

In the Environment Court
At Auckland

ENV-2021-AKL-000104
ENV-2021-AKL-000105
ENV-2021-AKL-000106

I te Kōti Taiao o Aotearoa
KiTāmaki Makaurau

Between

**TE TAIWHENUA O HERETAUNGA, TE RUNANGANUI O
HERETAUNGA, TE MANAAKI TAIAO O HERETAUNGA AND NGATI
KAHUNGUNU IWI INCORPORATED**

**ROYAL FOREST AND BIRD PROTECTION SOCIETY OF NEW
ZEALAND INCORPORATED and**

THE MĀORI TRUSTEE

Appellants

And

HAWKE'S BAY REGIONAL COUNCIL

Respondent

**REBUTTAL EVIDENCE OF ANDREW HICKS ON BEHALF OF HAWKE'S BAY REGIONAL
COUNCIL**

Ecology

23 November 2023

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1. INTRODUCTION

1.1 My full name is Andrew Steven Hicks and I am a Principal Scientist at *Science that Helps*. I have the qualifications and experience set out in my evidence in chief dated 11 August 2023.

1.2 I confirm that this rebuttal statement of evidence has been prepared in accordance with the Code of Conduct for Expert Witnesses contained in the Environment Court Practice Note 2023.

1.3 This statement of rebuttal evidence responds to the evidence filed by:

- (a) Mr John Cheyne (ecology) for Royal Forest and Bird Society of New Zealand Incorporated (**Forest and Bird**) dated 1 September 2023; and
- (b) Mr Maurice Black (planning and cultural) for Te Taiwhenua o Heretaunga (**TToH**) dated 28 August 2023.

1.4 I participated in expert conferencing on 10 October 2023 and am a signatory to the joint witness statement of the same date.

1.5 In addition to the above evidence, I have reviewed the following statements in preparing this ecology evidence for the Council:

- (a) Jens Rekker, evidence in chief (geology), dated 11 August 2023;
- (b) Dr Greg Ryder, evidence in chief (ecology), dated 11 August 2023;
- (c) Antoine Coffin, evidence in chief (spiritual and cultural values), dated 11 August 2023;
- (d) Rob Greenaway, evidence in chief (recreation), dated 11 August 2023;
- (e) Belinda Harper, evidence in chief (planning), dated 11 August 2023;
- (f) Joint Witness Statement (geology), dated 9 October 2023;
- (g) Joint Witness Statement (ecology), dated 10 October 2023;
- (h) Joint Witness Statement (cultural and spiritual), dated 11 October 2023;
- (i) Joint Witness Statement (planning), dated 16 October 2023;
- (j) Rebuttal statement of evidence of Jens Rekker, dated 23 November 2023;

- (k) Rebuttal statement of evidence of Rob Greenaway, dated 23 November 2023; and
- (l) Rebuttal statement of evidence of Antoine Coffin, dated 23 November 2023.

1.6 I have reviewed the memorandum of Belinda Harper (Planner for Hawke’s Bay Regional Council) circulated on 26 October 2023 setting out questions to assist with potential amendments to framework, and the responses to that memorandum from Royal Forest and Bird Protection Society of New Zealand Inc., and Genesis Energy.

1.7 My rebuttal evidence addresses the following matters:

- (a) the modification of the ecology screening criteria for native aquatic bird and native fish populations in the PC7 framework; and
- (b) the request by TToH for water bodies to be included for outstanding ecology values.

2. MODIFICATION OF ECOLOGY SCREENING CRITERIA FOR NATIVE AQUATIC BIRD AND NATIVE FISH POPULATIONS

2.1 In HBRC’s preferred version of PC7¹ amendments were made to List A(a) and List A(b) criteria for aquatic birds, native fish, and indigenous plants values sets. Key changes included replacing the IHP’s threshold of ‘one of the highest’ with ‘regionally unique’ and a national population threshold of 5%.

