

Before the Freshwater Hearings Panel convened by the Chief Freshwater
Commissioner

In the matter of Freshwater parts of the Proposed Otago Regional
Policy Statement 2021

**Supplementary Evidence of Jayde Couper on behalf of Otago and Central South
Island Fish and Game Councils regarding the implications of the National Policy
Statement for Indigenous Biodiversity for freshwater issues**

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Introduction

- 1 My full name is Jayde Couper.
- 2 I prepared a statement of evidence on the Freshwater Parts of the Proposed Otago Regional Policy Statement 2021 (**pORPS**) dated 28 June 2023 (**EiC**). My qualifications and experience are set out in my EiC.
- 3 This evidence is provided in relation to the implications of the National Policy Statement for Indigenous Biodiversity (**NPS-IB**) for freshwater issues and in response to Minute 7 of the Freshwater Hearing Panel.

Implications of the changes to natural wetlands

- 4 In her supplementary evidence for the Freshwater Planning Instrument (**FPI**) process on the implications of the NPS-IB, Felicity Boyd states “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”.¹ I agree with this statement and the intent to value and protect these ecosystems. Many wetlands in Otago are valuable despite being dominated by exotic pastures. In many cases, this high prevalence of exotic pasture will be due to both historic and ongoing poor land management practices.
- 5 In my EiC, I spoke about the importance of wetlands that are not classified as “natural inland wetlands”² which is a similar concept to what Ms Boyd has proposed in her supplementary evidence. In this evidence I will refer to “natural wetlands” using Ms Boyds proposed definition.
- 6 My non-FPI evidence in chief³, my EiC⁴ and the FPI evidence of Bruce McKinlay⁵, Michael Joy⁶ and Luke Kane⁷ talk at length of the general values of Otago’s wetlands. These values include the provision of habitat for valued species, the mitigation of sediment, nutrient and faecal contaminant load on downstream water bodies, the attenuation of floods and the

¹ Evidence of Felicity Ann Boyd FPI – Implications of the NPS-IB – para 70

² FPI EiC-Jayde Couper para 14-17

³ Non-FPI EiC-Jayde Couper para 83-86

⁴ FPI EiC-Jayde Couper para 13-17

⁵ FPI EiC-Bruce McKinlay para 32-43 and 59-62

⁶ FPI EiC-Michael Joy para 38-39 and 62-66

⁷ FPI EiC-Luke Kane – para 86 and Appendix 12

buffering of low flows. Unfortunately, despite these values wetlands are now diminished in extent relative to pre-human occupation levels due to the draining of around three quarters of Otago's wetlands⁸.

- 7 The threats to wetlands are not strictly a reduction in the extent, there are also risks to the quality and resilience of the wetlands. In an appendix to the Skelton report written by MFE⁹, it is noted that there is poor data available on the quality of wetlands. Based on a desktop analysis they found on average low to moderate levels of impact on the integrity of the wetlands based in the Arrow, Cardrona, Taieri and Manuherekia catchments and that all the catchments apart from the Cardrona had a large range of impact levels between wetlands. Analysis of the Waihola/ Waipori wetland complex found eutrophic lake conditions and poor water quality. The report emphasised that the Waihola/ Waipori wetland complex is "internationally significant and regarded as one of the largest and most significant remaining freshwater wetlands in New Zealand".
- 8 The threats to, and extent of, protection of different types of wetlands were recognised in the appendices of the non-FPI section 32 report. The report makes the following statements:
 - (a) "**Lowland wetlands** - Lowland and montane wetlands remain vulnerable to clearance and drainage, with recent examples of wetland drainage and vegetation clearance resulting in compliance reaction from the Council. Lowland harakeke wetlands have been significantly reduced from their historic extent (Wildland Consultants 2020a).
 - (b) **Ephemeral wetlands** are common in dry parts of Otago, but most are highly modified by invasion of exotic grasses and herbs. They are very poorly protected, with only about 6% of ephemeral wetland area occurring in legally protected areas and are vulnerable to activities such as open-cast mining and pastoral intensification. Some ephemeral wetlands have been assessed for their ecological significance in Waitaki District (e.g. Wildland Consultants 2018c), but in general the values and condition of Otago's ephemeral wetlands are not well documented.

