From:	Sarah Edwards
To:	Hannah Chamberlain
Cc:	Ryan Piddington
Subject:	Mahinerangi Wind Farm - Pre-application request number: RM25.091
Date:	Thursday, 27 March 2025 1:35:02 pm
Attachments:	ATT00001.gif Mahinerangi Wind Farm Regional Consent Requirements for ORC.docx

Dear Hannah,

Thank you to you and the team for making the time to meet with Ryan and I on 13 March to discuss Murcury's Stage 2 development of the Mahinerangi Wind Farm.

As an introductory session we found your comments on the technical assessments valuable for our preparation of the application. By way of an update, our technical experts have mostly finished their surveys and monitoring. They are part way through their assessments and will soon be moving on to preparing management plans. Being a Fast Track Application, these plans will form a key part of the application. The layout of Stage 2 is mostly finalised, but the new transmission line is still being designed. We will share all this information with you once the drafts are finalised.

In the meantime, attached is the water plan assessment that shows the activities that are likely to require consent. Things to note:

- Green shading = the activity can meet the permitted thresholds
- Pink shading = the activity can't meet the permitted thresholds
- No shading = consent required
- We would appreciate your advice on the wind farm status as a primary or supplementary allocation and whether the Taieri Catchment is overallocated. As part of the Stage 2 construction activities, a water take will be required for concrete batching and dust suppressant. Mercury will need to take around 400m3 / 4.6L/s over a 24hr period of water from either Lake Mahinerangi or Manawa's Dam C. It would be helpful if you could guide us on the activity status and any specific information requirements you have regarding this part of the consent application.
- We are still waiting on the wetlands survey and assessment to determine the activity status under the NESFM.

Noting this may change subject to the above, Mercury will likely require resource consent under the following Regional Plan rules:

- **Rule 12.1.4.3** as a **Restricted Discretionary Activity** – Surface water take as a supplementary allocation

Rule 12.2.3.1A as a **Restricted Discretionary Activity** – Dewatering within 100m of any perennial connected surface water body

- **Rule 12.2.3.2A** as a **Discretionary Activity** – Dewatering (exceeding 3 days and 25,000L)
- **Rule 12.3.4.1** as a **Discretionary Activity** – Diversion of water for construction of culverts.
- **Rule 12.B.4.1** as a **Restricted Discretionary Activity** – Discharge from batching/industrial processing
- **Rule 12.C.2.2**. as a **Restricted Discretionary Activity** – Discharge of water or any contaminant to land or water (short or long term) for construction
- **Rule 13.5.3.1** as a **Discretionary Activity** – Alteration of the bed of a lake or river (exceeding 10 hours works duration and causing a conspicuous change in visual clarity beyond 200m of the site.

We look forward to hearing from you at you earliest convenience.

Kind regards

Sarah

Sarah Edwards
Associate

[redacted] | 49 Currie Street, New Plymouth 4310
www.mitchelldaysh.co.nz

Otago Regional Council

Request for Fast-Track Consent Pre-Application Advice

Please use this form to engage with Council staff about your proposal before submitting your application under the Fast Track legislation

Once completed, this form can be emailed to consents.applications@orc.govt.nz.
Please include 'request for fast-track pre-application advice' in the subject line.

Contact Details:

I am the (please tick)

Property Owner(s)	☐	Prospective Purchaser	☐
Lessee Developer	☑	Agent/Consultant	☐
	☐	Other	☐

Full Name:
(Please write all names in full) Ryan Piddington

Company Name:
(If applicable) Mercury NZ Limited

Postal Address: The Mercury Building, 33 Broadway, Newmarket, Auckland

Post Code:

Phone: Mobile Phone: [redacted]

Email: [redacted]

Please provide a valid and clear email address. Otago Regional Council is moving to a paperless consenting process – therefore any correspondence will be sent via email, unless you request a paper copy.

If you prefer contact by post please tick here ☐

Cost of a pre-application service

The costs related to this service include; administration, research, meeting time, technical review, taking minutes, distribution of meeting notes, and follow up advice. 30 minutes of work carried out by the Consents Planner is free of charge. The remaining work is charged at the relevant staff member's hourly rate in accordance with the fees and charges schedule.

Prospective Applicant

Tick here if N/A ☐

Name: Tararua Wind Power Limited (a wholly owned subsidiary of Mercur

Postal Address: As above

Post Code:

Phone:

Mobile:

Email: as above

Application Site Details:

Site/Street Address: Eldorado Track, Mahinerangi

Town/Location: Dunedin

Legal Description (Found on your rates notice or Record of Title):

see attached

Document review or meeting required:

Please indicate if you would like us to carry out the following (tick one):

☐ Document review only ☐ Meeting only

☐ Document review and meeting

Document review required:

If you would like us to carry out a document review please advise the following (tick all that apply):

☐ Full application review

☐ Partial application

☐ Technical review

- If you are submitting a partial application or a review of technical aspects only, please advise when you expect to be able to provide us with the complete application in the box below:

Meeting Location:

Please indicate where you wish the pre-application meeting to be held.

- [x] **Dunedin Office - Head Office Video Conference** (Zoom or Teams meeting)
- [ ] **Alexandra Office**
- [ ] **Queenstown Office**
- [ ] **On site**
- [ ] ***Balclutha Depot**
- [ ] ***Oamaru Depot**

*Few staff are stationed out of these depots. For meetings at these locations, staff will have to travel from Dunedin. Travel time may be charged to the applicant.

Please note – we may be able to attend a meeting at another location however, staff travel time and mileage may be chargeable in accordance with the fees and charges schedule.

If staff are unable to accommodate a meeting at your selected location, please advise if you would prefer to meet at the Dunedin office or hold the meeting via video conference.

- [x] **Dunedin Office**
- [x] **Video conference**

Other Meeting Attendees

Tick here if N/A ☐

Please indicate who will be attending the meeting with you. E.g. technical experts, client/s

This will be an initial project briefing that will be attended by Ryan Piddington - Strategic Consents Manager Mercury and our consultant planner Sarah Edwards - Mitchell Daysh. Applicaiotn reviews will come later.

Type of activity and nature of the enquiry

Please provide a description of the proposed activity/project and any details of the intended application.

See attached Listed Project Application

Previous Advice

Tick here if N/A ☒

Please indicate whether you have previously discussed your application with Council. If this is the case, list any relevant staff and allocated reference number below:

Specific Advice Sought

Please describe as specifically as you can the matters you are seeking advice on e.g. planning, engineering, natural hazards, science, transport etc. This will help us decide what technical experts may be required to attend any meeting or provide input into a document review.

General planning and applicaiotn advice and discussion on process for agreeing conditions prior to lodgment.

Descriptive Plans of the Proposed Activity

Tick here if N/A ☐

Please attach to-scale plans of the activity. The plans need to show an adequate level of detail for us to assess it. Please list these plans below:

See attahced

Billing Details

This identifies who will be receiving any invoices associated with processing this pre application advice request. By signing below you agree that you are responsible for all outstanding fees incurred during consent processing.

Name:	Ryan Piddington		
Postal Address:	As above		
Post Code:		**Phone:**	
Mobile Phone:		**Email:**	[redacted]

Signature

I/We understand that this pre-application service is not free, and Council will charge me/us all costs that are actually and reasonable, incurred in the provision of this pre-application service. Without limiting Otago Regional Council's legal rights, if any actions are necessary to recover unpaid processing costs or fees associated with this pre application advice request, including debt recovery fees, I/we agree to pay all costs of recovering those costs. If this application is made on behalf of a company, society (incorporated or unincorporated) or trust, in signing this application I/we acknowledge that:

- I am/we are authorised to make this application on behalf of that company, society or trust; and
- The company, society or trust will pay the actual and reasonable costs of processing the application, including any debt recovery costs.

By signing this form, I hereby certify that, to the best of my knowledge and belief, the information given in this application is true and correct.

Signed by Applicant/s:	DocuSigned by: Ryan Piddington 8E9E38FC1398472...	Dated:	28/2/2025
Signed by Agent:		Dated:	
Name and Role: (Please print)	Ryan Piddington		Strategic Consents Manager

The advice you will receive from Council is based on the information provided to us and based on the provisions of any relevant legislation, plan or proposed plan and/or statements in existence at the time. Any advice, comment or view expressed is subject to reconsideration by Council after the application is lodged and does not preclude Council from providing further comment or having subsequent engagement with the application in the future.

Council does not accept any legal liability for any advice, comment or view expressed by Council in relation to the pre-application process or at any pre application meeting.

Prior to lodging any application under the Fast-Track Consenting process, applicants are advised to seek their own independent legal and planning advice in relation to all matters related to their application, including those covered by the pre application meeting.

Please note, that any information provided to a council may be required to be disclosed under the Local Government Official Information and Meetings Act 1987, unless there is a good reason to withhold the information under the Act (such as preventing unreasonable prejudice to someone's commercial position).

10 October 2025

Clutha District Council
1 Rosebank Terrace
PO Box 25
Balclutha 9230

By email: [redacted] and [redacted]

Dear Olivia and Michaela,

RE: Puke Kapo Hau - Mahinerangi Wind Farm Stage 2 – Substantive Application Under Schedule 2 of the Fast-Track Approvals Act 2024

Further to recent correspondence on 29 September 2025, this letter formally notifies the Clutha District Council that Tararua Wind Power ("**TWP**"), a fully owned subsidiary of Mercury NZ Limited, will be applying for all necessary approvals under the Fast-track Approvals Act 2024 (FTAA). This includes the construction, operation, and maintenance of Puke Kapo Hau - Mahinerangi Wind Farm Stage 2, as well as the construction and use of a new 110 kV transmission line and associated infrastructure, including a substation ("**The Project**"). The Project is listed in Schedule 2 of the FTAA, and it is intended that a substantive application for the project will be lodged with the Environmental Protection Authority late October 2025.

Project Overview

The project is located on private farmland, land owned by Pāmu Farms and Contact Energy, on the eastern foothills of the Lammermoor Ranges. The project site is approximately 50 km west of Dunedin and approximately 5 km north of Lake Mahinerangi.

TWP holds an existing land use consent for Puke Kapo Hau - Mahinerangi Wind Farm (RM 1409) from the Clutha District Council that was confirmed by the Environment Court in 2009. The consent was given effect to by the construction of Stage 1 of the wind farm in 2011 - which comprised the establishment of twelve 3 MW wind turbines.

TWP now seeks to vary the conditions of the existing land use consent to enable the second stage of the project to be completed. The primary purpose of changing the conditions of the land use consent is to enable the use of larger and more efficient wind turbines that have become available since the original consent was granted. Given the increase in the size of modern wind turbine technology, and the fact that smaller turbines are no longer readily available in the market, the change in conditions is material to the delivery of Puke Kapo Hau - Mahinerangi Wind Farm.

In addition to the variation to the existing land use consent, TWP is also seeking a new land use consent for the construction and use of a new 110 kV transmission line (and associated infrastructure including a substation and access tracks) to connect to the National Grid, a Battery Energy Storage System ("**BESS**"**),** and a new operations and maintenance facility ("**O&M facility**") for the wind farm. Twenty-five pole structures of up to 45 m in height above ground level are required to support the transmission line and its connection points.

Given the expiry of the regional resource consents confirmed by the Environment Court, a new suite of regional resource consents is also sought by TWP for the wind farm and transmission line.

Throughout the preparation of the application, Mercury has engaged a wide selection of technical experts to assist with the design of the project and the undertaking of assessments of actual and potential environmental effects

associated with the project. As a result, a package of environmental controls, management and reporting measures will be proposed. This draft information has been shared the relevant administering authorities, government agencies and iwi authorities.

Approvals sought under the FTAA

The substantive application will seek the following approvals under the FTAA:

Schedule 5 approvals relating to the Resource Management Act 1991 ("**the RMA**"):

A variation to the existing land use consent;

A new land use consent for the proposed transmission line, substation, O&M facility and BESS;

A new suite of regional consents; and

A land use consent for works within or within 10 m of a natural inland wetland.

Schedule 7 approvals relating to the Wildlife Act 1953 for catch and release for lizards; the incidental killing of lizards; catching and handling of falcon; attaching identification leg bands and GPS transmitters to falcon; and handling falcon carcasses; and undertake necropsy to establish cause of death where the death may be related to the operational wind farm.

Schedule 8 approvals relating to the Heritage New Zealand Pouhere Taonga Act 2014 for a general archaeological authority and approval of the person to carry out the activity.

Request to Clutha District Council

In accordance with section 30(3) of the FTAA, it is requested that the Clutha District Council confirms by written notice to Mercury that there are no existing resource consents to which sections 124C(1)(c) or 165ZI of the RMA would apply if approval for the Project were to be applied for as a resource consent under the RMA. We would appreciate your response by Wednesday **17 October 2025**.

Next Steps

Mercury will continue to engage with relevant administering authorities, government agencies, iwi authorities, stakeholders and members of the community as the project progresses.

In accordance with section 53 of the FTAA, the chosen Fast-Track Panel will invite comments from some specified parties, including local authorities, iwi authorities, treaty settlement entities, landowners within the project area and adjacent to it and any other person the panel considers appropriate. The FTAA does not allow the Panel to give public or limited notification for comments.

If the Council has any questions or matters they would like to discuss in relation to the application under the FTAA, please let us know.

Yours sincerely

DocuSigned by:
Ryan Piddington
8E9E38FC1398472...

Ryan Piddington

Strategic Consents Manager

[redacted]

From: Ryan Piddington
To: "[redacted]"
Cc: "Sarah Edwards"
Subject: RE: Mahinerangi Wind Farm - Fast Track Schedule 2 Listing
Date: Tuesday, 18 March 2025 12:12:00 pm
Attachments: 20250318_ORC_MAH2Presentation.pdf
image001.png

Hi Olivia, we spoke on the phone a couple of weeks back regarding the above project. This is a historical TrustPower project now owned and operated by Mercury NZ. The stage 2 proposal is a schedule 2 listed project in the Fast Tract Act, and we are undertaking consultation on the project with key stakeholders. We met with Otago Regional Council last week and I would like to extend the invite to Clutha District Council also.

I have attached some high-level information relating to the project.

In terms a time for an online meeting, let me know a day and time in the first week of April you are available, and we can set something up.

Following our online session, we will come back to you with more detail in relation to the variation specific etc.

Thanks

RYAN PIDDINGTON
STRATEGIC CONSENTS MANAGER

MERCURY.CO.NZ
[redacted]
Level 3, ANZ Centre, 17 Grantham Street, Hamilton, 3204

Mahinerangi Wind Farm Stage 2: Substantive Application Consultation

TO:	EPA
FROM:	Ryan Piddington - Strategic Consents Manager, Mercury
DATE:	30 September 2025
SUBJECT:	Mahinerangi Wind Farm Stage 2: Schedule 2 Listed Project Substantive Application Pre-Lodgement Consultation

1 Purpose

The purpose of this document is to provide the Environment Protection Agency (**EPA**) with an overview of Tararua Wind Power Limited's (**TWP**) upcoming Fast-Track Approvals Act 2024 (**FTAA**) substantive application for the Mahinerangi Wind Farm Stage 2 (**MWF2**). We are be happy to meet to discuss our project if you consider that would be worthwhile.

This consultation pack is intended to support TWP in meeting the consultation requirements set out in Section 29 of the FTAA. Section 29(1)(a) requires the authorised person for the project to consult with persons and groups referred to in s11. More specifically, s11(1)(e), which requires the authorised person to consult relevant administering agencies before lodging a substantive application. For purposes of Section 42 of the FTAA, TWP is the authorised person for this listed project.

We have provided as much detail as possible at this stage, and this information may be subject to change in response to consultation with other administering agencies and those parties listed in s11(1)(a) and s11(1)(b). As such please consider this information as draft for consultation.

Please note that all information provided herein is commercially sensitive and confidential.

Table 1 – Attachmments	
Attachment 1	Locality Plan
Attachment 2	Indicative Turbine Locations, Access Roads and transmission Line

2 Mercury, The Project and The Substantive Application

2.1 Mercury

TWP, a fully owned subsidiary of Mercury NZ Limited, is one of New Zealand's largest electricity generators and retailers. Mercury generates electricity from 100% renewable sources, including hydroelectric power from nine stations on the Waikato River, geothermal energy from five plants in the central North Island, and wind power from several farms. TWP acquired the wind assets of TrustPower in 2021 which was the original consent holder for the MWF. The Project

TWP is progressing Stage 2 of the Mahinerangi Wind Farm (**MWF2** or **MWF Stage 2**). MWF2 is a Schedule 2 Listed Project to the Fast-track Approvals Act 2024. Given the regional and national significance of this renewable electricity project, a substantive application has been prepared in accordance with FTAA.

The project is to be located on private farmland, and land owned by Landcorp Farming Limited. The project site is located approximately 50 km west of Dunedin and approximately 5 km north of Lake Mahinerangi, at the eastern foothills of the Lammermoor Ranges (refer to Figure 1).

Figure 1: Project site location

TWP holds existing resource consents for the Mahinerangi Wind Farm (**MWF**) that were confirmed by the Environment Court in 2009[1]. The existing conditions provide for up to 100 wind turbines with a maximum tip height of 145 m and an overall maximum installed generation capacity of 200 MW[2]. The consent was given effect to by the construction of Stage 1 that comprised of twelve 3 MW wind turbines that became operational in 2011 (**MWF1** or **MWF Stage 1**).

In order to maximise the efficient use of the wind resource at Mahinerangi, and to provide greater flexibility in the turbines available to be installed (due to advances in technology), TWP is seeking to increase the height limit for the turbines from the currently consented 145 m (as set out in condition 17) to a blade tip height of 165 m. TWP has also confirmed that the total number of turbines required within the wind farm can reduce from a consented maximum of 100 (as per condition 12) to 56 (12 existing plus 44 proposed). It is proposed that up to 44 additional turbines be constructed over 54 potential locations. A turbine with a tip height of 165 m, minimum of 20 m ground clearance, and 136 m rotor diameter is used for assessment purposes.

In addition to the variation to the existing district land use consent conditions, TWP also requires a new suite of regional consents for the construction, operation and maintenance of the wind farm (given the expiry of the previously held consents) and a new district land use consent for the construction and use of a new 110 kV transmission line (and associated infrastructure) to connect to Transpower's National Grid, a Battery Energy Storage System (**BESS**), Operations and Maintenance (**O&**M) building and associate site improvements.

The new 110 kV double-circuit transmission line is to be located on private farmland, and on land owned by Landcorp. Twenty-five pole structures of up to 45 m in height above ground level are required to support the transmission line and its connection points. Its location in relation to Mahinerangi Wind Farm is shown in Figure 2 below.

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1 *Upland Landscape Protection Society Incorporated v Clutha District Council, Otago Regional Council and Trustpower*, Decisions No C 85/2008 [Interim Decision] and No. C140/2008.

2 200 MW limit was proffered by Trustpower (the original consent holder) because of National Grid constraints at the time rather than to manage environmental effects. The installed generation limit (set out in district land use consent condition 11), has the practical effect of limiting the number of wind turbines depending on the generation capacity of the model used.

