

**IN THE ENVIRONMENT COURT
WELLINGTON REGISTRY**

**I TE KŌTI TAIAO O AOTEAROA
TE WHANGANUI-A-TARA ROHE**

ENV-2024-WLG-001

UNDER the Resource Management Act 1991

IN THE MATTER the direct referral of applications for resource consents by
under section 87G of the Act for the Mt Munro Wind Farm

BY **MERIDIAN ENERGY LIMITED**
Applicant

STATEMENT OF EVIDENCE OF LAUREN EDWARDS

ON BEHALF OF MANAWATŪ-WHANGANUI REGIONAL COUNCIL

PLANNING

Dated: 23 August 2024



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STATEMENT OF EVIDENCE OF LAUREN EDWARDS

A. INTRODUCTION

- [1] My name is Lauren Adele Edwards. I am a Senior Consents Planner at Manawatū-Whanganui Regional Council.
- [2] I co-authored a report on the application required by s 87F of the Resource Management Act 1991 (**RMA**) on behalf of Manawatū-Whanganui Regional Council (**Horizons**) dated 15 March 2024 (**s 87F Report**).
- [3] In the s 87F Report, I reviewed the application from Meridian Energy Limited (the **Applicant** or **Meridian**) for resource consent applications lodged with Horizons for the Mt Munro Wind Farm (**Mt Munro Project** or **Project**). My s 87F Report provided recommendations to improve or further clarify aspects of the resource consent applications, including with regard to conditions, should the Court be minded to grant resource consents.
- [4] I confirm I have the qualifications and experience set out in paragraphs 90-92 of the s 87F Report.
- [5] I attended mediation on 18-19 June 2024 in Palmerston North. Following on from mediation I have had discussions and workshops with Mr Tom Anderson from Meridian as to some of the matters arising from mediation, and in particular the condition set.
- [6] On 8 and 9 August 2024, I participated in expert conferencing on planning, which resulted in a joint witness statement dated 9 August 2024 (the **Planning JWS**). I confirm the contents of the Planning JWS.

B. CODE OF CONDUCT

- [7] I repeat the confirmation provided in the s 87F Report that I have read and agree to comply with the Code of Conduct for Expert Witnesses contained in the Environment Court Practice Note 2023. This evidence has been prepared in accordance with that Code. Statements expressed in this evidence are within my areas of expertise, except where I state I am relying on the opinion or evidence of other witnesses.

C. SCOPE OF EVIDENCE

[8] This statement will cover the following:

- (a) The extent to which issues identified in the s 87F Report have been resolved through mediation, Meridian evidence, and expert conferencing;
- (b) A response to section 274 party evidence; and
- (c) Conditions.

[9] In addition to the material that was reviewed for the s 87F Report, the following has also been reviewed:

- (a) All of the Joint Witness Statements (**JWS**) filed with the Court;
- (b) Statements of Evidence of Mr Grant Telfar (Meridian and the Electricity Sector), Mr Nicholas Bowmar (Project Description and Consultation), Mr James Kendrick (Ngāti Kahungunu ki Tāmaki nui a rua), Mr Simon Faulkner (Wind Technical), Dr Jennifer Purdie (Climate Change Impacts and Mt Munro), Mr Maurice Mills (Civil Engineering Design), Mr Graeme Ridley (Erosion and Sediment Control), Dr Vaughan Keesing (Freshwater and Wetland Ecology), Dr Leigh Bull (Avifauna and Lizards), Mr Robert Van de Munckhof (Air Quality), Ms Emily Howitt (Archaeology), and Mr Tom Anderson (Planning) dated 24 May 2024, on behalf of Meridian;
- (c) The proposed changes to conditions filed with Mr Anderson's evidence (the **Meridian Conditions**);
- (d) Further information provided by Meridian, dated 27 June 2024, 3 July 2024, 11 July 2024 and 16 August 2024;
- (e) Evidence of Janet McIlraith (s 274 party) dated 10 July 2024;
- (f) Evidence of Robin Olliver (s 274 party) dated 10 July 2024;

- (g) Evidence of Hastwell/Mt Munro Protection Society Inc. (s 274 party) dated 10 July 2024;
 - (h) Evidence (Social Impact Report) of John Maxwell (s 274 party) dated 10 July 2024; and
 - (i) Evidence of Mr Andrew Curtis (Air Quality), Ms Deborah Ryan (Greenhouse Gas Emissions), Mr James Lambie (Terrestrial Ecology and Wetlands), Dr Adam Forbes (Freshwater Ecology), Ms Sarah Newall (Contaminated Soils), Mr Neil Crampton (Geotechnical), Mr Neil Thomas (Groundwater), Mr Kerry Pearce (Erosion and Sediment Control), Ms Sue Ira (Operational Water Quality), and Mr Andres Roa (Operational Water Quantity) for the Regional Councils dated 23 August 2024.
- [10] My evidence responds to any outstanding issues raised in submissions and evidence that have not been addressed in the s 87F Report, or where, in that report, I reserved my position until all relevant evidence had been heard. I also address information provided since my s 87F report. I have indicated where I have updated or changed my recommendations since my s 87F report. Where I have not responded to an issue, I consider this issue to be addressed in full in the s 87F Report or through expert conferencing and my opinion remains unchanged.
- [11] I attended a conditions workshop of 11 and 12 July 2024, together with Ms Vivian of Greater Wellington Regional Council, Mr McGahan on behalf of the District Councils, and Mr Anderson on behalf of Meridian. As a result of the workshop, and the Planning JWS, amendments to the Meridian Conditions were agreed upon between the planning experts. To avoid duplication, these have been included as a 'clean' version, together with amendments sought by the Regional and District Councils, in **Attachment B** to Mr McGahan's evidence on behalf of the Consent Authorities (the **August Proposed Conditions**).
- [12] I also attended a meeting between the ecology experts (in a drafting capacity), along with Mr Anderson, and Ms Vivian, on 14 July 2024. This

meeting followed on from the Freshwater Ecology and Wetlands JWS,¹ and solely focused on conditions. The outcomes of these discussions are reflected in the August Proposed Conditions, although I note that the conditions have not been agreed between the experts in a full and final manner and there remain some points of disagreement. The position recorded in the August Proposed Conditions reflects the Councils' position.

D. OUTSTANDING ISSUES

[13] Following mediation, expert conferencing and review of the Meridian evidence, I remain of the view as set out in my s 87F Report that most of the potential adverse effects from the Project can be managed through the inclusion of appropriate consent conditions – including, effects associated with air quality, greenhouse gases, hydrology, groundwater, water quality, earthworks/land disturbance, geotechnical, terrestrial ecology, wetlands, and contaminated land matters.

[14] In my view, the following planning matters remain at issue:

- (a) Cultural Effects – addressing the gaps that remain in relation to feedback from Rangitāne o Tamaki nui-ā-Rua and Rangitāne o Wairarapa.
- (b) Terrestrial Ecology – conditions in relation to the long-tailed bat management plan.
- (c) Freshwater Ecology – the adequacy of the freshwater ecology assessment undertaken by Meridian.
- (d) Water Quality – conditions regarding restrictions within the trout spawning period and consistency of the Project with Policy 5-4.
- (e) Greenhouse Gas Emissions – the inclusion of a climate change condition.

¹ Freshwater Ecology and Wetlands JWS, at page 8, item 25.

- (f) Contaminated Land – the wording of the accidental discovery protocol condition.
- (g) Natural Character – the effects on natural character of the streams and their margins.
- (h) Operational Stormwater (Quality) – how the potential effects are to be managed through conditions.
- (i) Groundwater Quality – exclusion of the concrete batching plant from the Mākākahi River Valley.
- (j) Erosion and Sediment Control – monitoring of Erosion and Sediment Control (ESC) devices.
- (k) Consent Lapse and Expiry Dates.

[15] I address these issues in turn below, except the issues raised with regard to the conditions generally, which I address at section F below.

[16] While not at issue, I also provide comment on the positive effects and the planning framework below.

[17] The applicable ‘existing environment’ for the Project site has been discussed in the evidence of Mr McGahan.²

[18] I note there are also a number District Council planning matters that remain unresolved at this time, and in particular the social impact of the Project. The social effects associated with the Project fall under the jurisdiction of the District Councils, rather than the Regional Councils, and have been addressed by Mr McGahan in his evidence on behalf of the District Councils.

Tangata Whenua Values and Cultural Effects

[19] As identified in my s 87F Report,³ I was unable to conclude that the Project and/or conditions have adequately addressed cultural effects. I also noted

² Statement of Evidence – Damien McGahan (Planning), 23 August 2024 from [15].

³ Section 87F Report - Planning, 15 March 2024, at [230]-[231].

that, in the absence of further information, I was unable to reach a view as to the extent of involvement sought by iwi through consent conditions.

