APPENDIX 3

Mahinerangi Wind Farm (Stage 2): Evaluation of proposed conditions against concerns raised In Treaty Impact Assessment

1. Introduction

Mahinerangi Wind Farm was consented in 2009. The consents for 100 turbines were given effect to with the construction of Stage 1 which has been operational since 2011 and comprises 12 x 3MW wind turbines 125m high. Tararua Wind Power (TWP), a subsidiary of Mercury NZ Ltd (Mercury) now wishes to complete the wind farm (Stage 2) and seeks changes to the conditions of consent to enable it to use larger and more efficient wind turbines now available. It also seeks regional consents (including for such construction activities as modifications of wetlands, and diversion of a stream to construct a culvert crossing), in part to replace those that have expired, and new land use consents for the transmission infrastructure to connect with the National Grid, and an associated Battery Energy Storage System (BESS).

A Treaty Impact Assessment (TIA) of the proposal prepared for Te Rūnanga o Ōtākou documents concerns relating to the proposal.[1] It assigns levels of significance to the concerns and highlights:

- Impacts for which significance cannot be fully determined because of insufficient information,[2] and
- Impacts assessed as having moderate or major significance after considering the actions proposed in the application.[3]

This evaluation considers whether conditions proposed by the applicant, in conjunction with proposed management plans, are sufficient to address the concerns highlighted in Tables 7 and 8 of the TIA. I have also evaluated whether the management plans and conditions assessed in Section 5.7 of the TIA as addressing other concerns are drafted in a way that is sufficiently certain and will be effective in achieving their intent.

Recommendations are made for strengthening or adding to conditions where they are assessed as inadequate or uncertain.

[1] Tipa, G. (October 2025) Treaty impact assessment for Mahinerangi Wind Farm (Stage 2), Section 5.7.
[2] See TIA, Table 7.
[3] See TAI, Table 8.

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2. Comment on use of management plans in conditions

Management plans are the primary tool used by the applicant to manage the environmental effects of the proposed activities. The proposed conditions are heavily reliant on the 20 management and monitoring plans forming part of the application.

Management plans provide the benefit of flexibility for the applicant, as they can be modified quickly to meet changes in the operational or physical environment or to take advantage of advances in technology. For the applicant, tying conditions to management plans allows for such adjustments to be made without the need to re-enter the regulatory process to vary the consent conditions. For the consent authority, this approach also significantly reduces the detail, length and complexity of consent conditions that would otherwise be required.

Despite these advantages, some caution is needed in using management plans as the basis for conditions. Conditions must be framed in a way that makes it absolutely clear what the requirements are and that is sufficiently certain to form the basis of compliance checks. Critical matters, including performance standards, environmental bottom lines and monitoring/reporting requirements, must therefore be incorporated into conditions.

As part of this evaluation, the way in which management plans have been integrated into conditions has been assessed.

3. Evaluation approach and findings

2.1 Approach

The application includes multiple sets of conditions to address a wide range of effects of the various components of the proposal. This evaluation does not assess every proposed condition, but focuses on those that relate to the potential impacts identified in Section 5 of the TIA. The assessment is detailed in appendices to this report as follows:

- Appendix 2 assesses the adequacy of conditions to address the significant and uncertain impacts described in Tables 7 and 8 in Section 5.9 of the TIA;
- Appendix 3 reviews the conditions identified in the TIA as addressing other concerns raised in Section 5 of the TIA that have not been assigned a level of significance warranting their inclusion in Tables 7 and 8. This review was thought necessary because, if the conditions are framed in a way that means they will not be effective in achieving their intent, then this might affect the assessment of significance.
- Appendix 4 highlights a small number of concerns with the clarity and completeness of conditions that are not addressed in Appendix 2 and 3, but which are closely linked to those conditions.

In assessing the appropriateness of the conditions, three key questions have been considered:

- Are the conditions appropriately targeted to the concerns raised in the TIA?
- Are the conditions sufficiently clear and certain to be effective in achieving their intent?

- Where the conditions rely on management plans to address the concerns, are those management plans integrated into conditions in a way that ensures critical standards, requirements and outcomes are clearly set out in the conditions?

Where the assessment has identified a need for amendments to ensure these questions can be answered positively, recommendations for amendments or addition to conditions (and sometimes to management plans) are set out.

Due to the absence of distinctive numbering for the many different sets of conditions, a key has been applied in the assessment and recommendations to distinguish between conditions relating to the different consent requirements. This key is explained in Appendix 1.

2.2 Findings

The objectives and contents of management plans appropriately target the majority of the concerns raised in the TIA. Although many of these matters are also addressed in the conditions, there are some important gaps and a lack of certainty in regard to critical standards and monitoring requirements, particularly in respect to the health and values of waterbodies. The key areas of concern are as follows:

1. **Protection of natural flow paths** in construction of roads, hardstands and other infrastructure and in fill disposal: This matter is addressed in the detail of the relevant management plans but is not identified as an objective that must be met by those plans, and the "bottom line" requirements to protect the flow paths have not been included in the proposed conditions.

2. Certainty of **water quality standards** to be met, particularly in respect to the effects of sediment from earthworks and construction: There is an absence of defined receiving water quality standards in all or most of the conditions relating to discharge of sediment and stormwater. The general water quality conditions included do not provide sufficient certainty for monitoring and compliance purposes.