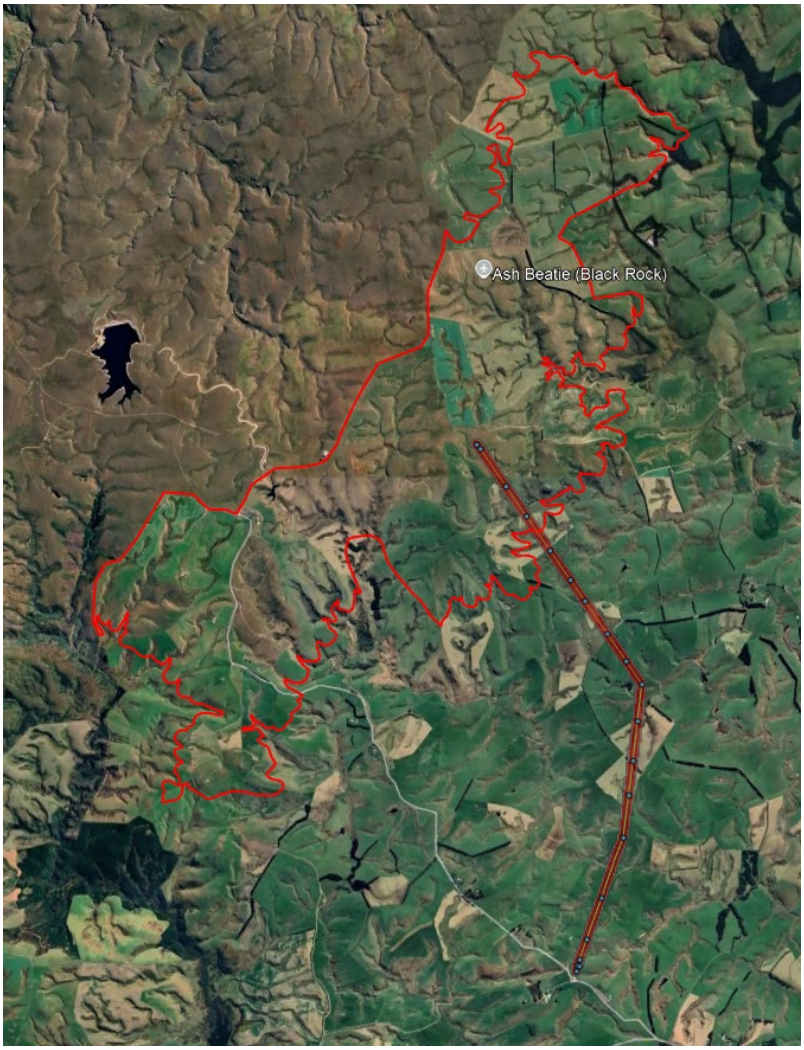

Figure 2: Transmission Line Corridor

Approvals are also sought relating to the Wildlife Act 1953 (Schedule 7) and the Heritage New Zealand Pouhere Taonga Act 2014 (Schedule 8). It is noted that no approval under Schedule 9 relating to complex freshwater activities is required.

Throughout the preparation of this application, TWP has engaged a wide range of technical experts to assist with the design of MWF Stage 2 and the associated transmission line, as well as the identification and assessment of actual and potential environmental effects. This input has been integral to ensuring that the layout and infrastructure design are informed by site-specific environmental values and constraints.

As far as practicable, environmental effects have been avoided or minimised through an iterative design process. This process has involved detailed mapping and site investigations to identify sensitive features and areas requiring protection, followed by refinement of the wind farm layout and infrastructure alignment to respond to these values.

Particular care has been taken to avoid direct impacts on wetlands. Turbines, transmission line poles, tracks, and other infrastructure have been located to avoid wetland areas as far as practicable, and the design has been adjusted to ensure that the hydrological integrity of wetlands are maintained. Where possible areas of dense snow tussock have also been carefully avoided during layout refinement.

As per the existing consent, the layout of MWF Stage 2 has been deliberately confined to flatter areas of the landscape, with turbines, crane pads, and surplus fill disposal ("**SFD**") areas continuing to all be located on gentle terrain so not to cause unacceptable landscape or natural hazard effects.

The reduction in the number of turbines has significantly decreased the footprint of MWF, including the volume of earthworks required compared to the already consented layout. MWF Stage 2 has adopted a design approach that prioritises the retention of the natural landform, seeking to minimise terrain modification wherever practicable. The transmission line, makes use of existing farm tracks as much as possible, minimising the earthworks volumes.

In addition, access tracks and hardstand areas have been designed to incorporate erosion, sedimentation and stormwater management measures. Impervious surfaces have been limited where possible, and drainage systems have been included in the design to appropriately manage runoff and protect downstream receiving environments.

Importantly, the project introduces a new approximately 6ha wetland and aquatic compensation area as part of its compensation and enhancement package. The Lee Stream Tributary Compensation Area is intended to compensate for the small impacts of installing a culvert in the Lee Stream Tributary, the loss of wetlands and providing a suitable location for snow tussock translocation. The Lee Stream Tributary Compensation Area has been designed to also provide ecological support for Eldon's galaxias, a species that is nationally endangered. The riparian and wetland enhancements are expected to result in a net ecological benefit for the site and surrounding environment.

MWF Stage 2 and the new activities including the transmission line have been carefully developed to respond sensitively to landscape and visual effects. Amendments to the consented turbine locations and contingency zones[3] have been informed by specialist landscape input, with a focus on reducing visibility from key viewpoints and minimising effects on natural character and rural amenity. The resulting layout reflects a balanced consideration of technical feasibility, environmental protection, and visual integration, consistent with recognised best practice in wind farm design and environmental management. High value areas such as at the Thomas Block have been excluded.

2.2 Project Rationale

2.2.1 Electricity Supply and Demand

Electricity generation in New Zealand includes a mix of hydro, thermal, geothermal, wind, solar and biogas electricity generation.

The North Island has a diverse range of generation sources, with a cluster of gas generation plants in the Taranaki Region; hydro generation concentrated in the Waikato, Bay of Plenty, Poverty Bay and Taranaki Regions; and geothermal plants within the Taupo Volcanic Zone. In addition, wind generation has been increasingly developed in the Manawatu, Wellington, Waikato and South Taranaki Regions over the past decade.

Most of the generation capacity and output for the Southland and Otago region is provided by a small number of large hydroelectric power schemes – Manapouri, Clyde and Roxburgh. The remaining output is provided by smaller scale hydroelectric power schemes, wind generation and to a lesser extent, solar. Aside from an upgrade to Roxburgh, most of the new generation capacity is from the construction of wind farms.

New Zealand's installed generation capacity in 2024 was 10,771 MW, which generated 43,903 GWh of electricity. Approximately 8.7% of this electricity generation came from wind farms established across New Zealand. MWF Stage 2 would increase New Zealand's installed generation capacity by approximately 1.8% and increase the annual generation output by 1.25%

The MWF Stage 2 will deliver a material contribution (equivalent to about 60 percent of one year of the required 1 TWh per year increase in renewable generation output recommended by the Climate Change Commission). The increase in generation is required to achieve the Government plan for decarbonisation of the economy through electrification of light vehicle transport and industrial process heat.

[3] A radius up to 100m within which limited flexibility to provided in order to microsite the tower.

2.2.2 Future Supply Considerations

The reliance on hydro sources makes New Zealand vulnerable to sharp increases in wholesale prices in dry years when low hydro storage levels in the autumn and winter coincide with peak demand. Dry year events that have affected wholesale prices occurred in 2001, 2003, 2006, 2008 and most recently 2024. As such, providing additional electricity generation capacity from wind technology will improve the diversity of the national electricity generation capacity and strengthen resilience against dry year events.

The direction from the Climate Change Response (Zero Carbon) Amendment Act 2019, and the Climate Change Commission, has sharply increased the need for additional renewable electricity generation in New Zealand. This is reflected in the Government's Emissions Reduction Plan, the first of which was issued in 2022, and sets a path toward meeting the long-term emissions reduction targets - including reaching net-zero emissions by 2050.

In December 2024 the Government released New Zealand's second Emissions Reduction Plan [4] for the period from 2026 to 2030. This identifies a number of key policies that have the greatest potential to lower emissions to meet the 2026 - 2030 targets, including "Electrify NZ" which seeks to double renewable energy generation. To this end, the Government has announced the Electrify NZ Plan, a series of reforms aimed at increasing investment in renewable energy supply, transmission and distribution. This signals a clear national direction toward prioritising and accelerating development of renewable energy generation, as well as ensuring electricity infrastructure can support growth and variability of supply and demand. A draft National Policy Statement for Renewable Energy Generation has been issued for consultation.

Transpower, in its Security of Supply Assessment 2023[5], identifies that New Zealand is tracking towards an 'accelerated electrification' scenario - signifying an increase in national electricity demand of 68% by 2050. This can be directly attributed to:

- Forecasted increases in process heat conversion to electricity; and
- The increase in electricity vehicle usage around the country.

Transpower projects that 28% of the energy generation capacity of New Zealand will be via wind developments by 2050, even when accounting for significant changes in demand.

The Ministry of Business, Innovation and Employment reports that New Zealand imported over 1 million tonnes of coal in 2019, 2020, 2021 and 2024 in order to meet electricity demand.[6] This demand could not be met by existing hydro and gas sources due to dry conditions and inconsistent natural gas supply. This approach of importing coal to meet demand is not aligned with the national direction towards the reduction in emissions noted above and signals the need for significant investment in renewable energy generation that can increase the overall supply of electricity.

The MWF Stage 2 will significantly contribute to the national supply of electricity in a manner that provides a secure alternative to hydro and gas generation, while also reducing the reliance on fossil-fuels in accordance with Government targets for reduced emissions and doubling the amount of renewable energy generation.

2.3 Summary of proposed Stage 2 activities and works

A summary of the activities and works associated with the construction, operation and maintenance of the MWF Stage 2 is as follows:

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[4] New Zealand's Second Emissions Reduction Plan 2026 – 30.

[5] https://static.transpower.co.nz/public/bulk-upload/documents/2023%20SOSA%20-%20Final%20Report%20-%20Final%20Version.pdf?VersionId=3VV75p2zXTR_3kxn3HZPixEiiq9ipiJX

[6] https://www.mbie.govt.nz/building-and-energy/energy-and-natural-resources/energy-statistics-and-modelling/energy-statistics/coal-statistics

2.3.1 Wind Farm Layout

- The installation of up to 44 turbines across 54 potential locations within an amended Windfarm Development Area[7]
- Each turbine will be a maximum height of 165m above ground level (to the blade tip)
- The installation of aviation obstacle lighting on the nacelles of some of the turbines in order to mark the perimeter of the wind farm and highest structure
- Establishment of a 2,200m^2 operations/maintenance facility (including approximately 700m^2 of buildings) within the Windfarm Layout
- An internal access road network of approximately 31km in length
- The diversion of water for the establishment of culvert structures for site access/internal road network purposes
- The establishment of a temporary 10,600m^2 concrete batching plant and other temporary buildings, structures, signage and construction equipment within the Windfarm Development Area
- An underground 33 kV electrical transmission and fibre network between the turbines and the substation
- A BESS located at the start of the above ground transmission line
- Establishment of an overhead 110kV transmission line and twenty-five, 45m high poles from the electricity substation to the existing 110 kV national grid transmission network operated by Transpower
- A total earthworks area of 55.2ha associated with turbine foundations, hardstand platforms, internal access roads and site compounds
- The disposal of surplus cut material of approximately 365,000m^3 will be disposed of within the Windfarm Development Area[8]
- Two instances of stream bed/wetland disturbance and placement of culvert structures in, or over, streams/wetlands
- Concrete batching and construction related discharges
- The clearance of vegetation
- The use and storage of hazardous substances
- Sediment and stormwater control measures

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[7] Windfarm Development Area boundary will be subject to 5 minor boundary adjustments.

[8] The approximate total area of Stage 1 was 18,000m^2. Therefore, the estimated Project surplus fill volume (when combined with the Stage 1 surplus) is approximately 384,000m^3, below the land use consent limit of 460,000m^3.

- Stormwater control and fire suppressant measures (and storage) associated with the BESS
- Site rehabilitation works, including land contouring and seeding of pasture and relocation dense snow tussock subject to disturbance.

2.4 Purpose of the Fast-Track Approvals Act

The purpose of the FTAA is to:

> *"facilitate the delivery of infrastructure and development projects with significant regional or national benefits"*.

MWF Stage 2 demonstrably achieves the purpose of the FTAA by delivering significant benefits to the Clutha District, the Otago Region and New Zealand more broadly. In this regard, MWF Stage 2 will provide significant economic benefits by:

- Injecting over $220 million of expenditure over the construction period into the local economy
- Providing approximately 200 full-time equivalent jobs ("**FTE**") during peak construction
- Contributing to approximately 595 GWh of electricity per annum and providing for improved electricity diversity and security of supply
- Contributing to the decarbonisation of the New Zealand economy by displacing over 600,000 tCO2-e annually[9]
- Aligning with Government policy towards meeting national and international climate change obligations.

The economic benefits of MWF Stage 2 are assessed in detail in the Economic Assessment prepared by the New Zealand Institute of Economic Research ("**NZIER**") (2025), which will be provided as part of our substantive application.

The FTAA is also designed to provide a "one-stop-shop" approvals process for applicants. This is primarily to minimise delays and costs often experienced by large complex projects requiring sequential approvals under different statutes. Approvals are sought for new resource consents; change or cancellation of conditions of consent; Wildlife approvals; and archaeological authority.

The project was identified as a "listed project" within Schedule 2 of the FTAA on 6 October 2024, providing confirmation that the purpose of the FTAA had been met and thereby qualifying the project for consideration by an expert panel.

2.5 Positive Effects

The variation application enhances the wind farm's efficiency and environmental outcomes by proposing fewer, larger turbines that utilise modern technology. This approach maintains and improves previously identified benefits while reducing the overall project footprint.

Key positive effects include:

- **Visual and Landscape Improvements**: Taller turbines and fewer units create a more spacious, less cluttered layout, improving visual outcomes from key viewpoints.

[9] Based on an annual generation of 595 GWh if generated from coal.

- **Ecological Benefits**: Avoidance of the Thomas Block protects high-quality snow tussock grasslands, indigenous shrublands, and wetlands, reducing landform modification and construction impacts.
- **Aquatic Ecology Gains**: Fewer access roads and culverts reduce disturbance to waterbodies and lower sediment runoff risks.
- **Environmental Compensation**: Provision for Aquatic and Wetland compensation sites to address residual aquatic and wetland effects and provide for the translocation of removed snow tussock.
- **Economic and Climate Contributions**: The project supports local, regional, and national economies and aligns with New Zealand's climate goals. It enhances electricity supply security and diversity and contributes to renewable energy growth needed for transport and industrial electrification.
- **Carbon Emission Reductions**: Stage 2 is estimated to displace over 600,000 tonnes of CO_2e annually compared to coal, and nearly 300,000 tonnes compared to gas.
- **Community Support**: A community fund will be established post-commissioning to support local initiatives, enhancing social wellbeing and resilience.

MWF Stage 2 will significantly support New Zealand's climate goals under the Zero Carbon Act and the Paris Agreement, contributing 190 MW of capacity and generating approximately 549 GWh annually. This helps meet the Climate Change Commission's forecasted wind energy needs through 2030.

Overall, the proposed variation to the Mahinerangi Wind Farm will maintain the previously identified positive effects while enhancing landscape, ecological, and construction outcomes, contributing to national climate and energy goals, generating significant economic benefits, and supporting local communities through the establishment of a dedicated community fund.

2.6 Resource Management Act 1991

With respect to the relevant matters in Sections 6 and 7 of the RMA, the following points are pertinent:

- Section 6(e), Section 7(a) and (aa) of the RMA are all relevant to the Mahinerangi Wind Farm, which require the recognition of the relationship Māori have with their ancestral lands, water, sites, wāhi tapu and other taonga, as well as having regard to kaitiakitanga. TWP has and continues to engage with Ōtākou Rūnanga and who are undertaking a Cultural Impact Assessment and who have been provided with environmental effects assessment reports to provide comment
- The MWF Stage 2 is not "inappropriate" in the context of Section 6(a) or (b) of the RMA and the various project elements have been designed to avoid effects on or preserve the natural character of wetlands, rivers/streams and their margins as far as is practicable
- In respect to biodiversity values, the careful management of effects associated with the MWF Stage 2, including avoiding areas of high ecological value through the design process as far as practicable. The careful management of effects associated with the Wind Farm, also include a suite of management plans, which will ensure that any areas of significant indigenous vegetation and significant habitats of indigenous fauna are protected in accordance with Section 6(c)

- The MWF Stage 2 will not create any additional constraints on public access to any rivers, streams or tributaries or any other surface water body affected or influenced by the project (Section 6(d))
- Section 6 (e), Section 7 (a) and (aa) of the RMA require the recognition of the relationship Māori have with their ancestral lands, water, sites, wahi tapu and other taonga, as well as having regard to kaitiakitanga. Consultation is being undertaken by TWP to understand the impacts of the project on mana whenua relationships and values. The MWF Stage 2 will not adversely affect any scheduled sites of historic heritage, and the archaeological assessment has not identified any archaeological features within the project. It is further noted that an archaeological authority will be sought with application and accidental discovery protocols will remain in conditions of the existing land use consent (section 6 (f))
- Consideration has been given to the management of significant risks from natural hazards and it is considered that there are appropriate factors of safety in the design of the various elements of the project (Section 6(h)
- The MWF Stage 2 enables efficient use and development of natural wind resources which is abundant in the district. The electricity generation from the wind farm is approximately 549 GWh per annum and will contribute to displacing greenhouse emission otherwise caused from generation of non-renewable sources
- The amenity values of the land adjacent to the Wind Farm will be maintained by the imposition of appropriate conditions to limit noise, vibration, lighting and dust during construction (Section 7(c));
- Sections 7(d), (f) and (g) of the RMA relate to the intrinsic values of ecosystems, the quality of the environment, and the finite characteristics of natural and physical resources. All of these matters have been given consideration in the technical assessments commissioned and a comprehensive range of conditions and monitoring is proposed to ensure that potential effects on the wider environment are appropriately avoided, remedied or mitigated
- Potential effects on ecosystems, including freshwater and terrestrial ecology, are described in the technical assessment. An aquatic fauna salvage and relocation plan will be provided (Section 7(h))
- The effects of climate change will be addressed (Section 7(i))

Overall, and based on the technical assessments that have been commissioned by TWP, it is considered that the MWF Stage 2 will promote the sustainable management of natural and physical resources in accordance with Sections 5, 6 and 7 of the RMA.

2.7 National Environmental Standards for Freshwater ("NES-F")

The NES-F came into effect in September 2020 and was most recently amended in January 2023. The NES-F sets requirements for carrying out certain activities within or adjacent to wetlands.

Resource consent will be required for activities associated with the wind farm construction, including earthworks, within, or within 100 m of natural inland wetlands and the establishment of culverts.

2.7.1 Earthworks in proximity to Natural Inland Wetlands – Regulation 45

Of relevance to this proposal is Regulation 45 which applies to the construction of specified infrastructure in proximity to natural inland wetlands. The proposed infrastructure is consistent with the NES-F's definition of "specified infrastructure".

2.7.2 Construction of Specified Infrastructure - Regulation 45

Regulation 45 provides for the construction and use of specified infrastructure within proximity to natural inland wetlands as a Discretionary Activity.

Natural wetland assessments were undertaken following the methods outlined in the Wetland delineation protocols (Ministry for the Environment (MfE) 2022). Natural wetlands are present in gully floors, on gully walls, and in flatter areas where drainage is poor.

There are four instances where the roading or associated earthworks will be located within 10 m of wetland extent. Management of these wetlands (and other wetlands within 100 m of works) will be addressed by the Wetland Monitoring and Management Plan.

There are two instances where access tracks will result in physical disturbance of the natural wetlands which cannot be practicably avoided. In these cases, the existing farm track and culverts will be replaced with a new track and culvert that is capable of accommodating construction vehicles. Approximately 476 m^2 (0.05 ha) of parts of these natural wetlands will be cleared. This loss will be compensated for by rehabilitating nearby wetlands guided by the Wetland and Aquatic Compensation Plan.

No natural inland wetlands are present at transmission line pole sites or within 10m of pole sites.

2.7.3 Passage of Fish Affected by Culverts – Regulation 70 and 71

With regards to fish passage, the NES-FW regulates structures in a river or connected area that may impact fish passage, such as a culvert, weir, flap gate, dam or ford. The project does require culvert structures. These structures have the potential to impede fish passage. Accordingly, the NES-FW regulations in Subpart 3 (Passage of fish affected by structures) are relevant in this instance.

