BEFORE THE HEARINGS PANEL

IN THE MATTER of the Resource Management Act 1991

AND

IN THE MATTER of submissions on the Proposed Otago Regional Policy Statement 2021 (non-freshwater provisions)

EVIDENCE OF SCOTT HOOSON

FOR OCEANA GOLD NEW ZEALAND LIMITED

CHAPTER 10 – ECO AND APP 2, 3 AND 4

Dated 23 November 2022

Solicitor acting:

Jackie St John
In-house counsel
22 Maclaggan St
Dunedin 9016
Jackie.stjohn@oceanagold.com

Counsel acting:

Stephen Christensen
Project Barrister
421 Highgate, Dunedin 9010
P 027 448 2325
stephen@projectbarrister.nz

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INTRODUCTION AND BACKGROUND

Qualifications and Experience

1. My name is Scott Hooson. I hold the position of Senior Principal / Senior Ecologist in Boffa Miskell Limited's (Boffa Miskell's) Ōtautahi Christchurch Office.
2. I hold the degrees of Bachelor of Science with 1st Class Honours in Ecology and Geography and a Masters degree in Zoology with Distinction which I gained from the University of Otago in Dunedin, in 2000 and 2002, respectively.
3. I have over 20 years' experience as an ecologist. I have been employed as an ecological consultant at Boffa Miskell from March 2008 to the present. Prior to working for Boffa Miskell I worked for the Department of Conservation from 2002 until 2008.
4. I have prepared evidence on ecological matters for Council, Environment Court and Board of Inquiry Hearings and presented evidence at both Council and Environment Court Hearings. I have published ecological research in national and international journals.
5. I am a Certified Environmental Practitioner and a member of the Ecological Society of New Zealand and the Ornithological Society of New Zealand.
6. In my role at Boffa Miskell I am a terrestrial ecologist. I have specialised experience in ecological surveys and assessments of vegetation, wetlands and birds and in the assessment of significant ecological sites and preparation of ecological impact assessment reports. My project work also involves provision of ecological advice, GIS mapping and analysis, preparation of ecological management plans and advising on ecological restoration projects.
7. I have carried-out ecological surveys and assessments in a wide range of ecosystems, including wetlands, estuaries, hāpua, lakes, streams, grasslands, shrublands, forests and alpine vegetation. I have worked widely throughout the South Island including in Nelson, Marlborough, Westland, Canterbury, Otago and

Southland. I have an excellent working knowledge of ecological and geographical patterns and processes and excellent botanical and fauna identification skills.

8. I have a wide range of experience providing input into the development of plan provisions, the identification and assessment of significant natural areas and developing impact management measures, including biodiversity offsetting and compensation.

    a. I am a co-author of the Environmental Institute of Australia and New Zealand's (EIANZ) Ecological Impact Assessment Guidelines[1] which has a chapter on impact management including a section on Biodiversity Offsetting[2].

    b. I am the Independent Peer Reviewer for the Mt Cass Wind Farm, a project that involves a biodiversity offset in the form of a 127 ha covenant and a range of associated enhancement measures.

    c. I have provided technical ecological input, including drafting provisions for the protection and management of significant natural areas (SNAs) and other general indigenous biodiversity issues, to assist City and District Councils with their Plan Reviews including Christchurch City Council, Hurunui District Council and Selwyn District Council.

    d. I have identified and assessed SNAs for several District Councils. I worked in a secondment role at Christchurch City Council as the Project Ecologist - Banks Peninsula to lead the identification and assessment of over 90

[1] Roper-Lindsay, J., Fuller, S. A., Hooson, S., Sanders, M. D., Ussher, G. T. (2018). *Ecological impact assessment (EcIA). EIANZ guidelines for use in New Zealand: Terrestrial and freshwater ecosystems* (2nd ed.). Environment Institute of Australia and New Zealand.

[2] Section 7.3

significant ecological sites across Banks Peninsula for the Christchurch Replacement District Plan (2014 – 2015).

e. In addition to assessments for local authorities, I have used ecological significance criteria in numerous Regional and District Plans to assess the ecological significance of sites for specific projects across the South Island.

f. I have also led, or been involved in, numerous projects across the South Island where I have developed impact management measures, including biodiversity offsets and / or compensation, for resource consent applications.

9. I have worked, and am currently working on, projects throughout the Otago Region. Some projects examples include:

a. Terrestrial ecology assessments for the re-consenting of the Waipori Hydro-Electric Power Scheme including the Black Rock[3], Shepherds[4], Crystals[5] and Beaumont[6] Water-Races for TrustPower[7].

b. Providing expert ecological input during Environment Court mediation to assist Dunedin City Council to resolve an appeal on the Proposed Second Generation Dunedin City District Plan (2GP).

c. Peer review of technical ecology reports and GAP analysis for the New Zealand Battery Project (Project Onslow).

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[3] Boffa Miskell Limited 2020. *Black Rock Water Race: Ecology Assessment Report*. Report prepared by Boffa Miskell Limited for ChanceryGreen on behalf of Trustpower Limited.

[4] Boffa Miskell Limited 2020. *Shepherds Water Race: Ecology Assessment Report*. Report prepared by Boffa Miskell Limited for ChanceryGreen on behalf of Trustpower Limited.

[5] Boffa Miskell Limited 2020. *Crystals Water Race: Ecology Assessment Report*. Report prepared by Boffa Miskell Limited for ChanceryGreen on behalf of Trustpower Limited.

[6] Boffa Miskell Limited 2021. *Beaumont Water Race: Terrestrial Ecology and Wetland Assessment Report*. Report prepared by Boffa Miskell Limited for Trustpower Limited.

[7] Now Manawa Energy.

d. Survey and assessment of the significance of the Three Stone Fens Wetland complex in South Otago.
e. Terrestrial ecological surveys of Queenstown Lakes District Council's foreshore reserves between Glendhu Bay and the Clutha Outlet, Wanaka.
f. Terrestrial ecology surveys and assessments for subdivision proposals at Damper Bay near Wanaka and Henley Downs at Jacks Point, Queenstown.

CODE OF CONDUCT

10. Although this is not an Environment Court hearing, I have re-read and agree to comply with the Environment Court's Code of Conduct for Expert Witnesses. This evidence is within my area of expertise, except where I state that I am relying upon material produced by another person. I have not omitted to consider material facts known to me that might alter or detract from my opinions.