- [20] While Meridian have provided further information through the evidence of Mr Bowmar⁴ and Mr Anderson,⁵ including confirmation that Ngāti Kahungunu ki Tāmaki nui-ā-Rua and Ngāti Kahungunu ki Wairarapa have confirmed their support for the Project, some gaps remain.
- [21] As identified in the Planning JWS, this is particularly in relation to Rangitāne o Tāmaki nui-ā-Rua and Rangitāne o Wairarapa. Rangitāne o Tāmaki nui-ā-Rua's support is contingent on the completion of a Cultural Impact Assessment⁶ (CIA) (as an update to the Cultural Values Assessment (CVA) provided with the application), which I understand has not yet been completed.⁷ The implications of this are unknown, and it is also unclear whether this will be on behalf of Rangitāne o Wairarapa as the CVA was.
- [22] The original CVA included as part of the initial consent application contained a number of issues and recommendations within it, as set out in my 87F Report.⁸ One of these was an identified issue with the turbines being placed on the ridgeline. On review of the email from Manahi Paewai of Rangitāne o Tāmaki nui-ā-Rua attached to Mr Bowmar's evidence, I am satisfied this matter is resolved.⁹
- [23] In addition, I understand that Meridian is still in discussions with both Rangitāne o Tāmaki nui-ā-Rua and Rangitāne o Wairarapa regarding a Memorandum of Partnership. I also understand that Mr Anderson is in the process of engaging with iwi representatives around feedback and input on draft conditions.

⁴ Statement of Evidence - Nicholas Erskine Bowmar (Project Description and Consultation), 24 May 2024, at [49]-[62].

⁵ Statement of Evidence – Tom Anderson (Planning), 24 May 2024, from [134].

⁶ Statement of Evidence - Nicholas Bowmar (Project Description and Consultation), 24 May 2024, Appendix A.

⁷ Planning JWS, at page 16, item 10.

⁸ Section 87F Report – Planning, 15 March 2024, at [220].

⁹ Statement of Evidence - Nicholas Bowmar (Project Description and Consultation), 24 May 2024, Appendix B.

- [24] On the basis that there is currently no feedback from Rangitāne o Tamaki nui-ā-Rua and Rangitāne o Wairarapa as to whether consent conditions are required to reflect their interest in the Project, the Proposed August Conditions include opportunities for iwi involvement (e.g., as part of the proposed Stakeholder Liaison Group and for pre-start and annual site meetings). However, I acknowledge that these have been proposed without any input from Rangitāne o Tamaki nui-ā-Rua and Rangitāne o Wairarapa.
- [25] Given the information gaps that still remain without the CIA and/or further feedback, I am unable to determine whether the Project and/or conditions have adequately and appropriately addressed matters of cultural importance for Rangitāne o Tamaki nui-ā-Rua and Rangitāne o Wairarapa. I therefore cannot offer a view as to the level of effects, whether mitigation is required, and alignment with the relevant objectives and policy framework for Horizons. Should additional information be filed or provided by Meridian before the hearing, I can revisit my opinion at that time.

Terrestrial Ecology

- [26] Mr Lambie has confirmed in his evidence that, following mediation, expert conferencing and review of Meridian evidence, the outstanding terrestrial ecology matters are:
- (a) The appropriateness of extending the monitoring regime for long-tail bats to include short-tail bats; and
 - (b) The purpose of the bat management plan and intention of adaptive management.
- [27] Given that the short-tailed bat has been recorded at the neighbouring Pūkaha, Mr Lambie suggests that post-construction bat monitoring should include both short-tailed and long-tailed bats.¹⁰ He is of the view that this change would result in no additional field work being required given the

¹⁰ Statement of Evidence – James Lambie (Terrestrial and Wetland Ecology), 23 August 2024 at [12].

monitoring equipment can detect both species.¹¹ The August Proposed Conditions have been amended to reflect this.

- [28] An amended bat monitoring and management plan condition (BMMP) was proposed by Meridian and included in Attachment 3 of the Planning JWS. The proposed condition reflects Mr Lambie's view that the purpose of the BMMP is to give effect to an adaptive management regime that commits to detecting and managing no more than minor effects through on-site curtailment, and then off-site if curtailed does not resolve the effect.¹²
- [29] To ensure that the monitoring programme is informed by the best available information, Mr Lambie has recommended that the monitoring design is checked for statistical robustness and that monitoring is not constrained to just the most active period.¹³
- [30] To address these matters, and to ensure oversight of any curtailment strategy, Mr Lambie has recommended a number of amendments to the proposed BMMP, including:¹⁴
- (a) The design to be prepared with input from a suitably qualified and experience biostatistician;
 - (b) A feedback loop with the General Response to Bird and Bat Carcasses condition that would inform the Bat Curtailment Design Plan (BCDP);
 - (c) The BCDP to include the design of a revised adaptive bat monitoring programme to measure the efficacy of the curtailment strategy; and
 - (d) That the results of the curtailment strategy are provided to Councils as part of the Annual Report.
- [31] These amendments to the BMMP have been reflected in the August Proposed Conditions.

¹¹ At [12].

¹² At [14].

¹³ At [15].

¹⁴ At [20].

- [32] Mr Lambie has also recommended that a condition is included requiring Meridian to submit a Bird and Bat Collision Monitoring Plan for certification.¹⁵ This has been included in the August Proposed Conditions.
- [33] Issues relating to monitoring predators that may increase as a result of the lighting on the turbines was raised in the section 274 party evidence of Ms McIlraith. This issue was addressed in the Terrestrial Ecology JWS¹⁶ which confirms that the cascade predatory effect is unlikely. Mr Lambie advises, however, that the evidence did assist in informing how the removal of carcasses is accounted for during post-construction bird strike monitoring.¹⁷

Freshwater Ecology

- [34] I have reviewed the evidence of Dr Forbes and the Freshwater Ecology and Wetlands JWS. Dr Forbes has identified a number of matters that remain at issue in relation to freshwater ecology,¹⁸ including:
- (a) Stream classification method and mapping.
 - (b) Characterisation of fish communities and freshwater mussel populations.
 - (c) Accuracy of magnitude of effect assessment for culverting proposal in Mangaroa catchment.
 - (d) Application of the mitigation hierarchy and implications for culvert design and for the proposed offset.
 - (e) The design and validity of the proposed freshwater offset.
- [35] Dr Forbes remains concerned about the method used to map stream classification, which could have implications where discharges occur to streams that hold a higher sensitivity than was assessed.¹⁹ It was agreed at conferencing that Meridian would undertake further work as to the

¹⁵ At [20].

¹⁶ Terrestrial Ecology JWS, at page 5, item 5.

¹⁷ Statement of Evidence – James Lambie (Terrestrial and Wetland Ecology), 23 August 2024 at [18].

¹⁸ Statement of Evidence – Dr Adam Forbes (Freshwater Ecology), 23 August 2024 at [12].

¹⁹ At [17].

identification of wetlands that were ephemeral/intermittent. Where intermittent/ephemeral systems were not wetlands, it was agreed that Meridian would reassess the classification of streams following the Auckland Unitary Plan Practice and Guidance Note for stream classification prior to finalising the design.²⁰

- [36] The adequacy of the freshwater fish surveys carried out by Meridian, the threat classification of the longfin eel, and that other Nationally Vulnerable species may not have been considered in the freshwater assessment, are all matters of concern for Dr Forbes, as was identified in my s 87F Report.²¹ The presence of freshwater mussels in the Kopuaranga River was also an issue raised in the section 274 evidence of Ms McIlraith.²² These concerns have been re-iterated in Dr Forbes' evidence.²³ It is confirmed in the Freshwater Ecology and Wetlands JWS that Meridian would take an eDNA sample from each of the Project's existing monitoring locations.²⁴ The eDNA samples will provide a good indication of the presence of freshwater mussels, will complement existing freshwater fish survey data for difficult to detect species, and will therefore help address Dr Forbes' concerns over the adequacy of Meridian's freshwater values assessment.²⁵
- [37] Dr Forbes remains of the view that the magnitude of effect associated with the proposed culverting in the Mangaroa tributary has not been assessed correctly in that Meridian have assessed the whole of catchment rather than at the tributary scale. Dr Forbes considers that this could result in an artificial reduction in the overall assessed level of effect.²⁶
- [38] In terms of the application of the mitigation hierarchy and implications for culvert design, the Freshwater Ecology and Wetlands JWS and the Planning JWS confirm that stream simulation culverts are to be used.²⁷ Dr Forbes is of

²⁰ At [18]. See also Freshwater Ecology and Wetlands JWS, at page 4, item 2.

²¹ Section 87F Report – Planning, 15 March 2024 at [165].

²² Statement of Evidence – Janet McIlraith, 10 July 2024 at [12].

²³ Statement of Evidence – Dr Adam Forbes (Freshwater Ecology), 23 August 2024 at [19]-[26].

²⁴ Freshwater Ecology and Wetlands JWS, at page 3, item 1.

