New Zealand and its purpose for inclusion is unclear. The list does not represent any form of consensus amongst farmers or resource management practitioners. Possibly for that reason the Guidance makes no statement that this list is reliable or comprehensive, and that is good, but the Guidance should note that this list has no status under the NPS-FM whatsoever or remove any reference to it.

Again, the Guidance should adopt a pragmatic solution in the absence of any more comprehensive test ie: the presumption is that exotic species that are in wetlands being managed for livestock grazing are pasture species.

This following photo shows the "Appin Farms" wetland to which the Commissioners' comments (quoted above) concerning the difficulty of applying the improved pasture test were directed:



"Appin Farms" ephemeral wetland near Deepdell North III pit

Distinguishing wetlands from lakes and other waterbodies

Regulation 52 of the NES-FW creates a non-complying activity for earthworks outside, but within a 100 m setback from, a natural wetland resulting in the drainage of the wetland. Similarly the taking, use, damming, diversion, or discharge of water outside, but within a 100 m setback from, a natural wetland is a non-complying activity if it drains the wetland.

This regulation becomes difficult to apply if the wetland itself includes its own flowing water source and, for the reasons discussed above, leaves a complex evidence-based decision in the hands of the decision-maker seeking to accept, or reject, a resource consent application for processing.

The guidance offered in the Note does not resolve that difficulty, and in fact compounds the uncertainty created by the conflicting activity statuses (depending on whether a wetland is being drained or solely part of its water source):

Lakes and rivers are captured by their own definitions in the NPS-FM. However, some wetlands contain lakes, rivers, or both. Some shallow lakes may be included within a natural wetland and considered part of the extent of the natural wetland. Whether a wetland comprises lakes and/or rivers must be assessed on a case-by-case basis using an ecological assessment where necessary to distinguish wetlands and other waterbodies. Wetlands can also be found at the margins of both lakes and rivers. These lacustrine and riverine wetlands are captured by the definition.

The Guidance Note should make it clear that the flowing water source for a wetland is not included in the wetland, but contain the reminder that other controls within the NES-FW may apply.

Concluding Comments

Yours sincerely

Thank you again for the opportunity to contribute. I am sorry that we remain negative in our comments on these reforms. OceanaGold absolutely supports the protection of New Zealand's wetland environments. However, in our view environmental bottom lines need to be performance-based to be both universal and effective, and they have to be capable of applying to the specific circumstances of each unique project proposal, via a resource consenting process if necessary. The "blunt instrument" of a Prohibited Activity has removed the opportunity to consider land and land uses, in their many forms, in the context of a resource consenting process; and to determine what is wetland, what is not, and the values at stake under any land use proposal. The current drafting has produced a "one size fits all" approach that is unworkable in practice and cannot be rescued by the application of yet more detailed formulae to an inherently complex set of variables.

We would welcome the opportunity to be heard further in relation to this process, if that is available.

GM Corporate & Legal Affairs OCEANA GOLD (NEW ZEALAND) LIMITED



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Straterra's Position on Policy Issues of Relevance to the Minerals Sector

December 2020



Globe Pit Lake, OceanaGold Restoration Project

Contents

Foreword from the CEO
Executive summary4
Introduction
About Straterra
Mining's role in the current environment
Mining on conservation land7
RMA reform
Freshwater
Biodiversity
Crown Minerals Act regime
Climate change
Overseas investment
EEZ Act regime
Marine mammal sanctuaries
Minerals research
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Foreword from the CEO

Most people on waking up in the morning would be thinking of anything other than minerals. I am an exception, as are the thousands of people who work directly and indirectly in a sector that produces the materials we all need every day of our lives.

Minerals and mining are essential to New Zealand's low-emissions transition. More mining is an inescapable reality, as the World Bank and the International Energy Agency have pointed out. We import most minerals as finished products but locally the minerals industry also contributes to regional economic development, to jobs and to exports. Exports are always important to our economy but are particularly important in this Covid-19 world.



Chris Baker, CEO, Straterra Inc

More than that, the industry is advancing rapidly in sustainability, climate change action and social performance. Investors, banks and stock exchanges are among the drivers, and this is clearly evident in the annual reporting of the larger firms active in mining, and in the use of minerals.

We ask the incoming government to recognise the reality of mining today when developing and reviewing policy affecting minerals and mining. This has largely not occurred to date under any political hue. One factor, we think, is that public and political understanding of our sector has lagged behind this reality.

Let's place the discussion on mining into a positive and holistic context

Straterra aims to explain the role of minerals in society and modern mining, and to advocate policy settings that enable responsible mining. "Responsible" means high standards of workplace health and safety, a net positive benefit for the environment, climate change action, and working successfully with the communities and iwi in which we live and work.

I make this point because mining is often accused of earning wealth at the expense of the environment. There are, of course, "trade-offs" inherent in virtually all human activity, including in mining and quarrying. Every mine is unique but, generally, mining impacts the environment and that impact must be mitigated, repaired and compensated for. That is what should happen, and, in most cases, that is what does happen. That is the function of the RMA which, for all its faults, manages those trade-offs well.

There is a further win-win for society. Mining and quarrying (including related environmental management) provide jobs and economic activity, which in turn provide revenue to central and local government in taxes, royalties, rates, fees and other charges. That in turn contributes to New Zealand's standard of living and wellbeing, which includes publicly funded control of pests and weeds, generally recognised as by far the biggest threat to our indigenous biodiversity.

Mining is, therefore, part of a virtuous circle: society needs minerals, and mining is the primary means of producing them. The economic wellbeing created helps fund environmental management.

Let's create better policy settings for mining

This Briefing for Incoming Ministers draws on the following key points to guide government policy development:

- Minerals and mining are essential to society, are important in the transition to low emissions, and contribute to New Zealand's economic wellbeing;
- People are at the centre of this industry, working in a wide range of careers, adapting to fast-evolving technologies and towards meeting society's expectations;
- Mineral deposits are individually unique, scarce, both hard and expensive to find, locationally constrained, and have a small footprint. Mining is a high-value and temporary use of land;

- The above argues for a case-by-case approach to decisions on mining projects, in consideration of the project's merits, other values in the land, the impacts on those values, and proposals for their management to meet the purpose of governing legislation;
- It also argues for an enabling approach to mining, by reducing unnecessary regulatory duplication, and a role for government to provide New Zealanders accurate and up-to-date information on minerals and mining.

In the following pages, we provide more detail and recommendations for change to policy settings and proposals of concern to the minerals sector. Our pre-election policy briefing paper refers.

Executive summary

The Covid-19 pandemic is an imperative for the government to concentrate on jobs, the economy and exports, and therefore, how to leverage **more productive investment**. The minerals sector provides a good opportunity because New Zealand is less attractive to that investment than it could be or should be. It also produces materials society needs.

The transition to a low-emissions economy will need more vanadium, rare-earth elements, lithium and other battery metals, as well as gold and silver for electronics, and steel and concrete (made of ironsands, coal, limestone and other minerals) for infrastructure. New Zealand is prospective for clean-tech minerals, including the ones listed.

Much of the gap between what could be achieved, and the reality concerns **regulatory complexity** – policy settings that fail to enable modern mining and accompanying sustainability and social performance. This briefing seeks a holistic approach to mining <u>and</u> the environment. We present policy positions and recommendations to that end.

In the enabling view: decision-makers consider mining projects on their merits, the effects on the environment and people, and proposals for managing those effects. That includes consideration of offsets of, and compensation for adverse effects. The aim, over time, is to achieve a **net positive benefit** for the environment.

These reflections drive Straterra's approach to conservation, and to reform of the Resource Management Act 1991, and policies on freshwater and indigenous biodiversity under the RMA. The common thread is **regulatory flexibility** to enable mining and the environment.

The Crown Minerals Act 1991 (CMA) reform should complement this approach to **modern mining and environmental management**, in which the RMA system provides for public participation and engagement. The CMA's emphasis should be to regulate the development of optimal exploration and mine plans for the minerals the Crown owns.

The sixth area of policy concerns the climate change issue. The policy settings have become confused between strengthening the Emissions Trading Scheme (ETS) and measures that undermine the ETS. The proposed bans on coal use in industrial process heat and bringing climate change mitigation into the RMA are examples of the latter and, are unnecessary.

A further area of disconnect is the ETS carbon price compared with global carbon prices, which, on average, are much less than New Zealand's. Our country's competitiveness is being undermined, a serious problem at any time, and especially during Covid-19 times. We propose using **the ETS as the main policy tool** and benchmarking New Zealand Unit prices with those of our major trading partners.

Straterra supports the No 3 Bill amending the Overseas Investment Act 2005 (OIA), in particular, to streamline approval processes for routine, minor or straightforward transactions. In terms of minerals activities, it is important to ensure the regime under the Act is open and transparent to **encourage responsible overseas investment**.

Oceans is a policy area of interest to the minerals sector because the marine jurisdiction contains an abundance of mineral resources. The Exclusive Economic Zone (EEZ) and Continental (Environmental Effects) Act 2012 was intended to regulate seabed mining. However, no project has been able to gain marine consent to date.

The EEZ Act requires amendment to clarify "adaptive management" of environmental effects, to provide for companies to gather baseline environmental data prior to the inception of mining and after obtaining marine

consent, and to clarify the statutory purpose of this statute. This is necessary for companies to be able to manage the very significant financial risks attached to seabed mining.

The Marine Mammals Protection Act 1978 has to a great extent been superseded by the Conservation Act, the RMA and the EEZ Act. Blanket bans on minerals activities in marine mammal sanctuaries are unnecessary because environmental effects on marine mammals are now managed under other legislation. This is a further example of unnecessary regulatory duplication and should be avoided.

Straterra recommends the government to develop a **minerals research strategy** in consultation with industry, to meet the challenges of harder-to-find mineral deposits, mining in more complex geological settings, a corresponding broadening of minerals careers, the pace of change in environmental management, and in working with communities and iwi.

The circular economy is an important concept, bearing in mind that **mining will meet the vast bulk of demand for minerals** in the transition towards a net zero carbon world. Research is still needed to continue to improve minerals exploration and mining.

Introduction

Straterra's intent is for our Briefing for Incoming Ministers to inform government policy development and implementation, and to provide ease of reference to our views concerning a responsible and well-performing minerals sector in Aotearoa New Zealand.

The document outlines Straterra's stance on a number of policy issues and sets out our recommended actions on each.

It should be read in conjunction with our pre-election briefing paper <u>Mining in New Zealand 2020</u>. That document includes background information on minerals, mining and aggregates, and a discussion about the role of resources in New Zealand as well as commentary on various issues facing the sector, and our high-level views for beneficial change.

This BIM in contrast is more specific and targeted on the policy issues of interest and concern to our sector.

About Straterra

Straterra is the industry association representing the New Zealand minerals and mining sector. Our membership is comprised of mining companies, explorers, researchers, service providers, and support companies.

Straterra is non-partisan. We do not support any political parties, but we do support policies that enable the minerals sector to invest and operate responsibly and to contribute positively to the New Zealand economy.

Members include large and small producers, exploration companies, equipment suppliers, research institutions, engineering firms, mining professionals and firms providing legal, accounting and other ancillary services. Our goal as a sector is to be recognised as a responsible and significant contributor to the New Zealand economy, the New Zealand brand and to the environmental and social values of New Zealand.

We achieve this by creating information on our sector; participating in public policy processes; and engaging with officials, politicians, iwi, stakeholders, industry, the public and the media.

Equally important is our drive to raise standards across the industry in workplace health and safety, environmental management and other operational standards. These are set out in our charter.

Straterra's Board members are:

- Brent Francis (Chair): Managing Director, New Zealand Coal & Carbon
- Chris Baker: CEO, Straterra
- Alison Paul: General Manager Corporate & Legal Affairs NZ, OceanaGold
- Sioban Hartwell: Market Lead Water NZ, GHD New Zealand Operating Centre Management Group
- Richard Tacon: CEO, Bathurst Resources
- Peter Walsh: Chair, Aggregate and Quarry Association
- Barry Bragg: Deputy Chair, Stevenson Group
- Rene Sterk: Managing Director, RSC Consulting, Director, AusIMM

Mining's role in the current environment

Mining and the Covid-19 recovery

The Covid-19 pandemic will continue to dominate all aspects of society during the coming months and years. While the health, safety and wellbeing of New Zealanders must remain the focus through Covid-19, the economic consequences of the pandemic will be profound. This means sound economic policies are required, including to enable the industries that will be critical in helping New Zealand traverse the crisis.

Under fit-for-purpose policy settings, the mining and quarrying sector will play a central role in mitigating the negative financial impacts of Covid-19 – by pumping millions of dollars into heartland New Zealand in regions that need it most; contributing to the export-led recovery, directly earning foreign exchange and linking into the export supply chain; and providing construction materials (such as steel, cement and aggregate) needed for infrastructure projects, including the government's "shovel-ready" proposals.

The fact that coal production for domestic energy use was deemed an essential service during the Covid-19 Level 4 lockdown and could continue to operate due to the integral role it plays in the provision of food and hospital services, speaks volumes.

For the mining and quarrying sector to contribute significantly to pulling New Zealand out of recession, the government must provide policy settings under which businesses can invest with confidence, along the lines recommended in this document. EEZ Act reform is one area, as discussed later in the document, to provide confidence to investors that development of the mineral resources of the EEZ will be considered objectively. There are proven deposits of strategic minerals potentially worth billions of dollars at stake, with a net societal benefit and an ability to create hundreds of jobs.

Government has a role to place mining into a holistic context

Of paramount concern to the minerals sector is the lack of knowledge and the misunderstanding prevalent amongst sectors of the public around mining. This is evidenced by the growing activism and negative viewpoints expressed on social media on this issue. The government as well as industry has a role to explain the reality of mining, its purpose, its compatibility with resource management, conservation and climate change policy, and its contribution to societal wellbeing.

The government's *Minerals and Petroleum Strategy for Aotearoa New Zealand 2019-2029* was a robust attempt to provide balance in the mining debate but the messages contained within it have not reached many sectors of the public, and some of the messages were out of date at the time of publication.

On the latter point, government ministers now have an opportunity to place minerals and minerals activities into a holistic context that includes workplace health and safety, engagement with communities and iwi, environmental and conservation management, and attention to the climate change issue, as well as an essential contribution to the transition.

This proactive approach to government communications on minerals and mining will help encourage people to consider for themselves the diverse careers the sector offers, including in academia and research, and in environmental and conservation management. Mining companies are seeking to build more diversity into their workforce, and an accurate and positive portrayal of our sector would go a long way towards this aim.

Mining on conservation land

A significant proportion of mining in New Zealand by area is carried out on land in the public conservation estate. That is because the conservation estate is 30% of New Zealand's land area. Also, there is a correlation between mineral resource and unique physical and biological features. Mining on this land has been allowed for many decades, consented under the RMA, via access agreements with the Department of Conservation (DOC), and additionally at times, under wildlife permits and/or concessions, all meeting different legal tests.

Minerals activities on conservation land listed on Schedule 4 of the Crown Minerals Act 1991, e.g. national parks, are heavily proscribed, as they should be.

The "no new mines" proposition

A ban on new mines on conservation land, intended to protect biodiversity from mining, has been proposed. Straterra strongly opposes this because it would not deliver the conservation benefits sought but would lead to extra costs on miners, lost investment opportunities and unintended consequences (see below). It is, in short, a solution looking for a problem.

Importantly, a ban is unnecessary because minerals activities on conservation land are already strictly regulated in terms of their effects on the environment and conservation values.

For the reasons outlined below, we argue the current regime, that allows a case-by-case assessment of minerals exploration and mining projects, provides excellent environmental safeguards (noting excessive regulatory duplication, however). There is no history of this regime leading to irreversible environmental degradation, and no evidence that biodiversity is adversely affected long term because of mining on the very small footprint of conservation estate where it occurs. Historically, the vast majority of access arrangements with mining companies have been granted.

Not all conservation land is of high conservation value

The conservation estate makes up about 33% of New Zealand's land area. It includes a range of land types and conservation values. Of that, 35% is in national parks, and therefore listed on Schedule 4.

The remainder of the conservation estate has varying conservation values from very low to very high, under a number of different land classes. Stewardship areas, which make up 35% of the total area of conservation land, were added in 1987 as part of the re-organisation of Crown land – as a "statutory holding pen", not because of any assessment of conservation values. DOC was to act as steward for this land until its destiny was determined.

Some parties propose excluding stewardship land from "no new mines on conservation land". While preferable to a blanket ban, such a subjective categorisation is deeply flawed because the mineral deposits are not all on stewardship land. The logical approach to regulating minerals activities on conservation land outside Schedule 4 is to consider projects on a case-by-case basis, on the merits of the project, the values in the land, the adverse effects on those values, and proposals for how they would be managed to meet the purpose of governing legislation. An additional safeguard for conservation values is the General Policy for Conservation 2005, which provides for place-based

conservation management, i.e. managing each area of conservation land on the basis of the values in that land, regardless of the land class.

Mining's small footprint – only 0.04% of conservation land is currently mined

Our estimate is that 3,500 hectares or 0.04% of the conservation estate is currently affected by mining. The footprint is so small because of the nature of economic mineral deposits. They tend to be sparsely distributed in the landscape, and, therefore, challenging to discover, evaluate for their economic potential, and develop. This attribute demonstrates the major flaw in "no new mines", being the prevention of new minerals activities in areas where there may be mineable deposits, and to allow for new minerals activities in areas where mineable deposits may not exist.

The small footprint of mining stands in contrast to other economic land uses on conservation land, including hydroelectricity generation and transmission, ski fields, roads, carparks and other tourism infrastructure. Unlike such land uses, mining has a finite life and land is returned after rehabilitation, and that can include a return to a better condition than before mining started. Roads and hydro lakes on conservation land, on the other hand, have permanently destroyed the conservation values in that land. These are trade-offs accepted by society; mining in contrast presents a trade-off that ought to be more acceptable, in light of its temporary nature, over time.

Strategic minerals and conservation land

As indicated above, it is notable that New Zealand's mineral deposits – including for strategic, low-carbon economy minerals – often correspond to areas of conservation land. A GNS Science study published in 2018 found 79% of land prospective for rare earth elements in New Zealand lies in the conservation estate. The same study found 69% for nickel-cobalt, and 66% for lithium prospectivity. These are among minerals of strategic importance for the global transition to a net zero carbon economy. New Zealand needs to develop ways of effectively realising this potential, while safeguarding conservation values. This requires a holistic policy approach to mining, the environment and climate change.

A ban would lead to unintended consequences

A blanket mining ban on conservation land would present other unintended consequences:

- Reduced access to aggregates, particularly on the West Coast, greatly increasing the cost of building and maintaining roads, flood defences and other infrastructure. Because 81% of this region is conservation land, this is largely where these vital resources must be accessed to be economic. This fact was illustrated by DOC quarrying conservation land for track works at Franz Josef Glacier.
- Increased "carbon miles" from trucking aggregates and other mineral resources longer distances to sites for use, including from abroad, thereby, leading to increased global carbon dioxide emissions.
- Importing minerals instead of producing them in New Zealand (where we have a comparative advantage) places a further burden on our country's balance of payments.
- Reduced pounamu recovery: an exemption for pounamu may be under consideration for cultural reasons (and because Ngāi Tahu owns all pounamu found in a natural state). Note, however, that most pounamu is recovered in association with other minerals, particularly alluvial gold, so any exemption would not deliver benefits in practice.
- Significantly reduced revenue to the Crown from minerals royalties and land access fees and compensation payments to DOC the latter being used to fund pest and weed control and other improvements to the conservation estate.
- Mining provides the critical mass that supports the West Coast transportation infrastructure, the rail link to Canterbury, in particular. A ban would, over time, reduce economic activity on the West Coast, and threaten the commercial viability of the Midland Line.

Straterra Recommendations

- Straterra notes that mining on conservation land is already strictly regulated under the RMA, the CMA and, at places, also under the Wildlife Act 1953, and under the concessions regime (Conservation Act 1987);
- Insert a definition of mining, based on that of the CMA, into the Conservation Act, to remove the need, where this occurs, for a concession for ancillary activities, e.g. access roads, given that mining is already subject to access arrangements;
- Delete from the Wildlife Act the provisions relating to approvals for translocating wildlife, noting these matters are already provided for under the Conservation Act;
- Supersede the 2017 Supreme Court decision on the Ruataniwha dam project by amending section 16A of the Conservation Act to enable land swaps to provide a net conservation benefit, as originally intended by this provision, as opposed to restricting such swaps only to conservation land of very low value.
- Amend Section 76 of the CMA on compensation to incorporate recent legal thinking concerning biodiversity
 offsets and compensation under the RMA;
- Amend the Conservation Act for consistency on the above with the RMA.

RMA reform

New Zealand has cross-party support for replacing the RMA. Of concern is that the RMA system has become unwieldy, opaque, litigious, time consuming and expensive, for little or no benefit. The question is what to replace the RMA with.

A government-appointed advisory group has proposed replacement legislation, which in Straterra's opinion tilts the resource management system towards preserving the environment and away from economic land use. A case-by-case approach to land use and the environment needs to be restored, under an amended RMA.

Context

In its conception, the RMA provided for "effects based" management and flexibility in decision-making on the basis that life in modern society entails certain trade-offs. For example, the hydro scheme and the quarry to supply the aggregate for the hydro must go somewhere, and these activities are locationally constrained. The early case law strengthened this case by-case approach to land use via an "overall broad judgment" approach to decision-making. While there was provision for mandatory national direction, the heart of the RMA system was local solutions for local problems.

Note also that the CMA was part of the resource management reform during the early stages, and was deliberately split out to produce twin statutes to regulate different aspects of minerals activities.

The system also provided for spatial planning, at a district or regional level, an approach suited to dealing with "thick" issues such as dairying intensification or urban expansion, but not to "thin" issues, e.g. sparsely distributed economic mineral deposits, and wind farm sites.

Then came the "cumulative effects" – overallocation of freshwater flows, declines in freshwater quality, disappearing wetlands, decrease in area of indigenous biodiversity, air quality problems, expanding subdivisions and marine farms. The response has been increasingly acute in RMA planning: to avoid all effects on significant values, and case law that determined "avoid" means "not allowed". This approach ignores the reality that mineral deposits are thin on the ground and are locationally constrained. It also ignores the reality of other values, e.g. wetlands, though nationally greatly reduced, can be locally very common and ranging in value from Ramsar sites to, literally, patches of wet grass.

