Woody Weed Management Plan

Mahinerangi Wind Farm Stage 2

Tararua Wind Power Limited

Prepared by:

SLR Consulting New Zealand

SLR Project No.: 810.031205.00001

6 October 2025

Revision: V1.0

Revision Record

Revision	Date	Prepared By	Checked By	Authorised By
1.0	6 October 2025	Steve Rate	Hamish Dean	Steve Rate

Basis of Report

This report has been prepared by SLR on the instructions of our Client, in accordance with the agreed scope of work. It is intended to support the Client's application under the Fast Track Approvals Act 2024 and may be relied upon by the Expert Panel and relevant administering agencies for the purposes of assessing the application. While SLR has exercised due care in preparing this report, it does not accept liability for any use of the report beyond its intended purpose. Where information has been supplied by the Client or obtained from external sources, it has been assumed to be accurate unless otherwise stated.

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1.0 Introduction

Tararua Wind Power Limited ("TWP"), a fully owned subsidiary of Mercury NZ Limited, is progressing Stage 2 of the Mahinerangi Wind Farm which is to be known as "Puke Kapo Hau" ("the Project", "Puke Kapo Hau" or "MWF Stage 2").

The MWF is located on the eastern foothills of the Lammermoor Range, situated approximately 5 km north of Lake Mahinerangi and approximately 50 km west of Dunedin.

Variation to Land Use Consent RM1409 contains several conditions relating to management of weeds:

Condition 25C Rehabilitation Management Plan:

ii)(b) To prevent weeds and pests invading the site in a manner that is consistent with the weeds and pests control programme required pursuant to condition 31.

iv(c) The means by which weeds will be controlled and targets for weeds met during the wind farm construction and operation stages in accordance with the control programme required pursuant to condition 29.

iv(d)ii Pasture grassland and turbine sites: recontouring, regrassing, erosion controls, control of woody weeds.

Condition 25D Ecological Monitoring and Management Plan:

i)(a) Monitoring, and associated reporting (as required by Conditions 26 - 30) in relation to:

…

- *invasive weeds.*

b) A requirement that all contractors shall be required to ensure that all vehicles shall, as far as is practicable, be confined to formed access routes and the active construction zone (see Condition 25E(vi)).

c) A requirement that construction vehicles must be cleaned of adhering soil before entering the site.

d) A requirement that the consent holder use its reasonable endeavours to source weed free aggregate for all construction, operational and maintenance related requirements.

Conditions 29 and 29B Control of Invasive Woody Weeds:

29. The consent holder shall ensure the construction and rehabilitation of Puke Kapu Hau Mahinerangi Wind Farm Stage 2 is undertaken in accordance with the requirements of the Woody Weed Management Plan prepared by SLR Consulting New Zealand that forms Part C of the Puke Kapo Hau - Mahinerangi Wind Farm Stage 2 – Fast-Track Approvals Act Application dated DD MM 2025. This includes a mitigation and monitoring programme for the control of invasive woody weeds that shall apply during the construction and rehabilitation of the Mahinerangi Wind Farm and for four years after construction and rehabilitation has been completed, or for such a period until these species cease colonising the areas disturbed by the construction activity.

29A. The purpose of the programme will be to ensure that invasive woody weeds (i.e., wilding pines, gorse, Spanish heath and broom) within the Mahinerangi Wind Farm site (in excess of the status quo) are targeted for control. To achieve this, the consent holder shall identify and document the extent of invasive woody weeds within the site at the commencement of the project and target the invasive weeds (in excess of the status quo) for control using manual and/or herbicide treatment. Thereafter, each spring, during the term specified within this condition, the consent holder shall survey the extent of invasive weed species, with a particular focus on areas most susceptible to invasive weeds (i.e., disturbed areas), and undertake control measures as appropriate.

2.0 Objective

This Woody Weed Management Plan (the 'Plan') has been prepared to satisfy the conditions of consent and is intended to form part of the Rehabilitation Management Plan and Ecological Monitoring and Management Plan.