²⁵ Statement of Evidence – Dr Adam Forbes (Freshwater Ecology), 23 August 2024 at [25].

²⁶ At [28].

²⁷ Freshwater Ecology and Wetlands JWS, at page 3, item 1. See also Planning JWS, at page 15, item 8.

the view that this is an important step towards Meridian exhausting the mitigation step of the effects management hierarchy.²⁸

- [39] Dr Forbes notes that Meridian has not collected specific site data from the Mangaroa tributary, and instead the Stream Ecological Valuation (SEV) scores and Ecological Compensation Ratios (ECRs) have been set in an undefined and subjective manner. Dr Forbes does not support this approach, which is more in line with environmental compensation than offsetting.²⁹
- [40] Dr Forbes also disagrees with how the ERC calculation has been undertaken and considers that the length of stream restoration required should be 1,204m rather than the 739m proposed.³⁰
- [41] Based on the eDNA samples and the stream simulation culverts, Dr Forbes and Dr Keesing agree that the SEV and ECRs should be recalculated.³¹ Dr Forbes is of the view, and I concur, that the adequacy of the freshwater assessment will need to be revisited once this additional data, together with the updated stream classification, has been reviewed.³²
- [42] I note that Meridian very recently provided some updated SEV information and further monitoring data to Dr Forbes for review.³³ This work was an outcome the Freshwater Ecology and Wetlands JWS.³⁴ In the time available, Dr Forbes has not been able to consider the information and provide a response within his evidence. I understand that with additional time, and all of the information identified in the Freshwater Ecology and Wetlands JWS, Dr Forbes will be able to provide an update to the Court and parties.
- [43] Given the above, the length of stream restoration required to offset the effects of the proposal has not been determined. For this reason, Conditions EC17 and EC18 of the August Proposed Conditions have gaps that are

²⁸ Statement of Evidence – Dr Adam Forbes (Freshwater Ecology), 23 August 2024 at [35].

²⁹ At [38]-[40].

³⁰ At [48].

³¹ Freshwater Ecology and Wetlands JWS, at page 3, item 1.

³² Statement of Evidence – Dr Adam Forbes (Freshwater Ecology and Wetlands), 23 August 2024, at [55].

³³ Memorandum from Dr Keesing on behalf of Meridian, 19 August 2024.

³⁴ Freshwater Ecology and Wetlands JWS, page 8, item 25.

intended to be filled if Dr Forbes reviews the recently provided information from Meridian and is of the view that it appropriately offsets any adverse effects of the Project. However, if Dr Forbes is not satisfied that this is the case, and the issue remains unresolved on the information presented to the Councils' and Court, it is my view that alternative conditions could be used to ensure that the offset is calculated and certified by the Regional Councils prior to construction commencing.³⁵ This approach would be dependent on there being sufficient certainty over the level of effect, and appropriateness of offsetting. Further, the conditions would need to clearly set out the methodology that Meridian would need to use in calculating the offset, and the calculation would need to be submitted to the Regional Councils for certification prior to works commencing.

[44] In relation to the conditions, several condition changes were recommended by Dr Forbes and Dr Keesing in the Freshwater Ecology and Wetlands JWS.³⁶ The Planning JWS confirms these conditions would be included, and they have been reflected in the August Proposed Conditions.³⁷

[45] As previously mentioned, the experts met post-conferencing to discuss the conditions. One point of disagreement between the experts was in relation to routine monitoring during construction. Dr Forbes is of the view that both baseline and routine monitoring should be undertaken during construction, whereas Dr Keesing does not believe routine monitoring to be necessary.³⁸ The August Proposed Conditions reflects the Council position.

Water Quality

[46] My views on water quality effects as set out in my s 87F Report³⁹ have not changed. I am of the view that, based on the s 87F Reports and evidence of Dr Forbes and Mr Pearce, any effects on water quality can be managed through the inclusion of appropriate consent conditions.

³⁵ A similar approach to what is utilised for validating or recalculating offsets described in consent conditions, where appropriate.

³⁶ Freshwater Ecology and Wetlands JWS, from page 7.

³⁷ Planning JWS, from page 15. See also August Proposed Conditions – EC conditions.

³⁸ Statement of Evidence – Dr Adam Forbes (Freshwater Ecology), 23 August 2024 at [53].

³⁹ Section 87F Report – Planning, 15 March 2024, at [141]-[147].

- [47] As is also set out in my s 87F Report, One Plan Schedule E water quality targets are not met for deposited sediment and the mean Macroinvertebrate Community Index (**MCI**).⁴⁰ Given this, Dr Forbes is of the view that the receiving environments are sensitive to sediment deposition, particularly in relation to trout spawning values.⁴¹ This is particularly important to ensure consistency with Policy 5-4, which is discussed below.

Greenhouse Gas (GHG) Emissions

- [48] In my s 87F Report I noted Ms Ryan's view that Meridian have not shown how GHG emissions from the Project specifically will be managed or reduced compared to business as usual. As a result, I recommended a condition requiring Meridian to provide this information.⁴²
- [49] The Planning JWS records that Meridian did not agree to the inclusion of the proposed condition (as was reflected in the Meridian Conditions), but the planning experts did agree that if a similar condition was to be included it would be more appropriate to form part of the annual reporting.⁴³
- [50] In her evidence, Ms Ryan remains of the view that Meridian should identify how it intends to incorporate lifecycle GHG emission matters into the Project, and that this should be addressed through conditions. Ms Ryan agrees with the approach Meridian have used on other projects with regard to management of GHG emissions, and intend to utilise here, but she needs to see how the approach would apply to this Project in particular.⁴⁴
- [51] Ms Ryan has recommended amendments to the previous condition to make clear that the condition was intended to focus on setting up a management framework, as opposed to creating an onerous reporting obligation on Meridian. This wording has been reflected in condition CC1 of the August Proposed Conditions. With the imposition of this condition, I note that Ms Ryan's concerns would be addressed.

⁴⁰ At [143], [286].

⁴¹ At [144].

⁴² At [118].

⁴³ Planning JWS, from page 9, item 8.

⁴⁴ Statement of Evidence – Deborah Ryan (GHG), 23 August 2024 at [9].

Contaminated Land

- [52] I remain of the view that, while resource consents are not currently being sought by Meridian, it is important that the process for addressing contaminated land is clearly set out in conditions. This view is supported by Ms Newall.⁴⁵
- [53] The August Proposed Conditions look to manage contaminated land matters through the Construction Environmental Management Plan (**CEMP**) and the Site Specific Erosion and Sediment Control Plan (**SSESCP**). The CEMP must include procedures to be followed in the event of an unexpected discovery, and the SSESCP requires Meridian to include plans identifying any contaminated land to be avoided when undertaking works. Ms Newall is comfortable with this approach.⁴⁶
- [54] I have also proposed additional requirements (steps) that should be included within the accidental discovery protocol conditions to ensure works stop immediately in the event of a discovery, and the appropriate people, including a SQEP in contaminated soil and the Councils, are advised. These changes are reflected in the August Proposed Conditions.⁴⁷ Proposed condition PCS2 sets out the process by which works may restart in the identified area, which may include the need to seek additional consents.

Natural Character

- [55] Given the uncertainty remaining in relation to offsetting the effects of the proposed culverting, as discussed above in the Freshwater Ecology section, the level of effects on the natural character of the streams and their margins cannot be determined. My view on this may change in light of the additional work to be undertaken by Meridian, and Dr Forbes' review, as noted above.

Operational Stormwater (Quality)

- [56] There were a number of conditions recommended by Ms Ira, Mr Roa and Mr Mills in relation to operational stormwater set out in the Stormwater and

⁴⁵ Statement of Evidence – Sarah Newall (Contaminated Land), 23 August 2024 at [23].

⁴⁶ At [26].

⁴⁷ See proposed condition PCS1.

Hydrology JWS. Ms Ira is of the view that a management plan, at minimum, is required to ensure any adverse stormwater effects are managed.⁴⁸

- [57] I confirm my view set out in my s 87F Report and the Planning JWS that, while Meridian have not applied for any resource consents in relation to the stormwater design, it is important that Meridian demonstrates how the permitted standards will be met at the detailed design stage for both the construction and operational stormwater.⁴⁹ This has been reflected in Conditions CM1 and CM4 in the August Proposed Conditions.

Groundwater Quality

- [58] As set out in my s 87F report,⁵⁰ Mr Thomas' only concern in relation to groundwater quality was if the concrete batching plant was to be located in the Mākākahi River Valley.⁵¹ Mr Thomas recommended that conditions were included to address this issue.
- [59] It was confirmed in the Planning JWS that the concrete batching plant would not be located in the Mākākahi River Valley. As a result, Meridian proposed the inclusion of a condition requiring that the plant be located at an elevation of at least 350m above sea level (condition CB1).⁵² Mr Thomas has confirmed in his evidence⁵³ that this condition would exclude his area of concern, and he considers this issue to now be resolved. Condition CB1 has now replaced the conditions previously recommended by Mr Thomas.