Regulation 70 provides for the construction of culverts as a permitted activity subject to the conditions set out in 70(2). The culvert proposed within Lee Stream Tributary is a Discretionary Activity under regulation 71.

Potential sediment runoff associated with the proposed construction works will be appropriately managed by way of an Earthworks Management Plan which will include measures such as minimising soil disturbance and diverting clean water.

Fish passage best principles have been adopted from NIWA's New Zealand Fish Passage Guidelines Version 2.0 (Fish Passage Guidelines) and integrated into the Lee Stream Tributary crossing design to ensure fish passage for juvenile native fish is provided for. To achieve this, the design is to preserve the current grade of the stream and embed the culvert in the streambed material. Over time as the culvert fills with the streambed material to the stream bed, the existing stream will in effect be simulated within the culvert.

The project ecologists have noted that the stream habitat for fish upstream of the existing culvert is degraded due to the fish passage and flow restrictions imposed by both the existing culvert and farm access track. Therefore, a solution that improves the connectivity of the upstream and downstream wetlands, in comparison to the existing barriers would be favourable. In the long term, removing overland flow barriers and restoring fish passage will likely improve the upstream environments.

A monitoring and maintenance plan would need to be developed to ensure the structure meets the fish passage objectives Regulation 69 of the NES-FW.

It is accepted that any consent granted will include the conditions set out in regulations 62 and 63, as relevant.

2.8 National Environmental Standard for Assessing and Managing Contaminants in Soil (NES-CS)

The NES-CS came into effect in January 2012. The NES-CS seeks to ensure that land affected by contaminants in soil is appropriately identified and assessed before it is developed. If necessary, affected land will need to be remediated or the contaminants contained to make it safe for human use.

The Wind Farm is not known to have any HAIL activities on it. A review of the historic aerial photos of the site does not identify any activities that are 'more likely than not' to have been a HAIL operating on the site. As such, the site is not considered a 'piece of land' and is not subject to the requirements of the NES-CS.

2.9 National Environmental Standard for Electricity Transmission Activities (NESETA)

The NESETA regulations came into force on 14 January 2010 and apply to activities that relate to the operation, maintenance, upgrading, relocation, or removal of an existing transmission line, including construction activities. The NESETA only applies to existing high voltage electricity transmission lines and does not apply to the construction of new transmission lines or to substations. As this project proposes a new transmission line and substation, the NESETA does not apply to the proposal.

2.10 National Policy Statement for Renewable Electricity Generation 2011

The NPS-REG came into effect on 13 May 2011. It seeks to enable the sustainable management of renewable electricity generation under the RMA.

The sole objective of the NPS-REG seeks to provide for the development and operation of new and existing renewable electricity generation activities, such that the proportion of New Zealand's electricity generated from renewable energy sources increases to levels that meet or exceed the Government's national target for renewable electricity generation.

The policies A, B and C1 of the NPS-REG are considered most relevant to the Wind Farm as they seek to ensure decision makers:

Recognises the benefits of renewable electricity generation activities.

- Acknowledges the practical implications of achieving an increase in proportion of electricity generated from renewable sources; and
- Acknowledges the practical constraints associated with the development, operation, maintenance and upgrading of new and existing renewable electricity generation activities.

The development of MWF Stage 2 of the consented wind farm will mean additional renewable electricity generation capacity – noting the Government is committed to achieving Net Zero by 2050, including by doubling New Zealand's renewable electricity generation.

The development of the MWF Stage 2 is also considered to be consistent with Policy B, clause (c), which notes that achievement of Government's strategic target for generation of electricity will require significant developments of renewable electricity generation activities.

Policy C1 of the NPS-REG recognises the practical implications and locational constraints associated with the development of renewable electricity generation activities. There are a number of factors that influence the continued development of the wind farm – not least being the quality / consistency of the wind resource and proximity to transmission infrastructure. As such, it needs to be recognised that potentially suitable sites for wind farms are reasonably limited and that infrastructure required to harness the wind resource will have some potential adverse effects that cannot be avoided or mitigated by altering their location. That is, the turbines need to be located where the wind resource exists and cannot simply be placed in a location where they are not visible from any dwellings.

With respect to Policy C2, it seeks that decision-makers have regard to offsetting measures or environmental compensation when considering the residual environmental effects associated with renewable electricity generation activities that cannot be avoided, remedied or mitigated. That said, the "National Policy Statement for Renewable Electricity Generation – Implementation Guidance" by the Ministry of Environment notes that it is up to the resource consent applicant to volunteer any offsetting of compensatory measures. It is concluded that the construction and operation of Stage 2 will be consistent with the stated objectives and policy directives of the NPS-REG.

2.11 National Policy Statement for Highly Productive Land 2022

The NPS-HPL came into effect on 17 October 2022, with the overall purpose being to improve the way highly productive land is managed to ensure it is recognised and protected from inappropriate use and development, so that it can be utilised for land-based primary production purposes.

While the site is within a rural zone, it is not classified within LUC 1, 2 or 3 categories. Rather it is predominately classified as LUC 6 (Non-Arable: productive hill country) with small areas of LUC 4 (Severe Limitations for Arable or Cultivation). As such, the Project is not within an area of highly productive land. Current farming practices will continue once the MWF is operational.

2.12 National Policy Statement for Freshwater Management

The NPS-FM came into force on 3 September 2020 and provides direction on how freshwater (including groundwater) should be managed under the RMA.

The design process has sought to avoid environmental effects on freshwater as far as practicable.

It is recognised that the technical design of Stage 2 (functional need) means that it is not practicable to avoid all wetlands during construction works. Wetland effects will however be minimised and mitigated through the following key measures:

- the implementation of stormwater, erosion and sediment control measures which will include measures such as minimising soil disturbance and diverting clean water.
- regressing exposed areas as soon as possible following construction work.
- appropriate construction methodologies will be employed around waterbodies.
- Implementation of Water Quality and Wetland Monitoring and Management Plans.

The findings of technical assessments undertaken in relation to freshwater demonstrate that the Project is consistent with these relevant objectives and policies of the NPS-FM.

2.13 National Policy Statement for Indigenous Biodiversity

Clause 1.3(3) of the NPS-IB states that nothing in the National Policy Statement applies to the development, operation, maintenance or upgrade of renewable electricity generation assets and activities and electricity transmission network assets and activities. Therefore, the provisions of the NPS-IB are not relevant to the development of Stage 2 of the Mahinerangi Wind Farm.

3 Overview of Technical Assessment Findings

3.1 Economic Effects

The provision of additional generation capacity provides system-wide benefits in assisting conservation of hydro storage and adding diversity and resilience to national generation capacity.

While the Southland Otago region is currently a net exporter of electricity, it is anticipated that this will change in time with the proposed construction of a data centre and electrification of industrial process heat will reduce the electricity available for export to the rest of the country.

The impact of Stage 2 on the local or regional economy is most pronounced in the building and construction stage. Over its operating life, labour time on operations and maintenance may accumulate to approach the construction stage labour, but that is spread out over a long period so the expected impact on labour and incomes per year is small.

It is estimated that the main significant regional and national benefits of the Mahinerangi Wind Farm Stage 2 will be:

- A large increase in wind generated electricity equivalent to almost one year of additional capacity requirements estimated by the Climate Change Commission.
- Contribution to the increase in renewable energy generation and overall electricity supply to meet expected growth in demand.
- Injection of around $220 million expenditure during wind farm construction (in total over three years), of which about $73 million would be economic value added for the region
- Up to an additional 200 full time equivalent (FTE) during peak construction and on average 75 FTE per year for two years during construction and 8 to 10 FTE per year for operation of the completed wind farm.
- The BESS will allow controlled supply of electricity during peak periods - up to 60 MWh for two hours at a time. The construction activity for the BESS adds a further 10 percent to the expenditure and employment.
- Reduction in greenhouse gas (GHG) emissions of 303,171 tCO2-e if displacing gas-fired generation, or 600,161 tCO2-e if displacing coal fired generation. The value of these emission reductions at $59.82 per tCO2-e would be $18.1 million or $35.9 million respectively.
- Supporting electrification of the economy which is a key element of the Climate Change Commission advice on reducing greenhouse gas emissions.

Construction and operation of wind farms requires specialised skilled labour, many of which will be found already within the Otago and Southland regions engaged in servicing wind farms. It is expected that most of the direct expenditure associated with construction and operation of Stage 2 of the Mahinerangi Wind Farm will impact the Otago and Southland region.

The Mahinerangi Wind Farm Stage 2 provides significant national benefits through its substantial contribution to increasing renewable the generation of electricity from renewable resources that is necessary to meet expected increase in electricity demand from the electrification of the economy including light vehicle transport and industrial process heat.

3.2 Noise Effects

Overall, the conditions, with minor amendments, remain relevant and appropriate to manage construction and decommissioning works, and concrete batching associated with Stage 2 of Mahinerangi Wind Farm.

The proposed changes to the Stage 2 turbines are considered reasonable, as the noise impact remains unchanged for the surrounding community compared to the existing consent.

3.2.1 Construction Noise

Conditions 31–33 of the project require compliance with New Zealand noise standards during construction and decommissioning of Stage 2 of the wind farm. A Construction Noise Management Plan will be prepared and included in the Construction Management Plan. Noise from construction (excluding concrete manufacture) must meet the limits set in NZS 6803:1999 and Condition 32.

The loudest construction activity (concrete cutting) is predicted to generate 43 dBA at the nearest dwelling, which is well within both daytime and night-time limits. All construction activities are at least 900 m from the closest non-participating residence.

Condition 33 manages the concrete manufacturing, requiring noise assessment under NZS 6801:1991, which will be updated to NZS 6801:2008 (with no material change in outcome). Although concrete manufacturing is

currently limited to daytime hours, 24/7 manufacturing is proposed to allow for continuous concrete pours as permitted under Condition 32. This requires a condition amendment.

The concrete batching plant will be located over 2000 m from the nearest dwelling, with noise levels predicted at 27 dB LAeq, which is compliant and not expected to cause any adverse acoustic effects. This noise level is broad band and lacks tones that might cause annoyance. Internally, it would result in under 15 dBA, well below World Health Organisation thresholds.

All activities, including extended concrete manufacturing hours, will comply with noise limits and are not expected to create adverse effects.

1.1.1 Operational noise

All operational noise will remain compliant with the relevant noise limits set by the existing consent conditions. Predicted noise levels for the combined Stage 1 and amended Stage 2 have either negligible or beneficial effects at all receivers. Five receivers are predicted to experience lower noise levels, while the remaining receivers show a difference of less than 0.1 dB. Noise levels at all nearby receivers are within the lower design limits (35 or 40 dB LA95), with most sites experiencing turbine noise levels more than 10 dB below ambient noise levels.

The noise impacts as a result of proposed changes to the Stage 2 turbines remains unchanged for the surrounding community compared to the existing consent.

The BESS associated with the transmission line will operate in accordance Condition 34. This condition remains relevant and appropriate to manage operational noise from non-turbine activities associated with Stage 2 of Mahinerangi Wind Farm.

3.3 Landscape and Visual Effects

The proposed changes to the existing consent conditions will:

- Maintain natural landscape values. The layout has been designed to fit the natural landscape, retaining the same pattern as the consented wind farm. Any adverse effects of the proposed changes on the natural landscape will be 'low'. The changes will also lead to positive effects. In particular:
    - Shifts to the centres of the Contingency Zones (nominal turbine locations) are localised in each case. They vary between 10m and 160m and have been made to match the civil works with site conditions and ecological values. The layout retains the same overall pattern as the existing consent.
    - The Contingency Zones will retain the same 100m radius. The proposed revisions to the Contingency Zone exclusions will ensure that works (as under the existing consent) will be located on the peneplain surface in areas of pasture and will avoid gullies. They also retain a 10m minimum buffer from wetlands is consistent with the NES-FW.
    - The removal of four wind turbine locations on the south-western spur (Area T) and one in the QEII covenant area (Area C) will have positive effects by avoiding the main area of high-quality snow tussock.
    - The larger area of each hardstand (1855m2 vs 1400m2) will be offset by fewer wind turbine numbers.
    - Earthworks will also be reduced by the proposed change to a 5.5m road width (with localised only widening to 9.5m) for both construction and operations, compared with a

12m construction road width under the existing consent. The reduction in wind turbine numbers will also reduce the length of access road required.

- Maintain amenity values and continue to be appropriate with respect to landscape character. The layout retains the same pattern as the consented wind farm, which in turn was designed to fit the natural landscape. The wind farm will continue to be appropriate in the landscape setting. It will continue to have acceptable effects. Any adverse effects will be low and there will be various positive effects compared to the existing consent.
- Protect the ONL values of the Lammermoor Range. The proposed changes will have positive effects and no adverse effects with respect to the ONL.

The civil engineering required to construct Stage 2 will largely avoid adverse effects on the natural character of wetlands and streams because the layout follows the crests of the peneplain and its spurs in an inverse pattern to hydrology. It follows a pattern very similar to the existing consent. The works will remain appropriate in what is a modified farmland and energy landscape. In those instances where one stream and perched wetland at a saddle on the peneplain cannot be avoided, natural character will be preserved through the design of the works and proposed restoration and offset mitigation measures.

The proposed transmission infrastructure (substation, BESS, 110kV transmission line) will be appropriate in the existing landscape given the existing energy generation and transmission. The design and location of the infrastructure, and the alignment of the line, minimises potential adverse effects. Any remaining adverse effects will be acceptable and of a 'low' degree. Likewise, the proposed Operations and Maintenance facility will be in an appropriate location and unremarkable within the wind farm. Any adverse effects will be 'very low' in degree. Landscape amenity values and natural landscape values will be maintained.

3.4 Transport Effects

The construction of Stage 2 will require transport of the different components, materials, and workers to the site.

Five main routes will be used to deliver the different components, materials, and workers to the site for construction. Two of the assessed routes from South Port in Bluff can cater for the different requirements of over-weight and over dimension vehicles. The other three routes are from Dunedin/Port Chalmers, Lyttelton Port in Christchurch, and South Port in Bluff, and generally follow state highways. These routes will generally be used to transport smaller components, materials, and workers to the wind farm using standard heavy vehicles and high productive motor vehicles (HPMVs).

Construction vehicle routes will be determined by contractors and suppliers, but it is anticipated that the key route taken would be SH1, SH87, Mahinerangi Road and Eldorado Track to the site. This route was assessed under the existing land use resource consent and was used for the construction of Mahinerangi Wind Farm Stage 1.

In terms of trips associated with transmission line towers and components, and BESS modular units, it is possible that these components could be transported from any of the other ports.

The transformer and the turbine components including the tower, nacelle, and blades are oversize and over-weight, and require specialist vehicles and appropriate routes to transport to the site. The over-weight components require routes that comply with permits for over-weight vehicles on structures. The blades require a relatively straight route with clearance on both sides to allow tracking and overhang of the blades.

The proposed routes to site may require slight modifications to the road network such as pavement widening, relocation of signs or poles, and construction of pull over bays to allow the movement of the large vehicles. The modifications are expected to be feasible and will be discussed with the road controlling authorities at the time of permitting.

The reduction in the total number of consented turbines results in 1,033 fewer return trips required by heavy vehicles compared to the additional turbines, and therefore less transport effects in comparison to the existing resource consent.

For the new resource consents for the transmission line, BESS, and substation, there are expected to be 878 heavy vehicle return trips, with the number of daily trips being fewer than 10, The transmission line and BESS construction traffic will have minor effects as these involve standard heavy vehicles and HPMVs following the existing HPMV network. The substation requires a transformer to be transported via the over-weight route. This will have temporary and short duration minor effects due to the low number of vehicle movements on the network (one return trip for over-weight over-dimension and three return trips for pilot vehicles).

These minor transport effects will be effectively mitigated through the Construction Traffic Management Plan and appropriate permits.

3.5 Shadow Flicker and Blade Glint Effects

A Shadow Flicker Assessment has considered a layout consisting of up to 54 potential turbine locations with a turbine rotor diameter of 136 m and a hub height of 97 m.

The assessment also considered the combined impacts of the varied Stage 2 turbine locations, and the existing Stage 1 turbines located in the south of the wind farm. When considering shadow flicker above a moderate level of intensity, it was found that no dwellings were impacted from both the existing Stage 1 turbines and the varied Stage 2 turbines.

When comparing the expected shadow flicker extents for the consented configuration to the proposed configuration for Stage 2 of the wind farm, the proposed configuration results in one fewer dwelling that is expected to experience shadow flicker. The shadow flicker conclusions for all other dwellings remain unchanged. Overall, the proposed configuration leads to a reduction in shadow flicker impacts compared to the consented configuration.

Blade glint is not expected to be an issue for the project provided a non-reflective finish is applied to the wind turbine blades.

3.6 Bat survey

Acoustic monitoring surveys were undertaken during valid periods of likely high bat activity and in locations that included major habitat features expected to be used by bats if they were present in the Mahinerangi Wind Farm Site.

Monitoring yielded zero bat passes, the site represents low quality bat habitat, and there are no recorded bat observations within a 50km radius of the site. These findings, provide overwhelming evidence that the Mahinerangi Wind Farm project area is not utilised by long-tailed bats or lesser short-tailed bats for roosting, foraging, or commuting purposes. The complete absence of any bat-related indicators strongly supports this assessment. Therefore, further consideration of potential effects on bat populations is not warranted in subsequent stages of the consent process for the Mahinerangi Wind Farm.

3.7 Aquatic Ecology

3.7.1 Aquatic Habitat and Fauna

The aquatic habitat within the Mahinerangi Wind Farm area is primarily composed of small first- and second-order headwater streams. These streams exhibit limited habitat quality, largely due to the impacts of surrounding land use. Key factors reducing ecological value include diminished riparian vegetation and the effects of livestock access, both of which contribute to habitat degradation and stream sedimentation. Although these headwater streams are small and narrow, habitat quality and diversity, particularly in terms of fish cover and riparian vegetation, tend to improve as the streams flow downstream and increase in size.

Water quality across the site is generally high. The streams contain healthy concentrations of dissolved oxygen, which supports a diverse array of aquatic organisms, especially fish. Suspended solid concentrations are low, indicating minimal turbidity and sediment load in most areas, further reinforcing the suitability of the streams for sustaining aquatic life.

The benthic macroinvertebrate communities found within streams draining the wind farm area are diverse. Health assessments of these communities, using established ecological indices, reveal a range from ‘Poor’ to ‘Excellent’ conditions. This variation in community health is closely linked to land use within the catchments, particularly the influence of grazing and pasture practices. Sedimentation and physical disturbances from stock access are key drivers of these differences in ecological quality between streams.

Freshwater crayfish/kōura and classified as ‘At Risk – Declining’ under national conservation criteria, were recorded in the Black Rock Stream and Broad Stream catchments. Given the presence of suitable habitat conditions, it is considered likely that kōura are distributed throughout all five major catchments that drain to the east and south of Stage 2.

The fish community within these streams is dominated by Eldon’s galaxias, a non-migratory species that is classified as ‘Threatened – Nationally Endangered’. The distribution of this species is constrained in the upper headwaters due to limited surface water and the very small size of the streams, which in many areas offer little more than vegetated trickles of water. In such environments, it is unlikely that sustainable fish populations can be supported. Instead, Eldon’s galaxias is expected to be confined to more stable and better-connected downstream habitats where flow and cover are adequate.

3.7.2 Construction Activities: Erosion and Sediment Control

To address potential ecological effects from construction and earthworks, all activities will be carried out under an Environmental Construction Management Plan (ECMP) and Earthworks Management Plan, which is based on the Auckland Council’s GD05 guideline—also adopted by the Otago Regional Council. The Earthworks Management Plan specifies sediment and erosion control methods designed to protect aquatic ecosystems. Importantly, the design of the Stage 2 infrastructure avoids direct interaction with watercourses in almost all cases. The only exception is a single site in a tributary of the Lee Stream where avoiding a watercourse is not practical. In all other cases, construction will occur away from streams, significantly reducing the risk of sedimentation, contamination, or physical habitat disruption.

