EVIDENCE OF FELICITY ANN BOYD

FPI – IMPLICATIONS OF THE NPSIB

Qualifications and Experience

1 My qualifications and experience are set out in paragraphs 37 to 40 of my section 42A report on the Freshwater Planning Instrument (FPI) parts of the Proposed Otago Regional Policy Statement (pORPS) dated 2 June 2023.

Code of Conduct

2 I have read and agree to comply with the Environment Court's Code of Conduct for Expert Witnesses, contained in the Environment Court Practice Note 2023. I have complied with the Code in preparing my evidence. Other than where I state that I am relying on the advice of another person, I confirm that the issues addressed in this statement of 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.

Scope of Evidence

3 In its Minute 7, the Freshwater Hearing Panel directed ORC to provide evidence and supporting submissions on the implications of the NPSIB on freshwater issues by 11 August 2023. At the same time, in its Minute 15, the Non-Freshwater Hearing Panel directed ORC to provide evidence and supporting submissions on the implications of the NPSIB on non-freshwater issues by 8 September 2023.

4 The scope of the NPSIB (explained in paragraphs 19 to 24) means it has limited implications for fresh water. The main impacts are on the management of natural inland wetlands. The relevant provisions in the pORPS for natural inland wetlands are split across the FPI and non-FPI parts. Given their interrelationship, and the importance of preparing an integrated response, I have addressed the suite of provisions from both parts of the pORPS in this statement.

5 This supplementary statement of evidence outlines:

5.1 the introduction of the National Policy Statement for Indigenous Biodiversity 2023 (NPSIB), its application, and its relationship with other national directions;

5.2 the impacts of any relevant provisions in the NPSIB to the pORPS insofar as they relate to fresh water; and

5.3 updates my previous recommendations on pORPS provisions as a result of the introduction of the NPSIB.

6 In summary, the amendments I am recommending in response to the NPSIB are:

6.1 Amending the definition of 'natural wetland' and introducing a new definition of 'natural inland wetland';

6.2 Amending LF-FW-P8 and LF-FW-P9 to reflect the amended and new definitions above; and

6.3 Including additional direction in LF-FW-P9 for wetlands that are not 'natural inland wetlands' to address a gap in both the NPSFM and NPSIB.

7 The majority of the NPSIB will be implemented through the non-FPI provisions (primarily the ECO chapter). Evidence on those provisions is not due until 8 September. Additional changes to the provisions I discuss in this statement may be required as a result of any amendments recommended through that evidence. If necessary, I will file an additional statement of evidence on 8 September which incorporates this analysis.

8 Where I have recommended additional amendments to provisions, my recommendations are shown in addition to my original section 42A (for FPI) or reply report (for non-FPI) recommendations. All of these recommendations are contained in the version of the pORPS attached to my FPI s42A report dated 2 June 2023. The key below sets out how these different recommendations are shown.

Key to proposed amendments

Appearance	Explanation
Black text	Text as notified.
Black text with underlining or ~~strikethrough~~	Amendments recommended in section 42A report (for FPI provisions) or reply report (for non-FPI provisions).
Text with ~~black underlining and green strikethrough~~	Amendments recommended in section 42A report (for FPI provisions) or reply report (for non-FPI provisions) that I now recommend deleting.
Green text with underlining or ~~strikethrough~~	Additional amendments recommended in this statement.

9 The scope for all proposed amendments is included as a footnote in the amended provisions.

National Policy Statement for Indigenous Biodiversity 2023 (NPSIB)

10 The NPSIB was gazetted on 7 July 2023 and came into force on 4 August 2023. The NPSIB is a response to biodiversity decline in New Zealand and provides direction to councils on protecting, maintaining, and restoring indigenous biodiversity. Overall, it requires, at a minimum, no further reduction of indigenous biodiversity nationally.

11 Part 1 of the NPSIB contains preliminary provisions, and definitions for words and terms used in the NPSIB. Part 2 of the NPSIB contains the objective and policies. The objective of the NPSIB is:

> *(a) to maintain indigenous biodiversity across Aotearoa New Zealand so that there is at least no overall loss in indigenous biodiversity after the commencement date; and*
>
> *(b) to achieve this:*
>
> > *(i) through recognising the mana of tangata whenua as kaitiaki of indigenous biodiversity; and*
> >
> > *(ii) by recognising people and communities, including landowners, as stewards of indigenous biodiversity; and*
> >
> > *(iii) by protecting and restoring indigenous biodiversity as necessary to achieve the overall maintenance of indigenous biodiversity; and*
> >
> > *(iv) while providing for the social, economic, and cultural wellbeing of people and communities now and in the future.*

12 Seventeen policies give effect to the objective. The policies address a range of matters, including:

12.1 Direction on decision-making priorities, the principles of the Treaty of Waitangi, mana whenua exercise of kaitiakitaka, and adopting a precautionary approach (Policies 1, 2 and 3);

12.2 Requiring management of indigenous biodiversity to promote resilience to the effects of climate change and to occur in an integrated way (Policies 4 and 5);

12.3 The identification and protection of significant natural areas (SNAs) and management of activities within SNAs (Policies 6, 7, and 9)

12.4 Maintaining indigenous biodiversity outside SNAs, including by recognising and providing for certain established activities (Policies 8 and 9);

12.5 Recognising and providing for activities that contribute to New Zealand's social, economic, cultural, and environmental well-being (Policy 10);

12.6 Specific direction for managing geothermal SNAs and indigenous biodiversity within plantation forestry (Policies 11 and 12);

12.7 Promoting and providing for restoration of indigenous biodiversity, including promoting increased indigenous vegetation cover in urban and non-urban environments (Policies 13 and 14);

12.8 Identifying and managing areas outside SNAs that support specified highly mobile fauna and improving information about and awareness of them (Policy 15); and

12.9 Requiring development and implementation of regional biodiversity strategies, and improving information about and monitoring of indigenous biodiversity (Policies 16 and 17).

13 Part 3 of the NPSIB sets out a non-exhaustive list of things local authorities must do to give effect to the objective and policies. Clause 3.1(2) states that nothing in Part 3 limits a local authority's functions or duties under the Act in relation to indigenous biodiversity.

14 Part 3 broadly aligns with the policies in Part 2 and provides further detail on how these policies must be implemented. It has three parts:[1]

14.1 Subpart 1 – Approaches to implementing [the NPSIB];

14.2 Subpart 2 – Significant natural areas (SNAs); and

14.3 Subpart 3 – Specific requirements.

15 Subpart 1 contains direction on 'how' to implement the NPSIB, including the role of decision-making principles; involving tangata whenua as partners; taking an integrated approach; social, economic, and cultural well-being, resilience to climate change; and use of a precautionary approach.

16 Subpart 2 sets out how to identify and manage SNAs. It includes specific direction on how to manage the adverse effects of activities on SNAs, exceptions to that direction, management of SNAs on specified Māori land, and geothermal SNAs. It also sets out how indigenous biodiversity outside SNAs is to be managed, including the maintenance of improved pasture for farming.

17 Subpart 3 sets out additional specific requirements for particular areas or topics, including specified Māori land; acknowledged and identified taonga; highly mobile fauna; restoration; increasing indigenous vegetation cover; the preparation of regional biodiversity strategies; and information and monitoring requirements.

18 Part 4 addresses timing, both generally and for implementing specific parts of the NPSIB.

Application of the NPSIB

19 Clause 1.3 states that the NPSIB applies to indigenous biodiversity in the terrestrial environment, which is defined as (my emphasis added):

> *land and associated natural and physical resources above mean high-water springs,* ***excluding land covered by water, water bodies and freshwater ecosystems*** *(as those terms are used in the National Policy Statement for Freshwater Management 2020) and the coastal marine area*

[1] Clause 3.1(3), NPSIB

20 This considerably limits the application of the NPSIB with respect to the FPI provisions, as the latter have been identified on the basis that they relate directly to the maintenance or enhancement of the quality or quantity of fresh water in accordance with s80A of the RMA.

21 However, there are exceptions listed in clause 1.3(2), meaning that despite potentially locating outside terrestrial environments they are managed, at least in part, by the NPSIB:

21.1 Geothermal ecosystems, whether or not they are in the terrestrial environment (but excluding any within the coastal marine area);

21.2 Specified highly mobile fauna, whether or not they use areas outside the terrestrial environment (such as the coastal marine area or water bodies) for part of their life cycle;

21.3 Provisions relating to promoting restoration and increasing indigenous vegetation cover include natural inland wetlands;

21.4 Regional biodiversity strategies may include areas outside the terrestrial environment, including the coastal marine area and water bodies; and

21.5 If an SNA contains a natural inland wetland, the wetland may be treated as part of the SNA it is located in.

22 Some of these exclusions are relevant to the pORPS and some are not. There are no known geothermal ecosystems in Otago, therefore this exclusion is not relevant.

23 'Specified highly mobile fauna' is defined as the Threatened or At Risk species of highly mobile fauna identified in Appendix 2 of the NPSIB. Appendix 2 contains a number of species that spend part of their life cycle in freshwater environments and are known to be present in Otago. This exclusion is therefore relevant.

24 The pORPS contains provisions managing natural wetlands, which includes natural inland wetlands. The NPSIB provisions relating to increasing indigenous vegetation cover in natural inland wetlands, and their inclusion in SNAs, are therefore relevant.