Erosion and Sediment Control

- [60] As discussed in my s 87F Report, it remains my view that, with the conditions recommended by Mr Pearce (included in the August Proposed Conditions), the actual and potential effects associated with land disturbance can be appropriately managed and the effects will be less than minor.⁵⁴

⁴⁸ Statement of Evidence – Sue Ira (Operational Water Quality), 23 August 2024, at [17].

⁴⁹ Section 87F Report – Planning, 15 March 2024, at [131]. See also Planning JWS, at page 9, item 7.

⁵⁰ At [137]–[138].

⁵¹ From [137].

⁵² Planning JWS, from page 12, item 8.

⁵³ Statement of Evidence – Neil Thomas (Groundwater), 23 August 2024, at [10].

⁵⁴ Section 87F Report – Planning, 15 March 2024, at [160].

- [61] However, while there is agreement that a consent condition imposing a discharge standard or target is necessary, along with clear processes to be followed should it not be met, there is disagreement as to what is required in terms of monitoring in order to be compliant with this condition.⁵⁵
- [62] Mr Ridley, on behalf of the Applicant, considers that monitoring the discharges from sediment retention ponds is adequate.⁵⁶ However, Mr Pearce is of the view that in order to determine that all sediment controls are operating effectively, all devices should be monitored to a standard. In particular, Mr Pearce is of the view that any device which results in a point source discharge, should form part of the monitoring regime, otherwise the effectiveness of them is unknown.⁵⁷
- [63] Mr Pearce has recommended a condition which requires Meridian to monitor all erosion and sediment control structures in order to determine compliance with the discharge standards. This would be achieved through inspections being carried out on weekly basis and prior to and following a rainfall trigger event.⁵⁸ A condition to this effect has been included in the August Proposed Conditions, together with a definition for “Erosion and Sediment Control Structures”.
- [64] Mr Ridley expressed a preference for the reference to ‘overland flow paths’ to be deleted from ES5(c)(i), whereas Mr Pearce suggested that this term could be defined.⁵⁹ On further consideration of potential definitions, Mr Pearce is of the view that reference to ‘overland flow paths’ could be deleted from this condition, and this is reflected in the August Proposed Conditions.
- [65] The experts agreed to change reference from “standards” to “targets” in Condition ES4 (now ES3 in August Proposed Conditions).⁶⁰ In my view, this should be reverted to “standards” as they are intended to be thresholds to

⁵⁵ ESC JWS, at page 12, item 12. See also Statement of Evidence – Kerry Pearce (ESC), 23 August 2024 from [12].

⁵⁶ ESC JWS, at page 5, item 12.

⁵⁷ Statement of Evidence – Kerry Pearce (ESC), 23 August 2024 at [14].

⁵⁸ Statement of Evidence – Kerry Pearce (ESC), 23 August 2024 at [16].

⁵⁹ ESC JWS, at page 5, item 12.

⁶⁰ ESC JWS, Annexure B.

be met, rather than simply “targets” that Meridian must try and achieve. The August Proposed Conditions reflect my view on this matter.

Positive Effects

[66] In my s 87F Report, I concurred with the Applicant’s assessment of the Project’s positive effects but noted that the adequacy of the freshwater ecology offsetting proposal could not be assessed at the time, and that some submitters had challenged the stated regional/local benefits.⁶¹ One section 274 party has also questioned the local benefits of the Project, in particular the potential for local employment during construction.⁶²

[67] As with my view on freshwater ecology, there remains a gap in information, which means the required offset has not yet been determined. I generally agree with Meridian’s assessment of positive effects of the Project, however, based on the evidence of Dr Forbes, I remain unable to make a final recommendation in relation to s 104(1)(ab) on the information currently provided.

Consent Lapse and Expiry Dates

Lapse Dates

[68] The consent lapse dates applied for by Meridian have been confirmed in the Planning JWS as ten (10) years for all consents.⁶³

[69] My view from my s 87F Report remains that the most appropriate lapse date for all consents is five (5) years.⁶⁴ Meridian have not, in my view, provided sufficient reasons to justify why a longer period is necessary.

[70] However, as set out in the Planning JWS, Meridian intended to provide further evidence concerning the variables as set out in Mr Bowmar’s evidence and additional matters that may influence the implementation of

⁶¹ Section 87F Report – Planning, 15 March 2024 at [232]-[236].

⁶² Statement of Evidence - Hastwell Mount Munro Protection Society Inc, 10 July 2024, at Section D, page 8.

⁶³ Planning JWS, at page 6, item 6.

⁶⁴ Section 87F Report – Planning, 15 March 2024 at [472].

consents.⁶⁵ This was provided by Meridian on 16 August 2024 and is attached to my evidence as **Attachment A**.

- [71] I have reviewed this further information and consider that there are some gaps and uncertainties that remain, particularly in relation to timing implications of the factors discussed and the interplay between them. I note that Mr McGahan has raised similar issues in his review of the recent information.⁶⁶ Further discussions and clarifications would be helpful, and I understand that further conferencing is likely to occur between the Council planning experts. I will be able to update my position at that stage.

Expiry Dates

- [72] The consent expiry dates applied for by Meridian have been confirmed in the Planning JWS as 35 years for all regional council consents.⁶⁷
- [73] I agree that a 35 year term is appropriate for works within the beds of rivers to allow for the operation, ongoing use and maintenance of the culverts and diversions.
- [74] As set out in the Planning JWS, Meridian's planner considers that the other regional council consents could have an expiry date of 'lapse date plus five years'.⁶⁸ Given the construction period is expected to be within the vicinity of two to three years (weather dependent), I am of the view that an expiry date of lapse date plus five years is appropriate. Noting however, that an agreement has still not been reached as to the appropriate lapse date.

Planning Framework

- [75] In my s 87F Report, I addressed the planning framework in the Horizons' One Plan. I confirm that the relevant objectives and policies are as agreed in the Planning JWS.⁶⁹ Where matters require further discussion, I address them below.

⁶⁵ Planning JWS, at page 6, item 6.

⁶⁶ Statement of Evidence – Damien McGahan – 23 August 2024, at [87]-[89].

⁶⁷ Planning JWS, at page 6, item 6.

⁶⁸ Planning JWS, at page 6, item 6.

⁶⁹ Planning JWS, at page 1, item 1.

Consistency with One Plan Objectives and Policies

- [76] I am of the view that the Project is consistent with the Objectives and Policies in the One Plan, with the exception of those in relation to tangata whenua values, water quality and freshwater ecology.⁷⁰ I address these below.

Tangata Whenua Values

- [77] As is confirmed in the Planning JWS and discussed above in relation to cultural effects, there are gaps that remain in relation to feedback from Rangitāne o Tamaki nui-ā-Rua and Rangitāne o Wairarapa. As is also discussed above, Rangitāne o Tamaki nui-ā-Rua have advised Meridian that they are preparing CIA, however this is yet to be completed. It is unclear whether this will be on behalf of Rangitāne o Wairarapa as the CVA was.
- [78] Without the CIA and/or further feedback from Rangitāne o Tamaki nui-ā-Rua and Rangitāne o Wairarapa, I am unable to determine whether the Project is consistent with Objective 2-1 and Policies 2-2, 2-3 and 2-4.

Policy 5-4

- [79] Policy 5-4 sets out that where the existing water quality does not meet the relevant Schedule E water quality targets within a Water Management Sub-Zone, water quality within that sub-zone must be managed in a manner that enhances existing water quality in order to meet the water quality target or the relevant Schedule B values and management objectives the water quality target is designed to safeguard. I note that generally this Policy is applied where there is a point source discharge to surface water, whereas in this case there are only temporary discharges ancillary to other works.
- [80] As set out in my s 87F Report,⁷¹ the Project site does not meet the Schedule E water quality targets for deposited sediment and MCI. The receiving environments are sensitive to sediment deposition, which directly affects the Schedule B trout spawning values.

⁷⁰ As agreed in Planning JWS, at page 17, item 11.

⁷¹ Section 87F Report – Planning, 15 March 2024, at [286].

- [81] Dr Forbes is of the view that, with the inclusion of conditions for monitoring and restrictions on deposited sediment levels during the trout spawning period, the Schedule B trout spawning value will be safeguarded.⁷²
- [82] In the Freshwater Ecology and Wetlands JWS, Dr Forbes set out his opinion that as part of the monitoring regime within the conditions, there should be no discernible increase in sediment during the winter earthworks period (trout spawning period).⁷³ This was a point of disagreement between the experts.⁷⁴ Since then,⁷⁵ the experts have agreed that rather than no discernible increase, Condition EC15(c)(iii) should read that there should be no more than a 10% increase in deposited sediment. Dr Forbes was satisfied that this would still protect the trout spawning value.
- [83] Given the above, I am of the view that the water quality will be managed in a manner that safeguards the trout spawning value. Therefore, while the ancillary discharges to water resulting from the Project would not enhance water quality, it is considered that they are not contrary to what Policy 5-4 is intending to achieve in safeguarding Schedule B values such as trout spawning.