Construction of internal access roads and tracks has been designed to avoid ecological impacts and will be managed through the Management Plans. Roads are aligned along ridgelines to avoid gullies and steep areas, keeping them away from watercourses except for one necessary crossing at a Lee Stream tributary. Stormwater will be managed using graded surfaces, swales, culverts, and erosion controls to maintain existing flow paths and protect downstream wetlands and streams.

Turbine hardstand areas, each approximately 1,855 m², are similarly sited on ridgelines, well separated from sensitive areas. Their construction and stormwater management will follow ECMP guidelines to minimise any ecological effects.

Additional infrastructure—including the substation, BESS, operations and maintenance facility, and concrete batching plant—will also be located on ridgelines, away from watercourses. Each facility includes stormwater and runoff management tailored to its function. For example, the operations facility will treat wastewater and collect roof runoff on-site; the concrete batching plant will use bunds and sumps to manage runoff, with chemical treatment as needed; and the BESS will have a dedicated stormwater and firewater containment system, including a detention basin and storage for potentially contaminated water. These measures are intended to prevent runoff from entering waterways and to minimise impacts on ecological values throughout both construction and operation

The 6 km access road for the Transmission Line Corridor will primarily use existing farm tracks and culverts, following fence lines and avoiding wetlands, with a 10-metre setback where practicable. Since no new construction is planned within or near watercourses, and works will follow the ECMP, no adverse effects on aquatic ecological values are expected from access road use or structure installation.

SFD from construction will be placed in designated sites located on broad ridgelines with gentle slopes, away from gullies and watercourses. These areas will be managed in line with the Management Plans, ensuring surface water is not impounded or diverted. As a result, the fill disposal is also expected to avoid or minimise ecological impacts on nearby waterways.

3.7.3 Culverts

Culverts will be installed along access roads and tracks to manage stormwater and surface water from overland flow paths. These culverts, along with associated headwalls and backfilling, will be constructed in accordance with the Management Plans. The road network is positioned along ridgelines to avoid gullies and watercourses, maintaining a 10-metre buffer from wetlands where practicable. Culvert outlets will include energy dissipation features to reduce erosion, and the overall design will preserve existing flow paths to avoid or minimise ecological impacts.

One new culvert will be installed across a headwater tributary of Lee Stream—the only part of the project where a watercourse crossing is unavoidable. This culvert will replace an old farm track culvert and will be designed to maintain fish passage for the threatened Eldon's galaxias. The culvert will preserve stream gradient and include embedded natural substrate to allow for a low-flow channel and avoid flow barriers. Construction will occur during low-flow months (January to March), outside the galaxias' spawning and hatching periods. A Fish Recovery Plan recommends relocating galaxias before works begin to protect the population.

3.7.4 Positive Effects

The removal of development within Area T (Thomas Block) from the wind farm will have positive benefits for aquatic ecology. Positive benefits are due to the reduction in the number of new tracks and culverts that need to be installed in watercourses and due to the removal of four turbines. Avoidance of Area T will reduce the land area required for excavation and construction activities, will reduce risks of sediment runoff to watercourses, and reduce areas where

3.8 Terrestrial Ecology Effects

Following compensation for directly affected wetlands, and implementation of a range of ecological monitoring and management plans, the actual and potential adverse effects of Stage 2 of the Mahinerangi Wind Farm (including the transmission line and BESS) on vegetation, wetlands, and terrestrial invertebrates will be minimal.

3.8.1 Terrestrial Vegetation

The wind farm site consists mainly of grazed exotic grassland and crops on ridgetops, with remnants of snow tussock grassland and some indigenous shrublands in gullies. There is also a small, replanted forest area, while rock outcrops are rare.

Under Clutha District Council consent RM1409 (condition 25D), an Ecological Monitoring and Management Plan is in place to manage weed risks.

A comparison between the consented layout and the proposed Stage 2 layout shows that Stage 2 will result in less clearance of indigenous vegetation—including snow tussock, shrublands, and wetlands. This is due to layout changes, fewer turbines and roads, and the avoidance of sensitive areas like Area T, which has high-value snow tussock.

Vegetation clearance is already authorised by RM1409, with 59.2 ha QEII covenant area offered as compensation. Overall, Stage 2 will have lower ecological impact than the consented design.

3.8.2 Natural Inland Wetlands

Natural wetlands have been identified using the Ministry for the Environment's 2022 protocols. They occur mainly in gullies and poorly drained flat areas. Stage 2 has been carefully designed to avoid wetlands wherever practicable, but:

- 2 instances involve direct works within wetlands (totalling 476 m^2 of wetland loss).
- 4 instances involve works within 10 m of wetlands (mostly for road access).
- 3 additional instances occur within 10 m of wetlands in the transmission line corridor.

Direct wetland loss will be compensated through wetland rehabilitation, guided by a Wetland Compensation Plan. All wetlands within 100 m of construction areas will be managed under a Wetland Monitoring and Management Plan.

No direct impacts to wetlands will occur in the Transmission Line Corridor, but two access tracks will be placed within 10 m of five wetlands, triggering the same monitoring and management requirements Stage 2.

Sediment and pollution risks will be managed under the ECMP and Earthworks Management Plan which follow best-practice protocols.

3.8.3 Flora Protection:

A *Carex tenuiculmis* and *Epilobium chionanthum* Management Plan will manage potential effects on *Carex tenuiculmis* and *Epilobium chionanthum*. These species were recorded in some wetlands which will be avoided.

3.9 Avifauna Effects

The 2025 Avifauna Assessment has reviewed of all historical investigations at site that led to consenting of Mahinerangi Wind Farm.

The original ecological assessments identified one species, the falcon, as being of concern. That assessment concluded that the risk to this species was low, but any small effects could be offset by appropriate predator control. Predator control was included in conditions of consent and is being carried out.

Conditions of consent also required pre and post construction monitoring. The pre and post construction monitoring was carried out over five years which included 2 years of bird strike. It concluded that falcon were not displaced by the wind farm, that they continued to hunt around and within the Stage 1 wind farm site, and they continued to breed and fledge chicks in the surrounding territories.

Bird strike monitoring was also carried out as part of the post-construction monitoring. Collisions did occur but all were of common and widespread species found within pastoral landscapes. Specifically, there were no collisions of falcon or pied oystercatcher, both of which are judged to have high avoidance of turbines and a low risk of collision.

The 2025 Avifauna Assessment has looked at whether there have been any changes at the site or to the local avifauna since consent was granted that may change the results of the earlier assessment. It has concluded that there have been no changes of note to the farming operation or the presence and distribution of vegetation and habitats within and around the site. There have also been no obvious changes to the species occupying the site or the nearby lakes and wetlands. The conservation status of several species had changed since consent was granted, and this has been taken into account.

The assessment did identify the presence of breeding pied oystercatcher, a species which has a conservation status of At Risk, Declining. Breeding of this species was not observed during the earlier ecological assessment. The protection of nests, chicks and adults within the Windfarm Development Area has been considered and included in the assessment.

The development of Stage 2 has been considered in light of proposed consent variations to change the size and design of turbines. These changes were found to be positive for falcon and will further reduce risk to this species. This change is also likely to provide the similar benefits for pied oystercatcher while breeding on the site.

The ongoing protection of falcon was considered against the current conditions and the scope of the certified Avifauna Management Plan (**AMP**):

- Protection of nests during breeding is not detailed in the current AMP. A new section has been added.
- It was considered that the post construction falcon monitoring detailed in Condition 27 is still of value and this monitoring will be repeated for Stage 2, as already detailed in the AMP

- There may still be some residual risk to falcon and the current pest control will continue to be carried out as required by conditions of consent, to provide a sufficient compensation.
- It is considered the risk to falcon of electrocution with the proposed transmission line will be avoided.

The ongoing protection of pied oystercatcher has also been assessed. None of the current conditions or the AMP address monitoring of this species. In response:

- Methods for the protection of pied oyster catcher during construction will be added to the AMP.
- The ongoing use of the Stage 1 wind farm site by this species speaks to the very low risk of collision with turbines or displacement. No additional post construction monitoring is proposed.
- Similarly, it is concluded that this species is not at risk of electrocution or collision with the new transmission line, as it has been seen in close proximity to the Stage 1 transmission lines.
- The ongoing pest control will be providing some benefit to nesting pied oystercatcher.

Overall, with suitable protection of nesting falcon, and ongoing pest control to account for any residual effects, it is concluded that the development of Stage 2 will have a lesser effect on these species than the consented layout.

3.10 Heritage Effects

As part of the 2006-2008 resource consent process, an archaeological assessment of the entire Mahinerangi Wind Farm project area was undertaken, which identified 26 sites of archaeological value within the wider wind farm site (Watson Oct 2006). The sites were water races, a hut, mine tailings, a dam, other mine workings, a fence line, a pole track, sluiced areas and a house. All of these sites were associated with gold mining activities in the area.

The 2006 assessment concluded that the only archaeological site that would be affected by the construction of the windfarm was part of the Pole Track (Site 91) that ran from Waipori to Deep Stream during the 19th century, is still used as a farm track, and exists as a paper road north of Eldorado Track.

None of the other identified archaeological sites would be directly affected. As such, the wind farm was assessed as having a very limited impact on the identified archaeological sites. However, it was concluded that it is possible that sites that were not located during the survey may be encountered during earth works associated with the project. It was considered possible that Māori archaeological sites may be encountered, and if so these are most likely to be findspots or the remains of small camp sites. In this regard, conditions regarding accidental discovery protocols and personnel training were included in the resource consent.

The 2025 Archaeological Assessment has involved a review of the 2006 Archaeological Assessment and the consented layout plan of Stage 2 and the transmission line corridor, with some additional field survey undertaken.

It can be confirmed that the effects of Stage 2 of the Mahinerangi Wind Farm on archaeological values have not changed from the 2006 assessment. The conclusions of the 2006 assessment remain valid if any of the 54 consented turbine locations and contingency zones are utilised, amended or repositioned (including hardstand and laydown areas) and with respect to the proposed changes to the spoil locations, roading layout (including track widths and cut and fill batters).

In addition, the existing conditions 69-71 relating to accidental discovery protocols remain valid and appropriate in managing the discovery of unknown archaeological sites and/or artefacts.

3.11 Stormwater, Erosion and Sediment Effects

The construction of the Mahinerangi Wind Farm Stage 2 will result in material being excavated and material being stockpiled in identified locations.

The existing land use consent provided earthwork limits and required stormwater management and erosion sediment controls in Condition 25. This condition will be varied to account for the changes related to hard stand areas, access tracks and works in or near waterbodies, without removing the requirement to address these matters.

The new suite of regional consents and consents under the NES-F require a review of stormwater and erosion and sediment controls, particularly in light of updated guidelines and works in proximity to natural inland wetlands.

3.11.1 Erosion and Sediment Control

The management and design of the sediment, erosion, and dust control measures at the site will be based on the area of the earthworks associated with the civil works for various phases of construction. The following techniques shall be used by the contractor to control sediment laden runoff and to prevent erosion of exposed ground:

- Cut and cover - As the track is formed, the excavated material will be loaded directly onto a dumper and transported to the nearest SFD. The trackside v-drains and cut batter will be rapidly stabilised with seeding or rock lined. The v-drain will then convey clean water runoff to culverts or discharge points.
- Stabilised Construction Entrance - A stabilised pad of aggregate on a filter cloth base will be located at the site entrance/s (and entrances to the SFD's - dependent on construction staging) where construction traffic will be entering and leaving.
- Wheel wash
- Runoff diversion channels or bunds will be used to intercept and detain silt laden runoff and divert into drop-out pits, earth decant structures, or sediment ponds
- Drop Out Pits and Sumps - Drop out pits may be used on steep sections of access tracks to ensure sediment laden water is slowed down and silt is deposited out at regular intervals. Drop out pits may also be installed within dirty water diversion channels to allow heavier sediment particles to drop out before they enter the sediment retention device, reducing the load on the device; or at termination points of roadside open drains - prior to discharge across grass fields
- Stormwater Inlet Protection, silt fences and sediment retention ponds
- Decanting Earth Bunds will be used to intercept sediment laden runoff and minimise the amount of sediment leaving the site through settlement
- Water treatment chemicals (such as flocculants) can be applied to increase the rate of sediment settling out of the water column and is commonly used in conjunction with sediment retention devices

The ECMP, Earthworks Management Plan and Chemical Treatment Management Plan have been prepared. The Plans generally follow the principles of Auckland Council's GD05 Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region (2016) which Otago Regional Council has adopted.

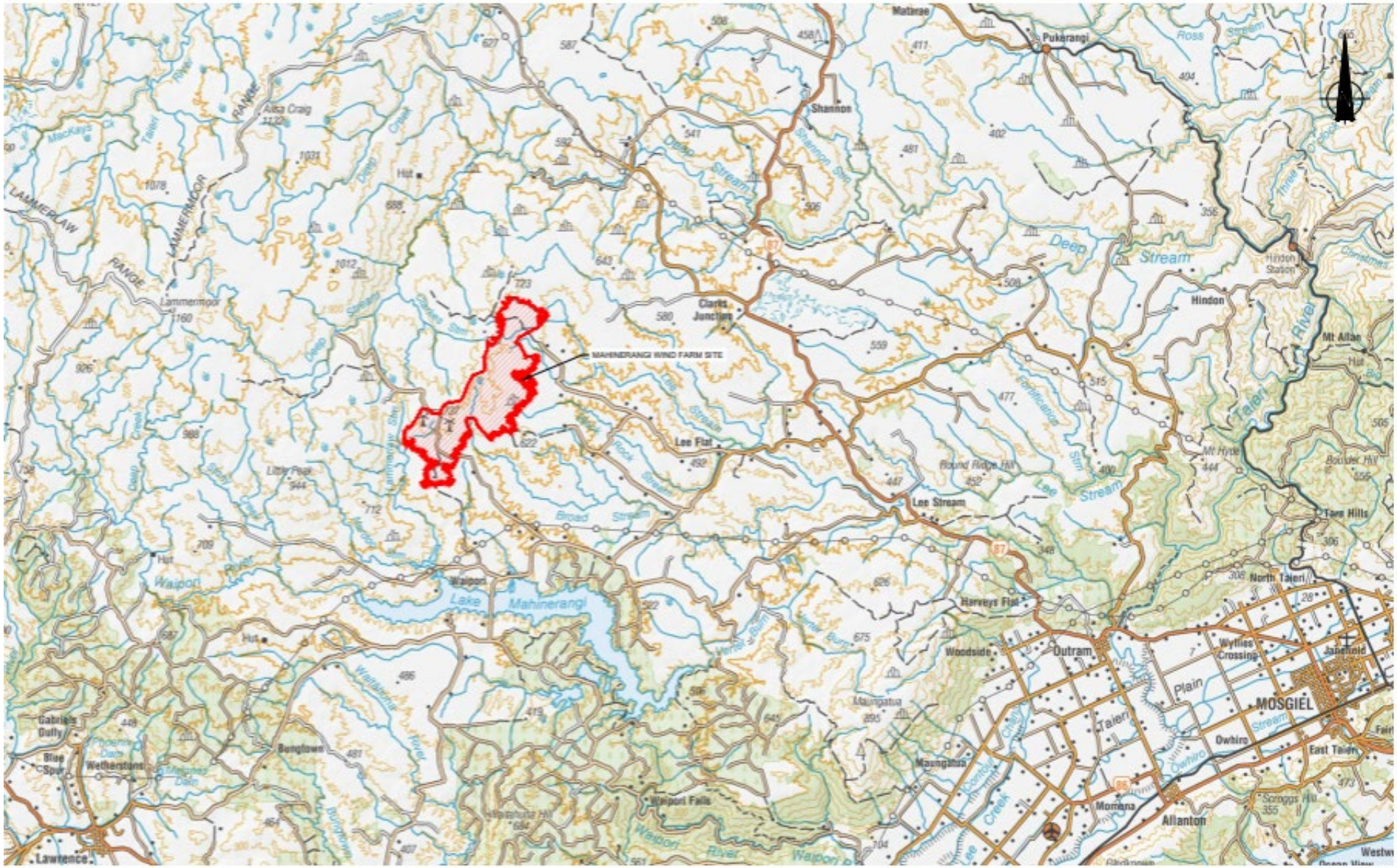
3.12 Conclusion

Overall, it is considered that the proposal to vary land use consents and seek new consents where required for the Mahinerangi Wind Farm Stage 2 will generate positive social and economic benefits for the broader community and can be constructed and operated in a manner that will, as far as practicable, avoid, remedy or mitigate potential adverse effects on the environment.

Importantly, the project site is already consented as an appropriate location for a wind farm due to the suitability of the wind resource, surrounding productive farmland and the low density of dwellings in the area and around the Wind Farm Site.

Particular consideration has been given to avoiding potential adverse effects through the design and construction methodology development process, which has resulted in the avoiding adverse effects as far as practicable (i.e. reducing impacts on areas of potential ecological significance).

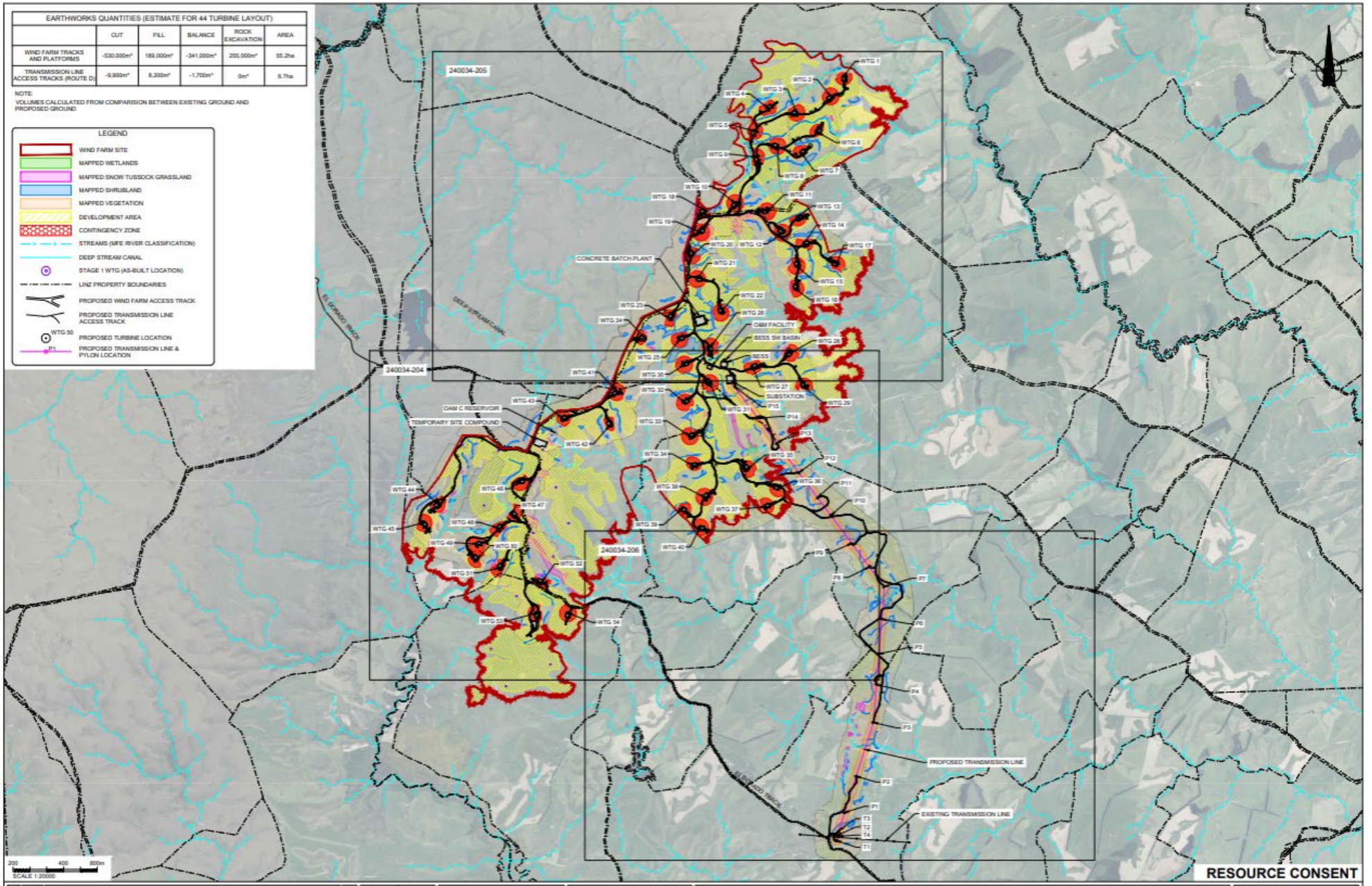
Attachment 1 – Locality Plan



SITE LOCATION
SCALE 1: 100 000

NOTE: MAP SOURCED FROM LINZ

Attachment 2 – Indicative Turbine Locations, Access Roads and Transmission Line



REV	DATE	ISSUE	BY
A	4.07.25	ISSUED FOR RESOURCE CONSENT	FY

PREP. BY: AT
REVD. BY: LG
APPROVED FOR ISSUE
DRAFT

RILEY
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Mercury

CLIENT: TARARUA WIND POWER LTD
ADDRESS: WAIPORI, OTAGO
PROJECT: MAHINERANGI WIND FARM STAGE 2
SHEET TITLE: SITE PLAN - OVERVIEW

CADFILE: 240034-202.dwg
SCALE (A1): 1:20000
DRG. SHEET SIZE: A1
DRAWING No.: 240034-202
REV.: A

From:	Ryan Piddington
To:	contact@fasttrack.govt.nz
Cc:	Sarah Edwards
Subject:	Mahinerangi Wind Farm - Stage 2. Mercury Schedule 2 Substantive Application
Date:	Tuesday, 30 September 2025 5:20:00 pm
Attachments:	image001.png Mahinerangi Wind Farm_Substantive App_EPA.pdf

Kia ora,

Mercury has the Mahinerangi Wind Farm Stage 2 project listed within Schedule 2 of the Fast-track Approvals Act 2025.