Where an "effects management hierarchy" (EMH) is provided for: instead of enabling the sustainable use and development of resources; where poorly drafted, it can impose a *de facto* prohibition on developers. This also has inspired repeated appeals of consenting decisions, including what may be termed frivolous or vexatious litigation.

The result is a heavily protectionist system in which it can take years and millions of dollars in legal and other fees to consent a quarry on farmland, let alone overcome the barriers to developing a mine on, say, conservation land. The government's fast-tracking of the consenting of infrastructure projects is a reaction to these profound shortcomings.

A way forward

The RMA has positive features worth retaining. For significant projects, it allows for a robust, adversarial assessment of the economic, social and environmental aspects. Proponents can access an EMH, which, if appropriately defined, allows for the cost-effective and practical proposing and achieving of net positive effects on the environment, over time. The desired outcome is a win-win situation.

Mining has a number of unique characteristics, many of which invite a bespoke approach to resource management:

- Highest-value use of land, compared to many land uses by orders of magnitude;
- Essential materials for society minerals are a matter of national importance, and for the Covid-19 economic recovery and are essential to the low-carbon transition;
- Temporary use of land, compared with most land uses;
- Relatively small footprint, compared with primary production;
- Sites are rehabilitated, during mining and post-closure, and offsets or compensation are practical management options, if appropriately configured;
- Minerals sector technologies continue to advance, as does practice for achieving, measuring and reporting on social performance and sustainability;
- Mineral deposits are sparsely distributed, hence the small footprint and high value use of land;
- Mineral deposits are locationally constrained you cannot mine where you like;
- Society cannot know in advance where all the new economic deposits are going to be, and does not need to know, today, where they all are located;
- There is a strong correlation between mineral deposits and mountains, and a strong correlation between mountains and conservation land;
- Minerals prospecting and exploration have low environmental impacts and are carried out over large areas, to identify mineable deposits over very small areas.

The above considerations suggest a national policy statement for mining as a discretionary activity, and minerals prospecting and exploration as permitted or controlled activities subject to rules that could be set out in an accompanying national environmental standard.

What is at stake

A fit-for-purpose policy and regulatory regime for minerals prospecting, exploration and mining would enable:

Development and production of aggregates for roading, concrete and other uses, to provide for cost-effective infrastructure projects;

- Limestone for uses in agriculture, water treatment, cement and lime manufacture, and a range of industrial uses;
- Industrial minerals, e.g. halloysite clay for porcelain, garnet for industrial abrasives, zeolites for a range of applications, and high-silica volcanic ash for use in low-carbon cement and concrete manufacture;
- Ironsands for domestic and export steelmaking;
- Seabed exploration and mining for a range of resources, including titanium and vanadium-rich ironsands;
- Coal for domestic and export steelmaking, and to underpin essential businesses, e.g. dairy and other food processing, for as long as coal is needed during the transition;

- Gold for export, being essential to the global financial system, and having also a range of technology uses, the latter, also the case for silver;
- Minerals prospectivity in a range of clean-tech metals including lithium and rare earth elements, for which more research, prospecting and exploration are needed;
- The above would incentivise people to pursue the wide range of careers in the minerals sector, including in academia, and research and educational institutions;
- Critical mass in the minerals sector would also feed into informed debate on minerals, and informed policymaking in this space.

Clarification of terms in te reo Māori

Interpretation of the rights of tangata whenua under Article 2 of te Tiriti o Waitangi continues to evolve in the resource management space, bringing Māori concepts into the core of the system. In principle, this is a positive development and is supported, however, it raises an issue of lack of consistency or clarity in definitions of terms and concepts in te reo Māori, such as mātauranga Maori, te ao Māori, te mana o te taiao, and mauri. This will require the courts to decide that, often at private sector expense.

Climate change

Concerns over the climate change issue have no place to be addressed under the RMA, with the exceptions of natural hazards and adaptation to climate change. The reason for this view is that climate change mitigation is legislated for elsewhere. To include this aspect in the RMA would be regulatory duplication; it would impose "double jeopardy" in decision-making or a double burden on project proponents; and, therefore, would amount to bad policymaking.

Recommendations

- The outcome of the government's review of the RMA should uphold the original intent of the RMA, which was an
 effects-based, case-by-case approach to proposals for development, that are able to address the balance
 between social, environmental and economic priorities;
- Recognise and provide for the special characteristics of mineral and aggregate extraction within the resource management system via a national policy statement for minerals (NPS-M), and a national environmental standard to regulate minerals prospecting and exploration as permitted activities subject to a set of rules;
- Preface the NPS-M with an explanation of the national importance and special characteristics of minerals and minerals activities, as discussed in the main text;
- Delete all reference to climate change mitigation in the RMA;
- Provide legal clarity on the evolving Māori frameworks and terms, for workability of the new system.

Freshwater

Protecting freshwater from further degradation looks to be desirable; doing so at the expense of the land-based economy is less so. Acknowledging this trade-off, the government has created belated exemptions from new wetland protections for some agricultural and infrastructure activities.

This suggests the problem definition is incorrect. At issue is the wide variety of freshwater around New Zealand, and of the impacts of activities on this value. That argues strongly for a case-by-case approach to resource consenting.

Natural wetlands

As defined in the National Policy Statement for Freshwater Management 2020, natural wetlands cover everything from Ramsar sites to intermittently wet patches of native grass species in the landscape. A recent resource consent decision granting an OceanaGold pit development at Macraes, East Otago, says the Environment Court will need to clarify what a natural wetland is, or is not.

The accompanying Resource Management (National Environmental Standards for Freshwater) Regulations 2020 (NES-F) implements the government's policy intent by prohibiting earthworks in natural wetlands, with exemptions for, e.g. state highways, winter grazing and some horticulture. The consequence will be to prevent almost all new mines and quarries, and expansions to existing mines and quarries. New Zealand will be increasingly importing aggregates, coal and limestone; and exports of gold and of coal for steelmaking will decline. The adverse impact on the national economy could run into the billions of dollars.

A policy failure has occurred, and it relates to an incorrect problem definition. Wetlands are greatly reduced in extent at a national level – to 9% of their original area – however, there are millions of small areas of native speciesdominated wet areas throughout New Zealand. If one of these patches occurs within a proposed mine or quarry expansion, that is likely to be the end of the project. The problem extends to council landfills and social housing, as shown by councils already interpreting projects as a prohibited activity.

A policy solution

Until 3 September 2020, mining and quarry companies could access an "EMH" when proposing a project and how to manage its impacts on the environment, including freshwater. This includes offsets of and/or compensation for impacts on natural wetlands. There are many examples in New Zealand of created or enhanced wetlands as a result of extractives development. As ecosystems go, this is usually straightforward: remove weeds including willow, plant natives, and translocate or encourage fauna including native fish and invertebrates, and native birds into wetlands. Case studies of success with this approach abound, and Straterra is happy to co-ordinate their provision.

It is noted that the higher the wetland values to be disturbed, the higher the bar on being able to cost-effectively offset or compensate, as ought to be the case. This concept is also established within the RMA system. Regulatory flexibility needs to be maintained.

As well, the government's Regulatory Impact Assessment was inadequate. It estimated that \$600 million worth of minerals would be adversely affected by the freshwater package, which refers only to some coal production data. Impacts on the mining of gold, ironsands, aggregates, and other minerals were not considered. The area figure of wetlands covering 3% of mining permits is meaningless, considering that one wetland, no matter how small in a proposed mining or quarrying area, could kill the project, as noted above.

So, the case for changing the activity status from 'prohibited' to 'discretionary' is that the impact of the new policy on mining and quarrying, and on the New Zealand economy, was underestimated by several orders of magnitude, and that natural wetlands are by and large amenable to offsetting and compensation by project proponents.

Strengthening this argument is the NPS-FM text which says: "The loss of river extent and values is avoided, unless the council is satisfied: (a) that there is a functional need for the activity in that location; and (b) the effects of the activity are managed by applying the EMH." This concept should be applied to natural wetlands as well as rivers.

Straterra Recommendation

• Change the activity status in Regulation 53 of the NES-F from 'prohibited' to 'discretionary' so that applications can be considered on a case-by-case basis and have access to the EMH.

Biodiversity

New Zealand's indigenous biodiversity faces multiple threats, led by exotic animal pests and weeds. The minerals sector can help mitigate this threat as part of its activities, but not under the draft National Policy Statement for Indigenous Biodiversity. As currently written, the NPS-IB will prevent almost all land-use outside of urban boundaries, and landowners will be disincentivised from managing pests and weeds.

That is because almost all indigenous biodiversity will meet a classification of significance, and of high value, thereby preventing miners and quarry operators accessing the "EMH". This cannot be the policy intent because the government has provided a carve-out for mineral and aggregate extraction in relation to significant biodiversity to access the EMH.

The nature of mining and quarrying

Economic mineral deposits are locationally constrained; and that mining and quarrying are the highest-value use of land, occupy a relatively small footprint, and are a temporary use of land. During and after site closure, companies rehabilitate the land to a former use, or repurpose it into a new or enhanced use. It is not always possible to return the land to exactly the way it was, hence a role for offsetting and compensation. The aim is to provide a net positive benefit for the environment as a result of mining, and it must be understood that this takes time to achieve.

Appropriate policy settings

The above argues strongly for a case-by-case approach to mining and quarrying projects. The RMA system was originally conceived with that approach in mind. Decisionmakers on resource consent applications will consider the merits of the project, the other values in the land, the impacts on those values, and proposals for their management, consistent with the purpose of governing legislation.

Mining and quarrying on conservation land and other areas containing biodiversity will almost certainly disturb biodiversity. The question is: with effort and time, can these impacts be avoided, remedied or mitigated, and offset or compensated for, to deliver a net positive benefit for biodiversity? A growing number of case studies in the mining and quarrying sector show that this outcome can be, and is being, achieved at sites. They include: OceanaGold's operations in Waihi and at Macraes, East Otago, and the closed Globe Progress mine near Reefton. Others include the Bathurst Resources-operated Stockton and Canterbury coal mines, current and former alluvial gold mines on the West Coast and in Southland, and many quarries around the country.

Significance and high value

The core problem the NPS-IB poses is its approach to defining significance, and, within that category, biodiversity of high value. In the opinion of our ecologist advisors, almost all biodiversity in New Zealand will meet both criteria. For example, threatened species are found throughout the country, much forest is regenerating and/or contains ecological gradients, areas of critical habitat for indigenous species abound, at least one species at any place in New Zealand will be at or near their distributional limit, and species in decline such as pipit/pihoihoi and longfinned eel/tuna, paradoxically, exist almost everywhere.

On the above, it would be very challenging to find any part of New Zealand where the biodiversity is either not significant or is significant and of medium value. The consequence is that mineral and aggregate extraction projects will not proceed because they will not be able to access the EMH. This defies the government's policy intent, which is to recognise the locational constraints on mining, and in many cases, a functional need to be near markets.

The solution is straightforward: remove the distinction between medium and high value and provide for all mineral and quarrying extraction to access the EMH. That will also enable a range of land uses beyond the minerals sector that would otherwise be unintentionally prevented.

Effects management hierarchy

In general, the schemes introduced into the NPS-IB for avoiding, remedying and mitigating adverse effects on biodiversity, and then providing for offsets and/or compensation are sound. If development harms biodiversity, project proponents must manage that to a standard of "no net loss" or a "net gain" over time in biodiversity.

We understand limits to biodiversity offsetting and compensation to mean that as the values proposed to be disturbed at a site increase in value, a point will be reached where an adequate offsetting or compensation package cannot be proposed in practical terms. That should be clarified in the relevant appendices to the NPS-IB. Proceeding into greater detail, the requirement for offsets or compensation to be "socially acceptable" is vague and is a circular argument. If resource consent for a project is granted, then, *ipso facto*, it is socially acceptable.

We have identified confusion in the principles for offsetting and compensation over whether "trade-ups" can occur. The ability to replace lower-value biodiversity with higher-value biodiversity as an offset or compensation appears to be the government's policy intent, and this needs to be clarified. That is also sought for the inconsistent use of terms in te reo Māori in the draft NPS-IB, e.g. mātauranga Māori and mauri.

Straterra Recommendations

- Remove all reference to "high" and "medium" in relation to significant biodiversity in the NPS-IB;
- Explicitly recognise exotic animal pests and weeds as the most serious threat to indigenous biodiversity in New Zealand in the NPS-IB;
- Explicitly recognise the role that mineral and aggregate extraction can play in providing no net loss in biodiversity as a result of development;
- Uphold the EMH in the NPS-IB, and access to it for mineral and aggregate extraction under all circumstances;
- Amend the EMH text in relation to biodiversity offsets and compensation to:
 - define limits to offsetting and compensation to mean that as the values to be disturbed increase in value, it will be more challenging for project proponents to offset or compensate for the loss of residual effects on those values;
 - remove text relating to "socially acceptable";
 - clarify the text to ensure that "trade-ups" in relation to biodiversity offsets and compensation can be proposed, considered and accepted;
 - clarify the meaning of terms in te reo Māori, and ensure consistency in the meaning and use of those terms throughout the NPS-IB.

Crown Minerals Act regime

The Crown Minerals Act was passed in 1991 to enable the exchange of rights between the Crown as the owner of certain minerals, and the developer of the minerals.

Straterra seeks an enabling regime because minerals are essential to modern society, and the minerals industry must manage significant financial risk.

Retain the purpose of the CMA

Section 1A was inserted into the CMA in 2013, to "promote" minerals prospecting, exploration and mining for "the benefit of New Zealand".

During the 2017-20 term, the government started a review of the CMA, including the option of removing the enabling

purpose of the CMA. Note that much of New Zealand's minerals production is also from privately owned resources, e.g. aggregate for building roads and other infrastructure, limestone for agriculture, and coal for dairy and other food processing, steelmaking and electricity generation among industries.

Removing the enabling purpose in the CMA would effectively favour the development of privately-owned minerals over Crown-owned minerals, which include all gold and silver, and all minerals on Crown land or on land alienated from the Crown under certain statutes (not including pounamu).

Retaining section 1A, on the other hand, provides for the government to: proactively communicate minerals and minerals activities in a holistic, accurate and positive context; and introduce policy settings that enable responsible minerals prospecting, exploration and mining.

No to public consultation over Crown minerals permits

The Government's proposal to require public consultation in relation to the granting of prospecting, exploration and mining permits is strenuously opposed because it is unnecessary, and of questionable value.

The CMA was developed as a twin statute to the RMA, which is about economic, environmental and social (and cultural) sustainability. The latter regime invites public consultation on the development and review of RMA statutory instruments, and in respect of notified resource consent applications. That is right and proper because people and the environment are at the centre of the RMA.

In contrast, the CMA is a technical statute, to do with the commercial and operational ability of permit applicants and permit holders to discover, develop and mine mineral resources effectively and efficiently. At issue are questions such as the geology, relevant scientific research, geotechnical ground conditions, and exploration, mining and minerals processing methods. The general public is in no position to comment on such technical details. For the same reason, the public is not consulted on how to design roads, bridges, airports, sewage treatment plants or other public infrastructure.

Support iwi engagement

As a Treaty partner, the Crown is obliged to engage with iwi on all matters of policy and regulation, including Crown minerals permitting. This engagement should include information on the benefits to society, including iwi, of the minerals sector, and a holistic view on how the sector is structured and operates. The *Minerals and Petroleum Strategy for Aotearoa New Zealand 2019-2029* goes some way towards meeting this aim. It should be noted that Māori have significant interests in the resource sector and are generally supportive of it. This manifests itself in the historic and cultural extraction of mineral resources and also the disproportionately large stake in the sector Māori have through their work and business interests in it.

For their part, permit holders are obliged to report on any engagement with iwi in relation to the permit. Such engagement goes to acknowledgement of, and respect for the ancestral connections iwi have with the land in which the rights to minerals are held. There is existing guidance on how private sector and Māori engagement may be conducted.

Nonetheless, the government seems to be wanting something more from permit holders under this heading, out of a concern that engagement to date has not always been adequate. Its proposal to create a template for reporting on engagement is supported.

Keep CMA separate from other legislation

It is self-evident that permit holders must obtain and comply with all other relevant regulatory approvals before exercising their permit. They include: workplace health and safety, resource management, climate change, conservation, heritage, and overseas investment. These matters should not form part of the CMA regime, except in relation to access arrangements for minerals activities to Crown land. In that circumstance, the purpose for which the land is held is among considerations when regulating access.

Rescind a proposal of 'no new mines on conservation land'

Within the CMA review consultation, the government makes reference to the "no new mines on conservation land" proposal (see page 6), without carrying out the public consultation it had promised on this proposal. This is undemocratic.

Straterra upholds a case-by-case assessment of exploration and mining projects, on the basis that each project is different as to geology, mineralisation, the merits of the project, and the competing values in the land, including the environment and conservation values. Not all conservation land is created equal, and nor are mines and quarries. We consider the no new mines ban is unnecessary to achieve conservation objectives. Properly consented and managed, mines and quarries can also contribute to conservation, subject to conditions on regulatory approvals. See pages 6-8 for a fuller discussion of this issue.

The way forward

Being an industry-specific regime, any review of the CMA should be done in collaboration with the sector that is regulated under the CMA.

This is separate from the obligation of the regulator, New Zealand Petroleum & Minerals, to grant, monitor for compliance, and take any other statutory actions in relation to permits and permit holders. Straterra does not suggest interference with these processes *per se*. We intend to engage with the Energy and Resource Markets branch of MBIE (which includes NZP&M) on what we think is a fit-for-purpose exercising of regulatory powers and functions.

Straterra Recommendations

- Rescind the government's CMA review discussion document, and revisit a CMA review from first principles in consultation with the minerals exploration, mining, quarrying and petroleum industries;
- To achieve the above, create a minerals sector advisory group of Straterra, the Aggregate and Quarry Association, the Petroleum Exploration and Production Association of New Zealand, and within their memberships, as a permanent dialogue partner for MBIE officials on CMA issues.

Climate change

Climate change is the defining issue of our time. New Zealand needs to play its part in global commitments to meet the objectives of the 2015 Paris Agreement and to reduce carbon dioxide emissions. But the ETS, which is the government's main policy instrument, does not take global carbon prices into consideration, threatening the contraction of the New Zealand economy with no benefit for world climate.

Straterra recommends amending the ETS to benchmark the New Zealand Unit price to that of our trading partners.

Mining and climate change in New Zealand

Generally, the extractive sector is not a big carbon dioxide emitter. Mining companies are emitters like any other that uses fossil fuels as an input – emissions stem mostly from burning the diesel used to extract, transport and process minerals, and to a lesser extent the fossil fuel component of the national grid electricity generation. These processes are relatively energy intensive with a wide variation across mining and quarrying operations. Our sector falls roughly in the middle of the emissions intensity of industries and sectors in New Zealand.

Coal has the highest emissions intensity of the fossil fuels and is the biggest source of carbon dioxide emissions internationally. In contrast, coal use in New Zealand is not the low-hanging fruit for emissions reductions that it can be in other countries. Here, coal for energy production contributes only 4% of our CO₂e emissions (a statistic that does not include coal used in steelmaking).

There needs to be sound analysis by the Climate Change Commission and others to inform how and where New

Zealand should focus its emissions reduction.

Minerals and aggregates are in fact part of the solution to the climate change issue, not the problem. They will have an important role in helping New Zealand adapt to the changing climate. For example, aggregates are needed to strengthen sea walls to adapt to sea level rise and provide flood protection. They are needed to make infrastructure more resilient to resist greater-intensity storms and extreme weather events.

The products of mining will play an important role in reducing global emissions. Minerals are needed in increasing abundance to make wind turbines, solar panels, batteries etc, as the world transitions towards a lower-carbon economy.

New Zealand has the potential to supply some of these minerals. Vanadium, lithium, rare earth elements, and nickelcobalt are examples of minerals which are part of the low-carbon economy – all of which New Zealand has the potential to supply, providing we have access to land and sea to explore, subject to appropriate resource management regulation. Our traditional production of ironsands, coal, gold, silver, and limestone are also needed for a lower-carbon world, and New Zealand also has potential in mineral, lower-carbon cement additives.

Straterra position – climate change action

Straterra supports the transition to a net zero carbon economy by 2050, provided this is an informed, evidencebased, careful and just transition that provides for New Zealand's continued prosperity and wellbeing.

The 2017-20 Government made headway on its climate change policy agenda. Key changes were: the creation of the Climate Change Commission, the capping of emissions in the ETS, and the introduction of an auctioning scheme of NZUs to replace the uncapped, fixed-price option.

This market-based approach to incentivising lower-emissions technologies and practices, is supported as one most likely to promote economic efficiency and least-cost emissions reductions during the transition.

The government's proposal to ban coal use in low-temperature process heat from 2030 is strenuously opposed, because it undermines economic efficiency and the ETS, and would adversely impact businesses for which coal use is key to their competitiveness. Examples occur in dairy and other food processing, and hothouse horticulture, which were deemed to be "essential services" during the Covid-19 pandemic lockdown.

In fact, this proposal is likely to increase global emissions rather than reduce them because other countries will produce the goods that New Zealand will no longer be producing, often at a higher carbon intensity, e.g. indoor dairy farming. New Zealand will then import many of these items – often from countries where the health and safety standards are far lower.

The strengthening of the ETS system should take precedence over other mechanisms to intervene in the New Zealand economy with the intention of reducing emissions.

A further example of an inappropriate policy mechanism is the introduction into the RMA of an obligation on councils to take into account the climate impacts of decisions made under this Act (discussed above in the section on RMA reform). This further undermines the ability of the ETS to promote economic efficiency during the transition and amounts to legislative duplication.

It is essential that the ETS aligns with our trading partners to ensure the ongoing competitiveness of affected sectors of the economy. If production shifts offshore because of the higher costs imposed on New Zealand emitters, then New Zealand jobs and businesses are put at risk for zero climate benefit.

In terms of the government's setting of ceiling or trigger carbon prices in the ETS, consideration of global carbon prices needs to be taken. Less than 22% of global emissions are priced, and of these emissions, according to the World Bank, the average price is US\$2 per tonne of CO₂e. These facts undermine assumptions underpinning many of New Zealand's climate change policy reforms, including in relation to the future price of carbon in New Zealand.