25 Regional biodiversity strategies must be prepared in accordance with Appendix 5 by regional councils and local authorities must have regard to the relevant strategy when developing restoration objectives, policies, and methods for regional policy statements and plans. The preparation of this strategy is a separate matter from the pORPS. The extent to which the pORPS may need to be amended in accordance with the NPSIB will depend on the content of the strategy.

26 Clause 1.3(3) states that the NPSIB does not apply to the development, operation, maintenance, or upgrade of renewable electricity generation assets and activities, or to electricity transmission network assets and activities.

Relationship with other national directions

27 Clause 1.4 states the relationship between the NPSIB and other national directions, including that:

27.1 Both the NPSIB and the New Zealand Coastal Policy Statement (NZCPS) apply in the terrestrial coastal environment;

27.2 If there is a conflict between the NPSIB and the NZCPS, the NZCPS prevails; and

27.3 If there is a conflict between the NPSIB and either the National Policy Statement for Freshwater Management (NPSFM) or the National Environmental Standard for Freshwater (NESF), the NPSFM and/or NESF prevail.

Council's obligation to implement the NPSIB

28 Clause 4.1 of the NPSIB sets out when the NPSIB takes effect and states that:

(1) Every local authority must give effect to this National Policy Statement as soon as reasonably practicable.

(2) Local authorities must publicly notify any changes to their policy statements and plans that are necessary to give effect to this National Policy Statement within eight years after the commencement date.

29 There are specific timeframes for the following activities:

29.1 Local authorities must publicly notify a policy statement or plan, or change, necessary to give effect to subpart 2 (SNAs) and clause 3.24 (information requirements) within five years after the commencement date of the NPSIB (i.e. 4 August 2028); and

29.2 Regional councils must complete or update a new or existing biodiversity strategy within ten years after the commence date of the NPSIB (i.e. 4 August 2033).

30 The NPSIB does not contain any compulsory direction that must be included in a regional policy statement without a Schedule 1 process.

31 Clause 4.4 states that local authorities are not obliged to make changes to wording or terminology in existing plans merely for consistency with the NPSIB, however the onus is on the local authorities to show that, despite these differences, the policy statement or plan does implement the NPSIB.

32 Minor wording or terminology changes for consistency can be made to *operative* plans only, in accordance with clause 20A (which does not require a Schedule 1 process).

33 In accordance with section 62(3) of the Resource Management Act, a regional policy statement must give effect to a national policy statement. Usually, and for the non-FPI provisions Because the NPSIB has been introduced 'mid-process', the extent to which the FPI can give effect to the NPSIB is confined by the scope of the submissions lodged that seek changes to the FPI provisions.

34 The following sections focus on four topics within the scope of the NPSIB which are relevant to the FPI:

34.1 Highly mobile fauna;

34.2 Natural inland wetlands;

34.3 Considering natural inland wetlands as part of SNAs, and

34.4 Effects management hierarchies.

Highly mobile fauna

35 Clause 1.3 states that specified highly mobile fauna are covered by the NPSIB, whether or not they use areas outside the terrestrial environment

(such as the coastal marine area or water bodies) for part of their life cycle and refers readers to clause 3.20.

36 Clause 3.20 has four clauses with different requirements. Clause 3.20(1) requires, where information about areas used by specified highly mobile fauna is available, recording any areas outside SNAs that are 'highly mobile fauna areas' by working together with stakeholders. This does not need to occur within a policy statement or plan and, given it requires collaboration with others, cannot be implemented through the pORPS given its late stage.

37 However, some of this work will occur as part of implementing the NPSFM. Specified highly mobile fauna are listed in Appendix 5 of the NPSIB and are a mixture of birds and bats that are either Threatened or At Risk. It does not contain any fish species. For each species, the ecosystems within which they occur are listed, being either coastal/riverine, wetland/riverine, riverine, or forest/open. Species locating within the first three ecosystem types are likely to be relevant to freshwater management generally.

38 The NPSFM requires regional councils to identify, within each freshwater management unit (FMU), the location of habitats of threatened species.[2] 'Threatened species' are defined in the NPSFM as:

> *…any indigenous species of flora or fauna that:*
>
> *(a) relies on water bodies for at least part of its life cycle; and*
>
> *(b) meets the criteria for nationally critical, nationally endangered, or nationally vulnerable species in the New Zealand Threat Classification System Manual (see clause 1.8).*

39 'Threatened species' is also one of the compulsory values that must be identified in every FMU. That value is described as:

> *… the extent to which an FMU or part of an FMU that supports a population of threatened species has the critical habitats and conditions necessary to support the presence, abundance, survival, and recovery of the threatened species. All the components of ecosystem health must be managed, as well as (if appropriate) specialised habitat or conditions needed for only part of the life cycle of the threatened species.*

40 Work to implement these requirements is underway as part of the development of the LWRP, including engagement with communities. There

[2] Clause 3.8(3)(c), NPSFM

is overlap between the NPSFM's 'threatened species' and the NPSIB's 'specified highly mobile fauna'. The key difference is that the former is restricted to the 'Threatened' threat classification whereas the latter includes both Threatened and At Risk threat classifications.

41 I consider that the specified highly mobile fauna species considered Threatened, and their habitats within freshwater environments, are likely to be managed by implementing the NPSFM requirements above. However, this work will not address At Risk species or those species that do not spend part of their life cycle in freshwater environments. Further work will be needed to determine whether managing the habitats of these species would be helped by including a map and description of relevant areas in Otago in the pORPS in accordance with clause 3.20(2) of the NPSIB.

42 Clause 3.20(2) follows on from subclause (1) and states that:

> *If it will help manage adverse effects on specified highly mobile fauna, regional councils must include in their regional policy statements (where practicable) a map and description of each highly mobile fauna area in the region.*

43 The work to implement the NPSFM through the LWRP will include identifying and/or describing some of these areas (for Threatened species). It will likely not be necessary to repeat this by also including it in the pORPS. However, again, further work will need to be undertaken on At Risk species to determine how to implement this direction.

44 Clause 3.20(3) requires local authorities to include objectives, policies, or methods in their policy statements and plans for managing the adverse effects of new subdivision, use, and development on highly mobile fauna areas. There are provisions across the LF and ECO chapters in the pORPS that manage, in a general sense, indigenous biodiversity and some of the likely habitats of these species but they are not specifically identified or managed separately. Again, I consider that some of this will be implemented through the LWRP but will also rely on the identification of these areas having happened in accordance with clause 3.20(1). I note that this clause also applies to territorial authorities, who are responsible for managing subdivision and land use, which means it is not solely a regional council responsibility.

45 Clause 3.20(4) requires local authorities to provide information to their communities on highly mobile fauna, their habitats, and management approaches. This can, and should, be implemented outside the pORPS so that information can be updated and refined as our understanding of these species and their habitats develops.

46 In summary, while clause 3.20 is applicable to the pORPS, it is not able to be implemented in full at this time. The requirements will likely be implemented in part through the development of the LWRP, however the remaining requirements will need to be progressed at a later stage.

Natural inland wetlands

47 The NPSIB is clear that some of its provisions apply to natural inland wetlands.

48 My fourth statement of supplementary evidence[3] on the non-FPI part of the pORPS canvassed the management of wetlands in detail and provides important context for this statement of evidence. I have recommended that the pORPS use the term 'natural wetland' rather than 'natural inland wetland'; however, the former incorporates the latter.

49 The provisions managing natural wetlands (and therefore natural inland wetlands) are in both the FPI and non-FPI parts. LF-FW-O9 sets out the primary objective for natural wetlands and policies LF-FW-P8, LF-FW-P9 and LF-FW-P10 set out how natural wetlands are to be identified, protected, and restored (respectively).

50 In response to submissions on LF-FW-P13 (which relates to the natural character of rivers and lakes), I have recommended including a new policy LF-FW-P13A setting out the effects management hierarchy to be followed for both natural wetlands and rivers, in accordance with the NPSFM. That policy therefore links provisions in the FPI and non-FPI processes.

51 All of these provisions are underpinned by the definition of 'natural wetland.' Although that provision is not within the scope of the FPI, it determines the scope and application of some FPI provisions (namely LF-FW-P9 and LF-FW-P10). I have addressed all relevant provisions for natural inland wetlands in this statement, regardless of which part of the pORPS they are

[3] Fourth brief of supplementary evidence of Felicity Ann Boyd – LF (NPSFM amendments) dated 24 February 2023, paras 19-62

in, because I do not consider it would be helpful to attempt to address them separately.

Increasing indigenous vegetation cover

52 Clause 1.3(2)(c) of the NPSIB states that provisions relating to increasing indigenous vegetation cover extend to include natural inland wetlands and refers readers to clause 3.22. That clause requires regional councils to:

52.1 assess the percentage of indigenous vegetation cover in each of its urban and non-urban environments using desktop analysis, ground-truthing, or both, and must do so in collaboration with relevant territorial authorities and tangata whenua (to the extent they wish to be involved);

52.2 set a target of at least 10% cover for any urban or non-urban environment that has less than 10% indigenous vegetation cover and, in consultation with tangata whenua and territorial authorities, consider setting higher targets for areas that already have at least 10% cover; and

52.3 include any indigenous vegetation cover target in their regional policy statements.

