OceanaGold's Submission to the Otago Regional Council on the proposed Otago Regional Policy Statement 3 September 2021

Submitted by:

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Summary

1. The main part of this submission addresses the indigenous biodiversity and wetlands policies within the proposed Otago Regional Policy Statement ("PORPS"). There are five key areas of concern:
    - What land will be classed as Significant Natural Area ("SNA")? Under the proposed policies, it is not just land that is mapped. The SNA coverage will be extensive, uncertain and unmitigated by consultation, discretion or any robust cost-benefit analysis (Part 1 of this Submission). Appendix 1 contains detailed ecological mapping of the proposed SNA policy settings and the likely and potential extent of SNA across Macraes Mine, Waitaki district and the Otago region.
    - PORPS requires most land use, including mining, to avoid SNA. But functionally constrained land uses cannot always choose their location for vegetation clearance. That is especially so at Macraes goldmine, where an inability to clear surrounding vegetation adjacent to current mine footprints will mean mining (and hundreds of mining jobs) could end within about 5 years (a risk that is ignored in the Council's cost-benefit analysis). Refer to Part 2 of this Submission. Appendix 2 gives background around mining to date at Macraes and its future potential, given the environmental management techniques developed to achieve acceptable environmental outcomes, even where some impacts on important biodiversity are unavoidable.
    - Offsetting policies should guide outcomes, not inputs. PORPS Appendices 3 and 4 are unnecessarily restrictive on the types of proposals that are deemed acceptable offsets. They do not represent best practice for offsetting policy (Part 3 of this Submission). Appendix 3 provides an up-to-date assessment of the available case law and academic comment on biodiversity offsetting policy and implementation.
    - PORPS is inconsistent with national direction. PORPS is at odds with both the consultation draft of the proposed National Policy Statement for Indigenous Biodiversity (DNPSIB) and national direction now proposed for wetlands, as part of a planned review of the Resource Management (National Environmental Standards for Freshwater) Regulations 2020 ("Wetlands Review"). Refer to Part 4 of this Submission. Appendix 4 contains extracts from the DNPSIB and a Ministry for the Environment letter showing national intent to provide a consent pathway for certain sectors.
    - PORPS fails indigenous biodiversity. The prohibition on virtually any new land use development within SNAs will drive down investment in predator and pest control and other measures required to actively prevent the further decline of New Zealand's indigenous biodiversity. Part 5 of this Submission makes further comment on the pressures impacting biodiversity, in the absence of active management through both publicly and privately funded initiatives.

2. In Appendix 5 OceanaGold has tabulated its clause-by-clause analysis of PORPS, addressing both the issues identified above and discussed further in the main part of this Submission, and additional issues that arise under PORPS, including matters concerned with heritage and the management of water and rural land use.

Part 1 - What land will be SNA?

3. Under PORPS: *"An area is considered to be a significant natural area if it meets any one or more of criteria below …"* (PORPS Appendix 2, page 203). In summary (and paraphrasing) SNA applies wherever land is (in ecological terms):
    - Either host to an indigenous species that is threatened, at risk, uncommon (nationally or locally) or unique to Otago
    - Or typical or characteristic of the original natural diversity of the local environment (even if it is degraded)
    - Or highly varied in its features or the species living there
    - Or distinctive or unique in its features or the species living there
    - Or functions in a way that is important to the surrounding area
    - Or is important for indigenous fauna (birds, fish, insects, bats, lizards, frogs etc) during some part of their life cycle, whether regularly or on an irregular basis.

There is no selection process over what is and is not SNA. Land is either SNA or it is not according to the values present on the land, and land needs only meet one of the criteria in Appendix 2 in order to be SNA. One landowner may have 100% of their land classed as SNA, another may have none.

4. There is no discretion, and competing values or attributes of the land are not able to be considered against the SNA classification. In the recent Environment Court decision, *Brookby Quarries Limited v Auckland Council* [1], Auckland Council noted the difficulty for it, as a consenting authority in having to reconcile competing policies for significant ecological areas and the specialist quarry zone where important aggregate resources and SNAs coincided. The Council submitted, and the Environment Court ultimately agreed, that the policies relating to mineral extraction did not first require adverse effects on biodiversity to be avoided.

There is no requirement for SNA to be mapped first. Every resource consent process after the PORPS becomes law will need to assess the project's clearance footprint against the Appendix 2 SNA criteria.

[1] [2021] NZEnvC 120

5. Again, it follows that the policies need to acknowledge and provide guidance to effectively reconcile the tensions arising between the different policy objectives.
6. The Appendix 2 SNA criteria are more conservative than those found in both the current partially operative Otago RPS ("ORPS 2019") and the DNPSIB and depart from the criteria recommended by and against which Otago's biodiversity values were (partially) assessed by Wildlands[2] in support of the PORPS. This is despite the section 32 report at paragraph 442 stating that "*the criteria in APP2 … is largely the same as the criteria in the PORPS 2019 and comparable to the criteria in the draft NPSIB"*.
7. There is no clear evidential basis or section 32 evaluation to support the Appendix 2 SNA criteria, which would capture a number of common and widespread plant species throughout the Otago region. For example, matagouri has a conservation status of "at risk-declining" therefore triggering the significance criteria for 'rarity' in Appendix 2. Every area in which it occurs throughout Otago would become a SNA as a result. Although uncommon in the North Island, matagouri in Otago has been described as "widespread". In fact, it is so common in Central Otago that the clearance of matagouri is exempt from the current district plan rules[3] limiting the extent of indigenous vegetation that can be cleared.

This is not to detract from the importance of matagouri (and species like it) or the need to manage threats to such species into the future. The point we make is simply that impacts on some classified species will not always be ecologically significant at an individual development scale and are often eminently capable of offset. Avoidance of all remaining matagouri (to name just one affected plant) is unnecessarily prohibitive of development.

8. The very limited assessment of SNA extent attempted for the purposes of the section 32 analysis is surprising given the proposed planning consequences that flow from an area being SNA and the readily available data to support such an assessment. These data allow a preliminary desktop analysis, at least, of Otago's species and habitat distribution applying the Appendix 2 criteria – themselves drawn from these classification tools. These tools include:
    - the NZ Threat Classification System ("NZTCS") which assesses the conservation status of groups of plants, animals and fungi and is administered by the Department of Conservation. The NZTCS confers the At Risk and Threatened conservation classes on which a number of the PORPS policies hinge;
    - the Land Environments of New Zealand (LENZ) national spatial database of land cover and threat classifications; and
    - the Landcover Database (LCDB 5), created by Landcare Research New Zealand Ltd, which classifies New Zealand's mainland land cover in terms of cover feature description, by time and polygon boundaries.

[2] Refer Appendix 17 Wildlands Report (2021a) and Appendix 12 Wildlands Report (2020a).
[3] Rule 4.7.6KA

9. In the absence of any proper supporting analysis made public by the Otago Regional Council ("ORC") as part of its section 32 assessment OceanaGold engaged Dr Mike Thorsen of Ahika Consulting to undertake a preliminary desk-top assessment to identify plant and animal species in the At Risk and Threatened categories ("Species Rarity"), areas of less than 20% remaining vegetation cover based on the LENZ database ("Habitat Rarity") and natural vegetation types as defined by LCDB 5 ("Representativeness"). These are just three of the qualifiers listed in PORPS Appendix 2, of which any one triggers SNA.
10. Dr Thorsen applied the Species Rarity and Habitat Rarity factors (being the less subjective of the chosen qualifiers) to identify, at high level, land with a high probability of being SNA; and added Representativeness (one of the more subjective and case-specific qualifiers) to gain some understanding of the additional land areas within the Otago region and the Waitaki district, and within the vicinity of Macraes mine, that would have a moderate probability of being held to contain SNA. The results of that analysis are shown in Appendix 1 (with light blue denoting privately-owned land that is not SNA).
11. While Dr Thorsen's maps are not definitive they do start to give an indication of just how widespread SNA are throughout Otago, using the criteria in Appendix 2.
12. Assessed against national direction, PORPS represents an especially sensitive trigger (or "low bar") for significance, as the basis for a strict avoidance-based planning approach to species and habitat management – a lower bar than that set by the DNPSIB. Given the requirement that the ORPS will need to give effect to the NPSIB when it is made operative, it is unclear on what basis the PORPS has adopted significance criteria that are different from those in the available draft instrument.

Part 2 - Most land use, including mining, must avoid SNA, even if functional constraints mean that is impossible (and thousands of jobs are lost as a result)

Functional constraints

13. As a general rule the pORPS requires SNAs to be identified (ECO-P2, page 142) and protected by avoiding adverse effects where these would result in any reduction of the area or values (even if those values are not themselves significant) (ECO-P3, page 143).
14. ECO-P6 sets out the usual effects management hierarchy (avoid, if you can't avoid remedy, then mitigate, offset and compensate in that order). But ECO-P6 excludes areas managed under ECO-P3 (SNAs).

> The result is that most forms of development in any area identified as SNA are prohibited if adverse effects on the SNA cannot be avoided outright.

15. ECO-P4 fails to recognise the locational needs of mining and aggregate extraction and to provide an ability for a resource consent to be applied for in SNAs where adverse effects are managed using the effects management hierarchy (a "consenting pathway"). This is a

departure from the existing ORPS 2019 - Policies 5.4.3 ("Recognise the functional needs of mineral exploration, extraction and processing activities to locate where the resource exists") and 5.4.8. And it is a clear failure to follow the approach in clause 3.9(2) of the DNPSIB:

> *All adverse effects of a new subdivision, use or development must be managed using the effects management hierarchy if –*
> *a) the subdivision, use or development is to take place in, or affects, an SNA classified as Medium; and*
> *b) there is a functional or operational need for the subdivision, use or development to be in that particular location; and*
> *c) there are no practicable alternative locations for the subdivision, use or development; and*
> *d) the subdivision, use or development is associated with:*
> *i. nationally significant infrastructure:*
> *ii. mineral and aggregate extraction ….*

16. Instead, ECO-P4 provides that the only new activities that can occur in SNAs, or where they may adversely affect indigenous species and ecosystems that are taoka are:
    - The development or upgrade of nationally and regionally significant infrastructure that has a functional or locational need to locate there.
    - The development of papakaika, marae and ancillary facilities associated with customary activities on Maori land.
    - The use of Maori land in a way that will make a significant contribution of enhancing the social, cultural or economic well-being of takata whenua.
    - Activities that are of the purpose of protecting, restoring or enhancing a significant natural area or indigenous species or ecosystems that are taoka; or
    - Activities that are for the purpose of addressing a severe and immediate risk to public health or safety.

The "consenting pathway" that is given to functionally or locationally constrained land uses in ECO-P4 is too narrow, given the disproportionate impact of avoidance-based policies on mines and quarries. The requirement of avoidance impacts these activities particularly heavily. Where a farm or a subdivision can graze or build around a stand of native scrub or a gully, a bridge, mine or a quarry cannot work around such features in the landscape to the same extent.

17. These locational constraints on mines and quarries have been acknowledged many times, both in the course of consenting successive mine developments at Macraes (decisions on Coronation North, Coronation North Extension, Deepdell North) and in other planning contexts, including this recent decision of the Environment Court from August 2021:

[36] … Throughout the AUP process the Council has consistently recognised that mineral extraction within a quarry zone/SEA is a difficult issue and a special case, worthy of a bespoke approach that is different from the general approach in the AUP to other activities people might wish to undertake within SEAs. This clearly involves two competing themes, the protection of significant indigenous biodiversity and the economic and social enablement of people and communities in the form of provision of aggregate, including by the zoning of significant mineral resources and extraction sites as SPQZ.

[37] The Council submitted that in practice it is not possible to fully implement both directives in all circumstances – avoiding effects on the values of a SEA overlying aggregate would very likely mean the aggregate could not be extracted. Equally the removal of some or all vegetation within a SEA overlying aggregate, without adequate mitigation and offset, would almost certainly have adverse effects on the values of the SEA.

Brookby Quarries Ltd v Auckland Council & Ors [2021] NZEnvC 120

18. In May of this year the government (via the Minister for the Environment and Cabinet) acknowledged both the value to New Zealand and the locational constraints on mines, quarries and clean-fills in its proposed Wetlands Review (letter from the Ministry for the Environment dated 25 May 2021 and attached as Appendix 4) in these terms:

- There is a clear case for providing a consenting pathway for the quarry, waste management, and mining sectors
- There are constraints on where these activities/operations can be located, and they provide necessary materials or services
- The government's proposed way forward would apply for these sectors the 'effects management hierarchy' and, in particular, the offset requirement that currently applies to consenting for specified infrastructure
- This provides for no net loss of wetland extent as a result of providing a consenting pathway.

(Ministry for the Environment, May 2021)

19. PORPS' silence on mines and quarries appears to have been a conscious decision, but one for which the underlying reasoning remains a mystery. The section 32 report records that the clause 3 (targeted consultation) version of the PORPS was reconsidered and that:

"*Staff agreed that the approach in [the clause 3 version] for managing significant natural areas was considerably more restrictive than the draft NPSIB anticipated and did not adequately recognise the need to use these areas for a range of new and existing activities*".[4]

20. The section 32 report goes on to say that the notified version of the PORPS:

[4] Section 32 report at [439]

"...seeks to retain elements of the PORPS 2019 provisions that continue to be appropriate and relevant while improving the clarity and drafting of those provisions and aligning the policy framework more closely with the draft NPSIB. It is acknowledged that this document is currently in draft form and has no legal weight, however it does indicate the Government's most recent policy position on managing indigenous biodiversity and has been developed over many years with input from a range of stakeholders and experts."[5]

It seems clear that whatever the acknowledged needs may be to use land in Otago for "*new and existing activities"* the continuation of mining at Macraes (one of Otago's largest employers) is not one of them.

Section 32 "cost-benefit" analysis

21. Added to its failure to acknowledge the locational constraints on mines and quarries, the PORPS fails to adequately recognize the resulting loss of the significant social and economic benefits from mining in Otago. This is even though the opening description of the region says:

    "*Otago's economy centres around agriculture, tourism, mineral mining, and education*." [6]

22. Although the section 32 report acknowledges there will be 'significant economic and social costs'[7] of constraining resource use the ORC has made no effort to quantify the extent of these costs despite the fact that it is practicable, in some areas at least, to do so.
23. Nor is the loss to environmental outcomes, attendant on lost mining sector investment in environmental offsetting and compensation, factored into the cost-benefit analysis. The untested assumptions in the section 32 analysis are that requiring the avoidance of adverse effects on SNA values will:
    - Come at significant economic and social cost, although no attempt is made to quantify this; and
    - Result in significant (but unquantified) environmental and cultural benefits
24. In relation to both these matters the section 32 analysis is at best cursory. This is despite the ORC having been involved closely as consent authority in relation to every mine development at Macraes over the last 30+ years.

[5] Section 32 report at [440]

[6] PORPS, Description of the Region (overview) at page 6.

[7] Section 32 Evaluation Report, PORPS 2021 at paragraphs [129] and [170].

In terms of GDP for the Otago Region, the contribution of the Macraes Gold Operation is significant. In the year 2017, it was estimated to have contributed 0.88% ($84 million) of the region's total GDP and that estimate remains representative. This is almost 1.5 times greater than the Region's entire grape growing and wine industry, 90% of the logging and forestry industry, more than double the value of the wool industry and 5 times greater than the combined fishing and aquaculture industries. The contribution that the Macraes Operation has made, and will continue to make, to the Waitaki District, Dunedin City and Otago Region is enormous.

25. The Waitaki District Plan specifically recognizes the contribution the Macraes Operation makes to its district. Issue 6 relates to Mineral Extraction and states:

    Within the district, there are minerals of significance and access to those minerals is an issue. The Council recognises that mineral extraction is an important industry in the District, and acknowledges that access to these minerals is an issue, particularly those of gold which only occur at a fixed and limited range of locations in the District. Future activities or developments have potential to compromise access to, and processing of, these minerals.

26. Recognizing this issue, Objective 6 in Section 16.7.1 of the Plan seeks that:

    Extractive industries are given the ability to access minerals but in a way that avoids, remedies or mitigates adverse effects on the environment.

27. Supporting policies and provisions in the District Plan provide for a mining zone at Macraes, which is intended to recognize the scale and intensity of the mining operation while ensuring the adverse effects of such operation are avoided, remedied or mitigated. This zone is referred to as the Macraes Mining Mineral Zone and much of the operation has been developed within this assigned area. The existence of this zone is significant, and suitably recognizes the considerable social and economic contribution the operation has within the district.

28. There is no reason to conclude a different approach is called for under more recent planning guidelines. The Wetlands Review has recognised the importance of the sector (as noted above) and In formulating the DNPSIB and the provision for identified activities to take place within SNAs, the costs and benefits of doing so were considered.

The draft section 32 report for the DNPSIB says:[8]

"*These activities [in policy 3.9(2)] are recognised as being critically important to economic, social and cultural well-being (at a local and/or a national level). In certain circumstances, these activities may need to be located within a SNA and there will generally be unavoidable adverse effects on the SNA*."

[8] National Policy Statement for Indigenous Biodiversity – Section 32 Evaluation and Cost Benefit Analysis, October 2019 at page 81.

29. Similarly, Ministry for the Environment ("MfE") formal Guidelines to Councils for implementing the National Planning Standards (2019) cite Macraes as an example of a suitable candidate for a unique or exceptional Special Purpose Zone.
30. In spite of these various imperatives, the section 32 report contains no acknowledgement of the fundamental change proposed in relation to the management of the overlap between mining and SNAs, and makes no attempt to address the economic and social costs that fundamental change would give rise to. In the section 32 report's own words "*This report focuses on identifying costs and benefits, who they fall on, and attempts to indicate their scale or, where possible, quantify them*".[9] But it fails to even attempt that analysis for mining.
31. The logic in the section 32 analysis is equally flawed in its omission of any loses flowing to biodiversity as a result of these policies. Both the social and economic benefits of mining and the benefits to biodiversity that can be delivered through well designed and implemented mitigation, offset and compensation measures (such as those employed at Macraes following extensive examination via resource consent processes) are foregone, in favour of "freezing" land disturbance. There is no acknowledgment that the region's important biodiversity faces ongoing decline, under these policy settings, as a result of no or under-investment in pest and predator control and other habitat enhancements.
32. This logical flaw continues through to the absence of any weight given to the requirement that any biodiversity offset is required (by definition) to result in 'no net loss' or preferably a net gain in biodiversity. No attempt has been made to balance any net gains, in particular, against the costs of development. The costs of this policy in this regard have not been properly tested in section 32 terms and the policy is flawed.[2]
33. In summary, in stepping away from any special recognition of Macraes gold mine or mining generally, PORPS runs counter to ORPS 2019, MfE guidance, the DNPSIB, planning responsibilities resting at District Council level and the suggested planning approach for Macraes in the official Guidelines for the National Planning Standards. It also fails to address known economic and social costs of doing so.

The proposed approach:

- Fails the people and communities of the Waitaki District in particular, but of Otago more generally.
- Overlooks the locational constraints on mining at Macraes and the need to develop a more nuanced approach to managing the unavoidable impact future mining will have on SNA values.
- Fails to protect significant biodiversity values by seeking to prevent the very developments that will in the future be catalysts for biodiversity gains through well-designed and implemented biodiversity actions in the Macraes Ecological District.

[9] Section 32 report at [176]

Part 3 - Offsetting policies should guide outcomes, not limit inputs

34. PORPS Appendices 3 (Criteria for biodiversity offsetting, page 205) and 4 (Criteria for biodiversity compensation, page 206) (together "PORPS Offsetting Rules") seek to constrain when an offset or compensation can be used.
35. Under the PORPS Offsetting Rules, specific classes of impacts on At Risk and Threatened species, or uncommon habitat types, are 'ruled out' for offsetting or compensation at a level that is close to the qualifying benchmark for SNA. In other words, offsetting and compensation are perversely 'ruled out' when specified species of conservation concern or their habitat will be lost to a development, even though the loss may be clearly capable of being offset or compensated to produce a net gain for the species of interest. So:
    - Under Appendix 3, the loss of any individuals of Threatened taxa (other than two kanuka species) rules out any formal offsetting proposal as the basis for a project that cannot otherwise avoid impacting SNA;
    - Under Appendix 4, the loss of habitat for any Threatened or At Risk indigenous species rules out any informal offsetting proposal (compensation) as the basis for a project that cannot otherwise avoid impacting SNA.

Given offsetting is offered in PORPS as an alternative consenting pathway to avoiding SNA, ruling out offsetting because Threatened or At Risk species are impacted, which may be the reason the area is determined to be an SNA in the first place, makes the whole offsetting regime fairly pointless.

36. The PORPS Offsetting Rules are also capable of being read in a way that requires an overly "by-the-book" approach every time, regardless of whether the final outcome benefits biodiversity as well as it could.
37. The PORPS Offsetting Rules are partially drawn from the outcomes of litigation over parts, but not all, of the ORPS 2019 offsetting and compensation provisions – provisions that were tested, and found wanting, in the Deepdell North Stage III consenting decision in September 2020. They were also considered but not adopted by the drafters of the DNPSIB in coming to what the section 32 report describes as "*the Government's most recent policy position on managing indigenous biodiversity*" that "*has been developed over many years with input from a range of stakeholders and experts*"[10].
38. In Deepdell North, the evidence was compelling that OceanaGold had sought to adopt a strategy for the management of adverse effects on ecological values which resulted in a mix of avoidance (where that was possible), mitigation, remediation, offsetting and compensation measures being offered in order to achieve a no net loss or better in terms of ecological outcomes. The approach was scrutinized and ultimately supported by key stakeholders including the Department of Conservation and ultimately the decision makers. The focus of the decision makers for this Project, despite the proposal not being entirely

[10] Fn 7

consistent, or contrary to some of RPS provisions mentioned above, was on achieving good environmental and ecological outcomes. They remarked that *"Our primary concern is that ecological outcomes are enhanced by the Proposal. We consider they are"*[11]. Similar conclusions were made in the evidence of Mr Brass on behalf of the Department of Conservation, who stated:[12]

> *(Court decisions) "appear to structure offsetting and compensation as "all or nothing" tiers where a proposal either meets the full set of criteria or drops down to the next tier. I am concerned that this could potentially fail the best meet the purpose of the RMA, and fail to deliver the best ecological outcomes. I consider that the approach taken by OGL is preferable, such that even where one criteria of a tier cannot be met, they have still worked to comply with as many of the other criteria for that tier as possible…."*
>
> *While I recognise the RPS provisions on offsetting and compensation, to an extent I consider the classification of the proposal in that way is somewhat academic. It is clear to me that OGL has taken an "effects management hierarchy approach – where adverse effects cannot be avoided, remedied or mitigated they have applied offsetting principles as much as practicable, where offsetting is not achievable they have applied compensation principles as much as practicable, and where compensation is not achievable, they have offered positive ecological enhancement measures."*

39. Appendix 3 provides an expert analysis by Mark Christensen, one of New Zealand's most experienced practitioners specializing in the application of offsetting under the RMA. For the reasons explained by Mr Christensen, best practice in offsetting policy favours flexibility, in the form of considerations, over method-based rules, in the form of limits. How an offset may be achieved (and whether it is even achievable) is a question for the experts providing their analysis of any given development proposal. On the other hand, as Mr Christensen points out, the ultimate standard of the outcome that is targeted by any given proposal becomes a matter validly within the discretion of the policy-makers. No Net Loss, or increasingly a Net Gain, becomes the focus.
40. In this context, it is important to remember that amending ECO-P4 to refer to mining does not provide an automatic "yes" to a consent proposal. Instead it provides a consenting pathway by which decision makers can evaluate a proposal. Without amendment to ECO-P4 OceanaGold is denied the opportunity to put a proposal on the table, the region is denied economic benefits, and the better protection of important biodiversity values via offsets and compensation cannot be realised.

[11] Deepdell North Stage III Resource Consent Decision, Page 27
[12] Deepdell North Stage III Resource Consent Decision, Page 27

Allowing consideration of effects management techniques (remediation, mitigation, offsetting, and compensation) does not need to imply a lesser level of protection and maintenance of biodiversity values. In the case of offsetting and compensation, these can be designed and implemented to produce net gains, which as its name suggests, results in the biodiversity values being addressed to end up in a better state than they were before the development took place.

Part 4 - PORPS is inconsistent with national direction

41. For the reasons outlined above, OceanaGold has a significant interest in any provisions or plan changes that might influence or affect its ability to continue to operate at the Macraes site. For this reason, OceanaGold was significantly involved in the consultation and submission process for the (now) partially operative ORPS 2019 including submissions and further submissions, a hearing before Councillors, two separate appeal decisions by the Environment Court[13] and a decision from the High Court[14] on the biodiversity compensation and offsetting policies alone. The level of that involvement is indicative of the complexity added when policy settings set out to avoid sector-specific policy adjustments in favour of "one size fits all" environmental "bottom lines.
42. Unfortunately, PORPS fails to engage with the requirements of and learnings from existing and ongoing policy developments embodied in the following planning instruments (listed in order of release):
    - ORPS 2019 (and subsequent resolutions on appeal)
    - National Planning Standards 2019 and related Guidance
    - Section 104(1)(ab) RMA as introduced by an amendment in 2017
    - DNPSIB
    - The proposed review of the Resource Management (National Environmental Standards for Freshwater) Regulations 2020 (NESFW)
43. Added to these, are the worked examples offered by the various consenting panels' analyses (and comments of submitters) on Oceana Gold's Coronation, Coronation North, Coronation North Extension and Deepdell North Stage III ("Deepdell") developments, the last of which received consents in September 2020.

ORPS 2019

44. When the partially operative ORPS 2019 was notified, OceanaGold had not long before been through the process of securing the necessary land use and regional consents to enable the Coronation Pit and associated rockfill and other infrastructure to be developed at the Macraes operation. OceanaGold's submission on the notified RPS was extensive and

[13] *Oceana Gold (New Zealand) Limited v Otago Regional Council* [2019] NZEnvC 41 and *Oceana Gold (New Zealand) Limited v Otago Regional Council* [2020] NZEnvC 137.
[14] *Oceana Gold (New Zealand) Limited v Otago Regional Council* [2020] NZHC 436

included the request that the provisions of the new RPS ensured a pathway was kept open to allow mineral development proposals at the Macraes operation to be considered and approved where adverse effects on significant and other biodiversity values could not be avoided, but were able to be addressed through other parts of the effects management hierarchy such that biodiversity was protected and maintained.

45. OceanaGold was concerned that, as notified, the RPS provisions would frustrate a similar proposal such as Coronation in the future – even though it was clear that such a development promoted sustainable management, as evidenced by the granting of consents. The decisions version of the RPS appeared to contain no recognition of OceanaGold's submission on this point, and OceanaGold appealed to the Environment Court.
46. In the meantime, and prior to the appeals being considered, resource consent applications for the Coronation North project at the Macraes operation were considered by the district and regional councils. As with Coronation, Coronation North involved unavoidable effects on some significant ecological values, and OceanaGold proposed a comprehensive series of mitigation and compensation measures based on expert ecological advice and in consultation with the Department of Conservation to ensure biodiversity was protected, maintained and improved. Those measures were accepted by the decision-makers and consents were granted.
47. Following Environment Court mediation relating to OceanaGold's and others appeals on the decisions version of the RPS, changes to key policy provisions affecting mineral resources in Otago were agreed between various parties. This resulted in the following policies being inserted into the RPS:

    Policy 5.3.4 – Mineral and petroleum exploration, extraction and processing

    Recognise the functional needs of mineral exploration, extraction and processing activities to locate where the resource exists.

    Policy 5.4.8 – Adverse effects from mineral and petroleum exploration, extraction and processing …

    - *Preference is to be given to avoiding the location of mining activities in areas of significant indigenous vegetation and significant habitats of indigenous fauna;*
    - *Where it is not practicable to avoid locating in such areas, because of the functional needs[15] of the proposed mining activity, then adverse effects should be - remedied or mitigated as necessary to maintain the outstanding or significant nature of such areas;*

[15] 'Functional needs' is defined to mean "The locational, operational, practical or technical needs of an activity, including development and upgrades".

- *If adverse effects cannot be practically remedied or mitigated, and there are residual adverse effects, consideration must be given first to biological diversity offsetting and then biological diversity compensation;*

48. The parameters for offsets are prescribed by Policy 5.4.6 and for compensation by Policy 5.4.6A.
49. During the hearing for the Deepdell project emphasis was placed on the detail within Policies 5.4.6 and 5.4.6A. It became apparent that Policy 5.4.6A relating to compensation was self-defeating as it contained limits or constraints on when compensation could occur. These provisions were not "agreed" by all parties during mediation and were instead arrived at as a result of a decision of Judge Jackson's division of the Environment Court ("Jackson Provisions"). They are something of an outlier when viewed in a national context.
50. On one hand Policy 5.4.6A sets out what good compensation looks like, but then by virtue of Policy 5.6.4A(a) it limits the circumstances when compensation can be applied. It does not, for example, allow for compensation to occur where the activity might result in the removal or loss of viability of habitat of a Threatened or At Risk indigenous species of fauna or flora, even though the compensation proposal results in a net benefit to the species concerned (this on the basis that allowing compensation is too 'risky' in these circumstances). With regard to the Deepdell project this was the situation for 'At Risk' lizard species whose habitat would be removed. All ecological experts (including those who represented the Otago Regional Council as submitter on the application) however agreed that this effect could be suitably compensated and that a No Net Loss outcome for lizard values of the Macraes Ecological District would occur as a result of the measures that were being proposed by OceanaGold. There was no unmanageable risk.
51. It could be concluded that as a result of this proposal, ecological values of the impacted area will likely be better off than current status quo (i.e. if the project did not receive consent).
52. In the course of the Deepdell hearing Oceana Gold as applicant, the councils, submitters and the hearing panel traversed some of the intervening developments listed above, between release of ORPS 2019 (decision version) and the Deepdell hearing in August 2020. As described in paragraph 38 above, ultimately, despite the proposal not being entirely consistent, or contrary to some of ORPS 2019 provisions mentioned above, the Commissioners remarked that "*Our primary concern is that ecological outcomes are enhanced by the Proposal. We consider they are*." In other words, Deepdell was a decision representing sustainable development, which was made in spite of the provisions of ORPS 2019 (now "rolled over" into PORPS) – not because of them.
53. As a final note on PORPS 2019, and notwithstanding the above and its concerns with Policy 5.4.6A in particular (which remain), OceanaGold is not opposed to the intent of the effects management hierarchy which was developed in Policy 5.4.8. This is accepted good resource management practice
54. Most importantly for OceanaGold Policy 5.4.8 enabled (despite its imperfections) an ability to apply for resource consent for its proposal and to have this heard and tested via a

thorough discretionary consenting process. In other words, this policy and others in the existing RPS at the very least recognized the importance of mining activities, acknowledged its location and functional constraints and attempted to provide a consenting pathway for such projects.

S104(1)(ab) RMA

55. It is also important to recognise that the policy framework in the ORPS 2019 and the formulation of the offset and compensation provisions in particular were developed without being able to lawfully consider section 104(1)(ab) of the RMA which requires decision makers on a resource consent application to consider "any measure proposed or agreed to by the applicant for the purpose of ensuring positive effects on the environment to offset or compensate for any adverse effects on the environment that will or may result from allowing the activity". The PORPS 2021 has been notified in a different legal context and 'rolling over' the offset and compensation formulations from the partially operative RPS is inappropriate as the wording sets up a conflict with section 104(1)(ab). A decision maker on a resource consent application must have regard to the provisions of an RPS and must also have regard to any offset and compensation proposals advanced by an applicant.[16] To the extent that the RPS provisions seek to limit the range of offset and compensation proposals that can be considered they are now unlawful.

DNPSIB & Wetlands Review

56. Added to its inconsistency with s104(1)(ab) of the RMA, since the partially operative ORPS 2019 was notified there have been several other relevant developments.

57. A draft National Policy Statement for Indigenous Biodiversity (the DNPSIB) was released for consultation in 2019. The draft includes:

    - Criteria for the identification of significant natural areas (SNA);
    - A general policy that requires avoidance of effects on the values that make an area significant
    - A "consenting pathway" for particular activities that are considered important, but which have functional needs that make avoidance impractical in some instances. Mining is included in that "consenting pathway"[17];
    - An ability for the identified activities requiring a "consenting pathway" to access the remainder of the effects management hierarchy provided the impacted values are of 'medium' and not 'high' significance;

[16] Section 104(1)(ab) and (b)(v) RMA
[17] Proposed National Policy Statement for Indigenous Biodiversity (2019), Policy 3.9(2).

- Principles for offsetting and compensation

58. A new National Policy Statement for Freshwater Management was promulgated in 2020 (NPSFM), together with a set of regulations relating to, inter alia, management of natural wetlands in the form of National Environmental Standards for Freshwater (NESFW). The NESFW has come in for serious criticism as being overly restrictive and unworkable, and, relevantly, the extractives sector (mining and quarrying) has been vocal about the impact on that sector of the NESF's wetland regulations, which in many instances make development impossible. As a result, the Ministry for the Environment wrote to interested parties in May 2021 advising the concerns with the NESF have been considered by Cabinet and that Cabinet:

> *"…noted that there is a clear case for providing a consenting pathway for the [quarry, waste management and mining sectors] and projects…The Government accepts that there are constraints on where these activities/operations can be located, and that they provide necessary materials or services."*

59. Consistent with this letter, proposals for a formal review of the wetlands provisions of the freshwater reforms have been released for consultation on 2nd September 2021.

60. There is a heightened level of public awareness and concern that the combined effect of a low bar for deeming areas to be 'significant' combined with strong 'avoidance' policies and other restrictions will make economic use of large areas impossible. Most recently this concern has been seen in Northland (a region that shares similar policy settings to those in PORPS). The Government is under some pressure to reconsider whether it has the various policy settings in this area balanced correctly.

61. Given the issues that arose during the Deepdell project around the inadequacies of the biodiversity policy provisions (which the ORC was party to as both regulator and submitter), and the developments that have occurred since the partially operative ORPS 2019 was notified and which the ORC is well aware of, it is a significant failing of the PORPS that there had been no attempt to improve the functioning of the provisions which relate to SNAs and biodiversity and mining activities in the PORPS.

Part 5 - PORPS fails indigenous biodiversity

OceanaGold does not dispute that biodiversity overall is in decline. We do dispute the efficacy of a widespread ban on land use development as a tool for managing that decline. In the absence of private sector investment in positive biodiversity programmes, pests, predators and weeds like wilding conifers will continue to degrade indigenous biodiversity at pace. ORC is required to recognise and provide for the protection of significant biodiversity areas and habitats[18] but has proposed policy that will not achieve this in relation to the Macraes area.

62. At Macraes Mine, a "world-class" goldfield co-locates with low-producing pasture, tussock grasslands and gullies that support some significant biodiversity values. As a result of this OceanaGold has adopted a cascading (or 'stepped') approach to the management of adverse effects, particularly where it might affect biodiversity values. The most recent projects at the site, Coronation North and Deepdell all involved development of a major and comprehensive suite of measures to address residual impacts on biodiversity values.
63. Through careful planning, and with the close scrutiny, assistance and support of key stakeholders in the form of the Department of Conservation and Waitaki District Council ecological advisors, OceanaGold has implemented measures that will ensure that biodiversity values are maintained and improved in the wider area, and knowledge of how to manage biodiversity in the Macraes environment is increased through research and adaptive management. Over 650ha of land in the Macraes Ecological District is now in ecological covenants. Several significant offsetting sites have also been identified to be set aside through consent conditions and legal protection as part of the Deepdell consenting process, and there are comprehensive conditions imposed in both the Waitaki District Council and Otago Regional Council consents to ensure these obligations are fulfilled. Crucially, protected areas are both selected for their suitability to be set aside as self-sustaining ecosystems on a path to recovery and funded for active management of threats like wilding pines.
64. PORPS departs from this model and, at Macraes at least, rules it out for the future. PORPS is instead drafted on the assumption that biological diversity will be maintained purely through of the absence of development. That is not a sound assumption. Biodiversity requires active protection, particularly in the face of unrelenting pressure from predators and pests.

[18] Section 6(c) RMA

65. The following excerpts (emphasis added) are taken from MfE's "Our land 2018" to illustrate the point:

Key findings

- There is continued loss of indigenous land cover. From 1996 to 2012, there has been a net loss of around 31,000 hectares of tussock grassland, 24,000 hectares of indigenous shrubland, and 16,000 hectares of indigenous forests through clearance, conversion, and development. Although these areas represent a small proportion of each cover type, the ongoing loss continues to threaten indigenous biodiversity.
- Coastal and lowland ecosystems that were once widespread (including wetlands) continue to decline in extent.
- Almost two-thirds of New Zealand's rare and naturally uncommon ecosystems are threatened.
- Except for some offshore islands and fenced sanctuaries, exotic pests are found almost everywhere in New Zealand. Predation and plant-eating by pests, as well as disease and competition from weeds, continue to threaten indigenous biodiversity.
- Our view of the conservation status of indigenous land species is restricted to those considered by New Zealand's threat classification system. Of the taxa that are assessed, nearly 83 percent (285 of 344 taxa) of indigenous terrestrial vertebrates (land-based animals with backbones) were classified as either threatened or at risk of extinction. This affects taonga species.
- The conservation status is worsening for some land species (seven bird species, three gecko species, and one species of ground wētā).
- The conservation status is improving for 20 bird species. More than half of these are dependent on intensive conservation management.