Straterra Recommendations

- The government should prioritise the ETS over non-market emissions reduction policies;
- Policies should, therefore, not target specific businesses or industries based on fuel choice; this is in the interest
 of promoting economic efficiency and, so, the proposed bans on coal use in industrial process heat should be
 rescinded;
- To reduce the risk of business closures and contraction, and of carbon leakage, New Zealand's carbon pricing should be in line with international trends. The ETS should be amended so that the NZU price is benchmarked with that of our trading partners;
- Disband the Just Transition Unit in the Ministry of Business, Innovation and Employment and strengthen MBIE's
 resources policy team, because the market should decide where people work, and government's role is to create
 the policy settings to allow this market to work efficiently;
- The proposal concerning larger businesses for the mandatory disclosure of financial risks and opportunities of climate change needs to include a requirement for the government to not introduce policies that increase the risks for no benefit to global climate – this is for inclusiveness and transparency;
- Remove from the RMA all requirements on councils to consider the climate change impacts of decisions because these matters are already legislated for under the Climate Change Response Act 2002;
- Repeal the Energy Resource Levy Act 1976 because this statute is anachronistic, and is superseded by the Climate Change Response Act.

Overseas investment

Investment is essential to minerals exploration, mining and quarrying, and much of it is sourced from abroad. The minerals investment dollar is a global one, so, for New Zealand to attract that investment, we need to be an attractive destination.

Overseas investment regime

Mining in New Zealand has a large degree of overseas investment with demonstrated economic benefits for both New Zealand and the local communities where it occurs. Overseas investment provides a larger pool of funds and is accompanied by access to new expertise, technology and links to global distribution systems. At the local level, overseas investment in the industry is particularly valued for the community benefits it provides.

Straterra supports a relatively open overseas investment regime noting that the Overseas Investment Act 2005 (OIA) has a role in protecting New Zealand's sensitive land and assets, and screening some applications before approval is given, which is appropriate.

In parallel to the regulatory regime, and in recognition of the importance of overseas investment, government needs to play a role in promoting the New Zealand minerals and mining industry and its opportunities and potential for prospective overseas investors.

The regulatory regime has flaws in that too many transactions are unnecessarily captured for screening (both in terms of land type and investor definition). This imposes unnecessary compliance costs and puts at risk proposed investments which have the potential to provide benefits to New Zealand.

Sales of small parcels of land for industrial purposes which happen to be adjacent to land defined as sensitive; the definition of overseas person being too broad; and investors who have already been screened for previous investments, are examples in our sector of issues leading to transactions which are unnecessarily captured under the screening regime, and which are being addressed.

We support the proposed legislative changes in the No 3 Bill currently before Parliament which would allow certain, lower-risk transactions not to be screened.

Urgent measures introduced into the OIA earlier in 2020 provide for a minister to veto certain types of investment that fail a "national interest test" and that can include "strategically important businesses" to be listed in regulation. Straterra is concerned that a minister will have wide discretion in creating this list, with no public consultation, with the risk of veto powers on proposed overseas investment transactions being exercised on ideological grounds.

Straterra Recommendations

- That the OIA be reformed to facilitate overseas investment in the minerals sector and to remove unnecessary deterrents, in a way that increases New Zealand's attractiveness for foreign investment;
- Note Straterra's support for the No 3 Bill, which is currently before Parliament;
- Amend the OIA to clarify the meaning of "strategically important businesses" to exclude investments in minerals projects.

EEZ Act regime

The Exclusive Economic Zone (Environment Effects) Act 2012 was introduced to regulate activities such as seabed mining in the EEZ. Marine consent for an ironsands project was granted by the Environmental Protection Authority in 2017, but successive appeals on points of law are yet to lead to any operator being able to exercise marine consents for seabed mining in the EEZ.

Officials have previously advised government the Act needs to be amended for workability. Straterra urges the government to act on this advice. At stake is future-proofing New Zealand's ability to produce a range of strategic minerals the world needs.

Adaptive management

"Adaptive management" can be described as adjustments to operations during operations, in response to lessons learned. For example, if more sediment is discharged into seawater than is allowed under marine consent conditions, the mining company can slow the rate of mining or otherwise amend operations to reduce sediment discharge. Regulations governing marine discharges, however, expressly prevent the adaptive management of discharges, which is illogical because these are among the types of effect most amenable to adaptive management. The Court of Appeal has ruled that managing these discharges is not adaptive management; however, this point of law may be redecided by the Supreme Court.

Officials from the Ministry for the Environment and the Ministry of Business, Innovation and Employment advised ministers of a previous government in June 2017 that the EEZ Act regulations contain drafting errors that need to be fixed to enable adaptive management in respect of marine discharges, as opposed to marine dumping, which is a very different type of activity (section 64 (1AA) of the Act). Straterra agrees.

Information principles

Trans-Tasman Resources (TTR) has an appeal before the Supreme Court, heard in November 2020 with a decision due during 2021, in relation to marine consent to mine vanadium-rich ironsands in the South Taranaki Bight, a point of law concerning "information principles". Decision-makers are required to have the "best available" information when considering a marine consent application. This is information that "is available without unreasonable cost, effort or time" (sections 34 and 61 of the Act). At issue in the marine environment is the cost of gathering baseline environmental data compared with on land. TTR had sought to have that aspect covered in marine consent conditions; no mining could occur until that data had been collected. Raising the investment capital to meet this expense is much more feasible to do when armed with a marine consent than not.

The Environmental Protection Authority's decision-making committee that granted marine consent in August 2017 agreed with TTR on this approach to baseline environmental data in the EEZ. This point was successfully appealed to the High Court and to the Court of Appeal by opponents to the project. If there is no change to this case law, it is possible no seabed mining projects will proceed in the EEZ, because the regulatory hurdle is too high.

Preventing seabed mining was not the intent of the EEZ Act, rather the opposite: the enabling of the activity subject to conditions to manage adverse effects on the environment.

Statutory purpose

The Supreme Court heard arguments in relation to the statutory purpose of the EEZ Act (section 10), which contains two limbs. One is the "sustainable management" of marine resources, and the other is to protect the marine environment from marine pollution. The Court of Appeal found that the latter is more specific than the former, and, therefore, the purpose needs to be read as sustainable management *subject to* protecting the marine environment from all marine pollution, which would include sediment discharges.

That interpretation by itself would prevent all seabed mining, which TTR argued in the Supreme Court would defy Parliament's intent in passing the law in the first place, i.e. to create a marine consenting regime for activities such as seabed mining. Straterra agrees with this position.

The size of the prize

Beyond ironsands deposits in offshore western New Zealand, our country's marine jurisdiction is prospective for many minerals. They include gold, copper, base metals and clean-tech metals in undersea volcanoes in the Kermadec volcanic arc; rock phosphate on the Chatham Rise; and polymetallic nodules containing cobalt, nickel and other metals.

Certainly, the undersea environment presents challenges in terms of mining technology and managing environmental impacts. Bringing seabed minerals to the surface is a highly capital-intensive investment, much more so than on land. Correspondingly, the benefits to New Zealand would be enormous, in terms of jobs, royalties and taxes, economic activity, and exports of minerals society needs, including to transition to a lower-emissions world.

The way forward

The EEZ Act needs significant amendment to be workable. MfE had at one time considered a review of the Act for this purpose. The starting point would be section 10 (1) (a) of the Act, "to promote the sustainable management of the natural resources" of the EEZ. The definition of sustainable management includes "managing the use, development, and protection of natural resources in a way, or at a rate, that enables people to provide for their economic wellbeing". This consideration is balanced with provisions to manage the environment.

That said, most provisions in the EEZ Act are fit for purpose. An overhaul of the Act is not required, rather, amendments to the specific problem provisions named above, and, perhaps, certain other provisions. This is best achieved in collaboration with the sector that is regulated under the EEZ Act, i.e. the minerals sector.

Straterra Recommendations

- Reform the EEZ Act to allow for the case-by case development of the natural resources of New Zealand's EEZ, while meeting environmental objectives, including with clarity of purpose in section 10.
- Amend sections 34, 61 and 64 of the EEZ Act to provide for seabed miners to gather baseline environmental data after marine consent is granted, and to be able to adaptively manage marine discharges as per all other mining activities;
- Review the EEZ Act in collaboration with the minerals sector to ensure capture of any other problem provisions in the EEZ Act.

Marine mammal sanctuaries

The Marine Mammals Protection Act (MMPA) was introduced in 1978 to conserve, manage and protect marine mammals. It pre-dates the Conservation Act, the RMA, and environmental law for the EEZ.

When making decisions on threat management planning for marine mammals, the best available science is to be harnessed. This has not occurred in the latest government decisions concerning Hector's and Māui dolphins, unnecessarily sterilising access to vanadium-rich ironsands prospectivity. The unprincipled approach to marine mammals and seabed mining policy demands an overhaul.

Māui and Hector's dolphins

Effective 5 November 2020, new protections for the Māui dolphin prevent mining in areas where the critically endangered species has not been sighted for many decades. Simultaneously, commercial fishing and dredging may continue in northern harbours where there are known to be Māui dolphins. Contrary to the government's claims that decisions were made on the basis of the best available science, this has not occurred.

No evidence was provided that seismic surveying adversely impacts dolphins or other marine mammals. There is already a code of conduct in place for this activity, which has been incorporated by reference into the EEZ and Continental Shelf (Environmental Effects) Act.

Taking a step back, the MMPA is aimed at protecting marine mammals, including via threat management plans. These statutory instruments are not intended to prevent all human activity in areas where there are marine mammals. They are intended to prevent adverse consequences for marine mammals for which in 1978 there were no other legislative protections. The situation has since fundamentally changed, as outlined below.

State of legal protections for marine mammals

Under the RMA, out to the 22km limit of the Territorial Sea, and the EEZ Act beyond, seabed mining requires resource consent or marine consent, respectively, subject to conditions including the welfare of marine mammals. These statutes supersede the MMPA, at least in regards to seabed mining. They provide for a case-by-case assessment of projects, their likely impacts on the environment including marine mammals, and proposals for their management to meet the purpose of legislation.

On that basis, it is not necessary to impose bans on seabed mining within all or parts of marine mammal sanctuaries.

South Taranaki Bight marine mammal sanctuary concept

Concern for blue whales has spurred thought within government into creating a marine mammal sanctuary encompassing the South Taranaki Bight. It is known that the blue whales are attracted to an upwelling in marine currents north of Farewell Spit. The observational data place the whales overwhelmingly in this area, stretching north in a line towards Cape Egmont. Their presence has long been known in this area to the Taranaki oil and gas rig operators. Human activities do not appear to have impacted negatively on the blue whales; on the contrary, they coexist.

Straterra questions the drawing of the eastern boundary into depths closer to shore where blue whales ordinarily would not go. In evidence, during Trans-Tasman Resources' minerals exploration work, not a single blue whale was observed. For that matter, the company observed very few marine mammals of any species within their Crown minerals permit area located offshore more than 33km south of Hāwera.

Protecting blue whales from seabed mining in an area where they do not exist does nothing for the whales while preventing the mining of vanadium-rich ironsands for redox flow battery manufacture and steelmaking. Even if blue whales did pass through areas of seabed minerals prospectivity, the EEZ Act provides for the mitigation of any impacts on them from seabed mining.

Straterra Recommendations

- Remove prohibitions on seabed exploration and mining from all marine mammal sanctuaries, on the basis that protections already exist under legislation other than the MMPA for marine mammals from this activity;
- Agree that the Seismic Surveys Code of Conduct is the preferable mechanism for managing this activity in areas where there are marine mammals;
- Agree to base decisions under the MMPA on science and evidence.

Minerals research

The first step to finding economic mineral deposits is scientific research. Beyond minerals and geology, this topic includes advances in environmental science, exploration and mining technologies, minerals processing, and in adding value to minerals including coal.

The minerals industry is a fast-evolving one, and research & development are part of this paradigm. At stake is the ability to supply materials for the transition to a net zero carbon economy, and to enable the industry to acquire and retain skills and knowledge to that end.

The nature of science

Over more than a decade of government support for minerals research, the universities, Crown research and other government institutes, and private research institutions have been able to build science capability and capacity. This is now at risk.

Recent positives include aerial geophysical surveys over large areas of New Zealand, predicting and managing the environmental impacts of gold and coal mining, the Zealandia systems approach to mineral deposits formation, and mapping economic aggregate resources around the country.

A regional research institute created in 2018 is working to add value to New Zealand's mineral resources, including gold, pounamu, rare earth elements, tungsten, and carbon-based advanced materials. The aim over time for the Greymouth-based New Zealand Institute for Minerals to Materials Research is to obtain more private sector investment in its work.

Callaghan Innovation has supported private firms on minerals-related research. They have also invested in research at their own expense, including freshwater quality management and native fish conservation, and separately in bringing carbon-based advanced materials, low-carbon cement additives, and lithium from geothermal brines closer to commercialisation.

Science capability under threat

Over the last two rounds of grants under the Ministry of Business, Innovation and Employment-administered Endeavour Fund, the minerals sector has almost entirely missed out. The exception is the University of Auckland-led programme to research erionite, a fibrous mineral, for its occurrence and potential human health impacts in Auckland.

If the lack of public funding of minerals research continues, the ability to maintain capability and capacity in New Zealand will diminish over time, with flow-on effects into minerals exploration and mining. The experience in Australian states is that jurisdictions that provide public support for minerals research receive vastly more in private investment in minerals exploration.

At stake is New Zealand's ability to investigate and realise potential in historically, poorly explored types of mineral deposit, including a number of clean-tech minerals needed for the world's low-carbon transition.

A minerals research strategy for New Zealand

The government's *Minerals and Petroleum Strategy for Aotearoa New Zealand 2019-2029* highlights a role for minerals research. It mentions a drive towards a "circular economy", i.e. recycling, reuse and repurposing of materials, and to gain more value from existing minerals and geology data, as well as to foster sectoral connections with sources of innovation.

In terms of better managing the environmental impacts of mining, this is already happening. Larger companies are increasingly measuring and reporting on their sustainability and social performance. Society's expectations of miners under the RMA are driving better practices for managing mine sites.

Something more is needed in relation to minerals research, we think, to place it in a real-world context: ours is an essential industry, with people at its centre, adapting in and to a fast-changing world.

We think a research strategy for minerals is warranted for the government to optimise its funding and support in this field. Straterra embarked on a minerals strategy in 2010; we may have been ahead of our time. The importance of minerals in the low-carbon transition had yet to take hold. The role of aggregates and, therefore, of quarrying in post Covid-19 New Zealand, is now coming to be generally appreciated among politicians.

While some minerals can be produced via the circular economy, mining will continue to account for the vast bulk of New Zealand and global minerals supply. More research will undoubtedly improve minerals exploration and mining practices.

Straterra Recommendation

• The government to develop a minerals research strategy in consultation with the minerals sector.



Wind Turbines at Makara Beach





National Environmental Standards for Freshwater – Natural Wetlands:

The Impacts on the Extractive Sector and Proposed Solution

November 2020

1. Introduction

A major problem has been identified with the <u>Resource Management (National Environmental Standards</u> <u>for Freshwater) Regulations 2020</u> as it relates to the minerals and aggregate sector (and earthworks generally).

A number of companies and industry organisations representing a range of mineral and aggregate extractive activities have approached the government outlining their concerns.

The regulations were consulted on last year and they came into force just prior to the election on 3 September 2020. The industry was largely taken by surprise as the outcome was not one which was considered as part of the consultation and nor was it foreshadowed in the May 2020 Cabinet paper.

This paper sets out the problem, discusses the issues and recommends that the activity status for earthworks be changed from 'prohibited' to 'discretionary'.

2. The problem

New Zealand's natural wetlands have been greatly reduced since pre-European times and the government has expressed a policy objective to prevent the remaining wetlands from further degradation. We support the government's desire to protect and preserve wetlands. However, this needs to be done without prohibiting extensions to existing mining and quarrying operations and/or the ability for future mines and quarries to be considered on their merits.

Under the regulations, "mineral and aggregate extraction" activity, along with earthworks generally (Reg 53), will be prohibited on land deemed to be natural wetlands.

The definition of natural wetlands itself has created uncertainty due to its breadth - unintentionally capturing many small patches of wet grass and wetland areas dotted throughout New Zealand.

All wetlands are treated the same under the regulation. In reality, wetlands can vary from a damp patch of grass to a wet area with common indigenous vegetation right through to a lake and its margins supporting significant flora and fauna, and so have a range of ecological values and sizes. Wetlands are present in a wide range of varying landscapes.

The 'prohibited' activity status under the RMA means there will be no opportunity to assess the merits of proposed mining and quarrying projects relative to the conservation/environmental value of the land where it is to occur. And no opportunity to consider offsets or compensation for disturbance to wetlands.

Areas impacted include expansion at the Stockton coal mine (within existing licences and permits) and on the West Coast generally, potentially the Waihi and Macraes gold mines, ongoing operation of major existing quarries in the Auckland region and the development of new mines and quarries in many other areas of New Zealand including alluvial gold and pounamu.

Implications for the extractive sector and New Zealand if the regulation remains in its current form

The consequences of such a disruption to the extractive sector would be significant for New Zealand. The sector directly provides well-paid jobs to 4400 people across the country and thousands more indirectly; it contributes to economic development in regional New Zealand and earns valuable export receipts at a time when other export earners such as tourism have been severely affected by Covid-19. It provides products that are essential for industrial supply chains in a number of other industries including aggregate and sand to provide infrastructure, and housing and products for the agriculture sector.

Unchanged, the new wetland regulations will mean New Zealand will need to, over time, import aggregates (shiploads of rock), limestone, more coal than at present, while foregoing export receipts from gold, silver, coking coal and iron sands, foregoing opportunities to mine for new minerals, including for the net zero carbon economy, and potentially closing the Glenbrook steel mill and Golden Bay Cement. The minerals sector has an important contribution to make in the post Covid-19 economic recovery. Aggregates are an essential part of the shovel-ready infrastructure projects announced by the government.

Evidence to date of the impacts of the regulation

It is not just industry which is concerned about this regulation. Already the seriousness of the issue has been reinforced by a number of third-party decision makers in relation to resource consent applications. We outline some of these here and are happy to provide more detail:

• Deepdell mining project

OceanaGold has recently been granted resource consent to develop the Deepdell North Stage III project at the Macraes gold mine in East Otago. Had Reg 53 been in force when the company lodged its application, the disturbance of "natural wetlands" would have been a prohibited activity. In their ruling the hearing commissioners said, "We believe that regulation such as this leading to a prohibited activity rule has no place in a National Policy Statement". The wetlands in question are shown in **appendix 1**.

• Flat Top Quarry

Auckland Council had to return Flat Top quarry's extension application in September 2020 because ecologists' advice was that a small wet area in the middle of the land was deemed to be a wetland under the new regulation making it a 'prohibited' activity. Photos of the land in question are provided in **appendix 1**.

EnviroWaste Fill Site

An Auckland cleanfill/managed fill site that has been operating since 2005 is due to reach capacity in 2021. A proposed expansion will require removal of approximately 100 metres of stream/wetland that has already been impacted by historical site works and stream diversions and infilling. (This is not a pristine environment.) Application was made for a non-complying activity. It was proposed to provide offset restoration at another 'like for like' wetland in the Auckland region. Approximately five times the wetland area would have been restored to provide 'no net-loss' of ecological function and values. The new NES Freshwater now makes the wetland removal a prohibited activity. A photo of the wetland to be replaced is provided in **appendix 1**.

The Process Leading to the Regulation

The government commenced consultation on this issue with the release of a discussion document and a proposed NPS and NES in September 2019. Under the consultation draft of the NES, earthworks activities in wetlands and their margins were to have discretionary or non-complying status (unless they were expressly for drainage where they were to be prohibited).

In the final document (which was released on 3 August 2020 for promulgation on 3 September 2020), the definition of natural wetlands was amended and the activity status for all earthworks was changed to prohibited'.

At some point between the release of the proposed and final NES, and post Environment Minister David Parker's Cabinet paper, there appears to have been a change to the NES provisions with no consultation with those who are materially affected by it. Information released by the government under the OIA suggests that these changes occurred without adequate evaluation or consultation.

If this change had been properly evaluated and put to the industry for comment, then the unintended consequence set out in this paper would have become apparent.

In the interim period the Independent Advisory Panel report supported the proposed draft and, importantly, said they oppose the use of prohibited activity status.

An exposure draft of the documents was produced but this was not provided to the extractive sector when this was made available for final comment. An evaluation report, produced by consultants, did not include any specific reasons for widening the scope of prohibited activities.

The Regulatory Impact Analysis

The Regulatory Impact Analysis (RIA) included a cost-benefit analysis of how the proposals would impact on extraction activities. It would seem this analysis led to decisions to change the activity status to 'prohibited.' But the cost-benefit was inadequate for the following reasons:

- The appropriateness of the data set of locations and sizes of wetlands used in the analysis has been questioned as the definition of wetlands used may not have corresponded with the RMA definition.
- It relied on an overseas study of the value of ecosystem services provided by wetlands. There was no evaluation of whether that valuation was appropriate to all wetlands within the RMA definition.
- It used as a value of minerals a figure of around \$600m based only on existing mining permits for coal reserves that would be affected by the proposals. Not only did this overlook those reserves not currently subject to a mining permit, it also ignored all other minerals i.e. gold, aggregate, iron sands etc. Data provided by OceanaGold showed that the proposals would prevent access to around \$1 billion of gold at Macraes alone yet this was not incorporated in the analysis. If the true value of what is at stake in terms of the value of the mineral resource had been incorporated, the cost-benefit analysis would have delivered a much different result.

The RIA also understated the area of land affected by the regulation. It estimated this to be only 3% of the total area of natural wetland but this estimate included only land under coal mining permits. Also, most importantly, the way mine and quarry developments are configured on available land parcels means small areas of wetland can disrupt much larger areas of development. Wetland areas are dotted in their millions around the landscape; a single wet area (which would meet the definition of a natural wetland) could sterilise 150 million tonnes of aggregate resource, as is the case at Drury Quarry, for example.

3. Discussion of the issues

The definition of natural wetlands

There is merit in clarifying the definition of a natural wetland (including, perhaps, a clarification of "improved pasture") to remove ambiguity and reduce the uncertainty. There may also be scope for reducing uncertainty by amending the published implementation guidelines, though this is not a statutory instrument.

However, changing the definition is only part of the solution needed. The issue of sterilising current and future mining on non-urban land must be addressed. These projects should be able to be assessed on their merits; and by applying the effects management hierarchy which would enable a net overall improvement in wetland values through offsetting and compensation etc.

The effects management hierarchy which enables offsetting and compensation to occur is an important part of the resource management regime. In **appendix 2** we have provided case studies showing how offsetting and compensation for natural wetlands in the minerals and aggregate sector can work well.

Mineral and aggregate extraction projects need to be considered case-by-case with access to the effects management hierarchy allowed if rational and efficient development is to occur.