53 Local authorities must then promote the increase of indigenous vegetation cover by including objectives, policies, and methods in their policy statements and plans, having regard to any targets and giving priority to:

53.1 areas listed in clause 3.21(2) (discussed separately below);

53.2 ensuring indigenous species richness appropriate to the ecosystem;

53.3 restoration at a landscape scale across the region; and

53.4 using species, and seed for species, that are local to the area.

54 Clause 3.22 applies to indigenous vegetation cover generally, including within the cover that occurs within natural inland wetlands but also other areas.

55 Implementing clause 3.22 will require a programme of work that is not possible to progress through the pORPS. When that work is undertaken, it

needs to include natural inland wetlands in the assessments of, and development of targets for, indigenous vegetation cover. However, at this stage, I do not consider any amendments to FPI provisions are required as the NPSIB requirements will need to be met when that work is undertaken.

Promoting restoration

56 Clause 1.3(2)(c) of the NPSIB states that provisions relating to promoting restoration extend to include natural inland wetlands and refers readers to clause 3.21. The relevant parts of clause 3.21 are:

> ***Clause 3.21 Restoration***
>
> *(1) Local authorities must include objectives, policies, and methods in their policy statements and plans to promote the restoration of indigenous biodiversity, including through reconstruction of areas.*
>
> *(2) The objectives, policies, and methods must prioritise all the following for restoration:*
>
> *(a) SNAs whose ecological integrity is degraded:*
>
> *(b) threatened and rare ecosystems representative of naturally occurring and formerly present ecosystems:*
>
> *(c) areas that provide important connectivity or buffering functions:*
>
> *(d) natural inland wetlands whose ecological integrity is degraded or that no longer retain their indigenous vegetation or habitat for indigenous fauna:*
>
> *(e) areas of indigenous biodiversity on specified Māori land where restoration is advanced by the Māori landowners:*
>
> *(f) any other priorities specified in regional biodiversity strategies or any national priorities for indigenous biodiversity restoration.*

57 Clause 3.21(2)(d) is directly relevant, however (a), (b), (c), (e), and (f) may also be relevant depending on the particular wetland, its condition, and its values. These clauses apply more broadly than natural inland wetlands and are implemented in the pORPS through the ECO provisions, which are the subject of supplementary evidence from Mr Maclennan.

58 LF-FW-P10 requires improving the ecosystem health, hydrological functioning and extent of natural wetlands that have been degraded or lost by requiring (to the greatest extent practicable):

58.1 an increase in the extent and condition of habitat for indigenous species;

58.2 the restoration of hydrological processes;

58.3 control of pest species and vegetation clearance; and

58.4 the exclusion of stock.

59 Clause 3.21(2)(d) requires *promoting* restoration of natural inland wetlands, whereas LF-FW-P10 requires *improvement* by implementing, to the greatest extent practicable, a series of specific actions which will improve both the extent and values of natural wetlands. In my view, LF-FW-P10 requires more than only 'promoting' restoration as required by clause 3.21(2)(d) – it requires action.

60 Clause 3.1 of the NPSIB states that nothing in Part 3 of the NPS limits the general obligation under the RMA to give effect to the objective and policies of the NPS. In my view, LF-FW-P10 gives effect to the objective which requires "protecting or restoring indigenous biodiversity as necessary to achieve the overall maintenance of indigenous biodiversity."[4] It also gives effect to Policy 13 which requires promoting and providing for restoration of indigenous biodiversity.

61 Despite this, I consider there is a significant issue with implementing clause 3.21(2)(d) in practice. That issue arises from the definition of 'natural inland wetland' in the NPSFM which underpins implementation of clause 3.21(2)(d) of the NPSIB, which also refers to 'natural inland wetlands'.

'Natural inland wetland' definition

62 The definition of "wetland" in section 2 of the Resource Management Act 1991 (RMA) is broad and captures wetlands with fresh water, coastal water, or both fresh and coastal water:

> ***wetland*** *includes permanently or intermittently wet areas, shallow water, and land water margins that support a natural ecosystem of plants and animals that are adapted to wet conditions.*

63 The term "natural inland wetland" used in the NESF and NPSFM refers to a subset of "wetlands" and is defined by the NPSFM as:[5]

[4] Clause 2.1(a)(b)(iii), NPSIB.
[5] Clause 3.21, NPSFM

natural inland wetland *means a wetland (as defined in the Act) that is not:*

(a) in the coastal marine area; or

(b) a deliberately constructed wetland, other than a wetland constructed to offset impacts on, or to restore, an existing or former natural inland wetland; or

(c) a wetland that has developed in or around a deliberately constructed water body, since the construction of the water body; or

(d) a geothermal wetland; or

(e) a wetland that:

(i) is within an area of pasture used for grazing; and

(ii) has vegetation cover comprising more than 50% exotic pasture species (as identified in the National List of Exotic Pasture Species using the Pasture Exclusion Assessment Methodology (see clause 1.8)); unless

(iii) the wetland is a location of a habitat of a threatened species identified under clause 3.8 of this National Policy Statement, in which case the exclusion in (e) does not apply

64 In my fourth statement of supplementary evidence on the non-FPI part of the pORPS,[6] I recommended including a definition of 'natural wetland' rather than 'natural inland wetland'. The definition I recommended was the same as that shown above but without subclause (a), meaning it applies to wetlands in the coastal marine area. In the pORPS, 'natural inland wetlands' are a subset of 'natural wetlands' which are themselves a subset of 'wetlands'.

65 Since the NPSFM was gazetted in 2020, ORC has progressed work to identify natural inland wetlands in accordance with clause 3.21 of the NPSFM. This was initially based on the definition of 'natural inland wetland' in the 2020 version but has recently been revised to follow the new definition and, in particular, to apply the pasture exclusion requirement introduced through the 2022 amendments (subclause (e) of the definition above). At a Council meeting on 26 July 2023, ORC staff provided an update on the identification process and advised the following:[7]

[6] Fourth brief of supplementary evidence of Felicity Ann Boyd – LF (NPSFM amendments) dated 24 February 2023, paras 19-62

[7] Item 8.4.3, ORC Council meeting on 26 July 2023, https://www.orc.govt.nz/media/14742/agenda-council-20230726.pdf

The guidelines[8] used for the mapping undertaken in financial years 2021-22 and 2022-23 were developed before the 'pasture exclusion' amendments were made to the NPSFM definition of "natural inland wetland" in December 2022 and there is a risk that the validity of the work may be challenged.

New tools have also been introduced to support the amended definition. The amendments and new tools will result in a substantial increase in the time and resources required to map wetlands due to the need for seasonally constrained field visits and special expertise. In addition to this, the changes to the NPSFM definition could result in the loss of protection for natural wetlands that were previously mapped and that are currently exhibiting significant natural wetland values.

As a test, a subset (~1%) of recently mapped natural wetlands in the Upper Taieri Scroll Plain were reassessed and the preliminary result suggests that nearly 50% of the previously mapped wetland area in the Scroll Plain will be identified as pasture and non-wetland area. This reassessment took six months of expert time and cost $150,000. In addition to the pasture exclusion assessment, the NPSFM also directs the use of the Wetland Delineation Protocols to delineate natural wetland in case of uncertainty or dispute about its existence or extent. In 2022-23, 20 out of 171 Regionally Significant Wetlands were delineated according to the protocol. This exercise took four months of expert time in the field and cost $45,000.

66 The advice above raises two issues. Firstly, it is not possible to know which wetlands are 'natural inland wetlands' without undertaking a seasonally constrained expert assessment on the ground. This is problematic for implementing any policy direction for natural inland wetlands, including in the NPSFM, NESF, NPSIB, and pORPS. As mapping of natural inland wetlands is not required to be completed until 2030, in the intervening period there is considerable uncertainty about where these documents apply. This increases the risk of loss of values and extent of wetlands, and also creates compliance and enforcement uncertainty for the public, landowners and the Council.

67 Secondly, from ORC's identification work to date, it appears that applying the exclusion for areas of pasture in the definition of 'natural inland wetland' will result in some areas previously identified as wetlands (including large

[8] Guidance to support the interpretation of the NPSFM and NESF https://environment.govt.nz/assets/publications/Defining-natural-wetlands-and-natural-inland-wetlands.pdf; Wetland mapping methods: proof of concept https://environment.govt.nz/publications/wetland-mapping-methods-proof-of-concept/

parts of important wetlands such as the Upper Taiari scroll plain) not meeting the definition of 'natural inland wetland' and therefore not being subject to any of the direction for that type of wetland in the NPSFM, NESF, or NPSIB. This affects the pORPS because the definition of 'natural wetland' I have recommended includes the same pasture exclusion. As above, this would mean none of the protective direction for 'natural inland wetlands' would apply to these areas. It is possible that some pasture areas will *not* be excluded if they are determined to be the location of a habitat of a threatened species. However, that determination also relies on expert identification of those habitats which is underway but not complete.

68 These issues have come to light since my evidence on the NPSFM amendments was prepared, where I recommended amendments to the definition of 'natural wetland' to align with the NPSFM. The reliance on the term 'natural inland wetland' in the NPSIB has exacerbated the issues I have outlined above, which I discuss in more detail below.