Box 6: Spread of wilding conifers threatens millions of hectares of high-country land

New Zealand's favourable tree-growing conditions have led to the rapid spread of exotic conifer species, most notably contorta pine and Douglas fir. These tree species present an environmental pressure of their own. Their adaptive qualities have seen them spread by wind and other means across large areas of open country. Current estimates show that wilding conifers (commonly known as wilding pines) currently cover about 1.8 million hectares, and before the national control programme, were increasing that coverage by about 90,000 hectares annually (MPI, 2017b).

Wilding conifers present a particular issue in high-country pastoral land and on public conservation areas in Marlborough, Canterbury, Otago, Southland, and on the central plateau of the North Island (Manaaki Whenua – Landcare Research, 2013). The conifers can dominate indigenous species, and can reduce the value of productive land, reduce water availability, affect soil carbon, facilitate the establishment of other alien species, compete with native plants and animals, and alter the natural character of landscapes (Froude, 2011).

Wilding conifer can spread if left unchecked, as seen in Mid Dome, Upper Tomogalak catchment, Southland, from 1998 to 2015. Photos: Environment Southland (left and right), Department of Conservation (middle)

66. OceanaGold understands that some people may be opposed to consenting pathways being open to development, due to a perceived risk that proposed actions will either not be undertaken at all, or will be poorly implemented and therefore the promised biodiversity gains will not be realised. This concern can be (and for major projects like those undertaken by OceanaGold most certainly is) addressed through the appropriate use of consent conditions (including review conditions), monitoring, reporting, bonding and enforcement.
67. PORPS can ,and should, acknowledge the opportunities that come with the pairing of active biodiversity management with responsible land use development.

Final Comments

68. As a matter of law, OceanaGold considers that in the absence of amendments to the PORPS to address and give effect to the above issues:

    - The PORPS will not promote the sustainable management or efficient use and development of natural and physical resources;
    - The PORPS as notified is not the most appropriate way to achieve the purpose of the RMA, particularly when regard is had to the efficiency and effectiveness of the provisions relative to other means;
    - The section 32 analysis is poor, and does not meet the expectations of the RMA, particularly in terms of its almost total failure to evaluate the costs of implementing the provisions and its failure to recognise that in many cases (such as at Macraes) simply avoiding effects on significant biodiversity values will not protect them;
    - The PORPS as notified is at risk of putting Waitaki District Council in the position where it is required in its district plan to include provisions to give effect to the PORPS that would render OceanaGold's interest in land at Macraes incapable of reasonable use.[19] It is a matter of record that the land and mineral interests OceanaGold owns at Macraes have been acquired under the provisions of the Overseas Investment Act and the Crown Minerals Act for the purpose of mining. OceanaGold is subject to rigorous obligations in its minerals permits issued by the Crown to continue to invest in the exploration and development of the area's mineral resources. How can OceanaGold do that if the PORPS precludes all reasonable opportunity for such development to occur because of an unnecessarily restrictive "avoidance" approach?
    - The PORPS does not represent sound resource management practice particularly with respect to planning for significant economic activities and contributors in the Otago Region.

[19] Section 85 RMA

69. Additionally, in relation to the use of the proposed use of the freshwater planning process, OceanaGold submits that the wide-ranging content of the PORPS necessitates special circumstances and requests additional panel members be appointed with expertise in current national and international best practice in terrestrial biodiversity management including the application of biodiversity offsets and compensation to achieve positive outcomes for biodiversity in conjunction with development proposals.

70. Finally, in addition to the above, various other amendments, as detailed in Appendix 6, are required to ensure that the regional significance of the Macraes mining operation is appropriately recognised and provided for in the Otago Regional Policy Statement.

Next Steps

71. OceanaGold wishes to be heard in support of its submission.

72. If others make a similar submission, OceanaGold will consider presenting a joint case with them at a hearing.

73. I **could not** gain an advantage in trade competition through this submission.

74. I **am** directly affected by an effect of the subject matter of the submission that
    a. adversely affects the environment; and
    b. does not relate to trade competition or the effects of trade competition

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Appendix 1 to Submission by OceanaGold (New Zealand) Limited

Evidence of Michael James Thorsen

Introduction

1 My name is Michael James Thorsen.

2 I have been engaged by Oceana Gold (New Zealand) Limited (**OceanaGold**) to review and comment on the proposed biodiversity provisions of the proposed Otago Regional Policy Statement 2021 (**pORPS**) as they relate to the identification and management of adverse ecological effects as a result of mining and on leasehold farms.

Qualifications and experience

3 I have the following qualifications and experience:

(a) I am a Director and Principal Ecologist with Ahikā Consulting Ltd, a company that focusses on sustainability.

(b) I have been working professionally in the biodiversity management field since 1990 for a number of organisations including the Department of Conservation (17 years), Mauritian Wildlife Foundation, United States Fish and Wildlife Service, St Helena National Trust, Landcare Research, Birdlife International, and as a freelance ecologist on a wide variety of flora and fauna restoration and protection projects throughout New Zealand, in Hawaii, Mauritius, Seychelles, Marquesas, St Helena and Kiribati. I have a PhD in Ecology from the University of Otago.

(c) I have been providing support on biodiversity issues to OceanaGold at Macraes Mine since 2013. I am familiar with the biodiversity of the Otago Region and in the area of the Macraes Mine and the general surrounds, having worked on vegetation and reptile studies for the Department of Conservation and as a professional ecologist since 2005.

(d) I am familiar with many of the Otago Region's and Macraes Ecological District's terrestrial ecological values, having undertaken various detailed surveys in parts of the district since 2004. While I am generally familiar with the Otago Region and Macraes Ecological District as a whole, given its substantial size I acknowledge that there are large parts of it that I have not surveyed in detail.

(e) I was member of the Ecosystem Reference Group providing feedback on previous versions of the pORPS to ORC.

4 Even though this matter is not before the Environment Court, I confirm that I have read the code of conduct for expert witnesses contained in the Environment Court Consolidated Practice Note 2014. I have complied with it when preparing this written statement of evidence and I agree to comply with it when presenting evidence. I confirm that the evidence and the opinions I have expressed in my evidence are within my area of expertise. I have not omitted to consider material facts known to me that might alter or detract from the opinions that I express.

5 In preparing this evidence I have read the pORPS, the s32 Evaluation Report[1] (including the relevant appendices, particularly Appendix 17 (Wildlands Report[2])

Scope of evidence

6 I have been requested by OceanaGold to provide expert evidence on the likely impact of proposed policies in Topic ECO of the pORPS on ecological considerations associated with consenting future mine developments and on freehold lands leased for farming. I have also considered the s32 report (v61) and supporting references.

7 The purpose of this statement of evidence dated 3 September 2021, is to accompany OceanaGold's submission on the pORPS. I will prepare a further statement of evidence for OceanaGold's presentation to the hearings panel where I will elaborate on the matters discussed and comment on any other submissions or matters raised by the ORC.

8 In this evidence I:

(a) Examine the ecological rationale and provide general comment of the proposed policies in Topic ECO;

(b) Provide an evaluation of the probable extent of land that could qualify as a Significant Natural Area (**SNA**) throughout Otago.

(c) Describe recent advances in biodiversity management being undertaken by OceanaGold and make a preliminary assessment of their adequacy in producing an increase in the biodiversity in the area surrounding Macraes mine;

(d) Describe the probable effects of the policies in Topic ECO on future mine developments.

I illustrate this evidence with examples drawn from past OceanaGold mine developments with which I am familiar, particularly the recent Coronation North and Deepdell North developments, together with current ecological information from the Macraes Ecological District (**E.D.**) including from a database of 21,697 plant records in this E.D. dating from 1889 – a database probably unique in NZ in its size.

Summary of evidence

9 I believe that Topic ECO of the pORPS is well intentioned, but that the policies do not align with the current causes of biodiversity loss in the region and do not adequately consider positive contributions that have been made in conserving biodiversity, and that can be made in the future if the policies allow this. I also consider that the effectiveness of the SNA approach has not been evaluated and the impact of implementation of the policies relating to SNA has not been adequately evaluated in the s32 report.

10 The policies relating to the mitigation hierarchy and the role that offsetting and compensation play in addressing project effects has not been properly considered and is at odds with the objectives and other policies of the

[1] May 2021

[2] Ecological Advice on Indigenous Biodiversity Provisions in the Proposed Otago Regional Policy Statement 2021.

pORPS and the draft National Policy Statement on Indigenous Biodiversity (**draft NPS-IB**) (especially Policies 6 and 8).

11 My submission has been hindered by non-supply of relevant information by the Otago Regional Council.

Ecological Rationale and General Comments of the dORPS

12 I find that the structure of the pORPS is confusing, particularly the relationship between Part 2 and Part 3, ie it is unclear what the relationship is between a Topic and a Domain, and their Objectives and Policies, in Part 3 and the objectives and policies in Part 2 (such as IM). Therefore, I cannot comment adequately on the implications of adopting the policies in Topic ECO. The pORPS and the s32 report also uses the term 'Chapters' which are not explained in or used in the pORPS.

13 I consider the objective of ECO-01: "Otago's indigenous biodiversity is healthy and thriving and any decline in quality, quantity and diversity is halted", to be aspirational, and not sufficiently supported by the policies in Topic ECO.

14 The ecological rationale behind the policies of the pORPS is in my opinion skewed from the primary causes of biodiversity loss in the Otago Region. These being[3,4,5,6] (in two main themes and in current importance priority order within the theme):

(a) habitat and ecosystem effects: the impacts of browsers, weeds, deliberate and accidental clearance of vegetation, diseases, and impacts from a changing climate with increasing frequency of extreme events on both the extent and quality of the remaining indigenous vegetation; and

(b) effects on species: the impacts of predators, weeds, browsers, declining habitat quality, diseases, and impacts from a changing climate with increasing frequency of extreme events on the numbers and distribution of indigenous species, to the point that well over 4,000 species (and possibly as many as 7,000 species) are of some conservation concern, and a considerable number are in real and imminent threat of extinction.

15 These effects are complicated, often inter-related, and mostly poorly understood. The effects of a changing climate on indigenous biodiversity are especially poorly understood, but are likely to be of increasing influence as a driver of biodiversity change. While these effects are generally described in SRMR-13, there is no assessment of the relative importance of each on the natural environment.

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[3] DOC. 2020. Te Mana o te Taiao: Aotearoa NZ Biodiversity Strategy 2020.

[4] DOC. 2020. Biodiversity in Aotearoa: an overview of state, trends and pressures.

[5] Macinnis-Ng; et al. 2021. Climate-change impacts exacerbate conservation threats in island systems: New Zealand as a case study. Frontiers in Ecology and the Environment. https://doi.org/10.1002/fee.2285.

[6] Brown, M.A; et al. 2015. Vanishing Nature: facing New Zealand's biodiversity crisis. Environmental Defence Society, Auckland.

16 Habitat loss caused by deliberate vegetation clearance (such as that created during new mine development) is often demand driven and without policies to support sustainable use of resources, minimisation of waste and full costings of activities (including ecological costs)[7] through approaches such as life cycle analysis and environmental reporting, then this demand is unlikely to change. Such policies appear to be absent from the pORPS.

17 The s32 report and supporting references do not prioritise the importance of the factors affecting biodiversity loss and appears to mainly consider statutory alignment and therefore the Objectives and Policies in the pORPS are skewed from the primary causes of biodiversity loss.

18 While there is limited consideration of the positive contribution that some activities provide to maintaining or enhancing biodiversity in the Wildlands (2021b) report, this does not seem to have been carried through into the pORPS itself. Also, this analysis is very incomplete and does not consider the effectiveness of the current protected area network throughout Otago in protecting indigenous biodiversity, or the many positive roles that community groups and industry have and can play.

19 In particular, there is no acknowledgement of the recent developments in New Zealand and internationally on the use of biodiversity offsets to produce net gains in biodiversity.

20 Because these policies are poorly aligned with the primary causes of biodiversity loss, and do not consider the positive gains that can be made through community conservation and commercial offsetting (for example), I have low confidence that adopting these policies will address the issue of biodiversity loss.

21 While I am generally supportive of the SNA approach, this support is tempered with caution centred around the adequacy of the approach employed in the pORPS to accurately identify sites that are significant as defined in the RMA and which would result in improved biodiversity condition in an area. I also have caution around the impact of this approach on people's land, particularly Mana Whenua lands, and understand the rural community has expressed concerns about this approach. I do believe this view held by the rural community also needs to be balanced with the need to effectively protect New Zealand's indigenous biodiversity.

22 In my opinion the pORPS approach to SNAs has not been adequately evaluated for effectiveness in identifying significant areas in accordance with the RMA or in protecting Otago's biodiversity. To the best of my knowledge, there has been little such evaluation anywhere in NZ[8], which is concerning given how widespread similar approaches are employed.

23 I am concerned that the significance criteria in the pORPS are more stringent and restrictive than those in the draft NPSIB. The s32 report claims that the criteria are considered "largely the same", but I disagree.

24 I also note that an area has to only meet <u>one</u> of the criteria before being considered significant. This approach will result in many more areas being considered as significant in the absence of clearly defined thresholds.

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[7] Stats NZ and MfE. 2021. *Our land 2021:* New Zealand's Environmental Reporting Series.

[8] See Maseyk, J.F.F; Gerbeaux, P. 2014. Advances in the identification and assessment of ecologically significant habitats in two areas of contrasting biodiversity loss in New Zealand. New Zealand Journal of Ecology (2015) 39(1).

25 I also have concerns around the wording and content of the criteria in APP2. In particular:

(a) Representativeness criterion. My main concern with this criterion, specifically subcriterion (a), is that representativeness is defined in relation to "original" without any consideration of what original means. Does this mean pre-human? Whatever the representative state, what information will be used to make this assessment and what confidence can we have with this information? Because of this uncertainty the interpretation is likely to be made that ANY natural vegetation is representative (and therefore qualifies as significant). Because there is no threshold state and the definition specifically includes 'degraded examples" then even very degraded examples of natural vegetation could be considered significant.

(b) Rarity criterion. My concern is that employment of the criteria "Indigenous vegetation or habitat of indigenous fauna that has been reduced to less than 20% of its former extent nationally" is not specifically linked to the Land Environment NZ (LENZ)[9] database which does provide a similar type of information. However, if this criterion is specifically linked to this data source, then consideration needs to be made of the confidence in the LENZ data – particularly with regards to classification errors and spatial resolution[10]. However, this analysis has been performed at a national scale, so the reference to it at a regional of Ecological District scale is problematic.

(c) Diversity criterion: My concern is how diversity is assessed. When does something become 'diverse'? I also note that in some cases low diversity is actually the valued state, such as in saline sites that often only contain a few indigenous species.

(d) Distinctiveness criterion: this is likely to be mostly an expert opinion unless specific mapping and analysis is undertaken.

(e) Ecological context criterion. How is 'important' judged?

26 I have concerns also on the adequacy of some of the definitions:

(a) *Indigenous Vegetation: means vascular and non-vascular plants that, in relation to a particular area, are native to the ecological district in which that area is located.*

Concern: This definition lacks the aspect that "Vegetation" should refer to group or community of plants. The definition above seems to apply more to defining an indigenous species rather than defining the "vegetation" component of the phrase.

(b) *Significant natural area: means areas of significant indigenous vegetation and significant habitats of indigenous fauna that are located outside the coastal environment.*

Concern: This definition lacks any consideration of what is meant by significant or whether the Criteria in APP2 are considered part of this definition. It is also erroneous to refer to the plural areas and

[9] https://www.landcareresearch.co.nz/tools-and-resources/mapping/lenz/

[10] See Dymond, J.R. et al. 2017. Estimating change in areas of indigenous vegetation cover in New Zealand from the New Zealand Land Cover Database (LCDB). New Zealand Journal of Ecology 41(1): 56-6.

habitats when referring to the singular term Significant natural area (which is usually also capitalised).

The likely extent of Significant Natural Areas within Otago

27 Policies ECO-P2 and P3 address the identification and protection of SNA within Otago and ECO-P3 is linked to a mitigation hierarchy in ECO-P6 to address project effects on biodiversity.

28 This effects management hierarchy in ECO-P6 is only available for activities that are able to meet the 'avoid' test in ECO-P3 (which also refers to ECO-P4 and P5). The 'avoid' test is very broad, as it does not allow reduction in area or values. This effectively means that a large range of activities (including mining and farming, which are not listed in ECO-P4) will not be able to access the effects management hierarchy if the effect is on an area that qualifies as a SNA under the Criteria in APP2.

29 The effects of these Policies is partly considered within the s32 report. While the potential effect of this policy structure was identified to ORC during Reference Group consultation, and the concerns appear to be accepted at paragraphs 436 and 439 of the s32 report, these concerns are not addressed in the preferred option of the s32 report or the pORPS.

30 I also consider the analysis at paragraph 445 of the s32 report on ECO-P5 to be naive, in that while the intention is to allow the continuation of existing activities (presumably such as farming) within a SNA where the activity "will not lead to the loss (including through cumulative loss) of extent or degradation of the ecological integrity" the reality is that some groups will consider current farming practices ARE affecting the ecological integrity of SNAs, with the result that they will use these provisions to exclude farming from these areas, and the apparent safeguard at (2) of ECO-P5 will be very difficult to prove for most farming operations.

31 Neither the pORPS nor the s32 report make any assessment of the likely extent of SNA within Otago if ECO-P2 and P3 and criteria in APP-2 are adopted. Therefore, the impact of these policies on economic and social issues has not been considered.

32 To address this, I have attempted to map the potential extent of SNAs within the Otago Region. I emailed the ORC on 16 July, 20 July, and 20 August 2021 requesting a copy of the base mapping information underpinning parts of the pORPS and the Appendices to the s32 report. At the date of writing this evidence it has not been provided to me. Therefore, I have used geographic which I considered the best available alternative for reflecting the criteria included in the APP-2 of the pORPS[11]. However, not all criteria have geographic information available that would represent the extent of SNA under that criteria. This means that my maps may be conservative in identifying the potential extent of SNAs.

33 For the purposes of my analysis, Otago Region's total land area is calculated as 3,110,780 ha if lakes > 4 ha and the sea is excluded. Removing urban and residential areas results in a land area of 3,099,547 ha.

[11] Mostly accessed from (unless stated otherwise): https://koordinates.com/data/global/oceania/new-zealand/

34 Areas identified as freehold land do not include lands already protected under DOC or by a covenant. Removing these protected areas results in an area of 2,364,435 ha of freehold land where new SNAs may be present. This figure is the basis for my analysis.

Spatial extent of Representativeness criteria

35 The Representativeness criteria is based around the current extent of natural vegetation, including degraded examples. Therefore, any area of natural vegetation potentially qualifies as a SNA under Representativeness criterion (a). Criterion (b) and (c) are not mapped as they are marine focussed.

36 The coverage of Otago Region's freehold area by native vegetation was estimated using mapping of indigenous vegetation types from the Landcover Database (LCDB 5)[12] and including depleted grasslands and low producing grasslands vegetation communities as, in my experience, these often harbour extensive natural biodiversity and can be viewed as a degraded short tussock grassland habitat[13,14] which fits within the degraded context of Representativeness subcriterion (a). There is 1,262,679 ha of natural vegetation within the freehold area (Table 1). Depending on the interpretation made, it is possible that any (or all) of these areas could be assessed as SNA.

LCDB5 Vegetation Type	Area (ha)
Alpine Grass/Herbfield	11,047
Broadleaved Indigenous Hardwoods	16,921
Depleted Grassland	16,158
Estuarine Open Water	595
Fernland	23,766
Flaxland	31
Gravel or Rock	32,553
Herbaceous Freshwater Vegetation	14,386
Herbaceous Saline Vegetation	492
Indigenous Forest	32,493
Lake or Pond	2,092
Landslide	284
Low Producing Grassland	586,519
Manuka and/or Kanuka	39,211
Matagouri or Grey Scrub	29,401
River	6,733
Sand or Gravel	900

[12] https://lris.scinfo.org.nz/layer/104400-lcdb-v50-land-cover-database-version-50-mainland-new-zealand/

[13] See 3.1 in Peart, R; Woodhouse, C. 2020. Te Manahuna – Mackenzie Basin and Landscape Protection. Environmental Defence Society, 118 pp.

[14] Walker et al. 2021. What effects must be avoided, remediated or mitigated to maintain indigenous biodiversity? New Zealand Journal of Ecology, Vol. 45, No. 2, 2021.

Sub Alpine Shrubland	11,145
Tall Tussock Grassland	436,334
Urban Parkland/Open Space	1,618

Table 1. Areas of natural vegetation communities within the freehold land areas of Otago. Community names follow those in LCDB5.

Spatial extent of Rarity criteria

37 Within the freehold area are 22,800 records (Table 2) of nearly 600 species of conservation concern in a database developed by myself for the Endangered Species Foundation using species records in electronic biodiversity databases. This does not include species that might be considered Regionally or locally rare as the criteria for identifying these species has not been provided in the pORPS. The sites for all of these records qualify as a SNA under criteria (d) (i), even if the site is not within an area with natural vegetation cover.

Threat Status	count
Migrant	111
Relict	145
Vagrant	684
Extinct	11
Nationally Endangered	2262
Recovering	1805
Data Deficient	181
Nationally Critical	2448
Declining	10271
Nationally Vulnerable	2011
Naturally Uncommon	2859
Coloniser	12

Table 2. The threat status under the NZ Threat Classification System within the freehold land areas of Otago.

38 To calculate the area associated with each record within Otago, a conservative assumption is made that each record requires a 500 m x 500 m area to inhabit. This results in a total of 191,215 ha required to provide habitat for these species. If a more realistic area of 1 km x 1 km area for each site where a species has been recorded is used then 586,357 ha is required. Records are scattered throughout Otago but are concentrated around the Otago Peninsula, the Catlins, Macraes, around Alexandra, and Cromwell through to Queenstown and Wanaka.

Threatened land environment Criteria (d) (ii)

39 Natural areas in LCDB5 that are mapped as a Land Environment NZ (LENZ) with less than 20% of vegetation remaining = 777,136 ha in the freehold area. Note, this is a conservative estimate as “habitat of indigenous fauna” could also include areas that are not mapped as natural vegetation.

Overall

40 Overall, this means that using data to map areas where there is a high probability of being assessed as a SNA (considered a 'high probability' because the criteria have little opportunity for interpretation: LENZ with less than 20% natural vegetation remaining and 500m^2 area around species records), then SNAs could cover 458,958 ha (19%) of freehold land (Figure 1, Table 3).

41 Overall, this means that using data to map areas where there is a moderate probability of being assessed as a SNA (because the criteria have more opportunity for interpretation: the representativeness and larger 1km^2 area around species records), then SNAs could cover 1,540,198 ha (65%) of freehold land (Figure 2, Table 3).

42 This approach means that within the portion of the Waitaki District Council's territorial area that is within the Otago Region, SNAs could cover between 63,423 ha and 145,551 ha (19.41% to 65.14%) of freehold land (Figures 3, 4, Table 3).

Council Name	Land Area in Otago Region	Area Freehold	High Probability of SNA	% of Freehold Area	Moderate Probability of SNA	% of Freehold Area
Central Otago District	995,876.08	859,888.27	205,347.06	23.88	658,857.97	76.62
Clutha District	636,088.84	558,333.63	46,445.20	8.32	170,654.05	30.56
Dunedin City	328,145.58	281,318.19	97,910.74	34.80	193,344.18	68.73
Queenstown-Lakes District	935,756.62	391,715.37	45,831.64	11.70	371,789.57	94.91
Waitaki District	291,140.08	273,179.62	63,423.53	23.22	145,551.92	53.28
Otago Region	3,187,007	2,364,435	458,958	19.41	1,540,198	65.14

Table 3. Areas of freehold land within council boundaries with high or moderate probabilities of being considered an SNA.

43 There are undoubtedly extra areas that would qualify as a SNA under one or more of the criteria, but there is insufficient information available to allow mapping of these features. The criteria that could not be mapped are Representativeness (b) & (c), Rarity (d) (iii) & (iv), Diversity, Distinctiveness, and Ecological Connectiveness. The inability to identify SNAs based on these criteria due to lack of information further highlights issues with the criteria in the pORPS.

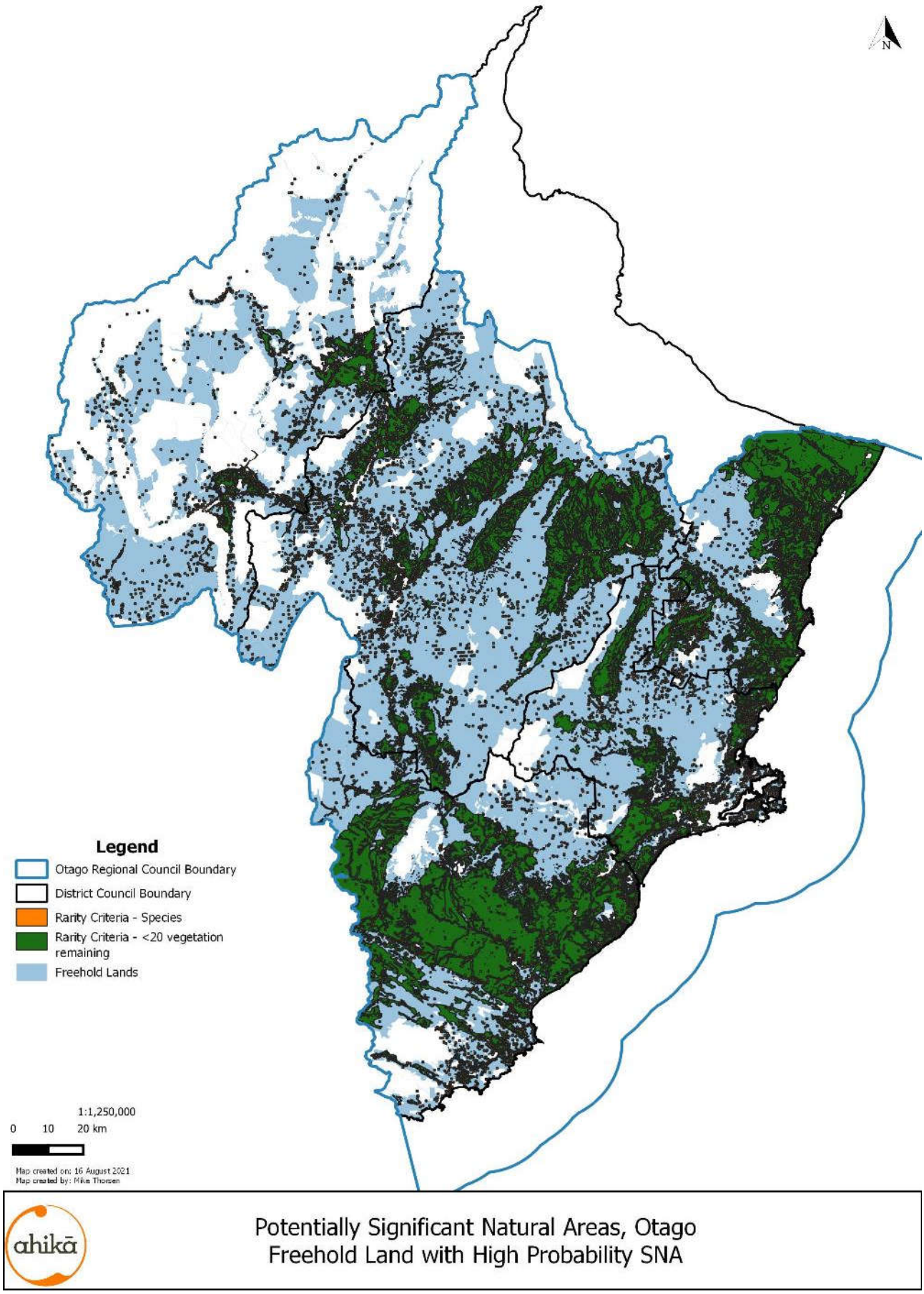


Figure 1. Area of freehold land within the Otago region with a high probability of being assessed as an SNA.

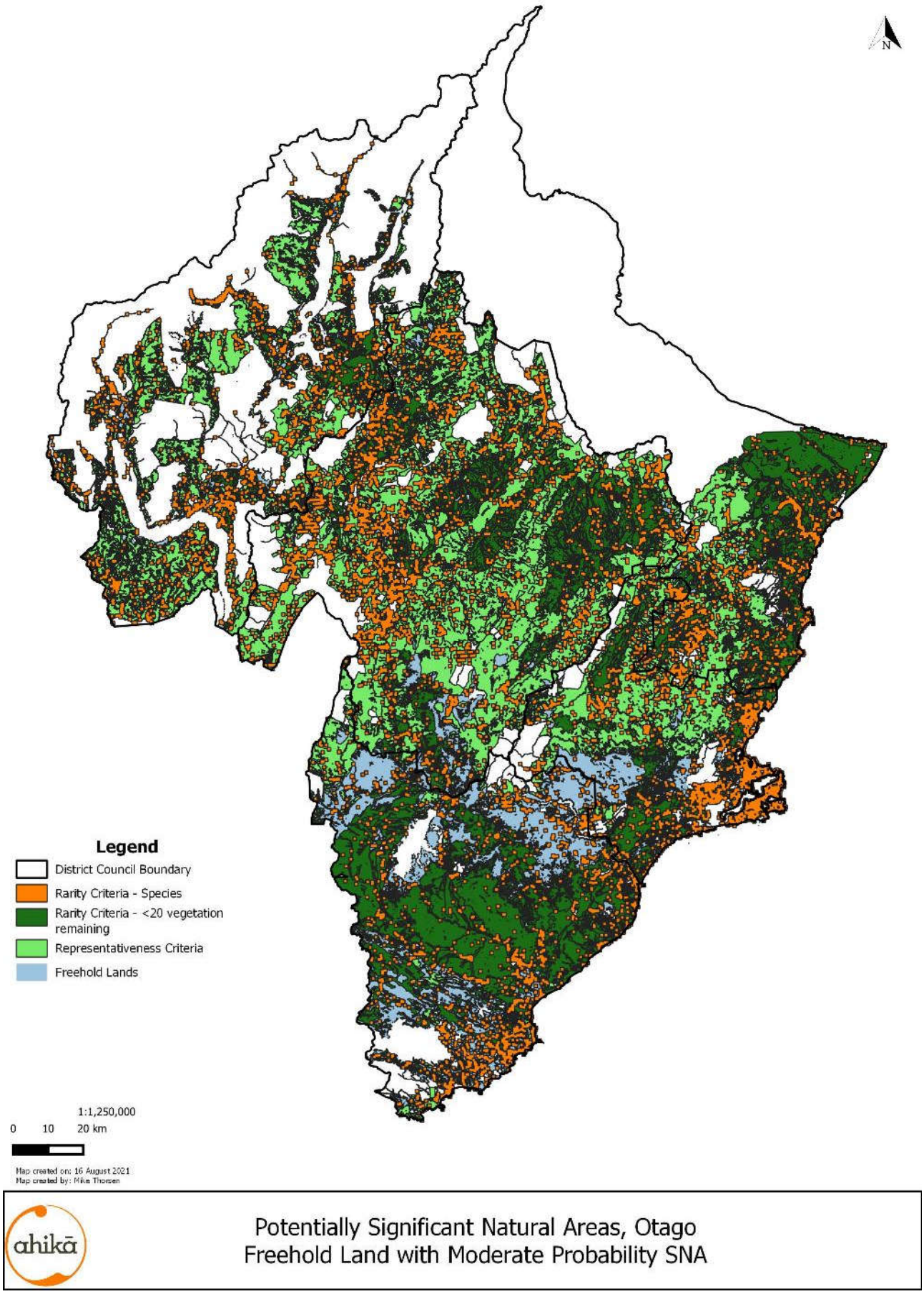


Figure 2. Area of freehold land within the Otago region with a moderate probability of being assessed as an SNA.

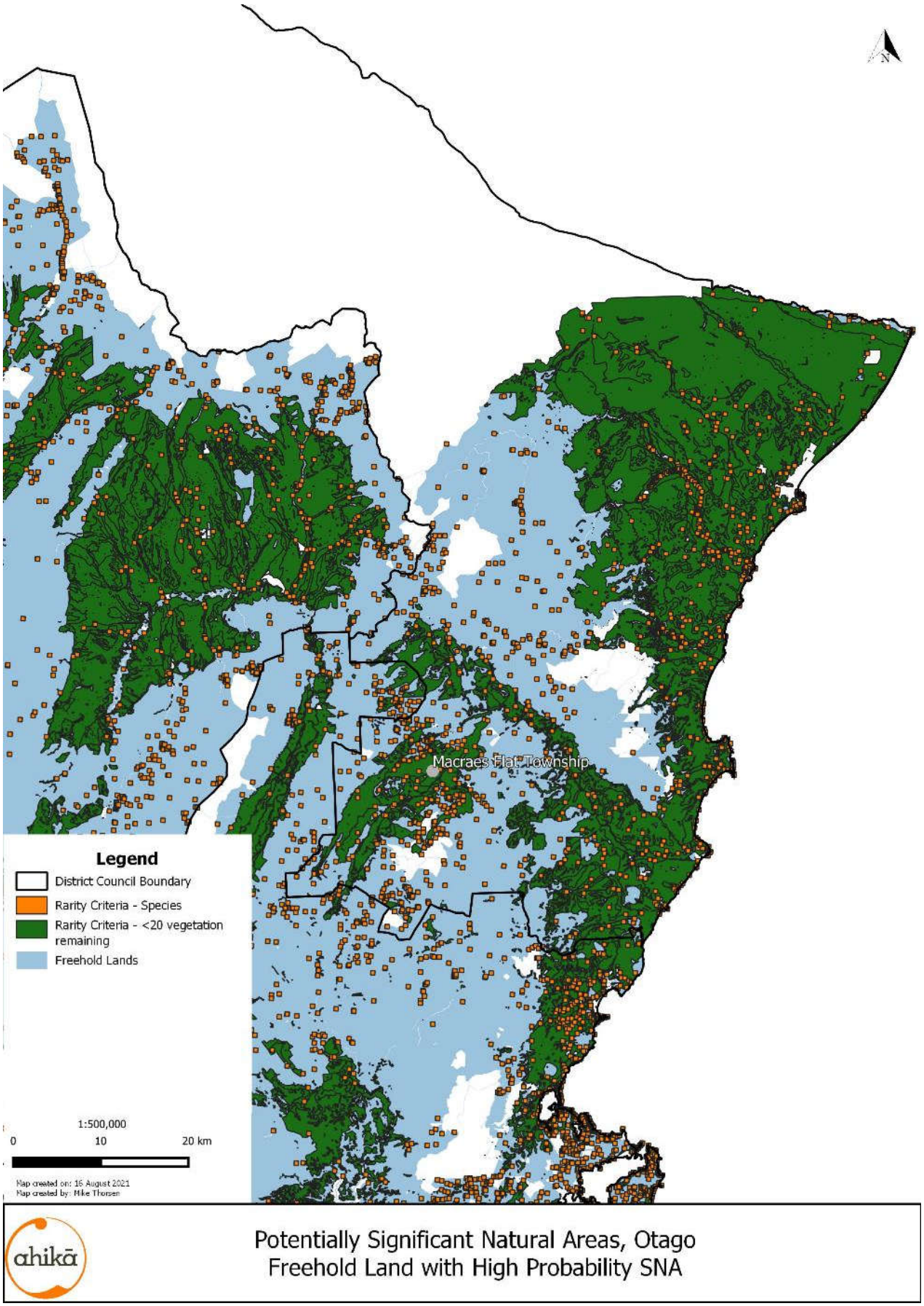


Figure 3. Area of freehold land within the Waitaki District of Otago region with a high probability of being assessed as an SNA.