3. Adequacy of **measures to address other contaminants**: Other contaminants identified in the TIA as potential concerns include:

    a. Risk of spill from oil or other lubricants used in operation of the turbines. Although there is a general requirement to avoid spillage, there is no information in the relevant management plans about the potential contaminants or degree of risk, so it is not possible to assess whether the general requirement is adequate to address the risk.

    b. Management of wastewater generated by the construction workforce. Although the treatment of wastewater during the operation period is discussed in the application, there is no discussion of the how wastewater from the large construction workforce (up to 200 people) will be managed.

    c. Contaminants in water used for fire suppression. While the Fire Management Plan discusses management od contaminants, there are no requirements incorporated into the proposed conditions to provide a basis for compliance monitoring.

d. Cleaning of vehicles and equipment to avoid spread of both terrestrial and aquatic weeds. Requirements for inspecting and cleaning vehicles and equipment are included in the details of the Woody Weed Management Plan. Relevant requirements are incorporated into conditions for installation of a culvert in a tributary of Lee Stream, but not into conditions for earthworks, construction and general operational activities.

4. Protection of the **galaxiid population and habitat** in the Lee Stream tributary in which a culvert is proposed to be installed: Requirements described in the Native Fish Recovery Plan are not well integrated into the proposed conditions for works in the tributary, and requirements about timing of works to avoid the spawning season are not included in all relevant sets of conditions.

5. Clarity and certainty of **monitoring and reporting requirements**: There is significant variation in the level of certainty and clarity provided in management plans in regard to monitoring and resporting requirements for the various activities and potential effects. Some management plans refer to monitoring occurring in compliance with consent conditions, but the related conditions do not set out requirements. Matters for which greater clarity and certainty is needed in the proposed conditions include monitoring and/or reporting requirements relating to protection of flow paths, water quality and impacts on NZ falcon and lizards.

In addition to the above matters, gaps and/or lack of clarity have been identified in conditions relating to:

- contingency planning to avoid sedimentation from earthworks in extraordinary events;
- mitigation of environmental effects of fire; and
- clarity and consistency of accidental discovery protocol requirements in the Archaeological Management Plan and related conditions.

As discussed above, the detailed recommendations to address the concerns identified are set out in Appendices 2, 3 and 4 to this report.

A key concern raised in the TIA that is not addressed in this evaluation is the question of how impacts on the ability for Ōtākou whānau to connect with wāhi tūpuna can be effectively addressed. As stated in the TIA, this is a matter that will require further discussion with Te Rūnanga o Ōtākou. That discussion may result in further recommendations for amendment or addition to consent conditions.

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Appendix 1: Key to coding of consent conditions referred to in this report

ORC-Gen	General conditions that apply to all Otago Regional Council consents
ORC-Cul	Land use consent to install a culvert in the bed of Lee Stream tributary and associated disturbance of the bed
ORC-Cul-Dis	Discharge of sediment to water for the purpose of installing a culvert in Lee Stream tributary
ORC-Cul-Div	Water permit to temporarily divert Lee Stream tributary while installing culvert
ORC-Bore	Land use consent for construction of "bores" for dewatering (i.e. excavation resulting in taking of groundwater for dewatering)
ORC-GW	Water permit to take groundwater for the purpose of dewatering construction sites
ORC-Conc-Dis	Discharge of water or any contaminant from concrete batching to land
ORC-Const-Dis	Three discharge permits with common water quality conditions addressing: • Discharge of water to land for disposal of stormwater from construction sites and fill areas • Discharge of water and sediment to land for disposal of stormwater from construction sites and fill areas • Discharge water to land for the purpose of dewatering construction sites
ORC-SW-Dis	Operational discharges of stormwater to land from new infrastructure and associated impervious surface areas (excluding roading)
ORC-NESF	Construction of specified infrastructure (including earthworks, land disturbance, vegetation removal and stormwater discharge) in or within 10m of natural inland wetlands
CDC-W	Variation of existing Clutha District Council land use consent for wind farm (RM1409)
CDC-T	Clutha District Council land use consent to construct transmission line and poles, including associated Substation, Battery Energy Storage System and Operations and Maintenance Facility

Appendix 2: Evaluation of conditions against significant and uncertain impacts identified in TIA

Note: Separate consent conditions have been drafted by the applicant for each of the consent requirements that apply. To avoid confusion between different proposed conditions with the same numbering, this evaluation uses a key to distinguish between the various sets of conditions. The key is attached as Appendix 1.