⁸<https://www.forestandbird.org.nz/resources/world-wetlands-day-forest-bird-release-maps-showing-extentwetlands-crisis> (data sourced from the Ministry for the Environment)

⁹ Skelton, Peter (2019) Investigation of Freshwater Management and Allocation Functions at Otago Regional Council - Report to the Minister for the Environment. Wellington: Ministry for the Environment. **Also appended to the non-FPI 32 report**

- (c) **Upland wetlands** - Otago's upland wetlands are extensive and relatively intact above 800 metres elevation, but only 16% of these wetlands occur in protected areas. They are therefore more vulnerable to modification and clearance from activities such as intensification of farming, and large developments such as the proposed Lake Onslow pumped storage system."
- 9 In my experience the values and risks listed above will largely apply for both natural wetlands and natural inland wetlands. Relative to "natural inland wetlands", biodiversity values are likely to be lower in natural wetlands due to the high proportion of introduced pasture, but these wetlands will still serve important functions and are crucially important to Otago's environment. Because of the importance of these wetlands, I support the amended provisions that provide them greater protection.
- 10 A good example of the types of wetlands I am talking about would be those spread across the scroll plains of the upper Taieri River. My understanding is that throughout the plain there are a large number of wetlands identified by their hydrology and that due to prevalence of exotic pasture, some will be identified as natural wetlands while others will be classed as natural inland wetlands. The prevalence of pasture is likely to vary due to slight differences in hydrology as well as management of the wetlands (for example the sowing and maintenance of pasture for grazing). Despite having different levels of biodiversity, both types of wetlands are subject to the same pressures and both provide the benefits to the Taieri River's hydrology and water quality that I describe in paragraph 6.
- 11 Other examples of natural wetlands that are unlikely to be classified as natural inland wetlands would be the small wetlands at the base of valleys dotted around the Otago landscape. A proportion of these will be providing important hydrological functioning and protecting downstream waterbodies from nutrient, silt and bacteria loading despite being dominated by introduced pastures in many cases.
- 12 I am unable to be specific about the individual characteristics and extent of these natural wetlands as information on them is scarce. There will need to be a large amount of work done to survey and map these areas. This difficulty in identifying these wetlands is exacerbated by them often being small in scale and spread diffusely around the region.

Significant Natural Areas

- 13 I have been asked to comment on whether some natural wetlands may qualify as SNAs under the NPS-IB.
- 14 Appendix 1 of the NPS-IB requires at least one of the following criteria to be met for an area to qualify as an SNA:

- (a) representativeness;
 - (b) diversity and pattern;
 - (c) rarity and distinctiveness;
 - (d) ecological context.
- 15 I have reviewed the above criteria and believe that even with the lack of overall information, the number of wetlands mean that at least some natural wetlands may qualify for protection as SNAs, however, I expect that some wetlands will not meet these criteria.
- 16 I have reviewed Dr Keesing's evidence¹⁰ and appearance and agree that there will be multiple views on how the criteria will be applied as they will rely on field surveys and a level of interpretation by the appropriate experts. Using Dr Keesing's interpretation of the criteria it appears that a large number of areas may be identified as SNAs.
- 17 However, I also note that MFE has made it clear that the process is to "provide protection for our most significant indigenous biodiversity" and "It does not affect land ownership, nor does it identify all areas with indigenous biodiversity as SNAs"¹¹ This gives us some guidance in interpreting the criteria.
- 18 Determining the number of natural wetlands in Otago that would qualify as SNAs is difficult due to the same reasons listed above that make it hard to determine how many there are, a lack of information and mapping made harder by their extensive nature. This is made more difficult by cases where a single small wetland does not contain significant values in itself but in aggregate with surrounding wetlands, they can be considered very important.
- 19 In conclusion, there is likely to be overlap between natural wetlands and SNAs but it is difficult to be specific about the number that will qualify without comprehensive surveying and mapping.

Irreversible Damage to Wetlands

- 20 The evidence produced by Ms Boyd also discusses activities which cause 'irreversible' damage to natural wetlands. I support the intent of the wording as aims to provide greater ongoing protection for these important

¹⁰ Non-FPI EIC-Dr Vaughn Keesing for Manawa Energy, section 6 and for Contact Energy, section 7.

¹¹ MFE - National Policy Statement for Indigenous Biodiversity- General summary

ecosystems. I can however envisage difficulties with the term irreversible as it is difficult to interpret.

- 21 I support the intent of the term as it protects against the most serious permanent changes including, most importantly, activities which would cause a species or subspecies to go extinct.
- 22 I can see issues with the term being used in its absolute sense as nearly any activity on a wetland could cause irreversible effects even if they are at an unmeasurable scale. A simple example of this would be the installation of a bird viewing platform which consisted of driving poles into submerged wetland soils. The effects of this could be considered irreversible as following the removal the platform there may be a subtle but lasting shift in the species present due to the shading. The effects listed above would be confined to a small area and exist at a scale and would make them difficult to measure.
- 23 In practice, determining whether the effects of an activity were reversible or not would require comparing variables measured before the activity with values expected an indeterminate time after the activity has ceased. This would require a thought experiment that extrapolates into the distant future and would have to be based on expert opinion. I would expect that experts would vary significantly both in opinion and also on whether they were comfortable making assessments that far into the future.
- 24 I believe it would be more suitable to analyse the effects of the activities by looking at the degree to which they degrade the aspects we value rather than strictly on their permanence. Using an alternative word to 'irreversible' may improve the usability of the proposed provision.

22 August 2023

Jayde Couper