EXECUTIVE SUMMARY

11. Oceana Gold New Zealand Limited (Oceana Gold) has asked me to review policies ECO-P2, ECO-P3 and ECO-P4 in the ECO Chapter of the Proposed Otago Regional Policy Statement (pORPS), as well as appendices APP2 - Significance criteria for indigenous biodiversity, APP3 – Criteria for biodiversity offsetting and APP4 – Criteria for biodiversity compensation.
12. The intent of ECO-P2 is broadly consistent with national guidance. For simplicity purposes I recommend a minor amendment to the wording of this policy. ECO – P3 is consistent with s.6(c) of the RMA, which requires the protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna. However, for new activities that are unable to avoid the adverse effects described in ECO-P3(1) and are not provided for in ECO-P4, then those activities cannot proceed because effects management hierarchy in ECO-P6 is not available.

13. ECO-P4 provides for a limited number of new activities in significant natural areas, or where they may adversely affect indigenous species and ecosystems that are taoka where the sequential steps in the effects management hierarchy (in relation to indigenous biodiversity) is followed. However, ECO-P4 does not provide a consenting pathway for new use or development required for mineral extraction within significant natural areas. This policy is inconsistent with other second generation Regional Policy Statements and the NPS-IB Exposure Draft.
14. The significance criteria for indigenous biodiversity in APP2 are in most respects similar to criteria in other operative second generation Regional Policy Statements. In my experience with similar significance criteria many areas of indigenous (and exotic) vegetation types and habitats in Otago will be significant under these criteria. This has important implications for the application of Policies and Rules in the ECO Chapter of the pORPS and in particular, the strong policy direction in ECO-P3 to first avoid any reduction of the area or indigenous biodiversity values of SNAs, or loss of taoka values. This will have substantial implications for new activities such as mining where there is a functional or operational need for the activity to be in a particular location and there is limited ability to avoid SNAs.
15. APP3 and APP4 provide 'criteria' for biodiversity offsetting and biodiversity compensation, respectively. In my view, a better approach would be to amend APP3 and APP4 so they set out the principles or framework for considering the adequacy and appropriateness of offsetting and compensation proposals at the consenting stage. In particular, clause 1 (a) – (e) of APP3 and clause 1 (a) – (e) of APP4, which set out situations where biodiversity offsetting will not be available, will mean that biodiversity offsetting and compensation are not available in circumstances where they could result in better outcomes for indigenous biodiversity.

OUTLINE OF EVIDENCE

16. Oceana Gold has asked me to review the policies and appendices listed below and provide evidence on how I consider they would work in practice, what issues I envisage with them and to offer any alternative wording I consider would better achieve the pORPS's objectives, based on my experience with policies dealing with similar issues in other planning contexts.
    a. Policy ECO-P2 – Identifying significant natural areas and taoka
    b. Policy ECO-P3 – Protecting significant natural areas and taoka
    c. Policy ECO-P4 – Provision for new activities
    d. APP2 – Significance criteria for indigenous biodiversity
    e. APP3 – Criteria for biodiversity offsetting
    f. APP4 – Criteria for biodiversity compensation
17. While I have concentrated on these provisions, I have sought to understand them within the wider context of the full suite of objectives and policies insofar as they are relevant to indigenous biodiversity.
18. In preparing this evidence I have read the following:
    a. The provisions of the pORPS as they relate to Ecosystems and Indigenous Biodiversity.
    b. Submissions on the pORPS by Oceana Gold and the further submission of Oceana Gold.
    c. The Hearing Commissioners' decision on Deepdell North[8].
    d. The Regional Council's s42A report and accompanying Wildland Consultants Report as Appendix 10c, including the s42A report version dated 31 October 2022 showing recommendations from the Regional

[8] Deepdell North Stage III decision, September 2020.

Council's supplementary evidence and additional supplementary evidence (s42A report – October version).

e. The Regional Council's supplementary evidence relevant to the ECO Chapter, including Dr Kelvin Lloyd's supplementary statement of evidence.

f. The Exposure Draft of amendments to the National Policy Statement for Freshwater Management 2020 (released in May 2022) (NPS-FM Exposure Draft), and the Exposure Draft of the NPS-IB (NPS-IB Exposure Draft) and relevant provisions in regional policy statements from other regions.

g. Other statements of evidence prepared on behalf of Oceana Gold:

    i. The evidence of Dr Michael Thorsen; and

    ii. The evidence of Mr Mark Christensen.

ECO POLICIES

19. Policies ECO-P2 addresses the identification and mapping and protection of significant natural areas and indigenous species and ecosystems that are taoka. ECO-P3 addresses the protection of significant natural areas and indigenous species and ecosystems that are taoka. ECO-P3(2) is linked to the effects management hierarchy in ECO-P6. ECO-P4 provides for certain new activities in significant natural areas or where they may adversely affect indigenous species and ecosystems that are taoka.

ECO-P2 – Identifying significant natural areas and taoka

20. Policy ECO–P2 – Identifying significant natural areas and taoka, as drafted in the 31 October version of the pORPS, reads:

"Identify and map

(1) the areas and indigenous biodiversity values of significant natural areas in accordance with APP2, and

(2) where appropriate, indigenous species and ecosystems that are taoka in accordance with ECO-M3."

21. The intent of this policy is broadly consistent with national guidance, including sections 3.8 and 3.9 of the NPS-IB Exposure Draft which requires territorial authorities to assess, identify and map significant areas.
22. While ECO-P2 requires significant natural areas to be identified and mapped, what determines which areas are identified as significant for the purposes of section 6(c) of the Resource Management Act (1991) (RMA), and the extent of significant natural areas within the Otago Region, is the significance criteria in APP2. I discuss the significance criteria in APP2 in paragraphs 33 to 65 of my evidence and Dr Thorsen describes the likely extent of significant natural areas within the Otago Region using the significance criteria in APP2 in paragraphs 29 to 48 of his evidence.
23. The purpose of ECO-P2 (i) is to identify and map significant natural areas in accordance with APP2, rather than indigenous biodiversity values, or the indigenous biodiversity values within significant natural areas. For clarity and simplicity, I recommend amending the wording of this policy by removing the wording *"the areas and indigenous biodiversity values of" so that* ECO–P2 more simply reads:

ECO–P2 – Identifying significant natural areas and taoka

"Identify and map

(1) ~~*the areas and indigenous biodiversity values of*~~ *significant natural areas in accordance with APP2, and*

(2) where appropriate, indigenous species and ecosystems that are taoka in accordance with ECO-M3."