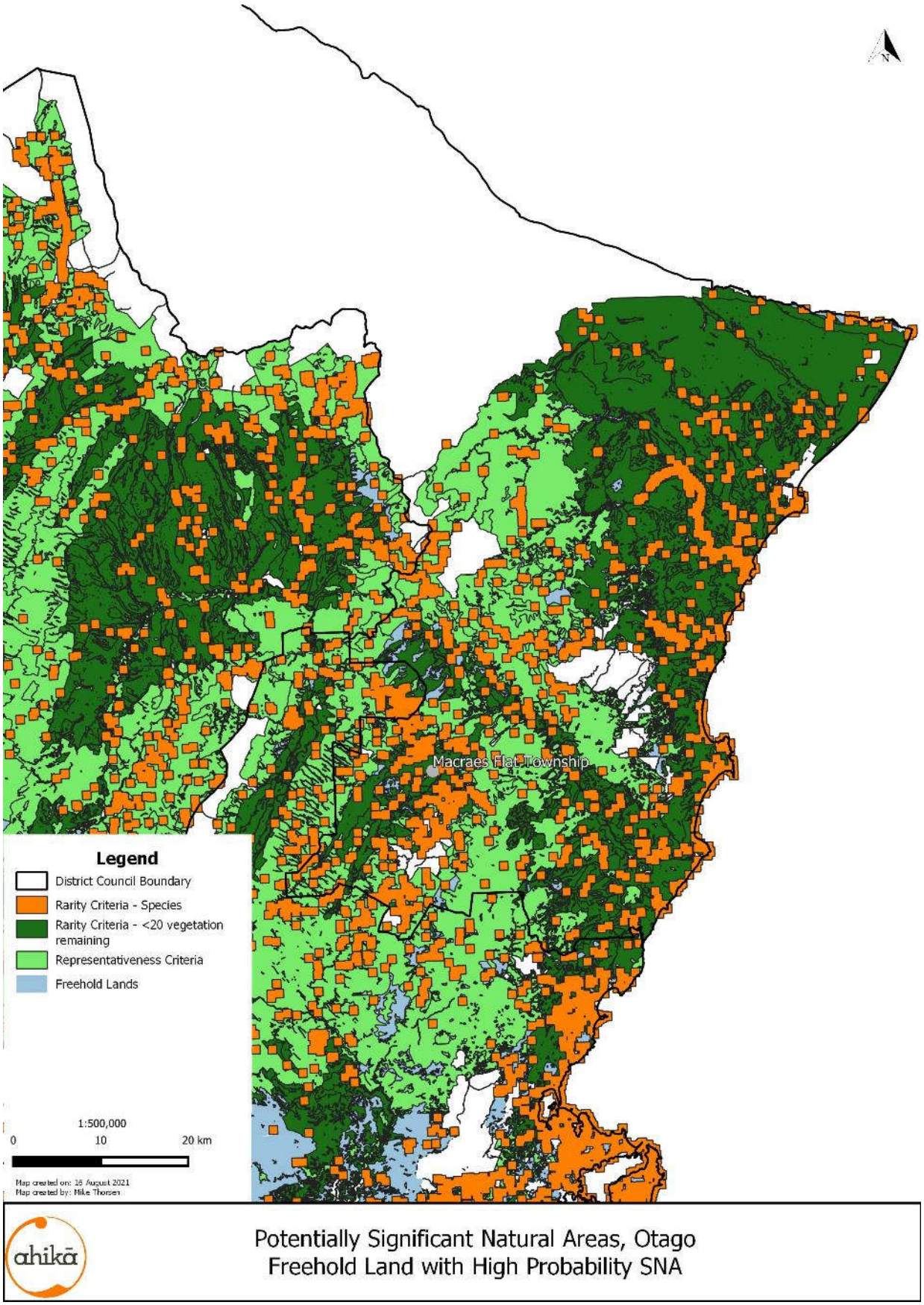


Figure 4. Area of freehold land within the Waitaki District of Otago region with a moderate probability of being assessed as an SNA.

Current approaches to effects management employed by OceanaGold

44 Both the recent Coronation North and Deepdell North projects have had effects on vegetation assessed as significant, and would also have been assessed as significant under several of the proposed criteria in APP2.

45 The approach employed in the Coronation North and Deepdell North projects applied the effects management hierarchy of sequentially seeking to avoid effects, remedy effects, mitigate effects, offset effects and compensate for effects. This resulted in a mitigation package that was designed with input from councils and the Department of Conservation with the aim of having an overall benefit to the area's biodiversity.

46 In the Deepdell North project, where the partially Operative Regional Policy Statement applied, the mitigation package was a combination of all levels of the effects management hierarchy. I wish to focus on the offsetting component of this mitigation package.

47 Two offset projects are part of this mitigation package, one focussing on a wetland near Middlemarch (wetland offset) and one on an area on Redbank Station (Redbank offset). Both offsets are primarily focussed on addressing project effects on vegetation communities, but also include components of rare species management.

48 The Ecological Enhancement Area Management Plans (EEAMP) for both sites were produced (under the umbrella of a project-specific Ecological Management Plan) on the basis of offset calculations using a disaggregated accounting model[15] to calculate the extent of works required within the EEA to achieve a state of at least No Net Loss of biodiversity (NNL). The offset calculations and EEAMPs were independently reviewed by an expert in offset design and calculation to confirm NNL. The Department of Conservation had a strong role in developing these EEAMP, and agreed with what was proposed prior to the consent being granted.

49 An important component of these offsets is that they incorporate a long-term funding model to support the planned actions for a greater than 50-year time frame (greater time period than consent duration) using a sustainable fund captured in the mine bond. The quantum of this fund was calculated on the cost of undertaking the planned activities and includes depreciation and replacement of materials and inflationary pressure.

50 Where there is some uncertainty around the effectiveness of actions within the EEAMP, a research action has been instigated to address this uncertainty. In the case of the wetland offset, this is a 7-year research programme comparing the utility of herbicides, grazing, mowing and restoring lost ecological function using surrogate wetland bird species in producing and maintaining ephemeral wetland vegetation in a Critically Endangered and Naturally Uncommon ecosystem type (and the largest example of in Otago).

51 Both sites will be protected in perpetuity through covenanting.

52 Both projects have been implemented and are in the baseline information gathering stage.

53 In my opinion projects such as these address concerns about the validity of commercial activities being able to occur with no net impact on an area's biodiversity. My concern is the pORPS does not allow for mining to

[15] Maseyk, F.J.F; Barea, L.T; Stephens, R.T.T; Possingham, H.P; Dutson, G; Maron, M. 2016. A disaggregated biodiversity accounting model to improve estimation of ecological equivalency and no net loss. Biological Conservation 204: 322-332.

show, on a case-by-case basis, that it can provide a biodiversity offset and this means that the region will lose out on potential biodiversity offsets which would see NNL or biodiversity gains.

Impact of Topic ECO on future OceanaGold mine activities

54 I assessed the possibility of areas within two indicative areas of future mine interest (Roundhill Extension and Golden Bar) being assessed as Significant Natural Areas if using the proposed criteria in APP2. To do this I used expert interpretation of aerial photographs to outline natural areas that I consider have a possibility of being assessed as an SNA. Much of the area around and within the forecast area of mine interest is likely to be assessed as Significant Natural Areas, as has been the case in the recent projects (see Figures 5, 6, 7 below), and most of the identified areas have a High or Very High possibility of meeting one or more of the criteria in APP2.

55 ECO-P3 is structured so that access to the effects management hierarchy in P6 occurs subsequent to the requirement to avoid any reduction of the area or values (even if those values are not themselves significant) identified under ECO–P2(1). As avoidance is not possible with commercial activities such as mining (which is locationally constrained) and as mining is not provided for in ECO-P4, it effectively means that any new mining, such as that indicated by the Areas of Interest (**AOI**), cannot occur. This is particularly concerning given the large areas of land affected by the broad criteria used to identify SNAs.

56 If instead use of the effects management hierarchy is elevated, on the basis that well-planned and well-implemented activities can redress project effects on local biodiversity, then mine activities can progress if their effects can be adequately and appropriately managed.

57 In my opinion this approach is more consistent with objective ECO-01 as it provides another well-resourced avenue whereby Otago's indigenous biodiversity is healthy and thriving and any decline in quality, quantity and diversity is halted.

Conclusion

58 The Topic-ECO policies do not best align with the objective of ECO-01 as the magnitude of the effects on Otago's indigenous biodiversity arising from different factors, and the positive measures that have been or could be employed have not been adequately considered.

59 The impacts arising from policies associated with identification and protection of Significant Natural Areas have not been evaluated in the context of the suitability of the criteria within APP2 in identifying 'real' SNAs and the probably wide spatial extent of new SNA's within Otago if these criteria are adopted. Therefore, the impact on social, cultural and economic activities has been under appreciated.

60 The opportunity to implement the effects management hierarchy in ECO-P6 is practically non-existent if a project effects a SNA. This will have the effect of stymying many commercial developments, including those which would have an overall result of no net loss of biodiversity.

61 If instead the effects management hierarchy was allowed to be considered against an at least ‘no net loss of indigenous biodiversity’ standard when a project affects a SNA, then well-planned projects with good environmental outcomes could be considered. This approach helps meet objective ECO-01 by facilitating well-funded conservation works that otherwise would not occur.

Michael James Thorsen

3 September 2021

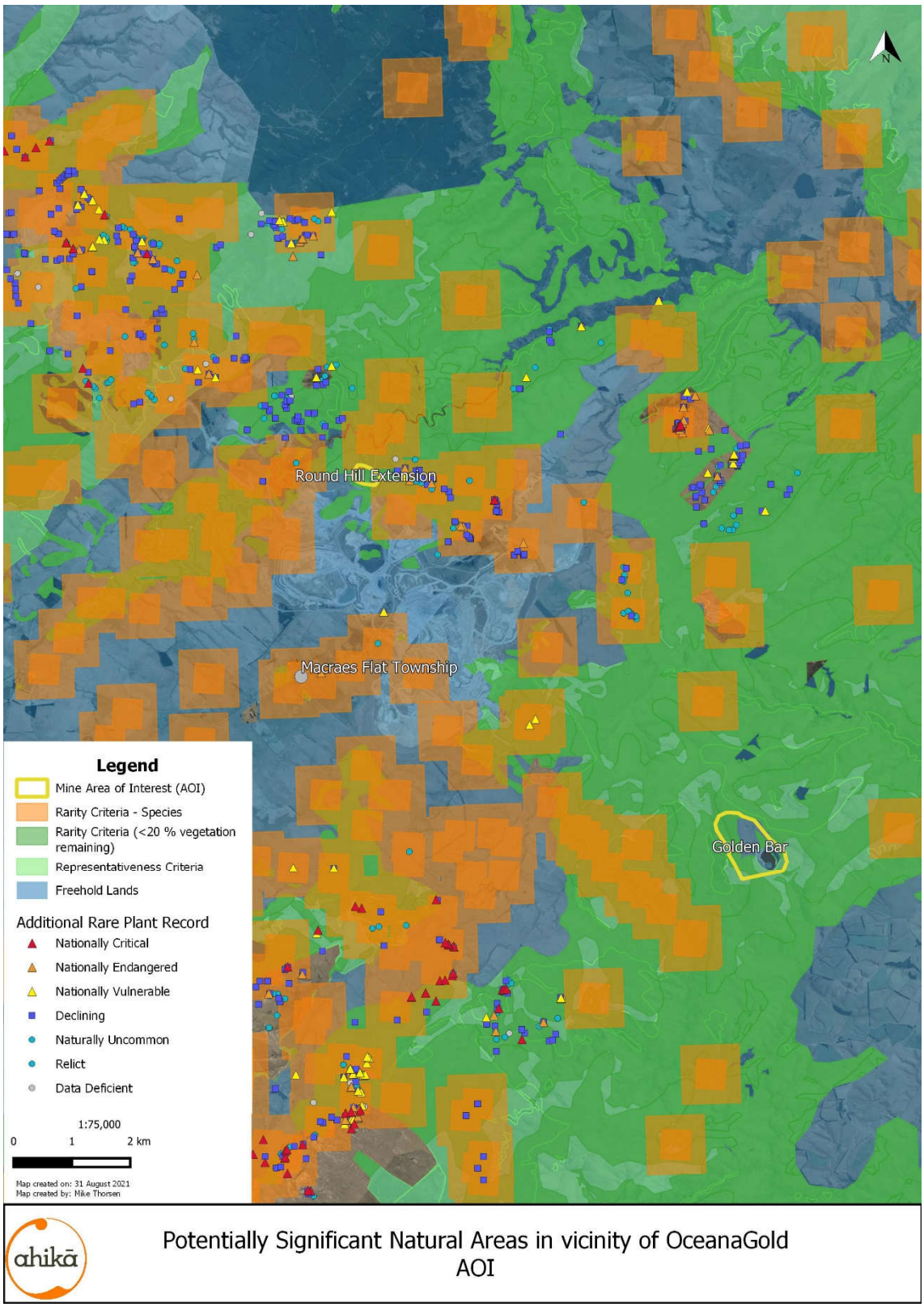


Figure 5. Possible extent of SNA in the vicinity of OceanaGold's future Areas of Interest (AOI). This map uses the same mapping as in previous figures, but with the addition of locations of rare species recorded during survey work by myself in the area.

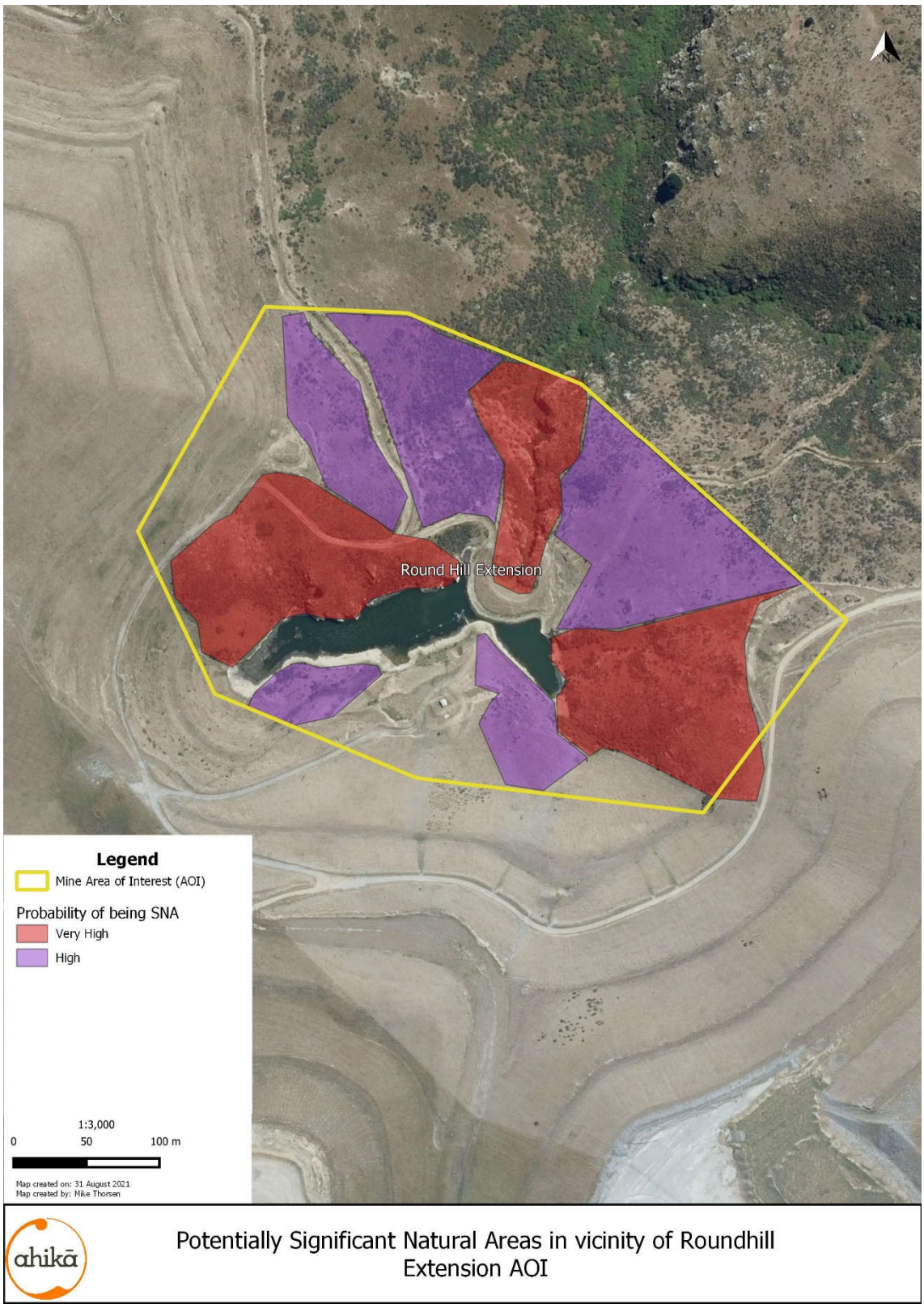


Figure 6. Finer-grained assessment using expert interpretation of aerial imagery of probability of the Roundhill Extension Area of Interest (AOI) being considered a SNA under the criteria in APP2 of the pORPS. Note: the extent of the AOI is mapped in LENZ as having less than 20% of vegetation cover remining. This is not mapped to keep map interpretation simple.

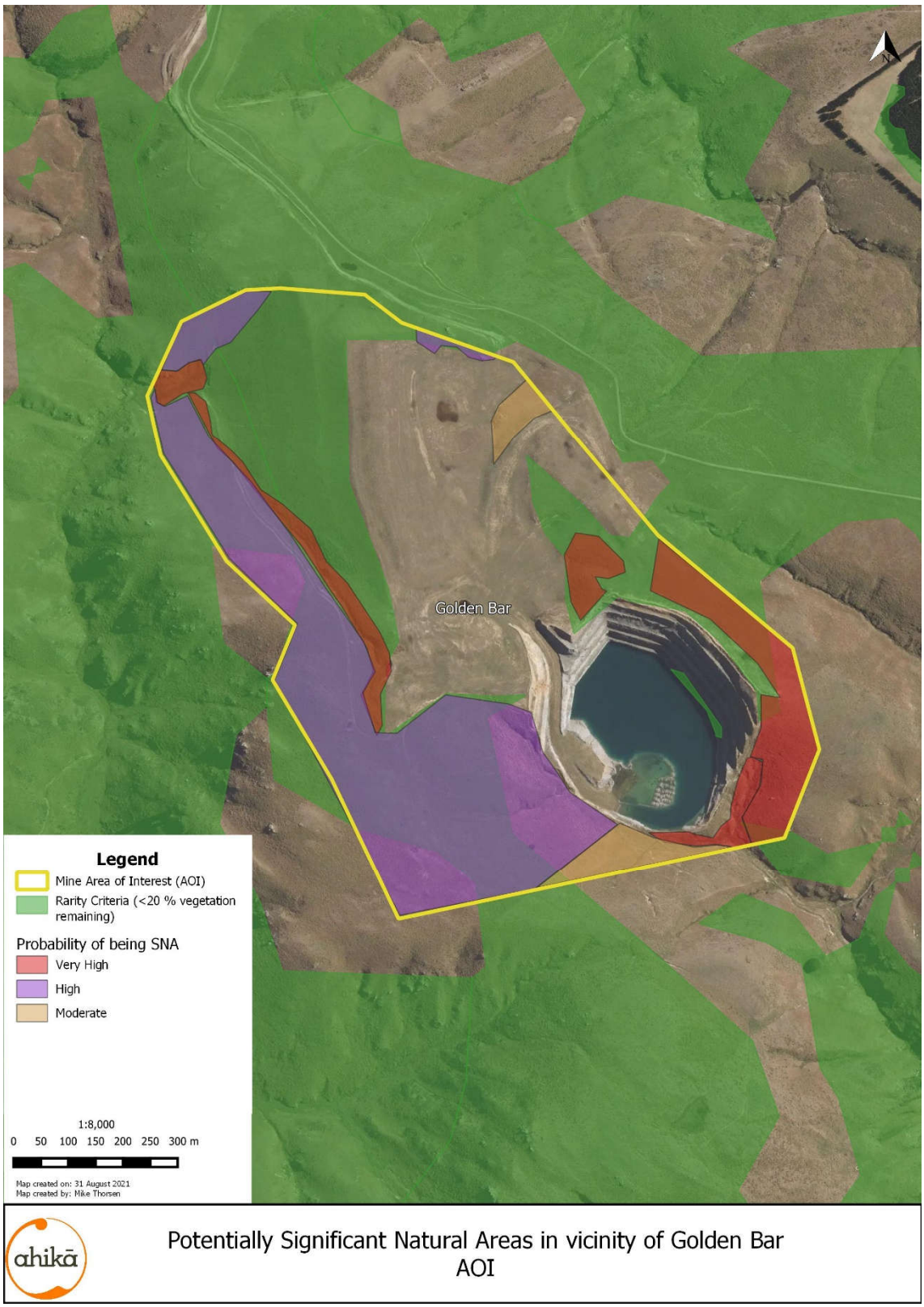
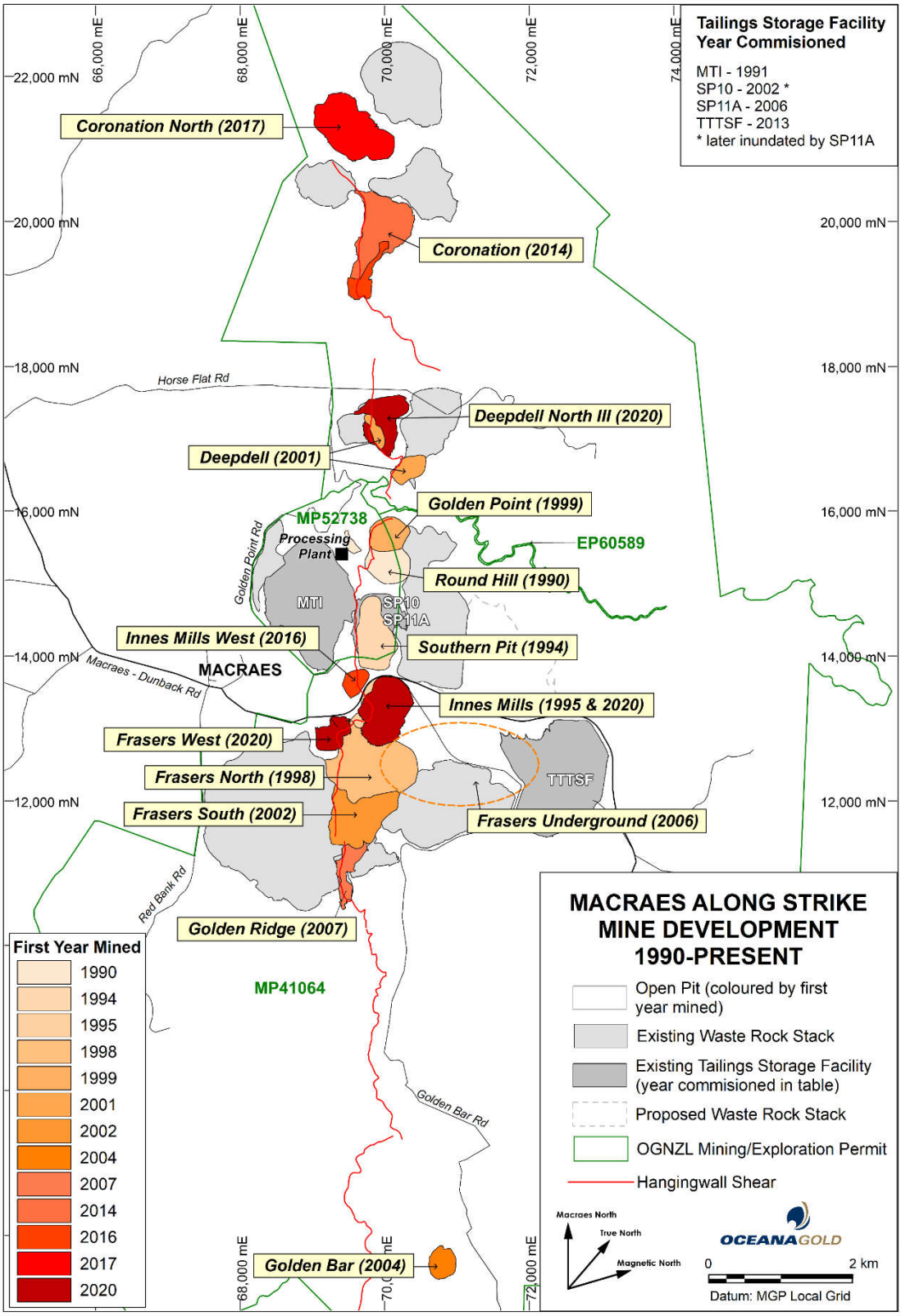


Figure 7. Finer-grained assessment using expert interpretation of aerial imagery of probability of the Golden Bar Area of Interest (AOI) being considered a SNA under the criteria in APP2 of the pORPS.

Appendix 2 – 30 Years of mining at Macraes and looking towards 2040



Macraes line of strike (a world class gold deposit)

1. The map above shows the progression of mining at Macraes over its 30 years of operations. While the Macraes district is highly prospective, before an open pit or underground mine can be established there is an intense and prolonged period of capital investment and review that the company undertakes. Exploration activities such as aerial surveys that map topographical features, surface-based soil and rock sampling, and progressive exploration drilling campaigns are required after which point collected material can be assayed for mineral content. This information is then used to construct detailed geological modelling, which represents the size and endowment of the resource. Engineering work then occurs to identify whether the resource can be safely and economically extracted while simultaneously minimizing and where possible avoiding environmental impacts. The process of exploring for, modelling, designing and approving each new pit or underground mine takes place over decades and throughout the life of the mine as more information becomes available or market conditions change. Macraes has an active exploration programme to identify and define further gold resources that can be developed as part of the Macraes Operation.
2. As demonstrated in the map above, mining at Macraes over the years has generally occurred within 10km along strike from the processing plant. The current rising gold price makes it economic to re-assess brownfields sites within this range and return to areas that have been disturbed by previous mining activity. These areas are currently confined to OceanaGold owned land.
3. Macraes has a suite of potential projects which are yet to be developed within the site. The Deepdell North Stage III Project is the most of advanced of these. In 2020 the Waitaki District Council and the Otago Regional Council granted consents for this project. Obtaining consent for this project was critical for the site as it will supply the base feed to sustain existing operations for the next few years, by which point other projects (collectively named the "Round Hill" project) will have been technically assessed and resource consent applications made.
4. OceanaGold is not complacent about its continued ability to operate at Macraes. As society's expectations around mining continue to evolve so does Macraes ability to manage its impacts. The site is classed as a world class gold discovery, one of just a few of equivalent scale ever discovered in NZ, and has known resources that suggest the mine could continue to operate for decades to come. The long-term focus is heavily "brownfields" (that is, centred on returning to previously disturbed parts of the mine site), with Deepdell North (at about one quarter re-mining) signalling the start of that new phase. With the continuation of open pit mining, underground opportunities (with fewer impact, than surface environments) remain viable, and the site begins to offer long-term benefits for the environment and community stretching out towards 2035 and beyond.
5. This should not be taken to mean however that the operation can occur without checks, controls and constraints. Instead, the zoning establishes a consenting pathway for which developments within the site can proceed through a suitably robust consenting process in order to ensure adverse effects can be appropriately managed and sustainable outcomes are being achieved.

6. Through its consenting processes and other initiatives, OceanaGold has also demonstrated that its large scale mining operations are able to be assimilated into the receiving environment of the Macraes Flat area. OceanaGold operates the Macraes Operation within the framework of its strict environment policies. A key focus is the internalisation of effects wherever possible. However, there are some effects that cannot be fully internalized and some which arise because of the very nature of the mineral resource which are fixed in location.
7. OceanaGold currently has a life of mine to 2028 and is working towards extending this timeframe. Prospective areas for medium term / next decade expansion that would require resource consenting, centre around an expansion of the consented Roundhill Pit and a cut back in Golden Bar Pit. These developments can only undertaken efficiently and cost effectively through open pit mining. Underground mining at these locations would not be suitable due to the low grade and the inability to fully extract the resource.
8. OceanaGold has provided polygons of those areas to Dr Thorsen who assessed these areas against the significance criteria in PORPS Appendix 2 and found that there is a high probability that the SNA criteria would be triggered (refer to Appendix 1 of this submission).

Appendix 3 - Expert analysis from Mark Christensen

3 September 2021

Ms Alison Paul
GM Corporate and Legal Affairs
Oceana Gold New Zealand Ltd
22 Maclaggan St
Dunedin

By email – Alison.Paul@oceanagold.com

Dear Alison,

Biodiversity Offsets and Ecological Compensation – the latest on best practice

A. INTRODUCTION AND EXCUTIVE SUMMARY

Introduction

You have asked me to provide independent advice to Oceana Gold about what is best practice from a legal perspective in relation to policy formulation through statutory planning documents and the assessment of the adequacy of proposed biodiversity offsets and ecological compensation. I have not previously provided advice to Oceana Gold on these matters. I note that I was requested by the mining industry association, Straterra, to represent it on the Biodiversity Collaborative Group which made recommendations to Government in 2018 about a National Policy Statement on Indigenous Biodiversity, following personnel changes that left a vacancy in the representation in that group. My appointment was opposed, however, leaving that vacancy unfilled.

Biodiversity offsets and ecological compensation in New Zealand have been the subject of judicial decisions, inclusion in statutory planning documents and comments in academic commentary for nearly two decades. I have not attempted to repeat much of the earlier case law and commentary which was discussed in a 2013 paper I co-authored[1]. I understand that you have read that paper. This advice considers the significant developments that have occurred since 2013 and is structured under the following headings:

a. What have resource consent decisions since 2013 said about best practice assessment and application of offsets and compensation?
b. Do recent statutory planning documents represent best practice in terms of regulation and policy for offsets and compensation?
c. Are there adequate responses to recent concerns about poor management of biodiversity offsetting and ecological compensation in the New Zealand context?

[1] *Biodiversity Offsets – The Latest on the Law* M Christensen and M Baker-Galloway October 2013

Attached to my advice is a memorandum from Pip Walker, barrister who provides detailed summaries of the relevant decisions and provides a table comparing the offset and compensation provisions of three regional policy statements.

Summary of advice

My advice can be summarised as follows:

Recent consent decisions – best practice assessments

- In this context, best practice for assessing the adequacy of proposed offsets and compensation can be considered by asking three general questions:
  - Is the proposed biodiversity offset/compensation in accordance with the generally accepted principles of offsets and compensation, especially the appropriate application of the 'effects management hierarchy'?
  - What is the appropriate use of assessment tools (primarily modelling) in assisting the decision-maker?
  - What controls or conditions are required to provide transparency and adequate certainty of outcome?

- The general principles applying to biodiversity offsets are now reasonably settled, even if the specific wording between various documents and formulations shows some differences. Overall, there is a clear consensus on the general approach to the mitigation hierarchy/management hierarchy and the necessity that biodiversity offsetting and ecological compensation must be the penultimate and final considerations respectively in a stepped process of assessment.

- While the general principles to be applied to biodiversity offsets are reasonably settled, their specific application in any resource consent application can still give rise to disagreements and the need for a decision maker to exercise judgments

- The recent decisions contain limited discussion about the principles to be applied to biodiversity or ecological compensation as distinct from the principles applying to biodiversity offsets. Nonetheless, it is clear from the decisions that in relation to biodiversity compensation decision makers are:

  - generally applying the offset principles to their consideration of proposed biodiversity compensation; and
  - treating compensation as being potentially available only as the 'final step' when it is not practically possible (for whatever reason) to provide a biodiversity offset.

- However, in recent planning documents there has been a move towards defining biodiversity compensation by reference to specific limits and outcomes. I consider this is likely to be problematic and will consequently give rise to the need to differentiate between considering those documents under s104(1)(b) and an assessment of effects under s104(1)(a) as was necessary in the 2020 Deepdell North decision.

- The use of models is not compulsory. However, where recent decision makers have been presented with evidence and argument about the appropriate approach to modelling, they have favoured a more qualitative modelling approach rather than a quantitative accounting model.

- Decisions are continuing to build on earlier examples by imposing increasingly sophisticated suites of conditions which provide greater clarity around outcomes required, the use of adaptive management plans, monitoring and reporting, and provision for review of actions resulting from monitoring. However, there is a risk, because of the inherent uncertainties of predicting the outcomes of future actions, that conditions will increasingly become, not only unnecessarily prescriptive (thereby potentially limiting the need for appropriate flexibility and adaptive management), but also so complex that they are difficult to understand and apply.

Statutory planning documents – What is best practice?

- I have considered the question of what constitutes best practice in terms of policy under the following headings:
  - General principles, including appropriate provision for the 'effects management hierarchy'.
  - Should the objective of biodiversity offsets be 'no net loss' or net gain?
  - How the principle of 'limits to offsets' should be applied.
  - Should the policy be explicit about using biodiversity offset modelling?
  - What is best practice policy for environmental compensation?
  - Is there justification for differentiating between types of SNAs (as the NPSIB does)?

- In relation to the effects management hierarchy, the general approach across the documents is reasonably consistent, but there are important drafting differences between them. For example, there is, in my view, no policy justification for the definition of the effects management hierarchy to be different between the NPSFM and the NPSIB.

- Overall, the definition in the NPSFM, including the way obligations are expressed at each step, I consider to be the most appropriate. In my opinion, that definition should be incorporated into the proposed NPSIB.

- I also think it is important that the NPSIB requires all relevant subsidiary statutory planning documents to insert the same wording into those documents, in the same way that this has been done for wetlands and rivers with the NPSFM 2020. As with the principles applying to offsets and compensation generally, I see no policy justification for regional or local differences in how the effects management hierarchy is expressed.

- I see no policy reason why New Zealand's overall policy objective, as expressed in this particular principle, should not be Net Gain, rather than No Net Loss.

- There are considerable differences in the way the general principle of limits to offsets are expressed.

- In my view it is likely that there will be in reality little, if any, place for the effective application of biodiversity offsets (as defined) under the NPSIB. Whether this is an unintended outcome or one which the drafters of the BCG and the proposed NPSIB intended, is unclear.

- Moreover, in light of the very recent Environment Court's decision in *Brookby Quarries*, there must now be considerable doubt about the appropriateness of the central reliance which is placed on 'maintenance' in the NPSIB.

- The reference to the loss of individuals in the proposed Otago RPS as being a limit to offsetting was novel in 2019 under the operative RPS, and it remains so. The operative Otago RPS limits proved to give rise to a result that would (but for s104(1)(ab)) have made it impossible to achieve what was agreed by all relevant ecologists in that case to result in an appropriate net gain.

- I believe it is instructive that Forest & Bird which was one of the appellants in the 2019 Otago RPS appeal, later agreed in mediation to the 'higher level' limits which are in the West Coast RPS. I consider the proposed Otago RPS policy simply to be unreasonably restrictive, to the point that it undermines the whole objective of proposing a biodiversity offset. It may be that a decision maker decides on the evidence before them that even the loss of individuals of certain species is unacceptable and cannot be appropriately offset. But that is a decision which should be made on the evidence and in accordance with the other principles set out in the relevant policy, not decided a priori by way of the policy in its current form.

- For both these reasons, I consider the limits to offsets as set out in the West Coast RPS policy to represent a preferable policy than both the operative and proposed Otago RPS.

- I have one caveat in relation to the use of the West Coast RPS and that is an additional limit that biodiversity offsetting must maintain 'irreplaceable or significant indigenous biological diversity'. I consider this policy to be too uncertain to be usefully applied. Moreover, the reference to 'maintaining' has now been called into question by the Court's 2021 decision in *Brookby.*

- I consider the policy on biodiversity offsets in the proposed NPSIB to be too uncertain about limits to be capable of reasonable application, and in any event to now also be seriously in question as a result of the *Brookby* decision

- Throughout much of the discussion about the role of offsets and compensation, and their place within the effects management hierarchy is an implicit, but untested, assumption that protection of existing (and even past) biodiversity values is best achieved by leaving them alone. But this fails to have regard to New Zealand's specific ongoing risks to biodiversity through introduced predators and browsers, which is almost unique internationally. In my view, a more mature approach needs to be fashioned for New Zealand's unique position.

- It is my opinion that best practice in terms of providing for limits to offsets is demonstrated by the approach in the West Coast RPS, except for policy 7.4(a). In addition, rather than link the principles of offsetting to the definition in the way the NPSIB proposes, the preferable approach, in my view, is to define offsets as the NPSFM does, but then to set out the principles and outcomes to be sought (such as provided in the NPSIB) as assessment matters or criteria against which a proposed offset should be assessed.

- Again, that best practice should be reflected in the NPSIB which then requires that all subsidiary planning documents adopt a consistent national approach.

- In my opinion, modelling should not be a requirement under the NPSIB or other documents, especially if offsets are to be used for more than a few 'major' applications. Nonetheless, it would be helpful if New Zealand adopted a standardise approach to modelling.

- The various policies relating to biodiversity compensation also show inconsistencies of approach and have similar limitations to those relating to biodiversity offsets.

- Similar to offsets, it is my opinion that best practice in terms of providing for limits to offsets is demonstrated by the approach in the West Coast RPS, except for policy 5.4(a). In addition, rather than link the principles of offsetting to the definition in the way the NPSIB proposes, the preferable approach, in my view, is to define offsets as the NPSFM does, but then to set out the principles and outcomes to be sought (such as provided in the NPSIB) as assessment matters or criteria against which a proposed offset should be assessed.

- I do not see any policy justification for a distinction between High and Medium classifications for SNAs.

Responding to recent concerns expressed by commentators

- A 2020 article has commented on several concerns with offsetting in the New Zealand context. The article considers an Australian National Audit Office audit of the Australian Government's Department of Agriculture, Water, and the Environment's (DAWE's) approach to managing biodiversity offsetting. The article notes that the Audit provides an opportunity to learn from Australia's mistakes and avoid some of the most serious outcomes that result from poor exchanges and poor implementation.