Implementing clause 3.21(2)(d) of the NPSIB

69 The definition of 'natural inland wetland' (and the pORPS 'natural wetland') is particularly problematic when considering the reference in clause 3.21(2)(d) of the NPSIB to natural inland wetlands that "no longer retain their indigenous vegetation." These wetlands would not be 'natural inland wetlands' if the loss has resulted in the wetland's vegetation comprising more than 50% exotic pasture species. In these cases, neither the NPSIB nor the NPSFM provisions for managing natural inland wetlands would apply to them. Perversely, this means that some of the most vulnerable and degraded wetlands (in terms of their loss of indigenous vegetation and likely also habitat for indigenous fauna) are not subject to any specific regulatory controls.

70 Similarly, due to the inability to determine what is a 'natural inland wetland' without expert assessment, I consider there is uncertainty about where and whether any NPSFM, NPSIB or pORPS provisions relating to either 'natural inland wetlands' (NPSFM and NPSIB) or 'natural wetlands' (pORPS) would apply. In my view, there is a considerable risk that some of the most vulnerable and/or degraded wetlands may 'fall through the cracks' by virtue of either not being mapped or being excluded from being considered a 'natural inland wetland' on the basis of the prevalence of exotic pasture species.

71 While clause 1.3(2) states which specific provisions in the NPSIB apply to natural inland wetlands, it is not clear whether the general provisions in the NPSIB (such as the decision-making principles in clause 1.5) also apply to the interpretation and application of specific clauses for natural inland wetlands. In my view, if particular parts of the NPSIB apply to 'natural inland wetlands' then the decision-making principles in clause 1.5 and the clauses outlining approaches to implementing the NPSIB in subpart 1 also apply when implementing the parts relevant to natural inland wetlands.

72 The relevant parts of clause 1.5 are:

> *(1) This National Policy Statement prioritises the mauri and intrinsic value of indigenous biodiversity and recognises people's connections and relationships with indigenous biodiversity.*
>
> *(2) It recognises that the health and wellbeing of people and communities are dependent on the health and wellbeing of indigenous biodiversity and that in return people have a responsibility to care for and nurture it. It acknowledges the web of interconnectedness between indigenous species, ecosystems, the wider environment, and the community, at both a physical and metaphysical level.*
>
> *(3) Consistent with this, the decision-making principles that must inform the implementation of this National Policy Statement are as follows:*
>
> *(a) prioritise the mauri, intrinsic value and wellbeing of indigenous biodiversity:*
>
> *…*

73 In my opinion, interpreting and applying clause 3.21(2)(d) in a strict sense (i.e. by overlooking the conflict between the direction for restoration and the definition of 'natural inland wetland') does not prioritise the mauri, intrinsic value, and well-being of indigenous biodiversity. Biodiversity exists regardless of the various administrative boundaries that humans impose in order to manage various parts of the environment, including through the definition of 'natural inland wetland'. Although the reference to 'natural wetlands that "no longer retain their indigenous vegetation" is, in a technical sense, invalid because those wetlands are not natural inland wetlands, philosophically it is clear that the NPSIB seeks to promote the restoration of degraded wetlands, including those which have degraded so much that they have ceased to be considered 'natural inland wetlands'.

74 As wetlands are also water bodies, the NPSFM is also applicable to their management. Clause 1.4(3) of the NPSIB states that in the event of a conflict between the NPSIB and the NPSFM, the latter prevails.

Relevant direction from the NPSFM

75 The objective of the NPSFM is to ensure that natural and physical resources are managed in a way that priorities, first, the health and well-being of water bodies and freshwater ecosystems. The definition of 'water bodies' in section 2 of the RMA includes 'wetlands'. Despite the use of 'natural inland wetland' elsewhere in the NPSFM, the objective applies to *all* 'wetlands' and accordingly, in decision-making, their health and well-being must be prioritised first.

76 Policy 5 of the NPSFM requires that the health and well-being of water bodies (including wetlands) and freshwater ecosystems is maintained or, if degraded, improved. Wetlands that have degraded to such an extent that their indigenous vegetation cover has reduced to less than 50% of their total vegetation cover may not be 'natural inland wetlands' but are still 'wetlands' and therefore Policy 5 applies. Further, Policy 9 requires protecting the habitats of indigenous freshwater species, some of which will be within natural inland wetlands and/or other wetlands.

Impacts on the pORPS

77 In my view, in a technical sense, the pORPS gives effect to the NPSIB for the reasons I have outlined previously. I consider that it also gives effect to the direction in the NPSFM that applies to natural inland wetlands. However, like the NPSFM, the pORPS is silent on the management of wetlands that are not natural inland wetlands by virtue of being excluded on the basis of their vegetation cover, which may not fully implement the direction in the objective and policies 5 and 9 of the NPSFM.

78 This gap in the policy framework can either be addressed by:

78.1 Retaining the existing pORPS provisions and relying on the LWRP to include additional controls for wetlands that are not, or may not be, natural inland wetlands, or

78.2 Amending the pORPS provisions to provide direction on managing wetlands that are not, or may not be, natural inland wetlands (to the extent that there are submissions providing scope for such amendments).

79 One of the primary drivers for the development of the pORPS was to inform the development of the LWRP. In my view, it would therefore be most helpful if the pORPS addressed this gap insofar as it can within the constraints of the dual processes it is currently subject to.

Recommended amendments to the pORPS

80 **Attachment 1** contains the amendments I recommend to both non-FPI and FPI provisions, based on the versions of those provisions contained in either the relevant reply report (for non-FPI provisions) or the s42A report (for FPI provisions). In the timeframe available, I have not been able to fully consider and respond to any amendments proposed by FPI submitters in their evidence. Given the late stage of the non-FPI process, I have limited my recommended amendments so that they focus primarily on (1) retaining previous direction and recommendations, and (2) addressing the policy gap identified in this statement.

81 The amendments I recommend are in two parts:

81.1 In relation to definitions, introducing the NPSFM definition of 'natural inland wetland' and amending the notified definition of 'natural wetland' so that it captures 'wetlands' that are not man-made and those in the coastal marine area but does *not* contain the pasture exclusion from the NPSFM definition of 'natural inland wetland'; and

81.2 In relation to provisions, and based on the amended definitions:

81.2.1 amending LF-FW-P8 and LF-FW-P13A so they are limited to applying to natural inland wetlands in accordance with clause 3.23 of the NPSFM; and

81.2.2 including new direction in LF-FW-P9 to prevent activities that would result in irreversible damage to natural wetlands (i.e. natural inland wetlands and other non-man-made wetlands) and to clarify the direction applying to natural inland wetlands (in accordance with the NPSFM).

81.2.3 No amendments to LF-FW-O9 or LF-FW-P10 on the basis that their use of 'natural wetland' rather than 'natural inland wetland' appropriately recognises the direction in the objective and Policies 5 and 9 of the NPSFM with regard to

wetlands (including those that are and are not natural inland wetlands).

82 The extent to which amendments can be made to non-FPI provisions is confined by the scope of submissions on the non-FPI part of the pORPS. I consider that either there is scope in submissions for the amendments or they are of minor effect and accordingly can be made in accordance with clause 16(2) of Schedule 1 of the RMA. Clause 49(2) of Schedule 1 allows a freshwater hearing panel to make recommendations outside the scope of submissions; however, in this case I consider there is scope in submissions on the FPI for the amendments I recommend.

83 In its submission on the FPI, Forest and Bird seeks to include the latest definition of 'natural inland wetland' from the NPSFM in the pORPS and to amend LF-FW-P9 to refer only to 'natural inland wetlands'.[9] I consider this submission provides scope to include the definition as well as for consequential amendments to LF-FW-P9 to clarify which direction in that policy applies to natural inland wetlands. In my view, the amendment I recommend to LF-FW-P9(2) has the same effect as the amendment sought by Forest and Bird because it similarly limits the application of particular clauses to natural inland wetlands.

84 Including this definition without amending the definition of 'natural wetland' as I recommended it be amended creates duplication. I consider that definition should be amended as a consequence of including 'natural inland wetland'. The RMA does not provide for consequential amendments to be made to non-FPI provisions as a result of amendments to FPI provisions. However, I consider that the amendments I recommend to the definition of 'natural wetland' can be made in accordance with clause 16(2) of Schedule 1 of the RMA because it removes duplication.

85 The non-FPI[10] and FPI[11] submissions by Kāi Tahu ki Otago both include the following:

> *The significant loss of wetlands in Otago has had devastating effects on mahika kai and indigenous biodiversity and has also affected water yield and flood behaviour. Kā Rūnaka support the provisions in the PORPS to protect remaining wetlands and reverse the degradation that has occurred.*

[9] FPI045.017 Forest and Bird
[10] Para 3.15
[11] Para 3.8

Kā Rūnaka consider this appropriately reflects the direction in the NPSFM 2020 and recognises the key role of wetlands in supporting catchment function and mahika kai.

86 In the non-FPI summary of decisions requested, this has been coded as a specific submission point (00226.012) and paraphrased as follows: "Support the provisions to protect remaining wetlands and reverse the degradation that has occurred." In the FPI summary of decisions requested, this has not been coded as a specific submission point however the paragraph is referenced as part of the reasoning behind the amendments sought to LF-FW-O9, LF-FW-P9 and LF-FW-P10.