Policy 5-26

- [84] As a result of the Planning JWS, Meridian provided additional information in relation to a number of points on 16 August 2024. One of these was an analysis to show that the culverts are “essential” in order for Policy 5-26 to be applicable. The letter and Tonkin and Taylor report setting this out are attached to my evidence at **Attachment B** and **Attachment C**.
- [85] Policy 5-26 sets out that activities in the beds of rivers that are essential must generally be allowed. As recorded in the Planning JWS, my view was

⁷² Statement of Evidence – Dr Adam Forbes (Freshwater Ecology), 23 August 2024 [49]-[50].

⁷³ Freshwater Ecology and Wetlands JWS, at page 5, item 7.

⁷⁴ Freshwater Ecology and Wetlands JWS, at page 5, item 7.

⁷⁵ During the discussion on conditions on 14 August 2024, with myself and Ms Vivian.

Meridian had not shown that this policy was relevant as there had been no explanation as to how the proposed culverts were “essential”.⁷⁶

- [86] I am satisfied that the Tonkin and Taylor report now makes it clear that crossings over the waterways are essential for the Project in that alternative routes were not practicable to accommodate the over-dimensional loads. Policy 5-26 is therefore relevant.

Freshwater Ecology Objectives and Policies

- [87] As discussed above in relation to Freshwater Ecology, there remain gaps and further work to be undertaken by Meridian. Dr Forbes is of the view that, until all of the further information is provided and considered, the adequacy and appropriateness of the freshwater assessment cannot be determined.

- [88] As a result of the uncertainty that remains in relation to the level of effects of the Project on freshwater ecology, my view on the consistency of the Project with the related objectives and policies is the same as set out in my s 87F Report. More specifically, I am unable to reach a view on the consistency of the Project with Policy 3-3,⁷⁷ Objective 5-4 and Policies 5-22 and 5-25,⁷⁸ Objective 6-2 and Policies 6-8 and 6-9,⁷⁹ Chapter 14,⁸⁰ Objective 17-1 and Policy 17-1,⁸¹ and Policy 17-4.⁸²

Consistency with National Policy Statement for Freshwater Management 2020 (NPS-FM)

- [89] Given the gaps that remain in relation to tangata whenua and freshwater ecology discussed above, my view in my s 87F Report has not changed.⁸³ That is, on the information currently provided I am able to determine that the Project is generally consistent with some, but not all, of the relevant policies of the NPS-FM. Further information is required to make this determination

⁷⁶ Planning JWS, at page 3, item 1.

⁷⁷ Section 87F Report – Planning, 15 March 2024, at [280].

⁷⁸ At [296]-[298].

⁷⁹ At [305].

⁸⁰ At [325].

⁸¹ At [327].

⁸² At [332].

⁸³ At [263].

in relation to policies 1, 2, 3, 7 and 9. I understand that Meridian is undertaking further work on both tangata whenua and freshwater ecology matters, which will help inform any further assessment against the policies of the NPS-FM. If further information is provided, I may revisit my position.

Section 105

[90] I confirm that s 105(1)(a) and (b) have addressed by Meridian through reference to technical experts' advice, which is set out in the Planning JWS.⁸⁴

[91] As agreed in the Planning JWS, Meridian has provided an assessment against s 105(1)(c), on 16 August 2024. This is attached to my evidence as **Attachment D**. Based on this further information, I am satisfied that alternative options for the discharges associated with the Project have been adequately considered by Meridian.

[92] Therefore, from a planning perspective, I consider that the provisions of s 105 for the Project have been addressed.

E. RESPONSE TO SECTION 274 PARTY EVIDENCE

[93] I have reviewed the section 274 party evidence and have responded some of the matters raised (as appropriate) in earlier sections of my evidence.

[94] Mr Curtis has addressed the concerns raised in the section 274 evidence of Mr Olliver in relation to contamination of roof-collected drinking water and fruit and vegetables grown on his property, and of Mr Maxwell in relation to Meridian's assessment not specifically considering the construction occurring on an exposed ridge.⁸⁵ Mr Curtis is of the view that these concerns have been addressed through the management methods proposed by Meridian and the distance between the ridge and residents in Hastwell.⁸⁶

[95] Four of the section 274 parties raised the concern that the incorrect rainfall data had been used by Meridian in their application.⁸⁷ The stormwater and

⁸⁴ Planning JWS, at page 4, item 3.

⁸⁵ Statement of Evidence – Mr Andrew Curtis (Air Quality), 23 August 2024 from [16].

⁸⁶ At [17], [19].

⁸⁷ John Maxwell, Hastwell/Mt Munro Protection Society, Janet McIlraith and Robin Olliver.

hydrology experts agreed with the section 274 parties on this matter, and agreed that the rainfall data in HIRDS Version 4 RCP8.5 (for the period 2081-2100) is more appropriate.⁸⁸ A condition requiring culverts to be designed accounting for this rainfall data has been included in the August Proposed Conditions.

- [96] Where the matters raised in section 274 party evidence have not been addressed in my evidence, I consider that they have been addressed through expert conferencing and recorded in the relevant JWS or they are in relation to District Council matters and have been addressed in Mr McGahan's evidence.

F. CONDITIONS

- [97] As discussed above, the August Proposed Conditions attached to McGahan's evidence were informed by the conditions workshop with Meridian's planner and the Planning JWS.
- [98] The August Proposed Conditions also include amendments proposed by the Councils. Some of the amendments proposed by Councils are of an administrative nature, or relate to implementation. In some cases, the changes are a result of expert advice and have not been agreed upon or remain at issue between Councils and Meridian.
- [99] Conditions EC15-EC18 were worked on by Dr Forbes for the Regional Councils and Dr Keesing for Meridian as a result of the Freshwater Ecology and Wetlands JWS. Their discussions have been reflected in the conditions, but some of the details of the conditions are pending further work to be done by Meridian. I have discussed this in greater detail in the Freshwater Ecology section of my evidence. These conditions remain at issue.

⁸⁸ Stormwater and Hydrology JWS, at page 4, item 4.

G. CONCLUSION

[100] Some of the issues identified within the s 87F Report have been addressed through evidence, expert conferencing and mediation. However, there remain a number of matters that require further attention to ensure the effects of the Project are appropriately avoided, remedied, mitigated or offset, having regard to the relevant planning framework. I have described these matters above, with regard to technical evidence of various experts, and the August Proposed Conditions.

23 August 2024

Lauren Edwards

H. ATTACHMENTS

ATTACHMENT A: Further Information dated 16 August 2024 (Lapse Date Variables)

ATTACHMENT B: Letter from Meridian dated 16 August 2024

ATTACHMENT C: Further Information dated 16 August 2024 (T+T Report)

ATTACHMENT D: Further Information dated 16 August 2024 (s 105 Assessment)

Memorandum

To	Damien McGahan, Lauren Edwards, Alisha Vivian, Tom Anderson (Planning Experts)
From	Nicholas Bowmar, Meridian Energy Limited (Meridian)
Date	16 August 2024
Subject	Mt Munro - Response to queries made in Joint Witness Statement of Planning Experts

1. Scope

- 1.1. This memorandum responds to two queries from the Joint Statement of Planning Experts dated 9 August 2024 (the **JWS**), in relation to Meridian's application for consents to construct, operate and maintain the proposed Mt Munro windfarm (the **Project**).
- 1.2. These queries are in relation to the National Policy Statement on Highly Productive Land (**NPS-HPL**), and to the lapse period being sought for the consents.

2. NPS-HPL Query

- 2.1. I refer to our previous letter dated November 2023 on the NPS-HPL, and to the AgFirst report on the applicability of the NPS-HPL to the Project.
- 2.2. The bulk of the proposed Mt Munro windfarm site does not contain highly productive land and is not subject to the NPS-HPL. The area of the site that is classed as highly productive land (LUC-3) is relatively small and the substation and transmission line infrastructure located on it have a functional and operational need to be there.
- 2.3. The transmission line, substation, and the Mt Munro windfarm as a whole, are appropriate uses of the section of LUC 3 land identified on the Manaaki Whenua – Landcare Research mapping. These uses are consistent with the purposes of Policy 8 of the NPS-HPL, and the specified infrastructure pathway which it provides, and the actual impact on land-based primary production is minimal.
- 2.4. The JWS noted that:

Under clause 3.9(3)(a) we agree that the proposal minimises any actual loss of the availability and productive capacity of the HPL.

In terms of part (b) we agree that the conditions as currently proposed/draft are able to mitigate reverse sensitivity effects on HPL.