- I consider that there are adequate responses to all the concerns raised in a 2019 article about offsetting to ensure that there can be best practice management of offsets and ecological compensation.

B. RESOURCE CONSENT DECISIONS – BEST PRACTICE ASSESSMENTS

Since 2013, there have been several important decisions on resource consent applications made by independent hearing panels, the Environment Court and Boards of Inquiry. These decisions have been made without formally having regard to the proposed National Policy Statement on Indigenous Biodiversity (NPSIB), and in most cases in the absence of detailed policy direction in relevant regional and district planning documents. Nonetheless, the decision makers in these cases have had the benefit of contested expert evidence and legal submissions on the appropriate assessment and application of offsets and compensation, and latterly in the knowledge of the wording of the proposed NPSIB.

What do these decisions tell us about best practice? In this context, best practice for assessing the adequacy of proposed offsets and compensation can be considered by asking three general questions:

a. Is the proposed biodiversity offset/compensation in accordance with the generally accepted principles of offsets and compensation, especially the appropriate application of the 'effects management hierarchy'?
b. What is the appropriate use of assessment tools (primarily modelling) in assisting the decision-maker?
c. What controls or conditions are required to provide transparency and adequate certainty of outcome?

a. Is the proposal in accordance with the generally accepted principles of offsets/compensation?

This question is important whether or not the relevant statutory planning documents provide any framework or principles, and whether or not any framework which is in place is seen to be 'up to date'. That is, the decision maker should be applying best practice principles even where the relevant policy statement or plan is silent or out of date in relation to offsets and compensation.

Biodiversity offsets

The general principles applying to biodiversity offsets are now reasonably settled, even if the specific wording between various documents and formulations shows some differences[2]. For example, the Environment Court has recently stated[3]:

> *Offset design must also meet certain other criteria which relevantly include:*
>
> - *Adherence to the agreed mitigation hierarchy;*
> - *Recognising that some biodiversity values cannot be offset ('limits to offsetting');*
> - *Ensuring that any gains are additional to those that would have occurred in the absence of an offset ('additionality');*
> - *Ecological values gained being similar to those lost ('like for like');*
> - *Offsets being carried out in proximity to the loss (for example, in the same catchment, or same ecological district, taking into account the ecological context);*
> - *Outcomes lasting at least as long as the effects and preferably in perpetuity;*
> - *The delay ('time lag') between the loss and offset gain in biodiversity being taken into account.*

The 'mitigation hierarchy' is elsewhere known as the 'effects management hierarchy'. Again, what this means is now generally accepted. For example, the West Coast Regional Policy Statement (2020) provides:

> *… when managing the adverse effects of activities on indigenous biological diversity within SNAs:*
>
> *a) Adverse effects shall be avoided where possible; and*
>
> *b) Adverse effects that cannot be avoided shall be remedied where possible; and*
>
> *c) Adverse effects that cannot be remedied shall be mitigated.*
>
> *d) In relation to adverse effects that cannot be avoided, remedied or mitigated, biodiversity offsetting in accordance with Policy 4 is considered; and*

[2] For example, there are slight differences of wording of the general offsetting principles between what the Court says here and in Table 1 of the 2018 local Government New Zealand guidance document *'Biodiversity Offsetting under the Resource Management Act: A Guidance Document*", Section 7 of the West Coast Regional Policy Statement 2020, and Appendix 3 of the 2019 proposed National Policy Statement on Indigenous Biodiversity. However, it is my view that these different expressions of the principles are not material. Despite this, there should ideally not be differences in wording, and so it is important that the proposed NPSIB provide the 'best' formulation. In my view, it is also important that the NPS provides that all relevant subsidiary statutory planning documents are required to insert the same wording into those documents, in the same way that this has been done for wetlands and rivers with the NPSFM 2020. I do not see any justification for allowing regional or local differences in the formulation of the general principles of offsetting and compensation.

[3] *Waka Kotahi NZ Transport Agency v Manawatu- Whanganui Regional Council* [2020] NZEnvC 192 at 154.

e) *If biodiversity offsetting in accordance with Policy 4 is not achievable for any indigenous biological diversity attribute on which there are residual adverse effects, biodiversity compensation in accordance with Policy 5 is considered.*

Similarly, the National Policy Statement Freshwater 2020 defines the 'effects management hierarchy' (for wetlands and rivers) to mean:

> *… an approach to managing the adverse effects of an activity on the extent or values of a wetland or river (including cumulative effects and loss of potential value) that requires that:*
>
> *a. adverse effects are avoided where practicable; and*
> *b. where adverse effects cannot be avoided, they are minimised where practicable; and*
> *c. where adverse effects cannot be minimised, they are remedied where practicable; and*
> *d. where more than minor residual adverse effects cannot be avoided, minimised, or remedied, aquatic offsetting is provided where possible; and*
> *e. if aquatic offsetting of more than minor residual adverse effects is not possible, aquatic compensation is provided; and*
> *f. if aquatic compensation is not appropriate, the activity itself is avoided.*

Again, while there are some differences in the specific wording in the various documents[4], overall there is a clear consensus on the general approach to the mitigation hierarchy/management hierarchy and the necessity that biodiversity offsetting and ecological compensation must be the penultimate and final considerations respectively in a stepped process of assessment.

Biodiversity compensation

The recent decisions contain limited discussion about the principles to be applied to biodiversity or ecological compensation as distinct from the principles applying to biodiversity offsets. In practice, applicants usually propose a 'package' of actions to address effects, with some combination of mitigation, offsets, and compensation. Normally, applicants and decision makers do not attempt a fine-grained analysis of the distinction between offsets and compensation, although in some instances the distinction between mitigation on the one hand and offsets and compensation on the other can be important.[5]

[4] For example, both the West Coast RPS and the proposed NPSIB provide that effects are to be 'avoided where possible' and if not avoided, then to be 'remedied where possible'. In contrast, the Auckland RPS and the NPSFW 2020 use the expression avoided 'where practicable' etc. In contrast, the Otago RPS has no qualifier at each stage.The West Coast RPS and the proposed NPSIB provide for offsets and compensation being able to be 'considered' whereas the NPSFM 2020 provides that they are to be 'provided' and if that is not appropriate then the activity is to be avoided. It is unclear if the formulation in the NPSFM is intended to indicate that a greater level of conservatism is required for wetlands or rivers than for effects on other Significant Natural Areas (SNAs)..

[5] As in the Dome Valley Landfill decision where the activity status for the landfill was non-complying. For a non-complying activity, the assessment of whether a residual effect is 'no more than minor' can only have regard to mitigation and not to offsets and compensation. Similarly, when assessing the magnitude of effects for a decision whether to notify an application, the council can only have regard to mitigation of effects, and not offsets/mitigation. A helpful discussion on the distinction from an

Moreover, it is my experience that applicants are likely to downplay the use of the term 'biodiversity offsets' whilst actually applying the principles and tools for offsets, and instead referring to the 'package' in the round as appropriately applying the effects management hierarchy and the relevant principles. They are doing this to minimise the risk that decision makers will be diverted into requiring or considering increasingly complicated models in an effort to satisfy opponents' assertions about the need for detailed 'like for like' modelling[6]. I consider this issue further below in the discussion below about the appropriate use of offset (and compensation) models.

In any event, the distinction between biodiversity offsets and compensation can often be unclear. This issue was commented on in the independent commissioners' decision in Oceana Gold's Deepdell North application[7]:

> *We understand the essential difference between offsetting and compensation is that the former involves "like for like" whereas the latter is "unlike for like". In practice these distinctions can become blurred in a complex proposal such as that before us. The key ecological principle is that whatever mix is used, there must be No Net Loss (NNL) of biodiversity values….*
>
> *As we have already observed it is not possible to definitively quantify the difference between offsetting and compensation in a complex proposal like this. A strict policy hierarchy cannot realistically be applied in this instance. What matters is that there is no net loss and an overall gain. As Ms Williams said in a comment made during her legal submissions the wetland at Middlemarch "is not like for like, but appears bigger and better.*

I consider those statements to be both realistic and reasonable.

The commissioners' approach to the application of the hierarchy insofar as it relates to offsets and compensation is described in this way*:*

> *We were also impressed by the evidence of [a witness for the Director-General of Conservation] on this issue. In discussing the provisions of the RPS he said:*
>
> > *(Court decisions) "appear to structure offsetting and compensation as "all or nothing" tiers where a proposal either meets the full set of criteria or drops down to the next tier. I am concerned that this could potentially fail the best meet the purpose of the RMA, and fail to deliver the best ecological outcomes. I consider that the approach taken by OGL is preferable, such that even where one criteria of a tier cannot be met, they have still worked to comply with as many of the other criteria for that tier as possible…."*
> >
> > *"While I recognise the RPS provisions on offsetting and compensation, to an extent I consider the classification of the proposal in that way is somewhat academic. It is*

ecological perspective can be found in *Defining mitigation: an ecology perspective* J Quinn et al Resource Management Journal, August 2021 page 17.

[6] Which was what almost happened in the Escarpment Mine case.

[7] Application by Oceana Gold (New Zealand) Limited for the Deepdell North Stage III Project, decision by Independent Commissioners dated 23 September 2020

> *clear to me that OGL has taken an "effects management hierarchy approach – where adverse effects cannot be avoided, remedied or mitigated they have applied offsetting principles as much as practicable, where offsetting is not achievable they have applied compensation principles as much as practicable, and where compensation is not achievable, they have offered positive ecological enhancement measures."*
>
> *We agree with [the DoC witness] on these matters. Our primary concern is that ecological outcomes are enhanced by the Proposal. We consider they are.*

In my view this is a pragmatic yet principled, approach.

The Environment Court has commented on the distinction as follows:

> Where the attribute values and losses are able to be quantified and the outcome verified, that replacement or improvement is an offset. Where the values cannot be quantified and the losses and gains cannot be verified, that outcome is termed compensation.[8]

Having said that, it is clear from the decisions that in relation to biodiversity compensation decision makers are:

(a) generally applying the offset principles to their consideration of proposed biodiversity compensation; and
(b) Treating compensation as being potentially available only as the 'final step' when it is not practically possible (for whatever reason) to provide a biodiversity offset.

There has been some concern expressed by commentators about the use of 'indirect offsets' (actions which do not result in a measurable conservation gain, for example funding a PhD)[9]. In my view, such actions should not be described as 'offsets' or 'biodiversity compensation', and they do not form part of the 'effects management hierarchy'. They may however be positive actions which a decision maker can take into account under both s104(1)(a) and s104(1)(ab) of the RMA.

Section 3 RMA provides that an effect (which is to be considered under s104(1)(a)) includes a positive effect. In addition, s104(1)(ab) provides that a decision maker must have regard to "any measure proposed or agreed to by the applicant for the purpose of ensuring positive effects on the environment to offset or compensate for any adverse effects on the environment that will or may result from allowing the activity." The effects which may be considered under s104(1)(ab) are not restricted to biodiversity offsets and environmental compensation as those terms may be defined in the NPSIB or other statutory planning documents. The words 'offset and 'compensate' in s104(1)(ab) are verbs not nouns, and they are not restricted to what are now becoming defined 'terms of art' for biodiversity offsets and environmental compensation in various statutory planning documents.

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[8] *Waka Kotahi NZ Transport Agency v Manawatu- Whanganui Regional Council* [2020] NZEnvC 192 at para 153.

[9] Eg, Possum in the Headlights: An Audit of Australia's Biodiversity Offsetting Conditions and Some Lessons for New Zealand D Gepp et al Resource Management Journal August 2020.

This is demonstrated in the decision of the independent commissioners on Oceana Gold's Deepdell North application. In the summary of the decision, the Commissioners summarised their view on the RPS:

> *The Otago Regional Policy Statement contains some very prescriptive policy which potentially shapes any framework adopted for management of the effects of mining at Macraes.*
>
> *The agreements largely reached between experts do not follow the framework established by the Regional Policy Statement precisely. It would not be practical to do so. The agreed offsets and the detail as to how they are managed involve a mix of offsetting and compensation, whereas the regional policy promotes the former. We also find that in relation to wetlands, the offset/compensation policy approach in the National Policy Statement for Freshwater 2020 is much more straightforward than its equivalent in the Regional Policy Statement.*
>
> *For these reasons we have not followed the regional policy precisely. Our decision to grant the WDC consent application is driven by ecological outcomes and pragmatism, which we think is entirely appropriate*.[10]

In this case, all of the ecological witnesses (including those for the Director-General of Conservation) that the actions proposed by Oceana Gold would result in a net gain of conservation values but would not meet the specific provisions of the relevant policy. The Commissioners accepted that s 104(1)(ab) provided the authority to enable them to have regard to the proposed actions, even though the RPS policy indicated it should not have regard to them. Had only the policy been available to consider, a net gain would have been unable to be achieved.

Conclusion – general principles and the effects management hierarchy

While the general principles to be applied to biodiversity offsets are reasonably settled, their specific application in any resource consent application can still give rise to disagreements and the need for a decision maker to exercise judgments. I address some of these specific areas below. It is therefore important that, except where it is clear that effects will be less than minor, plans provide that activities which are likely to affect indigenous biodiversity are, at minimum, restricted discretionary activities.

In relation to the principles to be applied to the assessment of proposed biodiversity compensation, the decisions have not demonstrated any difficulty with adopting the general principles applying to biodiversity offsets where they are relevant. However, in recent planning documents there has been a move towards defining biodiversity compensation by reference to specific limits and outcomes. As I discuss in the section below on best practice for biodiversity compensation in planning documents, I consider this is likely to be problematic and will consequently give rise to the need to differentiate between those documents and an assessment of effects as was necessary in the Deepdell North decision.

[10] Section 2 of the decision.

b. What is the appropriate use of assessment tools (primarily modelling) in assisting the decision-maker?

There is no requirement in the RMA that a proponent of a biodiversity offset use modelling to demonstrate how the proposed offset was determined, or if modelling is used to apply any particular type of model[11].

Our 2013 article discussed the caution with which the Courts had approached the use of biodiversity offset modelling, and the debates that were raging between ecologists. The interim Environment Court decision in the Escarpment Mine project (2012) expressed concerns with the heavy emphasis placed on the computer model put forward by the applicant in that case, which was ultimately abandoned. The Court stated that it had become apparent that the Court was being used as a forum to settle vigorous technical scientific debates between two groups of ecologists as to appropriate modelling methodology. It was reiterated that the Court is neither a peer review panel nor an arbitrator between factions disputing scientific or computer modelling methodology; it is a consent authority whose duties are set by the RMA, which in this case include:

a. Assessing the strength or otherwise of the evidence about various species, ecosystems, and biodiversity;

b. To weigh the individual factors;

c. Assess whether adverse effects must be avoided, remedied or mitigated; and

d. Arrive at an overall broad judgement that serves the purpose of the Act as stated in section 5.

In a more recent decision of the Environment Court[12], the applicant had used what is called a Biodiversity Offset Accounting Model (BOAM) and a Biodiversity Compensation Model (BCM) to calculate the offset and compensation required. The Court commented:

[152] Our understanding of the models is that they:

[11] Unless that is mandated in a statutory planning document. The only example I am aware of is the requirement to use Stream Ecological Valuation (SEV) and Environmental Compensation Ratio (ECR) in the Auckland region where there is loss of stream habitat. I note, however, that the proposed NPSIB in Appendix 3 under the heading of one of the principles 'No net loss and preferably a net gain' states 'No net loss and net gain are measured by type, amount and condition at the impact and offset site **and require an explicit loss and gain calculation**.' [my emphasis]. This can be contrasted with the statement in the 2018 Guidance Document: 'The goal of a biodiversity offset is a measurable outcome… No-net-loss is measured by type, amount, and condition **and requires explicit statements describing**…'. The Business and Biodiversity Offset Programme's (BBOP's) Principles do not refer to 'explicit' statements or calculations, but it does state that a biodiversity offset should be designed and implemented to achieve in situ, **measurable** conservation outcomes. The West Coast RPS refers to neither measurable outcomes nor 'explicit statements'. In my view, having 'measurable outcomes' does not necessarily mean that models have to be used. Outcomes can be measurable by way of comparing baseline condition with the effect of the offset through monitoring of type, amount as condition as set out in the 2018 Guidance document.

[12] *Waka Kotahi NZ Transport Agency v Manawatu- Whanganui Regional Council* [2020] NZEnvC 192.

- *Place (where possible) a numerical value on the existing ecological quality of each ecological component ('attribute') of an area of vegetation or habitat;*

- *Compare that with a 'benchmark' (the value of a more-or-less intact ecosystem of the same habitat type), then record or calculate the loss of that value as a result of the activity in question*

- *Calculate the quantum of offset needed to achieve the replacement (leading to no net loss of biodiversity) or improvement (leading to a net gain in biodiversity) over a set period, with a 'discount' applied to account for model uncertainties and the lag time between biodiversity losses and gains.*

[153] Where the attribute values and losses are able to be quantified and the outcome verified, that replacement or improvement is an offset. Where the values cannot be quantified and the losses and gains cannot be verified, that outcome is termed compensation.

Expert witness conferencing showed approval of the general approach the applicant had taken to offsetting and compensation, and also the modelling, but because of several detailed concerns raised by some experts at the conferencing, the applicant had re-run the model and presented that to the Court. The Court noted this did not alter the outcome and stated:

[170] … This has raised a question in our minds about the degree of refinement expected of the model and the efficacy of undertaking that additional work. There must be a point of diminishing returns at which the inclusion and refinement of additional attributes ceases to add value to the outcome and we wonder if some form of simpler sensitivity analysis might have been as effectively adopted for testing the modelling.

With respect to the use of the models, the Court concluded:

[173] … From the Court's perspective, the model is intended to assist in determining reasonable and supportable offset and compensation quanta. The offset and compensation are intended to be measurable and that will be the case without the level of detail included in the EC conditions. The development of biodiversity offsetting and the use of models to achieve it is relatively recent. We appreciate the models' applicability as tools and that inputs can be at a very detailed level but ***there is no compulsion to use any particular model or for the model to do more than assist the Court in making a decision as to whether reasonable mitigation is being applied.*** *(my emphasis)*

The use of the BOAM model has been endorsed by an Expert Consenting Panel convened under the COVID-19 Recovery (Fast-Track Consenting) Act 2020.[13]

[13] Record of Decision of the Expert Consenting Panel on the Matawii Water Storage Reservoir, Alternate Environment Judge LJ Newhook (Chair), Environment Commissioner Kevin Prime, Rob von Voorthuysen, W Russell Howie, date of decision 23 October 2020, issued 27 October 2020.

The Council commissioners' decision in the Dome Valley landfill application[14] also commented on the use of modelling:

> *Offset/compensation modelling is a tool to assist in decision making processes. Some submitters (e.g. Forest & Bird) were critical of the qualitative approach taken by the applicant, highlighting that quantitative data could have been used instead if more assessments were carried out. Regarding frogs, bats, and lizards, we do not consider that further assessment work (e.g., radio-tracking for bats, further frog surveys, quantitative fish data) would have allowed for meaningful quantitative modelling that would further assist with decision-making. While the quantitative results of such further assessment may give the impression of increased precision, survey and monitoring data for the fauna groups concerned are inherently variable and difficult to interpret. The applicant's approach to this uncertainty was to adopt a conservative approach towards assessing effects and applying a comprehensive effects management package that seeks to achieve a net gain, which provides more confidence in at least achieving no net loss. We accept the applicant's approach[15].*

The approach of suggesting the need for ever greater levels of detail has been a feature of experts giving evidence for parties opposing developments. It is a theme which runs through many of the earlier decisions[16] reaching perhaps its high point in the Escarpment Mine case,[17] although the debate has continued in the more recent decisions. This debate has now, in essence, become a debate between what are known as Biodiversity Offset Accounting Models (BOAMs) and Qualitative Biodiversity Models (QBMs)[18]. BOAMs have been developed to help determine the type and amount of biodiversity offset required to achieve NNL/NG outcomes.[19] To demonstrate an offset, such models require explicit quantitative measures of loss of biodiversity values at impact sites versus gains in biodiversity values at offset sites. For example, at the impact and offset site(s), this may include the quantification of the relative abundance of tui using standard bird count methods or the quantification of a range of vegetation and habitat characteristics using standard vegetation plot methods. This is the approach advocated for in the so-called New Zealand Government "Guidance on good practice biodiversity offsetting in New Zealand 2014." [20] However, I have been advised by several

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[14] Application by Waste Management (NZ) Wayby Valley Landfill, Decision by Independent Commissioners dated 11 June 2021

[15] At para [283].

[16] Eg the Mt Cass windfarm *MainPower NZ Ltd v Hurunui District Council* [2011] NZEnvC 384 (see page 25 of the 2013 article)

[17] *West Coast Environmental Network Inc v West Coast Regional Council and Buller District Council* [2013] NZEnvC 47 (see page 26 of the 2013 article)

[18] For a discussion of this see 'The use of modelling for terrestrial biodiversity offsets and compensation: a suggested way forward,' M Baber et al Resource Management Journal April 2021 p 28. (I note that I was a co-author of this paper).

[19] Eg, F Maseyk and others "A Biodiversity Offsets Accounting Model for New Zealand: User Manual" (March 2015) Department of Conservation; F Maseyk and others "Biodiversity offsetting under the Resource Management Act: A guidance document (prepared for the Biodiversity Working Group on behalf of the BioManagers Group, 2018). (I note that I was also a co-author of the 2018 guidance document).

[20] August 2014. Department of Conservation

ecologists that the particular modelling approach used in the 2014 Guidance is incapable of practical application. Indeed, I am unaware of the 2014 Guidance having been used in any reported instances.

As noted, where modelling has been used, decision-makers have expressed concern that it is being asked to deliver outcomes which it is not equipped to deliver. For example, the Environment Court has recently said:

> *[175] … We maintain our view that the very detailed modelling and the level of monitoring for some attributes of the offset may place more confidence in the model outcomes than is warranted or reasonable.*[21]

More recently, QBMs have been used on projects at the consenting stage to provide guidance on the type and magnitude of offsetting and compensation requirements that are expected to generate NNL/NG outcomes. QBMs are similar to BOAMs in that they are informed by field investigations at the impact site(s) and by expected gains at the proposed 'offset' site(s), and they account for uncertainty and the time lag between biodiversity losses and gains. However, unlike BOAMs, QBMs include the use of science-based qualitative data where quantifiable data is not available or lacks adequate precision.

Conclusion – the use of models

In summary, where recent decision makers have been presented with evidence and argument about the appropriate approach to modelling[22] they have favoured a more qualitative modelling approach rather than a quantitative accounting model.

c. *What controls or conditions are required to provide transparency and adequate certainty of outcome?*

In my view, conditions relating to biodiversity offsets and biodiversity compensation are not in a different category from other conditions which require certain actions to achieve desired outcomes. Like other conditions of this type, they need to be clear, certain and enforceable.

Recent decisions imposing conditions relating to offsets and compensation continue to build on earlier examples. These decisions demonstrate that consents are being granted with increasingly sophisticated suites of conditions attached which provide greater clarity around outcomes required, the use of adaptive management plans, monitoring and reporting, and provision for the review of actions resulting from monitoring.

However, there is a risk, because of the inherent uncertainties of predicting the outcomes of future actions, that conditions will increasingly become, not only unnecessarily prescriptive (thereby potentially limiting the need for appropriate flexibility and adaptive management), but also so complex that they are difficult to understand and apply. While I consider that the effectiveness of conditions will continue to evolve with more understanding and experience of

[21] *Waka Kotahi NZ Transport Agency v Manawatu- Whanganui Regional Council* [2020] NZEnvC 192 at 175.
[22] The Manawatu Highway Environment Court and the Dome Valley Council decisions. The use of a QBM in the Matawii Water Storage Reservoir application was not disputed.

both applicants and consent authorities, I do not see that as necessarily resulting in more detailed and extensive conditions than those which have been recently imposed.

Of course, the conditions need to be effectively monitored and enforced. I address concerns raised about these issues below.

C. STATUTORY PLANNING DOCUMENTS – WHAT IS BEST PRACTICE?

The Appendix to this advice compares the regional provisions of the 2016 Auckland Unitary Plan, the 2020 West Coast Regional Policy Statement and the 2021 proposed Otago Regional Policy Statement. The Auckland Unitary Plan has similar provisions to several other RPSs which were made operative around the same time. The West Coast RPS was agreed to following lengthy Environment Court mediation between the council, 'conservation interests' (including Forest & Bird), mining interests and others such as iwi, forestry, agricultural and community interests.

I have also considered and comment on the provisions of the 2019 draft National Policy Statement on Indigenous Biodiversity (NPSIB), as well as the operative National Policy Statement Freshwater Management (NPSFM).

Having regard to these various statutory planning documents and in light of the general international guidance from BBOP and others[23], I have considered the question of what constitutes best practice in terms of policy under the following headings:

a. General principles, including appropriate provision for the 'effects management hierarchy'.
b. Should the objective of biodiversity offsets be 'no net loss' or net gain?
c. How the principle of 'limits to offsets' should be applied.
d. Should the policy be explicit about using biodiversity offset modelling?
e. What is best practice policy for environmental compensation?
f. Is there justification for differentiating between types of SNAs (as the NPSIB does)?

a. General principles, including appropriate provision for the 'effects management hierarchy'.

In terms of the general approach to principles for both offsets and compensation, the statutory documents provide generally for three different approaches:

a. Offsets and compensation are defined by the purpose for which action is taken, within a general requirement to apply the effects management hierarchy. Beyond that, no general principles are specified (the NPSFM).

b. The general principles are incorporated within the specific policies applying to offsets and compensation as part of the effects management hierarchy (the West Coast RPS).

c. Offsets and compensation are defined in terms of both the intended purpose of the action, and by reference to appendices which set out principles (the proposed NPSIB).

[23] Eg, ten Kate, Kerry. 2018. *Improving the Implementation of the Mitigation Hierarchy through Policy: Benchmark for Review of Policy Measures*. Business and Biodiversity Offsets Programme (BBOP). Forest Trends, 2018, Washington, D.C. Baker, J, Hoskin, R, Butterworth, T *Biodiversity net gain. Good practice principles for development. Part B – Guidance for local planning authorities.* Chartered Institute of Ecology and Environmental Management, 2019, London.

How these are expressed is closely linked to how limits to offsets (and compensation) are also expressed, which I consider in detail below. I conclude that defining offsets in the manner set out in the NPSFM is preferable to including within the definition the entire set of principles, as with the NPSIB[24], or including the principles within the policies themselves (like the West Coast RPS).

There should be a requirement for rigorous adherence to the mitigation hierarchy/effects management hierarchy. This requirement is found in all the recent documents although there are some differences in wording. There are three issues here:

- How the 'cascade' from each stage to the next is expressed;
- To what standard must the actions at each stage be assessed before an applicant can proceed to the subsequent stage?
- Do all effects have to be addressed at each stage, or should there be some assessment of the significance of residual effects at each stage?

How the 'cascade' from each stage to the next is expressed

This is best demonstrated by both the West Coast RPS and the draft NPSIB.

To what standard must the actions at each stage be assessed before an applicant can proceed to the subsequent stage?

As noted in footnote 2 above, the various statutory planning documents I have considered use different words to express the actions required. Some require avoidance and mitigation with no qualifiers. Others use 'where practicable', and others use 'where possible'.

I doubt that the different formulations are the result of intentional differences by the drafters of each of the policies. Rather, they are mostly indications that each step in the hierarchy need not be achieved 'at all costs', and that there needs to be a consideration of reasonableness in the circumstances at each step.

In my opinion, the preferable formulation is the wording set out in the NPSFM which provides that each step in the hierarchy needs to be implemented 'where practicable'. 'Practicable' is a more useful word than 'possible' from an assessment perspective.

Do all effects have to be addressed at each stage, or should there be some assessment of the significance of residual effects at each stage?

The NPSIB, the West Coast RPS, and the proposed Otago RPS require all effects to be addressed at each stage, whereas the Auckland RPS requires that only 'significant' residual effects need to be managed. In contrast, while the NPSFM requires all effects to be avoided or minimised 'where practicable', only 'more than minor residual effects' are to be addressed by offsets and compensation. And, the NPSFM requires offsets and compensation 'where

[24] Again, there seems no good reason why the definitions of offsets and compensation in the NPSIB (and elsewhere) should be different to the definitions of aquatic offsets and aquatic compensation, mutatis mutandis, in the NPSFM.

possible' whereas all of the other documents simply allow for offsets and compensation to be 'considered'.

In my opinion, overall, the NPSFM provides the preferable formulation.

Conclusion - the 'effects management hierarchy'

There is, in my view, no policy justification for the definition of the effects management hierarchy to be different between the NPSFM and the NPSIB.

Overall, the definition in the NPSFM, including the way obligations are expressed at each step, I consider to be the most appropriate. In my opinion, that definition should be incorporated into the proposed NPSIB.

I also think it is important that the NPSIB requires all relevant subsidiary statutory planning documents to insert the same wording into those documents, in the same way that this has been done for wetlands and rivers with the NPSFM 2020[25]. As with the principles applying to offsets and compensation generally, I see no policy justification for regional or local differences in how the effects management hierarchy is expressed.

b. Should the objective of biodiversity offsets be 'no net loss' or net gain?

One of the offset principles is usually expressed as 'achieving no net loss, and preferably a net gain'.[26] However, anecdotally, applicants to date have always approached the issue with the objective that net gain should be achieved. This is partly in recognition that applicants wish to take a cautious approach to things, and not risk a situation where what is proposed is the minimum the modelling shows is needed to achieve NNL, only to find out that some of the assumptions in the model prove wrong and there is a net loss. However, to date because offsets have only really been used in the context of larger projects where there can be greater investment in this area, the ecologists advising developers have been able to say with confidence that the proposals will achieve Net Gain. If offsetting becomes more widely used, there is a concern that modelling and field work that costs significant amounts and takes multiple seasons to do will be impractical on a larger scale, and most applicants may not have the financial ability to provide an offset that achieves net gain by a huge margin like most of the examples to date.

Nonetheless, I see no policy reason why New Zealand's overall policy objective, as expressed in this particular principle, should not be Net Gain, rather than No Net Loss. The concept of No Net Loss was originally developed through the work of BBOP. I believe New Zealand's policy position should have progressed from that BBOP work of a decade or so ago.[27]

[25] Under s55(2A) of the RMA.
[26] NPSFM Clause 3.21(2); Policy 7.4(c)(iii) West Coast RPS etc.
[27] See also the example of the work being done in the UK on a policy on Net Gain - https://www.maplesteesdale.co.uk/insights/the-environment-bill-and-biodiversity-net-gain/

c. How the principle of 'limits to offsets' should be applied.

There are limits to offsets specified in the operative West Coast RPS, and in the proposed NPSIB and the proposed Otago RPS.

The West Coast RPS. Here, Forest & Bird and the Director-General of Conservation had appealed the council's decision seeking a re-wording and new provisions. They were promoting the concept of no net loss for indigenous biological diversity. They complained that the WCRPS did not properly recognise or provide for national importance in s 6(c) of the Act. They also contended that the Regional Council had failed to discharge its duty under s 30(1)(ga) of the Act to maintain indigenous biodiversity.

The agreed Policy 7.2 of the West Coast RPS provides:

> Activities shall be designed and undertaken in a way that does not cause:
>
> a) The prevention of an indigenous species' or a community's ability to persist in their habitats within their natural range in the Ecological District, or
> b) A change of the Threatened Environment Classification to category two or below at the Ecological District Level; or
>
> c) Further measurable reduction in the proportion of indigenous cover on those land environments in category one or two of the Threatened Environment Classification at the Ecological District Level; or
>
> d) A reasonably measurable reduction in the local population of threatened taxa in the Department of Conservation Threat Classification Categories 1 – nationally critical, 2 – nationally endangered, and 3a – nationally vulnerable.

These limits appear reasonable, and consistent with evidence presented at recent hearings.

However, in addition to this 'bottom line' limit, the policy in the RPS which provides for the consideration of biodiversity offsets (Policy 7.4) goes on to provide what is in effect another 'limit' by stating:

> Provided that Policy 2 is met, and the adverse effects on a SNA cannot be avoided, remedied or mitigated, in accordance with Policy 3, then consider biodiversity offsetting if the following criteria are met:
>
> a) Irreplaceable or significant indigenous biological diversity is maintained; …

Those terms are not defined, and it is unclear what 'is maintained' means.

In its decision approving the mediated settlement the Court noted that it was difficult to assess whether the wording put before it better achieved the purpose of the Act than the council's decision version. It also noted, however, that similar debates were being had up and down the country and that Forest and Bird were pursuing its agenda on a national level. The fact that both the Direct-General and Forest & Bird reached agreement on the provisions (where they are taking the issues to Court in other instances) indicates to me that the West Coast RPS provisions are likely to represent the most recent example of what the parties

consider to be an acceptable 'middle' position, noting that some parties are likely to have given concessions in some areas for gains in others[28].

The proposed NPSIB. The NPSIB provides for limits on offsets in three ways. First Clause 3.9 sets out the following list of effects on an SNA which must be avoided (which means they cannot be offset or compensated for):

i. loss of ecosystem representation and extent:

ii. disruption to sequences, mosaics or ecosystem function:

iii. fragmentation or loss of buffering or connectivity within the SNA and between other indigenous habitats and ecosystems:

iv. a reduction in population size or occupancy of threatened species using the SNA for any part of their life cycle.

None of these effects are defined or described in the NPSIB. Consequently, compared with the limits set out in the West Coast RPS (but not including Policy 7.4(a)), it is unclear how the limits in the NPSIB will be interpreted and applied.

The second way the proposed NPSIB provides for limits is through the application of the 'effects management hierarchy' and the definition of 'biodiversity offset'. The hierarchy applies to all activities, including the 'excluded' activities such as specified infrastructure.[29] What that means for biodiversity offsets is set out in Appendix 3 of the NPSIB. Appendix 3 includes the following 'limits to offsetting' which "must be complied with for an action to qualify as a biodiversity offset", and in respect of which an offset would be "inappropriate"[30]:

i. residual adverse effects cannot be offset because of the irreplaceability or vulnerability of the indigenous biodiversity affected.
ii. there are no technically feasible or socially acceptable options by which to secure gains within acceptable timeframes
iii. effects on indigenous biodiversity are uncertain, unknown or little understood, but potential effects are significantly adverse.

I note:

a. Like the West Coast RPS, the NPSIB does not define 'irreplaceable' or 'vulnerable'.
b. Nor does it define what is 'socially acceptable'.
c. It is probably fair to say that in most instances which come before a decision maker, it could be argued that the effects on indigenous biodiversity are at least uncertain

[28] *Heritage New Zealand Pouhere Taonga v West Coast Regional Council* [2020] NZEnvC 80 at paragraph [16].
[29] All activities affecting SNAs must 'be managed using the effects management hierarchy' (Clause 3.9(1)(b) and 3.9(2)) and all activities affecting indigenous biodiversity outside SNAs must 'apply the effects management hierarchy to adverse effects' (clause 3.13(b)).
[30] The chapeau to Appendix 3.

(especially in the long term). It is certainly already being argued by some ecologists that all identifiable adverse effects on indigenous biodiversity are 'significant'.

The third (and perhaps most significant) way the proposed NPSIB provides for limits is through the application of what is stated to be the single matter of national importance.[31]

> The matter of national significance to which this National Policy Statement relates is the maintenance of indigenous biodiversity. (emphasis added).

'Maintenance', as one of the 'fundamental concepts' in the NPSIB, is defined:

> The maintenance of indigenous biodiversity requires at least no reduction, as from the commencement date, in the following:
>
> a) the size of populations of indigenous species:
>
> b) indigenous species occupancy across their natural range:
>
> c) the properties and function of ecosystems and habitats:
>
> d) the full range and extent of ecosystems and habitats:
>
> e) connectivity between and buffering around, ecosystems:
>
> f) the resilience and adaptability of ecosystems.
>
> The maintenance of indigenous biodiversity may also require the restoration or enhancement of ecosystems and habitats.

These are very wide and undefined concepts. Given the importance which is placed on 'maintenance' in the NPSIB, I consider that it is also likely to be found that any effect which falls into one of more of these listed will be one for which an offset is 'inappropriate' or will be seen as not 'qualifying' to be an offset in Appendix 3[32], and therefore not defined as a biodiversity offset.

Considering these extensive and widely expressed limits, in my view it is likely that there will be in reality little, if any, place for the effective application of biodiversity offsets (as defined) under the NPSIB. Whether this is an unintended outcome or one which the drafters of the BCG[33] and the proposed NPSIB intended, is unclear.

Moreover, in light of the very recent Environment Court's decision in Brookby Quarries[34], there must now be considerable doubt about the appropriateness of the central reliance which is

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[31] Clause 1.4.

[32] Either because of the use of the words 'These situations include…' in Principle 2 'Limits to offsetting' or because these effects would be included within the first limb of that principle - 'residual adverse effects cannot be offset because of the irreplaceability or vulnerability of the indigenous biodiversity affected'.