87 The scope of the Kāi Tahu submissions is broad because they refer to the wider category of 'wetlands', not only 'natural inland wetlands.' Importantly, the Kāi Tahu submission specifically refers to protecting remaining wetlands (which may or may not be natural inland wetland) and to reversing degradation (which is particularly relevant to wetlands that are not inland natural wetlands by virtue of having lost their indigenous vegetation cover). I am advised that this submission provides scope for the amendment I recommend to LF-FW-P9(1).

88 I have recommended amending LF-FW-P8 and LF-FW-P13A to use 'natural inland wetland' rather than 'natural wetland' because these policies give effect to direction applying to natural inland wetlands in accordance with clauses 3.22 and 3.23 of the NPSFM. I consider this is an amendment of minor effect in accordance with clause 16(2) of Schedule 1 of the RMA.

89 For completeness, I note that I have not recommended amendments to LF-FW-O9 or LF-FW-P10. Those provisions apply to 'natural wetlands' as I previously recommended that term be defined (i.e. excluding areas with more than 50% exotic pasture species). I consider this does not give full effect to the objective of the NPSFM or Policies 5 and 9. Retaining the wording of these provisions, but applying the revised definition of 'natural wetland' that I now recommend will better implement those provisions, and particularly the requirement to improve the health and well-being of degraded water bodies.

90 In relation to the NPSIB, I consider that my recommended amendments give effect to the intent of clause 3.21 (i.e. that degraded wetlands are restored) despite the internal conflict in that provision. This is consistent

with the decision-making principles in clause 1.5 of that NPS because it prioritises the mauri, intrinsic value, and well-being of indigenous biodiversity.

Section 32AA evaluation

91 The pORPS provisions managing wetlands were always designed to apply more broadly than the provisions in the NPSFM. Paragraph 385 of the s32 report states that (my emphasis added):

> *…To achieve Objective LF–FW–O9, Policies LF–FW–P8,LF–FW–P9 and LF–FW–P10 set out how natural wetlands are to be identified, protected and restored (respectively), reflecting the direction in Policy 6 and clauses 3.22(1) and 3.23(1) of the NPSFM. <u>These policies apply to natural wetlands rather than the narrower sub-category of natural inland wetlands which is used in the NPSFM, meaning the direction will apply to those natural wetlands that are partly within the coastal marine area. This was a preference expressed by the Reference Group (Land and Freshwater) who preferred a regionally consistent approach to the management of wetlands.</u>*

92 Paragraph 388 of the s32 report states that:

> *Otago has an extensive network of freshwater lakes, wetlands, rivers, and streams that support diverse populations of indigenous species, including nationally significant populations of Threatened and At Risk freshwater fish (see Wildlands, 2021b in Appendix 14). There has been widespread loss and modification of indigenous habitats in lowland and montane areas in the region, and wetlands (lowland, montane and upland) continue to be vulnerable to clearance and drainage (see Wildlands, 2021b in Appendix 14). Clause 3.1(2)(a) of the NPSFM explicitly provides for local authorities to adopt more stringent measures than required by the NPSFM.*

93 In this context, I consider that there are environmental (and associated cultural) benefits from ensuring that wetlands falling outside the definition of 'natural inland wetlands' are protected from activities that would irreversibly damage them. In my view, while this may place additional restrictions on resource users, it is an outcome that would likely have arisen by the application of the NPSFM regardless. Addressing this gap in the policy framework is a more effective way of achieving the objective and policies of the NPSFM than leaving it for the LWRP to address.

Considering natural inland wetlands as part of SNAs

94 Clause 1.3(2)(e) states that if an SNA contains a natural inland wetland, the wetland may be treated as part of the SNA it is located in. As it stands,

the ECO chapter of the pORPS (including the criteria for identifying SNAs in APP2) is not limited to terrestrial environments and so could incorporate natural inland wetlands. Mr Maclennan's evidence on the ECO chapter is not due to be filed until 8 September, however I understand that at this stage he intends to retain the existing scope of APP2 which already implements the direction in the NPSIB in this respect.

Effects management hierarchies

95 Both the NPSFM and the NPSIB contain effects management hierarchies (EMHs). The pORPS has three EMHs that are relevant to this statement of evidence:

95.1 LF-FW-P13A contains the EMH from clause 3.21(1) of the NPSFM which manages the adverse effects of activities on the extent of values of a natural inland wetland or a river; and

95.2 ECO-P6 contains an EMH which is applied for the purpose of maintaining indigenous biodiversity; and

95.3 ECO-P3 contains an EMH which is applied for the purpose of protecting SNAs and indigenous species and ecosystems that are taoka. This EMH begins with a requirement to avoid adverse effects that result in specific outcomes within SNAs, and then following that, to apply the EMH set out in ECO-P6.

96 There are also two relevant definitions:

> **Effects management hierarchy (in relation to natural wetlands and rivers)** means the effects management hierarchy set out in LF-FW-P13A
>
> **Effects management hierarchy (in relation to indigenous biodiversity)** means the effects management hierarchy set out in ECO-P6

97 To respond to the 2022 amendments to the NPSFM, and avoid repeating a very lengthy policy in the pORPS, in my FPI s42A report I recommended deleting the notified content of LF-FW-P9 and replacing it with the following:

> Protect natural wetlands by implementing clause 3.22(1) to (3) of the NPSFM, except that:
>
> (1) in the coastal environment, natural wetlands must also be managed in accordance with the NZCPS, and
>
> (2) when managing the adverse effects of an activity on indigenous biodiversity, the *effects management hierarchy (in relation to*

indigenous biodiversity) applies instead of the *effects management hierarchy (in relation to natural wetlands and rivers).*

98 In my opening statement for the non-FPI hearing on the LF chapter,[12] I addressed the application of the two EMHs as follows:

> *"The decision to cross-reference the ECO chapter was a deliberate choice because, at the time, the NPSFM effects management hierarchy did not contain any particular limitations on offsetting or compensation and therefore I considered it to be less stringent than the ECO effects management hierarchy. Given the number of threatened freshwater species in Otago, and the fact that many of them are found only or predominantly in Otago, I did not consider that was appropriate.*
>
> *The NPSFM hierarchy was amended in December 2022 and the appendices setting out principles for offsetting and compensation included. I am no longer certain that this hierarchy is more stringent than the ECO chapter. I am aware that some submitters on the ECO chapter now seek to align the two hierarchies. This is a matter that Ms Hardiman and I will need to discuss as we prepare our reply reports, I note it here simply to confirm that I am cognisant of the ECO discussions and that it is a 'live issue' that spans both chapters."*

99 Ms Hardiman addressed this matter in her reply report for the ECO chapter.[13] She concluded that ECO-P6 was more stringent than the EMH contained in the NPSFM. On that basis, and for the reasons I outlined above, I did not recommend any changes to the way the EMHs are applied in the LF chapter. One important point to note is that, unlike the NPSIB, the ECO chapter is not limited only to terrestrial environments. Its provisions (with some exceptions to give effect to the NZCPS) apply to all indigenous biodiversity.

100 The EMHs themselves, and their application in the pORPS, now require reconsideration due to the introduction of the NPSIB. That is primarily a matter for the ECO chapter and therefore will be addressed in Mr Maclennan's statement of evidence due 8 September. However, given that a core component of LF-FW-P9 is the application of the EMH in ECO-P6 (which is affected by the NPSIB), it is relevant to highlight what I consider to be the key issues for the LF chapter provisions.

[12] https://www.orc.govt.nz/media/14196/opening-statement-lf-fb.pdf Opening statement of Felicity Ann Boyd: LF – Land and freshwater, dated 27 April 2023, paras 62-63
[13] Report 10: ECO – Ecosystems and indigenous biodiversity (25 May 2023), paras 15-20.

101 There are three parts to the EMHs in the NPSFM, NPSIB, and ECO-P6:

101.1 The EMHs themselves, which set out the sequential steps to be followed;

101.2 Definitions of aquatic / biodiversity compensation and aquatic / biodiversity offsetting that support the interpretation and application of the EMHs; and

101.3 Principles for offsetting and compensation that determine how the offsetting and compensation steps in the EMHs must be undertaken.

102 Another key difference between the NPSIB and ECO-P6 is that the former is limited to the terrestrial environment (except in specific circumstances, which do not apply to the EMH) whereas the ECO chapter, including ECO-P6, applies to all indigenous biodiversity.

103 To understand whether the EMH in the NPSIB is more stringent than the NPSFM, I have compared the relevant provisions (see **Appendix 2**). In summary, although the steps, and the order they must be implemented in, are the same in both EMHs, the definitions and principles which support the application of each EMH differ in some ways. The key differences between the NPSIB and the NPSFM are:

103.1 The definitions require aquatic offsetting to achieve no net loss and preferably a net gain whereas biodiversity offsetting must achieve a net gain;

103.2 The principles for offsetting reflect the different outcomes sought from aquatic and biodiversity offsetting (above); and

103.3 In the principles for compensation, the NPSIB version has an additional criterion for the use of financial contributions, which makes it more stringent than the NPSFM version.

104 I agree with Ms Hardiman that the EMH in ECO-P6 is more stringent than the EMH in the NPSFM. Based on my comparison above, I consider the EMH in the NPSIB is also more stringent than the EMH in the NPSFM. However, unlike ECO-P6, the EMH in the NPSIB is limited to applying in terrestrial environments. In order to understand any implications for LF-FW-P9, it is therefore necessary to know whether and how ECO-P6 may be

amended as a result of the NPSIB and, principally, whether it will retain its broad scope or be narrowed to applying to terrestrial environments only.