Population thresholds

2.2 Mr Cheyne’s evidence expressed concern about using a 5% of national population threshold in the Ecology – Habitat for native aquatic birds criteria (List A (b))²,

¹ Circulated 13 July 2023.

² Statement of Evidence of John Cheyne, 1 September 2023, at [4.3].

introduced in HBRC's preferred version of PC7 (13 July 2023). He specifically considered that a 5% national threshold was too onerous.

- 2.3** Instead, he suggested the threshold be set as 15% of the regional population, consistent with the approach taken by the Expert Panel.
- 2.4** I would not recommend using a regional population threshold alone, because the categories of Nationally Critical, Nationally Endangered and Nationally Vulnerable are all based on national population assessments. The reason that taxa in these threatened categories have been elevated above others (e.g. above taxa that are deemed 'At Risk' or 'Not Threatened') is because of their national population sizes and trajectories, and I consider it appropriate for screening criteria to compare the numbers supported by a potentially outstanding waterbody to the national population.
- 2.5** The risk of not comparing numbers to the national population is that some threatened species may only occur in negligible numbers in a region. If a regional population threshold alone was used, there may always be some water bodies that pass the screening criteria for each taxa in one of the threatened categories despite that waterbody only supporting a very small proportion of the national population. I do not consider that supporting a trivially small number of a threatened taxa would be an outstanding feature.
- 2.6** For example, if there were only 25 Australasian bittern (Nationally Critical) in a region, with 5 birds in each of 5 different waterbodies, then each of those waterbodies would support more than 15% of the regional population. A regional population threshold alone does not therefore seem to be an appropriately high threshold to pass.
- 2.7** I do, however, accept Mr Cheyne's concerns that 5% of a national population may be an overly restrictive criterion to apply as screening criteria for potential *regionally* outstanding waterbodies, despite this threshold having precedent for birds in national Water Conservation Orders.

- 2.8** For example, the Expert Panel noted that Te Hoe River supported approximately 18% of the regional population but only about 2% of the national population. The Te Hoe was found to provide outstanding habitat for Aquatic Native Birds (particularly blue duck) by the Independent Hearing Panel (**IHP**), which means it passed what the IHP considered to be an appropriately high bar to merit being deemed outstanding.
- 2.9** On reflection, any newly proposed Ecology screening criteria would presumably be too stringent if the criteria excluded water bodies that the IHP had found to pass through the decisions version of the screening criteria and meet the outstanding test of being “conspicuous, eminent and/or remarkable”. The planning experts have agreed “the intent of the screening criteria is to provide clear, objective, and transparent criteria that can be used to assist with the identification of water bodies that are highly likely to meet the definition of outstanding in PC7. That is the best of the best water bodies in the region.”³ I therefore consider the screening criteria need to be high enough to exclude most water bodies that will not be outstanding, but also set at a level that will not inadvertently exclude any outstanding water bodies.
- 2.10** By way of example, the amendments to List A(a) and (b) in HBRC’s version to include a threshold of 5% of the national population (of blue duck) would likely have excluded Te Hoe River from further consideration, which presumably means a 5% threshold is too stringent and therefore inappropriate, because the IHP found Te Hoe River to be outstanding.
- 2.11** I therefore confirm my agreement with the proposed wording in the ecology joint witness statement (**JWS**), which used a combination of national and regional thresholds, and is consistent with the thresholds originally applied by the Expert Panel.
- 2.12** Specifically, a waterbody would meet the amended screening criteria if it “Supports 15% or more of the regional population, and 2% or more of the national population,

3 Planning Joint Witness Statement, 16 October, at [5.1].

of a particular native aquatic bird species listed as Nationally Critical, Nationally Endangered or Nationally Vulnerable on the New Zealand Threat Classification List”.

2.13 I note that 15% of the regional population is substantially more than 5%, which means it is a substantial proportion of the regional population. And I further note that the reference to 2% of the national population ensures that the number of individual native aquatic birds is not trivial with regards to the national population perspective. I consider inclusion of 2% of the national population adequately negates the concern I outlined in 2.4 and 2.5.