Component of proposal	Impact identified in TIA		How are these addressed in proposed management plans and conditions?	Recommendations
Impacts of concern that cannot be fully assessed				
Whole proposal	5. Whānau ora	A priority for Ngai Tahu is advocating for developments likely to contribute to affordable power for whanau and communities. It is unclear whether this proposal will simply add capacity to Mercury, provide flexibility for Mercury, or add to security of supply to alleviate the risk of shortages across NZ. The benefits of the development to whānau needs to be clarified.	This is a matter that should be addressed in the rationale for the proposal. It cannot be dealt with through conditions of consent.	-
Whole proposal	7. Wai māori Mahika kai Taoka species	When Ōtākou supported the proposal in 2006 they saw advantages in one company operating the windfarm	The potential effects of competition between generators in the Taiari catchment on the Waipori/ Waihola wetland complex is a matter that should be addressed in the	-

Component of proposal	Impact identified in TIA		How are these addressed in proposed management plans and conditions?	Recommendations
		alongside the nearby Waipori hydro scheme. Although Ōtākou raised questions, it was felt that this synergy could benefit the downstream Waipori Waihola wetland complex.	overall assessment of the proposal. It cannot be dealt with through conditions of consent.	
Whole proposal	9. Wāhi tūpuna Mauka	The location of infrastructure in relation to ridgelines needs to be clarified as the technical reports appear to be contradictory. • "The base of most wind turbines is beyond the ridgeline"[4] • "The handstand areas for the turbines …are located on ridgelines"[5] Mercury have since clarified the placement in relation to ridgelines.	CDC-W Condition 25 ties location of turbines and access tracks to the locations shown on the Stage 2 Plans. These locations are predominantly along ridgelines but they do not depart in any significant way from the locations approved in the Stage 1 consent. The application proposes a reduction in the number of turbines provided for, from the 100 previously consented to 56 now proposed. Existing conditions thus ensure the impact of location will not be more than for the activity currently consented.	-

[4] Button, S. Lister, G. (24 June 2005) Landscape and Visual Effects Assessment Draft for Consultation Isthmus page 27
[5] See SLR (June 2025) "Ecological Assessment – Aquatic Ecology: Mahinerangi Wind Farm Stage 2" page iii

Component of proposal	Impact identified in TIA		How are these addressed in proposed management plans and conditions?	Recommendations
Whole proposal	11. Wai māori	The extent to which the roading network, and other infrastructure including sediment disposal areas will intercept flows that are meant to contribute to flows in the Lower Taiari catchment is unknown.	Conditions do not require the detailed location and specifications of building, structures and the internal roading network to be made available before consent has been obtained, but only a month before construction commences (ORC-Gen Condition G11). The Environmental Construction Management Plan (ECMP) includes proposed measures to minimise adverse effects on existing stormwater runoff patterns. These include: • Locating tracks and hardstands along ridgelines where practicable to avoid impact on natural flow paths • Where tracks and hardstands do intercept flow paths, installing stormwater culverts to conserve the natural flow path or, for access tracks, allowing sheet flow from tracks across the natural topography. The Earthworks Management Plan (EMP) also provides for use of temporary culverts to maintain existing flow paths during earthworks construction. In respect to	1. Add the following further objective to the stated objectives for the ECMP (ORC-Gen G16): *To ensure that natural flow paths are conserved in construction and use of access tracks and hardstands.* 2. Add the following further objective to the stated objectives for the EMP (ORC-Gen G18): *To ensure that natural flow paths are not impeded by earthworks or surplus fill disposal.* 3. Add further conditions to the ORC-Gen conditions, in the section headed "Earthworks and construction", as follows: • *No surplus fill disposal shall take place into any wetlands or permanent,*

Component of proposal	Impact identified in TIA		How are these addressed in proposed management plans and conditions?	Recommendations
			surplus fill disposal (SFD) sites, these are required to be located on ridgelines rather than in gullies, and to be contoured in a way that will not obstruct overland flow. However these requirements have not been incorporated into conditions. Conditions require certification of these management plans to confirm that they include appropriate measures and monitoring to ensure they achieve their objectives. The respective objectives are specified in further conditions; however conservation of natural flow paths is not identified as an objective for either the ECMP or the EMP, and there are no monitoring requirements relating to this matter identified in the ECMP, EMP or conditions. Although there is some reference to ephemeral streams, reference in the management plans to conserving flow paths appears to be primarily focused on impacts on adjacent wetlands.	*intermittent or ephemeral rivers or streams.* • *No surplus fill disposal shall be located in a gully or on land with a gradient of more than 15%.* • *All earthworks and construction must be designed and managed in a way that ensures no natural flow path is permanently impeded*. • A requirement to monitor impacts on natural flow paths following the first storm event after completion of earthworks for any access tracks, hardstand areas and SFDs, and to report to the consent authority on: - the results of monitoring - if any impedance of flow paths is identified, the

Component of proposal	Impact identified in TIA		How are these addressed in proposed management plans and conditions?	Recommendations
				measures that will be taken to remedy this. 4. Amend ECMP and EMP as necessary to ensure that flow paths to Taiari catchment streams (including via ephemeral and intermittent streams) are protected as well as flow to wetlands.
Base, tower and turbine	13. Wai māori Wāhi tūpuna	It is unclear what contaminants (e.g. oils) are needed in each tower once the farm is operational and the contingency plans that are needed for extraordinary events. The TIA also notes, with reference to the assessment of effects on aquatic ecology,[6] that wastewater will be treated by means of a septic tank with a drip field, with the tanks emptied as required and	No information has been found in the application or supporting documents to clarify what potential contaminants are used as part of turbine operation. It would be expected that use of oil or other lubricants would form part of ongoing operation and maintenance. CDC-W Condition 16 requires that any refuelling, lubrication or mechanical repairs are undertaken in a way that ensures there is no spillage of hazardous substances, that immediate action is taken to stop and/or contain any spillage of more than 10 litres and that measures are also taken to remedy	1. Consider whether a condition equivalent to CDC-T 63 is required to ensure containment of any spills of lubricants or other contaminants used in the operation of turbines. 2. Clarify how wastewater generated by the construction workforce will be managed, and consider the need for a condition requiring wastes to be removed from the site or other measures to ensure no