ECO-P3 – Protecting significant natural areas and taoka

24. Policy ECO-P3 provides direction on how significant natural areas and indigenous species and ecosystems that are taoka are to be protected. The direction of this policy is clear that any activities must first avoid adverse effects that result in:
    a. any reduction of the area or indigenous biodiversity values identified and mapped under ECO-P2(1), (even if those values are not themselves significant but contribute to an area being identified as a significant natural area), and
    b. any loss of taoka values identified and mapped under ECO-P2(2),….
25. The proposed wording of this policy is generally consistent with section 6(c) of the RMA, which requires the protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna. It is also broadly consistent with other Regional Policy Statements and the NPS-IB Exposure Draft. However, for new activities that are unable to avoid the adverse effects described in ECO-P3(1) and are not provided for in ECO-P4, then that activity cannot proceed because the effects management hierarchy in ECO-P6 is not available.

ECO-P4 – Provision for new activities

26. ECO-P4 provides for a limited number of new activities in significant natural areas, or where they may adversely affect indigenous species and ecosystems that are taoka where the sequential steps in the effects management hierarchy (in relation to indigenous biodiversity) is followed. These new activities are essentially ‘exceptions’ to the general ‘avoid’ policy in ECO – P3 (1). Those new activities are:
    a. the development, operation, maintenance or upgrade of nationally significant infrastructure and regionally significant infrastructure that has a functional need 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,

b. the development of papakāika, marae and ancillary facilities associated with customary activities on Native Reserves and Māori land,

c. the sustainable use of mahika kai and kaimoana (seafood) by mana whenua,

d. the use of Native Reserves and Māori land to enable mana whenua to maintain their connection to their whenua and enhance social, cultural or economic well-being,

e. activities that are for the purpose of protecting, restoring or enhancing a significant natural area or indigenous species or ecosystems that are taoka, or

f. activities that are for the purpose of addressing a severe or immediate risk to public health or safety.

27. Although ECO-P4 provides for nationally significant infrastructure and regionally significant infrastructure that has a functional need or operational need to locate within significant natural area(s), notably, it does not provide for new mineral extraction activities in significant natural areas. New mining activities are often unable to avoid SNAs because they have a functional need to be in a particular location.

28. In its submission, Oceana Gold sought the inclusion of a new clause to provide a consenting pathway for mineral and aggregate extraction activities to ensure consistency with clause 3.9(2) of the draft NPSIB (prior to the release of the Exposure Draft NPS-IB). The author of Chapter 10 of the section 42A report acknowledged that mining has a functional and operational need to locate where the resource is present, but argued that ECO-P4 applies to SNAs which are of the highest importance to maintaining Otago's indigenous biodiversity and so require the highest practicable

level of protection[9]. However, as I discuss later in paragraph 63 of my evidence, in my experience with similar significance criteria, using the significance criteria in APP2 of the pORPS, many areas of indigenous (and exotic) vegetation types and habitats in Otago will be significant under the criteria in APP2, rather than those areas which are of the highest importance to maintaining Otago's indigenous biodiversity.

29. The author of Chapter 10 of the s42A report refers to advice received from Dr Lloyd[10]: *"Mineral extraction, particularly open-cast mining, has the potential to generate significant adverse effects on the ecological values and areas of SNAs, and these would often require offsetting or compensation".* I agree that this can be the case, because open-cast mining activities result in the permanent loss of those areas within the mine's footprint. Given this reality, it is important that in developing these types of proposals consideration is able to be given to the use of biodiversity offsetting and compensation. In some cases, it is only through the use of these techniques that net losses of biodiversity can be avoided, and net biodiversity gains can be achieved. However, because new mineral extraction activities are not provided for in ECO-P4, there is no access to the effects management hierarchy in ECO-P6[11] at all, including offsetting or compensation in accordance with APP3 and APP4 respectively.

30. In contrast to ECO-P4 of the pORPS, clause 3.11(2) of the NPS-IB Exposure Draft includes a consenting pathway for new use or development required for mineral extraction that provides significant national public benefit that could not otherwise be achieved domestically, and there is a functional or operational need for the new use

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[9] At paragraph 194.

[10] Section 5.7 of Appendix 10c of the s42A Report

[11] I do not specifically discuss ECO-P6 or the effects management hierarchy in my evidence. However, Mr Christensen provides a detailed discussion on ECO-P6 and the effects management hierarchy in paragraphs 80 to 84 and 95 to 107 of his evidence.

or development to be in that particular location and there are no practicable alternative locations for the new use, or development[12]:

"Clause 3.10(2) does not apply, and all adverse effects on an SNA must be managed instead in accordance with clause 3.10(3) and (4):

(a) if a new use or development is required for the purposes of any of the following;

1. specific infrastructure that provides significant national or regional public benefit; or

2. mineral extraction that provides significant national public benefit that could not otherwise be achieved domestically; or

3. aggregate extraction that provides significant national or regional public benefit that could not otherwise be achieved domestically; and

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

(c) there are no practicable alternative locations for the new use, or development."

31. While I acknowledge that the NPS-IB Exposure Draft is not a statutory document that the pORPS must give effect to[13], nonetheless, I consider that it can be of assistance, at least insofar as it indicates the current policy position of the Ministry for the Environment's advice to government having taken into account a range of submissions (subject to the final documents being released following consideration

[12] NPSIB Exposure Draft Clause 3.11(2).

[13] Under s63(3).

of submissions on them). From the Ministry for the Environment's website I understand that it is anticipated that the NPS-IB will be gazetted in December 2022[14].

32. As proposed, ECO-P3 and ECO-P4 will substantially constrain development, including new mineral extraction activities where there is a functional or operational need for the activity to be in a particular location.

