

IN THE ENVIRONMENT COURT OF NEW ZEALAND
WELLINGTON REGISTRY

I MUA I TE KŌTI TAIAO O AOTEAROA
TE WHANGANUI-Ā-TARA ROHE

ENV-2024-WLG-000001

Under the	RESOURCE MANAGEMENT ACT 1991
In the matter of	the direct referral of applications for resource consents under section 87G of the Act for the Mt Munro Wind Farm
By	MERIDIAN ENERGY LIMITED Applicant

**JOINT STATEMENT OF THE FRESHWATER ECOLOGY AND
WETLAND EXPERTS**

6 August 2024

INTRODUCTION

1. This joint expert witness statement relates to the direct referral application lodged by Meridian Energy Limited for resource consents to construct, operate and maintain a windfarm on Mt Munro, Eketāhuna.
2. The ecological technical experts attending the conference were:
 - (a) Dr Adam Forbes (**AF**) for the Consent Authorities (Manawatū-Whanganui Regional Council, Wellington Regional Council, Tararua District Council, and Masterton District Council)
 - (b) James Lambie (**JL**) for the Consent Authorities (Manawatū-Whanganui Regional Council, Wellington Regional Council, Tararua District Council, and Masterton District Council)
 - (c) Dr Vaughan Keesing (**VK**) for Meridian Energy Limited (**MEL**).
3. The conference took place on 6 August 2024 at the Wellington registry of the Environment Court. It was facilitated by Environment Court Commissioner Myers.

AGREED AGENDA

4. The agenda for discussion is set out below in Annexure A.

CODE OF CONDUCT

5. This joint witness statement is prepared in accordance with section 9 of the Environment Court Practice Note 2023.
6. We confirm that we have read the Environment Court Practice Note 2023 and agree to abide by it.

PURPOSE AND SCOPE OF CONFERENCING

7. The purpose of this expert conferencing was to identify, discuss, and highlight points of agreement and disagreement on freshwater ecology and wetland issues.
8. Issues have been identified following the reporting of the Consent Authorities in the s 87F reports, and through evidence filed by MEL

and the s 274 parties. At mediation in June 2024, the parties also agreed that some issues would be discussed at expert conferencing.

AGREED ISSUES

9. Refer to Annexure A.

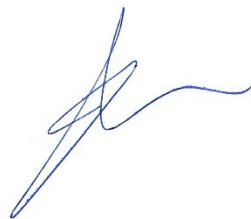
DISAGREEMENT AND REASONS

10. Refer to Annexure A.

Date: 6 August 2024



Dr Adam Forbes



James Lambie



Dr Vaughan Keesing

ANNEXURE A

In the matter of the Mt Munro windfarm application

Expert conferencing – Freshwater Ecology and Wetlands – AF, JL, and VK

Issue	Agreed position with reasons	Disagreements with reasons
Topic: Methodology – Freshwater Assessment		
<p>1. Approach to assessment generally including accuracy and adequacy of assessment of effects.</p> <ul style="list-style-type: none"> - Ecological values including the effect of any disagreement in approach. - Appropriate scale for the assessment of magnitude of effect - Characterisation of fish populations and communities - Threat classification of the longfin eel and relevance to stream values. - Consideration of freshwater mussels - Potential for lamprey 	<p>We understand Meridian have agreed to provide stream simulation culverts in the Mangaroa tributary, the Northern Makakahi.</p> <p>We agree that better satisfies the remedial actions (effects management hierarchy). We agree that the adoption of stream simulation culverts in the Mangaroa tributary, the Northern Makakahi satisfies the mitigation step of the mitigation hierarchy.</p> <p>We agree that the ECRs will need to be recalculated based on the stream simulation culvert design.</p> <p>We recommend Meridian undertake eDNA in all of the sample sites and that this will assist with the issues relating to potential missing species.</p> <p>ACTION: Meridian are asked to confirm:</p> <ul style="list-style-type: none"> - collection of eDNA at each sampling point; - use of stream simulation culvert Mangaroa tributary, the Northern Makakahi; and - recalculation of SEV and ECRs in relation to the stream simulation culvert. <p>With the wetlands methodology we are in agreement.</p>	<p>We disagree on the interpretation of results in terms of freshwater ecological value:</p> <ul style="list-style-type: none"> - There is a disagreement between AF and VK in regard to the outcomes of the fish survey which relate to sample effort. - The diversity of macroinvertebrates. - The threat status of long fin eel has not been reflected in the values assessment (rarity). - There is no evidence of survey for freshwater mussels. <p>There is a point of disagreement between the scale of magnitude of effect assessment (tributary AF vs sub catchment VK). When assessing magnitude of effect, the increasing scale diminishes the magnitude of effect.</p> <p>The difference in our opinions results in the values being either low or moderate and the magnitude of effect being either low or moderate and therefore the level of effect being between very low or moderate.</p>