We are finalising the application and looking to lodge the substantive application mid-October.

We are now seeking a pre lodgement consultation session with the EPA to provide a summary of the project and application, and work through any relevant matters.

I have attached a summary of the project for your information.

I look forward to hearing from you as to whether you can accommodate our pre lodgement consultation request and if so, what information you would like to receive prior to or at that session.

Ngā mihi
Nā Ryan

RYAN PIDDINGTON
STRATEGIC CONSENTS MANAGER

MERCURY.CO.NZ
[redacted]
108 Durham Street, Tauranga, 3110

Mahinerangi Wind Farm: Referral Application Consultation

TO:	Ministry for the Environment
FROM:	Ryan Piddington - Strategic Consents Manager, Mercury
DATE:	16 August 2025
SUBJECT:	Mahinerangi Wind Farm Stage 2: Schedule 2 Listed Project Substantive Application Pre-Lodgement Consultation

1 Purpose

The purpose of this document is to provide Ministry for the Environment (**MfE**) with an overview of Tararua Wind Power Limited (**TWP**) upcoming Fast-Track Approvals Act 2024 (**FTAA**) referral application for the Mahinerangi Wind Farm Stage 2 (**MWF2**). We would be happy to meet to discuss our project if you consider that would be worthwhile.

This consultation pack is intended to support TWP in meeting the consultation requirements set out in Section 29 of the FTAA. Section 29(1)(a) requires the authorised person for the project to consult with persons and groups referred to in s11. More specifically, s11(1)(e), which requires the authorised person to consult relevant administering agencies before lodging a substantive application. For purposes of Section 42 of the FTAA, TWP is the authorised person for this listed project.

We have provided as much detail as possible at this stage, and this information may be subject to change in response to consultation with other administering agencies and those parties listed in s11(1)(a) and s11(1)(b). As such please consider this information as draft for consultation.

Please note that all information provided herein is commercially sensitive and confidential.

Table 1 – Attachmments	
Attachment 1	Locality Plan
Attachment 2	Indicative Turbine Locations, Access Roads and transmission Line

2 Mercury, The Project and The Substantive Application

2.1 Mercury

TWP, a fully owned subsidiary of Mercury NZ Limited, is one of New Zealand's largest electricity generators and retailers. Mercury generates electricity from 100% renewable sources, including hydroelectric power from nine stations on the Waikato River, geothermal energy from five plants in the central North Island, and wind power from several farms. TWP acquired the wind assets of TrustPower in 2021 which was the original consent holder for the MWF. The Project

TWP is progressing Stage 2 of the Mahinerangi Wind Farm (**MWF2** or **MWF Stage 2**). MWF2 is a Schedule 2 Listed Project to the Fast-track Approvals Act 2024. Given the regional and national significance of this renewable electricity project, a substantive application has been prepared in accordance with FTAA.

The project is to be located on private farmland, and land owned by Landcorp Farming Limited. The project site is located approximately 50 km west of Dunedin and approximately 5 km north of Lake Mahinerangi, at the eastern foothills of the Lammermoor Ranges (refer to Figure 1).

Figure 1: Project site location

TWP holds existing resource consents for the Mahinerangi Wind Farm (**MWF**) that were confirmed by the Environment Court in 2009[1]. The existing conditions provide for up to 100 wind turbines with a maximum tip height of 145 m and an overall maximum installed generation capacity of 200 MW[2]. The consent was given effect to by the construction of Stage 1 that comprised of twelve 3 MW wind turbines that became operational in 2011 (**MWF1** or **MWF Stage 1**).

In order to maximise the efficient use of the wind resource at Mahinerangi, and to provide greater flexibility in the turbines available to be installed (due to advances in technology), TWP is seeking to increase the height limit for the turbines from the currently consented 145 m (as set out in condition 17) to a blade tip height of 165 m. TWP has also confirmed that the total number of turbines required within the wind farm can reduce from a consented maximum of 100 (as per condition 12) to 56 (12 existing plus 44 proposed). It is proposed that up to 44 additional turbines be constructed over 54 potential locations. A turbine with a tip height of 165 m, minimum of 20 m ground clearance, and 136 m rotor diameter is used for assessment purposes.

In addition to the variation to the existing district land use consent conditions, TWP also requires a new suite of regional consents for the construction, operation and maintenance of the wind farm (given the expiry of the previously held consents) and a new district land use consent for the construction and use of a new 110 kV transmission line (and associated infrastructure) to connect to Transpower's National Grid, a Battery Energy Storage System (**BESS**), Operations and Maintenance (**O&**M) building and associate site improvements.

The new 110 kV double-circuit transmission line is to be located on private farmland, and on land owned by Landcorp. Twenty-five pole structures of up to 45 m in height above ground level are required to support the transmission line and its connection points. Its location in relation to Mahinerangi Wind Farm is shown in Figure 2 below.

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1 *Upland Landscape Protection Society Incorporated v Clutha District Council, Otago Regional Council and Trustpower*, Decisions No C 85/2008 [Interim Decision] and No. C140/2008.

2 200 MW limit was proffered by Trustpower (the original consent holder) because of National Grid constraints at the time rather than to manage environmental effects. The installed generation limit (set out in district land use consent condition 11), has the practical effect of limiting the number of wind turbines depending on the generation capacity of the model used.

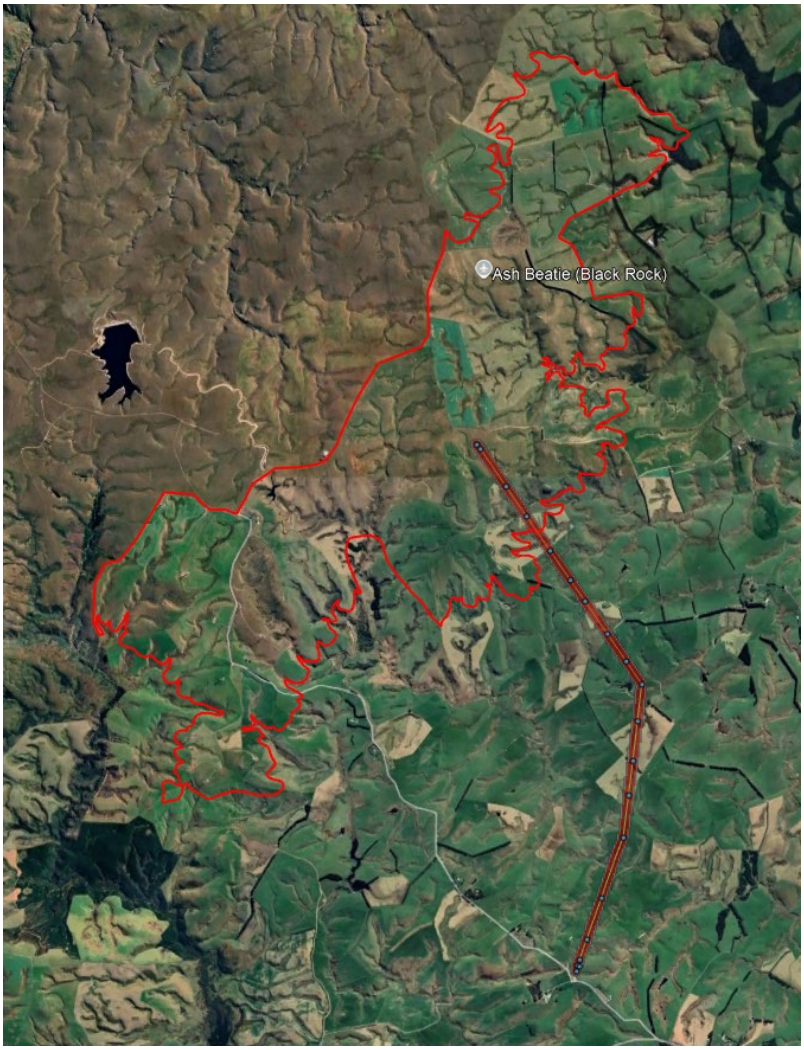

Figure 2: Transmission Line Corridor

Approvals are also sought relating to the Wildlife Act 1953 (Schedule 7) and the Heritage New Zealand Pouhere Taonga Act 2014 (Schedule 8). It is noted that no approval under Schedule 9 relating to complex freshwater activities is required.

Throughout the preparation of this application, TWP has engaged a wide range of technical experts to assist with the design of MWF Stage 2 and the associated transmission line, as well as the identification and assessment of actual and potential environmental effects. This input has been integral to ensuring that the layout and infrastructure design are informed by site-specific environmental values and constraints.

As far as practicable, environmental effects have been avoided or minimised through an iterative design process. This process has involved detailed mapping and site investigations to identify sensitive features and areas requiring protection, followed by refinement of the wind farm layout and infrastructure alignment to respond to these values.

Particular care has been taken to avoid direct impacts on wetlands. Turbines, transmission line poles, tracks, and other infrastructure have been located to avoid wetland areas as far as practicable, and the design has been adjusted to ensure that the hydrological integrity of wetlands are maintained. Where possible areas of dense snow tussock have also been carefully avoided during layout refinement.

As per the existing consent, the layout of MWF Stage 2 has been deliberately confined to flatter areas of the landscape, with turbines, crane pads, and surplus fill disposal ("**SFD**") areas continuing to all be located on gentle terrain so not to cause unacceptable landscape or natural hazard effects.

The reduction in the number of turbines has significantly decreased the footprint of MWF, including the volume of earthworks required compared to the already consented layout. MWF Stage 2 has adopted a design approach that prioritises the retention of the natural landform, seeking to minimise terrain modification wherever practicable. The transmission line, makes use of existing farm tracks as much as possible, minimising the earthworks volumes.

In addition, access tracks and hardstand areas have been designed to incorporate erosion, sedimentation and stormwater management measures. Impervious surfaces have been limited where possible, and drainage systems have been included in the design to appropriately manage runoff and protect downstream receiving environments.

Importantly, the project introduces a new approximately 6ha wetland and aquatic compensation area as part of its compensation and enhancement package. The Lee Stream Tributary Compensation Area is intended to compensate for the small impacts of installing a culvert in the Lee Stream Tributary, the loss of wetlands and providing a suitable location for snow tussock translocation. The Lee Stream Tributary Compensation Area has been designed to also provide ecological support for Eldon's galaxias, a species that is nationally endangered. The riparian and wetland enhancements are expected to result in a net ecological benefit for the site and surrounding environment.

MWF Stage 2 and the new activities including the transmission line have been carefully developed to respond sensitively to landscape and visual effects. Amendments to the consented turbine locations and contingency zones[3] have been informed by specialist landscape input, with a focus on reducing visibility from key viewpoints and minimising effects on natural character and rural amenity. The resulting layout reflects a balanced consideration of technical feasibility, environmental protection, and visual integration, consistent with recognised best practice in wind farm design and environmental management. High value areas such as at the Thomas Block have been excluded.

2.2 Project Rationale

2.2.1 Electricity Supply and Demand

Electricity generation in New Zealand includes a mix of hydro, thermal, geothermal, wind, solar and biogas electricity generation.

The North Island has a diverse range of generation sources, with a cluster of gas generation plants in the Taranaki Region; hydro generation concentrated in the Waikato, Bay of Plenty, Poverty Bay and Taranaki Regions; and geothermal plants within the Taupo Volcanic Zone. In addition, wind generation has been increasingly developed in the Manawatu, Wellington, Waikato and South Taranaki Regions over the past decade.

Most of the generation capacity and output for the Southland and Otago region is provided by a small number of large hydroelectric power schemes – Manapouri, Clyde and Roxburgh. The remaining output is provided by smaller scale hydroelectric power schemes, wind generation and to a lesser extent, solar. Aside from an upgrade to Roxburgh, most of the new generation capacity is from the construction of wind farms.

New Zealand's installed generation capacity in 2024 was 10,771 MW, which generated 43,903 GWh of electricity. Approximately 8.7% of this electricity generation came from wind farms established across New Zealand. MWF Stage 2 would increase New Zealand's installed generation capacity by approximately 1.8% and increase the annual generation output by 1.25%

The MWF Stage 2 will deliver a material contribution (equivalent to about 60 percent of one year of the required 1 TWh per year increase in renewable generation output recommended by the Climate Change Commission). The increase in generation is required to achieve the Government plan for decarbonisation of the economy through electrification of light vehicle transport and industrial process heat.

[3] A radius up to 100m within which limited flexibility to provided in order to microsite the tower.

2.2.2 Future Supply Considerations

The reliance on hydro sources makes New Zealand vulnerable to sharp increases in wholesale prices in dry years when low hydro storage levels in the autumn and winter coincide with peak demand. Dry year events that have affected wholesale prices occurred in 2001, 2003, 2006, 2008 and most recently 2024. As such, providing additional electricity generation capacity from wind technology will improve the diversity of the national electricity generation capacity and strengthen resilience against dry year events.

The direction from the Climate Change Response (Zero Carbon) Amendment Act 2019, and the Climate Change Commission, has sharply increased the need for additional renewable electricity generation in New Zealand. This is reflected in the Government's Emissions Reduction Plan, the first of which was issued in 2022, and sets a path toward meeting the long-term emissions reduction targets - including reaching net-zero emissions by 2050.

In December 2024 the Government released New Zealand's second Emissions Reduction Plan [4] for the period from 2026 to 2030. This identifies a number of key policies that have the greatest potential to lower emissions to meet the 2026 - 2030 targets, including "Electrify NZ" which seeks to double renewable energy generation. To this end, the Government has announced the Electrify NZ Plan, a series of reforms aimed at increasing investment in renewable energy supply, transmission and distribution. This signals a clear national direction toward prioritising and accelerating development of renewable energy generation, as well as ensuring electricity infrastructure can support growth and variability of supply and demand. A draft National Policy Statement for Renewable Energy Generation has been issued for consultation.

Transpower, in its Security of Supply Assessment 2023[5], identifies that New Zealand is tracking towards an 'accelerated electrification' scenario - signifying an increase in national electricity demand of 68% by 2050. This can be directly attributed to:

- Forecasted increases in process heat conversion to electricity; and
- The increase in electricity vehicle usage around the country.

Transpower projects that 28% of the energy generation capacity of New Zealand will be via wind developments by 2050, even when accounting for significant changes in demand.

The Ministry of Business, Innovation and Employment reports that New Zealand imported over 1 million tonnes of coal in 2019, 2020, 2021 and 2024 in order to meet electricity demand.[6] This demand could not be met by existing hydro and gas sources due to dry conditions and inconsistent natural gas supply. This approach of importing coal to meet demand is not aligned with the national direction towards the reduction in emissions noted above and signals the need for significant investment in renewable energy generation that can increase the overall supply of electricity.

The MWF Stage 2 will significantly contribute to the national supply of electricity in a manner that provides a secure alternative to hydro and gas generation, while also reducing the reliance on fossil-fuels in accordance with Government targets for reduced emissions and doubling the amount of renewable energy generation.

2.3 Summary of proposed Stage 2 activities and works

A summary of the activities and works associated with the construction, operation and maintenance of the MWF Stage 2 is as follows:

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[4] New Zealand's Second Emissions Reduction Plan 2026 – 30.

[5] https://static.transpower.co.nz/public/bulk-upload/documents/2023%20SOSA%20-%20Final%20Report%20-%20Final%20Version.pdf?VersionId=3VV75p2zXTR_3kxn3HZPixEiiq9ipiJX

[6] https://www.mbie.govt.nz/building-and-energy/energy-and-natural-resources/energy-statistics-and-modelling/energy-statistics/coal-statistics

2.3.1 Wind Farm Layout

- The installation of up to 44 turbines across 54 potential locations within an amended Windfarm Development Area[7]
- Each turbine will be a maximum height of 165m above ground level (to the blade tip)
- The installation of aviation obstacle lighting on the nacelles of some of the turbines in order to mark the perimeter of the wind farm and highest structure
- Establishment of a 2,200m^2 operations/maintenance facility (including approximately 700m^2 of buildings) within the Windfarm Layout
- An internal access road network of approximately 31km in length
- The taking of surface water from the Waipori or Deep Stream schemes for concrete batching and other construction related activities (e.g. dust suppression)
- The diversion of water for the establishment of culvert structures for site access/internal road network purposes
- The establishment of a temporary 10,600m^2 concrete batching plant and other temporary buildings, structures, signage and construction equipment within the Windfarm Development Area
- An underground 33 kV electrical transmission and fibre network between the turbines and the substation
- A BESS located at the start of the above ground transmission line
- Establishment of an overhead 110kV transmission line and twenty-five, 45m high poles from the electricity substation to the existing 110 kV national grid transmission network operated by Transpower
- A total earthworks area of 55.2ha associated with turbine foundations, hardstand platforms, internal access roads and site compounds
- The disposal of surplus cut material of approximately 365,000m^3 will be disposed of within the Windfarm Development Area[8]
- Two instances of stream bed/wetland disturbance and placement of culvert structures in, or over, streams/wetlands
- Concrete batching and construction related discharges
- The clearance of vegetation

[7] Windfarm Development Area boundary will be subject to 5 minor boundary adjustments.

[8] The approximate total area of Stage 1 was 18,000m^2. Therefore, the estimated Project surplus fill volume (when combined with the Stage 1 surplus) is approximately 384,000m^3, below the land use consent limit of 460,000m^3.

- The use and storage of hazardous substances
- Sediment and stormwater control measures
- Stormwater control and fire suppressant measures (and storage) associated with the BESS
- Site rehabilitation works, including land contouring and seeding of pasture and relocation dense snow tussock subject to disturbance.

2.4 Purpose of the Fast-Track Approvals Act

The purpose of the FTAA is to:

> *"facilitate the delivery of infrastructure and development projects with significant regional or national benefits"*.