[33] Which is an allegation some have levelled against the 2014 so-called Government Guidance on biodiversity offsets.

[34] *Brookby Quarries Limited v Auckland Council* [2021] NZEnvC 120

placed on 'maintenance' in the NPSIB. The Brookby decision relates to provisions in the Auckland Unitary Plan which address the broad issue of the conflict between maintaining and protecting indigenous biodiversity and the locational needs of the extractives sector. The Court did not accept the appellants'[35] submissions that there was a mandatory obligation on regional councils to make objectives, policies and methods for the maintenance of indigenous biodiversity. Whilst accepting that this was important, it was not an environmental 'bottom line', nor did the Court accept there were decisions on this point which it was bound to follow[36]. In essence, 'maintenance' is a function of local authorities whereas the RMA provides for the 'protection' of significant indigenous vegetation.[37]

The NPSFM takes a different approach. It provides a definition of 'aquatic offset', but that definition is framed very differently from the NPSIB, and the NPSFM has no appendix setting out the 'principles of aquatic offsetting'. The NPSFM definition relates to the purpose for which the offset is being proposed[38], rather than combining that with limits about what can and cannot 'qualify' as an offset.

The proposed Otago RPS.

I have reviewed the provisions of both the partially operative Otago RPS and the proposed Otago RPS. While there are some differences in detail between the two documents, in terms of the identified limits to both offsetting and compensation the proposed RPS effectively applies the same provisions as were inserted in the operative RPS following the Environment Court's decisions in 2019.

In addition to the (relatively) standard principles applying to biodiversity offsets, the proposed Otago RPS contains the following limits as part of its policy:

> **Policy APP3**
>
> (1) Biodiversity offsetting is not available if the activity will result in:
>
> (a) the loss of any individuals of Threatened taxa, other than kānuka (Kunzea robusta and Kunzea serotina), under the New Zealand Threat Classification System (Townsend et al, 2008), or

[35] Forest and Bird and the Environmental Defence Society.

[36] In addition to finding that the function of maintaining biodiversity in s30(ga) is one of many functions of regional councils (and unitary authorities) within s 30 and that none of the functions are given any priority within that section, the Court stated (at [25]): "The case authorities cited by the Societies do not support their submission and in particular the Environment Court is not bound by obiter comments of other divisions of the Environment Court; and there is no relevant higher court decision. Judicial references to environmental bottom lines are generally found in relation to national policy direction such as the NZ Coastal Policy Statement and part of the NPS-FM 2020, but not in the current context". This is an implicit rejection of the earlier approach of another division of the Environment Court when considering the (then) proposed Otago RPS in *Oceana Gold (New Zealand) Ltd v Otago Regional Council* [2019] NZEnvC 41.

[37] Section 6(c)RMA.

[38] Clause 3.21(2).

(b) reasonably measurable loss within the ecological district to an At Risk-Declining taxon, other than manuka (Leptospermum scoparium), under the New Zealand Threat Classification System (Townsend et al, 2008).

The reference to the loss of individuals was novel in 2019 and it remains so. This can be contrasted with the later West Coast RPS which places the limits not at the loss of individuals, but at the significantly higher level of prevention of an indigenous species' or a community's ability to persist in their habitats within their natural range in the Ecological District, or causing change of the Threatened Environment Classification to category two or below at the Ecological District Level.[39] The reference to individuals is also inconsistent with the NPSIB.

As I have discussed above in relation to the Deepdell North decision, the operative Otago RPS limits proved to give rise to a result that would (but for s104(1)(ab)) have made it impossible to achieve what was agreed by all relevant ecologists in that case to result in an appropriate net gain.

Moreover, I believe it is instructive that Forest & Bird which was one of the appellants in the 2019 Otago RPS appeal, later agreed in mediation to the 'higher level' limits which are in the West Coast RPS. I consider the proposed Otago RPS policy simply to be unreasonably restrictive, to the point that it undermines the whole objective of proposing a biodiversity offset. It may be that a decision maker decides on the evidence before them that even the loss of individuals of certain species is unacceptable and cannot be appropriately offset. But that is a decision which should be made on the evidence and in accordance with the other principles set out in the relevant policy, not decided a priori by way of the policy in its current form.

For both these reasons, I consider the limits to offsets as set out in the West Coast RPS policy to represent a preferable policy than both the operative and proposed Otago RPS.

I have one caveat in relation to the use of the West Coast RPS and that is the additional limit in Policy 7.4(a) about biodiversity offsetting must maintain 'Irreplaceable or significant indigenous biological diversity'. As I have noted, I consider this policy to be too uncertain to be usefully applied. Moreover, the reference to 'maintaining' is likely to be a throwback to the position Forest & Bird took (successfully) on the operative Otago RPS in 2019, but which has now been called into question by the Court's 2021 decision in Brookby.

And, for the reasons I set out earlier, I consider the policy on biodiversity offsets in the proposed NPSIB to be too uncertain about limits to be capable of reasonable application, and in any event to now be seriously in question as a result of the Brookby decision.

The assumption that avoidance is the best option for protection

Throughout much of the discussion about the role of offsets and compensation, and their place within the effects management hierarchy is an implicit, but untested, assumption that protection of existing (and even past) biodiversity values is best achieved by leaving them alone. That in turn assumes that biodiversity in most situations is in a steady state or that its condition and extent will improve over time if left to its own devices. But this fails to have

[39] West Coast RPS Policy 7.2.

regard to New Zealand's specific ongoing risks to biodiversity through introduced predators and browsers, which is almost unique internationally. The concept of the mitigation hierarchy as developed by BBOP was in a more general context which did not have the specific threats that we have in this country. While avoidance of adverse effects as a starting point has always been there, and, in my opinion, should always apply to biodiversity values as much as any other aspect of the environment on the principle that we should aim to do things in a way that causes as little external harm as possible, that is a different proposition from one that assumes avoidance in New Zealand is adequate, in itself, for the protection of significant biodiversity.

As one article states[40]:

> *While this 'preservationist' approach will work in some instances it is ineffective in others, and inadequately recognises the extent to which protection of our remaining faunal values in particular requires active, rather than passive protection. Providing for 'preservation' through legal status or covenants that preclude future activities will on its own not provide for protection of many biodiversity values in the presence of invasive pests*
>
> *A more effective approach in relation to protecting our remaining fauna may be to allow some activities that impact biodiversity values to proceed, but requiring those activities to include mitigation and positive enhancement measures like predator control, to achieve overall better protection for and enhancement of the affected values. In other words, always requiring a net biodiversity gain.*

Conclusion – limits to offsetting

It is my opinion that best practice in terms of providing for limits to offsets is demonstrated by the approach in the West Coast RPS, except for policy 7.4(a). In addition, rather than link the principles of offsetting to the definition in the way the NPSIB proposes, the preferable approach, in my view, is to define offsets as the NPSFM does, but then to set out the principles and outcomes to be sought (such as provided in the NPSIB) as assessment matters or criteria against which a proposed offset should be assessed.

Again, that best practice should be reflected in the NPSIB which then requires that all subsidiary planning documents adopt a consistent national approach.

d. Should the policy be explicit about using modelling?

In my opinion, modelling should not be a requirement under the NPSIB or other documents, especially if offsets are to be used for more than a few 'major' applications. In many cases, however, some form of modelling is likely to be necessary in order to provide 'explicit statements' on the relevant assessments. Nonetheless, it would be helpful if New Zealand adopted a standardise approach to modelling, even if that included the types of situations where BOAM and BCM models are appropriate. This might be achieved in a collaborative way, similar to the adoption of the EIANZ guidelines for use in New Zealand: terrestrial and freshwater ecosystems.[41]

[40] What does 'Protection' of Biodiversity mean? J Craig, S Christensen (in press).

[41] Roper-Lindsay, J., Fuller S.A., Hooson, S., Sanders, M.D., Ussher, G.T. 2018. Ecological

e. What is best practice policy for environmental compensation?

The NPSFM 2020 relating to wetlands and rivers defines and distinguishes between aquatic offsets and aquatic compensation. The latter is defined to mean:

> … a conservation outcome resulting from actions that are intended to compensate for any more than minor residual adverse effects on a wetland or river after all appropriate avoidance, minimisation, remediation, and aquatic offset measures have been sequentially applied.[42]

The NPSFM provides (for 'eligible' activities such as 'specified infrastructure'):

> …
>
> (e) if aquatic offsetting of more than minor residual adverse effects is not possible, aquatic compensation is provided; and
>
> (f) if aquatic compensation is not appropriate, the activity itself is avoided.[43]

Beyond that, the NPSFW does not provide any 'limits to compensation', 'bottom lines', or criteria that aquatic compensation must meet, although it does state that if aquatic compensation is 'not appropriate' the activity itself should be declined consent.

In contrast, the West Coast RPS does not define biodiversity compensation (or offsets) but rather provides for listed criteria which must be met for a proposed action to be considered compensation:

> 5. Provided that [bottom line' effects are avoided], in the absence of being able to satisfy [the avoidance, mitigation and offset policies], consider the use of biodiversity compensation provided that it meets the following:
>
> a) Irreplaceable or significant indigenous biological diversity is maintained; and
>
> b) The compensation is at least proportionate to the adverse effect; and
>
> c) The compensation is undertaken where it will result in the best practicable ecological outcome, and is preferably:
>
> i. Close to the location of development; or
>
> ii. Within the same Ecological District; and
>
> d) The compensation will achieve positive indigenous biological diversity outcomes that would not have occurred without that compensation; and

impact assessment. EIANZ guidelines for use in New Zealand: terrestrial and freshwater ecosystems. 2nd edition.

[42] Clause 3.21 NPSFM.

[43] In the definition of 'effects management hierarchy' in Clause 3.21.

e) The positive ecological outcomes of the compensation last for at least as long as the adverse effects of the activity; and

f) The delay between the loss of indigenous biological diversity through the proposal and the gain or maturation of the compensation's indigenous biological diversity outcomes is minimised[44].

There are two aspects of interest with this policy. First, in addition to the 'bottom lines' which apply generally, [45] this policy provides an additional 'bottom line': "Irreplaceable or significant indigenous biological diversity is maintained." As I have noted earlier, those terms are not defined and it is unclear what 'is maintained' means.

Second, it is unclear what would happen if an applicant proposes 'compensation' which does not meet one or more of the criteria in the policy. Unlike the NPSFM there is no reference to a consideration of appropriateness. All the policy says is that the proposed actions cannot be considered to be 'biodiversity compensation'. Despite this, the proposed actions can still be considered as positive actions under section 104(1)(a) and 104(1)(ab) of the Act, (although possibly with less weight to be given to them than if they meet the compensation criteria in the RPS?). Does this mean there is now a de facto next and final step in the 'effects management hierarchy'?

The proposed NPSIB provides a different approach. It allows for biodiversity compensation to apply to both SNAs (though restricted to limited 'eligible' activities)[46] and outside SNAs.[47] In both instances, biodiversity compensation may be considered when it is in accordance with the effects management hierarchy.[48] What that means for biodiversity compensation is set out in Appendix 4 of the NPSIB. Appendix 4 includes 'limits to biodiversity compensation' which "must be complied with for an action to qualify as biodiversity compensation". In addition, 'biodiversity compensation' is defined with reference to Appendix 4. In appendix 4, there are three additional limits listed, including where "the indigenous biodiversity affected is irreplaceable or vulnerable."

Like the West Coast RPS, the NPSIB doesn't define 'irreplaceable' or 'vulnerable'. Nor does it state how proposed actions which don't 'qualify' as biodiversity compensation should be treated. And, unlike the NPSFM, the NPSIB does not say if biodiversity compensation is not 'appropriate' (whatever that means), consent should be declined.

In contrast, the Proposed Otago RPS takes a different approach which provides (in addition to the standard principles, the following:

[44] Policy 7.5
[45] Policy 2 of the RPS.
[46] Clause 3.9 NPSIB.
[47] Clause 3.13. NPSIB.
[48] Clauses 3.9(1)(b) and 3.13(1)(b). Within SNAs the combination of clause 3.9(1) and (2) appear to provide an exclusion to the 'eligible' activities having to meet the listed adverse effects in clause 3.9(1)(a), but those eligible activities are still required by clause 3.9(1)(b) to comply with the effects management hierarchy.

APP4 – Criteria for biodiversity compensation

1. Biodiversity compensation is not available if the activity will result in:

    a. the loss of an indigenous taxon (excluding freshwater fauna and flora) or of any ecosystem type from an ecological district or coastal marine biogeographic region,

    b. removal or loss of viability of habitat of a Threatened or At Risk indigenous species of fauna or flora under the New Zealand Threat Classification System (Townsend et al, 2008),

    c. removal or loss of viability of a naturally rare or uncommon ecosystem type that is associated with indigenous vegetation or habitat of indigenous fauna, or

    d. worsening of the New Zealand Threat Classification System (Townsend et al, 2008) conservation status of any Threatened or At Risk indigenous fauna.

This can be contrasted with the limits in the West Coast RPS and, like the proposed Otago RPS provision on offsets, it is novel by referring to individuals. For the same reasons as apply to the proposed Otago RPS offset policy, I consider the proposed policy on biodiversity offsetting to potentially undermine the effective application of biodiversity compensation is some circumstances. I accept that the decision to insert the 'West Coast limits' as opposed to the 'proposed Otago limits' is, in the end, a matter of policy. However, any such policy needs to be reasonable, and it should be based on expert advice. The proposed Otago RPS policy on compensation is inconsistent with other approaches. That in itself is not determinative. But I do I consider it determinative that in the context of the Deepdell North consent application all expert ecologists agreed that the same approach as is included in the proposed RPS would not allow an effective net gain to be achieved. That demonstrates that, at least in some circumstances, the proposed policy is unreasonable and not as good as other options.

As I have noted, in my opinion, a provision in a statutory planning document which directs that a decisionmaker can only consider offsets or compensation which is defined by way of specific criteria (as the proposed Otago RPS purports to do) cannot prevent the decision maker having regard to whatever is proposed under s104(1) and s 104(1)(b). Therefore, such a provision in a RPS (which sets up a potential conflict between the considerations to be made under the three subsections of s104) is, in my view, unreasonable and confusing. In comparison, the direction in the NPSFM that 'if aquatic compensation (as that term is defined) is not appropriate, the activity itself is avoided' appears reasonable. (This provisions must be included in all RPSs and regional plans by virtue of clause 1.7(1) of the NPSFM). Rather than providing criteria which determine what and what is not compensation and directing that the decision maker is restricted to that assessment, the decision in the NPSFM as to whether a particular aquatic compensation proposal is appropriate is left to the decision maker, depending on the circumstances. This wording does not set up a potential conflict between a consideration of the RPS/plan (s104(b)(iii), (v) and (vi)) and consideration of effects (s104(1) and 104(1)(ab)" That is because a decision that a particular proposal is appropriate (or not) will likely be the same whichever subsection the assessment is being made under.

Conclusion – policies on environmental compensation

Similar to offsets, it is my opinion that best practice in terms of providing for limits to offsets is demonstrated by the approach in the West Coast RPS, except for policy 5.4(a). In addition, rather than link the principles of offsetting to the definition in the way the NPSIB proposes, the preferable approach, in my view, is to define offsets as the NPSFM does, but then to set out the principles and outcomes to be sought (such as provided in the NPSIB) as assessment matters or criteria against which a proposed offset should be assessed.

f. Is there justification for distinguishing between different types of SNAs?

The NPSIB has a distinction between High and Medium classifications for SNAs. I do not see any policy justification for such a distinction. I have been advised that some preliminary assessment by ecologists have shown that, using the criteria in the NPSIB, it is likely that the vast majority of SNAs will fall within the High classification.

This approach assumes that offsets for any values within a High SNA cannot be reliably achieved. For some impacts that will be the case, but not for others. Consequently, this unnecessarily predetermines that outcome. If a properly designed and implemented offset achieves net gain for a 'high' value then by definition that would be a positive outcome – perhaps even better than net gain for a 'medium' value.

D. RESPONDING TO RECENT CRITICISM OF THE NEW ZEALAND MANAGET OF OFFSETS AND COMPENSATION

A 2020 article has commented on several concerns with offsetting in the New Zealand context.[49] The article considers an Australian National Audit Office audit of the Australian Government's Department of Agriculture, Water, and the Environment's (DAWE's) approach to managing biodiversity offsetting. The article notes that the Audit provides an opportunity to learn from Australia's mistakes and avoid some of the most serious outcomes that result from poor exchanges and poor implementation.

This section of my advice considers the concerns raised in this paper and comments on the implications for best practice for biodiversity offsetting in New Zealand.

First, the Australian Audit found that DAWE does not identify desired environmental outcomes as a means of determining the level of acceptable environmental impact. As a consequence, there is no method for determining whether approval conditions are proportionate to the environmental risk and ultimately, or whether the approval itself is appropriate. The article states "New Zealand biodiversity offsetting policies are typically premised on a "no net loss or preferably net gain" objective. Beyond this broad scale objective, specific goals (for example, no net loss of what, compared to what, by when), and desired outcomes (for example, regional targets for habitat extent or population targets) are less commonly explicitly defined. The lack of national direction on specific goals and outcomes means New Zealand is likely to face similar inadequacies to the Australian situation".

However, there is no discussion as to how the authors reached this conclusion. As a starting point in New Zealand, because of the principle of 'like for like' the objective is to achieve NNL or NG for <u>all</u> values that are affected by a proposal. The draft NPSIB has 'bottom lines' (as does the West Coast RPS) which provide parameters about the limits to offsetting. The draft NPSIB will require councils to undertake a process to identify SNAs across the country. There is also the Government's 2007 Statement of National Priorities for protecting rare and threatened native biodiversity on private land, as well as the Te Mana o te Taiao, the Aotearoa New Zealand Biodiversity Strategy 2020 which 'sets out a strategic framework for the protection, restoration and sustainable use of biodiversity, particularly indigenous biodiversity, in Aotearoa New Zealand, from 2020 to 2050'.

In sum, it is my view that there is a policy framework in place which addresses this concern. Together with the principles of offset and compensation application developed by the Environment Court there is adequate national direction on specific goals and outcomes.

The second concern was that the Audit criticised the DAWE for not having established internal guidance for reviewing environmental offsets beyond a policy and guides and had no "quality assurance process for sampling or reviewing offset plans." As a result, there was no way of ensuring "that offsets are assessed consistently, in line with the offset policy and in a way that achieves the objectives of the EPBC Act".

[49] *Possum in the Headlights: An Audit of Australia's Biodiversity Offsetting Conditions and Some Lessons for New Zealand* D Gepp et al Resource Management Journal August 2020.

The authors state: “Both of New Zealand’s offsetting guidance documents are non-statutory documents and offsetting policies remain inconsistent across different regional policy instruments. Against that background, it is safe to assume that deviation from New Zealand’s guidance documents is common.”

I agree that the guidance is non-statutory, but I do not understand the basis for the assertion that deviation is common. I have noted above that the 2014 DoC Guidance appears incapable of practical application. But it is certainly my experience that proponents of offsets are tested against the 2018 guidance (and more generally against the ‘latest thinking’ on policy and modelling). This concern appears to be a re-run of the debate about which models should be used.

Third, the DAWE was found to have no agreed method for estimating risk of loss averted – being the risk that the biodiversity at the proposed offset site would be lost at some defined point in the future if not for the offset. While the authors note that averted loss offsets are used infrequently in New Zealand, they say “the principle that robust, defensible, and transparent methods for estimating biodiversity gains are needed to reduce the risk of negative consequences is equally applicable to New Zealand.” I agree. And I also agree with the following statement that “This highlights the importance of continued development of tools and methods for designing adequate and appropriate offset proposals and guidance for their correct and transparent use”. And this is what I consider is happening through the decisions being made on consideration of the evidential debate that is occurring about the appropriate use of models.

Fourth, the Audit found that DAWE does not have a system for mapping offsets for internal or external use. Risks relating to this include the possibility for land already protected as an offset to be accepted as an offset site again, or conversely for an offset site to be developed. The authors note that New Zealand similarly lacks a central offset register or mapping database. That is indeed the case, and could well be a useful addition, particularly if policies and proposals for providing offsets in advance of effects become more common.

Fifth, the Australian audit noted that offsets for some matters of national significance are becoming increasingly unavailable in Australia due to a lack of locations where the matter is present or poor data. This has resulted in “difficulty satisfying offset conditions”. However, instead of declining an activity due to unacceptable effects in this situation the DAWE has instead varied or extended offset conditions and increased its acceptance of “indirect offsets” (offsets that do not result in a measurable conservation gain, for example funding a PhD). This increases the risk that environmental gains will not be achieved.

The authors note that New Zealand also has a narrow market for “like-for-like” exchanges, especially so for lowland habitats and ecosystems and in light of the high proportion of species at risk of extinction. They state: “The Australian situation demonstrates the risks with increasing flexibility in offset exchanges. It also highlights the need to identify specific offset locations and detail offset actions within consent conditions and not approve proposals “in principle.” While this is a legitimate concern, there is again no comment in the article on the extent to which this is already could be a problem in New Zealand. On the contrary, it is my experience that recent offset (and compensation) proposals are very explicit about location and actions required. This concern is also, to some extent, addressed by the ‘bottom line

provisions' about limits to offsetting, and also the clear effects management hierarchy requirement to consider like for like offsets before ecological compensation, or other positive actions ('indirect offsets').

Sixth, the Audit found DAWE does not have a process for verifying completion of offset conditions, and it has not assessed the risks of systematically failing to do this. The authors note that "unlike Australia, we do have a system in place to verify completion of offset conditions", but go on to say "we nonetheless have issues with poorly crafted consent conditions and implementation of [compliance, monitoring and enforcement] Further, we do not have recent data regarding offset compliance or the environmental implications of poor compliance."

There is no doubt that poor conditions, poor monitoring, and poor enforcement lead to poor outcomes. But this is not a problem which is unique to biodiversity offsetting. It applies to all aspects of the resource management (and conservation planning) system. Considering the detailed suites of conditions (which include reporting, monitoring and reviews) which have been attached to the grants of the various consents I have discussed in this letter, I do not see that the issue is poorly crafted conditions from these larger scale projects. Issues around monitoring and enforcement come down to capability and capacity of councils, rather than being a fundamental issue with biodiversity offsets[50].

In summary, I consider that there are adequate responses to all the concerns raised in a 2019 article about offsetting to ensure that there can be best practice management of offsets and ecological compensation.

Yours Faithfully

Natural Resources Law

Mark Christensen
Director
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[50] The references to this article include a 2018 article by Brower and others "Compliance with biodiversity compensation on New Zealand's public conservation lands". This is curious. Not only does the Department say its 2014 Guidance does not apply to concessions under the Conservation Act, but the Department's poor practice cannot be responsible for any system applying to offsetting and compensation under the RMA or any replacement legislation to the RMZ.

Pip Walker Environment Law Memorandum

To: Mark Christensen

From: Pip Walker

Subject: Biodiversity offsets research

Date: 31 August 2021

Introduction and summary

1. You have asked me to research the current and latest law on biodiversity offsets and compensation.

2. I have read and summarised the following resource consent decisions:
    a. *Clearwater Mussels Ltd v Marlborough District Council* [2018] NZEnvC 88
    b. *Director-General of Conservation v Te Runanga o Ngati Tama Trust* [2018] NZEnvC 203
    c. Oceana Gold's Deepdell North Project
    d. *Waka Kotahi NZ Transport Agency v Manawatu- Whanganui Regional Council* [2020] NZEnvC 192
    e. Matawii Water Storage Reservoir
    f. Dome Valley landfill
    g. Huia Water treatment plant
    h. *Brookby Quarries Limited v Auckland Council* [2021] NZEnvC 120

3. I have read and summarised the following decisions on plans and regional policy statements:
    a. Independent Hearings Panel recommendations on the Proposed Auckland Unitary Plan
    b. *Oceana Gold (New Zealand) Ltd v Otago Regional Council* [2019], [2020] NZHC 436 and [2020] NZEnvC 137.
    c. *Heritage New Zealand Pouhere Taonga v West Coast Regional Council* [2020] NZEnvC 80

Clearwater Mussels Ltd v Marlborough District Council [2018] NZEnvC 88

4. In this case, Clearwater Mussels Ltd (**CML**) appealed the decision by Marlborough District Council (MDC) to decline new consents, to operate CML's two marine in Pig Bay, Marlborough Sounds. The farms had operated for a number of years, but consents had expired. Under the Marlborough Sounds Resource Management Plan marine farms were discretionary activities.

5. Pig Bay was part of the Important Bird Area, and King Shag was a threatened species that had habitat there. The Court then addressed CML's proposed predator and pest programme, offered by way of mitigation in the conditions. The Court, concluded that

this was a well-intentioned initiative but that it would not provide any of the benefits contended by CML in relation to the proposal.

6. The application was made prior to the Resource Management Amendment Act 2017 and therefore section 104(1)(ab) did not apply, however the Court accepted it could consider offsetting or compensation proposal under section 104(1)(c)[1].

7. The only reference to any plan provisions on offsetting and compensation is the following[2]:

> *The policies in 9.2.1.1 also deal with various dimensions of avoiding, remedying or mitigating adverse effects of activities. In particular:*
> *"(a) Policy 9.2.1.1.1 relevantly refers to:*
> *'Avoid, remedy and mitigate the adverse effects of use and development of resources in the coastal marine area on …*
> *Conservation and ecological values;*
> *…*
> *e) Marine habitats and sustainability*
> *…*
> *"(b) Policy 9.2.1.1.2 colours Objective 9.2.1.1 by its directions that adverse effects 'should as far as practicable be avoided' and that where 'complete avoidance is not practicable' adverse effects 'should be mitigated and provision made for remedying those effects to the extent practicable'."*

8. The key species under consideration was the King Shag which fed within the Sounds, and the IBA was considered to be significant habitat given it small and threatened population[3].

9. As part of the proposed conditions of consent CML proposed a Pest and Predator Programme. The Court did not go into much discussion about whether it satisfied the principles of offsetting and compensation because while the Programme was "well intentioned"[4] it lacked certainty as to the implementation of it (the predator fence to be reinstated was on DoC land and it bounded a third party's land). Furthermore, there was little protection against the programme failing. The Court concluded[5]:

> *In any case, the evidence does not satisfy us that the Programme (were it to be implemented and maintained as intended) would be effective for its intended purposes concerning the effects of the Proposals. It would not avoid or mitigate the risks that disturbance from human activity associated with the operation and maintenance of the farms could have for local King Shag colonies. Nor would it materially compensate for, or offset, the loss of natural character values that we find would result from the Proposals.*

Director-General of Conservation v Te Runanga o Ngati Tama Trust [2018] NZEnvC 203

10. This was an interim decision by the Environment Court in relation to appeals on roading improvement to the Mt Messenger section of SH3 north-east of New Plymouth. Waka Kotahi had identified constraints with the road which meant that it was no longer fit for

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[1] *Clearwater Mussels Ltd v Marlborough District Council* [2018] NZEnvC 88 at [11].
[2] [2018] NZEnvC 88 at paragraph [68].
[3] [2018] NZEnvC 88 at paragraph [77].
[4] [2018] NZEnvC 88 at paragraph [102].
[5] [2018] NZEnvC 88 at paragraph [103].

purpose. Waka Kotahi had lodged a notice of requirement and resource consents for amendment to the current designation.

11. The Environment Court quoted from the evidence of Waka Kotahi's ecologist[6] as to the potential adverse effects of the proposal. Some potential effects had been avoided due to route selection, however there were still potential adverse effects which included:
    a. loss of 31.28 ha of indigenous vegetation;
    b. the loss or alteration of 3705 m of stream;
    c. loss or alteration of habitat (including that of kiwi);
    d. habitat fragmentation and increased risk of vehicle strike.

12. To offset, compensate and mitigate the residual adverse effects, an extensive Restoration Package was proposed. The key components of the Package required Waka Kotahi to:
    a. undertake intensive pest management over an area of 3,650 ha surrounding the Project area in perpetuity (or until such time as pest control techniques are no longer required);
    b. remove all farm livestock from the upper Mangapepeke valley and the adjacent forest areas;
    c. establish 6 ha of ecologically significant kahikatea - swamp forest habitat on farmland that would previously have been swamp forest;
    d. fence 8.455km of stream from livestock and plant 16.91 ha of riparian margin with indigenous species;
    e. plant 200 seedlings of the same species for every significant tree removed. This was estimated to require planting of approximaltey 3,400 seedlings;
    f. plant 9ha of mitigation planting on areas that are currently predominantly pasture;
    g. salvage and relocate threatened plant species, lizards, peripatus and wood from the Project footprint;
    h. compensate for the residual ecological effects on lizards by the provision of $200,000 to DOC to be directed to research that will benefit indigenous herpetofauna; and
    i. install kiwi roadside barrier fencing along areas of roadside margin that are considered to be locations where there is a risk of kiwi attempting to cross the road.

13. Waka Kothai said that this Restoration Package would improve ecosystem functioning and would achieve no net loss after 10 years, and a net gain in biodiversity after 15 years.

14. Part of the proposed pest management area included 1,400 ha of Ngati Tama land which was already part of a pest control program and achieving good results. The Court questioned how the Restoration Package would result in an ecological benefit if the area was already subject to pest control. Waka Kotahi said that continuous funding in perpetuity, plus a more intensive level of pest control would result in a significant ecological benefit[7].

15. The Court agreed that it was crucial to the success of the predator management programme that the manager had the right expertise, and suggested amendments to

[6] [2018] NZEnvC 203 at paragraph [170].
[7] [2018] NZEnvC 203 at paragraph [177].

conditions to provide clarity around management for the implementation, monitoring and reporting phases[8].

16. The Court discussed the issue of the predator control programme being "in perpetuity". The proposed condition gave Ngati Tama the option to exclude its land from pest control in 35 years time (intended to give future generations of Ngati Tama a say in management of Ngati Tama land). If Ngati Tama did "opt out", Waka Kotahi would need to find an additional 1,400 ha of adjacent land to control pests on. One the one-hand the Court noted that if this took some time, it would only be several years in the context of an "in perpetuity" programme. However, on the other hand if the future land for the programme was not guaranteed, then the promise of "in perpetuity" seemed hollow[9].

17. Ultimately the Court thought that the "in perpetuity" component was "extremely generous" and was keen to ensure that this did not set a precedent. The Court said:[10]

> *We consider the in-perpetuity provision of the Restoration Package to be extremely generous, but this is what the parties have agreed and we have no basis on which to convert this to a shorter term. We note, however, that we do not consider the inclusion of an in-perpetuity condition to be precedent-setting in terms of future projects, as the Restoration Package results from the peculiar circumstances of this Project and is volunteered. Should the need for predator control of the type now required no longer be necessary in future (for example, should a national pest management strategy overtake the requirement for local pest/predator control initiatives) the usual recourse to a review of the consent conditions is available.*

Deepdell North decision[11]

18. Oceana Gold applied to the Otago Regional Council (**ORC**) and Waitaki District Council (**WDC**) for resource consents for the Deepdell North Stage III Project. This project reworks a previously backfilled and rehabilitated pit. The pit will cover approximately 38 ha, 18 ha of which was previously mined. A waste rock stack and noise bunds would also be constructed. The applications were processed as discretionary activities. Of note, the ORC Policy team submitted in opposition to the WDC consents.

19. The section 42A report from the ORC recommended grant of consent whilst the section 42A report from the WDC noted that there were still outstanding issues to be resolved.

20. Of the approximately 170ha in the project impact area (**PIA**), 80.5ha was in cultivated pasture, 73ha in low producing grassland, approximately 11ha in shrublands, 0.6ha in shelterbelts or exotic trees, 0.3ha in ephemeral wetlands, 70m^2 in a seepage wetland located below a small culvert on Horse Flat Road, and 4.2ha in an ephemeral gully drainage system. The Commissioners found that there were significant adverse effects from the loss of habitats of indigenous flora and fauna, and the loss of several small wetlands[12].

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[8] [2018] NZEnvC 203 at paragraph [202].
[9] [2018] NZEnvC 203 at paragraph [207].
[10] [2018] NZEnvC 203 at paragraph [209].
[11] Application by Oceana Gold (New Zealand) Limited for the Deepdell North Stage III Project, decision by Independent Commissioners dated 23 September 2020 (**DDN Decision**).
[12] DDN Decision at section 5.2.

21. There was debate about the significance of the wetlands. The Commissioners ultimately agreed with the applicant that they were not regionally significant and not outstanding. It was clear that the PIA provided significant habitat for indigenous flora and significant habitats of indigenous fauna.

22. The Commissioners said that sometimes it was difficult to distinguish between compensation and offsetting in a proposal such as this[13]:

> *We understand the essential difference between offsetting and compensation is that the former involves "like for like" whereas the latter is "unlike for like". In practice these distinctions can become blurred in a complex proposal such as that before us. The key ecological principle is that whatever mix is used, there must be No Net Loss (NNL) of biodiversity values.*

23. It was not possible to avoid all of the adverse effects and therefore mitigation was proposed which fitted with section 104(1)(ab) RMA[14] (note; section 104(1)(ab) RMA was a section which the Commissioners repeatedly came back to). This included:
    a. A draft Lizard Management Plan;
    b. The proposed Red Bank Covenant, through the hearing process this was amended to be 50 ha with "impressive" ecological values. It would be fenced off from other land so that no grazing would occur, covenanted and managed in perpetuity. It was agreed by the ecologists that this would offset (and compensate) for the loss of terrestrial habitat and the seepage wetland.
    c. Protection of a large ephemeral wetland of about 4ha near Middlemarch to compensate for the loss of small ephemeral wetlands within the PIA. Initially there was some concern by ORC that this was not "like for like", and although nearby was in a different ecological district. After some discussions the experts agreed two specific outcomes and four actions to achieve this.

24. In relation to the NPS-FM (which only took effect on the day the hearing closed), the Commissioners said[15]:

> *In our view the provisions of the NPSFM 2020 when read collectively do not weigh against the application to the WDC being granted.*

25. However, the comments in relation to the partially operative Otago Regional Policy Statement are more interesting. The Commissioners felt that it was more important to consider if there was an overall gain from the proposed mitigation.

26. In the summary of the decision, the Commissioners also summarised its views on the RPS when it said[16]:

> *The Otago Regional Policy Statement contains some very prescriptive policy which potentially shapes any framework adopted for management of the effects of mining at Macraes.*
> *The agreements largely reached between experts do not follow the framework established by the Regional Policy Statement precisely. It would not be practical to do so. The agreed offsets and the detail as to how they are managed involve a mix of offsetting and compensation, whereas the regional policy promotes the*

[13] DDN Decision at section 5.3.
[14] See DDN Decision at section 7.2.
[15] DDN Decision at section 7.3.
[16] DDN Decision at section 2.

former. We also find that in relation to wetlands, the offset/compensation policy approach in the National Policy Statement for Freshwater 2020 is much more straightforward than its equivalent in the Regional Policy Statement.
For these reasons we have not followed the regional policy precisely. Our decision to grant the WDC consent application is driven by ecological outcomes and pragmatism, which we think is entirely appropriate. Our full decision follows.

27. The Commissioners again reiterated the difficulty in distinguishing offsetting and compensation and said:

> *As we have already observed it is not possible to definitively quantify the difference between offsetting and compensation in a complex proposal like this. A strict policy hierarchy cannot realistically be applied in this instance. What matters is that there is no net loss and an overall gain. As Ms Williams said in a comment made during her legal submissions the wetland at Middlemarch "is not like for like, but appears bigger and better."*

28. The Commissioners considered Policy 5.4.6A "biological diversity compensation". It was noted by experts that it would be difficult to meet the strict test under limb (a), and ORC therefore considered offsetting was not possible. The Applicant's planner considered that section 104(1)(ab) provided a pathway through this policy and the Commissioners agreed. The Commissioners were also persuaded by DoC's evidence and quoted it in their decision[17]:

> *We were also impressed by the evidence of Mr Brass on this issue. In discussing the provisions of the RPS he said:*
>
> > *(Court decisions) "appear to structure offsetting and compensation as "all or nothing" tiers where a proposal either meets the full set of criteria or drops down to the next tier. I am concerned that this could potentially fail the best meet the purpose of the RMA, and fail to deliver the best ecological outcomes. I consider that the approach taken by OGL is preferable, such that even where one criteria of a tier cannot be met, they have still worked to comply with as many of the other criteria for that tier as possible…."*
> >
> > *"While I recognise the RPS provisions on offsetting and compensation, to an extent I consider the classification of the proposal in that way is somewhat academic. It is clear to me that OGL has taken an "effects management hierarchy approach – where adverse effects cannot be avoided, remedied or mitigated they have applied offsetting principles as much as practicable, where offsetting is not achievable they have applied compensation principles as much as practicable, and where compensation is not achievable, they have offered positive ecological enhancement measures."*
>
> *We agree with Mr Brass on these matters. Our primary concern is that ecological outcomes are enhanced by the Proposal. We consider they are.*

29. There was some discussion about whether the proposal was consistent with the District Plan. The Commissioners noted as it was now 10 years since the District Plan had been operative, it did not reflect current thinking, for example with section 104(1)(ab) RMA.