Why prohibited activity status sterilises minerals and aggregates extraction

Under the current regulation, the prohibited activity status means extractive sector earthworks are restricted to those areas that don't meet the definition of natural wetland. Such an approach might work for economic activities that are not constrained in terms of where they are carried out, but they do not work for the extractive sector due to characteristics that are unique to it.

Economic mineral deposits are locationally constrained. Extraction can only happen where the minerals are physically located and where the industry is able to access them cost-effectively. This applies to all minerals including aggregate, which is particularly pertinent given the expense of transporting aggregate to where they are to be used.

Mining and quarrying are typically the highest-value use of commercial land-based activities and where the value of the wetlands is not high, a mechanism should be available for weighing up proposals.

Because of their scarcity and the cost of extraction, mining and quarrying activities have a relatively small footprint across the country. It is also important to note they are a temporary use of land, with the land either returned to its pre-mining state, or used for other commercial or community activities once rehabilitation is completed.

Flexibility mechanisms are needed for mineral and aggregate extraction. The effects management hierarchy works well in relation to wetlands. Offsetting and compensation are able to ensure that allowing extraction activity is able to provide a net positive to the environment, over time.

Not all wetlands are pristine and of high value. A case-by-case approach that enables a consideration of the value of a wetland when assessing proposed industrial activity with adverse effects on them is needed.

4. The Solution

As argued in the previous discussion, the prohibited activity status will act to sterilise mining and quarrying activities in relation to natural wetlands. By changing the activity status for earthworks to 'discretionary', applications can be considered on a case-by-case basis and the effects management hierarchy can be applied to produce the best possible outcome for New Zealand.

A discretionary activity status would require resource consents to be applied for, and this sets a high bar for applicants who would have to show they are able to avoid, remedy, mitigate, and/or offset and/or compensate adequately for the environmental effects of earthworks on natural wetlands. New Zealand's highest value wetland areas would not be put at risk under these safeguards because in practice no proposed offsetting or compensation would be adequate to meet the purpose of the RMA.

As part of the proposed solution there will also need to be minor amendments to the National Policy Statement for Freshwater Management to align it with the NES - Freshwater.

Appendix 1 – Examples of Wetlands

1. Wetlands at Deepdell



3. EnviroWaste - 100 metres of wetland that was to be replaced



Appendix 2 - Examples of offsetting for impacts on natural wetlands from Bathurst Resources

1. Canterbury Coal Mine - Tara Gully wetland

The Upper Tara Stream Wetland was considered by Bathurst's consultant ecologist to be ecologically significant under the ecological criteria for determining ecological significance in Appendix 3 of the Canterbury Regional Policy Statement. It was significant because it meets the criteria for representativeness (criterion 1) and rarity/distinctiveness (criterion 3). This wetland is also likely to qualify as a natural wetland as per the definitions in the NPS-FW.

Bathurst applied for resource consent to remove approximately 540m2 of the Tara Stream wetland (total area approximately 1.4ha or 14,000m2) to create a sediment retention pond. The activity was deemed a non-complying activity in the ECan land and water plan and was inconsistent with policies in the council's Regional Policy Statement. The company proffered a biodiversity offset package that provided an overall net positive effect for wetlands in the wider Waianiwaniwa catchment by committing to undertake crack willow control, other weed control, and restoration planting over an area of 2900m2 of the Bush Gully wetland complex . This wetland system is also habitat for the endangered Canterbury Mudfish / Kōwaro. Crack willow is a threat to wetlands in general and only a small area of crack willow was present in the Bush Gully wetland system. It is also harmful to mudfish habitat as the root system clogs the small waterways and removes habitat.

In determining the extent of effects and the benefits of the offset package, the Council was able to approve the resource consent application with appropriate conditions.

2. Escarpment Mine

The Escarpment Mine footprint lies on the Denniston Plateau (c.16km northeast of Westport). The area is conservation land administered by the Department of Conservation. The majority of the Denniston Plateau has been determined to be a significant wetland in the West Coast Regional Council land and water plan. This assessment was based on a desktop exercise undertaken by external parties (predominantly DOC). The majority of the area meets the NPS-FW criteria as a natural inland wetland.

The resource consenting process for the Escarpment Mine (2011) considered the non-complying status of activities in schedule 2 wetlands, but on the weight of the mitigation, financial benefits of the project and the offsets, decision-makers determined that an approval was appropriate.

One of the main measures used to remedy the extent of effects on wetlands is vegetation direct transfer (VDT). Vegetation including wetlands (pakihi) are picked up and translocated to another location, normally within the mine site, to an area that has been completed. There was also a significant offsets and compensation package proffered for effects on biodiversity values that could not be avoided, remedied or mitigated. This package predominantly involved weed and pest control over the remainder of the Denniston Plateau, and the nearby Heaphy Valley (compensation). Recent monitoring and reports are showing a positive outcome for the work being undertaken in the Heaphy Valley.

The mitigation package including VDT, and the compensation and offsets package along with all of the other conditions of consent enabled both the Minister of Conservation and the Environment Court to approve over 100ha of mining on the Denniston Plateau within an area designated as a significant wetland.

3. Cypress Mine VDT

The resource consents for the Cypress Mine, which is part of the Stockton Mine, considered the potential adverse effects on the red tussock wetland within the Cypress Valley. Consents were granted on the basis that this wetland could be moved and stored and then returned on completion of mining. To date the majority of the red tussock wetland has been moved to a temporary storage area. Monitoring over the last approximately 10 years has shown that this technique is effective and provides proof that with careful management these habitats can be relocated.

Photos of Vegetation Direct Transfer (VDT) tussock

The temporary tussock storage pad (Cypress) another VDT site on Stockton



Another VDT site on Stockton



Photos showing what red tussock wetland looks like during stripping, and the temporary storage pad. Tussock is still stored on the temporary site as Bathurst has not yet created a final landform to where it can be returned. However, monitoring shows the tussock (and wetland) in the storage pad remains healthy.

Cypress tussock stripping in progress



McCabes tussock pad from drone footage





From:	S9(2)(a)	
To:	Hayden Johnston	
Subject:	FW: FW Regulations (Commercial in Confidence)	
Date:	Thursday, 18 February 2021 5:20:41 pm	
Attachments:	image001.png	
	image003.png	
	image004.png	
	Assessment Report 201900432 201900444 - redactions highlighted pdf	Attachment withheld as Out of Scope
	Letter to WRC re wetlands and Freshwater NPS NES[1].pdf	
	sherylr 17-12-2020 18-26-33.pdf	
	Wethender (Overthee) and	

MFE CYBER SECURITY WARNING

This email originated from outside our organisation. Please take extra care when clicking on any links or opening any attachments.

Hi Hayden,

In case it bounces, I am re-sending the below email with the slides PDFed (as it turned out to be a 22MB email)

Regards,

S9(2)(a)

GM Corporate & Legal Affairs NZ

OUR PURPOSE MINING GOLD FOR A BETTER FUTURE

OceanaGold Corporation 22 Maclaggan Street Dunedin 9016 New Zealand

Please consider the environment before printing this e-mail

OceanaGold Corporation is a low-cost, mid-tier, multinational gold producer with significant operating and development expenses. The Company owns a suite of high quality assets in the Philippines, New Zealand and the United States and is publicly listed on the Toronb and Australian stock exchanges under the trading symbol OGC.

9(2)(a)

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From: S9(2)(a)

Sent: Thursday, 18 February 2021 5:11 PM To: 'Hayden Johnston' <Hayden.Johnston@mfe.govt.nz: Subject: FW Regulations (Commercial in Confidence)

Hi Hayden,

Thank you for your time last week at short notice.

I have attached a **short slide set** based on the one I showed you when we met, with a little extra definition around the issues. This describes the issues impacting the Quattro project at Waihi. This and the Deepdell project at Macraes were the two mine-life extension projects that we initially raised concerns about in our submissions on the NPS/NES FW, but we accept that both were just theoretical at the time. They are very much working examples at this stage.

This links through to the Quattro animation: https://www.projectquattro.info?wvideo=ivlp9ujaf0

I have also attached the Reasons for the **Overseas Investment Act consent** that allowed the company to purchase the land needed for the tailings storage that forms a critical part of the Quattro project. OIA consent was also given for the purchase of land required for the Rock Stack. These consents record the position ultimately accepted for the purposes of the OIA that options are limited for locating storage for overburden and rock displaced as part of the mining process.

Finally, I have **attached** the correspondence (including links to drone footage and copies of technical studies) that we have exchanged with the Waikato Regional Council seeking to progress this issue ahead of lodging consent applications. This illustrates the kinds of analyses that have been used in an attempt to resolve the uncertainties around the definitions of "wetland" and "natural wetland". The process between OceanaGold and the Council of seeking further information and clarity around exactly how the features at issue in Waihi fit within the natural wetland definition and exclusions is ongoing. There remains a risk that one or more of these features does not

unequivocally fall within the exclusions to the definition of a 'natural wetland'. If that is the conclusion, then without a change to the definition or some other relief it threatens to derail at least part of Project Quattro, with significant implications for the company's ability to further develop the gold resource, and to deliver the various related employment, economic, social, and biodiversity benefits that will accompany the development.

Regarding this issue of locational constraints, in summary:

- Selection and consenting of a project footprint for ancillary infrastructure connected to a pit or underground mine requires a weighing of a variety of environmental, technical (hydrological & engineering etc) and amenity impacts to reach a decision on final location.
- The resource consent hearing offers the chance to review this selection process, including consideration of whether the location is dictated by "functional need" (as defined in st14 of the NPStandards 2019).
- We accept that irreplaceable ecology may, after careful environmental assessment and analysis of the
 alternatives, be deemed "off-limits" because the loss is unable to be off-set and the effect of that may be to
 prevent a project from proceeding. In other words, even where there is a functional need to locate in the
 footprint of a wetland, if the values of the wetland are such that the loss cannot be off-set, that may
 constitute an environmental "bottom line" that may well rule out a particular site.
- But where off-setting is offered the best way to assess the wetland values that will be lost and the value of
 their replacement is an evidence-based hearing. Prohibited status (or non-complying status, where the
 Objectives and Policies of the relevant instruments rule out off-setting) will prevent that hearing taking
 place.

At Quattro, as you noted, the issues are definitional as well as substantive. As discussed, it is not actually clear that the wetlands that will be impacted meet the minimum criteria of a "wetland" or a "natural wetland" and that also becomes a difficult issue to resolve where acceptance of the application for processing, itself, hinges on the issue. An Environment Court declaration proceeding to determine activity status may be required as a precursor to lodging consent applications, later this year. It cannot have been the intention of the NES to create such uncertainty and to raise the prospect that unavoidable impacts that are entirely capable of being addressed to result in no net loss or better are unable to be considered, and that as a result important development that benefits New Zealand is frustrated. I hope I am not talking out of turn to say I understand a large council (the size of the Waikato Regional Council) may need something like 10-20 new-hire ecologists, alone, to undertake surveys of wetlands to the level expected by these regulations. In front-loading these assessments into the processes of the RMA that pre-date the lodging of a resource consent application, the regulations represent a significant resourcing issue for the Councils. I am sure the authors of the attached correspondence from the Waikato Regional Council would be happy to share thoughts on the uncertainties and complexities of these regulations and am happy to authorise the MfE to share the contents of this email with the Council if that would assist.

The attached copy of the Reasons for the OIA decision is the unredacted version. While we are now engaging publicly about the Quattro project, aspects remain confidential. If this email or its enclosures are subject to release under the Official Information Act, I would be grateful if we could be consulted first on anything that might remain commercial-in-confidence at that time.

Please feel free to come back with any queries you may have on the attached correspondence or any other matter.



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17th December 2020

Waihi Gold Company Ltd PO Box 190 Waihi 3641 Attn: S9(2)(a) Via email S9(2)(a)

Dear S9(2)(a)

Project Quattro - NPSFM and NESF

As requested, I have reviewed the document titled "Re: Quattro Wet Areas and the Implications of the NPSFM and NESF", dated 2 December 2020 recorded as document number 17742247 on the Waikato Regional Council's electronic monitoring system. Thanks for the links within the document to the drone footage I found these to be very insightful and helped provide a different perspective of the landscapes in question and their surrounds.

I have assessed the document and drone pictures and have provided comment on the following:

- 1. Whether I consider that the area can be consider to be a "natural wetland" under the NPSFW or not;
- 2. Where I am not sure what further information would be required to help determine further consideration of whether it is a natural wetland.

Please note that the NPSFW provides for a "wetland delineation protocol" which is referred to in 3.23(3) of the NPSFW. Section 3.23(3) states:

"In case of uncertainty or dispute about the existence or extent of a natural inland wetland, a regional council must have regard to the Wetland delineation protocols (see clause 1.8)."

The Freshwater NPS 2020 requires regional councils to have regard to the Wetland Delineation Protocols in cases of uncertainty or dispute about the existence or extent of a natural wetland. This protocol uses three criteria for identifying and delineating wetlands: vegetation, soils, and hydrology. This protocol appears to be workable if there is clear scientific guidance available for the three identified criteria. As far as I am aware there is criteria available for vegetation and soils put out by Landcare but not for the hydrological criteria and further, I note that this existing criteria pre-dates the NESF and the 2020 version of the NPSFW.

There is one school of thought around that this protocol solely provides for the definition of what constitutes a wetland for the NPSFW and NESF. This is a somewhat reductive approach and does not appear to have regard to current land use, scale, or actual ecological values. However, the Company might want to consider and specifically comment on this protocol and any relevant or applicable criteria and any further matters that should be considered when assessing whether an area can or should be considered a natural wetland under the NESF and NPSFW or not.

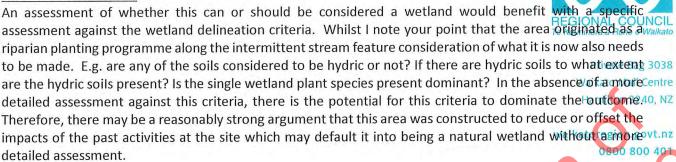
> HE TAIAO MAURIORA HEALTHY ENVIRONMENT HE MHANGA PAKARI STRONG ÉCONDMY HE MAPORI HIHIRI V(BRANT COMMUNITIES



Private Bag 3036 Waikato Mail Centre Hamilton 3240, NZ

waikatoregion.govt.nz

Gladstone Headwaters



Waikato

Gladstone Wetland

The Company's advice that this is a wetland is accepted. I am of the opinion that this area would be considered a natural wetland under the NPSFW and NESF.

Northern Rock stack

There appears to be a reasonable argument that this area is not a natural wetland. However, if only the wetland delineation protocol and its criteria were applied there may also be the argument that parts of the area may be considered a natural wetland.

I would welcome further discussion about this area and how to assess its status further.

TB1

Despite the origin of this area I consider that there may be an argument that this area was constructed to reduce or offset the impacts of the previous activities at the site and as such may now be considered to be a natural wetland under the NPSFW.

I would welcome further discussion about this area and how to assess its status further.

Eastern Stream Water Storage Wetland

The letter from Rod Clough at attachment 3, identifies that this area is part of a concrete dam structure that was "10-12 feet deep". Further information on what this water storage wetland was constructed of is required before I am able to provide any further comment. Applying the wetland delineation protocol and its criteria again there may be the argument that this area could be considered a wetland. However, if the wetland is located/contained within a concrete structure then this will likely have an influence on whether it can in fact be considered to be a natural wetland or not.

TSF3 – Farm Pond

Given the origins of the construction of the pond – i.e. as a silt pond and current use, I consider there is a strong argument that if it has any wetland characteristics, then this could be considered a wetland constructed of artificial means.

Please note I have assumed that all of these areas identified are at least 0.05 hectares in area – the size of each area is not detailed within the document.

Conclusion

Overall, I consider that some areas are clearly natural wetlands or not e.g. Gladstone wetland and TSF3 – Farm Pond, but some areas are less clear as to their status and more information is required. In particular, I consider that it is less clear of the status of the Gladstone Headwaters and TB1 and further discussion on these areas is required.

 HE TAIAO MAURIORA
 HEALTHY ENVIRONMENT

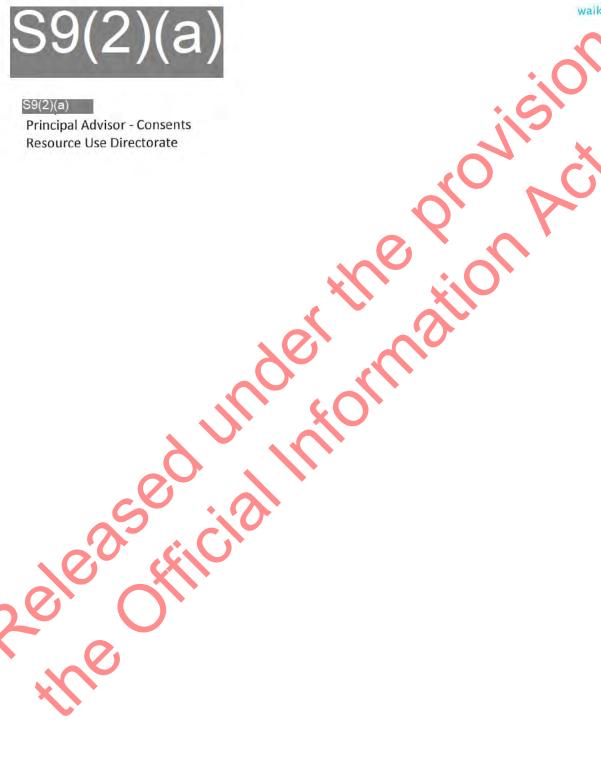
 HE ÕHANGA PAKARI
 STRONG ECONOMY

 HE HAPORI HIHIRI
 VIBRANT COMMUNITIES



Should you have any questions about this letter then please contact me on S9(2)(a) S9(2)(a)

Yours faithfully



Private Bag 3038 Waikato Mail Centre Hamilton 3240, NZ

waikatoregion.govt.nz 0800 800 40

HEALTHY ENVIRONMENT HE TAIAO MAURIORA HE OHANGA PAKARI STRONG ECONOMY HE HAPORI HIHIRI VIBRANT COMMUNITIES



Wetlands February 2021





INNOVATION PERFORMANCE GROWTH

OCEANAGOLD

Quattro

9(2)(b)(i)

- 3 areas impacted by "borderline" wetlands issues (definitional);
 - Existing Martha open pit (proposed expansion)
 - New waste rock stack (to allow the expanded pit to be excavated)
 - New smaller pit (to provide both production and an early source of construction material for tailings space, underground back-filling and/or early-stage tailings capacity)
- Regional Council considering (with assistance from experts)
- May require resolution in the Environment Court ahead of lodging or on appeal/judicial review

Definitional Issues in these 3 Areas

The FW regulations prevent excavating, backfilling or draining "natural wetlands". But this excludes temporarily wet pasture & man-made ("constructed") wetlands (if not built for off-setting purposes). Quattro has 3 project components where it will be necessary to establish that these exceptions apply:

- At Martha Pit N-E pit rim (potential wetland x 1) the area concerned has been induced over decades by historic workings (ponds & a dam) and therefore ought to be a man-made wetland.
- At Gladstone Pit (potential wetlands x 2):
 - One area within the pit footprint is running (versus standing) water (so not wetland);
 - A second area that borders the pit, while natural wetland, can be managed to avoid draining it.
- At Northern Rock Stack (potential wetlands x 2):
 - One area within the NRS footprint is mainly pasture and artificially kept wet ("induced") as a result of a manmade fence-line (because of that, it straddles the man-made & temporarily-wet pasture exceptions);
 - A second area within the NRS boundary footprint is a former silt pond, since planted out as wetland. That ought to make it a man-made wetland & we can show it is not the result of previous formal off-setting measures.

Note: TSF3 includes a revegetated silt pond that everyone agrees is man-made (not captured).

Martha Pit Expansion: induced by dam v constructed



OCEANAGOLD

INNOVATION PERFORMANCE GROWTH

Martha Pit Expansion (cont'd)

- Our technical advice is that this wetland is induced (so man-made). We consider that means it is "constructed" and not protected as a natural wetland. But this could be clearer.
- WRC have asked, for example, whether the wetland is located within a concrete structure.



2019



Gladstone Open Pit: stream/spring-fed Seep ends v wetland begins



Gladstone Wetlands (cont'd)

- One area, south of the pit, is accepted to be natural wetland (red outline).
- The other area is the riparian (river margin) zone to the north of that wetland (affected by open pit), enhanced by riparian planting, with just one plant growing there that would be classed as a wetland species
- WRC say: more information is needed. As a matter of definition, is the water source (here the spring) that feeds a wetland, part of the wetland? Also, is the soil wetland-like? How dominant is the single wetland species? And was it planted as an off-set (and untouchable for that reason alone?)
- Given the discretionary status of works in streams, there is a good basis for saying the spring is not part of the wetland. But again, the definition could be clarified on this point.



Rock stack: >50% pasture (but bunded ∈ always wet)



NRS Wetlands

- The area to the north is dominated by pasture species and kept wet by a man-made raised fenceline. We say that means it is not a protected "natural wetland" but the case straddles 2 definitions – it could be clearer.
- To the south, the area was a silt pond, subsequently planted out by the mine as part of riparian enhancement planting. So we say it is constructed.
- WRC say: needs some more discussion. Take the point to the north, but want to analyse it further against the strict letter of the law. To the south, there could be an issue given the riparian planting may have been some form of off-set. We can show it wasn't (but clarity on formal versus informal offsets would be helpful).



Recommendations

Clarify availability of discretionary status (to allow a case to be tested) for significant projects with locational constraints, with effective off-setting as a bottom line for the granting of consent.

Clarify definitions to exclude from the definition of natural wetland:-

- Wetlands that have been induced by man-made structures or land-forms;
- Wetlands that were created as part of an informal planting or enhancement programme (one that was not part of remedial, mitigation, off-setting or compensation measures required by the conditions of or other formal obligations entered into as a necessary part of the granting of resource consent);
- Rivers, streams, springs and water courses etc that are not natural wetlands in their own right



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2 December 2020

The General Manager Waikato Regional Council Private Bag 3038 Waikato Mail Centre HAMILTON 3240

Attention: S9(2)(a)

Dear S9(2)(a)

Re: Quattro Wet Areas and the Implications of the NPSFM and NESF.

As you know, the National Environmental Standard for Freshwater ('NESF') and the National Policy Statement for Freshwater Management 2020 ('NPSFM'), both of which took effect from 3 September 2020, make specific provisions related to natural wetlands.