MWF Stage 2 demonstrably achieves the purpose of the FTAA by delivering significant benefits to the Clutha District, the Otago Region and New Zealand more broadly. In this regard, MWF Stage 2 will provide significant economic benefits by:

- Injecting over $220 million of expenditure over the construction period into the local economy
- Providing approximately 200 full-time equivalent jobs ("**FTE**") during peak construction
- Contributing to approximately 595 GWh of electricity per annum and providing for improved electricity diversity and security of supply
- Contributing to the decarbonisation of the New Zealand economy by displacing over 550,000 tCO2-e annually[9]
- Aligning with Government policy towards meeting national and international climate change obligations.

The economic benefits of MWF Stage 2 are assessed in detail in the Economic Assessment prepared by the New Zealand Institute of Economic Research ("**NZIER**") (2025), which will be provided as part of our substantive application.

The FTAA is also designed to provide a "one-stop-shop" approvals process for applicants. This is primarily to minimise delays and costs often experienced by large complex projects requiring sequential approvals under different statutes. Approvals are sought for new resource consents; change or cancellation of conditions of consent; Wildlife approvals; and archaeological authority.

The project was identified as a "listed project" within Schedule 2 of the FTAA on 6 October 2024, providing confirmation that the purpose of the FTAA had been met and thereby qualifying the project for consideration by an expert panel.

2.5 Positive Effects

The variation application enhances the wind farm's efficiency and environmental outcomes by proposing fewer, larger turbines that utilise modern technology. This approach maintains and improves previously identified benefits while reducing the overall project footprint.

Key positive effects include:

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[9] Based on an annual generation of 595 GWh if generated from coal.

- **Visual and Landscape Improvements**: Taller turbines and fewer units create a more spacious, less cluttered layout, improving visual outcomes from key viewpoints.
- **Ecological Benefits**: Avoidance of the Thomas Block protects high-quality snow tussock grasslands, indigenous shrublands, and wetlands, reducing landform modification and construction impacts.
- **Aquatic Ecology Gains**: Fewer access roads and culverts reduce disturbance to waterbodies and lower sediment runoff risks.
- **Environmental Compensation**: Provision for an ecological compensation site to address residual aquatic and wetland effects and provide for the translocation of removed snow tussock.
- **Economic and Climate Contributions**: The project supports local, regional, and national economies and aligns with New Zealand's climate goals. It enhances electricity supply security and diversity and contributes to renewable energy growth needed for transport and industrial electrification.
- **Carbon Emission Reductions**: Stage 2 is estimated to displace over 554,000 tonnes of CO_2e annually compared to coal, and nearly 280,000 tonnes compared to gas.
- **Community Support**: A community fund will be established post-commissioning to support local initiatives, enhancing social wellbeing and resilience.

MWF Stage 2 will significantly support New Zealand's climate goals under the Zero Carbon Act and the Paris Agreement, contributing 190 MW of capacity and generating approximately 549 GWh annually. This helps meet the Climate Change Commission's forecasted wind energy needs through 2030.

Overall, the proposed variation to the Mahinerangi Wind Farm will maintain the previously identified positive effects while enhancing landscape, ecological, and construction outcomes, contributing to national climate and energy goals, generating significant economic benefits, and supporting local communities through the establishment of a dedicated community fund.

2.6 Resource Management Act 1991

With respect to the relevant matters in Sections 6 and 7 of the RMA, the following points are pertinent:

- Section 6(e), Section 7(a) and (aa) of the RMA are all relevant to the Mahinerangi Wind Farm, which require the recognition of the relationship Māori have with their ancestral lands, water, sites, wāhi tapu and other taonga, as well as having regard to kaitiakitanga. TWP has and continues to engage with Ōtākou Rūnanga and who are undertaking a Cultural Impact Assessment and who have been provided with environmental effects assessment reports to provide comment
- The MWF Stage 2 is not "inappropriate" in the context of Section 6(a) or (b) of the RMA and the various project elements have been designed to avoid effects on or preserve the natural character of wetlands, rivers/streams and their margins as far as is practicable
- In respect to biodiversity values, the careful management of effects associated with the MWF Stage 2, including avoiding areas of high ecological value through the design process as far as practicable. The careful management of effects associated with the Wind Farm, also include a

suite of management plans, which will ensure that any areas of significant indigenous vegetation and significant habitats of indigenous fauna are protected in accordance with Section 6(c)

- The MWF Stage 2 will not create any additional constraints on public access to any rivers, streams or tributaries or any other surface water body affected or influenced by the project (Section 6(d))
- Section 6 (e), Section 7 (a) and (aa) of the RMA require the recognition of the relationship Māori have with their ancestral lands, water, sites, wahi tapu and other taonga, as well as having regard to kaitiakitanga. Consultation is being undertaken by TWP to understand the impacts of the project on mana whenua relationships and values. The MWF Stage 2 will not adversely affect any scheduled sites of historic heritage, and the archaeological assessment has not identified any archaeological features within the project. It is further noted that an archaeological authority will be sought with application and accidental discovery protocols will remain in conditions of the existing land use consent (section 6 (f))
- Consideration has been given to the management of significant risks from natural hazards and it is considered that there are appropriate factors of safety in the design of the various elements of the project (Section 6(h)
- The MWF Stage 2 enables efficient use and development of natural wind resources which is abundant in the district. The electricity generation from the wind farm is approximately 549 GWh per annum and will contribute to displacing greenhouse emission otherwise caused from generation of non-renewable sources
- The amenity values of the land adjacent to the Wind Farm will be maintained by the imposition of appropriate conditions to limit noise, vibration, lighting and dust during construction (Section 7(c));
- Sections 7(d), (f) and (g) of the RMA relate to the intrinsic values of ecosystems, the quality of the environment, and the finite characteristics of natural and physical resources. All of these matters have been given consideration in the technical assessments commissioned and a comprehensive range of conditions and monitoring is proposed to ensure that potential effects on the wider environment are appropriately avoided, remedied or mitigated
- Potential effects on ecosystems, including freshwater and terrestrial ecology, are described in the technical assessment. An aquatic fauna salvage and relocation plan will be provided (Section 7(h))
- The effects of climate change will be addressed (Section 7(i))

Overall, and based on the technical assessments that have been commissioned by TWP, it is considered that the MWF Stage 2 will promote the sustainable management of natural and physical resources in accordance with Sections 5, 6 and 7 of the RMA.

2.7 National Environmental Standards for Freshwater ("NES-F")

The NES-F came into effect in September 2020 and was most recently amended in January 2023. The NES-F sets requirements for carrying out certain activities within or adjacent to wetlands.

Resource consent will be required for activities associated with the wind farm construction, including earthworks, within, or within 100 m of natural inland wetlands and the establishment of culverts.

2.7.1 Earthworks in proximity to Natural Inland Wetlands – Regulation 45

Of relevance to this proposal is Regulation 45 which applies to the construction of specified infrastructure in proximity to natural inland wetlands. The proposed infrastructure is consistent with the NES-F's definition of "specified infrastructure".

2.7.2 Construction of Specified Infrastructure - Regulation 45

Regulation 45 provides for the construction and use of specified infrastructure within proximity to natural inland wetlands as a Discretionary Activity.

Natural wetland assessments were undertaken following the methods outlined in the Wetland delineation protocols (Ministry for the Environment (MfE) 2022). Natural wetlands are present in gully floors, on gully walls, and in flatter areas where drainage is poor.

There are four instances where the roading or associated earthworks will be located within 10 m of wetland extent. Management of these wetlands (and other wetlands within 100 m of works) will be addressed by the Wetland Monitoring and Management Plan.

There are two instances where access tracks will result in physical disturbance of the natural wetlands which cannot be practicably avoided. In these cases, the existing farm track and culverts will be replaced with a new track and culvert that is capable of accommodating construction vehicles. Approximately 476 m^2 (0.05 ha) of parts of these natural wetlands will be cleared. This loss will be compensated for by rehabilitating nearby wetlands guided by the Wetland and Aquatic Compensation Plan.

No natural inland wetlands are present at transmission line pole sites or within 10m of pole sites.

2.7.3 Passage of Fish Affected by Culverts – Regulation 70 and 71

With regards to fish passage, the NES-FW regulates structures in a river or connected area that may impact fish passage, such as a culvert, weir, flap gate, dam or ford. The project does require culvert structures. These structures have the potential to impede fish passage. Accordingly, the NES-FW regulations in Subpart 3 (Passage of fish affected by structures) are relevant in this instance.

Regulation 70 provides for the construction of culverts as a permitted activity subject to the conditions set out in 70(2). The culvert proposed within Lee Stream Tributary is a Discretionary Activity under regulation 71.

Potential sediment runoff associated with the proposed construction works will be appropriately managed by way of an Earthworks Management Plan which will include measures such as minimising soil disturbance and diverting clean water.

Fish passage best principles have been adopted from NIWA's New Zealand Fish Passage Guidelines Version 2.0 (Fish Passage Guidelines) and integrated into the Lee Stream Tributary crossing design to ensure fish passage for juvenile native fish is provided for. To achieve this, the design is to preserve the current grade of the stream and embed the culvert in the streambed material. Over time as the culvert fills with the streambed material to the stream bed, the existing stream will in effect be simulated within the culvert.

The project ecologists have noted that the stream habitat for fish upstream of the existing culvert is degraded due to the fish passage and flow restrictions imposed by both the existing culvert and farm access track. Therefore, a solution that improves the connectivity of the upstream and downstream wetlands, in comparison to the existing barriers would be favourable. In the long term, removing overland flow barriers and restoring fish passage will likely improve the upstream environments.

A monitoring and maintenance plan would need to be developed to ensure the structure meets the fish passage objectives Regulation 69 of the NES-FW.

It is accepted that any consent granted will include the conditions set out in regulations 62 and 63, as relevant.

2.8 National Environmental Standard for Assessing and Managing Contaminants in Soil (NES-CS)

The NES-CS came into effect in January 2012. The NES-CS seeks to ensure that land affected by contaminants in soil is appropriately identified and assessed before it is developed. If necessary, affected land will need to be remediated or the contaminants contained to make it safe for human use.

The Wind Farm is not known to have any HAIL activities on it. A review of the historic aerial photos of the site does not identify any activities that are 'more likely than not' to have been a HAIL operating on the site. As such, the site is not considered a 'piece of land' and is not subject to the requirements of the NES-CS.

2.9 National Environmental Standard for Electricity Transmission Activities (NESETA)

The NESETA regulations came into force on 14 January 2010 and apply to activities that relate to the operation, maintenance, upgrading, relocation, or removal of an existing transmission line, including construction activities. The NESETA only applies to existing high voltage electricity transmission lines and does not apply to the construction of new transmission lines or to substations. As this project proposes a new transmission line and substation, the NESETA does not apply to the proposal.

2.10 National Policy Statement for Renewable Electricity Generation 2011

The NPS-REG came into effect on 13 May 2011. It seeks to enable the sustainable management of renewable electricity generation under the RMA.

The sole objective of the NPS-REG seeks to provide for the development and operation of new and existing renewable electricity generation activities, such that the proportion of New Zealand's electricity generated from renewable energy sources increases to levels that meet or exceed the Government's national target for renewable electricity generation.

The policies A, B and C1 of the NPS-REG are considered most relevant to the Wind Farm as they seek to ensure decision makers:

Recognises the benefits of renewable electricity generation activities.

- Acknowledges the practical implications of achieving an increase in proportion of electricity generated from renewable sources; and
- Acknowledges the practical constraints associated with the development, operation, maintenance and upgrading of new and existing renewable electricity generation activities.

The development of MWF Stage 2 of the consented wind farm will mean additional renewable electricity generation capacity – noting the Government is committed to achieving Net Zero by 2050, including by doubling New Zealand's renewable electricity generation.

The development of the MWF Stage 2 is also considered to be consistent with Policy B, clause (c), which notes that achievement of Government's strategic target for generation of electricity will require significant developments of renewable electricity generation activities.

Policy C1 of the NPS-REG recognises the practical implications and locational constraints associated with the development of renewable electricity generation activities. There are a number of factors that influence the continued development of the wind farm – not least being the quality / consistency of the wind resource and proximity to transmission infrastructure. As such, it needs to be recognised that potentially suitable sites for wind farms are reasonably limited and that infrastructure required to harness the wind resource will have some potential adverse effects that cannot be avoided or mitigated by altering their location. That is, the turbines need to be located where the wind resource exists and cannot simply be placed in a location where they are not visible from any dwellings.

With respect to Policy C2, it seeks that decision-makers have regard to offsetting measures or environmental compensation when considering the residual environmental effects associated with renewable electricity generation activities that cannot be avoided, remedied or mitigated. That said, the "National Policy Statement for Renewable Electricity Generation – Implementation Guidance" by the Ministry of Environment notes that it is up to the resource consent applicant to volunteer any offsetting of compensatory measures. It is concluded that the construction and operation of Stage 2 will be consistent with the stated objectives and policy directives of the NPS-REG.

2.11 National Policy Statement for Highly Productive Land 2022

The NPS-HPL came into effect on 17 October 2022, with the overall purpose being to improve the way highly productive land is managed to ensure it is recognised and protected from inappropriate use and development, so that it can be utilised for land-based primary production purposes.

While the site is within a rural zone, it is not classified within LUC 1, 2 or 3 categories. Rather it is predominately classified as LUC 6 (Non-Arable: productive hill country) with small areas of LUC 4 (Severe Limitations for Arable or Cultivation). As such, the Project is not within an area of highly productive land. Current farming practices will continue once the MWF is operational.

2.12 National Policy Statement for Freshwater Management

The NPS-FM came into force on 3 September 2020 and provides direction on how freshwater (including groundwater) should be managed under the RMA.

The design process has sought to avoid environmental effects on freshwater as far as practicable.

It is recognised that the technical design of Stage 2 (functional need) means that it is not practicable to avoid all wetlands during construction works. Wetland effects will however be minimised and mitigated through the following key measures:

- the implementation of stormwater, erosion and sediment control measures which will include measures such as minimising soil disturbance and diverting clean water.
- regressing exposed areas as soon as possible following construction work.
- appropriate construction methodologies will be employed around waterbodies.
- Implementation of Water Quality and Wetland Monitoring and Management Plans.

The findings of technical assessments undertaken in relation to freshwater demonstrate that the Project is consistent with these relevant objectives and policies of the NPS-FM.

2.13 National Policy Statement for Indigenous Biodiversity

Clause 1.3(3) of the NPS-IB states that nothing in the National Policy Statement applies to the development, operation, maintenance or upgrade of renewable electricity generation assets and activities and electricity transmission network assets and activities. Therefore, the provisions of the NPS-IB are not relevant to the development of Stage 2 of the Mahinerangi Wind Farm.

3 Overview of Technical Assessment Findings

3.1 Economic Effects

The provision of additional generation capacity provides system-wide benefits in assisting conservation of hydro storage and adding diversity and resilience to national generation capacity.

While the Southland Otago region is currently a net exporter of electricity, it is anticipated that this will change in time with the proposed construction of a data centre and electrification of industrial process heat will reduce the electricity available for export to the rest of the country.

The impact of Stage 2 on the local or regional economy is most pronounced in the building and construction stage. Over its operating life, labour time on operations and maintenance may accumulate to approach the construction stage labour, but that is spread out over a long period so the expected impact on labour and incomes per year is small.

It is estimated that the main significant regional and national benefits of the Mahinerangi Wind Farm Stage 2 will be:

- A large increase in wind generated electricity equivalent to almost one year of additional capacity requirements estimated by the Climate Change Commission.
- Contribution to the increase in renewable energy generation and overall electricity supply to meet expected growth in demand.
- Injection of around $220 million expenditure during wind farm construction (in total over three years), of which about $73 million would be economic value added for the region
- Up to an additional 200 full time equivalent (FTE) during peak construction and on average 75 FTE per year for two years during construction and 8 to 10 FTE per year for operation of the completed wind farm.
- The BESS will allow controlled supply of electricity during peak periods - up to 60 MWh for two hours at a time. The construction activity for the BESS adds a further 10 percent to the expenditure and employment.
- Reduction in greenhouse gas (GHG) emissions of 303,171 tCO2-e if displacing gas-fired generation, or 600,161 tCO2-e if displacing coal fired generation. The value of these emission reductions at $59.82 per tCO2-e would be $18.1 million or $35.9 million respectively.
- Supporting electrification of the economy which is a key element of the Climate Change Commission advice on reducing greenhouse gas emissions.

Construction and operation of wind farms requires specialised skilled labour, many of which will be found already within the Otago and Southland regions engaged in servicing wind farms. It is expected that most of the direct expenditure associated with construction and operation of Stage 2 of the Mahinerangi Wind Farm will impact the Otago and Southland region.

The Mahinerangi Wind Farm Stage 2 provides significant national benefits through its substantial contribution to increasing renewable the generation of electricity from renewable resources that is necessary to meet expected increase in electricity demand from the electrification of the economy including light vehicle transport and industrial process heat.

3.2 Noise Effects

Overall, the conditions, with minor amendments, remain relevant and appropriate to manage construction and decommissioning works, and concrete batching associated with Stage 2 of Mahinerangi Wind Farm.

The proposed changes to the Stage 2 turbines are considered reasonable, as the noise impact remains unchanged for the surrounding community compared to the existing consent.

3.2.1 Construction Noise

Conditions 31–33 of the project require compliance with New Zealand noise standards during construction and decommissioning of Stage 2 of the wind farm. A Construction Noise Management Plan will be prepared and included in the Construction Management Plan. Noise from construction (excluding concrete manufacture) must meet the limits set in NZS 6803:1999 and Condition 32.

The loudest construction activity (concrete cutting) is predicted to generate 43 dBA at the nearest dwelling, which is well within both daytime and night-time limits. All construction activities are at least 900 m from the closest non-participating residence.

Condition 33 manages the concrete manufacturing, requiring noise assessment under NZS 6801:1991, which will be updated to NZS 6801:2008 (with no material change in outcome). Although concrete manufacturing is currently limited to daytime hours, 24/7 manufacturing is proposed to allow for continuous concrete pours as permitted under Condition 32. This requires a condition amendment.

The concrete batching plant will be located over 2000 m from the nearest dwelling, with noise levels predicted at 27 dB LAeq, which is compliant and not expected to cause any adverse acoustic effects. This noise level is broad band and lacks tones that might cause annoyance. Internally, it would result in under 15 dBA, well below World Health Organisation thresholds.

All activities, including extended concrete manufacturing hours, will comply with noise limits and are not expected to create adverse effects.

1.1.1 Operational noise

All operational noise will remain compliant with the relevant noise limits set by the existing consent conditions. Predicted noise levels for the combined Stage 1 and amended Stage 2 have either negligible or beneficial effects at all receivers. Five receivers are predicted to experience lower noise levels, while the remaining receivers show a difference of less than 0.1 dB. Noise levels at all nearby receivers are within the lower design limits (35 or 40 dB LA95), with most sites experiencing turbine noise levels more than 10 dB below ambient noise levels.

The noise impacts as a result of proposed changes to the Stage 2 turbines remains unchanged for the surrounding community compared to the existing consent.

The BESS associated with the transmission line will operate in accordance Condition 34. This condition remains relevant and appropriate to manage operational noise from non-turbine activities associated with Stage 2 of Mahinerangi Wind Farm.

3.3 Landscape and Visual Effects

The proposed changes to the existing consent conditions will:

- Maintain natural landscape values. The layout has been designed to fit the natural landscape, retaining the same pattern as the consented wind farm. Any adverse effects of the proposed changes on the natural landscape will be 'low'. The changes will also lead to positive effects. In particular:
    - Shifts to the centres of the Contingency Zones (nominal turbine locations) are localised in each case. They vary between 10m and 160m and have been made to match the civil works with site conditions and ecological values. The layout retains the same overall pattern as the existing consent.
    - The Contingency Zones will retain the same 100m radius. The proposed revisions to the Contingency Zone exclusions will ensure that works (as under the existing consent) will be located on the peneplain surface in areas of pasture and will avoid gullies. They also retain a 10m minimum buffer from wetlands is consistent with the NES-FW.
    - The removal of four wind turbine locations on the south-western spur (Area T) and one in the QEII covenant area (Area C) will have positive effects by avoiding the main area of high-quality snow tussock.