[17] DDN Decision at page 27.

30. The Commissioners also considered Part 2 and found that he proposal was consistent with the purpose of the Act . The resource consents were granted, subject to conditions agreed during the course of the hearing.

Waka Kotahi NZ Transport Agency v Manawatu- Whanganui Regional Council [2020] NZEnvC 192

31. This case related to a roading project called Te Ahu a Turanga: Manawatu Tararua Highway. A Notice of Requirement had previously been granted for the project and therefore this case only concerned the resource consent applications, including earthworks and vegetation clearance. The resource consent applications were referred directly to the Environment Court.

32. The project footprint included 11.82 ha of indigenous forest and shrublands and 4.97 ha of small wetlands and included 'threatened' and 'at risk' species. Some of the habitat had high ecological significance as was assessed as significant under the One Plan policies. The project area was also known to included habitat for indigenous fauna and several 'threatened' and 'at risk' lizard species had previously been recorded at the project site.

33. As well as expert witness conferencing, there were mediation sessions by which the parties were able to agree on a set of conditions which were put before the Court.

34. Waka Kotahi (**the Applicant**) acknowledged that despite efforts made to avoid and minimise potential adverse effects, there would still be adverse effects (which were more than minor) in respect of indigenous biodiversity.

35. The Applicant's approach[18] was to employ the effect management hierarchy ie avoid, mitigate, offset and compensate those effects related to rare or threatened species or at risk species in accordance with Maysek et. al. 2018. Offsetting was to achieve 'no net loss' or preferably a 'net gain'. Some residual effects were assessed as being 'moderate' or 'high' and it was proposed to compensate or offset these through habitat provision or enhancement.

36. The decision sets out the various methods employed to avoid[19] (amending the road corridor and design) and mitigate[20] (for example vegetation clearance protocols, salvage and relocation of fauna) that the Applicant had used.

37. The Applicant used the Biodiversity Offset Accounting Model (BOAM) and Biodiversity Compensation Model (BCM) to calculate the offset and compensation required. The decision sets out the key components of this:

> *[152] Our understanding of the models is that they:*
> *• Place (where possible) a numerical value on the existing ecological quality of each ecological component ('attribute') of an area of vegetation or habitat;*
> *• Compare that with a 'benchmark' (the value of a more-or-less intact ecosystem of the same habitat type), then record or calculate the loss of that value as a result of the activity in question;*
> *• Calculate the quantum of offset needed to achieve the replacement (leading to no net loss of biodiversity) or improvement (leading to a net*

[18] [2020] NZEnvC 192, see paragraph [141].
[19] [2020] NZEnvC 192 at paragraph [144].
[20] [2020] NZEnvC 192 at paragraph [147].

gain in biodiversity) over a set period, with a 'discount' applied to account for model uncertainties and the lag time between biodiversity losses and gains.
[153] Where the attribute values and losses are able to be quantified and the outcome verified, that replacement or improvement is an offset. Where the values cannot be quantified and the losses and gains cannot be verified, that outcome is termed compensation.
[154] Offset design must also meet certain other criteria which relevantly include:
• Adherence to the agreed mitigation hierarchy;
• Recognising that some biodiversity values cannot be offset ('limits to offsetting');
• Ensuring that any gains are additional to those that would have occurred in the absence of an offset ('additionality');
• Ecological values gained being similar to those lost ('like for like');
• Offsets being carried out in proximity to the loss (for example, in the same catchment, or same ecological district, taking into account the ecological context);
• Outcomes lasting at least as long as the effects and preferably in perpetuity;
- *The delay ('time lag') between the loss and offset gain in biodiversity being taken into account.*

38. As noted in the quote from paragraph 154 above, the Court said that where the offset values could not be quantified, and losses and gains verified, then it was actually compensation.

39. Based on the outcomes of the modelling[21], seven habitats could achieve net gains after 35 years. For the other five habitats, the biodiversity values means that a net gain could not be achieved however key attributes could be compensated to an expected net gain within 35 years. To address short to medium net losses and 'false positives', additional measures of stock exclusions and pest control was proposed[22]. The Court then concludes that it's understanding is that a biodiversity gain will be achieved after 10 years[23]. The Court was critical that although the results of the modelling were included in the evidence, it was difficult to see the link between the area impacted and area of habitat required to be provided[24].

40. Expert witness conferencing showed approval of the general approach the Applicant had taken to offsetting and compensation, and also the modelling. However the other experts noted a couple of limits to offsetting and suggestions[25]:
    a. A key element of vulnerability is when an ecosystem is reduced to less than 20% of its original extent in an ecological district or region;
    b. irreplaceability is the degree to which a biodiversity feature is sustained by the site and the degree to which the loss of the site would significantly increase the extinction risk of the feature;
    c. The attributes used in the BOAM models were appropriate, however additional attributes for basal area metrics, forest birds and wetland birds should be included; and

[21] [2020] NZEnvC 192 at paragraph [158].
[22] [2020] NZEnvC 192 at paragraph [160].
[23] [2020] NZEnvC 192 at paragraph [161].
[24] [2020] NZEnvC 192 at paragraph [163].
[25] [2020] NZEnvC 192 , see paragraph [167].

d. Suggested amendments to consent conditions included an additional round of biodiversity monitoring at year 25. If this did not show the offset was on the right trajectory then further adaptive management would be required.

41. The applicant re-ran the model as a result of inputs from the other experts at expert witness conferencing, however the Court noted this did not alter the outcome. This led the Court to say[26]:

> *This has raised a question in our minds about the degree of refinement expected of the model and the efficacy of undertaking that additional work. There must be a point of diminishing returns at which the inclusion and refinement of additional attributes ceases to add value to the outcome and we wonder if some form of simpler sensitivity analysis might have been as effectively adopted for testing the modelling.*

42. In this way the Court was mindful of the limits of models, but still confident in their use.

43. The Court was also critical about the level of monitoring required by the agreed conditions and said it was too "risk adverse", again conscious of the limitations in the modelling[27].

> *With those systems in place it is unclear why monitoring at the level of foliage density and seedling indices is necessary. With best practice pest control in place and being monitored it does not seem necessary to add another level of monitoring. Given the comprehensive range of requirements for the implementation and monitoring of the offset and compensation activities* ***such fine-grained monitoring of outcomes seems to be extraordinarily risk-averse.*** *It places reliance on the model at a level of confidence that seems out of proportion with what it is intended to achieve.* ***From the Court's perspective, the model is intended to assist in determining reasonable and supportable offset and compensation quanta.*** *The offset and compensation are intended to be measurable and that will be the case without the level of detail included in the EC conditions. The development of biodiversity offsetting and the use of models to achieve it is relatively recent. We appreciate the models' applicability as tools and that inputs can be at a very detailed level but there is no compulsion to use any particular model or for the model to do more than assist the Court in making a decision as to whether reasonable mitigation is being applied. (emphasis added)*

44. The Court held that the One Plan did not provide, per se, for 'çompensation' in the offsetting hierarchy. However the Court still found that the compensation proposed, where an offset was not available, was still an appropriate part of the mitigation package[28].

Matawii Water Storage Reservoir

45. The decision[29] on the Matawii Water Storage Reservoir (**MWSR**) was heard under the COVID-19 Recovery (Fast-Track Consenting) Act 2020 and no hearing was held. The Expert Panel had the power to make minor amendments to the conditions, and some

[26] [2020] NZEnvC 192 at paragraph [170].
[27] [2020] NZEnvC 192 at paragraph [173].
[28] [2020] NZEnvC 192 at paragraph [187].
[29] Record of Decision of the Expert Consenting Panel on the Matawii Water Storage Reservoir, Alternate Environment Judge LJ Newhook (Chair), Environment Commissioner Kevin Prime, Rob von Voorthuysen, W Russell Howie, date of decision 23 October 2020, issued 27 October 2020.

minor amendments were made to the conditions with a subsequent decision released on 19 November 2020.

46. The MWSR is a proposed 750,000 m^3 water reservoir on an un-named tributary of the Kopenui Stream, on the southern slopes of the Te Pua Volcano, east of the township of Kaikohe. It will be used to supply water for irrigation, commercial and industrial use, and municipal use. It will be an earth dam with the maximum height of the embankment 24 m. Water above median flows from the contributing catchment will be impounded and flows at or below median are to be conveyed through the reservoir to maintain a sustainable residual flow. Water would also be harvested from the Wairoro Stream above median flow.

47. The application was assessed overall as a non-complying activity.

48. The project will result in a total indigenous vegetation loss of 3.55 ha (including the Threatened – Nationally Critical swamp maire), with an additional 0.21 ha of exotic shrub, 0.04 wattle forest and 0.42 ha of wet pasture grass[30]. The applicant proposed to offset and compensate for this and the Panel was satisfied that the Biodiversity Offset Compensation Model "*employs suitably conservative offset ratios appropriately derived by applying the Biodiversity Offset Accounting Model*"[31], particularly for the swamp maire where 200 seedlings will be planted for each swamp maire tree removed.

49. After receiving and considering comments, the Panel sought amendments to the Biodiversity Offset Compensation Plan to:
    a. specifically address any adverse effects on the Significant Natural Area (SNA) – Kopenui Stream Remnants and require the relocation of existing swamp maire trees if that was practicable.
    b. specify how areas used for offset or enhancement planting will be legally protected and that they will be monitored for ten years with any failed plantings being replaced.

Dome Valley resource consent[32]

50. The Dome Valley decision (also referred to as Wayby Valley landfill) was a resource consent hearing for a new regional landfill involving a variety of district and regional land use consents. The consents were bundled as a non-complying activity. There was also a contemporaneous private plan change to create a regional landfill precinct. The majority of the Commissioners (herein referred to as the Commissioners) granted consent, although the Chairperson (in the minority) was of the opinion that consents should not be granted.

51. Te Rūnanga Ō Ngāti Whātua and DoC have filed appeals in the Environment Court[33].

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[30] MWSR Decision at paragraph [281]. The footnote at paragraph 281 describes the Model as "A transparent, robust, and structured means of assessing an offset proposal that calculates whether a 'nonet-loss'/'net-gain' biodiversity outcome will be achieved, whilst accounting for uncertainty and time lag between loss at impact sites and gain being created at offset sites."
[31] MWSR Decision at paragraph [281].
[32] Application by Waste Management (NZ) Wayby Valley Landfill, Decision by Independent Commissioners dated 11 June 2021 (**Dome Valley decision**).
[33] Te Rūnanga Ō Ngāti Whātua File An Appeal On Dome Valley In The Environment Court | Scoop News referring to a press release from 6 July 2021. Website accessed 21 August 2021 and Matt Baber (pers. Comm. 23 August 2021).

52. The section 42A report recommended consent be declined, and one of the reasons for this was that the ecological effects would be more than minor, and that the proposal would be inconsistent with a number of planning provisions relating to the protection of ecological and biodiversity values. After further evidence was produced during the hearing the section 42A report writer reconsidered his decision and concluded that the effects would be acceptable and that it would be consistent with the planning provisions.

53. As part of the proposal over 118 ha of forest and pasture would be cleared (including approximately 4.83ha of indigenous regenerating forest and approximately 0.67ha of indigenous mature forest), approximately 13,915m of stream reclamation and approximately 1.37ha of wetland reclamation (0.7 ha indigenous wetland).

54. To address ecological effects associated with the proposal, the applicant proposed the following measures. Note that visual and amenity screening was additional.
    a. Enhancement and / or protection of approximately 15km of identified streams within and outside the applicant's landholdings and within a further 30km of streams that are yet to be identified
    b. Planting of approximately 9.9ha of native terrestrial vegetation within the applicant's landholdings
    c. Protection via covenant of 111.9ha of indigenous forest outside the applicant's landholdings
    d. Planting and protection of approximately 4.63ha of degraded wetlands within the subject site
    e. Planting of wetland buffers of 10m or 5m around significant ecological area ("SEA") and non-SEA wetlands within the subject site, with a total area of approximately 15.18ha
    f. Covenant protection of all wetland habitats within the subject site, being an area of approximately 25.59ha
    g. The implementation of a general ecological management plan and a range of specific management plans relating to Hochstetter's frogs, long-tailed bats, avifauna, lizards, fish, invertebrates and vegetation
    h. Pest management over an area of approximately 856.9ha within and outside the applicant's landholdings.

55. The section 42A report said that "*Ecological values are confirmed as being very high, noting that the site provides habitat for a range of flora and fauna, some of which are defined as nationally threatened or at risk.*"[34]

56. The permanent loss of stream channels and habitat was found to be offset.
57. The loss of two degraded wetlands would be offset by enhancement of two wetlands of substantially higher quality[35]. Even though the Commissioners noted that wetlands had received increase protection under the NPS-FM, the proposed wetland enhancement "*went beyond the minimum requirements*"[36].

58. The experts agreed that the project would lead to the potential loss of Hochstetter's frogs (At Risk - Declining) and their habitats, however there was disagreement as to

[34] Dome Valley Decision at paragraph [131].
[35] Dome Valley Decision at paragraph [260].
[36] Dome Valley Decision at paragraph [260].

the benefits of the proposed pest control programme on the wider frog populations and the efficacy of proposed translocations[37].

59. The applicant had tried to avoid the loss of stream habitat. To offset the loss of 14km of stream habitat, the applicant proposed an offsite offset which would enhancement other stream habitats based on the Stream Ecological Valuation (SEV) and Environmental Compensation Ratio (ECR) approach. DoC was critical of this approach as[38]:

> *…the ECR calculation using the SEV does require expert judgment in selecting sites and can also fail to take into account some biodiversity values at the impacted and off-setting sites.*

60. One of the concerns raised by submitters was locating suitable areas of stream habitat where enhancement could occur (as these specific enhancement areas had not yet been identified)[39]. The Commissioners were satisfied that there were a number of potential sites.

61. The applicant's stream offset proposal was criticised for being overly optimistic. Timeframes for completing the work were imposed and a bond was put in place to ensure the work was undertaken.

62. In terms of bats, "*While the proposed pest control area may fall short of the area DOC considers necessary to recover bat populations, we find it to be commensurate with the project's likely adverse effects on bats*."[40]

63. In concluding on the offset approach used, the Commissioners said[41]:

> *Offset/compensation modelling is a tool to assist in decision making processes. Some submitters (e.g. Forest & Bird) were critical of the qualitative approach taken by the applicant, highlighting that quantitative data could have been used instead if more assessments were carried out. Regarding frogs, bats, and lizards, we do not consider that further assessment work (e.g., radio-tracking for bats, further frog surveys, quantitative fish data) would have allowed for meaningful quantitative modelling that would further assist with decision-making. While the quantitative results of such further assessment may give the impression of increased precision, survey and monitoring data for the fauna groups concerned are inherently variable and difficult to interpret. The applicant's approach to this uncertainty was to adopt a conservative approach towards assessing effects and applying a comprehensive effects management package that seeks to achieve a net gain, which provides more confidence in at least achieving no net loss. We accept the applicant's approach.*

64. Mana whenua opposed the applications for a number of reasons, including biodiversity[42].

> *The position of Ngāti Manuhiri and Ngāti Whātua in particular, was that these effects should be avoided, not remedied, mitigated or offset. As stated,*

[37] Dome Valley Decision at paragraph [253].
[38] Dome Valley Decision at paragraph [262].
[39] Dome Valley Decision at paragraph [265].
[40] Dome Valley Decision at paragraph [279].
[41] Dome Valley Decision at paragraph [283].
[42] Dome Valley Decision at paragraph [418].

"Furthermore, there would be no amount of offset that could replace this area of significance to mana whenua – reforming our Awa will remove the...mauri and the wairua forever a permanent loss..."

65. A key point was that the Auckland Unitary Plan did not require no-net loss. The Commissioners said[43]:

> *[624] Both sets of policies could be said to require off-setting of residual effects, that is effects that cannot be avoided, remedied or mitigated. The AUP does not state that off-setting must result in no net loss in values. The NPS-FM is explicit that off-setting must result in no-net loss and preferably a net gain.*
>
> *[625] However, we note here that the applicant has offered a 'no-net loss of ecological function' approach. Based on our findings which agree with the applicant's stated quantum of offsets and compensation, we do not need to take this particular point further.*

66. The relevant policies in the AUP required indigenous biodiversity to be restored and enhanced, and there was also a cascading management hierarchy. The Commissioners said[44]:

> *We are satisfied that reasonable steps have been taken to avoid and minimise the loss of biodiversity. In relation to steps to off-set and compensate residual effects to a point where there may be a net gain, we note that policy 15.3.3 refers to encouraging offsetting where effects cannot be avoided. There is no absolute requirement that all effects must be off-set or compensated under the AUP, but noting that the NPS-FW requires no net loss. Overall, the proposal is generally consistent with the E15 provisions if we accept that the landfill is necessary infrastructure and that its location has been appropriately selected.*

67. In her dissenting judgement, the Chairperson touched on her concerns with biodiversity. In relation to frogs she accepted that adverse effects had been recused to a practicable minimum, however she said that even this was unacceptable for a "taonga" species[45].

68. Whilst she did repeat submitters concerns regarding the offset modelling, her principal concern seems to be that there are some things which are not capable of being offset. She referred to the evidence from tangata whenua and said "*This harm, including biodiversity and impacts to waterways and the wellbeing of water (including Te Mana o te Wai) cannot be offset, mitigated or avoided*."[46] Her second main concerns appears to be a lack of certainty as to the offsetting and where it would occur[47]. As her view on the effects differs, she also considered the landfill to be inconsistent with relevant objectives and policies.

Huia Water Treatment Plant[48]

69. This was a decision by independent Commissioners on behalf of the Auckland Council to make decisions on resource consent applications by Watercare for the Huia Water

[43] Dome Valley Decision at paragraph [624-625].
[44] Dome Valley Decision at paragraph [664].
[45] Dome Valley Decision part 23 at paragraph [77].
[46] Dome Valley Decision part 23 at paragraph [84].
[47] Dome Valley Decision part 23 at paragraphs [111-113].
[48] Application by Watercare for the Huia Water Treatment Plant, decision by Independent Commissioners dated 30 June 2021 (**Huia Decision**).

Treatment Plant. There was a designation in place and therefore matters such as the physical structures themselves were the subject of the Outline Plan of Works. The resource consents were bundled as non-complying activities.

70. The section 42A report writer recommended consent be granted, however after hearing submitter's evidence he changed this to recommending consent be declined.

71. The project comprised three sites, the current Huia Water Treatment Plan (which would be decommissioned and turned into a water reservoir), a new site of approximately 4.2 ha of undeveloped land, (largely covered in indigenous vegetation that is identified in the AUP's Significant Ecological Area ("**SEA**") Overlay and with two streams) where the replacement Huia Water Treatment Plan would be built, and a third site where another water reservoir would be created.

72. A "comprehensive" mitigation and biodiversity compensation package was proposed which would include[49]:
    i. establishment of the Waima Biodiversity Management Plan ("**WBMP**"). The WBMP seeks to coordinate and improve community-based conservation efforts in the 990-hectare Little Muddy Creek catchment, through weed and pest management and other efforts to promote natural forest regeneration.
    j. an initial lump sum payment of $5 million would be made, and it was estimated that this would provide about 10 years funding.
    k. Governance would occur through a charitable trust (Waima Biodiversity Trust ("Trust")) comprising representatives from the applicant, Auckland Council, the community, Mana Whenua, and an independent trustee.

73. The applicant accepted that the forest removal would have residual adverse effects and sought to compensate for them through the WBMP.

74. The Commissioners said at paragraph 86:

> *Particularly in respect of infrastructure projects, there is potential for adverse effects to arise that cannot be avoided, remedied or fully mitigated, where those effects are associated with a proposal that should proceed because it is in the public good and provides significant positive effects. That is essentially the situation that arises in relation to the current resource consent application. Environmental compensation has a place in such relatively rare circumstances and we consider it to be an appropriate response that should at least be assessed on its merits.*

75. DoC gave evidence that policy D9.3.1 required offsetting to be provided, not compensation. However the Commissioners disagreed and said that the compensation package was legitimate and enabled by section 104(1)(ab) RMA and the AUP.

76. Submitters were critical of the potential for governance issues or a lack of take-up by landowners. The Commissioners accepted that there could be issues, however they felt that the WBMP would lead to positive environmental outcomes[50].

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[49] Huia Decision at paragraphs [30] to
[50] Huia Decision at paragraph [69].

77. DoC also wanted a biodiversity offset accounting approach to be used. The Commissioners considered that this would add an unnecessary level of complexity[51]. The Commissioners accepted that the WBMP would result in ecological benefits which are at least commensurate with adverse effects from loss of indigenous vegetation and habitat[52].

78. In relation to submissions calling for more funding to be provided, the Commissioners said[53]:

> *We consider that the amount of funding must be determined in the context of the adverse residual ecological effects that remain once all mitigation is applied. In this instance, we are satisfied that the amount of funding is sufficient to create positive biodiversity effects that at least offset the adverse effects that will arise.*

79. There is little detailed discussion about the objectives and policies relating to offsets or environmental compensation. The Commissioners held that the applications "in the round" were consistent with the objectives and policies and were not contrary to them.

Brookby Quarries Limited v Auckland Council [2021] NZEnvC 120

80. *Brookby Quarries Limited v Auckland Council*[54] is a very recent decision of the Environment Court (dated 13 August 2021). While it relates to provision of the Auckland Unitary Plan (**AUP**), it also addresses the broader issue of the conflict between maintaining and protecting indigenous biodiversity and the locational needs of the extractives sector. The Court held that it was appropriate that the specific policy on significant ecological areas in the special quarry zone did not require the quarry owners to first avoid adverse effects.

81. In an earlier decision, the Independent Hearings Panel on the AUP removed the Significant Ecological Area Overlay (**SEA Overlay**) from the Special Purpose Quarry Zone (**SPQZ**). This was because it was seen as was inconsistent with the purpose of the zone (i.e. the extraction of minerals). This was appealed to the High Court and the SEA Overlay was reinstated, and a new restricted discretionary activity rule would apply in the SPQZ. Brookby Quarry appealed this to the Environment Court and Fulton Hogan joined the proceedings. They sought a specific policy and objective framework for the SPQZ which recognised the need to remove vegetation in order to remove overburden and enable mineral extraction. Royal Forest and Bird Protection Society of New Zealand Incorporated and Environmental Defence Society (together **the Societies**) also joined.

82. By the time of the hearing the key point of disagreement was whether the policy should refer to avoiding removal of vegetation in the SPQZ. The quarry operators said there should be no requirement to <u>avoid</u> vegetation removal, whereas the Societies said that the standard hierarchy should apply so that adverse effects had to first be <u>avoided</u>, where practicable.

83. The Court did not accept the Societies submissions that there was a mandatory obligation on regional Councils to make objectives, policies and methods for the

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[51] Huia Decision at paragraph [71].
[52] Huia Decision at paragraph [72].
[53] Huia Decision at paragraph [73].
[54] [2021] NZEnvC 120.

maintenance of indigenous biodiversity[55]. Whilst accepting that this was important, it was not an environmental bottom line, nor did they accept there were decisions on this point which they were bound to follow. The Court also considered the Societies "one-sided emphasis" on maintenance of indigenous biodiversity and safeguarding ecosystems over mineral extraction was not supported by the RMA nor case law[56].

84. There was evidence from the quarry operators about the additional costs of having to source aggregate from outside Auckland. The Council supported the quarry operators, and the use of a "bespoke" approach for mineral extraction.

85. The Council highlighted the difficulty in avoiding adverse effects on the values of a SEA at the same time as enabling extraction of aggregate. The Council wanted a clear framework in place to avoid difficulties when it came to processing consents.[57]

86. The Court called for further ecological reporting in regard to the Brookby and Drury quarries. This showed that a number of threatened or at risk species and habitat were found at each quarry and that the ecological values were assessed overall as "high" for Brookby and varied from "low" to "very high" for Drury, including a historically rare habitat called volcanic boulder field forest at Drury which was "*physically and ecologically irreplaceable*"[58].

87. The Societies opposed the "carve out" as the ecologically irreplaceable and nationally threatened and at risk species and habitats would be lost and amounted to a "de facto controlled activity"[59].

88. In response, the quarry operators submitted[60]:

> *They [the quarry operators] further submitted that there is no legal or planning principle that would require the management of mineral resources (often recognised as an exception to the sustainable management of resources) to be consistent with how infrastructure is managed. This because, there is no locational flexibility for quarries within the SPQZ and no locational flexibility at either of the two quarries in respect of the SEA Overlay. If quarrying of these areas is as to be undertaken, vegetation within the SEA Overlay needs to be removed. In contrast, infrastructure does not have the same locational constraint. We comment that that would not be invariable but is a reasonable submission in the general sense.*

89. The Court rejected the Societies arguments that the quarry operators wording would amount to authorising quarrying and created a "de facto controlled activity"[61]. The quarry operators pointed out that if on any given application, the mitigation and offset package was not sufficient then consent could be declined.

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[55] [2021] NZEnvC 120 see paragraphs [25] and [26].
[56] [2021] NZEnvC 120 at paragraph [27].
[57] [2021] NZEnvC 120 at paragraph [39].
[58] [2021] NZEnvC 120 at paragraph [62].
[59] [2021] NZEnvC 120 at paragraph [82].
[60] [2021] NZEnvC 120 at paragraph [86].
[61] [2021] NZEnvC 120 at paragraph [83].

90. The Court did not like the use of the term “carve-out” and said;[62]

> *We agree with the council and the quarry operators on these matters. There is no call to label matters "carve-outs", but instead it is appropriate to identify reasonable planning principle to underpin a site-specific approach given the importance of the aggregate resource in the two quarries, its fixed locations, and the sparing use of some important site-specific matters in the AUP. We are not confronted with a proposal for a de facto controlled activity approach. Of significance, if further detailed ecological investigations at the time of any resource consent application demonstrate for whatever reason that mitigation and avoidance will not offer adequate protection, consent could be refused by the decision-maker at the time.*

91. The Societies also alleged that their preferred wording was more consistent with the NES Freshwater. The quarry operators said that the proposed provisions related to vegetation with a SEA, not freshwater or wetlands. Also, the Council would be implementing the NPS-FM and NES in a consistent approach across the entire AUP[63]. The Court was satisfied that the provisions were not inconsistent with the NPS-FM and NES and would be considered as part of any future resource consent applications.

92. The Societies also alleged that the further ecological reporting undertaken by the quarry operators (the Societies had declined to take part), was inadequate. The quarry operators disagreed. The Council reiterated that at the time of considering a resource consent application, any ecological values which cannot be mitigated or offset can mean a consent is declined. The Court then went on to say:

> *Our assessment is that the latter submission is important in our coming to the conclusion that we can weigh at this stage the quite considerable wealth of information brought by the ecologists in the latest studies and JWS and feel able to find that the source of approximately half of the aggregate supply needed for Auckland be the subject of planning provisions that are reasonably enabling of same, while nevertheless offering ultimate protections through refusal of consent should new matters be uncovered and assessed by the decision maker as being particularly relevant in terms of further information brought forward in an inquiry under Schedule 3 of the AUP.*

Auckland Unitary Plan

93. The Auckland Unitary Plan was developed under the process set out in the Local Government (Auckland Transitional Provisions) Act 2010. This included hearings by the Independent Hearings Panel[64] (**IHP**), instead of Commissioners appointed by the Council, who then made recommendations to the Council.

94. In the IHP Report on Topic 6 (Biodiversity)[65], the IHP said[66]:

> *…offsetting is not an alternative to avoiding, remedying and mitigating adverse environmental effects, but an opportunity to offset residual effects where they have not been able to be avoided, remedied or mitigated.*

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[62] [2021] NZEnvC 120 at paragraph [89].
[63] [2021] NZEnvC 120 at paragraph [98].
[64] Judge David Kirkpatrick (Chair), Janet Crawford, Peter Fuller, Greg Hill, Paula Hunter, John Kirikiri, Desmond Morrison, Stuart Shepherd, Alan Watson, David Hill, Les Simmons.
[65] IHP Report to AC Topic 006_010 Natural resources and biodiversity 22 July 2016.
[66] IHP Report to AC Topic 006_010 Natural resources and biodiversity 22 July 2016, Section 8.2.1

95. The IHP agreed with submitters that offsetting could not be "required", but may be offered. The IHP disagreed with suggestions that the effects to be offset had to be "ecologically significant" or "more than minor". The IHP recommended that where offsetting is offered, it should only be the significant residual adverse effects which are to be offset[67]. In response to submissions the Council had redrafted Policy 7 to remove achievement of no net loss as a requirement for offsetting. The IHP agreed and said that although "no net loss" was a goal, it would not be a requirement for offsetting[68].

Oceana Gold (New Zealand) Ltd v Otago Regional Council [2019] NZEnvC 41

96. OceanaGold (New Zealand) Limited (OceanaGold), EDS and Forest and Bird appealed the provisions of the proposed Otago Regional Policy Statement (now the partially operative RPS). Some changes to provisions had been made a result of mediation and the main question in the proceedings was "*if the adverse effects of mining on indigenous biodiversity cannot be avoided, remedied, mitigated or offset, then should there be a policy enabling the miner to compensate for those effects and if so to what extent*"[69].

97. The decisions version of policy 5.4.8 did not include environmental compensation however the parties agreed that it should be provided for and had suggested wording. The dispute between the parties centred around whether limits should be placed on a miner wanting to offer compensation and how they would operated ie as limits or criteria to be considered.

98. The Court seemed surprised that a specific policy was created for mining when it said:

> *Mining is in a relatively privileged position under the PORPS. Recognising that minerals such as gold can only be won from where they are found, mining is the most entitled activity in the PORPS because it is apparently the only activity that is allowed to "compensate" for its adverse effects on indigenous biological diversity (or aspects of it).*

99. The ORC felt that policy 5.4.8 (compensation policy), by following a effects management hierarchy and would help achieve the outcomes sought in the RPS[70], and that the limits should be on residual adverse effects that would result in the loss of a taxon or ecosystem type. Forest and Bird and EDS (who presented a joint case), meanwhile felt that clear limits needed to be put in place and that it was not just the "last of the last" which needed to be protected, but also loss of essential habitat for At Risk or Threatened species and loss or modification of rare ecosystem types[71]. Oceana, the Crown and QLDC meanwhile submitted that limits were not necessary, and that instead these should be criteria to be considered.

100. The Court held that section 30(1)(ga) created a directive obligation on Councils to have policies that lead to the substantive outcome of maintaining indigenous biodiversity[72],

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[67] IHP Report to AC Topic 006_010 Natural resources and biodiversity 22 July 2016, Section 8.2.2.
[68] IHP Report to AC Topic 006_010 Natural resources and biodiversity 22 July 2016, Section 8.2.3.
[69] *Oceana Gold (New Zealand) Ltd v Otago Regional Council* [2019] NZEnvC 41 at paragraph [10].
[70] *Oceana Gold (New Zealand) Ltd v Otago Regional Council* [2019] NZEnvC 41 at paragraph [50].
[71] *Oceana Gold (New Zealand) Ltd v Otago Regional Council* [2019] NZEnvC 41 at paragraph [54].
[72] *Oceana Gold (New Zealand) Ltd v Otago Regional Council* [2019] NZEnvC 41 at paragraph [66].

and that owing to the definition of "maintain", the life-supporting capacity of ecosystems in section 5(2)(b) was important[73].

101. The Court traversed the previous case law and summarised its view as:

> *[85] We consider that the Day approach to offsets comes closest to the principles of Part 2 of the RMA (and — as we shall show — international practice) in relation to offsets; although the J F Investments understanding of (environmental) compensation may remain useful. Further, the latter is consistent with the economic themes of the RMA especially the idea introduced by section 7(b) RMA that particular regard should be had to the efficient use of resources, i.e. there should be a net (social) benefit in any exercise of a resource consent. The idea of compensation is to ensure that in appropriate cases the net social benefitis also a net conservation benefit: Baker Boys Limited v Canterbury City Council. Consequently we respectfully decline to follow the obiter remarks of the High Court in Buller.*

102. One of the issues with the offset policy (policy 5.4.6) was whether it related to the loss of individuals or loss of a species, and what scale this would be set at (ie the ecological district or New Zealand). After considering Business and Biodiversity Offsetting Programme (**BBOP)** and papers on this issue, the Court agreed with the Societies that it is not just whether a no-net loss is technically feasible, but whether there are some impacts which should be avoided at all cost. The Court held that there should be not net loss of individual plants or animals of rare or vulnerable species as identified in the reports under the NZTCS[74].

> *[161] We find — on a provisional basis which is subject to the next part of this decision — that appropriate effective limits (if there are to be limits on compensation) are:*
> *"(ii) The residual adverse effects will not result in:*
> *(1) The loss of an indigenous taxon (excluding freshwater fauna and flora) or of an ecosystem type from an ecological district or coastal marine biogeographic region;*
> *(2) Removal or loss of viability of habitat of a threatened or at risk indigenous species of fauna or flora under the New Zealand Threat Classification System;*
> *(3) Removal or loss of viability of an originally rare or uncommon ecosystem type that is associated with indigenous vegetation or habitat of indigenous fauna;*
> *(4) Worsening of the NZTCS conservation status of any threatened or at risk indigenous freshwater fauna."*

103. The Court drew a distinction with threatened species, and said[75]:

> *The reason we hold that individual plants or animals should not be lost is that while the "no net loss" policy 5.4.6(b) is generally adequate for indigenous biological diversity (noting that it allows for loss of individual plants or animals on one site provided others are established elsewhere in the region) it is too risky to extend that method of management to threatened species. Accordingly we consider that proposed policy 5.4.6(c) is likely to be effective in achieving objectives 3.1 and 3.2 of the PORPS provided its reference to the NZTCS is made express. Similarly we consider 5.4.6(a) should be amended in a minor way by the addition of the word "residual" to emphasise the place of offsetting in the mitigation hierarchy.*

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[73] *Oceana Gold (New Zealand) Ltd v Otago Regional Council* [2019] NZEnvC 41 at paragraph [63].
[74] *Oceana Gold (New Zealand) Ltd v Otago Regional Council* [2019] NZEnvC 41 at paragraph [94].
[75] [2019] NZEnvC 41 at paragraph [95].

104. The Court provisionally concluded that, if limits were to be imposed, they should be that the residual adverse effects would not result in:
    l. the loss of an indigenous taxon (excluding freshwater fauna and flora) or of any ecosystem type from an ecological district or coastal marine biogeographic region;
    m. removal or loss of viability of habitat of a threatened or at risk indigenous species of fauna or flora under the New Zealand Threat Classification System ("NZTCS");
    n. removal or loss of viability of an originally rare or uncommon ecosystem type that was associated with indigenous vegetation or habitat of indigenous fauna;
    o. worsening of the NZTCS conservation status of any threatened or at risk indigenous freshwater fauna.

105. The Court then went on to consider whether limits should be imposed at all. The Court was critical of the fact that Oceana's economic evidence was limited (even though no other party had provided any economic evidence), had not considered the effect on mining if there were some limits, and had not put a value on the cost to ecosystems and habitats if they were lost[76]. It considered there was not enough evidence before the Court to undertake a cost/benefit analysis[77]. The Court concluded that limits were necessary[78]:

> *Accordingly we find that the limits are necessary to ensure that indigenous biological diversity is protected. We accept the assessments by the ORC and the Societies of the risks of acting or not acting to supply limits to compensation, i.e. that the limits are necessary.*

106. The Court concluded[79]:

> *But while we accept the equal importance of enabling development and use of non-renewable resources, we hold that a policy which provides for adverse effects on significant indigenous vegetation and significant habitat of indigenous fauna to be offset or compensated for is not consistent with a requirement to protect those values or, more fundamentally, to safeguard the life-supporting capacity of the ecosystems of which they are part. The Societies submit and we accept that including parameters around when effects can be offset (as already provided in policy 5.4.6) or compensated for (as proposed for policy 5.4.X) is more consistent with Part 2 than a policy that does not include such limits. The proposed limits relate to biodiversity attributes that make an area significant.*

107. The Court made the observation that indigenous biodiversity policies were not working well in New Zealand[80].

108. Oceana appealed this decision to the High Court[81]. The decision was upheld on appeal, except for one point where the parties agreed that the Environment Court had erred. Amongst the points of appeal, Oceana alleged that there was no evidence before the Environment Court to allow it to conclude that policy 5.4.6(c) should refer to the loss of individuals. The High Court did not accept this.

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[76] *Oceana Gold (New Zealand) Ltd v Otago Regional Council* [2019] NZEnvC 41 at paragraph [165].
[77] *Oceana Gold (New Zealand) Ltd v Otago Regional Council* [2019] NZEnvC 41 at paragraph [168].
[78] *Oceana Gold (New Zealand) Ltd v Otago Regional Council* [2019] NZEnvC 41 at paragraph [184].
[79] *Oceana Gold (New Zealand) Ltd v Otago Regional Council* [2019] NZEnvC 41 at paragraph [187].
[80] *Oceana Gold (New Zealand) Ltd v Otago Regional Council* [2019] NZEnvC 41 at paragraph [199].
[81] *Oceana Gold (New Zealand) Ltd v Otago Regional Council* [2020] NZHC 436.