[6] SLR (June 2025) "Ecological Assessment – Aquatic Ecology: Mahinerangi Wind Farm Stage 2" pg 42

Component of proposal	Impact identified in TIA		How are these addressed in proposed management plans and conditions?	Recommendations
		waste taken off site and only water dripped into the field.	or mitigate adverse effects of the spillage. This condition may be adequate to manage the effects; however further information is needed about the types and quantities of material used to determine whether additional contingency plans are required. Conditions applied to the substation that will be part of the transmission line infrastructure include a requirement for transformers and radiators to be enclosed by bunds with sufficient capacity to contain any spills of oil or other contaminant (CDC-T Condition 63). A similar condition might be appropriate for areas in which turbine lubricants are stored or maintenance on towers is carried out. In respect to wastewater disposal, it is not clear whether the proposed septic tank and drip field will be designed to manage wastewater during the construction period, when the project description states that up to 200 contractors may be on site.[7]	contamination of water bodies occurs.

[7] Puke Kapo Hau / Mahinerangi Wind Farm Stage 2: Part A - Substantive Application Report, Section 5.4.5.5, p.53

Component of proposal	Impact identified in TIA		How are these addressed in proposed management plans and conditions?	Recommendations
Increased size of hardstand	14. Wai māori Taoka species	• "The handstand areas for the turbines …are located on ridgelines"[8] • Although the total amount of land disturbance will be less (1400x100 compared to 1855x44) there will be land disturbance and sediment disposal areas on gently sloping areas away from gullies. The risk of these and downstream waters in an extraordinary event is unknown.	Objectives of the ECMP and the EMP incorporated into ORC-Gen conditions G16 and G18 each require that the area of overall disturbance and the generation of sediment and sediment-laden runoff is minimised, and ORC-Gen G18 requires control or mitigation of any potential adverse effects of sediment run-off. As noted in the TIA, the EMP sets out requirements for location and construction of SFD sites and the ECMP describes stormwater management measures to avoid or minimise effects of SFDs on the values of receiving waterbodies. However these plans do not identify the water quality outcomes to be maintained in the receiving waterbodies. The proposed conditions do not adequately address water quality outcomes for receiving waters. In particular: • ORC-Gen G37 sets water quality standards (pH and receiving water clarity) for sediment retention devices, but there are no comparable quantitative standards in the proposed conditions for discharge	1. Add to proposed condition ORC-Gen G37 TSS limit at point of discharge from sediment retention devices (50 mg/l) referred to in the CTMP. 2. In the proposed conditions for dewatering of construction sites and stormwater discharges from construction sites and fill areas (ORC-Const-Dis), replace the general water quality requirements in proposed condition 3 with defined receiving water quality standards such as the clarity and pH outcomes that are required in Condition ORC-Gen G37. 3. In the NESF conditions for works in or near wetlands (ORC-NESF), include defined water quality standards for affected wetlands.

[8] SLR (June 2025) "Ecological Assessment – Aquatic Ecology: Mahinerangi Wind Farm Stage 2" page iii

Component of proposal	Impact identified in TIA		How are these addressed in proposed management plans and conditions?	Recommendations
			consents relating to construction sites and fill areas. The proposed conditions for discharges only include the general requirements of RMA section 107 (Condition 3 in each of these discharge consents), which need to be translated into clear and certain standards for monitoring and compliance purposes. • The Chemical Treatment Management Plan (CTMP) refers to a best practice limit for total suspended solids (TSS) at point of discharge from sediment retention devices. This limit is not included in ORC-Gen G37. • The reference to undefined "reasonable mixing" in the standard for water clarity in ORC-Gen G37 also introduces uncertainty.[9] Clarity standards for receiving water should reflect the intent that management of exposed areas and sediment disposal areas ensures sediment does not enter waterways. In this context, use of a mixing zone needs to	4. In all conditions referring to a zone of "reasonable mixing", clear definition of the area of this zone should be included. 5. Add to ORC-Gen G38 (or as a separate condition) a requirement for a programme of monitoring specified water quality parameters both upstream and downstream of construction and fill areas before, during and after construction to determine if there has been any decline in water quality downstream of these areas. Parameters to be monitored should include relevant measures of sedimentation and ecological health. 6. As part of the minimum content of the EMP set out in

[9] The Otago Regional Plan: Water does not include any definition or clear method for determining a reasonable mixing zone, but just identifies the range of considerations to be taken into account (see Policy 7.B.6).