SIGNIFICANCE CRITERIA

33. In this section of my evidence I discuss the workability of the significance criteria in APP2 of the pORPS.
34. The identification of SNAs reflects the RMA s.6(c) requirement to recognise and provide for the protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna.
35. The criteria in the s42A report (October version) of the pORPS are:
    a. representativeness;
    b. rarity;
    c. diversity;
    d. distinctiveness;
    e. ecological context; and
    f. vulnerable and sensitive species.
36. I have compared the criteria in the s42A report (October version) of the pORPS with the criteria in the Partially Operative ORPS (2019)[15]. The two sets of criteria are similar. The main differences are:
    a. The inclusion in the October version of:

[14] https://environment.govt.nz/acts-and-regulations/national-policy-statements/proposed-nps-indigenous-biodiversity/

[15] Amended March 15, 2021

i. representativeness criterion (b) and (c) which relate to marine ecosystems;
ii. the wording "*an important population of species that is at risk*" in the rarity criterion (d)(i);
iii. a new ecological context criterion (g)(iv): "*A wetland which plays an important hydrological, biological or ecological role in the natural functioning of a river or coastal ecosystem*"; and
iv. a new assessment matter (criterion (h)) for 'vulnerable and sensitive species'.

b. The removal of the coastal environment criterion from the Partially Operative ORPS (2019).

37. The APP2 significance criteria in the s42A report (October version) are in many respects similar to criteria in other operative second generation Regional Policy Statements. Exceptions are:
    a. the inclusion of the representativeness criterion (b) and (c) which relate to marine ecosystems and;
    b. the inclusion of an assessment matter for 'vulnerable and sensitive species' (criterion (h)).
38. Recent significance criteria in operative second generation Regional Policy Statements typically contain four widely accepted criteria[16]. These key criteria are included in a number of operative second generation Regional Policy Statements

[16] Also referred to as 'matters' in some Regional Policy Statements.

(i.e. Canterbury[17], West Coast[18], Southland[19]) and are also used in the NPS-IB Exposure Draft. They are:

a. representativeness;
b. rarity and distinctiveness;
c. diversity and pattern; and
d. ecological context.

39. I provide a more detailed analysis of the workability of each of the significance criteria in APP2 of the pORPS below.

Representativeness

40. The wording of the Representativeness criterion (criterion (a)) in the s42A report (October version) of the pORPS is:

> *"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."*

41. The first sentence of this criterion follows best practice. As identified by the author of the Appendix 10c report, inclusion of the words the 'original natural diversity' requires comparison against the standard of the original natural vegetation type or habitat rather than with current vegetation type or habitats. It is also useful in that it provides an historic baseline against which to assess vegetation types or habitats. However,

[17] Environment Canterbury Regional Council (2013). Canterbury Regional Policy Statement 2013.

[18] The West Coast Regional Council (2020). West Coast Regional Policy Statement.

[19] Environment Southland Regional Council (2017). Southland Regional Policy Statement 2017.

further clarity on whether ‘original’ means pre-human or pre-1840 (pre-European) would, in my view, aid interpretation.

42. The second sentence uses the wording *“This may include degraded examples of their type”*. Other Regional Policy Statements use the wording “*This can include degraded examples where they are some of the best remaining examples of their type”*.
43. Reference to "*all that remains*" should be considered under the rarity criterion rather than representativeness. If a habitat type has been reduced in extent then it should be identified under criterion d(ii).
44. I have not included any commentary on the representativeness criteria (b) and (c) as they relate to marine ecosystems which are outside my area of expertise.

Rarity

45. The wording of the Rarity criterion (criterion d) in the s42A report (October version) of the pORPS is:

> *“An area that supports:*
>
> *(i) An indigenous species that is threatened, or uncommon, or an important population of species that is at risk, 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."*

46. In relation to the presence of threatened or at risk species, the pORPS rarity criterion (d)(i) sets a relatively low threshold. For example, in the NPS-IB Exposure Draft an

area qualifies as an SNA if it provides habitat for an indigenous species that is listed as Threatened or At Risk (Declining). In comparison, the pORPS only requires the presence of a species classified under any of the categories under the umbrella category of At Risk for an area to be significant (i.e. Declining, Recovering, Relict and Naturally Uncommon).

47. In recognition that the lowest threshold in the criteria set is the rarity criterion (d)(i), which requires the presence of a threatened, at risk or uncommon species for an area to trigger significance, this criterion has been amended to replace "at risk" species with "*an important population of species that is at risk*…". This amendment is appropriate for the reasons outlined in the s42A report and particularly because some at risk species, for example, matagouri (*Discaria toumatou*) are currently classified as At Risk - Declining (de Lange et al. 2018)[20], but are widespread and abundant in parts of Otago. I do, however, have concerns about how the word "*important*", as it is used in this criterion (and the ecological context criterion), may be interpreted differently by ecologists. An assessment of whether a population is "*important*" is subjective and likely to lead to debate. I discuss my concerns further in paragraph 57 of my evidence.

48. Reference to 'uncommon' species at ecological district or regional levels is appropriate, because national threat classifications don't take account of these finer scales of rarity, which are important if indigenous biodiversity is to be maintained at the regional or ecological district scales. However, while there is an accepted process for determining whether indigenous species are threatened or at risk nationally, there is not an accepted process for determining whether a species is threatened, at risk

[20] de Lange, P.J.; Rolfe, J.R.; Barkla, J.W.; Courtney, S.P.; Champion, P.D.; Perrie, L.R.; Beadel, S.M.; Ford, K.A.; Breitwieser, I.; Schonberger, I.; Hindmarsh-Walls, R.; Heenan, P.B.; Ladley, K. (2018). Conservation status of New Zealand indigenous vascular plants, 2017. *New Zealand Threat Classification Series* 22. Department of Conservation, Wellington. 82 pp.

or uncommon within an ecological district or coastal marine biogeographic region. In my experience, information on whether a species is threatened, at risk or uncommon at the ecological district scale, for example, is typically either not available or very poor.

49. The rarity, criterion (d)(iii) refers to indigenous vegetation and habitats within *"originally rare ecosystems".* I note that Appendix 10c of the s42A report recommended that 'naturally uncommon' is the most suitable term to use in APP4. I agree that this is the most suitable term, and note that it follows Landcare Research's most up-to-date terminology[21]. For consistency, '*originally rare ecosystems'* should also be replaced with '*naturally uncommon ecosystems*' in APP2.

Diversity

50. The wording of the Diversity criterion (criterion e) in the s42A report (October version) of the pORPS is:

    "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."