- The larger area of each hardstand (1855m2 vs 1400m2) will be offset by fewer wind turbine numbers.
- Earthworks will also be reduced by the proposed change to a 5.5m road width (with localised only widening to 9.5m) for both construction and operations, compared with a 12m construction road width under the existing consent. The reduction in wind turbine numbers will also reduce the length of access road required.

> Maintain amenity values and continue to be appropriate with respect to landscape character. The layout retains the same pattern as the consented wind farm, which in turn was designed to fit the natural landscape. The wind farm will continue to be appropriate in the landscape setting. It will continue to have acceptable effects. Any adverse effects will be low and there will be various positive effects compared to the existing consent.

> Protect the ONL values of the Lammermoor Range. The proposed changes will have positive effects and no adverse effects with respect to the ONL.

The civil engineering required to construct Stage 2 will largely avoid adverse effects on the natural character of wetlands and streams because the layout follows the crests of the peneplain and its spurs in an inverse pattern to hydrology. It follows a pattern very similar to the existing consent. The works will remain appropriate in what is a modified farmland and energy landscape. In those instances where one stream and perched wetland at a saddle on the peneplain cannot be avoided, natural character will be preserved through the design of the works and proposed restoration and offset mitigation measures.

The proposed transmission infrastructure (substation, BESS, 110kV transmission line) will be appropriate in the existing landscape given the existing energy generation and transmission. The design and location of the infrastructure, and the alignment of the line, minimises potential adverse effects. Any remaining adverse effects will be acceptable and of a 'low' degree. Likewise, the proposed Operations and Maintenance facility will be in an appropriate location and unremarkable within the wind farm. Any adverse effects will be 'very low' in degree. Landscape amenity values and natural landscape values will be maintained.

3.4 Transport Effects

The construction of Stage 2 will require transport of the different components, materials, and workers to the site.

Five main routes will be used to deliver the different components, materials, and workers to the site for construction. Two of the assessed routes from South Port in Bluff can cater for the different requirements of over-weight and over dimension vehicles. The other three routes are from Dunedin/Port Chalmers, Lyttelton Port in Christchurch, and South Port in Bluff, and generally follow state highways. These routes will generally be used to transport smaller components, materials, and workers to the wind farm using standard heavy vehicles and high productive motor vehicles (HPMVs).

Construction vehicle routes will be determined by contractors and suppliers, but it is anticipated that the key route taken would be SH1, SH87, Mahinerangi Road and Eldorado Track to the site. This route was assessed under the existing land use resource consent and was used for the construction of Mahinerangi Wind Farm Stage 1.

In terms of trips associated with transmission line towers and components, and BESS modular units, it is possible that these components could be transported from any of the other ports.

The transformer and the turbine components including the tower, nacelle, and blades are oversize and over-weight, and require specialist vehicles and appropriate routes to transport to the site. The over-weight components require routes that comply with permits for over-weight vehicles on structures. The blades require a relatively straight route with clearance on both sides to allow tracking and overhang of the blades.

The proposed routes to site may require slight modifications to the road network such as pavement widening, relocation of signs or poles, and construction of pull over bays to allow the movement of the large vehicles. The modifications are expected to be feasible and will be discussed with the road controlling authorities at the time of permitting.

The reduction in the total number of consented turbines results in 1,033 fewer return trips required by heavy vehicles compared to the additional turbines, and therefore less transport effects in comparison to the existing resource consent.

For the new resource consents for the transmission line, BESS, and substation, there are expected to be 878 heavy vehicle return trips, with the number of daily trips being fewer than 10, The transmission line and BESS construction traffic will have minor effects as these involve standard heavy vehicles and HPMVs following the existing HPMV network. The substation requires a transformer to be transported via the over-weight route. This will have temporary and short duration minor effects due to the low number of vehicle movements on the network (one return trip for over-weight over-dimension and three return trips for pilot vehicles).

These minor transport effects will be effectively mitigated through the Construction Traffic Management Plan and appropriate permits.

3.5 Shadow Flicker and Blade Glint Effects

A Shadow Flicker Assessment has considered a layout consisting of up to 54 potential turbine locations with a turbine rotor diameter of 136 m and a hub height of 97 m.

The assessment also considered the combined impacts of the varied Stage 2 turbine locations, and the existing Stage 1 turbines located in the south of the wind farm. When considering shadow flicker above a moderate level of intensity, it was found that no dwellings were impacted from both the existing Stage 1 turbines and the varied Stage 2 turbines.

When comparing the expected shadow flicker extents for the consented configuration to the proposed configuration for Stage 2 of the wind farm, the proposed configuration results in one fewer dwelling that is expected to experience shadow flicker. The shadow flicker conclusions for all other dwellings remain unchanged. Overall, the proposed configuration leads to a reduction in shadow flicker impacts compared to the consented configuration.

Blade glint is not expected to be an issue for the project provided a non-reflective finish is applied to the wind turbine blades.

3.6 Bat survey

Acoustic monitoring surveys were undertaken during valid periods of likely high bat activity and in locations that included major habitat features expected to be used by bats if they were present in the Mahinerangi Wind Farm Site.

Monitoring yielded zero bat passes, the site represents low quality bat habitat, and there are no recorded bat observations within a 50km radius of the site. These findings, provide overwhelming evidence that the Mahinerangi Wind Farm project area is not utilised by long-tailed bats or lesser short-tailed bats for roosting, foraging, or commuting purposes. The complete absence of any bat-related indicators strongly supports this assessment. Therefore, further consideration of potential effects on bat populations is not warranted in subsequent stages of the consent process for the Mahinerangi Wind Farm.

3.7 Aquatic Ecology

3.7.1 Aquatic Habitat and Fauna

The aquatic habitat within the Mahinerangi Wind Farm area is primarily composed of small first- and second-order headwater streams. These streams exhibit limited habitat quality, largely due to the impacts of surrounding land use. Key factors reducing ecological value include diminished riparian vegetation and the effects of livestock access, both of which contribute to habitat degradation and stream sedimentation. Although these headwater streams are small and narrow, habitat quality and diversity, particularly in terms of fish cover and riparian vegetation, tend to improve as the streams flow downstream and increase in size.

Water quality across the site is generally high. The streams contain healthy concentrations of dissolved oxygen, which supports a diverse array of aquatic organisms, especially fish. Suspended solid concentrations are low, indicating minimal turbidity and sediment load in most areas, further reinforcing the suitability of the streams for sustaining aquatic life.

The benthic macroinvertebrate communities found within streams draining the wind farm area are diverse. Health assessments of these communities, using established ecological indices, reveal a range from 'Poor' to 'Excellent' conditions. This variation in community health is closely linked to land use within the catchments, particularly the influence of grazing and pasture practices. Sedimentation and physical disturbances from stock access are key drivers of these differences in ecological quality between streams.

Freshwater crayfish/kōura and classified as 'At Risk – Declining' under national conservation criteria, were recorded in the Black Rock Stream and Broad Stream catchments. Given the presence of suitable habitat conditions, it is considered likely that kōura are distributed throughout all five major catchments that drain to the east and south of Stage 2.

The fish community within these streams is dominated by Eldon's galaxias, a non-migratory species that is classified as 'Threatened – Nationally Endangered'. The distribution of this species is constrained in the upper headwaters due to limited surface water and the very small size of the streams, which in many areas offer little more than vegetated trickles of water. In such environments, it is unlikely that sustainable fish populations can be supported. Instead, Eldon's galaxias is expected to be confined to more stable and better-connected downstream habitats where flow and cover are adequate.

3.7.2 Construction Activities: Erosion and Sediment Control

To address potential ecological effects from construction and earthworks, all activities will be carried out under an Environmental Construction Management Plan (ECMP) and Earthworks Management Plan, which is based on the Auckland Council's GD05 guideline—also adopted by the Otago Regional Council. The Earthworks Management Plan specifies sediment and erosion control methods designed to protect aquatic ecosystems. Importantly, the design of the Stage 2 infrastructure avoids direct interaction with watercourses in almost all cases. The only exception is a single site in a tributary of the Lee Stream where avoiding a watercourse is not practical. In all other cases, construction will occur away from streams, significantly reducing the risk of sedimentation, contamination, or physical habitat disruption.

Construction of internal access roads and tracks has been designed to avoid ecological impacts and will be managed through the Management Plans. Roads are aligned along ridgelines to avoid gullies and steep areas, keeping them away from watercourses except for one necessary crossing at a Lee Stream tributary. Stormwater will be managed using graded surfaces, swales, culverts, and erosion controls to maintain existing flow paths and protect downstream wetlands and streams.

Turbine hardstand areas, each approximately 1,855 m², are similarly sited on ridgelines, well separated from sensitive areas. Their construction and stormwater management will follow ECMP guidelines to minimise any ecological effects.

Additional infrastructure—including the substation, BESS, operations and maintenance facility, and concrete batching plant—will also be located on ridgelines, away from watercourses. Each facility includes stormwater and runoff management tailored to its function. For example, the operations facility will treat wastewater and collect roof runoff on-site; the concrete batching plant will use bunds and sumps to manage runoff, with chemical treatment as needed; and the BESS will have a dedicated stormwater and firewater containment system, including a detention basin and storage for potentially contaminated water. These measures are intended to prevent runoff from entering waterways and to minimise impacts on ecological values throughout both construction and operation

The 6 km access road for the Transmission Line Corridor will primarily use existing farm tracks and culverts, following fence lines and avoiding wetlands, with a 10-metre setback where practicable. Since no new construction is planned within or near watercourses, and works will follow the ECMP, no adverse effects on aquatic ecological values are expected from access road use or structure installation.

SFD from construction will be placed in designated sites located on broad ridgelines with gentle slopes, away from gullies and watercourses. These areas will be managed in line with the Management Plans, ensuring

surface water is not impounded or diverted. As a result, the fill disposal is also expected to avoid or minimise ecological impacts on nearby waterways.

3.7.3 Culverts

Culverts will be installed along access roads and tracks to manage stormwater and surface water from overland flow paths. These culverts, along with associated headwalls and backfilling, will be constructed in accordance with the Management Plans. The road network is positioned along ridgelines to avoid gullies and watercourses, maintaining a 10-metre buffer from wetlands where practicable. Culvert outlets will include energy dissipation features to reduce erosion, and the overall design will preserve existing flow paths to avoid or minimise ecological impacts.

One new culvert will be installed across a headwater tributary of Lee Stream—the only part of the project where a watercourse crossing is unavoidable. This culvert will replace an old farm track culvert and will be designed to maintain fish passage for the threatened Eldon's galaxias. The culvert will preserve stream gradient and include embedded natural substrate to allow for a low-flow channel and avoid flow barriers. Construction will occur during low-flow months (January to March), outside the galaxias' spawning and hatching periods. A Fish Recovery Plan recommends relocating galaxias before works begin to protect the population.

3.7.4 Positive Effects

The removal of development within Area T (Thomas Block) from the wind farm will have positive benefits for aquatic ecology. Positive benefits are due to the reduction in the number of new tracks and culverts that need to be installed in watercourses and due to the removal of four turbines. Avoidance of Area T will reduce the land area required for excavation and construction activities, will reduce risks of sediment runoff to watercourses, and reduce areas where

3.8 Terrestrial Ecology Effects

Following compensation for directly affected wetlands, and implementation of a range of ecological monitoring and management plans, the actual and potential adverse effects of Stage 2 of the Mahinerangi Wind Farm (including the transmission line and BESS) on vegetation, wetlands, and terrestrial invertebrates will be minimal.

3.8.1 Terrestrial Vegetation

The wind farm site consists mainly of grazed exotic grassland and crops on ridgetops, with remnants of snow tussock grassland and some indigenous shrublands in gullies. There is also a small, replanted forest area, while rock outcrops are rare.

Under Clutha District Council consent RM1409 (condition 25D), an Ecological Monitoring and Management Plan is in place to manage weed risks.

A comparison between the consented layout and the proposed Stage 2 layout shows that Stage 2 will result in less clearance of indigenous vegetation—including snow tussock, shrublands, and wetlands. This is due to layout changes, fewer turbines and roads, and the avoidance of sensitive areas like Area T, which has high-value snow tussock.

Vegetation clearance is already authorised by RM1409, with 59.2 ha QEII covenant area offered as compensation. Overall, Stage 2 will have lower ecological impact than the consented design.

3.8.2 Natural Inland Wetlands

Natural wetlands have been identified using the Ministry for the Environment's 2022 protocols. They occur mainly in gullies and poorly drained flat areas. Stage 2 has been carefully designed to avoid wetlands wherever practicable, but:

- 2 instances involve direct works within wetlands (totalling 476 m^2 of wetland loss).
- 4 instances involve works within 10 m of wetlands (mostly for road access).

- 3 additional instances occur within 10 m of wetlands in the transmission line corridor.

Direct wetland loss will be compensated through wetland rehabilitation, guided by a Wetland Compensation Plan. All wetlands within 100 m of construction areas will be managed under a Wetland Monitoring and Management Plan.

No direct impacts to wetlands will occur in the Transmission Line Corridor, but two access tracks will be placed within 10 m of five wetlands, triggering the same monitoring and management requirements Stage 2.

Sediment and pollution risks will be managed under the ECMP and Earthworks Management Plan which follow best-practice protocols.

3.8.3 Flora Protection:

A *Carex tenuiculmis* and *Epilobium chionanthum* Management Plan will manage potential effects on *Carex tenuiculmis* and *Epilobium chionanthum*. These species were recorded in some wetlands which will be avoided.

3.9 Avifauna Effects

The 2025 Avifauna Assessment has reviewed of all historical investigations at site that led to consenting of Mahinerangi Wind Farm.

The original ecological assessments identified one species, the falcon, as being of concern. That assessment concluded that the risk to this species was low, but any small effects could be offset by appropriate predator control. Predator control was included in conditions of consent and is being carried out.

Conditions of consent also required pre and post construction monitoring. The pre and post construction monitoring was carried out over five years which included 2 years of bird strike. It concluded that falcon were not displaced by the wind farm, that they continued to hunt around and within the Stage 1 wind farm site, and they continued to breed and fledge chicks in the surrounding territories.

Bird strike monitoring was also carried out as part of the post-construction monitoring. Collisions did occur but all were of common and widespread species found within pastoral landscapes. Specifically, there were no collisions of falcon or pied oystercatcher, both of which are judged to have high avoidance of turbines and a low risk of collision.

The 2025 Avifauna Assessment has looked at whether there have been any changes at the site or to the local avifauna since consent was granted that may change the results of the earlier assessment. It has concluded that there have been no changes of note to the farming operation or the presence and distribution of vegetation and habitats within and around the site. There have also been no obvious changes to the species occupying the site or the nearby lakes and wetlands. The conservation status of several species had changed since consent was granted, and this has been taken into account.

The assessment did identify the presence of breeding pied oystercatcher, a species which has a conservation status of At Risk, Declining. Breeding of this species was not observed during the earlier ecological assessment. The protection of nests, chicks and adults within the Windfarm Development Area has been considered and included in the assessment.

The development of Stage 2 has been considered in light of proposed consent variations to change the size and design of turbines. These changes were found to be positive for falcon and will further reduce risk to this species. This change is also likely to provide the similar benefits for pied oystercatcher while breeding on the site.

The ongoing protection of falcon was considered against the current conditions and the scope of the certified Avifauna Management Plan (**AMP**):

- Protection of nests during breeding is not detailed in the current AMP. A new section has been added.

- It was considered that the post construction falcon monitoring detailed in Condition 27 is still of value and this monitoring will be repeated for Stage 2, as already detailed in the AMP
- There may still be some residual risk to falcon and the current pest control will continue to be carried out as required by conditions of consent, to provide a sufficient compensation.
- It is considered the risk to falcon of electrocution with the proposed transmission line will be avoided.

The ongoing protection of pied oystercatcher has also been assessed. None of the current conditions or the AMP address monitoring of this species. In response:

- Methods for the protection of pied oyster catcher during construction will be added to the AMP.
- The ongoing use of the Stage 1 wind farm site by this species speaks to the very low risk of collision with turbines or displacement. No additional post construction monitoring is proposed.
- Similarly, it is concluded that this species is not at risk of electrocution or collision with the new transmission line, as it has been seen in close proximity to the Stage 1 transmission lines.
- The ongoing pest control will be providing some benefit to nesting pied oystercatcher.

Overall, with suitable protection of nesting falcon, and ongoing pest control to account for any residual effects, it is concluded that the development of Stage 2 will have a lesser effect on these species than the consented layout.

3.10 Heritage Effects

As part of the 2006-2008 resource consent process, an archaeological assessment of the entire Mahinerangi Wind Farm project area was undertaken, which identified 26 sites of archaeological value within the wider wind farm site (Watson Oct 2006). The sites were water races, a hut, mine tailings, a dam, other mine workings, a fence line, a pole track, sluiced areas and a house. All of these sites were associated with gold mining activities in the area.

The 2006 assessment concluded that the only archaeological site that would be affected by the construction of the windfarm was part of the Pole Track (Site 91) that ran from Waipori to Deep Stream during the 19th century, is still used as a farm track, and exists as a paper road north of Eldorado Track.

None of the other identified archaeological sites would be directly affected. As such, the wind farm was assessed as having a very limited impact on the identified archaeological sites. However, it was concluded that it is possible that sites that were not located during the survey may be encountered during earth works associated with the project. It was considered possible that Māori archaeological sites may be encountered, and if so these are most likely to be findspots or the remains of small camp sites. In this regard, conditions regarding accidental discovery protocols and personnel training were included in the resource consent.

The 2025 Archaeological Assessment has involved a review of the 2006 Archaeological Assessment and the consented layout plan of Stage 2 and the transmission line corridor, with some additional field survey undertaken.

It can be confirmed that the effects of Stage 2 of the Mahinerangi Wind Farm on archaeological values have not changed from the 2006 assessment. The conclusions of the 2006 assessment remain valid if any of the 54 consented turbine locations and contingency zones are utilised, amended or repositioned (including hardstand and laydown areas) and with respect to the proposed changes to the spoil locations, roading layout (including track widths and cut and fill batters).

In addition, the existing conditions 69-71 relating to accidental discovery protocols remain valid and appropriate in managing the discovery of unknown archaeological sites and/or artefacts.

3.11 Stormwater, Erosion and Sediment Effects

The construction of the Mahinerangi Wind Farm Stage 2 will result in material being excavated and material being stockpiled in identified locations.

The existing land use consent provided earthwork limits and required stormwater management and erosion sediment controls in Condition 25. This condition will be varied to account for the changes related to hard stand areas, access tracks and works in or near waterbodies, without removing the requirement to address these matters.

The new suite of regional consents and consents under the NES-F require a review of stormwater and erosion and sediment controls, particularly in light of updated guidelines and works in proximity to natural inland wetlands.