Component of proposal	Impact identified in TIA		How are these addressed in proposed management plans and conditions?	Recommendations
			be clearly justified. If it is needed, the mixing zone needs to be clearly defined in conditions. • Although CDC conditions for the land use consent refer to water quality outcomes for downstream waterbodies to be met by measures in the EMP (see CDC-W condition 25E(b)(iv)(a) and (b)), these are not reflected by inclusion of any water quality standards in the ORC general conditions or discharge conditions. • ORC-Gen G38 requires measures to be taken if there is evidence of a change in downstream water quality as a result of construction activities. Collection of such evidence would rely on monitoring of both upstream and downstream water quality before, during and after construction, but there is no condition requiring this monitoring to occur. The TIA also seeks that the risks of an extraordinary event impacting SFDs be made explicit. The EMP identifies (in Section 6.4) extraordinary events that might trigger the need for urgent action to address discharge of	ORC-Gen G19, add the following: *Identification of extraordinary events that could result in sediment entering water bodies (including their likelihood and scale of effects), and measures to avoid sediment entering waterbodies as a result of these events.*

Component of proposal	Impact identified in TIA		How are these addressed in proposed management plans and conditions?	Recommendations
			sediment from earthworks and describes a range of actions that may be taken. However this content is not listed in the minimum requirements for EMP content that are set out in ORC-Gen G19, so there is currently no certainty that the content will remain over time. There is no specific discussion about risks to SFDs from extraordinary events. This is a matter that should be addressed in the overall assessment of the proposal, to determine whether there is a need for conditions to require contingency measures.	
Impacts of moderate and major significance that are still to be fully discussed				
Whole proposal	3. Rakatirataka Kaitiakitaka	• Relationships are essential to the successful implementation of any project and to provide assurance to Ōtākou that their concerns will be addressed. Mercury as a generator is new to the region with relationships still to be formed.	The nature of any formal relationship cannot be dealt with through conditions of consent but must be addressed outside the regulatory process.	-

Component of proposal	Impact identified in TIA		How are these addressed in proposed management plans and conditions?	Recommendations
		• Ōtākou whānau have a responsibility to care for the lands, waters and resources within their takiwā. Their ability to fulfil this obligation is challenged by developments.		
Whole proposal	4. Kaitiakitaka	It is unclear to whānau whether the inclusion of a battery and transmission line will add stability to the transmission network and be a catalyst for other developments in the catchment. In other words it will be part of but also exacerbate the cumulative effect.	This is a matter that should be addressed in the overall assessment of the proposal. It cannot be dealt with through conditions of consent.	-
Whole proposal	6. Mahika kai Taoka species	When fully operational it is likely that whānau cultural use of lands, waters and resources in the Taiari catchment will have a smaller footprint and be centred on the Lower Taiari	Appropriate mitigation of the impact of the wind farm on the area available to whānau for mahika kai and other cultural use is a matter that will require further discussion between the applicant and Te Rūnanga o Ōtākou.	Add the following to proposed conditions CDC-W 27 and 27A: • Minimum reporting requirements relating to falcon monitoring

Component of proposal	Impact identified in TIA		How are these addressed in proposed management plans and conditions?	Recommendations
		– arguably the most impacted and degraded part of the whole catchment.	With respect to taoka species, the TIA notes that the applicant has undertaken extensive investigations in relation to falcon and lizards, which are both subject to management plans. These management plans are referred to in proposed land use consent conditions CDC-W 26, 27 and 27A and CDC-T 29 and 30. The conditions describe the objectives to be met by the management plans and the minimum contents required. The minimum requirements for monitoring of effects on falcon are also described in proposed condition CDC-W 27. However reporting requirements in respect to falcon, and both minimum monitoring requirements and reporting requirements in respect to lizards, should be set out in the conditions rather than just referencing the management plans.	Add the following to proposed conditions CDC-W 27 and 27A and CDC-T 30: • Minimum monitoring and reporting requirements relating to lizards.
Base, tower and turbine	12. Wāhi tūpuna	Please note Ōtākou hold concerns about the impacts on wāhi tupuna and want to discuss further Tararua Wind Power Ltd Mahinerangi Wind Farm Stage 2 Landscape and Visual Assessment.	Appropriate mitigation of the impact of the wind farm on wāhi tūpuna is a matter that will require further discussion with Te Rūnanga o Ōtākou.	Subject to further discussion

Component of proposal	Impact identified in TIA		How are these addressed in proposed management plans and conditions?	Recommendations
Roadways	16. Wāhi tūpuna	• The visibility of the 37km of roading is unknown. • "The road/track network has been aligned to ridgelines" • The roading will not improve access for whānau or communities. • The roading network will require further earth disturbance. • The location of the roads in relation to ridgelines is unknown.	The TIA notes that, despite reduction of the width of formed road and the overall length of the roading network from the Stage 1 consent, the footprint of earthworks will still be significant. Impacts of the roading footprint on wāhi tūpuna values is a matter that will require further discussion with Te Rūnanga o Ōtākou. In respect to the extent of earthworks associated with forming access roads/ tracks, the comments made above (Impact 14) on addressing the effect of sediment from construction earthworks on downstream water bodies are also applicable to roading earthworks.	Amend conditions consistent with the recommendations at Impact 14 above.
Transmission line	21. Rakatirataka Kaitiakitaka	• Approximately 6km comprising up to 25 towers will be connected by tracks. This line will connect the windfarm to the national grid. • An issue in 2006 was the impact of new generation on the existing	This is a matter that requires further discussion with Te Rūnanga o Ōtākou and cannot be addressed in conditions.	-