2.14 I continue to recommend using similar wording for both the fish and bird sub values, which means any changes to birds should also be made to fish.

Unique

2.15 On a similar theme to that discussed above, I note that the planning joint witness statement records the following matter of agreement:

The Planners agree that in light of the advice from the Ecology expert conferencing, the List A criteria should be developed to provide a high threshold but without excluding two water bodies featuring similarly outstanding value. The use of the term ‘unique’ in the Preferred Version and the 15%/2% thresholds is problematic.

BH will consult with the ecologists and planners to find a better solution that defines a high test for ‘outstanding’ in terms of bird diversity, abundance and distinctiveness, without restricting that to one waterbody.

2.16 Similar to a 5% national population threshold, on reflection and in light of the planners’ comment above, the term ‘unique’ in the criteria may also be problematic because it may exclude waterbodies that were deemed as outstanding by the IHP.

2.17 Unique means only one. Some waterbodies were deemed outstanding for having features that were not unequivocally unique in the region.

- 2.18** For example, the numbers of bittern supported by Lake Whatuma are not dissimilar to the number of bittern supported by Lake Poukawa/Pekapeka (both deemed outstanding). And the numbers of blue duck supported in the Te Hoe River (deemed outstanding) are not dissimilar to the numbers of blue duck supported by the Waiau River (not deemed outstanding).
- 2.19** Using the term ‘unique’ may risk some waterbodies being screened out that should be considered outstanding. Including the concept of uniqueness in the criteria may therefore be too onerous.
- 2.20** I understand that the phrase ‘close to unique’ has been used during some Water Conservation Order processes, rather than the term ‘unique’, with associated discussion that highlighted that being ‘unique’ was too high a bar.
- 2.21** The alternative wording proposed in the ecology JWS, “that only has one or two other waterbodies like it”, captured my understanding of the intent of the screening criteria, and provided a usefully quantitative version of the ‘close to unique’ wording that has been used in WCO processes.⁴
- 2.22** After reflecting on the planning JWS and the responses to the questions posed by Ms Harper in her 26 October 2023 memorandum after the expert conferencing, I accept that the wording “that only has one or two other waterbodies *like it*” does not demand a high threshold. Specifically, the wording in the ecology JWS does not stipulate that these two or three waterbodies are alike in being “conspicuous, eminent and/or remarkable”. It may therefore not be appropriate wording to use for the screening criteria. I have therefore included some further reflections on potential wording here, in an attempt to be helpful.
- 2.23** Firstly, I would recommend the criteria include clear direction on both the type of assessment to undertake, as well as a specific and quantitative threshold. For example, I would discourage use of the phrase “one of the highest”, because this does not draw any line as to what “one of the highest” includes (or does not

⁴ Special Tribunal Report on the Fish and Game application to amend the Water Conservation (Kawarau) River Order, November 2017, at 6.

include). Not having specific and quantitative thresholds in the screening criteria means there would be little added clarity and direction over a simple narrative definition of outstanding. It is not clear whether “one of the highest” is the top 3, the top 5%, or another quantity. In my view, “one of the highest” is not any clearer than the term “outstanding”.

2.24 In contrast, the phrase “only one or two others like it” made it clear that there can only be a maximum of 3 comparable sites. But I am now aware that this wording is problematic because it does not require that the one or two other water bodies like it are conspicuously ‘good’.

2.25 As an alternative, the term ‘unsurpassed’ seems consistent with being “conspicuous, eminent and/or remarkable”, but also provides a clear quantitative threshold and direction that any sites need to be at least ‘equal best’ to pass the screening criterion. The term ‘unsurpassed’ would allow for more than one equally good site, because no equally good site would surpass the other. ‘Unsurpassed’ therefore seems less onerous than being ‘unique’, because it allows more than one, and therefore may avoid the problem that has been identified with the term ‘unique’.