51. When assessing the diversity of ecosystem types or indigenous taxa, ecosystems or habitats should be compared with similar habitats within the ecological district, because diversity differs markedly between different ecosystem types and habitats. For example, indigenous sand dune vegetation has relatively low natural diversity compared with indigenous broadleaved forest vegetation. I recommend amending this criterion to read:

    "An area that supports a high diversity of indigenous ecosystem types or indigenous taxa <u>in the context of similar areas and habitat types within the ecological district</u> or

[21] https://www.landcareresearch.co.nz/publications/naturally-uncommon-ecosystems/

has changes in species composition reflecting the existence of diverse natural features or gradients."

Distinctiveness

52. The wording of the Distinctiveness criterion (criterion f) in the s42A report (October version) of the pORPS is:

    "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

    (iii) 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."

53. Criterion (f)(i) can be difficult to assess as distributional data on species distributions is often poor and information on the actual distributional limits of species can be difficult to verify. Secondly, whether a species is at its distributional limit within Otago is typically not ecologically important and should not meet the threshold for significance because a species may occur in a number of locations in an adjoining region. If interpreted as read, this sub-criterion could also led to perverse outcomes. For example, all species will be at their southern distributional limit within Otago at or near the southern boundary of the Otago Region.

54. Under criterion (f)(ii) an area would be significant if it supports or provides habitat for any indigenous species that is endemic to the Otago Region. Several other Regional Policy Statements do not include this criterion and neither does the NPS-IB Exposure Draft, although the assessment principles in the NPS-IB do state that distinctiveness includes local endemism. While species that are endemic to the Otago Region may be widespread and abundant within the Region, or parts of the Region, because they

are range restricted and only found naturally in Otago, in my opinion the inclusion of this criterion is warranted.

Ecological context

55. The wording of the Ecological Context criterion (criterion g) in the s42A report (October version) of the pORPS is:

> *"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*
>
> *(iv) A wetland which plays an important hydrological, biological or ecological role in the natural functioning of a river or coastal ecosystem."*

56. Under the ecological context criterion (g)(iii) an area is significant if it is important for indigenous fauna during some part of their life cycle, either regularly or on an irregular basis. This is a departure from the wording typically used in other second generation significance criteria, which usually refer to indigenous vegetation or habitat of indigenous fauna that provides important habitat for indigenous species, either seasonally or permanently. The wording "*on an irregular basis*" is problematic because it could be interpreted to include a range of highly modified or exotic habitats such as improved pasture used irregularly by highly mobile indigenous species such as white heron, New Zealand pipit or South Island pied oystercatcher. The NPS-IB

Exposure Draft contains specific provisions to manage highly mobile fauna species and their habitats outside of significant natural areas. My preference would be to use the wording more typically used in other second generation Regional Policy Statements: *"indigenous vegetation or habitat of indigenous fauna that provides important habitat for indigenous species, either seasonally or permanently"*.

57. The word "*important*" is used in all four of the ecological context sub-criteria. It is also used in rarity criterion (d)(i): "*an important population of species that is at risk*". The word "important" creates a higher threshold and, in my view, is required in these sub-criteria. Inclusion of this term requires informed judgement from an experienced ecologist. While I agree with the author of the Appendix 10c s42A report that *"Terms such as 'important for' are plain English terms that ecologists should have no difficulty understanding or interpreting"*[22], I have observed similar ecological context sub-criteria to those in the pORPS to be interpreted very differently by different ecologists. Terms such as 'important' are subjective and can be contentious. In my opinion, this highlights the need to include key assessment principles or guidelines to assist the interpretation of the significance criteria in APP2. I discuss the need for key assessment principles or guidelines in paragraph 61 below.

Vulnerable and sensitive species

58. The s42A report (October version) of the pORPS includes an additional criterion 'vulnerable and sensitive species' in response to the submission of the Director-General of Conservation. This new criterion is:

    "An area that contains sensitive habitats or species that are fragile to anthropogenic effects or have slow recovery from anthropogenic effects."

[22] Appendix 10c, Section 2.7, Page 3.

59. I have reviewed Attachment 2 of the Director-General of Conservation's submission[23] and the rationale and examples provided to support the inclusion of this criterion in the Director-General of Conservation's submission. All of the examples provided relate to ecosystems in the coastal, marine or freshwater environment.

60. I am not aware of other significance criteria that include a criterion for 'vulnerable and sensitive species'. The *Department of Conservation Guidelines for Assessing Significant Ecological Values*[24] has a 'fragility and threat' criterion which is *"A site's inherent vulnerability to environmental change by virtue of the nature of its ecological components and its position in the landscape."* This criterion differs from the proposed 'vulnerable and sensitive species' criterion and is a management criterion that is not used for assessing significance. In my view, without either clear definitions for words such as 'sensitive' or 'fragile' or key assessment principles or accompanying guidelines, determination of whether an area contains habitats of species that are 'sensitive' 'fragile' our have 'slow recovery' from anthropogenic effects will largely be a subjective assessment. Further, areas within terrestrial and freshwater ecosystems that meet this criterion are likely to be significant under other criteria such as representativeness, rarity or distinctiveness. Providing any comment on the need for, or appropriateness of, this criterion in relation to marine ecosystems is outside my area of expertise.

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[23] Attachment 2: Significance criteria for indigenous biodiversity appended to the Director-General of Conservation's submission (0137)

[24] Davis, M.; Head, N.J.; Myers, S.C.; Moore, S.H. 2016: Department of Conservation guidelines for assessing significant ecological values. *Science for Conservation 327*. Department of Conservation, Wellington. 73 p.

Inclusion of key assessment principles or accompanying guidelines

61. Appendix 1 of the NPS-IB Exposure Draft includes supplementary information that is additional to the criteria themselves. This supplementary information includes direction on the approach, the context (or scale) of assessment and for each criterion a set of 'key assessment principles' that provide guidance or explanation to assist assessment. The Canterbury Regional Policy Statement also has non-statutory guidelines (Wildland Consultants 2013)[25], that are applicable to Canterbury, to assist in the application of the matters to determine areas of significant indigenous vegetation and significant habitats of indigenous fauna. Having assessed the ecological significance of many areas using different significance criteria with and without guidelines, in my opinion, the inclusion of assessment principles or guidelines either within, or to accompany, APP2 would assist the interpretation of the criteria. I note that in Appendix 10c of the s42A report the author suggests that appropriate guidance to the criteria could be provided to assist interpretation.