109. The final decision of the Court was in *Oceana Gold (New Zealand) Ltd v Otago Regional Council*[82]. The parties had agreed in the High Court that there was a legal error with one of the paragraphs as the NZTCS did have a category or rare or vulnerable species, and the matter was remitted back to the Environment Court. Before the Environment Court the parties largely agreed the wording, however there was debate about the application of it to the Myrtaceae family (in particular kanuka and manuka) as kanuka and manuka were largely common, however it is believed that they will be susceptible to myrtle rust. Policy 5.4.6(c) was amended to say:

> *The offset ensures there is no loss of individuals of Threatened taxa, other than kānuka (*Kunzea robusta *and* Kunzea serotina*), and no reasonably measurable loss within the ecological district to an At Risk-Declining taxon, other than mānuka (*Leptospermum scoparium*), under the New Zealand Threat Classification System ('NZTCS')."*

Heritage New Zealand Pouhere Taonga v West Coast Regional Council [2020] NZEnvC 80

110. This case related to appeals on the West Coast Regional Policy Statement. The parties had attended mediations over several days and filed consent memoranda resolving their respective appeals. The Court noted that its comments related to the RPS before it[83], and that it accepted that the proposals were a package (ie parties would have given concessions in some areas for gains in others)[84].

111. Bearing this in mind, the Court said[85]:

> *Overall, we are satisfied that the approach of the parties is consistent with the Act and s 32 (and s 32AA) in particular and that this approach is as a result of a cohesive and integrated approach to amendments which should aide understanding the application of the Policy Statement.*

112. The Court says:

> *[89] F&B have sought the deletion of Policy 1, Policy 2 and Policy 3A. They essentially sought a re-wording and new provisions and were promoting the concept of no net loss for indigenous biological diversity. DOC also had some concerns with the provisions and both complained that the WCRPS did not properly recognize or provide for national importance in s 6(c) of the Act. They also contended that the Regional Council had failed to discharge its duty under s 30(1) (ga) of the Act to maintain indigenous biodiversity.*
>
> *[90] In the end, the parties have agreed on a new suite of Policies to maintain indigenous biodiversity. This requires future actions and mapping Significant Natural Areas (SNA) and wetlands using the criteria of attached Appendices.*
>
> *[91] It also uses represents the issues of:*
>
> *(a) no net loss; and*

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[82] [2020] NZEnvC 137.
[83] *Heritage New Zealand Pouhere Taonga v West Coast Regional Council* [2020] NZEnvC 80 at paragraph [14].
[84] *Heritage New Zealand Pouhere Taonga v West Coast Regional Council* [2020] NZEnvC 80 at paragraph [16].
[85] *Heritage New Zealand Pouhere Taonga v West Coast Regional Council* [2020] NZEnvC 80 at paragraph [20].

(b) minimization of adverse effects.

113. The Court noted that it was difficult to assess whether the wording put before it better achieved the purpose of the Act. It also noted that similar debates were being had up and down the country and that Forest and Bird were pursuing agendas on a national level[86].

114. The Court noted the difficulty for it in reaching conclusions about the various benefits and costs where it was considering wording decided by the parties at mediation:

> *[214] Under s 32(2) of the Act, the Court is required to identify and assess the benefits and costs of the various economic, social and cultural effects anticipated.* ***This is particularly difficult to do at any level of detail given that the parties have reached an agreement.*** *I consider this provision can properly be met on a determination, where the Court is satisfied that the questions of benefits and costs have been taken into account and evaluated by the parties. (emphasis added)*
>
> *[215] In this case, I have a great deal of confidence on costs and benefits given the recognition in various provisions of the tension between the need to protect s 6 matters, while at the same time provide for appropriate development. These tensions are implicit within the Act and the Court must rely, to some extent, on the authority and the other parties to identify this in the appropriate method.*

[86] *Heritage New Zealand Pouhere Taonga v West Coast Regional Council* [2020] NZEnvC 80 at paragraphs [94-95].

Comparison of offsetting and compensation provisions in Regional Policy Statements

	West Coast Regional Policy Statement (operative)	Auckland Unitary Plan (operative in part 2016)	Proposed Otago Regional Policy Statement 2021
Policies	1. a) Areas of significant indigenous vegetation and significant habitats of indigenous fauna will be identified using the criteria in Appendix 1; they will be known as Significant Natural Areas (SNAs), and will be mapped in the relevant regional plan and district plans. b) Significant wetlands will be identified using the criteria in Appendix 2; they will be known as Significant Natural Areas (SNAs), and will be mapped in the relevant regional plan. 2. Activities shall be designed and undertaken in a way that does not cause: a) The prevention of an indigenous species' or a community's ability to persist in their habitats within their natural range in the Ecological District, or b) A change of the Threatened Environment Classification to category two or below at the Ecological District Level; or c) Further measurable reduction in the proportion of indigenous cover on	Policy B7.2.2 [RPS] … (5) Avoid adverse effects on areas listed in the Schedule 3 of Significant Ecological Areas – Terrestrial Schedule and Schedule 4 Significant Ecological Areas – Marine Schedule E15.3. Policies [rcp/rp/dp] … (2) Manage the effects of activities to avoid significant adverse effects on biodiversity values as far as practicable, minimise significant adverse effects where avoidance is not practicable, and avoid, remedy or mitigate any other adverse effects on indigenous biological diversity and ecosystem services, including soil conservation, water quality and quantity management, and the mitigation of natural hazards. (3) Encourage the offsetting of any significant residual adverse effects on indigenous vegetation and biodiversity values that cannot be avoided, remedied or mitigated, through protection, restoration and enhancement measures, having regard to Policy E15.3(4) below and	ECO-P3 – Protecting significant natural areas and taoka Except as provided for by ECO–P4 and ECO–P5, protect significant natural areas and indigenous species and ecosystems that are taoka by: (1) avoiding adverse effects that result in: (a) any reduction of the area or values (even if those values are not themselves significant) identified under ECO–P2(1), or (b) any loss of Kāi Tahu values, and (2) after (1), applying the biodiversity effects management hierarchy in ECO–P6, and (3) prior to significant natural areas and indigenous species and ecosystems that are taoka being identified in accordance with ECO–P2, adopt a precautionary approach towards activities in accordance with IM–P15. ECO-P4 – Provision for New Activities Maintain Otago's indigenous biodiversity by following the sequential steps in the effects management hierarchy set out in

	those land environments in category one or two of the Threatened Environment Classification at the Ecological District Level; or d) A reasonably measurable reduction in the local population of threatened taxa in the Department of Conservation Threat Classification Categories 1 – nationally critical, 2 – nationally endangered, and 3a – nationally vulnerable . 3. Provided that Policy 2 is met, when managing the adverse effects of activities on indigenous biological diversity within SNAs: a) Adverse effects shall be avoided where possible; and b) Adverse effects that cannot be avoided shall be remedied where possible; and c) Adverse effects that cannot be remedied shall be mitigated. d) In relation to adverse effects that cannot be avoided, remedied or mitigated, biodiversity offsetting in accordance with Policy 4 is considered; and e) If biodiversity offsetting in accordance with Policy 4 is not achievable for any indigenous biological diversity attribute on which there are residual adverse effects, biodiversity compensation in	Appendix 8 Biodiversity offsetting. (4) Protect, restore, and enhance biodiversity when undertaking new use and development through any of the following: (a) using transferable rural site subdivision to protect areas that meet one or more of the factors referred to in B7.2.2(1) and in Schedule 3 Significant Ecological Areas - Terrestrial Schedule or shown on the Kawau Island Rural Subdivision SEA Control. (b) requiring legal protection, ecological restoration and active management techniques in areas set aside for the purposes of mitigating or offsetting adverse effects on indigenous biodiversity; or (c) linking biodiversity outcomes to other aspects of the development such as the provision of infrastructure and open space.	ECO–P6 when making decisions on plans, applications for resource consent or notices of requirement for the following activities in significant natural areas, or where they may adversely affect indigenous species and ecosystems that are taoka: (1) the development or upgrade of nationally and regionally significant infrastructure that has a functional or operational need to locate within the relevant significant natural area(s) or where they may adversely affect indigenous species or ecosystems that are taoka, (2) the development of papakāika, marae and ancillary facilities associated with customary activities on Māori land, (3) the use of Māori land in a way that will make a significant contribution to enhancing the social, cultural or economic well-being of takata whenua, (4) activities that are for the purpose of protecting, restoring or enhancing a significant natural area or indigenous species or ecosystems that are taoka, or (5) activities that are for the purpose of addressing a severe and immediate risk to public health or safety.

	accordance with Policy 5 is considered.		ECO-P6 – Maintaining Indigenous Biodiversity Maintain Otago's indigenous biodiversity (excluding the coastal environment and areas managed under ECO–P3) by applying the following biodiversity effects management hierarchy in decision-making on applications for resource consent and notices of requirement: 1. avoid adverse effects as the first priority, 2. where adverse effects demonstrably cannot be completely avoided, they are remedied, 3. where adverse effects demonstrably cannot be completely avoided or remedied, they are mitigated, 4. where there are residual adverse effects after avoidance, remediation, and mitigation, then the residual adverse effects are offset in accordance with APP3, and 5. if biodiversity offsetting of residual adverse effects is not possible, then: (a) the residual adverse effects are compensated for in accordance with APP4, and (b) if the residual adverse effects cannot be compensated for in

			accordance with APP4, the activity is avoided. ….
Framework/criteria for considering biodiversity offsetting	4. Provided that Policy 2 is met, and the adverse effects on a SNA cannot be avoided, remedied or mitigated, in accordance with Policy 3, then consider biodiversity offsetting if the following criteria are met: a) Irreplaceable or significant indigenous biological diversity is maintained; and b) There must be a high degree of certainty that the offset can be successfully delivered; and c) The offset must be shown to be in accordance with the six key principles of: i. Additionality: the offset will achieve indigenous biological diversity outcomes beyond results that would have occurred if the offset was not proposed;	Appendix 8 Biodiversity offsetting [rcp/rp/dp] Biodiversity Offsetting The following sets out a framework for the use of biodiversity offsets. It should be read in conjunction with the New Zealand government Guidance on Good Practice Biodiversity Offsetting in New Zealand, New Zealand Government et al, August 2014 (or any successor document): (1) Restoration, enhancement and protection actions will only be considered a biodiversity offset where it is used to offset the significant residual effects of activities after the adverse effects have been avoided, remedied or mitigated. (2) Restoration, enhancement and protection actions undertaken as a biodiversity offset are demonstrably additional to what otherwise would occur, including that they are additional to any avoidance, remediation or mitigation undertaken in	APP3 – Criteria for Biodiversity Offsetting (1) Biodiversity offsetting is **not available** if the activity will result in: (a) the loss of any individuals of Threatened taxa, other than kānuka (Kunzea robusta and Kunzea serotina), under the New Zealand Threat Classification System (Townsend et al, 2008), or (b) reasonably measurable loss within the ecological district to an At Risk-Declining taxon, other than manuka (Leptospermum scoparium), under the New Zealand Threat Classification System (Townsend et al, 2008).

	ii. Permanence: the positive ecological outcomes of the offset last at least as long as the impact of the activity, preferably in perpetuity; iii. No-net-loss: the offset achieves no net loss and preferably a net gain in indigenous biological diversity; iv. Equivalence: the offset is applied so that the ecological values being achieved are the same or similar to those being lost; v. Landscape context: the offset is close to the location of the development; and vi. The delay between the loss of indigenous biological diversity through the proposal and the gain or maturation of the offset's indigenous biological diversity outcomes is minimised. d) The offset maintains the values of the SNA.	relation to the adverse effects of the activity. (3) Offset actions should be undertaken close to the location of development, where this will result in the best ecological outcome. (4) The values to be lost through the activity to which the offset applies are counterbalanced by the proposed offsetting activity, which is at least commensurate with the adverse effects on indigenous biodiversity. Where possible the overall result should be no net loss, and preferably a net gain in ecological values. (5) The offset is applied so that the ecological values being achieved through the offset are the same or similar to those being lost.	(2) Biodiversity offsetting is available if the following criteria are met: (a) the offset addresses residual adverse effects that remain after implementing the sequential steps required by ECO–P6(1) to (3), (b) the offset achieves no net loss and preferably a net gain in indigenous biodiversity, as measured by type, amount and condition at both the impact and offset sites using an explicit loss and gain calculation, (c) the offset is undertaken where it will result in the best ecological outcome, and as the first priority be: (i) close to the location of the activity, and (ii) within the same ecological district or coastal marine biogeographic region, (d) the offset is applied so that the ecological values being achieved are the same or similar to those being lost, (e) the positive ecological outcomes of the offset endure at least as long as the impact of the activity and preferably in perpetuity, (f) the offset achieves biodiversity outcomes beyond results that would have occurred if the offset was not proposed, (g) the time delay between the loss of biodiversity and the realisation of the offset is the least necessary to

			achieve the best possible outcome, (h) the outcome of the offset is achieved within the duration of the resource consent, and (i) any offset developed in advance of an application for resource consent must be shown to have been created or commenced in anticipation of the specific effect of the proposed activity and would not have occurred if that effect was not anticipated.
Framework/criteria for use of biodiversity compensation	5. Provided that Policy 2 is met, in the absence of being able to satisfy Policies 3 and 4, consider the use of biodiversity compensation provided that it meets the following: a) Irreplaceable or significant indigenous biological diversity is maintained; and b) The compensation is at least proportionate to the adverse effect; and c) The compensation is undertaken where it will result in the best practicable ecological outcome, and is preferably: i. Close to the location of development; or ii. Within the same Ecological District; and d) The compensation will achieve positive indigenous biological diversity outcomes that would not have occurred without that compensation; and		APP4 – Criteria for Biodiversity Compensation (1) Biodiversity compensation **is not available** if the activity will result in: (a) the loss of an indigenous taxon (excluding freshwater fauna and flora) or of any ecosystem type from an ecological district or coastal marine biogeographic region, (b) removal or loss of viability of habitat of a Threatened or At Risk indigenous species of fauna or flora under the New Zealand Threat Classification System (Townsend et al, 2008), (c) removal or loss of viability of a naturally rare or uncommon ecosystem type that is associated with indigenous vegetation or habitat of indigenous fauna, or (d) worsening of the New Zealand Threat Classification System (Townsend et al, 2008) conservation

	e) The positive ecological outcomes of the compensation last for at least as long as the adverse effects of the activity; and f) The delay between the loss of indigenous biological diversity through the proposal and the gain or maturation of the compensation's indigenous biological diversity outcomes is minimised.		status of any Threatened or At Risk indigenous fauna.

Appendix 4 - letter from MfE and excerpt from draft NPSIB

25th May 2021

Alison Paul
OceanaGold
alison.paul@oceanagold.com

Dear Alison

Providing a consent pathway for certain sectors under the wetland regulations

The Minister for the Environment, Hon David Parker, has heard concerns raised by the quarry, waste management, and mining sectors regarding the impact that aspects of the wetland regulations are having on their planning and operations. Concerns have also been raised by councils and infrastructure groups in relation to existing plans for housing development. The wetland regulations are part of the Resource Management (National Environmental Standards for Freshwater) Regulations 2020 (NES-F).

The Minister has asked the Ministry for the Environment (the Ministry) to provide you with an update on addressing these concerns.

Cabinet has considered the concerns and noted that there is a clear case for providing a consenting pathway for the affected sectors and projects described above. The Government accepts that there are constraints on where these activities/operations can be located, and that they provide necessary materials or services.

The RMA imposes complex process obligations on the making and amendment of NES regulations. Sometimes these processes are disproportionate, which is systemic of wider processes under the Resource Management Act 1991 (RMA). Enabling more proportionate processes is an aim of the wider RMA reforms that are underway. In the meantime, in finding a remedy to the issues raised above, we are bound by existing RMA processes.

The next step is to provide Cabinet with a detailed proposal (by mid-year), on which public consultation would then occur over a six to eight week period. An exposure draft of amended regulations, based on consultation feedback, would be circulated prior to final Cabinet decisions. Gazettal of amended regulations would be expected by the end of 2021.

It is intended that the detailed proposal directly acknowledge sectors in the National Policy Statement for Freshwater Management 2020, in the same or similar way as ‘specified infrastructure’. An associated consent pathway would be set out in the NES-F.

The proposal would apply the ‘effects management hierarchy’; and, in particular, the offset requirement that currently applies to consenting for specified infrastructure. This provides for no net loss of wetland extent as a result of providing a consenting pathway.

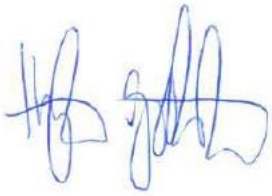
Ministry for the Environment
Manatū Mō Te Taiao

PO Box 10362, Wellington 6143
Website: www.mfe.govt.nz
Freephone: 0800 499 700

We are separately aware that the definition of what constitutes a wetland is being applied broadly by regional councils, and that this is impacting on a range of sectors. Draft guidance on this is being consulted on, and should be finalised next month. We anticipate this will reduce uncertainty by providing clearer direction of what constitutes a wetland, and therefore when a wetland should not be captured by the wetland regulations.

Please note that that this letter will be made available to other parties with an interest in the wetland regulations.

Yours sincerely



Hayden Johnston
Director – Water and Land Use Policy

New Zealand Government

Draft National Policy Statement for Indigenous Biodiversity

NOVEMBER 2019

This draft supports consultation on *He Kura Koiora i hokia: A discussion document on a proposed National Policy Statement for Indigenous Biodiversity*.

More information is available on the Ministry for the Environment website: www.mfe.govt.nz.

assessment undertaken as part of a resource consent application, notice of requirement for designation or any other means, so that the plan –

a) maps the area; and

b) sets out its attributes; and

c) records whether it is classified as High or Medium.

[Placeholder: see discussion document *He Kura Koiora i hokia* page 81 for options being considered for how this policy should apply to Crown Land and public conservation land.]

3.9 Managing adverse effects on SNAs

(1) Except as provided in subclauses (2), (3) and (4), local authorities must ensure that, in relation to any new subdivision, use or development that takes place in or affects, an SNA –

a) the following adverse effects on the SNA are avoided:

i. loss of ecosystem representation and extent:

ii. disruption to sequences, mosaics or ecosystem function:

iii. fragmentation or loss of buffering or connectivity within the SNA and between other indigenous habitats and ecosystems:

iv. a reduction in population size or occupancy of threatened species using the SNA for any part of their life cycle; and

b) the effects management hierarchy is applied to all other adverse effects.

(2) All adverse effects of a new subdivision, use or development must be managed using the effects management hierarchy if –

a) the subdivision, use or development is to take place in, or affects, an SNA classified as Medium; and

b) there is a functional or operational need for the subdivision, use or development to be in that particular location; and

c) there are no practicable alternative locations for the subdivision, use or development; and

d) the subdivision, use or development is associated with:

i. nationally significant infrastructure:

ii. mineral and aggregate extraction:

iii. the provision of papakainga, marae and ancillary community facilities associated with customary activities on Māori land:

iv. the use of Māori land in a way that will make a significant contribution to enhancing the social, cultural or economic wellbeing of tangata whenua.

(3) All adverse effects of a new use or development associated with a single dwelling on an allotment created before the commencement date must be managed using the effects management hierarchy if –

a) the use or development is to take place in, or affects, an SNA classified as Medium; and

b) there is no location within the existing allotment where a single, residential dwelling and essential associated on-site infrastructure can be constructed in a manner that avoids the adverse effects specified in subclause (1)(a).

(4) Subclause (1) does not apply to managing adverse effects in the following circumstances:

a) the adverse effects arising from a use or development that is for the purpose of protecting, restoring or enhancing an SNA:

b) the adverse effects arising from a use or development that addresses a severe and immediate risk to public health or safety:

c) an area comprising kānuka or mānuka and that is identified as an SNA solely because it is at risk from myrtle rust:

d) indigenous vegetation or habitat of indigenous fauna established and managed for a purpose other than the maintenance, restoration or enhancement of indigenous biodiversity, and the use or development is necessary to meet that purpose.

(5) In subclause (2)(b) –

functional need means the need for a proposed activity to traverse, locate or operate in a particular environment because the activity can only occur in that environment

operational need means the need for a proposal or activity to traverse, locate or operate in a particular environment because of technical, logistical or operational characteristics or constraints.

3.10 Managing adverse effects in plantation forests

(1) Clause 3.9 does not apply to managing "plantation forest biodiversity areas".

(2) Within a plantation forest biodiversity area that is a significant habitat for threatened or at-risk indigenous fauna, plantation forestry activities must be managed over the course of consecutive rotations to maintain long-term populations of indigenous fauna species present.

(3) Within a plantation forest biodiversity area that contains threatened or at-risk flora, the adverse effects to these flora from plantation forestry activities must be managed.

APPENDIX 5

ACCOMPANYING SUBMISSION POINTS BY OCEANAGOLD (NEW ZEALAND) LIMITED ON SPECIFIC PROVISIONS IN THE PROPOSED OTAGO REGIONAL POLICY STATEMENT

PROVISION	POSITION	REASONS	RELIEF SOUGHT (or other such similar outcome that has the same effect as the relief sought)
DEFINITIONS			
Primary Production	Support in part	OceanaGold notes that the definition of primary production specifically includes "mining" activities. This is appropriate and consistent with the National Planning Standards. OceanaGold is concerned however that the PORPS as a whole lacks appropriate regard to the benefits of mining activities. In a number of places the PORPS makes a brief mention of the significance of the mining industry in Otago (e.g. on Page 6 where it states that Otago's economy centres around agriculture, tourism, mining and education and again on Page 83 where it recognises that mining provides the region with 4.5% of its GDP), however there is no specificity within the corresponding objectives and policies and instead it appears to have been broadly captured in reference to provisions which relate to "primary production". Such provisions also appear to be skewed toward the agricultural and horticultural aspects of primary production, rather than mining or quarrying activities for example.	Retain the definition but also make changes to objectives and policies (LS- LF Land and Soil Chapter) to better recognise that mining is a valuable form of primary production that needs access to the key land that hosts valuable minerals.

Rural area *Means any area of land that is not an urban area.*	Oppose	OceanaGold is unsure as to the purpose of this or what is meant by this definition and how this would work in practice with regard to special purpose zones such as the Macraes Mineral Zone in the Waitaki District Plan. Land that has been designated for mining is not strictly urban nor is it arguably rural land. All land which is not defined as "urban" is therefore not necessarily rural and it is too simplistic to assume this. This definition is likely to lead to implementation difficulties as it is too simplistic in its approach.	Delete this definition as it is not necessary, or in the alternative amend to exclude areas which are subject to a special purpose zone.
Urban area *Means any area of land (regardless of size, and irrespective of local authority or statistical boundaries) that is, or is intended to be, predominately urban in character. This includes but is not limited to any land identified in District Plans as being within any urban growth boundary or equivalent however described, any residential zone, commercial and mixed use zone, industrial zone, and future urban zone as listed in the National Planning Standards or its present District Plan zone equivalent. Urban environments are a subset of urban areas.*	Oppose in part	Similar to the above, OceanaGold is concerned that the urban and rural definitions that have been included in the PORPS potentially confuse and/or limit other zones, particularly special purpose zones such as the Macraes Mineral Zone which does not neatly fit within either.	Delete this definition as it is not necessary, or in the alternative amend to exclude areas which are subject to a special purpose zone.
ISSUES			
Part 2 – SRMR Significant Resource Management Issues for the Region **Overview/introduction**	Oppose in part	OceanaGold notes that the figure on page 64 shows mineral extraction on the "Users side", but it should also be recognised that minerals are an important natural resource within the region and therefore represented on the right hand side of this figure as well.	Include "minerals" as a natural resource on Figure 2.

			This chapter of the PORPS also needs to better recognise and provide for mining which is a significant issue for the region because of the economic benefits it bring.
SRMR-I10 – Economic and domestic activities in Otago use natural resources but do not always properly account for the environmental stresses or the future impacts they cause.	Oppose in part	OceanaGold submits that the PORPS overall does not adequately recognise and provide for existing physical resources such as the Macraes mining operation, which provides significant economic benefit to the region. While OceanaGold agrees that it is important to balance these activities with effects on natural resources, the PORPS as a regionally strategic document also needs to recognise and provide for the benefits of such industry in the region and ensure that it can be continued within appropriate environmental parameters. While the context section of this issue statement refers to the region's important economic activities (including mining contributing 4.5% of the regional GDP), the issue focuses on the adverse effects that can be associated with these activities. This needs to be better balanced with an issue also identifying that economic activities like mining are important to the region and these need to be similarly recognised and provided for in the PORPS so that the enabling purpose of the RMA is also achieved. The Macraes mining operation is also a significant activity within the Waitaki District and wider Otago region. It is of such significance that the Waitaki District Plan currently includes a designated zone for mining,	Include greater recognition and support of the mining industry in Otago throughout the PORPS. Include provisions recognise that the need to provide for future mining in Otago and at Macraes in particular is a significant resource management issue for the region and which: - Recognise the significant economic and social benefits from mineral extraction. - Protect an ability to access these significant natural resources. - Recognise the finite nature of minerals. - Protect existing mineral assets from reverse sensitivity activities. - Enable a regime whereby further development of the region's minerals can occur while the effects on the natural environment are appropriately managed.

		referred to as the "Macraes Mining Zone". On the basis that the Waitaki District Plan is required to give effect to the PORPS, without any recognition of the importance of the mining industry, and/or its unique local and functional constraints and requirements, OceanaGold is concerned that this draws into question the ongoing existence and future of the Macraes Mining Zone in the District Plan in accordance with section 32 of the RMA. This is not appropriate and is of concern particularly as national direction with regard to the National Planning Standards specifically refers to the Macraes Mining Zone as being a clear example of when a special purpose zone is a good fit[1].	
RMIA-WAI-l1 – Land use activities have resulted in disturbance and degradation of wāhi tapu and wāhi taoka sites and the cultural and spiritual values associated with these areas.	Oppose in part	Mining activity has been identified under this issue statement as being "culturally inappropriate". OceanaGold does not believe that it operates its Macraes mine in a way which is "culturally inappropriate", this is evidenced via the relationship OceanaGold has with the mana whenua of the area and the approach that it adopts to managing its activities on the physical and cultural environment within which it exists.	Delete the generalised statement to mining activities being 'culturally inappropriate'.
RMIA-WAI-I5 – Poor integration of water management, across agencies and across a catchment, hinders effective and holistic freshwater management	Oppose in part	The water quality impacts of discharges from mining activities have been identified as being of particular concern under this issue. There appears to be no clear evidential basis for this, particularly with regard to the Macraes operations. With regard to the Deepdell North Stage III hearing, water quality experts including those for the Otago Regional	Delete reference to water quality being adversely impacted by mining activities. Where poor land management practices associated with mining (as with all other land uses) causes a deterioration in water quality this is already addressed in the first bullet point under this heading

[1] Ministry for the Environment – Step by Step Guide to 'rehousing' a policy statement and/or plan under the National Planning Standards, page 7

		Council, agreed that with appropriate management the impacts of the discharges on both an individual project and wider cumulative basis from the mining operation would be no more than minor.	
IM INTEGRATED MANAGEMENT			
IM-P2- Decision Priorities *Unless expressly stated otherwise, all decision making under this RPS shall:* *1. Firstly, secure the long term life support capacity and mauri of the natural environment,* *2. Secondly, promote the health and safety needs of people, and* *3. Thirdly, safeguard the ability of people and communities to provide for their social, economic and cultural well being now and in the future.*	Oppose	This direction is derived from the National Policy Statement for Freshwater Management 2020. Applying this hierarchy as mandatory to all decision making within Otago effectively usurps the requirement to promote sustainable management (or inappropriately implies that promoting sustainable management and following this hierarchy are the same thing) and is likely to cause implementation difficulties as in certain circumstances there will need to be a more nuanced approached taken to resource management within Otago.	Delete. In the alternative if this default hierarchy is retained extensive changes elsewhere in the RPS would need to be made to recognise that promoting sustainable management will often require a more nuanced approach
IM- P10 – Climate Change Adaptation and Mitigation *Identify and implement climate change adaptation and mitigation methods for Otago that:* *(1) Minimise the effects of climate change processes or risks to existing activities;* *(2) Prioritise avoiding the establishment of new activities in areas subject to risk from the effects of climate change, unless*	Support in part	OceanaGold submits that it is appropriate for the PORPS to address climate change risks, adaptation and mitigation. In doing so however OceanaGold also seeks to ensure that there is suitably policy to support initiatives that land owners may wish to pursue to assist in mitigating or offsetting carbon emissions. For example, carbon forestry initiatives on private land.	Insert new provisions or policy which support and encourage landowners / individuals climate change mitigation / decarbonisation initiatives.

those activities reduce, or are resilient to , those risks, and *(3) Provide Otago's communities, including Kai Tahu, with the best change to thrive, even under the most extreme climate change scenarios.*			
IM-P14- Human Impact *Preserve opportunities for future generations by:* *1. Identifying limits to both growth and adverse effects of human activities beyond which the environment will be degraded,* *2. requiring that activities are established in places, and carried out in ways, that are within those limits and are compatible with the natural capabilities and capacities of the resources they rely on, and* *3. regularly assessing and adjusting limits and thresholds for activities over time in light of the actual and potential environmental impacts.*	Oppose	OceanaGold opposes the uncertainty that is inherent within the drafting of this policy. There is no certainty provided within the RPS as to what is meant by the term "limits" and how these are intended to be developed or operate. For example are these "limits" intended to be used as consenting triggers, or are they intended to act as "environmental limits" or bottom lines. OceanaGold is also concerned that this provision is inconsistent with the section 5 of the RMA. Section 5(2)(a) explicitly recognises that mineral extraction consumptively uses natural resources and by their very nature these cannot be preserved for future generations.	Delete.
AIR			
AIR-P4- Avoiding Certain Discharges *Avoid discharges to air that cause offensive, objectionable, noxious or dangerous effects.*	Oppose in part	OceanaGold submits that this policy is too uncertain. Because there will be varying degrees of tolerance, it is very likely that there will be a certain degree of subjectivity in assessing whether a discharge to air, for example, may be objectionable or offensive. OceanaGold is further concerned that this policy is too onerous in that it requires all such discharges to be	Delete or amend as follows: *~~Avoid~~ Manage discharges to air so that they do not cause offensive, objectionable, noxious or dangerous effects.*

		avoided, and does not allow for the effects of such discharges to be otherwise addressed or managed such as via remediation, mitigation or offsetting / compensatory means.	
LAND AND FRESHWATER			
LF – FW- P13 Preserving Natural Character Preserve natural character of lakes and rivers and their beds and margins by: 1. Avoiding the loss of values or extent of a river, unless: (a) There is functional need for the activity in that location, and (b) The effects of the activity are managed by applying: i. For effects on indigenous biodiversity, either ECO-P3 or ECO-P6 (whichever is applicable), and ii. For other effects, the effects management hierarchy … …	Oppose in part	OceanaGold is concerned with the references to ECO-P3 and ECO-P6 within this policy. As outlined in submissions below, OceanaGold is concerned that the limits as to how and when biodiversity offsetting and compensation can be applied under ECO-P3, ECO-P6 and consequently APP 3 and APP4 are likely to be quite broad reaching and as a result mean that a number of development proposals are not able to work through the effects management hierarchy and avoidance of effects will be the only option available. OceanaGold submits that it would be more appropriate for the policy to only reference the effects management hierarchy as it is set out in the NPSFM with regard to freshwater resources and their management in the region. OceanaGold is also concerned that this policy seeks to sustain (or restore) the form and function of a water body that reflects its natural behaviours. Clause (4) seeks for this to occur "wherever possible". It is always "possible" to achieve this by not allowing the activity as the preferred option.	Amend this policy as follows: *Preserve the natural character of lakes and rivers and their beds and margins by:* *(1) avoiding the loss of values or extent of a river, unless:* *(a) there is a functional need for the activity in that location, and* *(b) the effects of the activity are managed by applying:* *~~(i) for effects on indigenous biodiversity, either ECO-P3 or ECO-P6 (whichever is applicable), and~~* *~~(ii) for other effects,~~ the effects management hierarchy,* *(2) not granting resource consent for activities in (1) unless Otago Regional Council is satisfied that:* *(a) the application demonstrates how each step of the effects management hierarchies in (1)(b) will be applied to the loss of values or extent of the river, and* *(b) any consent is granted subject to conditions that apply the effects management hierarchies in (1)(b),* *(3) establishing environmental flow and level regimes and water quality standards*

			that support the health and well-being of the water body, *~~(4) wherever possible, sustaining the form and function of a water body that reflects its natural behaviours,~~* *(5) recognising and implementing the restrictions in Water Conservation Orders,* *(6) preventing the impounding or control of the level of Lake Wanaka,* *(7) preventing modification that would reduce the braided character of a river, and* *(8) controlling the use of water and land that would adversely affect the natural character of the water body.*
LF-FW-P9 – Protecting Natural Wetlands *Protect natural wetlands by:* *1. avoiding a reduction in their values or extent unless:* *(a) the loss of values or extent arises from:* *i. the customary harvest of food or resources undertaken in accordance with tikata Maori,* *ii. restoration activities,* *iii. scientific research,* *iv. the sustainable harvest of sphagnum moss,*	Oppose	OceanaGold understands that this policy is to give effect to the National Policy Statement for Freshwater Management 2020 and the Regulations relating to Freshwater Management (NESFW). However, OceanaGold is concerned that this policy does not provide a consenting pathway for other activities which are also locationally or functionally constrained such as mining activities. This matter has been raised with regard to these higher order national documents and OceanaGold has written confirmation on behalf of the Minister for the Environment (a copy of which has been provided to the ORC), that industries such as quarries, waste management and mining have a clear case for providing a consenting pathway for these sectors through the national freshwater regulations relating to wetlands. This correspondence further	Amend the policy to recognise that changes to the NESFW are imminent and provide a broader scope of opportunity for activities such as mining to access the effects management hierarchy.

v. the construction or maintenance of wetland utility structures, *vi. the maintenance of operation of specific infrastructure, or other infrastructure,* *vii. natural hazards works, or* *(b) the Regional Council is satisfied that:* *i. the activity is necessary for the construction or upgrade of specified infrastructure,* *ii. the specified infrastructure will provide significant natural or regional benefits,* *iii. there is a functional need for the specified infrastructure in that location,* *iv. the effects of the activity on indigenous biodiversity are managed by applying either ECO-P3 or ECO-P6 (whichever is applicable), and* *v. the other effects of the activity (excluding those managed under (1)(b)(iv)) are managed by applying the effects management hierarchy, and* *2. not granting resource consents for activities under (1)(b) unless the Regional Council is satisfied that:* *(a) the application demonstrates how each step of the effects management hierarchies in (1)(b)(iv) and (1)(b)(v) will be applied to the loss of values or extent of the natural wetland, and*		advised that the Government accepts that there are constraints on where these activities/operations can be located, and that they provide necessary materials or services. OceanaGold understands that the Government will initiate amendments to the regulations by December 2021 to provide a consenting pathway for mining activities as a result of this. It is likely that mining activities would be treated in the same or similar way as 'specified infrastructure'. This would mean that mining activities would be able to apply the effects management hierarchy. This is considered to be appropriate and has been shown to be successful in the recently consented Deepdell North Stage III project where the management hierarchy was adopted and positive environmental outcomes will arise as a result. As outlined in submissions below, OceanaGold is also concerned that even if the effects management hierarchy was available to mining activities, the limits as to how and when this can be applied under ECO-P3, ECO-P6 and APP 3 and APP4 are unlikely to result in positive environmental and economic outcomes. This is discussed further with respect to these matters specifically.	

(b) any consent is granted subject to conditions that apply for the effects management hierarchies in (1)(b)(iv) and (1)(b)(v).			
LF-LS-O11 – Land and Soil *The life supporting capacity of Otago's soil resources is safeguarded and the availability and productive capacity of highly productive land for primary production is maintained now and for future generations.*	Oppose	OceanaGold notes that the definition of "primary production" includes mining activities. Whilst OceanaGold is supportive of safeguarding land for mining, this objective does not suitably recognise nor enable mining in any way. Mineral extraction is by its very nature exhaustive of the minerals recovered and while highly productive, the mineral resource being recovered will not be able to be preserved for future generations. This is recognised in section 5 of the RMA, which specifically excludes minerals from the purpose of sustainable management.	Amend this objective and/or introduce new objectives and policies to specifically recognise the significance of mining in the Otago region and specifically the Macraes operation. Ensure the provisions suitably recognise the finite nature of this resource.
LF-LS-P19 – Highly productive land *Maintain the availability and productive capacity of highly productive land by:* *(1) Identifying highly productive land based on the following criteria:* *(a) the capability and versatility of the land to support primary production based on the Land Use Capability classification system,* *(b) the suitability of the climate for primary production, particularly crop production, and* *(c) the size and cohesiveness of the area of land for use of primary production, and*	Support in part	OceanaGold supports this policy insofar as it seeks to prioritise the use of high productive land for primary production (which includes mining activities) ahead of other land uses. OceanaGold submits that it is necessary to recognise the significant economic benefits that are derived from the use of land for mining purposes. As set out in the covering submission the economic activity that is enabled from the Macraes operation is significant within the Otago region (4.5% of the GDP) and it is necessary to recognise this suitably in the RPS as a significant resource management issue for the region. OceanaGold is however concerned that this policy is directed only at maintaining land for a limited number	Amend this policy and/or insert new objectives and policies (preferable option) to specifically recognise the significance of mining in the Otago region and specifically the Macraes operation. These provisions are necessary to achieve LF-LS-O11 and to support the current zoning provisions in the Waitaki District Plan and likely future plans which will continue to recognise the Macraes operation as a special purpose land use zone which suitably recognises, provides for and enables mining activities within acceptable environmental parameters.