105 Mr Maclennan is currently preparing evidence on the implications of the NPSIB for the non-FPI parts of the pORPS, including the ECO chapter. His evidence is due to be filed by 8 September and his recommendations have not yet been finalised. However, I understand that at this stage he is likely to recommend retaining the broader scope of the ECO chapter (i.e. for all indigenous biodiversity) but replacing ECO-P6 with the definition of 'effects management hierarchy (in relation to indigenous biodiversity)' from the NPSIB.

106 This amendment would apply the EMH in the NPSIB to all indigenous biodiversity outside the coastal environment. That is consistent with the current scope and application of the ECO chapter and means there is no direct implication for LF-FW-P9.

107 Some submitters on LF-FW-P9 object to that policy applying both EMHs.[14] Others support the approach.[15] Given that it appears Mr Maclennan's recommended amendments will not affect the application of LF-FW-P9, the remaining question is simply whether LF-FW-P9 should be retained as I recommend it (i.e. with two EMHs) or amended to only rely on the EMH from the NPSFM. The latter option would mean that indigenous biodiversity in rivers and natural inland wetlands would be managed less stringently than indigenous biodiversity in the surrounding terrestrial environments.

108 I summarised the technical evidence on indigenous biodiversity, including aquatic biodiversity, in my reply report for the non-FPI parts of the pORPS.[16] Further technical evidence has been prepared for the FPI hearing. Dr Marine Richarson for the Director-General of Conservation states:[17]

> *"The Otago Region is host to unique freshwater fish communities that form part of a complex landscape. Fish species present a wide variety of life histories, ecological requirements, and responses to environmental*

[14] For example, see evidence of Stephanie Styles for Manawa Energy, Claire Hunter for Contact Energy, Claire Hunter for OceanaGold).
[15] For example, see rebuttal evidence of Maggie Burns for Forest and Bird, Sandra McIntyre for Kāi Tahu ki Otago.
[16] *Reply report 1: Introduction and general themes* dated 23 May 2023, paras 23-25.
[17] Marine Richarson for Director-General of Conservation, paras 24-25

changes, which means that their responses to anthropogenic threats are also highly variable.

Non-diadromous galaxiids represent a significant and highly threatened proportion of the endemic fish fauna of New Zealand. Several are endemic to the Otago Region, and some are endemic to Otago and neighbouring regions. Non-diadromous galaxiids have a distribution range that is often constrained, and many are only found in one or two out of the five Otago Freshwater Management Units (FMU). Their populations are often fragmented and vulnerable to incursions from introduced salmonids."

109 She goes on to state that (my emphasis added):[18]

"Freshwater ecosystems of the Otago Region host a unique native fish diversity at the national scale. Among the sixteen regions, Otago hosts the highest species richness, all native species combined at 32 extant taxa; by far it also hosts the highest diversity of non-diadromous galaxiids at 15 non-diadromous galaxiid taxa (Table 2), with Canterbury being a distant second with 27 extant taxa and 8 non-diadromous galaxiids."

110 Dr Richarson also notes that Otago is home to macroinvertebrate taxa that represent significant freshwater values.[19] Her evidence is supported by Dr Nicholas Dunn, also appearing for the Director-General of Conservation. He states that:[20]

110.1 Otago is home to a suite of Threatened non-diadromous galaxiid fishes and many of these indigenous taxa are endemic to, or predominantly occur in, Otago.

110.2 Further taxa predominantly located in Canterbury or Southland also have important sub-populations in Otago.

110.3 These endemic taxa are highly significant within the New Zealand indigenous freshwater fish fauna. Of the 22 Threatened taxa (nationally), 20 are non-diadromous galaxiids and 14 of those 20 occur in Otago.

111 I am not aware that these parts of the evidence by Drs Richarson and Dunn have been disputed by any other submitter. On this basis, I continue to maintain that it is not appropriate to manage aquatic biodiversity less

[18] Marine Richarson for Director-General of Conservation, para 28.
[19] Marine Richarson for Director-General of Conservation, para 27.
[20] Nicholas Dunn for Director-General of Conservation, paras 22-24.

stringently, especially in Otago. Accordingly, I continue to recommend that LF-FW-P9 applies the EMH in the ECO chapter (either its current version or its replacement with the EMH from the NPSIB) to effects on aquatic indigenous biodiversity and the EMH from the NPSFM to all other effects.

Felicity Ann Boyd

11 August 2023

Appendix 1 – Recommended amendments to the pORPS

Definitions

Natural wetland	~~has the same meaning as in clause 3.21 of the National Policy Statement for Freshwater Management 2020 (as set out in the box below)~~ ~~means a wetland (as defined in the Act) that is not:~~ ~~(a) a wetland constructed by artificial means (unless it was constructed to offset impacts on, or restore, an existing or former natural wetland); or~~ ~~(b) a geothermal wetland; or~~ ~~(c) any area of improved pasture that, at the commencement date, is dominated by (that is more than 50% of) exotic pasture species and is subject to temporary rain-derived water pooling~~ means a *wetland* (as defined in the Act) that is not: (a) a deliberately constructed *wetland*, other than a *wetland* constructed to offset impacts on, or to restore, an existing or former *natural wetland*; or (b) a *wetland* that has developed in or around a deliberately constructed *water body*, since the construction of the *water body*.~~; or~~ ~~(c) a geothermal *wetland*; or~~ ~~(d) a *wetland* that:~~ ~~(i) is within an area of pasture used for grazing; and~~ ~~(ii) has vegetation cover comprising more than 50% exotic pasture species (as identified in the National List of Exotic Pasture Species using the Pasture Exclusion Assessment Methodology (see clause 1.8 of the National Policy Statement for Freshwater Management)); unless~~ ~~(iii) the *wetland* is a location of a habitat of a *threatened species* identified under clause 3.8 of the National Policy Statement for Freshwater Management, in which case the exclusion in (d) does not apply.~~[21]
Natural inland wetland[22]	has the same meaning as in clause 3.21 of the National Policy Statement for Freshwater Management 2020 (as set out in the box below) means a *wetland* (as defined in the Act) that is not: (a) in the *coastal marine area*; or (b) a deliberately constructed *wetland*, other than a *wetland* constructed to offset impacts on, or to restore, an existing or former *natural inland wetland*; or (c) a *wetland* that has developed in or around a deliberately constructed *water body*, since the construction of the *water body*; or (d) a geothermal *wetland*; or (e) a *wetland* that: (i) is within an area of pasture used for grazing; and (ii) has vegetation cover comprising more than 50% exotic pasture species (as identified in the National List of Exotic Pasture Species using the Pasture Exclusion Assessment Methodology (see clause 1.8)); unless (iii) the *wetland* is a location of a habitat of a *threatened species* identified under clause 3.8 of this National Policy Statement, in which case the exclusion in (e) does not apply.

[21] Clause 16(2), Schedule 1, RMA
[22] FPI045.017 Forest and Bird

Provisions

LF-FW-O9 – *Natural wetlands*

Otago's *natural wetlands* are protected or restored so that:

(1) *mahika kai* and other *mana whenua* values are sustained and enhanced now and for future generations,

(2) there is no net[23] decrease, and preferably an increase,[24] in the ~~range~~ extent[25] and diversity of indigenous ecosystem types and habitats in *natural wetlands*,

(3) there is no reduction and, where degraded, there is an improvement[26] in ~~their~~ wetland[27] ecosystem health, hydrological functioning, *amenity values*, extent or *water* quality~~, and if degraded they are improved~~, and[28]

(4) their flood attenuation and water storage[29] capacity is maintained or improved.[30]

LF-FW-P8 – Identifying *natural inland*[31] *wetlands*

By 3 September 2030, ~~Identify~~ identify[32] and map *natural inland*[33] *wetlands* that are:

(1) 0.05 hectares or greater in extent, or

(2) of a type that is naturally less than 0.05 hectares in extent (such as an ephemeral *wetland*) and known to contain *threatened species*.