The implications of applying the APP2 significance criteria

62. Under APP2 of the pORPS an area is considered to be a significant natural area if it meets any one or more of the criteria. This approach to determining ecological significance is typical of a number of operative second generation Regional Policy Statements (i.e. Canterbury[26], West Coast[27], Southland[28]) and is also used in the Exposure Draft of the NPS-IB. However, only requiring one criteria to be met means

[25] Wildland Consultants (2013). *Guidelines for the Application of Ecological Significance Criteria for Indigenous Vegetation and Habitats of Indigenous Fauna in Canterbury Region.* Report No. 2289i. Prepared for Environment Canterbury, June 2013.

[26] Environment Canterbury Regional Council (2013). Canterbury Regional Policy Statement 2013.

[27] The West Coast Regional Council (2020). West Coast Regional Policy Statement.

[28] Environment Southland Regional Council (2017). Southland Regional Policy Statement 2017.

the threshold for significance is low. Generally, there has been a trend nationally for ecological significance criteria in second generation Regional Policy Statements to include lower thresholds for areas to be identified as significant.

63. In my experience with similar criteria, many areas of indigenous (and exotic) vegetation types and habitats in Otago will be significant under the criteria in APP2. Dr Thorsen has provided an analysis of the likely extent of significant natural areas within the Otago Region using the significance criteria in APP2 in paragraphs 29 to 48 of his evidence.

64. This has important implications for the application of policies and rules in the ECO Chapter the pORPS and in particular, the strong policy direction in ECO-P3 to first avoid any reduction of the area or indigenous biodiversity values of significant natural areas, or loss of taoka values. This will have substantial implications for new activities such as mineral extraction where there is a functional or operational need for the activity to be in a particular location, there is limited ability to avoid SNAs and no ability to access the effects management hierarchy in ECO-P6. Dr Thorsen has assessed, and describes, the impact of these policies on future Oceana Gold mine activities in paragraphs 60 to 63 of his evidence.

65. In contrast to the pORPS, the provisions in other second generation Regional Policy Statements address the consequences of setting a low significance threshold by ensuring that activities that may not be able to avoid adverse effects on SNAs are able to access the full effects management hierarchy, including consideration of biodiversity offsetting and compensation, to achieve no net loss of (or a net gain in) biodiversity within SNAs. For example:

66. Policy 9.3.1 (3) of the Canterbury Regional Policy Statement states that:

    "Areas identified as significant will be protected to <u>ensure no net loss</u> of indigenous biodiversity or indigenous biodiversity values as a result of land use activities." (my emphasis).

BIODIVERSITY OFFSETTING AND COMPENSATION

67. In this section I comment on the proposed approach for offsetting in APP3 of the pORPS.

Criteria or Principles

68. APP3 and APP4 provide 'criteria' for biodiversity offsetting and biodiversity compensation, respectively. Clauses 1 (a) – (e) of APP3 and Clause 1 (a) – (e) of APP4 set out situations where biodiversity offsetting will not be available.

69. Mr Christensen discusses the development of the principles of biodiversity offsetting and compensation in detail in paragraphs 108 to 125 of his evidence and considers how the principles have been applied in New Zealand. He concludes that APP3 and APP4 in the pORPS are inconsistent with the way the principles have been developed because they confuse the principles by referring to them as 'criteria' that 'must be met' in order to 'qualify' as an offset. I agree with Mr Christensen that the use of 'offsetting principles' are more appropriate as they allow for offsetting proposals to be considered on their merits at the consenting stage.

70. I do agree that there should be limits to when offsetting is available. It is widely accepted that there are situations where biodiversity offsets will not be appropriate or possible due to the important biodiversity values present at the site and an unacceptably high risk of permanent and irreplaceable loss of those values if an offset is not successful. In such cases, where no net loss cannot be confidently predicted or demonstrated, a biodiversity offset will not be an appropriate mechanism to address a project's adverse effects. 'Limits to offsetting' is a Biodiversity and

Biodiversity Offsets Programme (BBOP) principle[29] and limits to offsets have been incorporated into national biodiversity offsetting guidelines for New Zealand [30,31].

71. Mr Christensen discusses the principle of limits to offsets in detail in paragraphs 126 to 172 of his evidence. He concludes that the approach taken in the pORPS to use 'criteria' rather than principles is inconsistent with best practice. I agree with Mr Christensen, where in paragraph 165 of his evidence, he considers Clause 1 of APP3 to be unreasonably restrictive, to the point that it potentially undermines the objective of proposing a biodiversity offset. In my opinion, a better approach would be to amend APP3 so that it sets out the principles or framework for considering the adequacy and appropriateness of a proposed offset.

Clause 1: When biodiversity offsetting is not available.

72. Clause 1 (a) – (e) of APP3 of the pORPS sets out a list of five situations where biodiversity offsetting will not be available:

> *Biodiversity offsetting is not available for an activity that will result in:*
>
> *(a) the loss from an ecological district 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) 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)*

[29] BBOP: Principle 2: "**Limits to what can be offset:** There are situations where residual impacts cannot be fully compensated for by a biodiversity offset because of the irreplaceability or vulnerability of the biodiversity affected".

[30] Guidance on Good Practice Biodiversity Offsetting in New Zealand (Section 4.2).

[31] Maseyk et al. (2018). *Biodiversity Offsetting under the Resource Management Act: A guidance document.*

(c) *the worsening of the conservation status of any indigenous biodiversity as listed under the New Zealand Threat Classification System (Townsend et al, 2008); or*

(d) *the removal or loss of viability of a naturally uncommon ecosystem type that is associated with indigenous vegetation or habitat of indigenous fauna; or*

(e) *the loss (including cumulative loss) of irreplaceable or vulnerable indigenous biodiversity.*

73. In the following paragraphs I provide more specific discussion on the appropriateness of Clause 1 in APP3.

74. Under Clause 1 (a) offsetting would not be available if the activity resulted in "*the loss from an ecological district of <u>any</u> individuals of Threatened taxa"* (my emphasis).

75. This clause would mean that biodiversity offsetting would not be available if a proposal resulted in the death of even one Threatened taxa. In my view, this appears to be a very stringent clause that is likely to mean biodiversity offsetting is not available in many circumstances that could result in better outcomes for indigenous biodiversity, and for the Threatened taxa concerned.