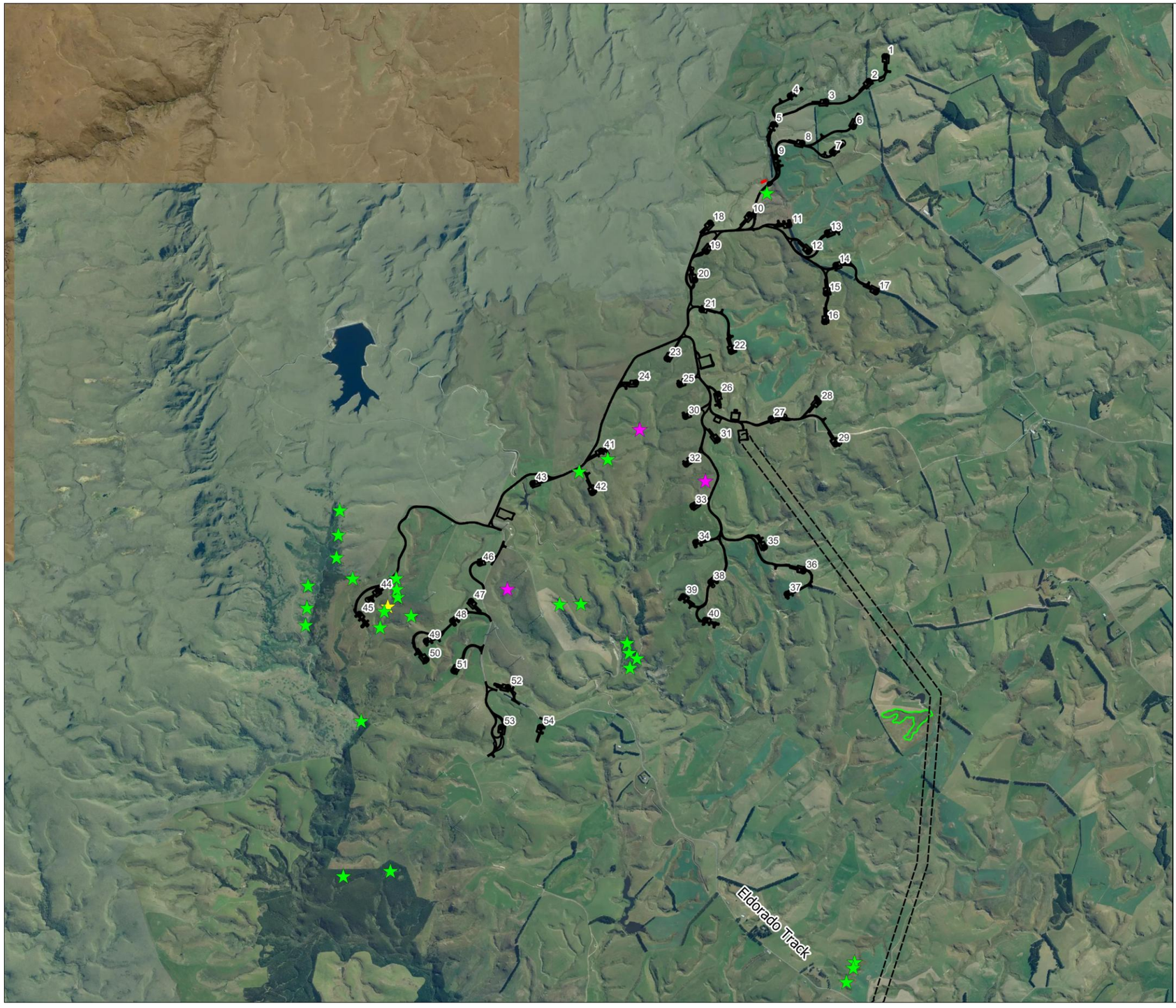
This Plan is an update of the Mahinerangi Wind Farm Woody Weed Control Plan prepared for Stage 1 of the Mahinerangi Wind Farm (Golder Associates 2010) and will apply works areas within the development of Stage 2 of the wind farm and all of the Wetland and Aquatic Compensation Sites (SLR 2025a). The Plan's objective is to set out the procedures and methods to prevent the establishment and spread of woody weeds within Stage 2 of Puke Kapo Hau and describe the monitoring methods to demonstrate how the conditions consent will be met.