LF-FW-P9 – Protecting *natural wetlands*

Protect *natural wetlands* by:

(1) preventing activities that will, or are likely to, result in irreversible damage to a *natural wetland*; and[34]

(2) for *natural inland wetlands*,[35] implementing clause 3.22(1) to (3) of the NPSFM, except that:

(~~1~~a) in the coastal environment, *natural wetlands* must also be managed in accordance with the NZCPS, and

[23] FPI033.003 Fulton Hogan
[24] FPI035.012 Wise Response
[25] FPI030.029 Kāi Tahu ki Otago, FPI021.004 Ballance, FPI025.027 Beef + Lamb and DINZ
[26] Clause 10(2)(b)(i), Schedule 1, RMA – consequential amendment arising from FPI033.003 Fulton Hogan
[27] FPI033.003 Fulton Hogan
[28] FPI033.003 Fulton Hogan
[29] FPI030.029 Kāi Tahu ki Otago
[30] FPI035.012 Wise Response
[31] Clause 16(2), Schedule 1, RMA
[32] 00230.088 Forest and Bird
[33] Clause 16(2), Schedule 1, RMA
[34] FPI030.031 Kāi Tahu ki Otago
[35] Clause 10(2)(b)(i), Schedule 1, RMA – consequential amendment arising from including definition of 'natural inland wetland'

(~~2~~b) when managing the adverse *effects* of an activity on *indigenous biodiversity*, the *effects management hierarchy (in relation to indigenous biodiversity)* applies instead of the *effects management hierarchy (in relation to natural wetlands and rivers).*[36]

~~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 tikaka Māori,~~

~~(ii) restoration activities,~~

~~(iii) scientific research,~~

~~(iv) the sustainable harvest of sphagnum moss,~~

~~(v) the construction or maintenance of *wetland utility structures*,~~

~~(vi) the maintenance of operation of *specific infrastructure*, or *other infrastructure*,~~

~~(vii) *natural hazard 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 national 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~~

~~(b) any consent is granted subject to conditions that apply the *effects management hierarchies* in (1)(b)(iv) and (1)(b)(v).~~

[36] FPI001.019 DCC, FPI026.031 Federated Farmers, FPI027.027 Contact

LF-FW-P10 – Restoring *natural wetlands*

Improve the ecosystem health, hydrological functioning~~, *water* quality~~[37] and extent of *natural wetlands* that have been degraded or lost by requiring, ~~where possible~~ to the greatest extent practicable: [38]

(1) an increase in the extent and ~~quality~~ condition[39] of habitat for indigenous species,

(2) the restoration of hydrological processes,

(3) control of pest species and vegetation clearance, and

(4) the exclusion of stock.

LF-FW-P13A – *Effects management hierarchy (in relation to natural inland*[40] *wetlands and rivers)*[41]

The *effects management hierarchy* (in relation to *natural inland*[42] *wetlands* and *rivers*) referred to in LF-FW-P9 and LF-FW-P13 is the approach to managing adverse *effects* of activities that requires that:

(1) adverse *effects* are avoided where practicable, then[43]

(2) where adverse *effects* cannot be avoided, they are minimised where practicable, then[44]

(3) where adverse *effects* cannot be minimised, they are remedied where practicable, then[45]

(4) where more than minor residual adverse *effects* cannot be avoided, minimised, or remedied, *aquatic offsetting* is provided where possible, then[46]

(5) if *aquatic offsetting* of more than minor residual adverse *effects* is not possible, *aquatic compensation* is provided, and then[47]

(6) if *aquatic compensation* is not appropriate, the activity itself is avoided.

[37] FPI024.030 DairyNZ
[38] FPI045.018 Forest and Bird, FPI025.043 Beef + Lamb and DINZ, FPI035.015 Wise Response, FPI020.017 Silver Fern Farms, FPI022.008 Manawa Energy
[39] FPI046.012 QLDC
[40] Clause 16(2), Schedule 1, RMA
[41] Clause 10(2)(b)(i), Schedule 1, RMA – consequential amendment arising from 00315.014 Aurora Energy, 00235.125 OWRUG, 00511.012 PowerNet, 00320.012 Network Waitaki
[42] Clause 16(2), Schedule 1, RMA
[43] Clause 16(2), Schedule 1, RMA.
[44] Clause 16(2), Schedule 1, RMA.
[45] Clause 16(2), Schedule 1, RMA.
[46] Clause 16(2), Schedule 1, RMA.
[47] Clause 16(2), Schedule 1, RMA.

Appendix 2 – Comparison of NPSFM and NPSIB effects management hierarchies

NPSFM	NPSIB	Comments
effects management hierarchy, in relation to natural inland wetlands and rivers, means 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; then (b) where adverse effects cannot be avoided, they are minimised where practicable; then (c) where adverse effects cannot be minimised, they are remedied where practicable; then (d) where more than minor residual adverse effects cannot be avoided, minimised, or remedied, aquatic offsetting is provided where possible; then (e) if aquatic offsetting of more than minor residual adverse effects is not possible, aquatic compensation is provided; then (f) if aquatic compensation is not appropriate, the activity itself is avoided	**effects management hierarchy** means an approach to managing the adverse effects of an activity on indigenous biodiversity that requires that: (a) adverse effects are avoided where practicable; then (b) where adverse effects cannot be avoided, they are minimised where practicable; then (c) where adverse effects cannot be minimised, they are remedied where practicable; then (d) where more than minor residual adverse effects cannot be avoided, minimised, or remedied, biodiversity offsetting is provided where possible; then (e) where biodiversity offsetting of more than minor residual adverse effects is not possible, biodiversity compensation is provided; then (f) if biodiversity compensation is not appropriate, the activity itself is avoided.	• The steps and order of the steps are the same in both hierarchies, however the definition of 'aquatic offset' and 'biodiversity offset' means there will be different outcomes from applying (e) in both hierarchies.
aquatic compensation means 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	**biodiversity compensation** means a conservation outcome that meets the requirements in Appendix 4 and results from actions that are intended to compensate for any more than minor residual adverse effects on indigenous biodiversity after all appropriate avoidance, minimisation, remediation, and biodiversity offsetting measures have been sequentially applied	• Both apply to 'more than minor residual adverse effects' • NPSIB has explicit reference to Appendix 4 (Principles for compensation), in the NPSFM this reference is contained in clauses 3.22 and 3.24 rather than the definition.
aquatic offset means a measurable conservation outcome resulting from actions that are intended to:	**biodiversity offset** means a measurable conservation outcome that meets the requirements in Appendix 3 and results from actions that are intended to:	• Both apply to 'more than minor residual adverse effects'

(a) redress any more than minor residual adverse effects on a wetland or river after all appropriate avoidance, minimisation, and remediation, measures have been sequentially applied; and (b) achieve no net loss, and preferably a net gain, in the extent and values of the wetland or river, where: (i) **no net loss** means that the measurable positive effects of actions match any loss of extent or values over space and time, taking into account the type and location of the wetland or river; and (ii) **net gain** means that the measurable positive effects of actions exceed the point of no net loss.	(a) redress any more than minor residual adverse effects on indigenous biodiversity after all appropriate avoidance, minimisation, and remediation measures have been sequentially applied; and (b) achieve a net gain in type, amount, and condition of indigenous biodiversity compared to that lost.	• Aquatic offsets are less stringent because they only have to achieve 'no net loss' whereas biodiversity offsets have to achieve a 'net gain'.
Appendix 6 – Principles for aquatic offsetting These principles apply to the use of aquatic offsets for the loss of extent or values of natural inland wetlands and rivers ("extent or values" below). 1. Adherence to effects management hierarchy: An aquatic offset is a commitment to redress more than minor residual adverse effects, and should be contemplated only after steps to avoid, minimise, and remedy adverse effects are demonstrated to have been sequentially exhausted. 2. When aquatic offsetting is not appropriate: Aquatic offsets are not appropriate in situations where, in terms of conservation outcomes, the extent or values cannot be offset to achieve no net loss, and preferably a net gain, in the extent and values. Examples of an offset not being appropriate would include where: (a) residual adverse effects cannot be offset because of the irreplaceability or vulnerability of the extent or values affected: (b) effects on the extent or values are uncertain, unknown, or little understood, but potential effects are significantly adverse:	**Appendix 3: Principles for biodiversity offsetting** These principles apply to the use of biodiversity offsets for adverse effects on indigenous biodiversity. (1) Adherence to effects management hierarchy: A biodiversity offset is a commitment to redress more than minor residual adverse effects and should be contemplated only after steps to avoid, minimise, and remedy adverse effects are demonstrated to have been sequentially exhausted. (2) When biodiversity offsetting is not appropriate: Biodiversity offsets are not appropriate in situations where indigenous biodiversity values cannot be offset to achieve a net gain. Examples of an offset not being appropriate include where: (a) residual adverse effects cannot be offset because of the irreplaceability or vulnerability of the indigenous biodiversity affected: (b) effects on indigenous biodiversity are uncertain, unknown, or little understood, but potential effects are significantly adverse or irreversible:	• Principles 1, 4, 5, 7, 8, 10, 11 are the same in both NPSs • Principles 5, 8 and 9 have minor wording differences but these are unlikely to affect application • Significant difference in principles (2) and (3), which again set a more stringent outcome from offsetting under the NPSIB provisions.