76. Because this clause is a criteria that must be met, it precludes the ability to implement an offset proposal that could result in a better outcome for threatened taxa, including indigenous plants through a number of methods including translocation, propagation, and herbivore control, and for indigenous fauna through offsetting actions such as habitat creation, translocation and predator control.

77. I have previously been involved in a proposal to quarry aggregate from a golf course at Templeton, on the outskirts of Christchurch on a site immediately adjacent to an existing aggregate quarry. The golf course is a modified and intensively managed environment but it retains scattered individual indigenous plants, including small numbers of individuals of two Threatened plant taxa; turnip-rooted geranium (*Geranium retrorsum*) and leafless pohuehue (*Muehlenbeckia ephrodroides*). The

proposal was to quarry the Templeton Golf Course, backfill and remediate the existing quarry next door and establish a dry plains conservation area there, as well as implementing a biodiversity offset to protect and enhance nearby indigenous dry plains grassland ecosystems. As part of work undertaken to reduce the uncertainty of the success of the proposed offset we trialled the propagation of both Threatened plant taxa. Both species were found to be very easy to propagate. The client decided not to progress this proposal further, but in my view, this proposal would have resulted in better outcomes for both Threatened plant taxa. Under the pORPS APP3 such a proposal could not be considered.

78. Mr Christensen also considers the appropriateness of the reference to the loss of individuals in paragraphs 162 to 163 of his evidence and compares the pORPS's position with the West Coast RPS and the NPS-IB Exposure Draft.

79. Under clause 1 (b), offsetting would not be available if the activity resulted in "*measurable loss within an ecological district to an At Risk-Declining taxon*"[32]. In my view the words "*measurable loss*" are problematic because the meaning of 'measurable loss' is unclear. Arguably, the loss of one individual At Risk-Declining taxa is measurable. If interpreted in this way, this clause would be unworkable. In my view, the intention of this wording is to preclude biodiversity offsetting where an activity would result in a meaningful loss of an At Risk-Declining taxa at the population level. If this clause is to be retained, use of "*measurable loss*" must be defined or clarified.

80. Under clause 1 (c), offsetting would not be available if the activity resulted in *"the worsening of the conservation status of any indigenous biodiversity as listed under the New Zealand Threat Classification System".* Presumably this means that the

[32] With the exception of manuka (*Leptospermium scoparium*).

activity would have an impact on the population of a nationally Threatened or At Risk species to the extent that it would result in the threat classification of that taxon being downgraded. If clause 1 (c) is to be retained in APP3, in my view this clause is reasonable, as the activity would be having a notable impact on a taxon's population at a national level.

81. Clause 1 (d) refers to "*the removal or loss of viability of a naturally uncommon ecosystem type that is associated with indigenous vegetation or habitat of indigenous fauna;*…"

82. The scale at which this clause applies is not stated and should be clarified. Because it is not stated, I have presumed that it refers to the removal or loss *of a naturally uncommon ecosystem type* at the scale of an individual feature or features, rather than loss at for example, the scale of the ecological district. While some naturally uncommon ecosystems, for example estuaries, can be extensive, others can be very small. For example, seepages and flushes, and boulderfields can cover only tens of metres and some naturally uncommon ecosystems can be widespread on some landforms. Further, some naturally uncommon ecosystems that support indigenous vegetation or habitat of indigenous fauna are often highly modified. This clause could create substantial challenges for some types of infrastructure such as roads and mines. Not allowing offsetting to be available because of the removal or loss of viability of one these features is in my view overly stringent, particularly when there may be viable methods for offsetting their loss or a reduction in their viability.

83. Clause 1 (e) is worded as follows "*the loss (including cumulative loss) of irreplaceable or vulnerable indigenous biodiversity*". This clause is similar to Principle 2(a) in Appendix 3 of the NPS-IB Exposure Draft and the BBOP Principle 'Limits to what can be offset' and recognises that there are situations where residual impacts cannot be fully compensated for by a biodiversity offset because of the irreplaceability or vulnerability of the biodiversity affected. I support the inclusion of clause 1 (e) in

APP3 because it aligns with national and international offsetting principles. As a broad principle, it means that the specific sub-clauses 1 (a) – (d) of APP3 become redundant because they are covered by clause 1(e).

84. The author of the Appendix 10c report[33] states, in relation to clause 1 of APP3, that "*the NPS-IB criteria refer to the 'vulnerability and irreplaceability' of biodiversity, which the bottom lines in APP3 (1) make more specific for Otago*". I do not agree that clause 1, or any of its sub-clauses, make the bottom lines in APP3 (1) more specific for Otago. All would apply equally well to any other region in New Zealand.

85. Clause (2)(h) requires that "*the outcome of the offset is achieved within the duration of the resource consent*". In my view this clause is unrealistic, particularly for activities of short duration where an applicant may be willing to commit to a longer-term offset to achieve better biodiversity outcomes. This clause is also likely to preclude offsetting as an impact management option for habitats or ecosystems such as mature podocarp forest where long timeframes are required to achieve the end outcome. It is also likely to preclude long-termer projects that have the potential to result in greater biodiversity gains. Long-term outcomes can be achieved through the setting, monitoring and review provisions contained within resource consent conditions (including resource consent renewals) and binding mechanisms such as bonds and covenants (including placement of a covenant on the record of title) can be used to ensure outcomes are secured beyond the duration of a resource consent. I prefer the wording used in Appendix 3 of the NPS-IB Exposure draft: *"Biodiversity offsets are managed to secure outcomes of the activity that last at least as long as the impacts, and preferably in perpetuity"*. This wording is better aligned to BBOP Principle 8: *"….with the objective of securing outcomes that last at least as long as*

[33] At Section 3.7, page 10.

the project's impacts and preferably in perpetuity". It also recognises the preference for biodiversity offsetting outcomes to be secured in perpetuity.

APP3 and the NPSIB Exposure Draft and NPS-FM Exposure Draft

86. With the exception of Clause 1, APP3 is broadly similar to Appendix 6 of the NPS-FM Exposure Draft and the NPS-IB Exposure Draft.