Both documents have potentially significant implications for the consenting of Project Quattro due to the need to undertake earthworks within some permanently or intermittently wet areas. For this reason, Oceana Gold (New Zealand) Ltd ("OGNZL") has commissioned additional studies in order to fully understand the implications of both documents - in particular whether the wet areas affected by the earthworks would fall within the NPSFM definition of "natural inland wetlands", in which case the earthworks would be a prohibited activity.

Please find attached the following documentation:

- Boffa Miskell Ltd, Project Quattro Wetland Assessment, 2 December 2020 (Attachment 1),
- Engineering Geology Ltd, <u>Development Site Memo on Possible Wetland Areas</u>, 27 November 2020 (Attachment 2), and,
- Clough and Associates Ltd, <u>Eastern Stream Wetland</u>, Grey Street Waihi, 27 November 2020
 (Attachment 3).

Based on these studies OGNZL is of the view that only one wet area, the Gladstone wetland, meets the definition of "natural inland wetland". The other wet areas are either constructed wetlands, streams, springs, riparian margins or improved pasture.

The only impact on the Gladstone wetland from Project Quattro will be the loss of a portion of its current water inflow. As part of Project Quattro OceanaGold will be assessing measures to maintain the flow into the Gladstone wetland during and following the construction of the Gladstone pit.

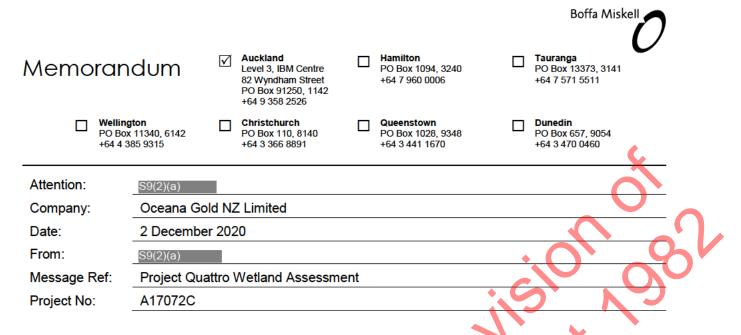
We look forward to the opportunity to meet with you and your legal/technical experts to discuss this matter at the earliest opportunity.

Oceana Gold (New Zealand) Ltd (Incorporated in New Zealand NZBN 9429 0377 53023) 43 Moresby Ave Waihi 3641 New Zealand P O Box 190 Waihi 3610 New Zealand Telephone: +64 7 863 8192 Facsimile: +64 7 863 8924 Website: <u>www.oceanagold.com</u> www.waihigold.co.nz As you will appreciate it is important that both OceanaGold and Waikato Regional Council have a clear and common understanding of the extent to which the new NPSFM and NESF impact on Project Quattro, and in particular the activity statuses of applications that affect these various features.



Senior Environmental Advisor - Projects

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1. Introduction

The National Environmental Standard for Freshwater ('NESF') and the National Policy Statement for Freshwater Management 2020 ('NPSFM') were released on 5 August 2020, and took effect from 3 September 2020. Both documents make specific provisions related to natural wetlands, and both documents have potentially significant implications for the consenting of Project Quattro and the management of wetlands as part of the project. Boffa Miskell Limited (BML) has prepared an ecological assessment of the ecological features relating to Project Quattro, including freshwater wetlands¹. The report also included an assessment of the effects of Project Quattro on the aquatic ecology, including wetlands, and proposed an overall effects management strategy for these effects.

In this memorandum, we provide an understanding of the application of the NPSFM and NESF for Project Quattro. We do this through a brief analysis of the relevant parts of the NPSFM and NESF referencing wetlands. In particular, we focus on the definition and the policy direction for natural wetlands. We provide a revision of the classification of wetlands at the Project Quattro site.

2. <u>National Policy Statement for Freshwater Management and National Environment Standards</u> <u>Freshwater</u>

The National Policy Statement for Freshwater Management (NPSFM) came into force on 3 September 2020. The objective of the NPSFM is to ensure that natural and physical resources are managed in a way that prioritises:

first, the health and well-being of water bodies and freshwater ecosystems.

second, the health needs of people (such as drinking water).

third, the ability of people and communities to provide for their social, economic, and cultural well-being, now and in the future.

The NPSFM directs Regional Councils to undertake a variety of policy inclusion or modifications to policy, as well as to undertake specific tasks. The NPSFM also directs Council to be satisfied that the Effects Management Hierarchy' is applied to the existing and potential values.

(a) (b)

(c)

¹ Boffa Miskell (2020). DRAFT

3. RMA and NPSFM wetland definitions

The RMA definition states:

• Wetland includes permanently or intermittently wet areas, shallow water, and land margins that support a natural ecosystem of plants and animals that are adapted to wet condition.

The NPSFM definition² states:

- **natural wetland** means a wetland (as defined in the Act) that is not:
- (a) a wetland constructed by artificial means (unless it was constructed to offset impacts on, or restore, an existing of former natural wetland); or
- (b) a geothermal wetland; or
- (c) any area of improved pasture that, at the commencement date, is dominated by (that is more than 50% of exotic pasture species and is subject to temporary rain- derived water pooling.
- Improved pasture means an area of land where exotic pasture species have been deliberately sown or maintained for the purpose of pasture production, and species composition and growth has been modified and is being managed for livestock grazing

In clarifying these definitions, we note that the RMA wetland definition is relevant, that natural wetlands are not restricted to indigenous ecosystems or biota, and no reference is made to the significance, quality or condition of the wetland feature.

We also note that, despite this intent, there remains some uncertainty at the point where the definition (a) and (c) intersect, and where an area of improved pasture coincides with an area that has likely been formed by an artificial 'barrier or a construction'. Existing views amongst ecologists vary, with a prevailing view emerging that the 'wetland constructed by artificial means (and therefore purposeful) does not refer to wetlands formed as a consequence of a barrier or obstruction constructed downstream (e.g., causeway and culvert). These latter wetland types are more an accidental or unintended consequence of an activity, and are thought by some ecologists to qualify as natural wetlands for the purpose of the definition, even though they did not occur naturally. On the other hand, discussions with Council regulatory staff, and their agents appointed to the project, were of a view that the intent of the definition (and its exclusions) held strong.

Our view is that much will depend on whether a wetland feature was present prior to the barrier being constructed; in such circumstances the definition of a natural wetland would apply, and the result of the construction of the barrier would be some amount of change to an existing natural wetland. By contrast if a wetland feature was not present before the construction of the barrier, the subsequent wetland will be constructed and the exclusion will apply. At many locations, it is likely that the history of whether any wetlands pre-existed a construction may not be easily known, and will need to be confirmed by historical research, or otherwise inferred.

4. NPSFM natural inland wetlands

The NPSFM requires that:

Every regional council must include the following policy (or words to the same effect) in its regional plan(s):

"The loss of extent of natural inland wetlands is avoided, their values are protected, and their restoration is promoted' (with exceptions).

The policy direction provides for some exceptions, of which Project Quattro may meet in some specific circumstances. There is a narrow window of opportunity for projects listed as specified infrastructure, whereby wetland loss may be acceptable and the 'effects management hierarchy' can be applied; however,

(1)

² NPSFM, s3.21(1)

at this time, Project Quattro does not qualify as specified infrastructure. However, an argument can be applied to wetland areas that Oceana Gold has 'restored', and these are detailed below.

5. NESF regulations on natural wetlands

The NESF provides some specific regulations for natural wetland activities, notably:

- Earthworks within a natural wetland, and the taking, use, damming, diversion or discharge of water within a natural wetland, that results in complete or partial drainage of all or part of the wetland, is a prohibited activity (Reg. 53).
- Earthworks outside, but within 100 m setback from a natural wetland, and the taking, use, damming, diversion or discharge of
 water outside, but within a 100 m setback from a natural wetland, that results in complete or partial drainage of all or part of
 the wetland, is a non-complying activity (Reg. 52).
- vegetation clearance within, or within a 10 m setback from, a natural wetland, earthworks within, or within a 10 m setback from, a natural wetland, and the taking, use, damming, diversion, or discharge of water within, or within a 100 m setback from, a natural wetland is a non-complying activity (Reg. 54).

6. Wetlands at Project Quattro

BML (2020) has identified several wetland areas that occur within the footprint of Project Quattro.

- (i) Gladstone wetland and headwater;
- (ii) Gully pasture site at NRS site;
- (iii) Riparian and wetland restoration along TB1;
- (iv) A farm pond located to the east of TSF3; and
- (v) A wetland complex associated with Eastern Stream, but within the proposed expansion area of the Martha Pit.

7. Assessment methods

We carried out site visits to the following locations:

- (i) Headwater stream to the Gladstone wetland;
- (ii) Gully pasture at the NRS site;
- (iii) TB1 stream at the Northern Rock Stack; and
- (iv) The wetland complex associated with Eastern Stream, but within the proposed expansion area of the Martha Pit.

At each site we observed the wetland area, noting dominant plants, and the likely formation of the wetland area. For the NRS gully pasture, we undertook a soil and vegetation survey across two transects across the pasture gully feature, to better inform our assessment of natural wetland. Species composition was determined and canopy cover roughly estimated at 5 m intervals, from which wetland prevalence index (PI) scores could be calculated. The shallow soil horizons (approx. 30 -40 cm) were observed and photographed, with a view to determining if hydric soils were present.

High resolution UAV images were collected from each of four locations listed above and links to the images are provided for each wetland area below.

8. Gladstone Hill – Headwater stream assessment (Appendix 1)

Link to drone images:

https://www.dronedeploy.com/app2/data/5f630d424771a7d01336409b;jwt_token=eyJ0eXAiOiJKV1QiLCJhbGciOiJIUzUxMiJ9.eyJleH AiOjI1MzQwMjMwMDc5OSwiaWQiOiI1ZjYzMGQ0MjQ3NzFhN2QwMTMzNjQwOWIiLCJzY29wZSI6WyJiZjNjYjhkZjI4X0VCOTc1NDg 0NDBPUEVOUEIQRUxJTkUiXSwidHlwZSI6IIJIYWRPbmx5UGxhbiJ9.JuKfFTV0i1SP7GERt591nTzATDkAqu6fF5zA41cTNxpXPnrj22 Wfk1-FtZQydiqg0Ux2wvh8naQbeA431QlqkA

Gladstone headwater stream

The stream emerging on the slopes of Gladstone Hill provides one of the water sources for the Gladstone wetland downstream. We investigated this site for the spring(s) source and to ascertain if any wetland features occurred in the headwaters. We note that the spring(s) was dry at the time of our assessment.

The only wetland species present (*Carex secta*) were planted³, with no natural regeneration of sedges or wet-tolerant herbs. Soil profiles showed a thin layer of clay over a lower layer of deep, peaty soil and an upper layer which may have been imported topsoil.

We do not consider that the revegetated watercourse meets the definition of a natural wetland, because it is not a "natural" ecosystem, is essentially a riparian planting programme alongside the intermittent stream feature, has been planted as part of a voluntary restoration programme, and is essentially a monoculture as a result of the planting.

Gladstone wetland

The large Gladstone wetland contains substantial areas of raupō and *Carex geminata*, and local patches of giant umbrella sedge (probably naturally established), surrounded by a wide perimeter of dense flax interspersed with cabbage trees. Neither the Gladstone wetland, or the smaller wetland patches have been listed as a Significant Natural Area in the Hauraki District Plan.

As this wetland area is established/restored from an existing and previous wetland area, we consider this site to meet the definition of a natural wetland under the NPSFM. Accordingly the NESF regulations apply to this wetland.

BML understands that this wetland is outside the direct footprint of Project Quattro, but that flows to the wetland will be affected by earthworks in the Gladstone headwater stream described above.

9. Northern Rock Stack

In this area is a shallow gully feature, and a stream (TB1) with a riparian margin that has been restored.

Shallow gully pasture feature (TB1-2, Appendix 2)

Link to drone images: https://www.dronedeploy.com/app2/data/5f6311514771a7d01336409c;jwt_token=eyJ0eXAiOiJKV1QiLCJhbGciOiJIUzUxMiJ9.eyJleH AiOjI1MzQwMjMwMDc5OSwaWQiOiH2jYzMTE1MTQ3NzFhN2QwMTMzNjQwOWMiLCJzY29wZSI6WyIzYTMzNjQ3OTU4X0VCOTc 1NDq0NDBPUEVOUEIQR0xJTkUXSwidHIwZSI6IIJIYWRPbmx5UGxhbiJ9.ngHdeb8fy0EBL2tgn6wBQLJ7iH1LtlICyZ6NNVPNZ8Gc0 RC9MVq4qOut0V8y0eN5Toqi03imG3GL7QURQwtFjQ

We note that a fence line running through the feature sits on a slightly raised mound that can hold back water, and thus may result in the ponding of rainwater. As is clear from the photos, pasture grasses were the dominant cover in almost all plots, but it is not clear how much influence the fence line barrier has on the gully feature. The feature is likely to enhance the collection of rain-derived water.

We consider that the feature is excluded from the definition of a natural wetland as it is an area of improved pasture that, at the commencement date, is dominated by exotic pasture species and is subject to temporary rain-derived water pooling.

³ Carex secta is classified as an 'obligate' wetland species in the prevalence index list, but will quite readily inhabit terrestrial sites and is a common garden plant

Nevertheless, at this location we undertook a formal delineation in a transect across the site and confirmed the apparent boundary (where rushes first appear) of this feature. Soil was too dark & peaty to be of use as an indicator. PI scores were as follows:

- 3.72 (on the margin)
- 2.51
- 2.38
- 2.77
- 2.95
- 3.14 (on the margin)

We did not score the subsequent photos for Transect 2, but the composition was very similar, so we are confident that a PI would confirm this as similar to Transect 1. The scores largely sit in the 'uncertain band' of the delineation protocol.

TB1 restored stream (TB1-1c, Appendix 3)

Link to drone images:

https://www.dronedeploy.com/app2/data/5f63132b4771a7d01336409d;jwt_token=eyJ0eXAiOIJKV1QiLČJhbGciOiJUzUxMiJ9.eyJleH AiOjI1MzQwMjMwMDc5OSwiaWQiOiI1ZjYzMTMyYjQ3NzFhN2QwMTMzNjQwOWQiLCJzY29wZSI6WyJmNDRIYjY5NTIyX0VCOTc1 NDg0NDBPUEVOUEIQRUxJTkUiXSwidHlwZSI6IIJIYWRPbmx5UGxhbiJ9.ArMaoIfBTGPnDptB_87Z9crc9ZWc6FpLh7adYape-IRITNswFW1r4mECKOTImZyMay_Ko2Cl6UB4JZXRiqI-Hw

TB1 is an existing stream and the riparian margins have been restored and replanted by Oceana Gold over the past 10-15 years. There is a confluence of the main stem and a minor tributary where the area surrounding the stream confluence has a larger open area. This area is the site of a former silt pond, and is thus a lower lying area that the stream runs through.

This area has been planted but the dominant naturally occurring vegetation includes tall fescue, swamp millet, buttercup and *Machaerina rubiginosa*. These plants are considered wetland species.

The earliest historical photographs suggest that TB1 was a shallow gully running water system with no obvious wetland feature at this location. Modifications through establishment of farm tracks, and the more recent establishment of the tailings ponds and associated roads are also all likely to have influenced TB1 as discussed by Engineering Geology Limited (EGL). EGL have confirmed that a silt pond was constructed at the downstream end of the Northern Stream Diversion to manage sediment associated with its construction⁴. The drain downstream of the silt pond was realigned slightly to the north, and there is no evidence that natural wetlands were present in this area before construction of the silt pond.

The NPSFM is silent on how restoration planting sits in the definition of a natural wetland, which makes the application of the definition to this location problematic. Given the historic nature of the location, a different planting mix at the time of the restoration planting may have given rise to a different ecosystem that would not have the same characteristics of a naturally occurring wetland.

We conclude that the feature was originally a water storage/sediment pond, and its restoration has led to a complex that is constructed by artificial means and thus is not a natural wetland under the NPSFM.

Eastern Stream water storage wetland (Appendix 4)

Link to drone images:

https://www.dronedeploy.com/app2/data/5f6314254771a7d01336409e;jwt_token=eyJ0eXAiOiJKV1QiLCJhbGciOiJIUzUxMiJ9.eyJleH AiOi11MzQvMjMwMDc5OSwiaWQiOiI1ZjYzMTQyNTQ3NzFhN2QwMTMzNjQwOWUiLCJzY29wZSI6WyIyNWNhYzY2MWNIX0VCOT c1NDg0NDBPUEVOUEIQRUxJTkUiXSwidHlwZSI6IIJIYWRPbmx5UGxhbiJ9.ThDEdsmbWIWQSKn9qaHmfYdJhy7qvG0Ldf2sCAlbp3 174Jmi0mm8Ju9bHKL3rjBVxkVMEx_XX5q-j0EPRscEZA

The raupo wetland in the disused water storage pond is clearly a wetland, insofar as the vegetation is a naturally established community which forms a functioning wetland ecosystem (complete with

⁴ Engineering Geology Ltd., Letter dated 27 November 2020.

pukekos). The natural wetland plant community extends across the channel of the watercourse for some way upstream of the raupo-dominated basin, comprising abundant swamp millet, with clumps of Carex and flax (possibly planted), *Machaerina rubiginosa, Juncus* spp, buttercup and kiokio (blackberry is also a common feature but doesn't rate as a wetland species according to the prevalence index, despite being a common wetland weed). Downstream of the raupo area is a narrow channel that then broadens out into a flat area that is revegetated mainly in *Carex*, co-dominant with abundant rank tall fescue (a "facultative wetland species" according to the prevalence index), and interspersed with cabbage trees, flax, karamu and a few weeds (e.g., arum lily). From a species composition perspective, the area would qualify as a wetland, but half (at least) is planted, and it was completely dry at the time of the visit.

Historical photographs clearly show a series of water storage ponds at the location, which have clearly fallen into disuse but are still present. The legacy of these ponds is a significant modification to the waterway at the location, such that these wetlands have formed within the disused ponds. Decades of sedimentation and the slowing of the water would create ideal circumstances for wetland formation. Furthermore, the pond areas and the wetland formation have 'backed up' the valley, extending the reach of wetland formation.

Historic research and recent survey confirms that the area described above has been extensively modified in the past by the construction of a series of dams/ponds for water storage to provide water for the boilers at the Grand Junction Powerhouse/Boiler House in the early 1900s⁵.

Our view is that although a wetland has formed as a result of the disuse of the former water storage ponds, the wetland has formed as a result of artificial means in a location where a wetland did not previously exist, and therefore does not classify as a natural wetland under the NPSFM.

10. <u>TSF3</u>

Farm pond

As discussed by EGL, the farm pond located within the Ruahorehore Stream catchment has been formed as a result of the construction of TSF1A. It was clearly constructed first as a silt pond to collect sediment from the surplus soil stockpile, and is now utilised as a water storage farm pond. As it is clearly constructed by artificial means as a water storage area, it does not meet the definition of a natural wetland under the NPSFM.

⁵ Letter dated 27 November 2020, Clough & Associates.



Appendix 1

Gladstone wetland and intermittent headwater stream. Flax swampland and Carex sedgeland form the natural wetland area.



Boffa Miskell

Gladstone Hill - Headwater stream, October 2020

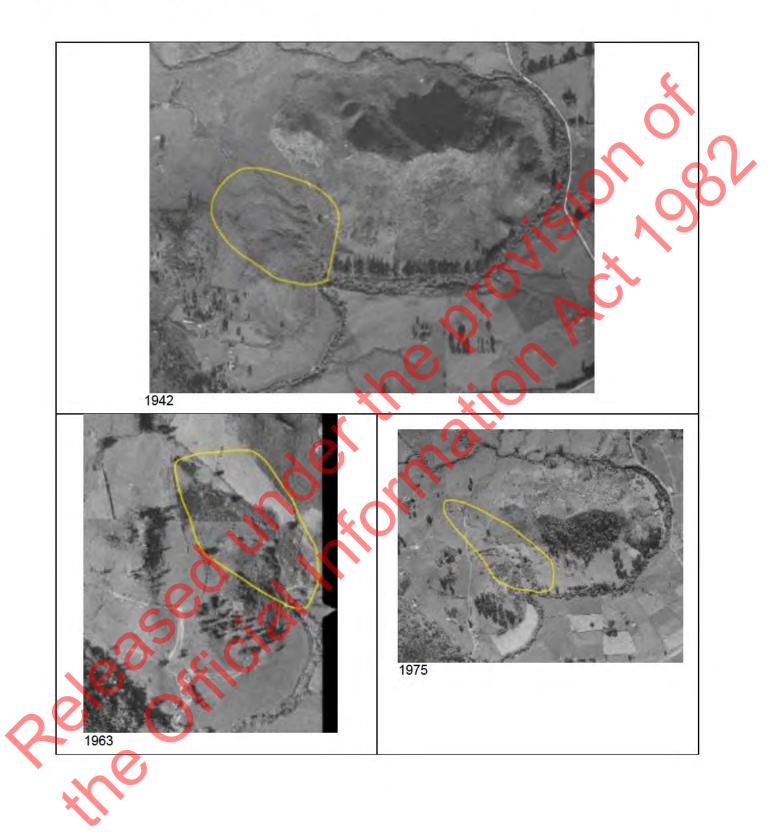


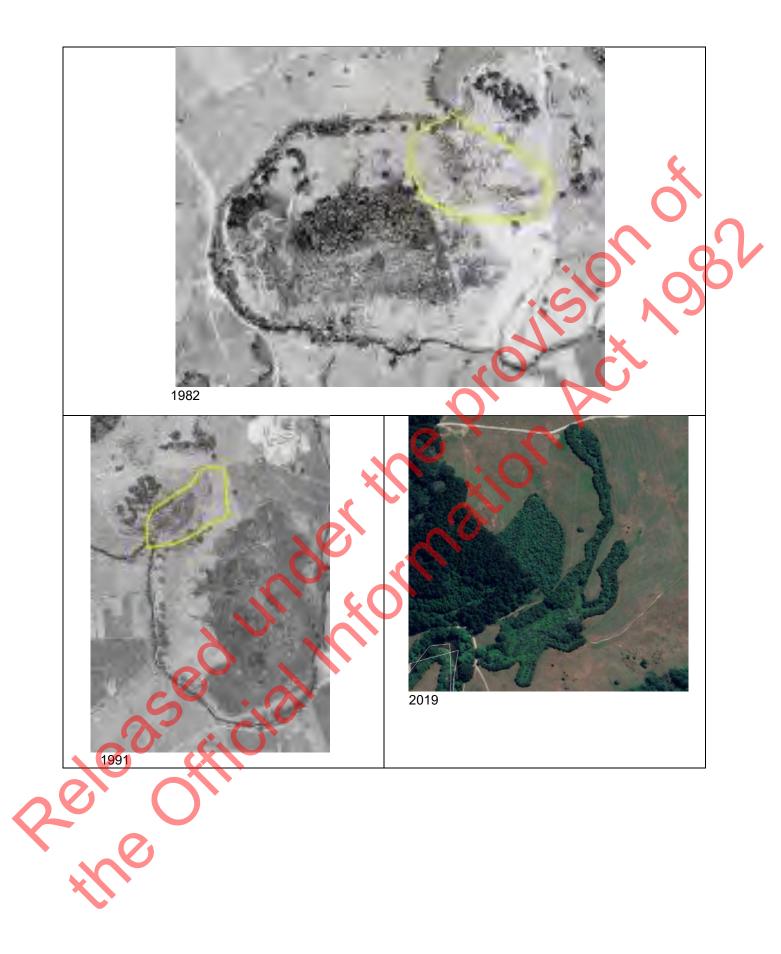
Gladstone Hill - Gladstone wetland





Gladstone Hill – Historic photos





Appendix 2

Northern Rock Stack - Shallow gully pasture feature 2020 (TB1-2)