Component of proposal	Impact identified in TIA		How are these addressed in proposed management plans and conditions?	Recommendations
		transmission network. The new line is expected to address this. • However will more stable conditions mean that it will be easier for other new generators to come into the catchment? In other words will it help create the cumulative effect that ultimately undermines the rakatirataka of Ōtākou?		
BESS (battery)	22. Manaakitaka Wāhi tūpuna Taoka species Mahika kai Wai māori	• The BESS changes the risk profile for the windfarm. • Although unlikely or low probability this will introduce the risk of fire in a remote rural landscape. If that occurs what wāhi taoka could be affected? What contaminants could be released over what area in the event of a fire?	The TIA identifies the following areas of concern in the event of fire: • Aerial spread of contaminants • Effects of runoff of firefighting water • Remediation of damage from the fire. Management of runoff from firefighting (which includes capture and containment of contaminated runoff via the stormwater detention system and timely removal from	1. Expand the purpose and minimum details of the Fire Management Plan set out in proposed conditions CDC-T 43 and 44 to include: • Management of the environmental effects of fire management • Risks to ecological values and measures to be taken to remediate ecological damage from fire events.

Component of proposal	Impact identified in TIA		How are these addressed in proposed management plans and conditions?	Recommendations
			the site) is addressed in the ECMP (Section 2.7.2) and the Fire Management Plan.[10] The Clutha District Council proposed conditions for the transmission line and BESS set out the purpose and minimum contents of the Fire Management Plan (CDC-T 43 and 44). The purpose and content relate to management of fire risk but does not refer to management of the environmental effects of fire management. There is no reference in any of the proposed conditions to the requirement to avoid discharge of contaminated water used for firefighting. There is no reference in management plans or conditions to potential aerial spread of contaminants from fire events or to remediation of fire damage.	2. Amend the Fire Management Plan, in consultation with Te Rūnanga o Ōtākou, to address the expanded scope. 3. Add the following to the proposed conditions for operational discharges of stormwater from new infrastructure (ORC-SW-Dis): *There shall be no discharge to land of runoff from fire suppression activities.*
Depot/ ancillary buildings (substation, operations and	23. Wāhi tūpuna Whānau ora	• "These facilities are located on the ridgelines" • The newly constructed scheme with the added components of the transmission line, battery,	Mitigation of impacts of the permanent infrastructure on the ability of Ōtākou whānau to access and connect with wāhi tūpuna will require further discussion with Te Rūnanga o Ōtākou.	1. Mitigation of impacts on access to wāhi tūpuna is subject to further discussion. 2. In respect to the effects of earthworks, see

[10] Note that on the Fast Track website, there is an error in the link to the Fire Management Plan, and that plan is currently not available on the website.

Component of proposal	Impact identified in TIA		How are these addressed in proposed management plans and conditions?	Recommendations
maintenance facility, concrete batching plant		and depot adds a degree of permanence. This has the potential to further disconnect Ōtākou whānau from this part of the catchment. The TIA also notes that the construction of this new infrastructure will require significant earthworks, as well as management of contaminated runoff from the concrete batching plant.	Management of sediment from construction earthworks is discussed in relation to Impact 14 above. The ECMP (Section 2.7.2) describes measures to capture and treat runoff from the concrete batching plant before it is discharged. It also requires monitoring of the pH of stored runoff, and treatment to reduce the pH to acceptable levels when necessary. Proposed conditions for discharges from the batching plant require that all practical measures are taken to prevent contaminants from concrete batching activities from entering flowing water (see ORC-Conc-Dis 4). However the proposed condition relating to water quality effects in receiving waters only repeats the general requirements of RMA section 107 rather than including clear and certain standards for parameters such as pH, suspended sediment and clarity.	recommendations on Impact 14 above. 3. In respect to discharges from the concrete batching plant: • In the proposed conditions (ORC-Conc-Dis), replace the general water quality requirements in proposed condition 3 with defined receiving water quality standards and include clear definition of the area of "reasonable mixing"; • Add a requirement for a programme of monitoring specified water quality parameters both upstream and downstream of the concrete batching plant.

Appendix 3: Evaluation of certainty and effectiveness of conditions in addressing other impacts identified in TIA

Notes:

1. This evaluation reviews conditions addressing measures referred to in Section 5.7 of the TIA as a response/action to address identified impacts to determine whether these conditions are framed in a way that will achieve their intent. (If the conditions are inadequate, this could trigger a need to reassess the scale of impact.)

2. Separate consent conditions are proposed for each of the consent requirements that apply. To avoid confusion between different proposed conditions with the same numbering, this evaluation uses a key to distinguish between the various sets of conditions. The key is attached as Appendix 1.

Condition/s	Impact identified in TIA that this condition is linked to		Adequacy of condition	Recommendations
CDC-W 69A, 69, 70, 71 CDC-T 41, 42	2. Mauri Rakatirataka Whānau ora	During construction (with the extensive earthworks the development entails), there is always the risk of accidental discovery of taoka during construction. (Assessed as low adverse effect under proposed measures.)	The conditions require compliance with an Accidental Discovery Protocol and set out details of this. They also refer to the Archaeological Management Plan, which includes protocols to be followed in the event of exposure of an archaeological site, kōiwi takata or taoka. There is some overlap and inconsistency across the conditions and the Archaeological Management Plan, and a need for amendment to reflect the Accidental Discovery Protocol currently used by Te Rūnanga o Ōtākou (attached here as Appendix 5).	1. Amend Archaeological Management Plan sections on protocols relating to exposure of archaeological sites and to kōiwi tangata, to make the details consistent with the Accidental Discovery Protocol in **Appendix 5** to this report. 2. Attach the Accidental Discovery Protocol to both sets of CDC land use consent conditions. 3. Replace conditions CDC-W 70 and 71 with the following condition, and also add this condition to the