(c) there are no technically feasible options by which to secure proposed no net loss and preferably a net gain outcome within an acceptable timeframe. 3. No net loss and preferably a net gain: This is demonstrated by a like-for-like quantitative loss/gain calculation, and is achieved when the extent or values gained at the offset site (measured by type, amount and condition) are equivalent to or exceed those being lost at the impact site. 4. Additionality: An aquatic offset achieves gains in extent or values above and beyond gains that would have occurred in the absence of the offset, such as gains that are additional to any minimisation and remediation undertaken in relation to the adverse effects of the activity. 5. Leakage: Aquatic offset design and implementation avoids displacing harm to other locations (including harm to existing biodiversity at the offset site). 6. Long-term outcomes: An aquatic offset is managed to secure outcomes of the activity that last at least as long as the impacts, and preferably in perpetuity. Consideration must be given to long-term issues around funding, location, management and monitoring. 7. Landscape context: An aquatic offset action is undertaken where this will result in the best ecological outcome, preferably close to the impact site or within the same ecological district. The action considers the landscape context of both the impact site and the offset site, taking into account interactions between species, habitats and ecosystems, spatial and hydrological connections, and ecosystem function. 8. Time lags: The delay between loss of extent or values at the impact site and the gain or maturity of extent or values at the offset site is minimised so that the calculated gains are achieved within the consent	(c) there are no technically feasible options by which to secure gains within an acceptable timeframe. (3) Net gain: This principle reflects a standard of acceptability for demonstrating, and then achieving, a net gain in indigenous biodiversity values. Net gain is demonstrated by a like-for-like quantitative loss/gain calculation of the following, and is achieved when the indigenous biodiversity values at the offset site are equivalent to or exceed those being lost at the impact site: (a) types of indigenous biodiversity, including when indigenous species depend on introduced species for their persistence; and (b) amount; and (c) condition (structure and quality). (4) Additionality: A biodiversity offset achieves gains in indigenous biodiversity above and beyond gains that would have occurred in the absence of the offset, such as gains that are additional to any minimisation and remediation undertaken in relation to the adverse effects of the activity. (5) Leakage: Biodiversity offset design and implementation avoids displacing harm to other indigenous biodiversity in the same or any other location. (6) Long-term outcomes: A biodiversity offset is managed to secure outcomes of the activity that last at least as long as the impacts, and preferably in perpetuity. Consideration must be given to long-term issues around funding, location, management and monitoring. (7) Landscape context: Biodiversity offsetting is undertaken where this will result in the best	

period or, as appropriate, a longer period (but not more than 35 years). 9. Science and mātauranga Māori: The design and implementation of an aquatic offset is a documented process informed by science where available, and mātauranga Māori at place. 10. Tangata whenua or stakeholder participation: Opportunity for the effective and early participation of tangata whenua or stakeholders is demonstrated when planning aquatic offsets, including their evaluation, selection, design, implementation, and monitoring. 11. Transparency: The design and implementation of an aquatic offset, and communication of its results to the public, is undertaken in a transparent and timely manner.	ecological outcome, preferably close to the impact site or within the same ecological district. The action considers the landscape context of both the impact site and the offset site, taking into account interactions between species, habitats and ecosystems, spatial connections, and ecosystem function. (8) Time lags: The delay between loss of, or effects on, indigenous biodiversity values at the impact site and the gain or maturity of indigenous biodiversity at the offset site is minimised so that the calculated gains are achieved within the consent period or, as appropriate, a longer period (but not more than 35 years). (9) Science and mātauranga Māori: The design and implementation of a biodiversity offset is a documented process informed by science and mātauranga Māori. (10) Tangata whenua and stakeholder participation: Opportunity for the effective and early participation of tangata whenua and stakeholders is demonstrated when planning biodiversity offsets, including their evaluation, selection, design, implementation, and monitoring. (11) Transparency: The design and implementation of a biodiversity offset, and communication of its results to the public, is undertaken in a transparent and timely manner.	
Appendix 7 – Principles for aquatic compensation These principles apply to the use of aquatic compensation for the loss of extent or values of natural inland wetlands and rivers ("extent or values" below). 1. Adherence to effects management hierarchy: Aquatic compensation is a commitment to redress more than	**Appendix 4 – Principles for biodiversity compensation** These principles apply to the use of biodiversity compensation for adverse effects on indigenous biodiversity: (1) Adherence to effects management hierarchy: Biodiversity compensation is a commitment to	• Principles 1, 4, 6, 8, 9, 12, and 13 are the same in both NPSs • Principles 2(a) and (c), 3, 5, 7 and 11 have minor wording differences but these are unlikely to affect application

minor residual adverse effects, and should be contemplated only after steps to avoid, minimise, remedy, and offset adverse effects are demonstrated to have been sequentially exhausted. 2. When aquatic compensation is not appropriate: Aquatic compensation is not appropriate where, in terms of conservation outcomes, the extent or values are not able to be compensated for. Examples of aquatic compensation not being appropriate would include where: (a) the affected part of the natural inland wetland or river bed, or its values, including species, are irreplaceable or vulnerable: (b) effects on the extent or values are uncertain, unknown, or little understood, but potential effects are significantly adverse: (c) there are no technically feasible options by which to secure gains within an acceptable timeframe. 3. Scale of aquatic compensation: The extent or values to be lost through the activity to which the aquatic compensation applies are addressed by positive effects that outweigh the adverse effects. 4. Additionality: Aquatic compensation achieves gains in extent or values above and beyond gains that would have occurred in the absence of the compensation, such as gains that are additional to any minimisation and remediation or offsetting undertaken in relation to the adverse effects of the activity. 5. Leakage: Aquatic compensation design and implementation avoids displacing harm to other locations (including harm to existing biodiversity at the compensation site). 6. Long-term outcomes: Aquatic compensation is managed to secure outcomes of the activity that last as	redress more than minor residual adverse effects, and should be contemplated only after steps to avoid, minimise, remedy, and offset adverse effects are demonstrated to have been sequentially exhausted. (2) When biodiversity compensation is not appropriate: Biodiversity compensation is not appropriate where indigenous biodiversity values are not able to be compensated for. Examples of biodiversity compensation not being appropriate include where: (a) the indigenous biodiversity affected is irreplaceable or vulnerable; (b) effects on indigenous biodiversity are uncertain, unknown, or little understood, but potential effects are significantly adverse or irreversible; (c) there are no technically feasible options by which to secure a proposed net gain within acceptable timeframes. (3) Scale of biodiversity compensation: The indigenous biodiversity values lost through the activity to which the biodiversity compensation applies are addressed by positive effects to indigenous biodiversity (including when indigenous species depend on introduced species for their persistence), that outweigh the adverse effects. (4) Additionality: Biodiversity compensation achieves gains in indigenous biodiversity above and beyond gains that would have occurred in the absence of the compensation, such as gains that are additional to any minimisation and remediation or offsetting undertaken in relation to the adverse effects of the activity. (5) Leakage: Biodiversity compensation design and implementation avoids displacing harm to other	• Principle 2(b) describes the nature of the effects slightly differently but this may be inconsequential (an irreversible effect would likely also be considered 'significantly adverse'). • NPSIB Principle 10 in has an additional criterion to be met (there is no effective option available for delivering biodiversity gains on the ground) that is not in the NPSFM principle 10.

least as long as the impacts, and preferably in perpetuity. Consideration must be given to long-term issues around funding, location, management, and monitoring. 7. Landscape context: An aquatic compensation action is undertaken where this will result in the best ecological outcome, preferably close to the impact site or within the same ecological district. The action considers the landscape context of both the impact site and the compensation site, taking into account interactions between species, habitats and ecosystems, spatial and hydrological connections, and ecosystem function. 8. Time lags: The delay between loss of extent or values at the impact site and the gain or maturity of extent or values at the compensation site is minimised so that the calculated gains are achieved within the consent period or, as appropriate, a longer period (but not more than 35 years). 9. Trading up: When trading up forms part of aquatic compensation, the proposal demonstrates that the aquatic extent or values gained are demonstrably of greater or higher value than those lost. The proposal also shows the values lost are not to Threatened or At Risk/Declining species or to species considered vulnerable or irreplaceable. 10. Financial contribution: A financial contribution is only considered if it directly funds an intended aquatic gain or benefit that complies with the rest of these principles. 11. Science and mātauranga Māori: The design and implementation of aquatic compensation is a documented process informed by science where available, and mātauranga Māori at place. 12. Tangata whenua or stakeholder participation: Opportunity for the effective and early participation of	indigenous biodiversity in the same or any other location. (6) Long-term outcomes: Biodiversity compensation is managed to secure outcomes of the activity that last as least as long as the impacts, and preferably in perpetuity. Consideration must be given to long-term issues around funding, location, management, and monitoring. (7) Landscape context: Biodiversity compensation is undertaken where this will result in the best ecological outcome, preferably close to the impact site or within the same ecological district. The action considers the landscape context of both the impact site and the compensation site, taking into account interactions between species, habitats and ecosystems, spatial connections, and ecosystem function. (8) Time lags: The delay between loss of, or effects on, indigenous biodiversity values at the impact site and the gain or maturity of indigenous biodiversity at the compensation site is minimised so that the calculated gains are achieved within the consent period or, as appropriate, a longer period (but not more than 35 years). (9) Trading up: When trading up forms part of biodiversity compensation, the proposal demonstrates that the indigenous biodiversity gains are demonstrably greater or higher than those lost. The proposal also shows the values lost are not to Threatened or At Risk (declining) species or to species considered vulnerable or irreplaceable. (10) Financial contributions: A financial contribution is only considered if: (a) there is no effective option available for delivering biodiversity gains on the ground; and	

tangata whenua or stakeholders is demonstrated when planning aquatic compensation, including its evaluation, selection, design, implementation, and monitoring. 13. Transparency: The design and implementation of aquatic compensation, and communication of its results to the public, is undertaken in a transparent and timely manner.	(b) it directly funds an intended biodiversity gain or benefit that complies with the rest of these principles. (11) Science and mātauranga Māori: The design and implementation of biodiversity compensation is a documented process informed by science, and mātauranga Māori. (12) Tangata whenua and stakeholder participation: Opportunity for the effective and early participation of tangata whenua and stakeholders is demonstrated when planning for biodiversity compensation, including its evaluation, selection, design, implementation, and monitoring. (13) Transparency: The design and implementation of biodiversity compensation, and communication of its results to the public, is undertaken in a transparent and timely manner.	