- 2.5. The JWS further requested that Meridian:

provide functional or operational needs as to why the terminal substation infrastructure must be located and can only occur on this LUC3 HPL.

- 2.6. The proposed route for the transmission line between the site and terminal substation is shown in red in Figure 1.

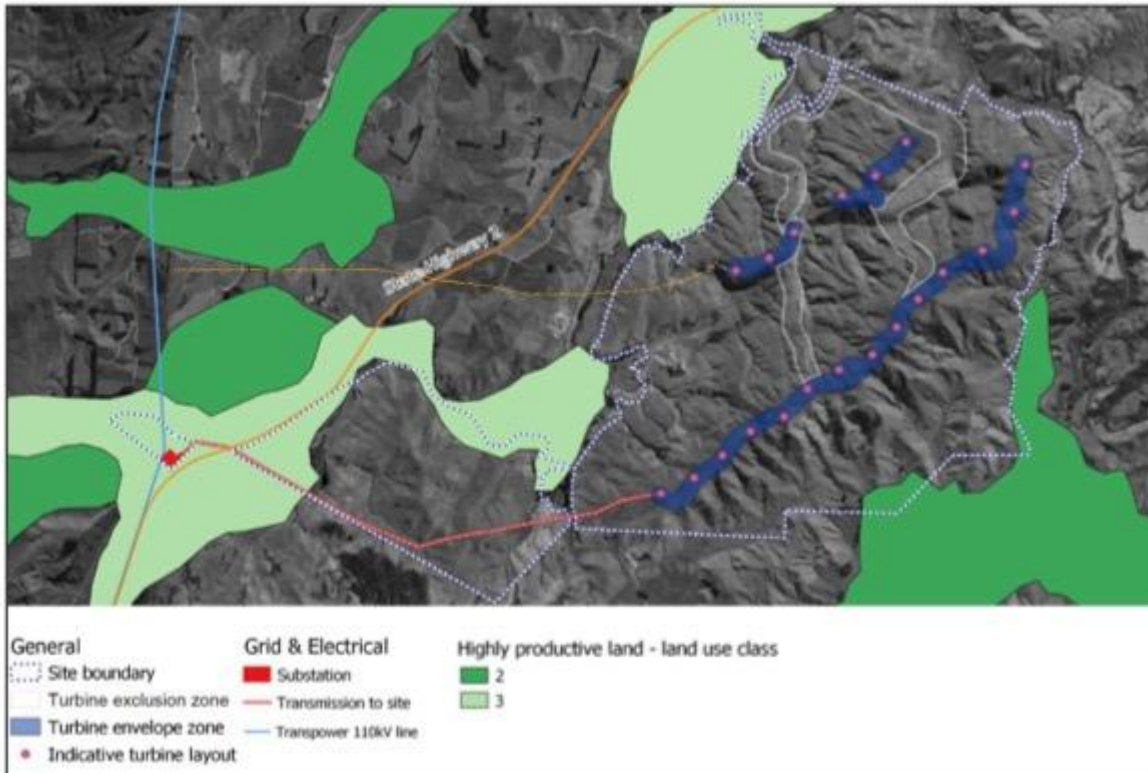


Figure 1: Transmission line and terminal substation routes for the proposed Mt Munro Windfarm

3. Functional or Operational need

3.1. For a proposal to use the specified infrastructure pathway in the NPS-HPL, there must be a “functional or operational need” for the relevant specified infrastructure to be located on the highly productive land.¹ These concepts are defined in the National Planning Standards as follows:

Functional need means the need for a proposal or activity to traverse, locate or operate in a particular environment because the activity can only occur in that environment.

Operational need means the need for a proposal or activity to traverse, locate or operate in a particular environment because of technical, logistical or operational characteristics or constraints.

3.2. There is a functional need for windfarms to be located in an area with a high-quality wind resource, and within proximity to a national grid connection. The Mt Munro site meets these criteria, and the windfarm has a functional need to locate on the site. While no turbines themselves are being located on highly productive land, the transmission system to convey the electricity generated by the windfarm to the national grid system is an integral part of the Project. Given the multiple considerations which have informed the overall windfarm design (including the proposed transmission line route and terminal substation site), the functional need should be assessed at the project level. On this reasoning, and considering the site selection factors set out below, the transmission line and terminal substation can be said to have a functional need to locate on the HPL land.

3.3. The transmission line and terminal substation also have an *operational* need to locate on the LUC-3 land. The proposed transmission line route and substation location was carefully chosen following a careful site selection process, and began with a survey of the general area, taking into consideration terrain, geological, constructability, planning and environmental factors, and ensuring the route and site would be accessible for construction and maintenance.

3.4. This process took into account the various technical, logistical and operational factors from both a Meridian and a Transpower perspective, and has involved a long process of negotiation with landowners.

¹ Clause 3.9(2)(j)(i) of the NPS-HPL
Memo

3.5. Factors which were relevant to selecting this route and site included the need:

- To minimise the length of the transmission line for operational and cost reasons;
- For the substation to locate immediately next to the national grid transmission line, which passes near the Mt Munro site to the west of SH2;
- To connect to the site substation at the western end of the main string of turbines. This location is strongly preferred for the site substation for cost and technical reasons, including to optimising the internal cabling configuration;
- to locate the substation on largely flat land which is clear of existing significant vegetation;
- to minimise the visual and amenity impact of the substation through existing screening and location away from dwellings where possible;
- To provide convenient and safe legal road access to the substation site during construction and operation;
- To avoid high flood hazard areas;
- To minimise the number of land holdings across which the transmission line crosses, to make contractual and land access arrangements logistically feasible / reduce the complexity of scoping and securing access;
- To locate the infrastructure on land with a current and surrounding use and zoning that does not conflict with the transmission line infrastructure;
- To secure access to the land by finding landowners willing to sell or lease parts of their land for the transmission line and substation use.
- To locate the transmission route wherever possible so that it runs along a boundary or fence line, and not through the middle of agricultural land. In Meridian's experience, this is a landowner requirement to reduce the disruption to the use of the balance of the land.

4. Alternatives

- 4.1. My understanding is that the NPS-HPL does not require that an applicant establishes that a particular site or route is the only one available in order to establish that there is a functional or operational need to locate specified infrastructure on highly productive land. As per High Court guidance on functional need, alternatives will generally always exist for specified infrastructure, especially for linear infrastructure, so if that interpretation were correct, a specified infrastructure exception would serve no purpose.²
- 4.2. In saying this, alternatives will be relevant, and I note that a line from the general windfarm site to the national grid has been identified which would not require this infrastructure to locate on HPL land (see the orange line on Figure 1). This route would be subject to numerous constraints compared to the proposed site, and would not be a realistically feasible option to negotiate access for.
- 4.3. Operational, logistical and technical constraints for this route and location include the following:
- Locating transmission infrastructure across multiple parcels, owned by different entities. In Meridian's experience it is exceptionally difficult to negotiate and secure these arrangements where multiple parties are involved. This increased complexity would result in difficulty in arriving at enduring arrangements that would satisfy Meridian, the multiple landowners and Transpower.
 - Needing to pass through and locate on higher land value based on current dairy farm use. Locating the terminal substation in the middle of an operational dairy farm unit would increase the risk of disruption to farming activities on the surrounding LUC-2 land, and could introduce conflict between farming and electricity transmission land uses;
 - An unfavourable transmission line route through the centre of parcels rather than along a fence line or a property boundary, in order to avoid the LUC-2 land on either side of the transmission route.
 - Connecting at a less favourable site substation location off a secondary turbine string, which would result in a less optimal internal cabling configuration; and

² see the High Court's comments on this in relation to functional need under the NPS-FM in *Poutama Kaitiaki Charitable Trust v Taranaki Regional Council* [2022] NZHC 629 at [57]

- Lack of existing legal road access to the terminal substation site, meaning easements and formed access through the parcels would need to be negotiated for construction and to satisfy Transpower's maintenance and operational requirements.

5. Lapse Period

- 5.1. The JWS noted that the Council was open to a longer than 5-year lapse period subject to considering further information from Meridian. I expand on the reasoning in my evidence in chief below. Numerous factors support a ten-year lapse period, including demand for electricity, the price and availability of materials and componentry, exchange rates, internal resourcing, grid operator requirements, and the timing and sequencing of other projects.
- 5.2. Many of these factors are outside a consent holder's control, and can dictate the financial viability and delivery of a project. A longer lapse date provides the necessary flexibility to consider these factors, and to respond to market uncertainties before a final investment decision is made.
- 5.3. I note that a five year lapse period is not the norm under the standard RMA consenting process, and that a longer period is consistent with the range of other consented wind farm applications, as set out in Table 1.³

6. Price and availability of materials and componentry

- 6.1. Wind farm components are manufactured for a global market, with wind farm owners competing on the world stage to negotiate and secure contracts with a small number of manufacturers. This has an impact on both the price and availability of the components. Meridian's current experience in its other projects is that there are high levels of competition.
- 6.2. While Meridian is committed to constructing the wind farm if consents are granted, the timeframes for securing the necessary wind turbine components at an affordable price are uncertain. Although civil works would begin ahead of wind farm components being delivered, Meridian's Board would not approve progressing with construction of a windfarm without the availability and price of turbine componentry being relatively secure.
- 6.3. The price of components is also heavily dependent on commodity prices in relation to steel manufacturing in particular, and on the strength of the New Zealand dollar. Both of these factors are outside a consent holder's control, but heavily affect the timing of a decision to construct a windfarm. Being able to defer an investment decision pending a more favourable commodity market and exchange rate can be vital to a project of this scale.