Issue	Agreed position with reasons	Disagreements with reasons
2. Stream classification method and mapping.	<p>ACTION: Overlay the stream classification with the wetland layer to determine if ephemeral/intermittent streams are identified wetlands and therefore potentially covered by the sediment discharge compliance into wetlands.</p> <p>Where ephemeral/intermittent systems are not wetlands then a condition is required by Meridian to reassess the classification of those reaches using the AUP classification method prior to finalising the design.</p> <p>The ecologists are concerned that there may be no condition covering monitoring compliance procedure for discharges to wetlands and/or flow paths.</p>	<p>AF concerned over accuracy of the stream classification method and results. For example, a stream to not be ephemeral had to have flowing water. AF concerned intermittent reaches classed as ephemeral. AF concerned intermittent reaches classed as ephemeral could be directly affected or receive sediment discharges and fall outside of effects management regime.</p> <p>VK security around what is classed as ephemeral as the assessment was not solely based on the presence of flowing water but would agree that the extent of the intermittent reaches mapped would be variable.</p>
3. Relevance of Policy 23 in the Wellington Regional Council NRP.		<p>Greater Wellington Regional Council RPS Policy 23 is the significance criteria and AF considers that Policy 23 significance is met in the tributaries of the Kopuaranga Stream because of long fin eel and the diversity of macroinvertebrates. VK does not.</p>
Topic: Ecological effects		
4. Application of effects management hierarchy	<p>Any potential effects on wetlands in Greater Wellington Region are to be avoided.</p> <p>There should be an upper limit of 0.35 ha on the extent of wetland impacted. This is to accommodate potential wetland loss of the proposed Old Coach Road widening. An upper limit is also needed to ensure that the 1:1 ratio of wetland replacement does not provide scope for wetland loss to go beyond what the ecologists have already assessed. We have not assessed the scale of loss beyond this.</p>	
5. Particular issues:	<p>The total length calculation includes the whole infrastructure (all culverts and auxiliary works e.g. wingwalls) and the adverse</p>	<p>As far as EC15 goes our point of disagreement is about the need for routine monitoring post construction. AF - routine monitoring enables you to decipher catchment effects from project effects. VK</p>

Issue	Agreed position with reasons	Disagreements with reasons
<p>6. Total effects length calculation and extent of instream structure lengths, such as wingwalls.</p> <p>7. Adverse impacts (if any) on freshwater species (ie: trout, freshwater mussels, tuna).</p>	<p>effects account for the species identified through additional eDNA sampling proposed.</p> <p>For these fauna, the direct effects from instream works can be adequately managed e.g. approved instream works protocols.</p> <p>We are in agreement that additional baseline fully quantitative data is required for macroinvertebrates and substrate in receiving environments. We agree that incident monitoring activities need to be improved.</p>	<p>says in his experience routine monitoring of macroinvertebrates does not allow that.</p> <p>AF is of the view the One Plan water quality policy for trout should apply to the project monitoring regime (e.g. no discernible increase in sediment during winter earthworks period).</p>
Topic: Effects management hierarchy		
<p>8. Appropriateness of mitigation measures proposed</p> <p>9. Quantum of offset measures, including:</p> <p>(a) What offsets are required?</p> <p>(b) What are the applicable principles and criteria?</p> <p>(c) Is the offset calculation required to be based on data from the project site?</p> <p>(d) Is the offset calculation appropriate? If not, why not?</p>	<p>We all agree that there are principles for offsetting within the NPSFM and respective regional plans that must be followed.</p> <p>JL raised that the difference between compensation and offsetting is also guided by non-statutory documentation which AF and JL have used.</p> <p>While we recognise that Meridian is not bound to non-statutory processes the guidance is useful for distinguishing the difference between the offset and compensation for which is important when following the statutory effects hierarchy.</p> <p>We agree that the SEV/ECR method is an offset method for rivers, however we have a difference of opinion in how this may be applied.</p>	<p>AF is of the opinion that the SEV and ECR methods should be implemented as per the authors published methodology. VK considers that there is an ability to modify the methodology.</p> <p>AF considers that the offset calculation is required to be based on data from the site. Data from the site hasn't been included and AF considers the proposed positive effects package to be environmental compensation rather than biodiversity offset as key offsetting principles are not met.</p> <p>VK disagrees and while there was no explicit data collection for the SEV model considers that onsite information and wider experience sufficient to provide an accurate SEV outcome.</p> <p>There is a difference of opinion on whether it is offsetting or compensation. The quantum may change because of the implementation of the stream simulation culverts.</p> <p>AF considers the freshwater offset calculation inappropriate as the SEVi-P should be the restoration potential of the impact reach not the current value and data from the site was not used in the offset calculation contravening offset principles.</p>