				proposed CDC-T conditions (after CDC-T 42): *If an archaeological site, taoka (Māori artefacts) or kōiwi takata (human remains) are discovered during site works, the consent holder shall comply with the Accidental Discovery Protocol attached to these conditions as Appendix _.*
CDC-W 12 CDC-W 25	8. Wāhi tupuna Mauka Korero tuku iho Whakapapa Whānau ora (social, cultural, spiritual)	Towers, stands, roading, ancillary buildings are being built within a wāhi tupuna. (Assessed as medium positive effect under proposed measures.)	The TIA comments that reduction from 100 to 56 towers (amendment to CDC-W 12) and removal of some turbines from the Thomas Block and QEII Trust area (amendment to CDC-W 25, Stage 1 Site Development Plan) to avoid high quality tussock areas are positive. These conditions are clear and certain.	-
CDC-W 25	15. Wai māori Taoka species	The contingency zones have been revised to afford an overall greater degree of protection for waterways.	The TIA refers to comment in the Landscape and Visual Effects Assessment that the Contingency Zones will retain the same (up to) 100m radius as in the conditions and approved layout,	-

		(Assessed as low positive effect under proposed measures.)	but the configuration will be modified to better align with natural features. CDC-W 25 ties final turbine locations and permanent hardstand areas to within the contingency zones depicted on the plans. This requirement is clear and certain.	
CDC-W 29, 29A CDC-T 36, 37 ORC-Cul 7	18. Wai māori Taoka species	There is a threat of machinery introducing weeds and pests into the area during construction. Management plans are expected to mitigate this. (Assessed as negligible effect under proposed measures.)	The CDC land use consent conditions refer to the Woody Weed Management Plan (WMMP). In respect to the WMMP, the CDC-T conditions set out the objectives of the plan and minimum required details (which include details about vehicle use and cleaning requirements). The CDC-W proposed conditions should also be amended to set out these matters. For certainty and for compliance purposes, the requirement to inspect and clean vehicles and equipment before entering the site should also be specifically included in the conditions. The proposed conditions for installation of a culvert in a tributary of Lee Stream set out specific precautions that must be	1. Incorporate the matters in CDC-T 36 and 37 into the CDC-W conditions as well. 2. Add the following to both the CDC-W and CDC-T proposed conditions: • *Vehicles and other equipment must be inspected and, as far as practicable, cleaned of adhering material before entering the site* • *Vehicles that have been in a lake, river, stream or wetland within 48 hours of entering the site must be dried or cleaned using an accepted method recommended by the Ministry of Primary Industries.*

			taken to minimise the spread of pest plants and aquatic weeds (ORC-Cul 7).	
ORC-Cul 3, 4 ORC-Cul-Div 4, 5, 11, 12, 13, 14, 15	19. Taoka species	Eldon galaxiid habitat will be protected. Fish passage will be provided to enable passage of Eldon galaxiids in a protected part of the stream. (Assessed as low positive effect under proposed measures.)	A Native Fish Recovery Plan (NFRP) sets out measures to minimise actual or potential adverse effects on native freshwater fish present within the reach of the Lee Stream tributary impacted by culvert works, including measures to manage fish salvage and relocation. ORC-Cul 3 and 4 also include clear requirements to ensure fish passage is not impeded and to provide information to the consent authority about how compliance with this requirement has been achieved. The proposed conditions for diversion of water associated with the culvert installation require that: • pump intakes are positioned away from the edges of the channel, which provide habitat for the galaxiids (ORC-Cul-Div 5) • the installation is undertaken in January-March low flow periods, and that no work can be undertaken in the galaxiid spawning season (September	1. Incorporate the requirements of proposed condition ORC-Cul-Div 4 about timing of work related to the diversion into the ORC-Cul conditions for work in the bed of the stream as well. 2. Incorporate key NFRP requirements into the consent conditions, including the following: • Essential requirements for successful transfer of salvaged fish e.g. Any salvaged fish will be held for the minimum time possible before release into suitable habitat • Installation of barriers to prevent transferred fish returning to the area where works are occurring • Cleaning of nets, traps and other equipment prior to use.

			to November) unless it can be demonstrated that it will avoid disturbance of spawning habitat (see ORC-Cul-Div 4). This condition should not be limited to the diversion, but should also be applied to the broader conditions for work in the bed of the stream (ORC-Cul conditions). Aside from the specific requirements in ORC-Cul 3 and 4 and in ORC-Cul-Div 4 and 5, the conditions generally just address the content and process for the NFRP rather than setting requirements for the works themselves. This does not provide sufficient clarity and certainty for compliance.	
ORC-Cul ORC-Cul-Dis ORC-Cul-Div	20. Wai māori	A culvert in a Lee Stream tributary will be upgraded to improve connectivity. Although this requires consent for instream activities, the outcomes are beneficial. (Assessed as low positive effect under proposed measures.)	In respect to fish passage and galaxiid habitat, see comments on Impact 19 above. In respect to effects of bed disturbance: • Proposed condition ORC-Cul 3 includes appropriate requirements to minimise effects from disturbance of sediment and vegetation, and ORC-	Replace the general water quality requirements in proposed condition ORC-Cul-Dis 4 with defined receiving water quality standards for clarity, turbidity and suspended sediment, and include a clear definition of any area to be allowed for “reasonable mixing”.