2.26 I therefore suggest consideration of the term ‘unsurpassed’. I now prefer this term to the wording I proposed in my Evidence in Chief, and the wording agreed to in the JWS ecology. I consider it avoids the problems identified for previous versions of the wording, is explicit in being ‘best of the best’, and provides a specific and quantitative threshold.

2.27 The term ‘unsurpassed’ could be used as follows:

- A native aquatic bird assemblage that is unsurpassed within the region in terms of diversity, abundance, or distinctiveness.
- A native fish assemblage that is unsurpassed within the region in terms of diversity, abundance, or distinctiveness.

3. REQUEST BY TTOH TO RECOGNISE WATER BODIES FOR OUTSTANDING ECOLOGY VALUES

3.1 I note that in Table 3 of Mr Black’s evidence, there are references to a number of Ecological values for waterbodies that were not deemed outstanding by the IHP.

3.2 These include:

- (a) Aquatic Bird Habitat in the Ngaruroro River (including the Lower Ngaruroro).
- (b) Indigenous fish habitat in the Ngaruroro River (including the Lower Ngaruroro).
- (c) Indigenous fish habitat in the Karamū River.
- (d) Indigenous fish habitat in the Tukituki River (From headwaters to the coastal environment boundary).
- (e) Bird habitat in Lake Poukawa and Pekapeka Swamp.

3.3 I understand that aquatic bird habitat will be recognised as an outstanding feature of the Ngaruroro River due to recognition of the same in the pending Water Conservation Order.

3.4 I agree that aquatic bird habitat should be recognised as outstanding for Lake Poukawa and Pekapeka Swamp, with additional evidence having been provided by Mr Cheyne, presented in my Evidence in Chief, and agreed to in the ecology JWS.

3.5 I am not aware of any evidence that demonstrates that indigenous fish habitat is regionally outstanding in the Ngaruroro River, Karamū River or Tukituki River, and so the position I outlined in my evidence in chief for fish values in these systems is unchanged.

3.6 I note that Mr Apatu also includes entries in a list of outstanding waterbodies in his Appendix One that are additional to those recognised by the IHP. These include:

- (a) ‘Ecology – Native fish’ in the Ngaruroro River;

- (b) 'Ecology – Bird habitat' in the Ngaruroro River;
- (c) 'Ecology – Stygofauna' in the Heretaunga Plains Aquifer System;
- (d) 'Ecology – Groundwater dependent ecosystems' in the Ruataniwha Plains Aquifer System;
- (e) 'Ecology – Native fish' in the Karamu River; and
- (f) 'Ecology – Bird habitat' in the Karamu River.

3.7 As outlined earlier, my understanding is that the Ngaruroro River will be recognised as a regional outstanding waterbody for aquatic bird values in both its upper and lower reaches due to the same values being recognised in a pending Water Conservation Order. But I am not aware of any evidence being presented that shows the other water bodies would pass the screening criteria for the ecology values listed, nor evidence that would support their recognition as being outstanding for the listed ecology values.

4. CONCLUSION

4.1 Following consideration of the evidence provided by Mr Cheyne, discussions had during the Expert Witness Conferencing (Ecology), and feedback from Planning experts following the Expert Witness Conferencing, I have reconsidered my recommendations for two aspects of the proposed criteria.

4.2 Firstly, I support using a regional threshold of 15% in conjunction with a national threshold of 2%, rather than using the originally proposed national threshold of 5%.

4.3 Secondly, I consider reference to 'unique' may be problematic and should be replaced. I am now aware that the wording in the ecology JWS, "one or two others

like it”, is also problematic. And so I recommend that the term ‘unsurpassed’ be considered instead.

- 4.4** Lastly, I note that the only waterbody for which further ecological evidence for outstandingness appears to be available is the Lake Poukawa/Pekapeka system.

Andrew Steven Hicks

Date: 23 November 2023