Issue	Agreed position with reasons	Disagreements with reasons
Topic: Wetlands		
10. Offsetting approach	We have agreed the replacement ratio 1:1 is an offset rather than compensation if the total wetland loss remains limited to the scale assessed. We have agreed that the scale is 0.35ha of wetland loss.	
11. Appropriateness of imposition of an upper limit for wetland loss.	As above.	
12. Ecological value of and extent of loss of wetlands as a consequence of OCR upgrade	The 0.35ha wetland loss maximum accounts for the Old Coach Road development. This number is still to be verified but both JL and VK are comfortable with that the final number will be around 0.35ha.	
Topic: Culverts		
13. Need for stream simulation culverts	We agree that Meridian should be installing stream simulation culverts.	
14. Provision of fish passage and recovery regime through conditions	Addressed below.	
15. Recommendations for freshwater management plan, threatened fish species discovery protocol, and comprehensive offset plan.	We agree that these things are required. As discussed below we agree to work collaboratively to address these aspects in conditions.	
16. Instream monitoring for sediment discharges.	VK and AF have agreed to work on condition wording for instream monitoring (item 16-18).	
17. Macroinvertebrate monitoring		

Issue	Agreed position with reasons	Disagreements with reasons
18. Application of One Plan water quality targets for trout		
Topic: Conditions		
19. Refer to proposed condition EC4(c)(ii) – the relevance/appropriateness of the proposed change as to the identification of hydrophytes.	We agree that the condition should read ‘at least nine species’. This is based on JL modelling of the offset that assumes at least nine species is the final result of the offset.	
20. Condition EC12 (b) – Discuss the difference between the Council and Meridian’s proposed condition.	We agree that in terms of EC12(b) the term dewatering alone is not sufficient. We also think that there are other impacts such as installation of a temporary culvert, physical disturbance, in preparation of management of sediment discharge.	
21. Condition EC12 (h) – Does this need to be provided on a quarterly basis, or would it be appropriate to align this reporting with the monthly or annual reporting already required?	We do not have an opinion on EC12(h) and consider that it could be linked to general reporting requirements. EC12(d)(ii): we agree to leave the reference to taonga species in but in the absence of a list of those species, we cannot say what the inclusion of this means.	
22. Condition EC13 – What maintenance and monitoring, if any, is required, taking the NES-F into consideration?	We agree that the reinstatement of EC13 is appropriate. Fish passage over the lifetime of the culvert is important.	
23. Conditions EC14 – Is a requirement in conditions for stream simulation culvert design necessary?	EC14(c)(iv)(i): We have already agreed that the stream simulation method is the appropriate method and helps with a number of issues relating to the mitigation hierarchy and offset. EC14(c)(iv)(ii) can stay as changed. We note there is a reference to CU14 and we have not seen it.	

Issue	Agreed position with reasons	Disagreements with reasons
24. Conditions EC15 – EC17	The ecologists agree and conclude that the current version of the draft conditions requires considerable restructuring and rewording to achieve the intended ecological outcomes. The ecologists recommend their involvement in a revision of the conditions at the earliest opportunity.	
Topic: Recommended actions		
25. Recommended actions	<ol style="list-style-type: none"> 1. Meridian are asked to confirm: <ul style="list-style-type: none"> - that collection of eDNA at each sampling point will be undertaken prior to the hearing; - that stream simulation culverts will be used in the Mangaroa tributary, the Northern Makakahi; and - that will result in a recalculation of SEV and ECRs in relation to the stream simulation culvert prior to the hearing. 2. Prior to the hearing, overlay the stream classification with the wetland layer to determine if ephemeral/intermittent streams are identified wetlands and therefore potentially covered by the sediment discharge compliance into wetlands. 3. AF and VK will collaboratively investigate and rewrite the conditions EC15 – EC17 (effects management conditions) to achieve desired ecological outcomes. 	