Northern Rock Stack - Shallow gully pasture feature 2020 - wetland TB2



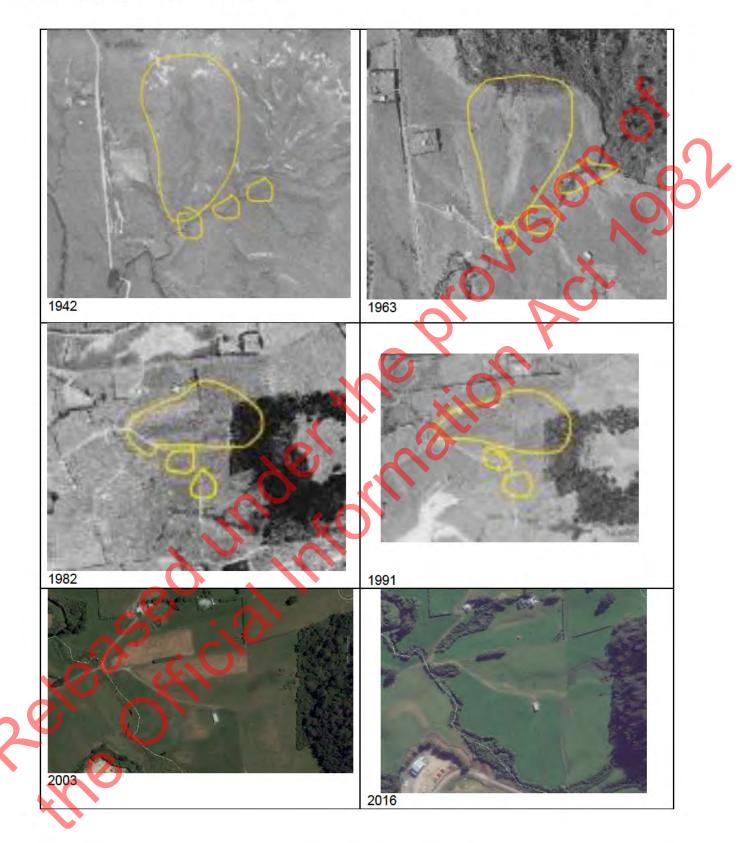




Northern Rock Stack - Shallow gully pasture feature - shallow soil profile



Northern Rock Stack – Historic photos





Appendix 3

Northern Rock Stack – TB1 silt pond wetland (TB1-1c), October 2020







Appendix 4

Eastern Stream Wetlands

Wetland areas resulting from construction of water storage ponds and culverts.



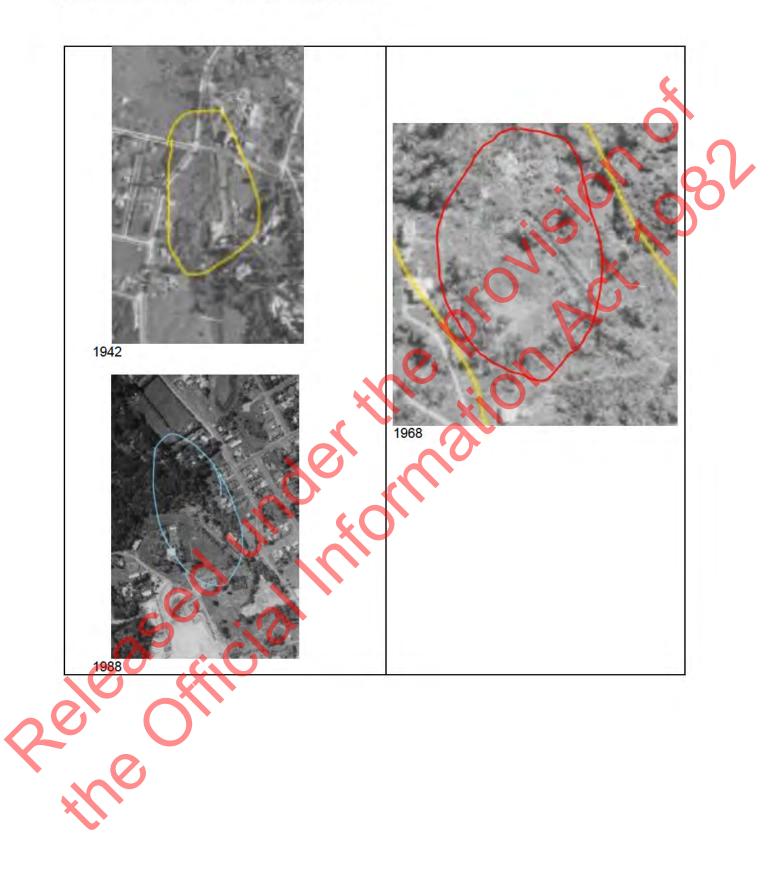


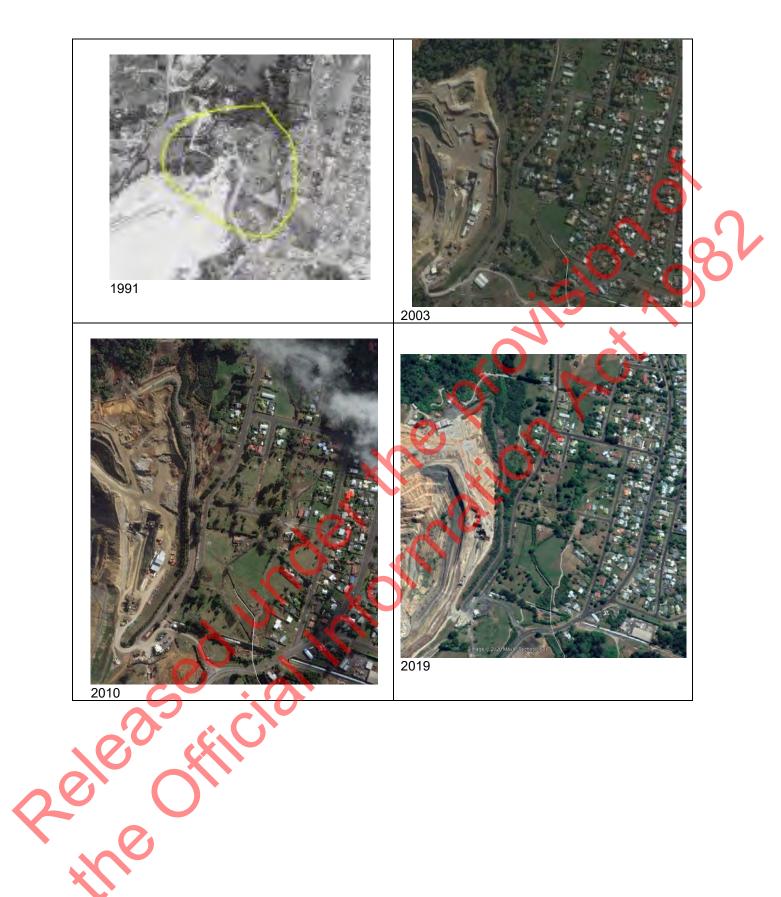






Historic features at the Eastern Stream wetlands





Attachment 2

Released under the provident



Engineering Geology Ltd

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- info@egl.co.nz
- Unit 7C, 331 Rosedale Road, Albany, Auckland PO Box 301054, Albany, Auckland 0752
- www.egl.co.nz

9018

27 November 2020

OceanaGold PO Box 140 Waihi

Attention: S9(2)(a)

Dear S9(2)(a)

OCEANAGOLD, WAIHI PROJECT DEVELOPMENT SITE MEMO ON POSSIBLE WETLAND AREAS

1.0 INTRODUCTION

This letter provides comment on two areas of the Waihi Gold Project Development Site where there has been speculation that they may have been natural wetlands at some stage. The two areas are:

- i. Near the northeast corner of the Northern Stockpile where the Northern Stream Diversion enters a watercourse that flows northwest to the Ohinemuri River. A potential wetland in this area is referred to as the TB1SP (Tributary 1 Silt Pond) Wetland and its location is shown in Figure 1.
- ii. A pond located to the east of Storage 1A. This is identified as the Surplus Soil Stockpile Silt Pond (SSSSP) and its location is shown in Figure 1.

Comments on these two locations follow:

2.0 TB1SP WETLAND

The location of TB1SP is shown in Figure 2. It is an area that comprises a pond at the eastern end which discharges into a watercourse that drains to the northwest to the Ohinemuri River. Figure 2 is a recent photograph, and the area has significant riparian vegetation that was planted by OceanaGold in the mid-2000s. An aerial photograph from 1998 (Figure 3) indicates the watercourse appears to be an excavated drain with no vegetation. In 1999 the Northern Stockpile was expanded to the north and east (Figure 4). The original footprint of the stockpile is shown in Drawing 98/1/DS-G-01. The extended footprint is shown in Drawing 98/1/DS-C-10a. As part of the extension works the Northern Stream Diversion was constructed. It is a rockfill lined open channel. Drawing 98/1/DS-C-62 shows a plan and typical cross section of the Northern Stream Diversion. At the upstream end it connects to a gully that flows down from the east. Surface water from above the Storage 2 tailings storage facility is diverted into this gully. A silt pond was constructed at the downstream end of the Northern Stream Diversion to manage sediment associated with its construction. The drain downstream of the silt pond was realigned slightly to the north. The realignment can be seen by comparing Figure 3 with Figure 5. The silt pond and realigned drain are visible in Figure





Page 2

5 which is an aerial photograph taken in 2004. This was before the extensive riparian planting which can be seen when comparing Figure 5 with Figure 2.

The land identified as TB1SP comprises land that was originally pasture and an open drain. There is no evidence that natural wetlands were present in this area before construction of the silt pond associated with the Northern Stream Diversion.

3.0 SURPLUS SOIL STOCKPILE SILT POND

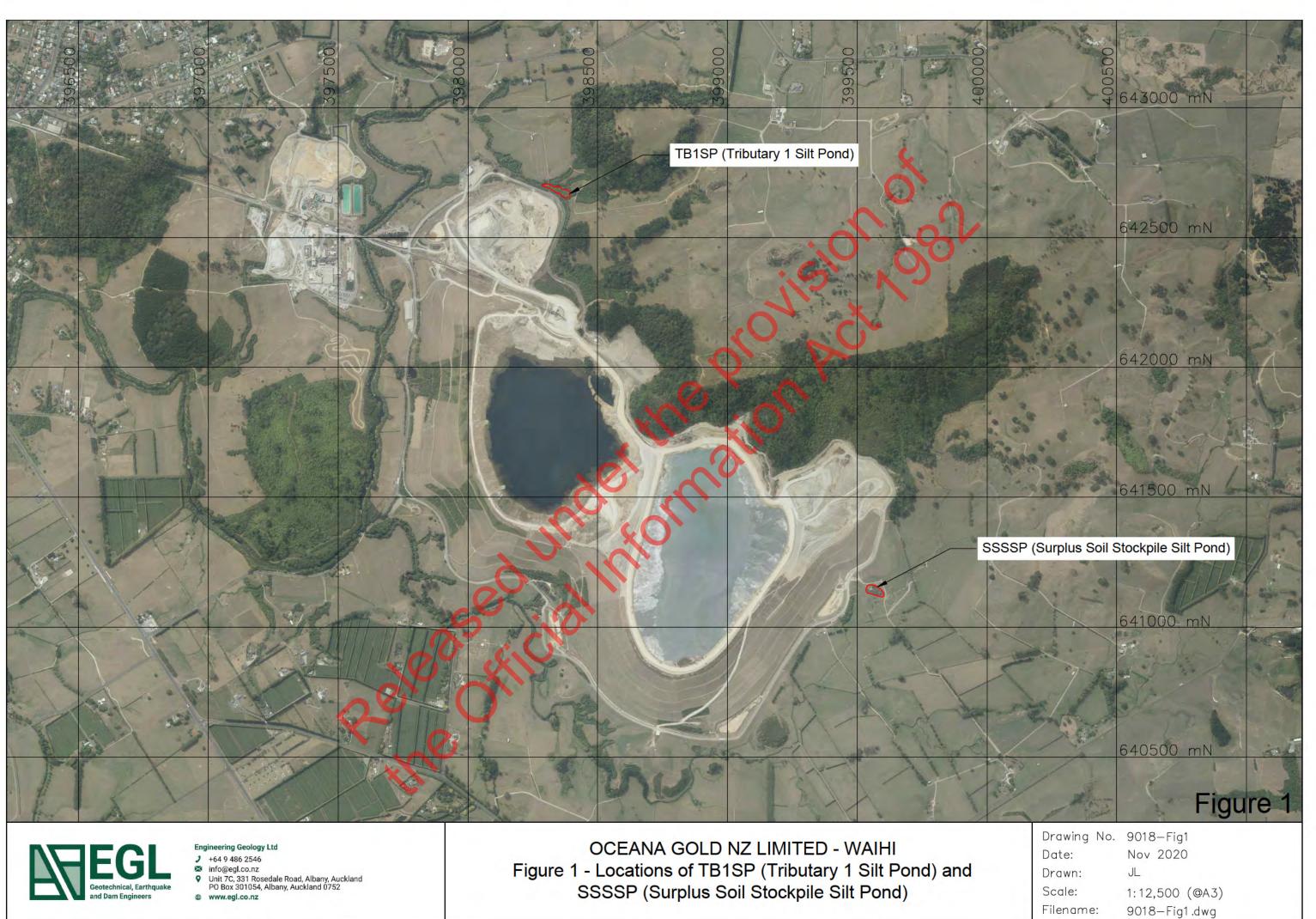
The Surplus Soil Stockpile Silt Pond was constructed in the early 2000s as part of construction of the Storage 1A tailings storage facility. It is a sediment pond constructed for the purposes of detaining sediment associated with runoff from stockpiles comprised of soils stripped from the foundations of the embankment that forms the Storage 1A tailings storage facility. The stockpiles were collectively referred to as the Surplus Soil Stockpile. Drawing 98/1/DS-G-03 shows the location of the Surplus Soil Stockpile and the associated Silt Pond. Figure 6 is an aerial view of the Surplus Soil Stockpile and the Silt Pond from 2004 when the stockpile was active. The area has since been rehabilitated and runoff to the Silt Pond is now mostly from areas that are grassed.

Prior to construction of the Silt Pond the land was in pasture and part of a dairy farm. There was no wetland in the footprint of the Surplus Soil Stockpile Silt Pond or nearby.

Yours sincerely ENGINEERING GEOLOGY LTD

S9(2)(a)

Attachments: Figures 1-6 Drawing 98/1/DS-G-01 Drawing 98/1/DS-C-01 Drawing 98/1/DS-C-10a Drawing 98/1/DS-G-03









OCEANA GOLD NZ LIMITED - WAIHI Figure 2 - TBSP1 and Associated Features

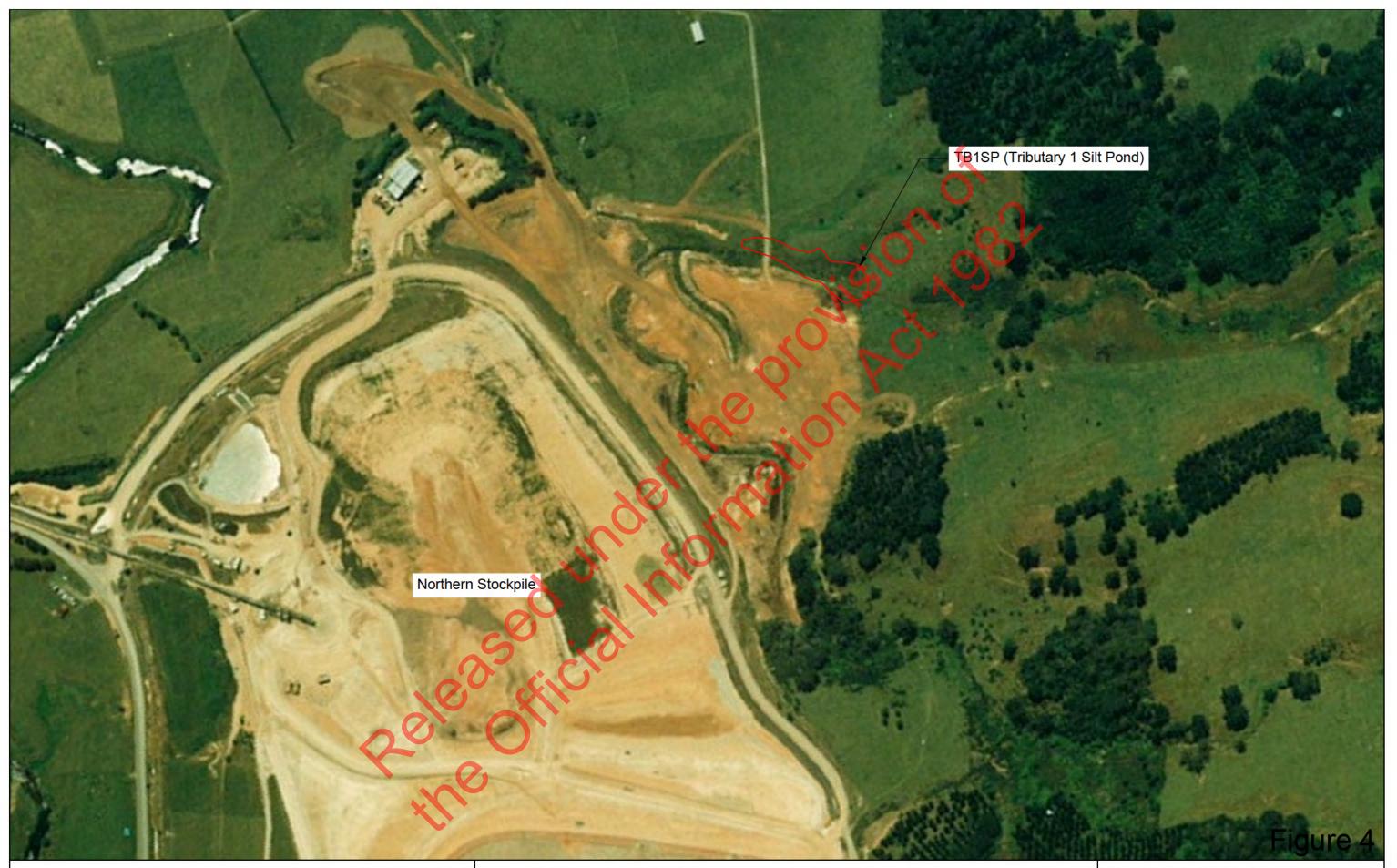
Date: Nov 2020 Drawn: JL Scale: N.T.S Filename: 9018-Fig2.dwg





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OCEANA GOLD NZ LIMITED - WAIHI Figure 3 - TBSP1 in 1998 prior to extension of the Northern Stockpile Drawing No.9018-Fig3Date:Nov 2020Drawn:JLScale:N.T.SFilename:9018-Fig3.dwg





Engineering Geology Ltd ↓ +64 9 486 2546 info@egl.co.nz ♀ Unit 7C, 331 Rosedale Road, Albany, Auckland PO Box 301054, Albany, Auckland 0752 ⊕ www.egl.co.nz OCEANA GOLD NZ LIMITED - WAIHI Figure 4 - Aerial Photograph January 1999 showing extension of the Northern Stockpile

Drawing No.	9018-Fig4
Date:	Nov 2020
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Filename:	9018-Fig4.dwg





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OCEANA GOLD NZ LIMITED - WAIHI Figure 5 - TB1SP and associated Silt Pond (2004)

Drawing No. 9018-Fig5 Date: Drawn: Scale: Filename:

Nov 2020 JL N.T.S 9018-Fig5.dwg

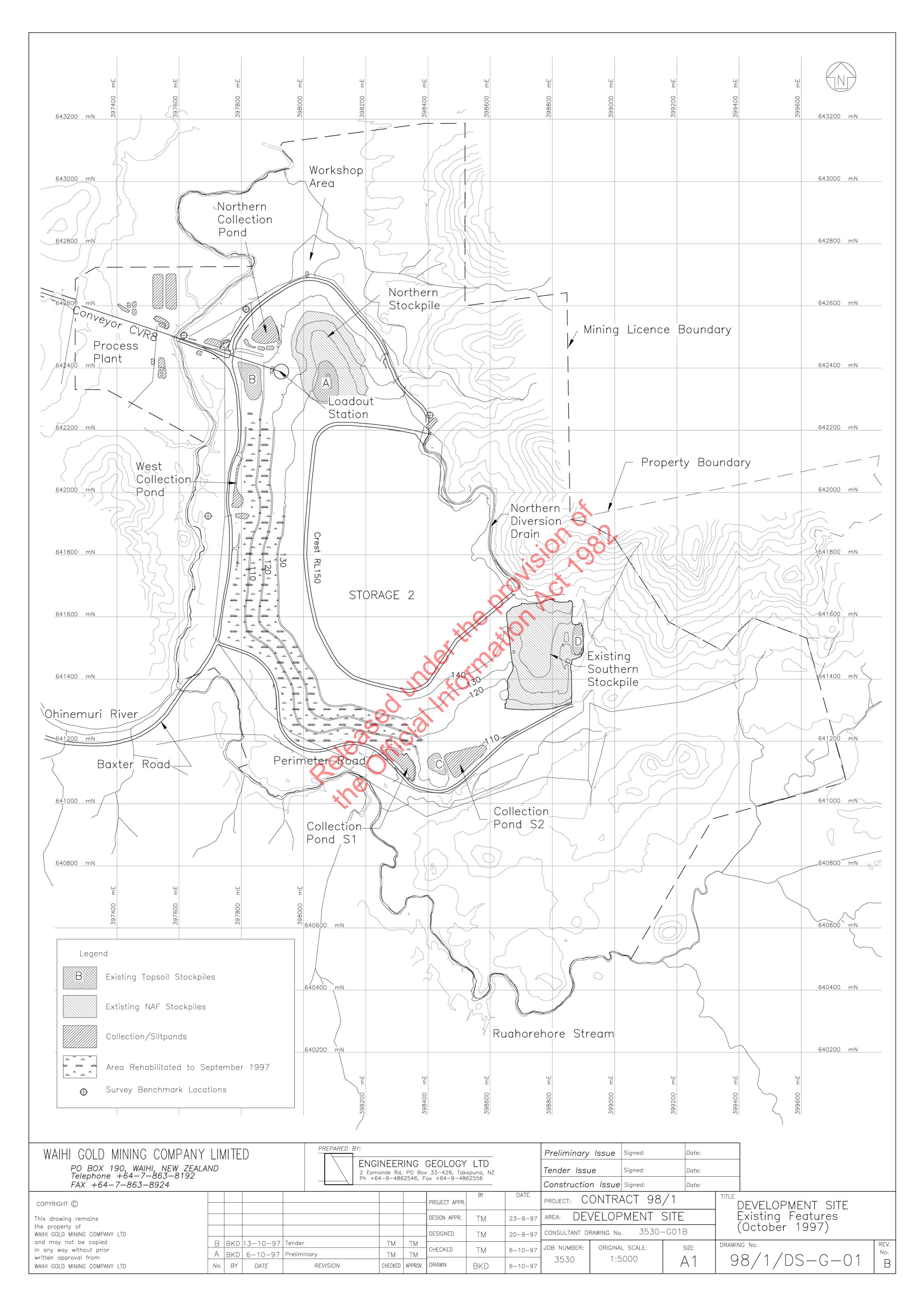
Figure 5

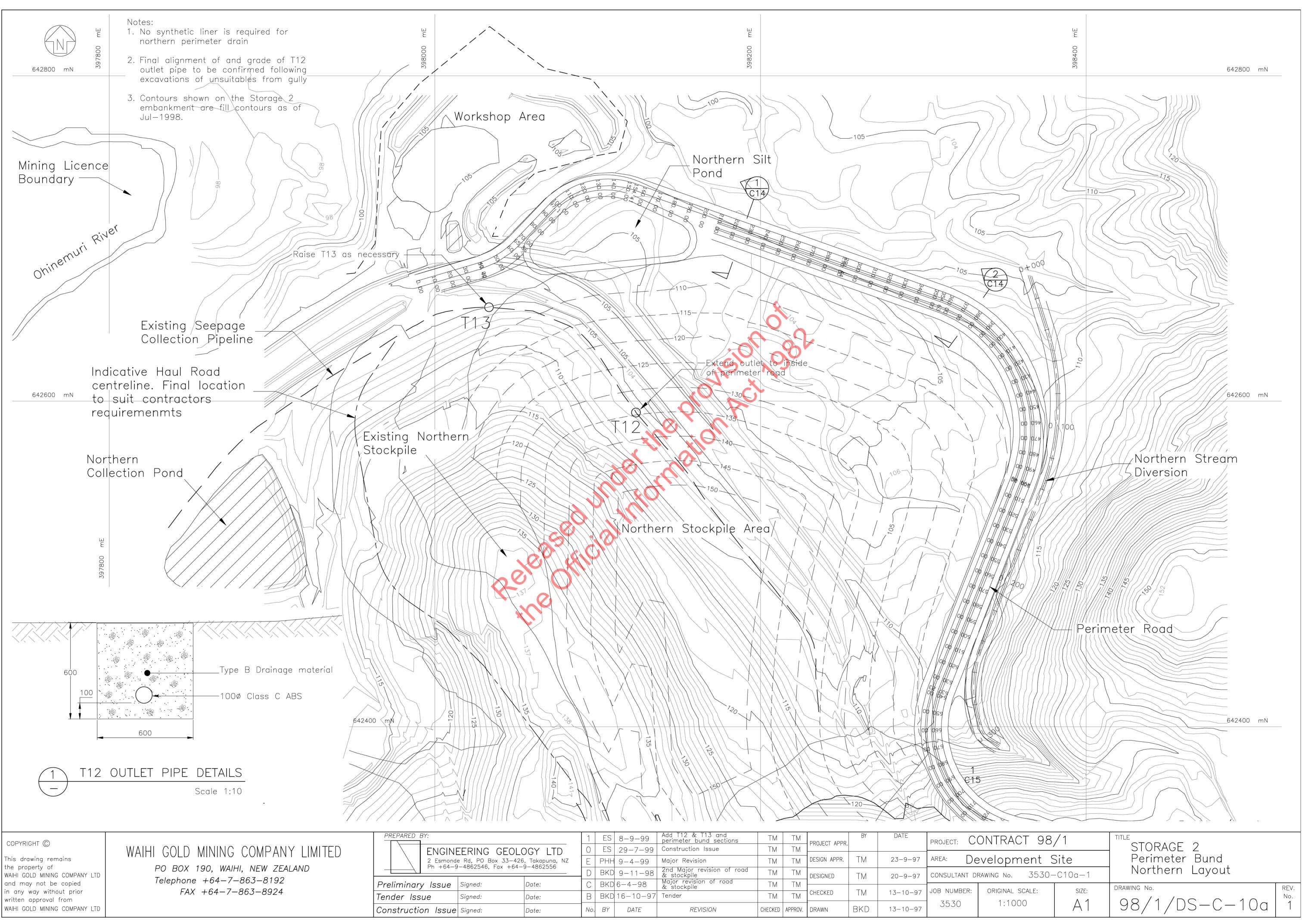




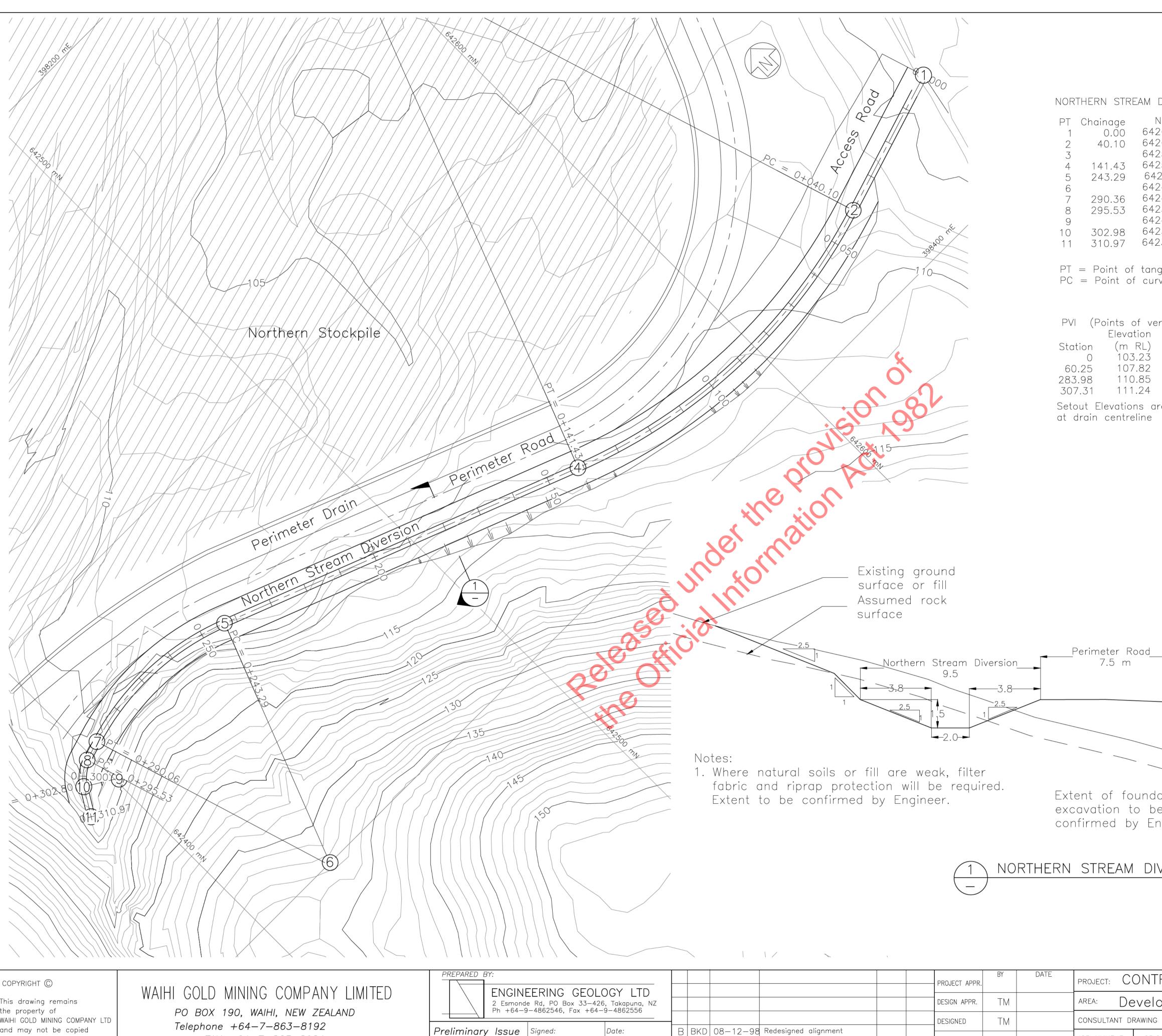
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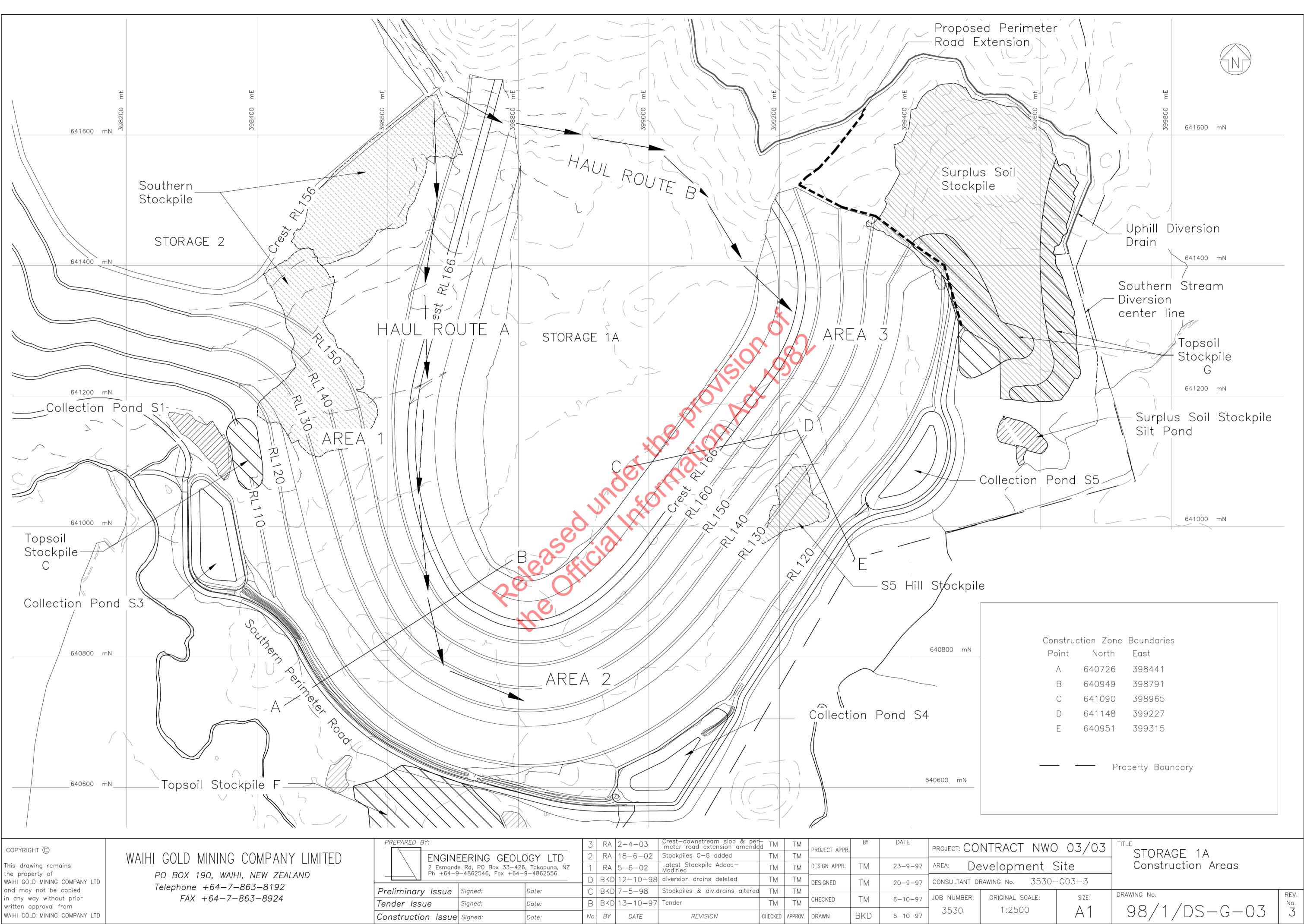
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Released under the provision Act, 1982 Released under the provision Act, 1982 the official Information act, 1982





321 Forest Hill Road, Waiatarua, Auckland 0612 09 814 1946 heritage@clough.co.nz www.clough.co.nz

27 November 2020

S9(2)(a)

OceanaGold Waihi Operation 43 Moresby Avenue Waihi

Dear^{S9(2)(a)}

Re: Eastern Stream Wetland, Grey Street Waihi

Historic research and recent survey as part of Project Quattro has demonstrated that the area of wetland identified in the Eastern Stream near Grey Street in Waihi has been extensively modified in the past by the construction of a series of dams/ponds to provide water for the boilers at the Grand Junction Powerhouse/Boiler House in the early 1900s. The Grand Junction Boiler Feeder Dam is a recorded historic heritage site and scheduled in the Hauraki District Plan (Historic Heritage Inventory HAU255 Category C). Described as a concrete dam structure that was 10 to 12 feet deep it was constructed in 1906 to provide water to the boilers. Water would come out of the Grand Junction Powerhouse quite hot and would be cooled in a series of shallow ponds before flowing back into the main dam to be used again. An examination of 1940s aerial photographs clearly shows a large cooling pond at this location (see Figure 1).

The aerials and historic information therefore suggest that this area was extensively modified by a series of dams/ponds leading to greater water retention upstream and that the wetland has formed within and as a result of historic modification of the stream for industrial purposes.

ours sincerely Director





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Figure 1. Eastern Stream aerial comparison from 1942 (left) and 2019 (right) showing the Grand Junction Power House site, the boiler feeder dam and pond

East Stream Wetland





18 September 2020

Secretary for the Environment Ms Vicky Robertson Ministry for the Environment PO Box 10-362 WELLINGTON 6143

By email - vicky.robertson@mfe.govt.nz

Dear Ms Robertson

Re: NES Freshwater

Thank you for your letter received on 3 September.

We want to reiterate that we fully support the government's objective of halting degradation of freshwater and its ecosystems. Our concern is that the regulations, as they stand, have the potential to close many mines and quarries across the country as resource consents are renewed or applied for, and will prevent new operations establishing.

We have had a constructive meeting with Hayden Johnston, as you suggested (accompanied by Sam Buckle). We have followed up this meeting by providing specific examples of how we think the regulations will impact on mining and quarrying, and how our sector manages impacts on wetlands. We will maintain this dialogue and will send more examples as they come to hand.

At this stage there appears to be a difference of opinion between government and the industry as to the seriousness of this issue. We have conflicting legal and ecological interpretations. It is, of course, the companies' assets and business that are at risk. The companies we are working with on this issue have had many years' experience working with the Resource Management Act and their concerns are well founded. We are sure this can be resolved but we need to do so proactively.

We remain of the view that the blanket ban on operations, that the prohibited activity status implies, would lead to the prevention of mining and quarrying activities in natural wetlands, the definition of which is extremely broad,

Unlike farming, forestry and other land-use activities, mining and quarrying are locationally constrained to where economic mineral deposits occur. They also have a relatively small footprint. Mining and quarrying today occupy around 0.05% of New Zealand's total land area.

At many locations in New Zealand, natural wetlands are commonplace, even pervasive in the landscape. The ecological values in them vary widely, from Ramsar sites to areas of wet or boggy ground dominated by nationally, regionally or locally common species of native vegetation.

There seems to be an entrenched position that every natural wetland in New Zealand – regardless of its spatial context or its ecological value - must be preserved from certain activities.





The prevention of mining and quarrying and associated economic loss were not considerations that formed part of the section 32 report or the regulatory impact assessment accompanying the Action for Healthy Waterways proposals. It is unfortunate the mining and quarrying sectors were not consulted on an exposure draft of the national policy statement and on the regulations.

There are many places in New Zealand where mining and quarrying could occur in areas of natural wetland as discretionary activities, subject to the mitigation hierarchy. Projects would be considered on the basis of their merits. The bar on being able to access the mitigation hierarchy would be set very high, in light of the importance of natural wetlands in the context of New Zealand's environmental values.

It is also noted that, over time, mining and quarrying are a temporary land-use. During and after operations, land is returned to a former use, or to a new or enhanced use, and lakes, ponds and wetlands are a common outcome of site rehabilitation.

In summary, we are disappointed that the mining and quarrying sector does not seem to have been part of government thinking when it comes to the formation of the freshwater regulation. In this regard, we note that the recently established Freshwater Implementation Group consists largely of land-based industry and stakeholder groups but has no mining or quarrying representation. We believe this group could be enhanced with representation from the extractive sector.

We will continue to work collaboratively with government to find a solution to this issue that satisfies the government's objectives for natural wetlands and allows our sector to propose activities to achieve a net positive impact, thus allowing mining and quarrying to proceed consistent with the purpose of the RMA and in the overall interests of New Zealand.

Yours sincerely



S9(2)(a) CEO Aggregate & Quarry Association NZ S9(2)(a)



New Zealand

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Royal Forest and Bird Protection Society of New Zealand Inc.

Head Office: 205 Victoria St, Wellington

14 September 2021

Hon David Parker Minister for the Environment Parliament Buildings Wellington

Dear Minister

MANAGING OUR WETLANDS DISCUSSION DOCUMENT

- Forest & Bird is implacably opposed to the amendments proposed in the Managing Our Wetlands discussion document (the discussion document). The proposed changes, which offer a consenting pathway to landfills, mining, quarrying and urban development effectively strip wetlands of any meaningful protection, contrary to the express requirements of section 6 of the RMA and the NZ Coastal Policy Statement (NZCPS).
- 2. We will fight these changes all the way.
- 3. The discussion document starts with a discussion of how important wetlands are, ecologically and culturally, and how almost 90% of these have been lost since human settlement. These factors call for an increase in the protection for wetlands. Then, making it clear that these words were just lip service, proposes significant changes to the provisions that protect wetlands.
- 4. If these changes are adopted, then any mining, quarrying, landfill or urban development that can show a significant regional benefit, will be given a "consenting pathway" such that it can be undertaken in a natural wetland, provided compensation is provided. This applies to all natural wetlands, including those that are significant.
- 5. The gateways provide no protection. Significant regional benefits are not defined. Activities would not be proposed in wetlands if there was no functional need. Compensation, by definition is not like for like, so could allow the loss of wetlands to be compensated by other vegetation types. Overall these provisions are likely to add up to permanent loss of wetlands, potentially compensated for by temporary enhancement of some wetlands or other vegetation by predator or weed control (this being the most common approach to offsetting and compensation).
- 6. This outcome is contrary to s 6(b) and 6(c) of the RMA, which respectively provide for the preservation of the natural character of wetlands and the protection significant indigenous biodiversity. In the coastal environment the consent pathway proposed is contrary to Policies 11 and 15 of the NZCPS which provide for the protection of natural character and indigenous biodiversity.
- 7. The proposed changes that provide a consenting pathway for landfills, quarrying, mining and urban development must be rejected.

- 8. We also reiterate our concerns about the definition of improved pasture. We wrote to you about this on 12 November 2020 and have received no response. Our letter was supported by an ecological report which set out the danger to biodiversity of excluding areas of improved pasture from the wetland definition. The inclusion of the 50% exotic pasture threshold means that many significant wetlands as defined in the RMA are not protected as they meet the definition of improved pasture. The discussion document does not even mention this issue, and now proposes to further widen the coverage of the improved pasture exemption by removing the requirement for such areas to be (only) temporarily wet after rain.
- 9. Have you received any advice about the ecological effect of this change, and what it means in terms of protecting wetlands? We have seen no reports that suggest that you have.
- 10. The proposed changes make a mockery of attempts made to address the loss of wetlands and the degraded state of freshwater in New Zealand.

Yours sincerely

Kevin Hague Chief Executive - Forest & Bird Kaiwhakahaere Matua - Te Reo o te Taiao

Memorandum

Date	14 December 2020
Matter	Essential Freshwater
То	S9(2)(a) GM Corporate and Legal Affairs, OceanaGold
Сору	
From	S9(2)(a)
Subject	Unavoidable Impacts on Wetlands from Mineral Development – Drafting Solution

- 1 You have asked me to consider a possible solution to a drafting issue that has arisen in the National Policy Statement for Freshwater Management 2020 (NPS-FM).
- 2 The NPS-FM and Resource Management (National Environmental Standards for Freshwater) Regulations 2020 (NES) came into force on 3 September 2020 and introduce new regulatory controls on activities that impact on natural wetlands:
- 3 It appears that as it stands the NES makes important, functionally constrained extractive projects impossible to consent where they impact natural wetlands (regardless of quality or condition) because of the use of prohibited activity status in Regulation 53. The prohibition will apply even where the full application of the mitigation hierarchy through to and including offsetting and compensation presents a better outcome for sustainable management and ensures net gains for wetlands. This is a departure from the approach proposed to be taken by the Biodiversity Collaborative Group¹ and subsequently adopted in the draft National Policy Statement for Indigenous Biodiversity released for consultation in November 2019 (NPS-IB).
- 4 I am aware that a separate set of problems has been identified relating to uncertainties in the definitions of "natural wetland" and "improved pasture" in the NPS-FM. I do not address that topic in this memorandum.
- 5 In my experience, while loses of (or changes to) hydrological services are potential issues that need to be addressed when impacts on wetlands from mineral development are considered, by far the most important issues revolve around impacts on indigenous biodiversity values associated with wetland areas. I therefore consider that there is benefit in ensuring the approach to the management of biodiversity impacts under the NPS-FM is aligned with the approach likely to be taken in the forthcoming NPS-IB.