3.11.1 Erosion and Sediment Control

The management and design of the sediment, erosion, and dust control measures at the site will be based on the area of the earthworks associated with the civil works for various phases of construction. The following techniques shall be used by the contractor to control sediment laden runoff and to prevent erosion of exposed ground:

- Cut and cover - As the track is formed, the excavated material will be loaded directly onto a dumper and transported to the nearest SFD. The trackside v-drains and cut batter will be rapidly stabilised with seeding or rock lined. The v-drain will then convey clean water runoff to culverts or discharge points.
- Stabilised Construction Entrance - A stabilised pad of aggregate on a filter cloth base will be located at the site entrance/s (and entrances to the SFD's - dependent on construction staging) where construction traffic will be entering and leaving.
- Wheel wash
- Runoff diversion channels or bunds will be used to intercept and detain silt laden runoff and divert into drop-out pits, earth decant structures, or sediment ponds
- Drop Out Pits and Sumps - Drop out pits may be used on steep sections of access tracks to ensure sediment laden water is slowed down and silt is deposited out at regular intervals. Drop out pits may also be installed within dirty water diversion channels to allow heavier sediment particles to drop out before they enter the sediment retention device, reducing the load on the device; or at termination points of roadside open drains - prior to discharge across grass fields
- Stormwater Inlet Protection, silt fences and sediment retention ponds
- Decanting Earth Bunds will be used to intercept sediment laden runoff and minimise the amount of sediment leaving the site through settlement
- Water treatment chemicals (such as flocculants) can be applied to increase the rate of sediment settling out of the water column and is commonly used in conjunction with sediment retention devices

The ECMP, Earthworks Management Plan and Chemical Treatment Management Plan have been prepared. The Plans generally follow the principles of Auckland Council's GD05 Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region (2016) which Otago Regional Council has adopted.

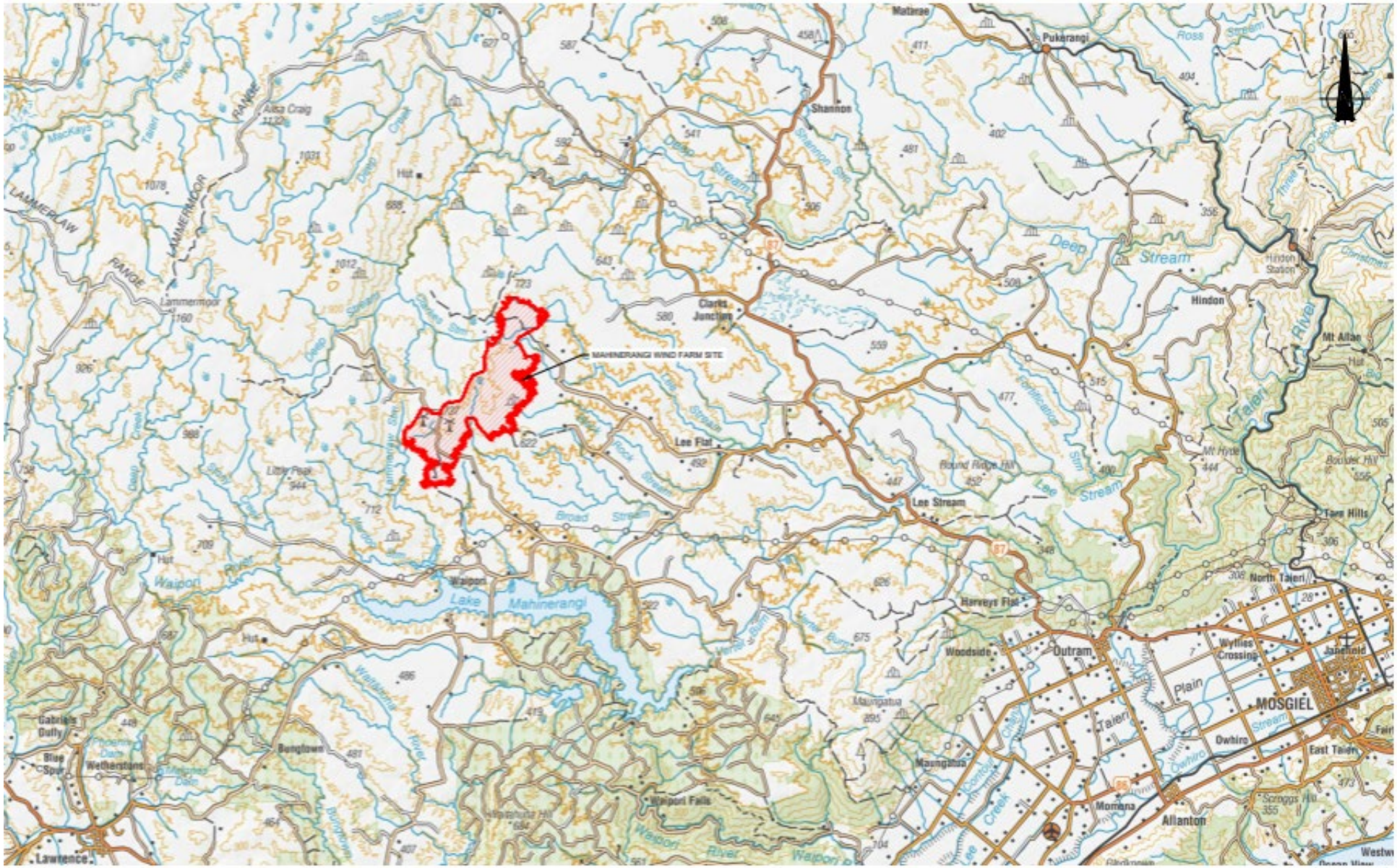
3.12 Conclusion

Overall, it is considered that the proposal to vary land use consents and seek new consents where required for the Mahinerangi Wind Farm Stage 2 will generate positive social and economic benefits for the broader community and can be constructed and operated in a manner that will, as far as practicable, avoid, remedy or mitigate potential adverse effects on the environment.

Importantly, the project site is already consented as an appropriate location for a wind farm due to the suitability of the wind resource, surrounding productive farmland and the low density of dwellings in the area and around the Wind Farm Site.

Particular consideration has been given to avoiding potential adverse effects through the design and construction methodology development process, which has resulted in the avoiding adverse effects as far as practicable (i.e. reducing impacts on areas of potential ecological significance).

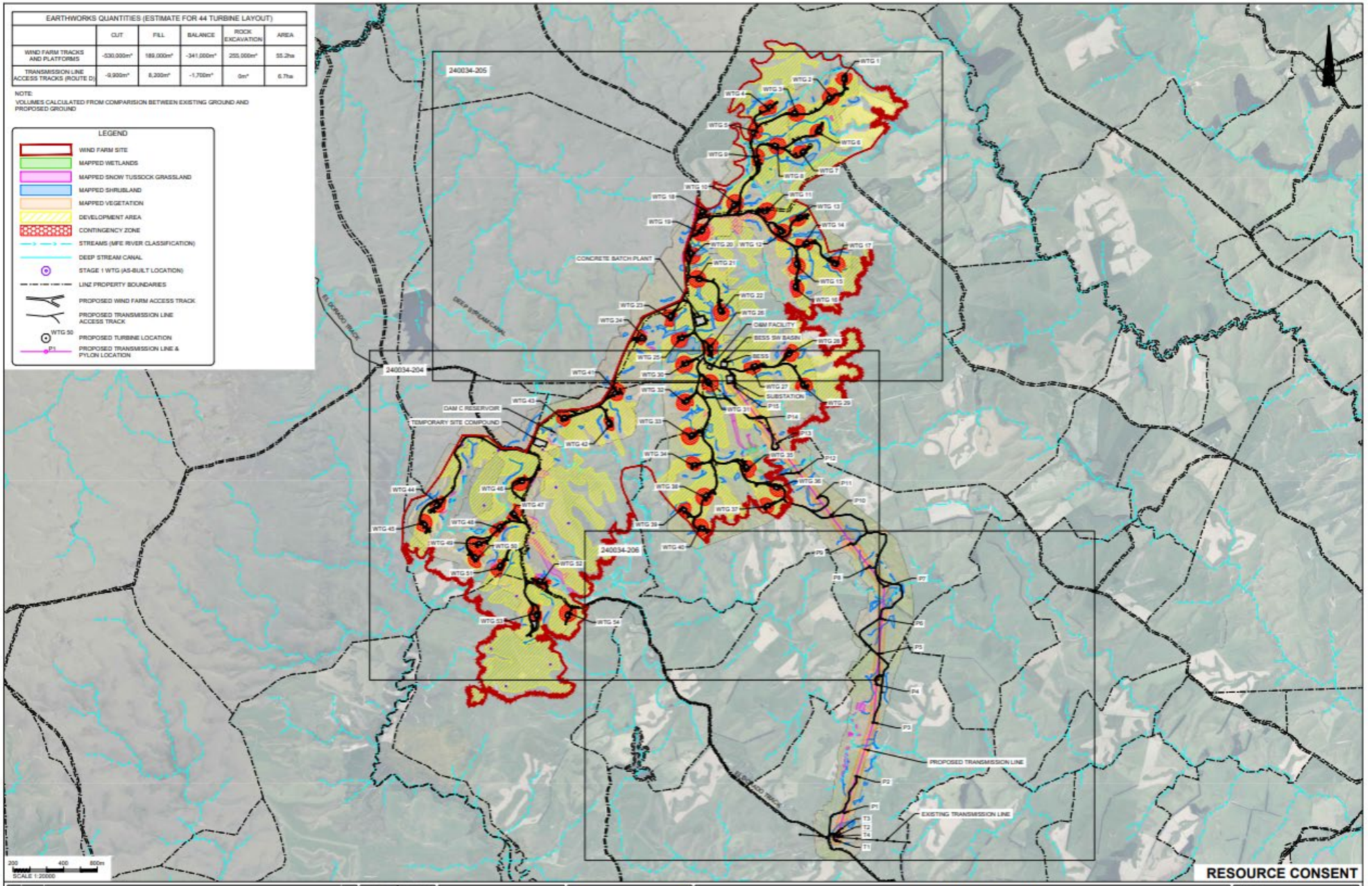
Attachment 1 – Locality Plan



SITE LOCATION
SCALE 1: 100 000

NOTE: MAP SOURCED FROM LINZ

Attachment 2 – Indicative Turbine Locations, Access Roads and Transmission Line



REV	DATE	ISSUE	BY
A	4.07.25	ISSUED FOR RESOURCE CONSENT	FY

PREP. BY: AT
REVD. BY: LG
APPROVED FOR ISSUE
DRAFT

RILEY
www.riley.co.nz

Mercury

CLIENT: TARARUA WIND POWER LTD
ADDRESS: WAIPORI, OTAGO
PROJECT: MAHINERANGI WIND FARM STAGE 2
SHEET TITLE: SITE PLAN - OVERVIEW

CADFILE: 240034-202.dwg
SCALE (A1): 1:20000
DRG. SHEET SIZE: A1
DRAWING No.: 240034-202
REV.: A

From:	Ryan Piddington
To:	Admin Agency FTAA
Cc:	[redacted]
Subject:	RE: Mahinerangi Wind Farm Schedule 2 Substantive Application under Fast Track Approvals Act - Substantive Application Consultation
Date:	Friday, 15 August 2025 2:21:00 pm
Attachments:	image002.png image003.png image004.png image005.png image006.png image007.jpg image008.png

Kia ora,

Following on form the below email please find attached Mercury's pre-lodgement consultation information regarding our Schedule 2 listed project, Mahinerangi Wind Farm Stage 2.

The attached document provides a high-level description of the project, information concerning the positive and other environmental effects, and measures to address these. We have also included some details of project matters as they relate to matters of national importance or matters addressed in national direction under the RMA.

As noted in the attached, we are happy to meet with you to work through the attached and answer any questions you might have.

If you could respond confirming receipt of this information and whether you are able to provide feedback no later than 29 August.

Ngā mihi
Nā Ryan

RYAN PIDDINGTON
STRATEGIC CONSENTS MANAGER
[redacted]

From: Admin Agency FTAA <AdminAgencyFTAA@mfe.govt.nz>
Sent: Monday, 9 June 2025 1:21 pm
To: Ryan Piddington [redacted]
Cc: [redacted]
Subject: RE: Mahinerangi Wind Farm Schedule 2 Substantive Application under Fast Track Approvals Act - Substantive Application Consultation

Kia ora

Thank you for your email. Your request has been passed on to us

When engaging with MfE prior to lodgement

Your request should include:

- a description of the proposal which is sufficient to understand its scale and location and

the likely significance of both its positive and adverse effects, particularly as these relate to matters of national importance or matters addressed in national direction under the RMA.

This could include a draft cover document to the application if it is more convenient to provide this than drafting a new document specifically for this engagement. However, you do not need to include a complete draft application.

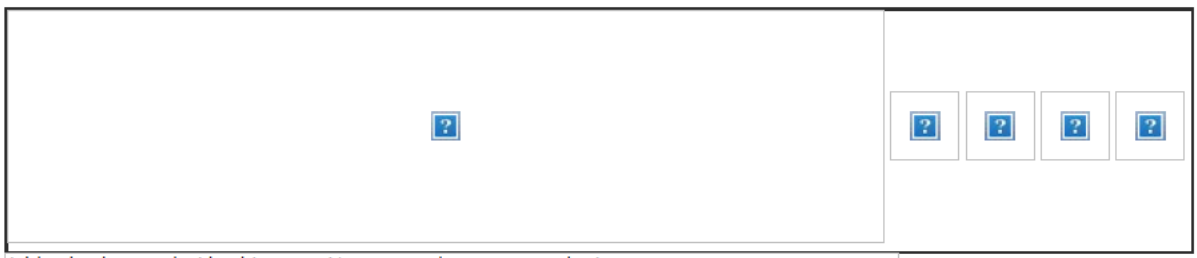
- the relevant section of the FTA Act that you are consulting under
- when you need a response by. Please allow at least **5 working days.**

Once provided we can prepare a formal response.

Ngā mihi,

System Oversight Team

Ministry for the Environment | Manatū Mō Te Taiao
Administering Agency under the Fast Track Approvlas Act 2024
AdminAgencyFTAA@mfe.govt.nz|environment.govt.nz



A blue background with white text AI-generated content may be incorrect.

Classification: General

From: Ryan Piddington [redacted]
Sent: Friday, 6 June 2025 3:30 pm
To: Info at MfE <infoatmfe@mfe.govt.nz>
Cc: Admin Agency FTAA <AdminAgencyFTAA@mfe.govt.nz>; Sarah Edwards [redacted]
Subject: Mahinerangi Wind Farm Schedule 2 Substantive Application under Fast Track Approvals Act - Substantive Application Consultation

when clicking on any links or opening any attachments.

Kia ora,

As you may be aware Mercury (under Tararua Wind Power Limited) has the Mahinerangi Wind Farm listed in Schedule 2 of the FTAA. We are looking to lodge our substantive application with the EPA at the end of July and are reaching out as part of our on our pre-lodgement consultation.

Please confirm what information would like to wee pre-lodgement and any specific information you would like to see considered within the substantive application.

Ngā mihi

Nā Ryan

RYAN PIDDINGTON
STRATEGIC CONSENTS MANAGER

MERCURY.CO.NZ
[redacted]
108 Durham Street, Tauranga, 3110

From:	Ryan Piddington
To:	fasttrackapplicationenquiries@doc.govt.nz
Subject:	Mahinerangi Stage 2 - Fast Track Pre Application Consultation Request
Date:	Friday, 21 February 2025 5:19:00 pm
Attachments:	120.01 - response-ANON-URZ4-5FRE-7.pdf 120.02 - MH2Location.pdf pre-lodgement-fast-track-application-consultation-application-form.docx image001.png

Please find attached filled out form in relation to the above project. I look forward to hearing from you due course.

Thanks

RYAN PIDDINGTON
STRATEGIC CONSENTS MANAGER

MERCURY.CO.NZ
[redacted]
Level 3, ANZ Centre, 17 Grantham Street, Hamilton, 3204

From:	Ryan Piddington
Sent:	Wednesday, 10 September 2025 8:48 am
To:	info@mch.govt.nz
Cc:	Sarah Edwards; kimtatton2
Subject:	Mahinerangi Wind Farm Stage 2 - Fast-track Approvals Act 2024. Pre Lodgment Meeting Enquiry
Attachments:	Mercury Mahinerangi Windfarm AMP DRAFT2 (1).docx

Kia or, my name is Ryan Piddington, and I am Mercury's Strategic Consent Manager coordinating the preparation of our substantive application for the Mahinerangi Wind Farm Stage 2 project.

The application is being applied for under Tararua Wind Power (TWP) a wholly owned subsidiary of Mercury NZ Limited. TWP currently holds an existing resource consent (LUC RM 1409) for the Mahinerangi Wind Farm (MWF) that was confirmed by the Environment Court in 2009. Amongst other things, the existing conditions provide for up to 100 wind turbines with a maximum tip height of 145 m. The consent was given effect to by the construction of Stage 1 that comprised twelve 3 MW wind turbines that became operational in 2011.

TWP now seeks to vary the conditions of LUC RM 1409 to enable Stage 2 of the wind farm (MWF Stage 2) to be completed with an additional 44 wind turbines (within 54 locations) of up to 165 m height (an increase in the blade tip height of 20 m). The primary purpose of changing the conditions of the land use consent is to enable for the use of larger and more efficient wind turbines that have become available since the original consent was granted.

In addition to the variation to the existing district land use consent conditions, TWP also requires a new suite of regional consents for the construction, operation and maintenance of the wind farm (given the expiry of the previously held consents) and a new district land use consent for the construction and use of a new Battery Energy Storage System (BESS), and a 110 kV transmission line (and associated infrastructure) to connect to Transpower's National Grid.

An application for an archaeological authority under the Heritage New Zealand Pouhere Taonga Act 2014 (HNZPTA) under section 42(4)(i) of the FTAA is being sought. An Archaeological Assessment has been undertaken by Clough & Associates Ltd. (Kim Tatton) that involved a review of the 2006 archaeological assessment and the consented layout plan of the proposed Stage 2 of the project, with some additional field survey undertaken.

The assessment concluded that*:*

> *"…the effects of Stage 2 of the Mahinerangi Wind Farm on archaeological values have not changed from the 2006 assessment. The conclusions of the 2006 assessment remain valid if any of the 54 consented turbine locations and contingency zones are utilised, amended, or repositioned (including hardstand and laydown areas) and with respect to the proposed changes to the spoil locations, roading layout (including track widths and cut and fill batters).*
>
> *It is recommended that a general archaeological Authority to modify site H44/1200 and to cover all earthworks for the project would be required under the HNZPTA and is therefore included in the FTAA approval application so that potential delays can be avoided should sites be exposed. This should include appropriate discovery protocols, including the training of all staff who work on the project during the earth moving phase(s) in the recognition of archaeological sites.*
>
> *In addition, the existing conditions 69-71 relating to accidental discovery protocols remain valid and appropriate in managing the discovery of unknown archaeological sites and/or artefacts."*

We have consulted with Heritage New Zealand and prepared an Archaeological Management Plan (attached) that includes protocols relating to Taonga (as defined by the Protected Objects Act 1975). We are aware of our obligations under this act in the case of an accidental discovery. The Project Archaeologist is a registered archaeologist.

Mercury has and continues to engage with Tangata Whenua in relation to the project for the last 10 months and has an existing Memorandum of Understanding with Te Rūnanga ō Ōtākou that will be reviewed as part of this process.

A substantive application is being completed and will be submitted to the EPA soon. The EPA has advised that engagement with the Ministry for Culture and Heritage is required as part of the pre-lodgement process. Could you please confirm whether you would like to arrange a pre-lodgement meeting, or if you're comfortable with the application proceeding without pre-lodgement discussions.

Ngā mihi
Nā Ryan

RYAN PIDDINGTON
STRATEGIC CONSENTS MANAGER

MERCURY.CO.NZ
[redacted]
[redacted]
108 Durham Street, Tauranga, 3110

Outlook

Mahinerangi Wind Farm Stage 2 - Fast-track Approvals Act 2024. Pre Lodgment Meeting Enquiry

From Ryan Piddington [redacted]
Date Wed 9/10/2025 8:48 AM
To info@mch.govt.nz <info@mch.govt.nz>
Cc Sarah Edwards [redacted] kimtatton2 [redacted]

1 attachment (2 MB)
Mercury Mahinerangi Windfarm AMP DRAFT2 (1).docx;

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The assessment concluded that:

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Ngā mihi
Nā Ryan

RYAN PIDDINGTON
STRATEGIC CONSENTS MANAGER

MERCURY.CO.NZ
[redacted]
108 Durham Street, Tauranga, 3110