7. Project Sequencing and Timing

- 7.1. Meridian is aware of other potential projects, including Meridian's own projects, which may impact on the timing of delivery for the Mt Munro wind farm. Meridian has tried to sequence projects with future construction in mind, but given the variables that exist within each project's separate processes, some projects may overlap. Meridian does not have an unlimited resource to construct projects concurrently. The flexibility to sequence projects as decisions on each project are made is therefore highly valuable.

8. Demand for electricity

- 8.1. While the evidence suggests that New Zealand is anticipating a significant demand in electricity demand over the coming years, the exact timing of that demand is subject to market factors, and is not within Meridian's control.

9. Uncertainty

³ These are projects for which the consent documentation could be found on public websites, and does not include all consented windfarms in New Zealand.

9.1. Once a resource consent is obtained for a project, detailed design has to be undertaken, tenders run, contracts drafted, procurement and service timelines confirmed, and a final investment decision (FID) made. This process itself could take 2.5 years, and we note that there is a level of uncertainty as to how much is required of a consent holder to establish that it has given effect to a consent. A five year lapse period provides limited flexibility, and introduces a greater degree of risk and uncertainty.

10. National Grid connection

10.1. The ability to connect to the National Grid within a five year timeline is not a certainty. Given the current and forecast demand for new generation, the capacity of the existing National Grid infrastructure could be reached, and the timeline to construct the supporting National Grid transmission infrastructure for projects such as Mt Munro is outside of Meridian's control and could result in delays. Again, Meridian could not construct the wind farm without having the certainty of a connection to the National Grid.

Table 1: Lapse periods for a range of windfarm consents under the standard RMA consenting process

Project	Lapse period	Comments
Awhitu Wind Farm	5 years	Granted in 2005, and subsequently required an extension to the lapse period. Construction began in 2020.
Castle Hill	10 years	Later extended by a further 8 years to 2031.
Hurunui	10 years	Lapsed.
Hauauru ma Raki – Waikato	10 years	Lapsed
Kaiwaikawe Wind Farm	10 years	
Kaiwera Downs	10 years	Lapse period extended by 5 years to 2024
Mill Creek	7 years	Constructed
Mt Cass Wind Farm	8 years	Lapse period extended by 5 years to 2025.
Puketoi	10 years	Lapse period extended to 2031
Taumatotara	8 years	Appears to have been extended.
Te Rere Hau (original)	8 years	Constructed
Te Rere Hau Extension	10 years	Constructed
Turitea	10 years	Constructed
Waitahora	5 years	Lapsed
Waverley Wind Farm	10 years	

West Wind	7 years	Constructed
White Hill	10 years	Constructed

Attachment B



16 August 2024

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Tēnā koutou

ENV-WLG-2024-001- Meridian Energy Limited (Meridian) – Mt Munro Wind Farm – Response to Queries in Planning JWS

This Joint Witness Statement of Planning Experts dated 9 August 2024 (JWS) requested clarification or further specifics on several points from Meridian. This letter provides this, and we understand will be used by the Planning Experts to inform an updated JWS, to which it will be attached.

Culverts

1. The JWS noted that Policy 5-26 of the One Plan 2022 would be relevant if an analysis could be provided by Meridian to show that culverts are essential.¹ Policy 5-26 is as follows:

Policy 5-26: Essential and beneficial activities

Activities in, on, under or over the beds[^] of rivers[^] and lakes[^] that are essential or result in an environmental benefit must generally be allowed, including: (a) the use, maintenance* and upgrading* of existing infrastructure[^] and other existing physical resources of regional or national importance (b) works designed to maintain or improve the stability and functionality of existing structures[^] (c) the removal of derelict, unlawful or non-functional structures[^] (d) the restoration or enhancement of natural habitats.

2. A memorandum from T+T as to how the specified design parameters to accommodate the over-dimensional loads have dictated the internal access road route options, and need for culverting, is included as **Appendix A** to this letter.

Terminal Substation

3. The JWS noted that Meridian should provide further information on the functional or operational need for the terminal substation infrastructure to be located and on the LUC3 HPL.² **Appendix B** to this letter is a memorandum from Mr Bowmar setting out this reasoning.
4. The JWS further requested that Meridian confirms why the terminal substation is not included in the decommissioning conditions.³ As noted in Mr Anderson's evidence on this matter, the terminal substation will be operated separately to the wind farm.⁴ It is proposed that Meridian consents and builds the terminal substation, but that ownership of this facility will ultimately be handed over to Transpower New Zealand Limited (Transpower). Transpower will then be able to use the substation for additional purposes aside from the wind farm, and it is highly likely that this infrastructure will be a permanent part of the national grid beyond the life of the wind farm. As such, it is not appropriate to include it in a decommissioning condition.

¹ [1] of the JWS

² [2] of the JWS.

³ [2] of the JWS.

⁴ Evidence of Thomas Anderson dated 24 May 2024, at [358]

Lapse Date

5. The JWS states that the Councils remain open to considering a lapse date that is longer than five years, on assessing further evidence by MEL concerning the variables as set out in Mr Bowmar's evidence and any additional matters that influence the implementation of the consents.⁵
6. Mr Bowmar's evidence in chief sets out the factors which affect the lead time for developing a wind farm, and the timing of a decision to proceed. For completeness, these include the demand for electricity, the price and availability of componentry, and construction timing of other projects. Further clarification on each of these points is included in the letter from Mr Bowmar attached as **Appendix B**.

Section 105

7. The JWS requested that Meridian specifically assesses section 105(1)(c) to make 'abundantly clear' that it is satisfied.⁶ A memorandum from Incite Limited which addresses this point is attached as **Appendix C**.

Ngā Mihi | Kind regards,

Ellie Taffs

Senior Legal Counsel - RMA
Meridian Energy Limited



Enclosed:

- Appendix A: Memorandum from Tonkin + Taylor regarding the need to cross waterbodies
- Appendix B: Memorandum from Nicholas Bowmar on the NPS-HPL and Lapse Period
- Appendix C: Memorandum from Incite Limited regarding section 105(1)(c)

⁵ {6} of the JWS

⁶ {3} of the JWS.



15 August 2024
Job No: 1016884.0002

Meridian Energy Limited
Level 2, 55 Lady Elizabeth Lane
Queens Wharf
Wellington 6011

Attention: Ellie Taffs

Dear Ellie

Mt Munro Wind Farm Wind Farm Roads Crossing Waterbodies

We understand that through recent planning conferencing discussions between Meridian and Horizons Regional Council, the question has been raised as to why the proposed internal wind farm roads cross waterbodies rather than avoiding them via the use of alternative routes.

The internal wind farm access roads are used by over-dimensioned vehicles such as tractor/trailer combinations for transporting the wind turbine components (tower units, nacelle units and blades) from the laydown area up to the wind turbine locations. These vehicles can only operate under certain design parameters which govern the alignment and gradient of the roads.

The most critical design parameters consist of:

- Minimum horizontal curve radius of 50 m
- Maximum longitudinal gradient of 16%

During the consent design process for the internal access roads up to the wind turbine locations, limiting the number of road crossings over waterbodies while meeting the specified road design parameters was a key aim. After considering site topography and geotechnical considerations, it became clear that route options which kept within these road design parameters were severely limited. The proposed design (as shown in Figure 1) has met these parameters, while minimising waterbody crossings. However, the crossings noted on Figure 2 have been identified as required.

The proposed routes (Western and Eastern) up to the proposed turbine locations are illustrated in Figure 1.

There are two major crossings over waterbodies on the eastern route located at proposed culverts 1 and 2. On the western route there are also two major crossings over waterbodies; at proposed culvert 3, and a proposed bridge crossing on an un-named tributary of the Makahahi River.

Refer to Figure 2 below for proposed culvert locations. Further detail on proposed crossings over waterbodies is provided in Tonkin and Taylor Memo "Mt Munro Wind Farm Stormwater S92 Responses" dated 7 September 2023.