Comparing the NPS-FM and the NPS-IB:

- (a) Both have a starting point of "avoidance" of impacts on nationally important values clause 3.22 of the NPS-FM (in relation to natural wetlands) and clause 3.9 of the draft NPS-IB (in relation to significant natural areas).
 - Both contain exceptions for important activities that have a functional need to locate in protected areas clause 3.22(1) of the NPS-FM and clause clause 3.9(2)(d)(ii) of the draft NPS-IB. "Functional need" is defined in the National Planning Standards as "means the need for a proposal or activity to traverse, locate or operate in a particular environment because the activity can only occur in that environment". In the case of the draft NPS-IB,

¹ The stakeho der ed group that reported the r recommendat ons for an NPS cover ng wet and ecosystems and other b od vers ty n October 2018

Memorandum

however, the exception extends to "mineral and aggregate extraction" but not regionally significant infrastructure; while the NPS-FM creates an exception for both regionally and nationally significant infrastructure, but not mineral and aggregate extraction with regional or national significance.

- (c) Both impose the requirement of strict adherence to the effects management hierarchy such that there is no net loss (and preferably a net gain) in important values as a result of the activity proceeding - clause 3.22(1)(b)(iv) of the NPS-FM and clause 3.9(2) of the draft NPS-IB.
- 7 As a consequence of:
 - (a) the omission of mineral and aggregate extraction from the list of exceptions in the regional policy set out at clause 3.22 of the NPS-FM; and
 - (b) the NES definition of specified infrastructure cross-referring the NPS-FM definition²; and
 - (c) the definition of "specified infrastructure" in the NPS-FM not including works associated with mineral and aggregate extraction; and
 - (d) the lack of any explicit provision for managing mineral and aggregate extraction's unavoidable impact on natural wetlands in the NES -

it is likely that as presently drafted all mineral and aggregate extraction activities that unavoidably impact natural wetlands (as defined) causing complete or partial drainage of the wetland will be a prohibited activity under Regulation 53 of the NES.

8 I have considered the most simple way to address the current drafting problem, assuming there is a desire to seek alignment between the NPS-FM and NPS-IB on this issue, and assuming the government's intention was to ensure that mineral and aggregate extraction that impacts on wetland and significant indigenous biodiversity values should have a consenting pathway available to it provided:

(a) There is a functional need for the activity to be located in that place; and

(b) The extraction will provide significant regional or national benefits; and

The effects on wetland values are managed by applying the effects management hierarchy.

In my opinion a simple solution would be to add to the definition of "specified infrastructure" in clause 3.21 of the NPS-FM as follows:

"specified infrastructure means any of the following:

(a) infrastructure that delivers a service operated by a lifeline utility (as defined in the Civil Defence Emergency Management Act 2002)

(b) regionally significant infrastructure identified as such in a regional policy statement or regional plan

² NES Reg 3

NPS FM Wet and Draft ng So ut on

Memorandum

(c) any public flood control, flood protection, or drainage works carried out:

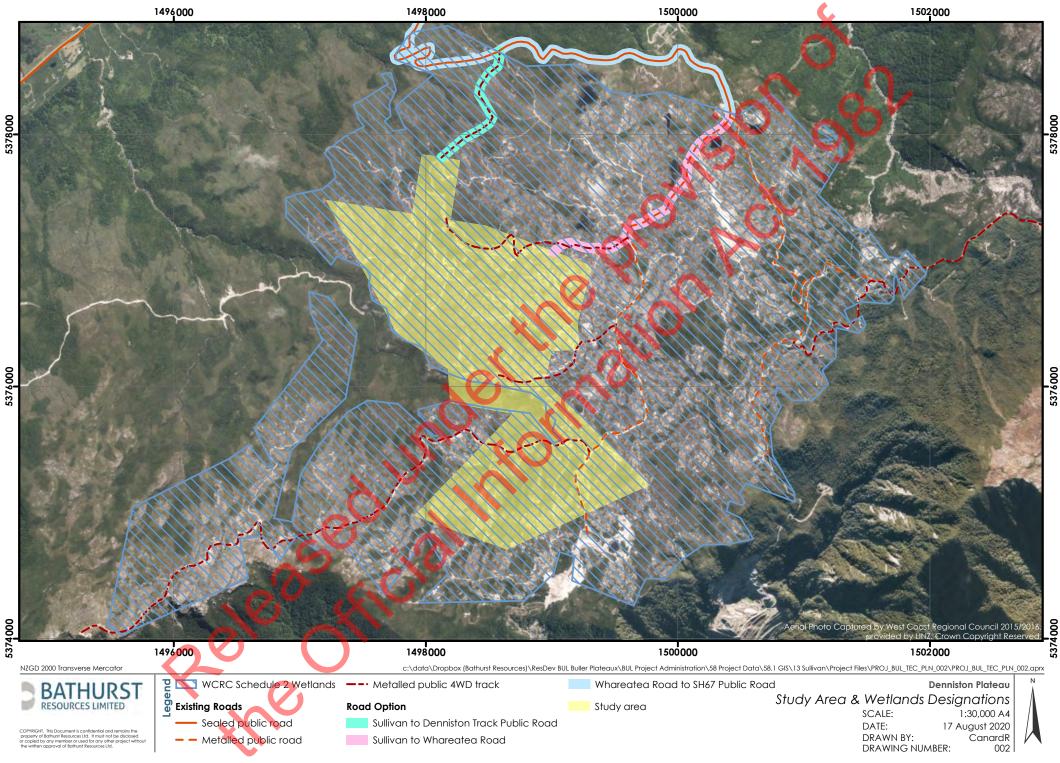
(i) by or on behalf of a local authority, including works carried out for the purposes set out in section 133 of the Soil Conservation and Rivers Control Act 1941; or

(ii) for the purpose of drainage by drainage districts under the Land Drainage Act 1908

(d) any works associated with mineral or aggregate extraction"

- 10 Under the NES such works would be subject to Regulation 45 which makes earthworks and vegetation clearance in or close to a natural wetland for the purpose of constructing specified infrastructure a discretionary activity. In reaching a decision on a resource consent application a council (under section 104(1) of the RMA) would be required to have regard to the NPS-FM; NPS-IB (once operative); and the NES; as well as regional policy, which in turn (under clause 3.22 of the NPS-FM³) must require the activity to be:
 - (i) Necessary for the construction of "specified infrastructure";
 - (ii) of significant national or regional benefit;
 - (iii) sited and sized under a functional need for the works to be in that location; and
 - (iv) the effects of the activity on wetlands to be managed through the application of the effects management hierarchy, starting with the requirement to avoid adverse effects on wetland values where it is practicable to do so.
- 11 In particular, a council will be required to turn its mind to the directive policy at clause 3.22 of the NPS-FM, and will be required to satisfy itself that the proposal truly meets the exception to the requirement to avoid further loss of wetland extent and values because of its significant regional or national benefits, functional need to occur at that location, and proper management of the effects using the effects management hierarchy. The council will also be required to satisfy itself that in terms of effects, the net result for wetland extent and values represents an acceptable outcome having regard to the national importance of such values.
- 12 In my opinion extending the definition of "specified infrastructure" as I have suggested is unlikely to open the floodgates given the limited application to specific categories of development where functional constraints apply and the onerous tests that would need to be met before decision-makers were in a position to grant resource consents for any such development.

³ Reg ona counc s are required to nc ude this policy (or words to the same effect) in their regional plans without using the Schedule 1 RMA process as soon as practicable under section 55(2A) of the RMA (clause 1.7 NPS FM)



Caroline Slight

From:	S9(2)(a) S9(2)(a) @oceanagold.com>
Sent:	Wednesday, 28 October 2020 5:59 pm
To:	Hayden Johnston
Subject:	RE: Regulation 53 of the Resource Management (National Environmental Standards For
Subject:	Freshwater) Regulations 2020
Attachments:	Out of Scope

Attachments withheld - Out of Scope

Hi Hayden,

Out of Scope

Thank you for your time and Sam's time in Wellington last week. We would like to reiterate our invitation of a site visit to any of our sites at Macraes (where ephemeral wetlands that were able to avoided by mining activities and those that were not feature, plus some good examples of established and proposed off-sets), Reefton (including a constructed wetland) and/or Waihi (where artificially induced and constructed wetlands feature).

As discussed, for Macraes and Waihi (and other extractive operations, such as large peri-urban quarries):

- We can point to significant large-scale existing or planned operations and workforce numbers, often already
 reflected in regional and district planning instruments (but not technically classed as infrastructure)
- Those existing operations and any new developments will have finite limits and a low overall footprint they exist in "mineral precincts" where the general geographical location of the mineralisation is already known and to some extent planned for through various RMA and CMA processes
- We know that these operations co-locate with at least some indigenous and freshwater habitats because of the size of the operations and their non-urban setting. Some unavoidable residual impacts are inevitable, for which formal or informal off-setting is required to achieve a net neutral or net positive outcome for the environment (including wetlands, streams, and terrestrial biodiversity values).
- The RMA definition of a wetland is very broad. We have no issue with that. We have never (that I can
 recall) had any significant disagreement between ecologists (our own, DOC's or the Councils') about
 whether a noted feature was wetland, although all of the ecologists tend to agree that sometimes the lines
 between ephemeral versus permanent and still versus running water can get blurred.
- The NPSFW definition of a natural wetland is very uncertain because of the part its past formation, use and management plays in determining whether it is pasture, artificially created or natural. There is no forum to test the view taken by Council on that except for general court processes. We think this is an issue.
- For formal off-setting, we have never experienced any significant problems reaching consensus across the experts (ours, DOC's and councils') on a well-documented, established and respected off-setting

regime. Again, the description of off-setting and biodiversity compensation in the NPSIB addresses this issue.

Please let us know when you would be interested in having a site visit and we will get arrangements in place. Macraes is due to begin work at the recently consented Deepdell site within a month or so, so some of that project footprint has a limited window to view.

Regards,



I'm happy to meet with you to discuss the issues your raise. I have recently met with Straterra who set out the sector's concerns (including providing material on the OeceanaGold consent process) on the new NPSFM and NES-F.

I'm on annual leave next week, but perhaps we could arrange to meet the week after that? A key part of the discussions to date with Straterra has revolved around the definition of wetlands as incorporated into the new

regulatory instruments. I note that this is referred to in the material you have sent. I'd be interested to hear from you about the terrestrial ecologist's findings, but I will also take a look at the report you have supplied.

Ngā mihi Hayden

From: $S9(2)(a) S9(2)(a) \underline{\text{Goceanagold.com}}$

Sent: Friday, 25 September 2020 3:37 PM

To: Hayden Johnston <<u>Hayden.Johnston@mfe.govt.nz</u>>

Subject: RE: Regulation 53 of the Resource Management (National Environmental Standards For Freshwater) Regulations 2020

MFE CYBER SECURITY WARNING

This email originated from outside our organisation. Please take extra care whe clicking on any links or opening any attachments.

Hello Hayden,

I am writing on behalf of OceanaGold, which operates hard-rock gold mines at Waihi (North-East Waikato) and Macraes (near Dunedin), and a closed mine rehabilitation project at Reefton on the West Coast of the South Island.

I enclose our letter to Minister Parker and the letter we received in response on his behalf, concerning the above subject. We were referred to you to continue the discussion.

We have been waiting to receive a decision on a recent resource consent application, where impacts on wetlands was a key issue. The timing of the hearing coincided with the release of the new Freshwater Regulations (NES-F), and we were keen to see the decision of the Commissioners ahead of further engagement with MfE. That decision, which we received yesterday, is enclosed, together with the evidence of our terrestrial ecologist on the wetlands within the impact area of the project under application.

We do not think the points noted in the Ministry's response levidence of grazing and certain consenting pathways available to cultivation activities) resolve the difficulties raised by the regulations, and described in the enclosed decision.

The response is correct that the application for consent on this occasion predated the NES-F coming into effect. However a temporary continuation of the Macraes Mine (which employs over 500 direct employees) does not resolve the obvious question mark that has been imposed over the future of that operation.

We would like to arrange a time to meet to discuss these concerns further if that was appropriate. Please could you let me know whether that could be arranged and the information that MfE would find helpful to receive ahead of that time. If a site visit was considered helpful we would be very happy to arrange that also.

Regards,

S9(2)(a) GM Corporate & Legal Affairs NZ



OUR VALUES: RESPECT | INTEGRITY | TEAMWORK | INNOVATION | ACTION | ACCOUNTABILITY

OceanaGold Corporation 22 Maclaggan Street Dunedin 9016 New Zealand



E: S9(2)(a) @oceanagold.com W: http://www.oceanagold.com/

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OceanaGold Corporation is a low-cost, mid-tier, multinational gold producer with significant operating and development experience. The Company owns a suite of high quality assets in the Philippines, New Zealand and the United States and is publicly listed on the Toronto and Australian stock exchanges under the trading symbol OGC.

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28 August 2020

Hon David Parker & Hon Damien O'Connor Minister of Environment and Minister of Agriculture Parliament Buildings WELLINGTON

Dear Ministers

Re: Industries adversely affected by Freshwater Regulations

We are writing to you in your capacity as Ministers of Environment and Agriculture to express serious concern over recently promulgated freshwater regulations and their impact on the extractives sector and a range of other economic activities. You will be aware that other land-based sectors have expressed concerns, notably farming. The new regulations, as they stand, also have the potential to close mining and quarrying operations and create major economic disruption and job loss.

At issue is that Regulation 53 of the Resource Management (National Environmental Standards for Freshwater) Regulations 2020 essentially prohibits earthworks on natural wetlands - the definition of which is extremely broad.

Reg 53 will result in closure of mines and quarries at sites where there are natural wetlands (for example, expansion at Stockton and on the West Coast generally, the Waihi and Macraes gold mines, and in much of Southland) and prevent development of new mines and quarries in many areas of New Zealand. Earthwork activities in a range of other sectors will equally be affected.

An immediate example in our sector is OceanaGold's application to Otago Regional Council for resource consents required to allow mining to continue at the Macraes gold mining operations. The matter is currently before independent commissioners.

Granting of these consents is necessary to secure more than 500 jobs at Macraes, and export revenue in the order of NZ\$600 million per year.

Attached are photos of the 'natural wetlands' present at Macraes.

Clearly stopping an ongoing business such as the Macraes mine is not the intent of Reg 53, but that would be the result post 3 September when the regulations enter into force.

In our view, the solution is to regulate activities in relation to natural wetlands as 'non-complying' rather than 'prohibited' activities. This non-complying status was in the draft regulations consulted on and it sets a very high bar for resource consent applicants, requiring them to demonstrate they are able to avoid, remedy, mitigate, or offset or compensate adequately for environmental effects. This is appropriate. The prohibited activity status is not.

We have received legal advice that there are strong grounds for judicial review of the regulations, based on mistake of fact, mistake of process, and unreasonable decisions made.







We acknowledge natural wetlands as a whole are greatly reduced in extent in New Zealand. Mining is not the problem here, but with flexibility mechanisms and removal of prohibited status it can be part of the solution. We all want better water.

Straterra & the AQA seeks to work collaboratively with government to resolve the issue. We propose an urgent amendment to Reg 53, to enable responsible mining and quarrying in areas of natural wetlands.

We will contact your offices shortly to discuss this urgent situation and will be able to provide more detailed information then.

Yours sincerely



S9(2)(a) CEO Straterra Inc S9(2)(a) S9(2)(a) CEO Aggregate & Quarry Association NZ S9(2)(a)

cc: Hon Grant Robertson, Hon Dr Megan Woods, Gavin Forrest (Federated Farmers), Kirk Hope (Business New Zealand), John Scott (DPMC)

CASE STUDY: BATHURST RESOURCES' SULLIVANS MINING LICENCE, WEST COAST

This case study shows how Bathurst Resources would manage impacts on wetlands as part of developing a mine at the Sullivan mining licence area, through the resource consent process.

The Sullivan mining licence area

Bathurst has a licence to mine the Sullivan area, south of its Stockton mine. Stockton is solely an export mine selling coking coal to overseas steelmakers (there is no market for this coal in New Zealand). To maintain production at Stockton Bathurst needs access to coal in Sullivan for blending purposes. If Bathurst were prevented from developing Sullivan by Regulation 53 of the NES-F, the company would have to reduce production levels as well as the life of the Stockton mine. The consequence would be a reduced life of coking coal mining in Buller District, which currently employs directly 260 people including contractors (at the Stockton mine).

Area of the mining licence, and area of wetlands within the mining licence

West Coast Regional Council has identified via a desktop exercise **311** hectares as "significant wetlands" of the 318 ha of the Sullivan licence area, or roughly 95% of the licence area (see attached map). Note that this exercise – in terms of wetlands - includes roads and previously disturbed areas.

Nature of the wetlands

Bathurst Resources has identified two main wetland types within the licence area: mānuka and *Chionochloa juncea* wetland (plateau pakihi); and red tussock fen, both indigenous ecosystems.

The broader wetland context

It is estimated that there are 630 ha of mānuka-*Chionochloa juncea* wetland on the Denniston plateau. A mine at Sullivan would disturb approximately 60 ha, or 9.5% of wetlands, on the plateau. Extensive, intact areas of wetland would remain on the Denniston plateau, therefore, and there are more of this type of wetland on the Stockton plateau (see map, attached).

Area of wetlands to be disturbed to develop Sullivans

Early estimates by Bathurst (as opposed to the council desktop estimate) are that wetlands would make up 50% of a potential mine footprint within the licence area.

General approach to mitigating, offsetting or compensating for impacts on wetlands

Mitigation

Most of the mānuka-*Chionochloa juncea* wetland could be direct transferred, as per standard practice at the Stockton mine. That is also the case for the red tussock wetlands, examples of which have been direct transferred at the Cypress extension to the Stockton mine, again, successfully.

Vegetation Direct Transfer: A digger lifts the vegetation and immediate subsoil in one intact layer and transfers it to another site, resulting in immediate cover. Additional seeding and planting is then undertaken to boost the overall recovery of the transferred shrubs and plants. Landcare Research has led the research and development in this space.

Compensation

Lowland wetlands across New Zealand, including in parts of the Buller District, are threatened and are generally in a poor state as a result of drainage, adjacent land use, weed infestations, impediments to fish passage, pests and catchment modification, among threats.

Active management to enhance these wetlands could include weed control, planting native species, and reinstating water flow regimes. In this way, less common and degraded wetland ecosystems would be enhanced as compensation for residual effects on Dennison and Stockton plateau wetland systems that are by comparison well represented.

A compensation package for residual adverse effects on wetlands on the Denniston plateau would seek to improve lowland wetlands within the Buller District and the West Coast region more broadly.

Conclusion

This case study shows that if Regulation 53 were changed from prohibited to discretionary activities, in respect of earthworks and certain other activities in natural wetlands, Bathurst and other mining and quarrying companies in relevant areas of New Zealand would be able to develop operations in areas of natural wetland while being able to manage their effects on these wetlands, as occurs currently.



Economic Impact of Regulation 53 of the NES for Freshwater Management

The Problem

- Recently promulgated freshwater regulations have the potential to close business operations and create major economic disruption and job loss.
- At issue is Regulation 53 of the <u>Resource Management (National Environmental Standards for</u> <u>Freshwater) Regulations 2020</u>, which essentially prohibits earthworks on "natural wetlands" - the definition of which is extremely broad.
- It will have a major impact on the extractives sector and other industries with activities involving earthworks (including roading and housing).
- In the extractive sector, Reg 53 will result in premature closure of mines and quarries where there are natural wetlands (e.g., expansion at Stockton and on the West Coast generally, potentially the Waihi and Macraes gold mines, and in much of Southland) and prevent development of new mines and quarries in many other areas of New Zealand.
- An immediate example is OceanaGold's application to Otago Regional Council and Waitaki District Council for resource consents to continue mining at the Macraes operations (a project known as Deepdell). This project will impact wetlands that ecologists assessed as natural. It escapes the new regulations through being lodged before they came into force. 500 jobs and annual export revenue of around NZ\$600 million are at stake.
- Attached are photos of the "natural wetlands" at Macraes, provided as an example of the broad reach of the wetland definition. These are patches of ephemeral wetland located within previously grazed grasslands.
- Potentially, Reg 53 is an oversight in the way that it is worded, and not intended to prevent mining and quarrying. But prevention will be the result post 3 September when the regulations enter into force.

The Solution

 The solution is to regulate activities in relation to natural wetlands as 'non-complying' as a minimum (or 'discretionary') rather than 'prohibited' activities.

The non-complying status, which was in the draft regulations and consulted on, allows resource consent to be applied for, and it sets a very high bar for applicants who would have to show they are able to avoid, remedy, mitigate, or offset or compensate adequately for environmental effects of earthworks on natural wetlands.

This is appropriate, while prohibited activity status is not. No consent applications can be made for prohibited activities. A prohibited status would apply a blanket ban on operations that both contribute greatly to economy and are able to be carried out with minimal net environmental impact.

• Straterra has received legal advice that there are strong grounds for judicial review of the regulations, based on mistake of fact, mistake of process, and unreasonable decisions made.

Straterra Inc Ground Level : 93 The Terrace : P0 Box 10-668 : Wellington 6143 : New Zealand T +64 4 909 7301 : www.straterra.co.nz



• We propose an urgent amendment to Reg 53, to enable responsible mining and quarrying in areas of natural wetlands.

Regulation 53 of the Resource Management (National Environmental Standards for Freshwater) Regulations 2020

http://www.legislation.govt.nz/regulation/public/2020/0174/latest/LMS364099.html

53 Prohibited activities

- (1) Earthworks within a natural wetland is a prohibited activity if it—
 - (a) results, or is likely to result, in the complete or partial drainage of all or part of a natural wetland; and
 - (b) does not have another status under any of regulations 38 to 51.
- (2) The taking, use, damming, diversion, or discharge of water within a natural wetland is a prohibited activity if it:
 - (a) results, or is likely to result, in the complete or partial drainage of all or part of a natural wetland; and
 - (b) does not have another status under any of regulations 38 to 51.

"Natural Wetlands" at Macraes

Wetlands