			Cul-Div 6 requires that sedimentation is minimised when diverting water. • ORC-Cul-Dis 5 specifies measures to be taken to prevent cement and cement products from entering the stream flow. In the event of any contamination of the stream, proposed condition ORC-Cul 6 requires immediate removal of contaminants. • ORC-Cul 7 sets out required precautions to minimise potential for spread of pest plants • ORC-Cul-Div 8 requires that the diversion of water that is needed to allow for installation of the culvert does not result in reduction of the surface flow in the stream. A Water Quality Management Plan (WQMP) describes a programme to monitor clarity, turbidity and suspended sediments, and key requirements of this programme are incorporated into proposed condition ORC-Cul-Dis. However neither the WQMP nor the proposed conditions identify defined water quality standards to be met in the	

			receiving waters downstream of the works. Condition ORC-Cul Dis 4 only repeats the general requirements of RMA section 107.	

Appendix 4: Other amendments needed for clarity and completeness of conditions affecting matters raised in the TIA

GENERAL CONDITIONS THAT APPLY TO ALL OTAGO REGIONAL COUNCIL CONSENTS (ORC-GEN)

Condition Number	Condition	Comment
Management Plans		
Certification Process for Draft Management Plans		
ORC-Gen G13	Certification is required to verify that the management plans: a) Include actions, methods and monitoring programmes as appropriate to meet the objectives in Conditions G16 (ECMP), G18 (EMP) and G23 (EMMP); and b) Satisfies the requirements in Condition G18 (EMP).	G13(b) should refer to G19 (minimum requirements for content of EMP), not G18 Add reference to Chemical Treatment Plan objectives (G21) and requirements (G22)
Erosion and sediment control		
ORC-Gen G38	If there is any evidence that the water quality downstream of the site is declining and this is attributable to the onsite construction activities, then the Consent Holder must immediately undertake any necessary maintenance of sediment control devices or take appropriate measures in order to ensure the ongoing and future effectiveness of water quality controls on site.	Amend apparent typo by including underlined words.

OPERATIONAL DISCHARGES OF STORMWATER FROM NEW INFRASTRUCTURE AND ASSOCIATED IMPERVIOUS SURFACE AREAS (EXCLUDING ROADING) TO LAND WHERE IT MAY ENTER WATERBODIES (ORC-SW-DIS)

Condition Number	Condition	Comment
ORC-SW-Dis	The discharge authorised by this consent must not, after reasonable mixing, give rise to all or any of the following effects in receiving waters:	As for the conditions discussed in

4	a) the production of any conspicuous oil or grease films, scums or foams, or floatable or suspended materials; b) any conspicuous change in the colour or visual clarity; c) any emission of objectionable odour; d) the rendering of fresh water unsuitable for consumption by farm animals; or e) any significant adverse effects on aquatic life.	relation to Impact 14 (Appendix 2 above), conditions should be amended to include defined receiving water quality standards and a clearly defined area of reasonable mixing.

Appendix 5: Accidental Discovery Protocol endorsed by Te Rūnanga o Ōtākou

If an unidentified archaeological site is located during works, the following applies:

1. Work must cease immediately at that place and within 20m around the site.
2. The contractor must shut down all machinery, secure the area, and advise the Site Manager.
3. The Site Manager must secure the site and notify the Heritage New Zealand Regional Archaeologist. Further assessment by an archaeologist may be required.
4. If the site is of Māori origin, the Site Manager must notify the Heritage New Zealand Regional Archaeologist and the appropriate papatipu rūnaka of the discovery and ensure site access to enable appropriate cultural procedures and tikaka to be undertaken, as long as all statutory requirements under legislation are met (Heritage New Zealand Pouhere Taonga Act, Protected Objects Act).
5. If human remains (kōiwi) are uncovered the Site Manager must advise the Heritage New Zealand Regional Archaeologist, NZ Police and the appropriate papatipu rūnaka and the above process under 4 must apply. Papatipu rūnaka will lead the management of any kōiwi tangata (human remains of a Māori person) that have been uncovered, in line with the Te Rūnanga o Ngāi Tahu Kōiwi Tangata policy 2019. Remains are not to be moved until such time as papatipu rūnaka and Heritage New Zealand have responded.
6. Works affecting the archaeological site and any human remains (kōiwi) must not resume until Heritage New Zealand Pouhere Taonga gives written approval for work to continue. Works affecting a site of Māori origin or containing kōiwi tangata must not resume until papatipu rūnaka give written approval for work to continue. Further assessment by an archaeologist may be required.
7. Where iwi so request, any information recorded as the result of the find such as a description of location and content, is to be provided for their records.
8. Heritage New Zealand Pouhere Taonga will advise if an archaeological authority under the Heritage New Zealand Pouhere Taonga Act 2014 is required for works to continue.

It is an offence under Section 87 of the Heritage New Zealand Pouhere Taonga Act 2014 to modify or destroy an archaeological site without an authority from Heritage New Zealand irrespective of whether the works are permitted or consent has been issued under the Resource Management Act.