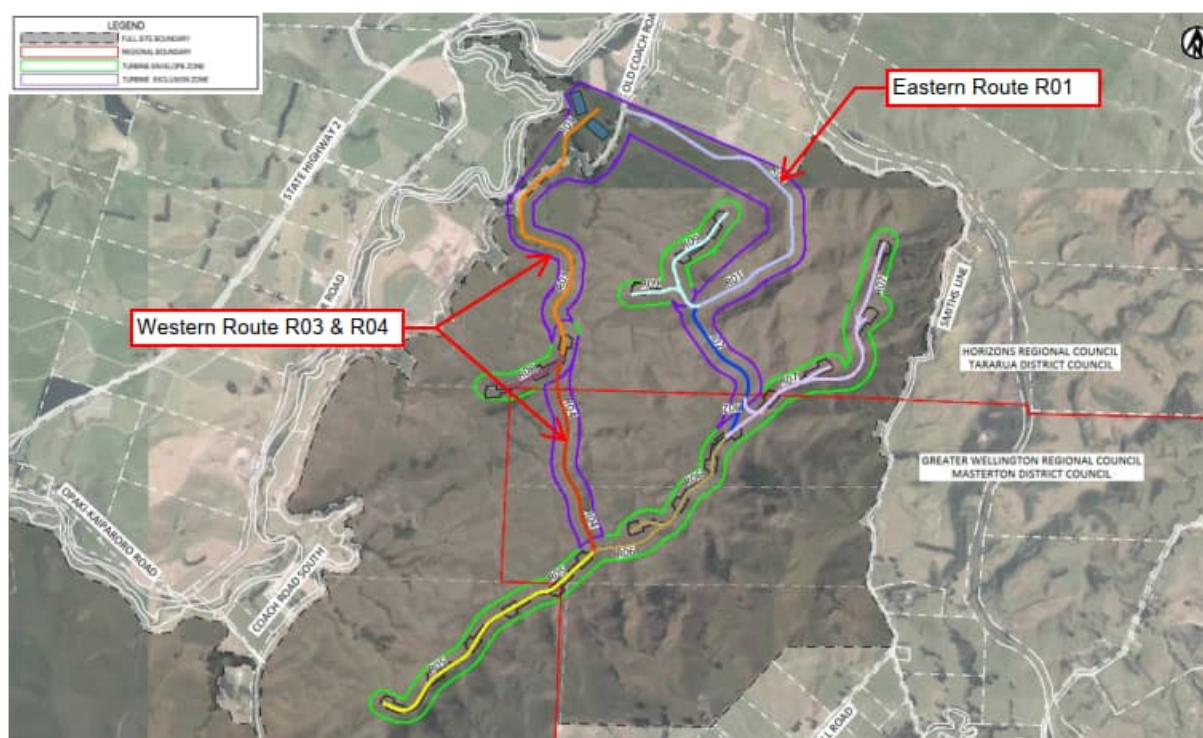


Figure 1: Access route options

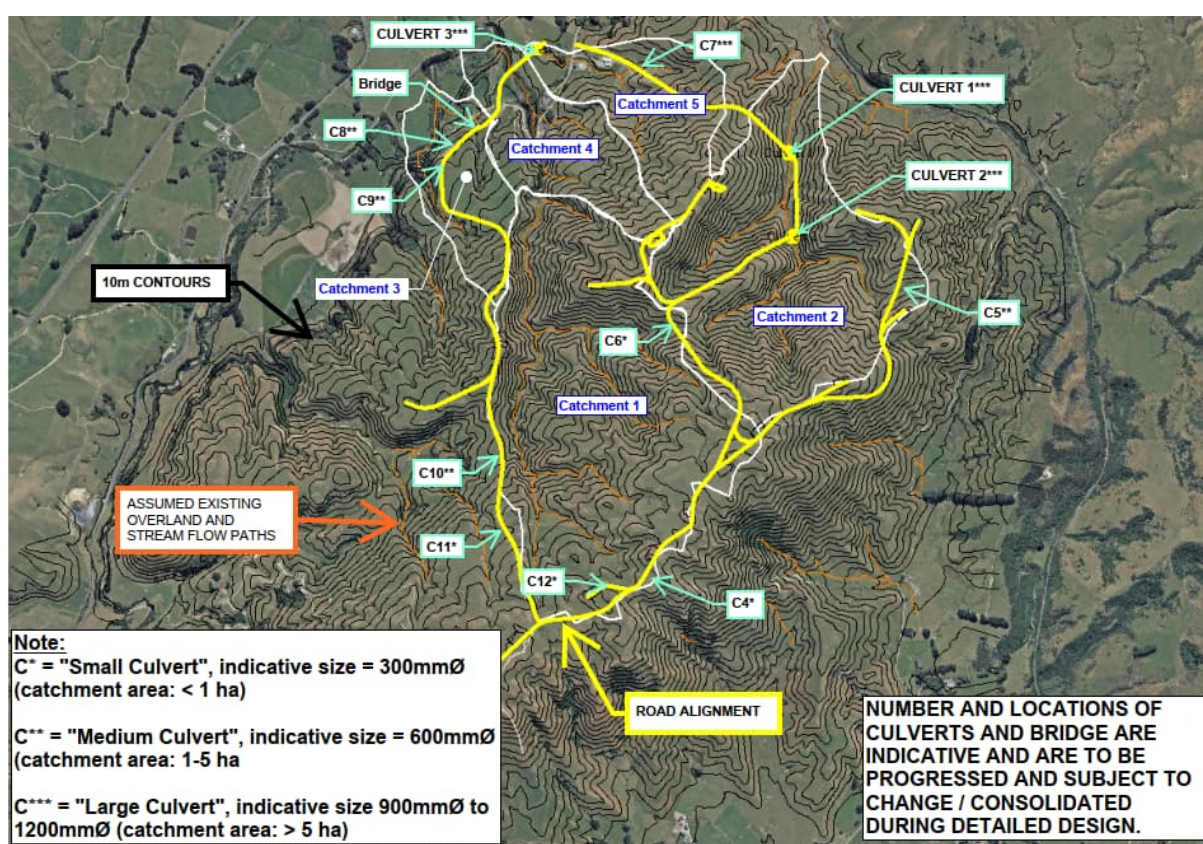


Figure 2: Proposed culvert locations

Yours sincerely

A handwritten signature in blue ink, appearing to read 'Mills', with a long horizontal flourish extending to the right.

Maurice Mills
Senior Civil Engineer

15-Aug-24

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Memo



Project Number	Mer.0035
Project	Mt Munro Wind Farm
Subject	Assessment of RMA s105(1)(c)
Date	16 August 2024
Prepared by	Tom Anderson

Incite
PO Box 2058
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1. Issue 3 of the Planning Joint Witness Statement for the Mt Munro Wind Farm Resource Consent Application requires that a specific assessment of the proposal against Section 105(1)(c) of the Resource Management Act (RMA) is provided by Meridian.

2. Section 105(1)(c) of the RMA provides:

105 *Matters relevant to certain applications*

(1) If an application is for a discharge permit or coastal permit to do something that would contravene section 15 or section 15B, the consent authority must, in addition to the matters in section 104(1), have regard to—

(c) any possible alternative methods of discharge, including discharge into any other receiving environment.

3. The resource consent application seeks discharge permits from Horizons Regional Council and Greater Wellington Regional Council for the discharge of sediment associated with earthworks and vegetation clearance, discharges associated with the placement of culverts, discharge to air from concrete batching and mobile aggregate crushing and discharges associated with the reclamation of ephemeral streams.
4. The discharges associated with the proposal have been minimised to the extent practicable and designed using current best practice.
5. Discharges are a necessary part of wind farm construction. A consideration of alternative locations for a wind farm was provided in Section 6 of the Assessment of Environmental Effects which accompanied the resource consent application, with the site being the best commercially viable site available to Meridian at that time in the Tararua or Masterton Districts.
6. In terms of alternative sediment discharge methods, it is not best practice to discharge sediments into other catchments. The only potential alternative is to avoid discharges of sediment by designing controls which provide for full impoundment of construction water. This method requires a much larger area for the devices, and is significantly more expensive.

On the basis the proposed sediment discharges are largely agreed as being acceptable by the erosion and sediment experts, and the ecologists appear to agree with the approach to managing effects from an ecological effects perspective, the proposed sediment discharge methods are considered appropriate for this project.

7. The alternative to the discharge to air associated with on site concrete batching and the mobile aggregate crushing facility is to bring in concrete and aggregate from elsewhere. While this may occur for aggregate (should no suitable quality rock be found within the project footprint), an offsite concrete batching plant would necessitate additional traffic movements, adding to the traffic impacts of the proposal. Concrete and aggregate is a necessary aspect of wind farm construction, and it must be sourced from somewhere. Sourcing as close as possible to the construction site is considered best practice. In any instance, it is noted that the air quality experts in their Joint Witness Statement are in agreement that the effects of the proposed air discharges will be appropriate.
8. I therefore consider that alternative methods of discharge have been appropriately given regard to as required under Section 105(1)(c).