87. To date, the commonly stated goal of biodiversity offsets is to achieve "*no net loss and preferably a net gain of biodiversity*"[34]. APP3 of the pORPS and Appendix 6 of the NPS-FM Exposure Draft both require an offset to achieve no net loss and preferably a net gain. The Exposure Draft NPS-IB requires an offset to achieve a net gain. Given the state of New Zealand's biodiversity, I consider that a requirement to achieve net gain of indigenous biodiversity, rather than 'no net loss and preferably a net gain' is more appropriate. In reality, because of the degree of uncertainty built into biodiversity offsetting calculations and / or evaluations, in most cases ecologists conservatively build a 'buffer' into offsetting proposals, effectively ensuring the goal of a proposal is to achieve a net gain.

88. The only other major difference between APP3 and the NPS-IB and NPS-FM Exposure Drafts is that stakeholder participation is included as a principle in both the NPS-IB and NPS-FM Exposure Drafts but is not included in APP3. While stakeholder participation is one of the BBOP Principles[35] in my view it would not be appropriate to include it as a 'criteria' as APP3 is currently framed.

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[34] For example BBOP Principle 4: "No net loss: A biodiversity offset should be designed and implemented to achieve in situ, measurable conservation outcomes that can reasonably be expected to result in no net loss and preferably a net gain of biodiversity." (my emphasis)

[35] BBOP Principle 6: "Stakeholder participation: In areas affected by the project and by the biodiversity offset, the effective participation of stakeholders should be ensured in decision-making about biodiversity offsets, including their evaluation, selection, design, implementation and monitoring."

89. In paragraphs 170 to 172 of his evidence Mr Christensen recommends amending APP3 so that it sets out the principles or framework for considering the adequacy and appropriateness of a proposed offset, and links that to the application of the effects management hierarchy in the same manner as is proposed in the 2022 NPS-FM Exposure Draft. He sets out his recommended changes in Appendix 4 of his evidence. I agree with this approach because it allows full consideration of the merits of a proposal rather than disallowing offsetting because of predetermined 'limits', irrespective of the ecological merits of the proposed offset.

APP4: Criteria for Biodiversity Compensation

90. In this section I consider the proposed approach for biodiversity compensation in APP4 of the pORPS.
91. Similar to APP3, clause (1) (a) – (e) of APP4 sets out situations in which biodiversity compensation would not be available. As I have noted above in relation to APP3, and as Mr Christensen has noted in paragraph 197 of his evidence, in my view, the approach in APP4 which directs that a decision-maker can only consider biodiversity compensation which is defined by way of specific criteria is not as useful as a provision which defines biodiversity compensation in terms of its purpose and then provides a framework of principles against which the appropriateness of any proposed compensation can be assessed.
92. In the following paragraphs I provide more specific discussion on the appropriateness of the clauses in APP4.
93. Biodiversity compensation would not be available under clause (1)(b) for an activity that will result in *"removal or loss of viability of the habitat of a Threatened indigenous species of fauna or flora…".*. My primary concern with this sub-clause is that its prescriptive nature means that where compensation actions may result in net gains for Threatened indigenous fauna or flora (and their habitats) they will not be able to

be considered as part of a consent application. This clause is also problematic because an ecologist will be required to assess, and make a determination on, whether an activity will result in a "*loss of viability"* of the habitat. Determining the threshold at which the viability of the habitat of a Threatened indigenous species of fauna or flora has been lost, and when compensation is therefore unavailable is likely to be subjective and is also likely to be highly variable depending on the Threatened taxa and the type of habitat. Secondly, many Threatened fauna are highly mobile. How would this clause be applied to low quality habitats that are used irregularly or seasonally by Threatened indigenous species?

94. Similarly to clause (1)(b), the words "*loss of health and resilience*" in clause (1)(c) are problematic because an ecologist will be required to assess, and make a determination on, whether an activity will result in the "*loss of health and resilience"* of a naturally uncommon ecosystem type. Again, determining the threshold at which *health and resilience* has been lost and when compensation is therefore unavailable is likely to be subjective. In addition to this, as I discussed earlier in relation to a similar criteria in APP3, some naturally uncommon ecosystems can be very small, extensive and modified. This clause could similarly create substantial challenges for consenting some activities when there are naturally uncommon ecosystems of low ecological value where offset or compensation actions could achieve a better overall outcome for indigenous biodiversity.

95. As I have already discussed in paragraph 82 of my evidence, in relation to APP3 of the pORPS, I support the intent of clause 1 (e) because it recognises that there are situations where residual impacts cannot be fully compensated for because of the irreplaceability or vulnerability of the biodiversity affected. As discussed earlier, I prefer the inclusion of this clause 1 as a principle rather than a criteria.

96. My earlier comment in paragraph 84 in relation to clause (2)(h) of APP3 that "*the outcome of the offset is achieved within the duration of the resource consent*" also applies to clause (2)(f) of APP4.

CONCLUSION

97. The intent of ECO-P2 is broadly consistent with national guidance. For simplicity purposes I have recommended a minor amendment to the wording of this policy.
98. Together, ECO-P3 and ECO-P4, as proposed in the October version of the pORPS, will mean that some new activities, including new mineral extraction activities where there is a functional or operational need for the activity to be in that particular location, will not be able to proceed within significant natural areas even though application of the effects management hierarchy could result in net gains for indigenous biodiversity. These policies are inconsistent with other second generation Regional Policy Statements and the NPS-IB Exposure Draft.
99. The significance criteria for indigenous biodiversity in APP2 are in most respects similar to criteria in other operative second generation Regional Policy Statements. In my experience with similar significance criteria many areas of indigenous (and exotic) vegetation types and habitats in Otago will be significant under these criteria. This has important implications for the application of policies and rules in the ECO Chapter and in particular, the strong policy direction in ECO-P3 to first avoid any reduction of the area or indigenous biodiversity values of SNAs, or loss of taoka values. This will have substantial implications for activities such as mining where there is a functional or operational need for the activity to be in a particular location and there is limited ability to avoid SNAs.
100. APP3 and APP4 provide ‘criteria’ for biodiversity offsetting and biodiversity compensation, respectively. In my view, a better approach would be to amend APP3 and APP4 so they set out the principles or framework for considering the

adequacy and appropriateness of offsetting and compensation proposals at the consenting stage. In particular, Clauses 1 (a) – (e) of APP3 and Clause 1 (a) – (e) of APP4, which set out situations where biodiversity offsetting will not be available, will mean that biodiversity offsetting and compensation are not available in circumstances where they could result in better outcomes for indigenous biodiversity.

Dated this 23rd day of November 2022

Scott Hooson