(2) prioritising the use of highly productive land for primary production ahead of other land uses, and *(3) managing urban development in rural areas, including rural lifestyle and rural residential areas, in accordance with UFD-P4, UFD-P7 and UFD-P8.*		of "primary production" activities such as agricultural and/or horticultural activities and does therefore not adequately provide for other primary production activities such as mining or quarrying activities. OceanaGold notes that the Phase 3 (Reference Groups) summary report included as Appendix 4 to the section 32 report states in the draft policy direction on Energy, Infrastructure and Transport that "Mining provision will be broadened to apply to all extractive industries. It is likely that these provisions will be included in the Land and Freshwater chapter." (page 25). OceanaGold is concerned that this provision has not been made in the notified version of the PORPS, neither in the Land and Freshwater chapter nor anywhere else.	Proposed policy wording could be based on policy 5.3.4 from the partially operative Otago RPS which says "Recognise the functional needs of mineral exploration, extraction and processing activities to locate where the resource exists." Further, it needs to be recognised that 'highly productive land' means different things for different parts of the primary production sector. While the Land Use Classification system may be useful in identifying highly productive land for horticulture and agriculture, it is not a useful classification system for identifying highly productive land for mining. Similarly, climate suitability is not an important factor for mining. The policy therefore needs to recognise the land requirements for all primary production activities, not just a subset. For mining, highly productive land is that which holds the region's best economically recoverable mineral resources, such as that around the Hyde Macraes Shear Zone. For these areas the policy needs to provide that that priority above all other uses of land is given to mining.
ECO-P2- Identifying significant natural areas and taoka *Identify:*	Oppose in part	OceanaGold is concerned that this policy combined with the criteria in APP2 will result in a large portion of the Otago region, and in particular within the Macraes Ecological District, being identified as an SNA. This	Delete ECO-P2 or amend as follows: ~~*Identify:*~~

(1) the areas and values of significant natural areas in accordance with APP2, and *(2) indigenous species and ecosystems that are taoka in accordance with ECO-M3.*		policy does not require any areas to be clearly mapped or scheduled in any lower order plans, instead it requires SNA to be identified in accordance with the criteria set out in APP2. This approach lacks necessary precision. The criteria set out in APP2 also differs from the criteria that was recommended to the ORC by its consultants, Wildlands (refer Appendix 17 to the section 32 report). It appears that the Wildlands criteria was used for informing the section 32 analysis, however there is no clear understanding provided in the documentation as to why there has been a shift to what was subsequently notified. OceanaGold is therefore concerned that the criteria as set out in APP2 has not been tested and found to be suitably robust under section 32 of the RMA. OceanaGold is also concerned that the only significant mapping which was submitted as part of the supporting documentation relates to faunal SNA values. Mapping of flora SNAs has not yet been undertaken, and as noted OceanaGold is concerned that by applying the criteria in APP2 large areas of the region would trigger one or more of the criteria and become an SNA. The extent of SNAs in the region is therefore currently unknown. As evidenced in other regions such as Northland, approximately 42% of the Far North District contains SNAs. This is almost half of the land area within the district. Assigning half the land area to SNA within the Otago region (in conjunction with the associated ECO policies) is likely to result in	~~*(1) the areas and values of significant natural areas in accordance with APP2, and*~~ ~~*(2) indigenous species and ecosystems that are taoka in accordance with ECO-M3.*~~ *Significant natural areas will be identified by local authorities using the criteria in APP2 and these areas will be mapped at an appropriate scale in the relevant regional and district plans.* *Indigenous species and ecosystems that are taoka will be identified by local authorities in accordance with ECO-M3, and these areas will be mapped in the relevant regional and district plans.*

		significant developmental constraints. And as a corollary the costs of applying a policy suite that could effectively curtail significant development opportunities in such areas is therefore also unknown. These costs should have been properly accounted for in section 32 terms. As an example, seepage and ephemeral wetlands which are classified as being 'historically rare and nationally endangered ecosystem' were found within the Deepdell North Stage III project area. The mapping exercise that has been undertaken within the Macraes Ecological District has shown that there are at least 1,360 examples of such wetlands greater than 1 ha. There is an unknown number of similar features that are less than 1 ha area. There are also other known examples of this type of wetland throughout the Otago Region, reports of at least 3000. In comparison the recently consented Deepdell mining project affected only approximately 0.38ha of these wetland types, and provides an offset/enhancement area of over 5ha. Under this suite of provisions the loss of these habitats would have to be avoided, without any regard being able to be had to the significance of the physical effects on these habitats, the economic benefits of the proposal, or the overall biodiversity improvements that were being offered.	
ECO-P3- Protecting Significant Natural Areas and taoka *Except as provided for by ECO-P4 and ECO-P5, protect significant natural areas and*	Oppose	OceanaGold is concerned that Policy ECO-P3 effectively acts as a veto to an otherwise meritorious proposal. This policy requires all SNAs to be protected by avoiding adverse effects that result in <u>any reduction of the area or value</u> (even if those values are not in	Delete.

indigenous species and ecosystems that are taoka by: *(1) Avoiding adverse effects that result in:* *(a) any reduction of the area or values (even if those values are not themselves significant) identified under ECO-P2(1), or* *(b) any loss of Kai Tahu values, and* *(2) after (1), applying the biodiversity effects management hierarchy in ECO-P6, and* *(3) prior to significant natural areas and indigenous species and ecosystems that are taoka being identified in accordance with ECO-P2, adopt a precautionary approach towards activities in accordance with IM-P15.*		themselves significant). The way this policy is drafted if there is simply a physical reduction in the area of SNA (regardless of the significance of that reduction on that species, the surrounding area or the ecological district or wider region) there is no ability for remediation, mitigation, offsetting or compensation to be offered and considered as required under section 104(1)(ab) of the RMA. For this reason alone the policy is unlawful. This policy is therefore highly likely to constrain significant development within the Otago region. This blanket approach to avoiding activities and effects within all SNA (regardless of the significance of the area or the severity of effect) is unduly onerous. It does not enable circumstances where adverse effects on SNAs cannot be avoided however on a merits assessment may be acceptable having regard to methods of remediation, mitigation and/or offsetting or compensation. OceanaGold submits that the resulting costs of the effects of this policy on significant industry and other activities in Otago has not been properly accounted for and evaluated in terms of section 32 of the RMA. This policy is inconsistent with the sustainable management purpose in section 5, and by purporting to proscribe the use of offsets and compensation to achieve biodiversity gains fails to protect biodiversity that is otherwise in decline or under threat.	

ECO-P4 – Provision for new activities *Maintain Otago's indigenous biodiversity by following the sequential steps in the effect management hierarchy set out in ECO-P6 when making decisions on plans, applications for resource consents or notices of requirements for the following activities in significant natural areas, or where they may adversely affect indigenous species and ecosystems that are taoka:* *(1) The development or upgrade of nationally and regionally significant infrastructure that has a functional or operational need to locate within the relevant significant natural area(s) or where they may adversely affect indigenous species or ecosystems that are taoka.* *(2) the development of papakaika, marae and ancillary facilities associated with customary activities on Maori land,* *(3) the use of Maori land in a way that will make a significant contribution to enhancing the social, cultural or economic wellbeing of takata whenua,* *(4) activities that are for the purpose of protecting, restoring or enhancing a significant natural area or indigenous species or ecosystems that are taoka, or*	Oppose	OceanaGold is concerned that this policy will be inconsistent with national direction such as the Draft NPSIB. Policy 3.9(2) of the Draft NPSIB recognises the need to retain a 'consenting pathway' for mineral extraction and provides these activities an ability to access the effects management hierarchy, where such proposals will affect medium SNAs. It is not clear why the PORPS has retained a consenting pathway for other activities recognised in the Draft NPSIB (e.g. nationally and regionally significant infrastructure, development of papakaika, and use of Maori land), but it has removed any reference to mineral extraction and mining activities which are similarly (if not more) constrained locationally and functionally. Whilst OceanaGold acknowledges that the NPSIB is not yet operative, the supporting section 32 documentation refers to adopting the Draft NPSIB approach in various circumstances throughout the PORPS, however there is no explanation provided as to why its approach to mining has not been followed. OceanaGold submits that the PORPS is flawed in this regard. The approach that has been adopted in ECO-P4 therefore fails to recognise the locationally constrained nature of mining, a regionally important activity which cannot be re−directed to other areas. Minerals are only located in certain areas and in some instances (in our experience quite often) mineral resources may be co−located with areas of indigenous biodiversity classified as SNAs under this RPS. The PORPS needs to recognise in these instances there is a need to strike a balance and that avoidance of activities which may	Delete this policy or amend as follows: *Maintain Otago's indigenous biodiversity by following the sequential steps in the effect management hierarchy set out in ECO-P6 when making decisions on plans, applications for resource consents or notices of requirements for the following activities in significant natural areas, or where they may adversely affect indigenous species and ecosystems that are taoka:* *(1) The development or upgrade of nationally and regionally significant infrastructure that has a functional or operational need to locate within the relevant significant natural area(s) or where they may adversely affect indigenous species or ecosystems that are taoka,* *(1)(a) <u>The construction, operation, maintenance and rehabilitation of any mineral and aggregate extraction activity,</u>* *(2) the development of papakaika, marae and ancillary facilities associated with customary activities on Maori land,* *(3) the use of Maori land in a way that will make a significant contribution to enhancing the social, cultural or economic wellbeing of takata whenua,*

(5) activities that are for the purpose of addressing a severe and immediate risk to public health and safety.		have adverse effects on SNAs, may not always be the optimal solution and may not always lead to the protection of significant biodiversity or the maintenance of indigenous biodiversity generally. Measures to manage these effects such as remediation, mitigation, offsetting and/or compensation, can lead to positive net outcomes for biodiversity while also enabling important economic and social outcomes. Without the ability to access the full effects management hierarchy it is very likely that these developments cannot proceed. With regard to the Macraes operation, the result will be early closure of the mine, loss of hundreds of jobs, loss of local and regional economic contributions, loss of economic benefit of investment in biodiversity. The counter-factual is that these areas will be either unused or used for low value farming, and biodiversity values will continue to decline. There will be no incentive or upside for private landowners or developers to protect or enhance areas of biodiversity. Applying a broad-brush avoidance policy is therefore likely to result in a lose – lose situation for both economic development and biodiversity in the Otago region. In the context of the Deepdell North Stage III project which was recently consented by OceanaGold, the consent authorities (including ORC) determined through their decision makers that by enabling	*(4) activities that are for the purpose of protecting, restoring or enhancing a significant natural area or indigenous species or ecosystems that are taoka, or* *(5) activities that are for the purpose of addressing a severe and immediate risk to public health and safety.*

		OceanaGold to develop a strategy using a combination of the effects management hierarchy, there would overall be biodiversity gains as a result of the project. This outcome was supported by the ecological evidence.	
ECO-P5 – Existing Activities in Significant Natural Areas *Except as provided for by ECO-P4, provide for existing activities within significant natural areas and that may adversely affect indigenous species and ecosystems that are taoka, if:* *(1) the continuation of an existing activity will not lead to the loss (including through cumulative loss) of extent of degradation of the ecological integrity of any significant natural area or indigenous species or ecosystems that are taoka, and* *(2) the adverse effects of an existing activity are no greater in character, spatial extent, intensity, or scale than they were before this RPS became operative.*	Oppose in part	OceanaGold submits that the intention of this policy is not clear. Existing activities are not defined in the PORPS and there is uncertainty as to whether "existing activities" would refer to those that have section 10 and section 20 rights under the RMA, or for example with regard to the Macraes mining operation whether it would apply to areas zoned for that purpose. There is no certainty as to whether this policy would only relate to general ongoing continuation of a legally authorised activity or whether it would be applicable to the development of new activities (e.g. a new mine) in an appropriately zoned area.	Delete or amend this policy so that it provides more certainty that all activities (new and existing) could be able to be developed within an appropriately zoned area.
ECO-P6 – Maintaining indigenous biodiversity *Maintain Otago's indigenous biodiversity (excluding the coastal environment and areas managed under ECO-P3) by applying the following biodiversity effects management hierarchy in decision making*	Oppose in part	OceanaGold supports the ability to utilise the effects management hierarchy as outlined in Policy ECO-P6. This is considered to be consistent with section 17 and section 104(1)(ab) of the RMA. OceanaGold is concerned however that the effects management hierarchy is not available to mineral extraction and mining activities where significant biodiversity is unavoidably impacted. The reasons for this have been set out above and in the overriding cover submission.	Amend this policy (and/or corresponding provisions) so that it enables other regionally significant activities such as mineral extraction to have access to the effects management hierarchy. Amendments to APP3 and APP4 are also necessary as set out below.

on applications for resource consents and notices of requirement: *(1) Avoid adverse effects as the first priority,* *(2) Where adverse effects demonstrably cannot be avoided, they are remedied,* *(3) Where adverse effects demonstrably cannot be completely avoided or remedied, they are mitigated,* *(4) Where there are residual adverse effects after avoidance, remediation and mitigation, then the residual adverse effects are offset in accordance with APP3, and* *(5) if biodiversity offsetting of residual adverse effects is not possible, then:* *(a) the residual adverse effects are compensated for in accordance with APP4, and* *(b) if the residual effects cannot be compensated for in accordance with APP4, the activity is avoided.*		Given the locational and functional constraints associated with mineral extraction and mining activities, the contribution mining makes to Otago, the clear requirements of national policy and the evidence that avoidance does not necessarily protect significant biodiversity values but that well designed and implemented actions can, OceanaGold submits that it should have an ability to have full access to the effects management hierarchy. Evidence has been provided which also demonstrates that OceanaGold is able to use these strategies to achieve positive environmental outcomes for biodiversity, while also significantly supporting economic growth and development within the Otago region. While OceanaGold generally agrees with the cascading approach that has been developed within this policy on a principled basis, OceanaGold submits that when this policy is considered alongside the limits or constraints which are set out in APP3 and APP4 as to when offsetting and compensation are available, the policy becomes unworkable in certain circumstances. APP3 and APP4 contain a set of criteria as to when both offsetting and compensation is not available. This criterion effectively acts as a bottom line or limit and if triggered offsetting and/or compensation will no longer be available to be used as part of any effects management strategy and adverse effects default back to the first management tier of avoidance. It is also important that the policy recognise that what is most important is the biodiversity outcome that is	

		achieved. Applying the hierarchy in strict order may not always deliver the best outcome, and in complex proposals the best outcome is often delivered by a suite of actions that encompass all or most of the elements in the hierarchy. These issues were traversed at the Deepdell North Stage III hearing as discussed in the cover submission. Despite resounding agreement between all of the relevant experts at the hearing that the measures that were being offered by OceanaGold to address adverse effects on lizards via compensatory measures were appropriate and would suitably achieve a no net loss, this component of the proposal did not align with Policy 5.4.6A (of the partially operative Otago RPS) as compensation was not available if the activity resulted in the removal of habitat for a threatened or at risk indigenous species of fauna or flora. As discussed during that hearing by various parties, there was concern that this approach fails to best meet the purpose of the RMA, and also fails to deliver the best ecological outcomes. It is concerning that despite the clear evidence in the Deepdell Stage III application that the compensation policy was flawed it has been incorporated into the notified PORPS 2021 without correction. OceanaGold submits that policy ECO – P6 and its references to APP3 and APP4 are inconsistent with national direction such as the Draft NPSIB and NPSFW as to when and under what circumstances the full effects management hierarchy can be considered. It is	

		also inconsistent with section 104(1)(ab) of the RMA which requires a decision maker to have regard to <u>any</u> measure proposed or agreed to by the applicant for the purpose of ensuring positive effects on the environment to offset or compensate for any adverse effects on the environment that will or may result from allowing the activity.	

APP2 – Significance Criteria *An area is considered to be a significant natural area if it meets any one or more of the criteria below:* *(a) An area that is an example of an indigenous vegetation type or habitat that is typical or characteristic of the original natural diversity of the relevant ecological district or coastal marine biogeographic region. This may include degraded examples of their type or represent all that remains of indigenous vegetation and habitats of indigenous fauna in some areas.* *(b) An indigenous marine ecosystem (including both intertidal and sub-tidal habitats, and including both faunal and floral assemblages) that makes up part of at least 10% of the natural extent of each of Otago's original marine ecosystem types and reflecting the environmental gradients of the region.* *(c) An indigenous marine ecosystem, or habitat of indigenous marine fauna (including both intertidal and sub-tidal habitats, and including both faunal and floral*	Oppose in part	OceanaGold is concerned that this set of significance criteria is similar to but differs to that which is contained in anticipated national direction (i.e. the Draft NPSIB). The criteria also differ to the set which was recommended by Wildlands in Appendix 17 of the supporting documentation to the PORPS (refer to the green highlighting). There is uncertainty therefore that this set of criteria that appears in the notified version has been properly evaluated in section 32 terms. OceanaGold is also concerned that the application of this criteria will mean a large proportion of the Otago region will be identified as an SNA. This issue has arisen in other parts of New Zealand where similar criteria have been used to determine SNAs. The Far North District Council identified 42% of its district as SNAs. This created a significant amount of controversy with members of the public, tangata whenua and farmers concerned that the proposal undermined their sovereignty and property rights. On 27th July 2021 the Far North District Council confirmed that it would no longer include SNAs in the proposed district plan. A similar situation arose on the West Coast when an ecological report identified 95% of all private land on the West Coast as comprising SNAs. In that situation, the Tai o Poutini Plan Committee rejected the report, instead preferring to work on a simpler version of provisions, similar to Westland District Council's current regulations, with general rules across all native vegetation with permitted activities and resource consents required for most land clearance.	Make amendments so that the significance criteria aligns with national direction as set out in the (currently Draft) NPSIB.

components), that is characteristic or typical of the natural marine ecosystem diversity of Otago. *(d) An area that supports:* *(i) An indigenous species that is threatened, at risk, or uncommon, nationally or within an ecological district or coastal marine biogeographic region, or* *(ii) Indigenous vegetation or habitat of indigenous fauna that has been reduced to less than 20% of its former extent nationally, regionally or within a relevant land environment, ecological district, coastal marine biogeographic region or freshwater environment including wetlands, or* *(iii) Indigenous vegetation and habitats within originally rare ecosystems, or* *(iv) The site contains indigenous vegetation or an indigenous species that is endemic to Otago or that are at distributional limits within Otago.*			

(e) An area that supports a high diversity of indigenous ecosystem types, indigenous taxa or has changes in species composition reflecting the existence of diverse natural features or gradients. *(f) An area that supports or provides habitat for:* *(i) Indigenous species at their distributional limit within Otago or nationally, or* *(ii) Indigenous species that are endemic to the Otago region, or* *(h) Indigenous vegetation or an association of indigenous species that is distinctive, of restricted occurrence, or has developed as a result of an unusual environmental factor or combinations of factors.* *(i) The relationship of the area with its surroundings (both within Otago and between Otago and the adjoining regions), including:* *(i) An area that has important connectivity value allowing dispersal of indigenous flora and fauna between different areas, or*			

(ii) An area that has an important buffering function that helps to protect the values of an adjacent area or feature, or *(iii) An area that is important for indigenous fauna during some part of their life cycle, either regularly or on an irregular basis, e.g. for feeding, resting, nesting, breeding, spawning or refuges from predation, or* *(j) A wetland which plays an important hydrological, biological or ecological role in the natural functioning of a river or coastal ecosystem.*			

APP3 – Criteria for Biodiversity Offsetting (1) Biodiversity offsetting is not available if the activity will result in: (a) the loss of any individuals of Threatened taxa, other than kānuka (Kunzea robusta and Kunzea serotina), under the New Zealand Threat Classification System (Townsend et al, 2008), or (b) reasonably measurable loss within the ecological district to an At Risk-Declining taxon, other than manuka (Leptospermum scoparium), under the New Zealand Threat Classification System (Townsend et al, 2008). ….	Oppose	OceanaGold submits that these limits as to when biodiversity offsetting is not available for use as part of an overall effects management strategy are not appropriate. These circumstances are mostly those that would apply where offsetting needs to be utilised. The proposed approach sets the threshold as to when offsetting can be considered too high and as a result this is not likely to lead to beneficial ecological or biodiversity outcomes. The approach assumes that offsetting to achieve no net loss or better cannot be assured in circumstances where the 'limits' are in play. That is incorrect. Whether or not a particular impact is able to be offset to achieve no net loss or better should be determined on a case by case basis using expert ecological advice and the various offsetting calculation tools that are available. The approach at present seems to assume that if an offset is considered it will inevitably be accepted. That is incorrect. For major development proposals that seek to use offset and compensation techniques there will inevitably be discretionary decision making on resource consent applications. That is the place to determine whether any proffered offset is appropriate. The approach taken in APP3 and APP4 in their entirety (limits and outcomes required) are also not consistent with national direction such as that contained within the (currently) Draft NPSIB. Comparatively the Draft NPSIB sets out that biodiversity offsetting is not an appropriate option where:	Remove limits as to when offsetting can be offered in clause (1). Or otherwise align to achieve consistency with national direction via the Draft NPSIB. Amend the offsetting requirements and outcomes so as to achieve consistency with recommended best practice for offsetting and/or national direction via the Draft NPSIB.

		(i) Residual adverse effects cannot be offset because of the irreplaceability or vulnerability of the indigenous biodiversity affected. *(ii) There are no technically feasible or socially acceptable options by which to secure gains within acceptable timeframes.* *(iii) Effects on indigenous biodiversity are uncertain, unknown or little understood, but potential effects are significantly adverse.* This sets more realistic outcomes-focused criteria for when offsets are not appropriate and does not pre-empt the outcome. The section 32 report states that APP3 and APP4 align with the relevant Environment Court decisions on similar provisions in the 2010 RPS. OceanaGold notes that this Environment Court drafting of the compensation criteria was considered in the preparation of the Draft NPSIB. The NPSIB discussion document specifically invited stakeholders to consider the Environment Court version as an alternative approach to that which was being promulgated in the Draft NPSIB Appendices 3 and 4. It is understood that this alternative approach was not favoured by the majority of the submitters with most submitters supporting the Draft NPSIB's approach. This support was strongest amongst regional/unitary councils and territorial authorities (See the Summary of Submissions on the Proposed NPSIB, MfE 2020, p124 - 128). It is therefore highly unlikely that these alternative	

		provisions will ultimately be preferred by the Government in its final drafting of the NPSIB. The Environment Court provisions incorporated in APP 3 and 4 have also not provided the precedence for SNA provisions recently developed elsewhere in New Zealand. The West Coast RPS which was made operative in July 2020 aligns more closely to the Draft NPSIB as to when offsetting and compensation proposals are appropriate. OceanaGold is also concerned that APP3 and APP4 have not been thoroughly evaluated and tested in terms of section 32 of the RMA. These appendices still come within the definition of "provisions" of the PORPS which must be evaluated under section 32. For the purpose of its analysis under section 32 the authors have considered "provisions" to be limited to the policies and the methods of the PORPS. OceanaGold considers this to be an error and the section 32 reporting is flawed as a result.	
APP4 – Criteria for Biodiversity Compensation (1) Biodiversity compensation is not available if the activity will result in: (a) the loss of an indigenous taxon (excluding freshwater fauna and flora) or of any ecosystem type from an ecological district or coastal marine biogeographic region,	Oppose	OceanaGold submits that these limits as to when biodiversity compensation is not available for use as part of an overall effects management strategy are not appropriate. These circumstances are mostly those that would apply where compensation needs to be utilised. This was evident in the Deepdell North Stage III Project regarding the projects impact on lizard species. As explained in the cover submission all ecological experts agreed in that case, that the effects on lizards	Remove limits as to when biodiversity compensation can be offered in clause (1). Or otherwise align to achieve consistency with national direction via the Draft NPSIB. Amend the compensation requirements and outcomes so as to achieve consistency with recommended best practice for compensation and/or national direction via the Draft NPSIB.

(b) removal or loss of viability of habitat of a Threatened or At Risk indigenous species of fauna or flora under the New Zealand Threat Classification System (Townsend et al, 2008), (c) removal or loss of viability of a naturally rare or uncommon ecosystem type that is associated with indigenous vegetation or habitat of indigenous fauna, or (d) worsening of the New Zealand Threat Classification System (Townsend et al, 2008) conservation status of any Threatened or At Risk indigenous fauna		could be compensated to achieve a no net loss outcome, however based on the policy framework (Policy 5.4.6A) compensation was not available to the project on the basis that the project was impacting on the habitat of an 'at risk' lizard species. The proposed approach is therefore not likely to lead to beneficial ecological or biodiversity outcomes and is not consistent with national direction such as that contained within the (currently) Draft NPSIB. The section 32 report states that APP3 and APP4 align with the relevant Environment Court decisions on similar provisions in the 2010 RPS. OceanaGold notes that this Environment Court drafting of the compensation criteria was considered in the preparation of the Draft NPSIB. The NPSIB discussion document specifically invited stakeholders to consider the Environment Court version as an alternative approach to that which was being promulgated in the Draft NPSIB Appendices 3 and 4. It is understood that this alternative approach was not favoured by the majority of the submitters with most submitters supporting the Draft NPSIB's approach. This support was strongest amongst regional/unitary councils and territorial authorities (See the Summary of Submissions on the Proposed NPSIB, MfE 2020, p124 - 128). It is therefore highly unlikely that these alternative provisions will ultimately be preferred by the Government in its final drafting of the NPSIB. The Environment Court provisions incorporated in APP 3 and 4 have also not provided the precedence for	

		SNA provisions recently developed elsewhere in New Zealand. The West Coast RPS which was made operative in July 2020 aligns more closely to the Draft NPSIB as to when offsetting and compensation proposals are appropriate. OceanaGold is also concerned that APP3 and APP4 have not been thoroughly evaluated and tested in terms of section 32 of the RMA. These appendices still come within the definition of "provisions" of the PORPS which must be evaluated under section 32. For the purpose of its analysis under section 32 the authors have considered "provisions" to be limited to the policies and the methods of the PORPS. OceanaGold considers this to be an error and the section 32 reporting is flawed as a result.	
HAZ-NH – Natural Hazards			
HAZ-NH-O1 – *Natural Hazards* *Levels of risk to people, communities, and property from natural hazards within Otago do not exceed a tolerable level.*	Support	OceanaGold agrees that it is appropriate to manage natural hazards in the region to ensure they do not exceed tolerable or acceptable risks.	Retain this objective. However, OceanaGold wishes to confirm that "tolerable" is consistent with the acceptable hazard risk which appears to be more commonly used in practice.
HAZ-NH-P3 – New Activities *Once the level of natural hazard risk associated with an activity has been determined in accordance with HAZ-NH-P2, manage new activities to achieve the following outcomes:* *(1) When the natural hazard risk is significant, the activity is avoided,*	Oppose in part	OceanaGold is concerned that this does not adequately recognise that risks posed (including significant risks) can be appropriately managed by adopting conservative hazard risk assumptions in the design of structures and activities. For example, mining structures such as dams and tailing facilities can be designed so they will still function under significant seismic shaking.	Amend this policy so that it is clear that natural hazard risks may still exist (and at times be significant) but that activities can be managed in ways so as to reduce the effects of the natural hazard on the activity. Suggest amending as follows:

(2) When the natural hazard risk is tolerable, manage the level of risk so that it does not become significant, and *(3) When the natural hazard risk is acceptable, maintain the level of risk.*			*Once the level of natural hazard risk associated with an activity has been determined in accordance with HAZ-NH-P2, manage new activities to achieve the following outcomes:* *(1) When the natural hazard risk remains ~~is~~ significant (despite mitigation or management of that risk), the activity is avoided,* *(2) When the natural hazard risk is tolerable (either with or without mitigation), manage the level of risk so that it does not become significant, and* *(3) When the natural hazard risk is acceptable (either with or without mitigation), maintain the level of risk.*
HAZ-CL CONTAMINATED LAND			
HAZ-CL-P15 – New Contaminated Land Avoid the creation of new contaminated land or, where this is not practicable, minimise adverse effects on the environment and mana whenua values.	Oppose in part.	OceanaGold notes that mining industries are including on the Ministry for the Environment's HAIL list. Mining activities such as those which occur within the Macraes operation will therefore create "new" contaminated land as a result of being scheduled as being of such a nature. Notwithstanding this, mining at Macraes can and is managed so as to not generate risks to human health or the environment as result of contamination. While OceanaGold acknowledges that this policy seeks to acknowledge that in some instances the creation of new contaminated land may not be practicable and	Delete this policy.

		instead requires 'minimisation'. OceanaGold submits that this is generally appropriate however there is some uncertainty as to what is required by "minimisation" and submits that this policy is not necessary when read in conjunction with HAZ-CL-P14 which requires contaminated land to be actively managed so that it does not pose an unacceptable risk to people and the environment. This is much more certain.	
HCV-HH- Historic Heritage			
HCV–HH–P5 – Managing historic heritage *Protect historic heritage by:* *(1) requiring the use of accidental discovery protocols,* *(2) avoiding adverse effects on areas or places with special or outstanding historic heritage values or qualities,* *(3) avoiding significant adverse effects on areas or places with historic heritage values or qualities,* *(4) avoiding, as the first priority, other adverse effects on areas or places with historic heritage values or qualities,*	Oppose	OceanaGold submits that this policy is likely to be overly restrictive and have the potential to significantly constrain the ability to develop sites which may be near to, or contain sites of historic heritage. HCV-HH-P3 recognises that Otago's heritage includes gold and other mining sites. Given the long-standing nature of the mining activity within the Macraes area, there are such historic sites within the Macraes operation. While OceanaGold seeks to enhance its early history where this is practicable and appropriate to do so, there may be some artefacts or sites which bear significance which may be affected by present day mining activities. If this is the situation, OceanaGold seeks where practicable to adopt measures such as the removal of significant artefacts, remediation and/or enhancement of other historic areas and features as part of its overall and ongoing site management. Often historic sites, artefacts or features are better preserved and recognised as a result of these actions. OceanaGold is concerned however that this policy	Amend this policy so that it recognises in some instances activities such as mining are locationally and functionally constrained and adverse effects on historic heritage cannot always be avoided. Insert a new suite of provisions to suitably recognise and importance of the mining in Otago, similar to those provisions which have been developed for infrastructure activities and include reference to those provisions. Or amend the policy to achieve the following: *Protect historic heritage by:* *(1) requiring the use of accidental discovery protocols,* ~~*(2) avoiding adverse effects on areas or places with special or outstanding historic heritage values or qualities,*~~

(5) where adverse effects demonstrably cannot be completely avoided, remedying or mitigating them, and *(6) recognising that for infrastructure, EIT–INF–P13 applies instead of HCV–HH–P5(1) to (5).*		which seeks as a priority to avoid adverse effects could adversely constrain its ability to continue to operate and develop mining sites at Macraes. Adverse effects can only be remedied or mitigated, if adverse effects "demonstrably cannot be completely avoided". It is not clear what this would require, especially as all adverse effects could be avoided by not undertaking the activity in the first instance.	*(3) avoiding significant adverse effects on areas or places with historic heritage values or qualities, <u>where adverse effects of any scale cannot be avoided due to functional or locational constraints of the activity, require adverse effects to be remedied and/or mitigated.</u>* *~~(4) avoiding, as the first priority, other adverse effects on areas or places with historic heritage values or qualities,~~* *~~(5) where adverse effects demonstrably cannot be completely avoided, remedying or mitigating them, and~~* *(6) recognising that for infrastructure, EIT–INF–P13 applies instead of HCV–HH–P5(1) to (5).*
NFL – NATURAL FEATURES AND LANDSCAPES			
NFL-P3 – Maintenance of highly valued natural features and landscapes *Maintain or enhance highly valued natural features and landscapes by:* *(1) Avoiding significant adverse effects on the values of the natural feature or landscape, and*	Oppose	OceanaGold submits that there is uncertainty regarding the term "highly valued natural features and landscapes". These are defined in the PORPS as being section 7(c) and 7(f) type landscapes, however OceanaGold is concerned that there appears to be little to distinguish these and the management of these types of landscapes from those recognised as being outstanding natural features and landscapes. For example, the criteria to identify both landscape types appear to be the same (refer APP9) and this policy is	Delete this policy, or amend so as to achieve the following: *Maintain or enhance highly valued natural features and landscapes by* *~~(1) Avoiding significant adverse effects on the values of the natural feature or landscape, and~~* *~~(2) Avoiding, remedying or mitigating other adverse effects.~~*

(2) Avoiding, remedying or mitigating other adverse effects.		very similar to the requirements set out in NFL-P2. While this policy seeks to maintain and enhance highly valued landscapes, the management requirement is essentially the same as what is required in NFL-P2 which seeks instead to "protect" outstanding natural landscapes and features. Because these highly valued landscapes are not yet known, OceanaGold is concerned that this policy regime sets too high a bar for lesser valued landscapes.	*ensuring development within such areas achieves appropriate integration with that landscape.*
UFD – URBAN FORM AND DEVELOPMENT			
UFD-O4- Development in rural areas *Development in Otago's rural areas occurs in a way that:* *(1) Avoids impacts on significant values and features identified in this RPS,* *(2) Avoids as the first priority, land and soils identified as highly productive by LF-LS-P19 unless there is an operational need for the development to be located in rural areas,* *(3) only provides for urban expansion, rural lifestyle, and rural residential development and the establishment of sensitive activities, in locations identified through strategic planning or zoned within district plans as suitable for such development; and* *(4) outside of areas identified in (3) maintains and enhances the natural and physical resources that support the productive capacity, rural character, and*	Oppose	OceanaGold is concerned that this objective will act as a prohibition to a significant number of activities within the rural environment. It requires the avoidance of all impacts on significant values and features identified in this PORPS and does not allow for any ability to manage those impacts or effects such as via mitigation, remediation, offsetting or compensation / enhancement type measures. A blanket "avoidance of impact approach" is not necessarily going to be the answer in every circumstance to achieving the best environmental and economic outcomes and this needs to be better recognised and balanced throughout the RPS. LF-LS-P19 refers to the use of land and soils for highly productive land use activities. The explanation attaching to this policy sets out that "highly productive land" is land used for primary production that provides economic and employment benefits. OceanaGold notes that the definition of primary production includes the	Delete this objective. Or alternatively, amend this objective to refer to "Urban development in Otago's rural areas…"

long term viability of the rural sector and rural communities.		use of land for mining. This is appropriate. However the PORPS needs to better recognise that mining is a highly productive use of the land, instead of focussing on horticultural and agricultural uses as the only primary production activities that are to be prioritised.	
UFD-P7- Rural Areas *The management of rural areas:* *(1) provides for the maintenance and, wherever possible, enhancement of important features and values identified by this RPS,* *(2) outside areas identified in (1), maintains the productive capacity, amenity and character of rural areas,* *(3) enables primary production particularly on land or soils identified as highly productive in accordance with LF–LS–P19,* *(4) facilitates rural industry and supporting activities,* *(5) directs rural residential and rural lifestyle development to areas zoned for that purpose in accordance with UFD–P8,* *(6) restricts the establishment of residential activities, sensitive activities, and non-rural businesses which could adversely affect,*	Oppose in part	OceanaGold is concerned that this policy is not sufficiently balanced in recognising the significant social and economic benefits that are generated from the use of rural land, particularly for primary production type uses and more specifically that of mineral extraction. OceanaGold submits that the PORPS should better provide for the Macraes mine operation. This is a significant industry in the Otago region, providing significant economic and social benefits. Like other regions around New Zealand which have significant mineral assets such as the West Coast and the Waikato region, the Otago RPS should suitably recognise this mineral resource which exists in its region and seek to protect an ability to access it and mine it, now and into the future.	Amend this policy and/or insert new provisions which suitably recognise and provide for significant existing industry activities such as the Macraes mine operation in the rural environment. The provisions need to suitably recognises that ongoing access to significant mineral resources within the Otago region is important in maintaining and enhancing the social and economic wellbeing of people and communities.

including by way of reverse sensitivity, the productive capacity of highly productive land, primary production and rural industry activities, and *(7) otherwise limits the establishment of residential activities, sensitive activities, and non-rural businesses to those that can demonstrate an operational need to be located in rural areas.*			