3.0 Baseline Weed Extent

The baseline extent of woody weeds within MWF Stage 2 was mapped based on field observations undertaken during the assessment of vegetation and wetlands (SLR 2025b, Photo 1, Figure 1).

Six pest plant species listed in the Otago Pest Management Plan 2019-2029 (ORC 2019) were recorded within the Wind Farm Site (Table 1).

Photo 1: (Montage) Gorse southeast of proposed turbine site 41 (left) and broom north of proposed turbine site 42 by a wind mast (right). Photos taken 22 March 2024.



Tararua Wind Power Limited

Mahinerangi Wind Farm

Stage 2

Legend

Weeds

- Willow
- Gorse and/or broom
- Wilding conifer
- Stage 2 Layout
- WTG
- Transmission Corridor
- Aquatic Compensation Site
- Wetland Compensation Site

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Figure 1: Baseline extent of woody weeds within and near Stage 2 of the Mahinerangi Wind Farm.

Table 1: Woody weed species listed in the Otago Pest Management Plan 2019-2029 that were recorded within the Wind Farm Site (SLR 2025b).

Species	Common name	Otago RPMP listing	Notes
Cytisus scoparius	Broom	Sustained control	One patch at a wind mast north of turbine site 42. Scattered in area of plantation forestry between turbine sites 10 and 11. Scattered plants and patches near Stage 1.
Pinus contorta[1]	Lodgepole pine	Progressive containment	Wilding control undertaken in QEII covenant.
Pinus radiata[1]	Radiata pine	Progressive containment	Rare, single wildings northeast of turbine site 41 and between turbine sites 32 and 33. Also in shelterbelts. Regenerating from seed in plantation forest. Wilding control undertaken in QEII covenant.
Pseudotsuga menziesii[1]	Douglas fir	Progressive containment	Recently planted near turbine site 19. No wildings seen.
Salix sp.	Willow	Organism of Interest	One tree in the gully east of turbine site 44.
Ulex europaeus	Gorse	Sustained control	One small patch near turbine site 41, several small patches in southern part of Stage 2 (near Stage 1).
[1] Listed under Wilding conifer.			

4.0 Weed Issues

Construction activity may result in the introduction and spread of woody weeds, pest plants and/or nuisance algae (e.g., *Didymosphenia geminata* (Didymo)) within MWF Stage 2.

The primary threat for weed spread within the site comes from gorse and broom due to the proximity of infestations to works sites, seeds persisting in the soil, and earthworks moving this soil to other sites. Existing and novel weed species could be introduced to the site on vehicles, other equipment, and in aggregate used for construction.

Introduction and spread of weeds could adversely affect ecological values and increase weed control costs for farmers and wind farm managers.

The following protocols for management of weeds aim to reduce potential adverse effects of windfarm construction and operation on existing ecological values and reduce long term weed management costs.

5.0 Weed Management

5.1 Vehicle Use

All vehicles shall, as far as is practicable, be confined to formed access routes and the active construction zone.

Vehicles and other equipment must be inspected and, as far as practicable, cleaned of adhering material including soil before entering the site. To prevent the spread of nuisance algae, vehicles that have been in a lake, river, stream, or wetland within 48 hours of entering the site must be dried or cleaned using an accepted method recommended by the Ministry for Primary Industries.

The consent holder shall use its reasonable endeavours to source weed-free aggregate for all construction, operational and maintenance related requirements.

5.2 Stage 2 Area

5.2.1 Site Rehabilitation

To help prevent the establishment of weeds, all disturbed sites within MWF Stage 2 should be sown with pasture grass/clover species as soon as earthworks are completed.

5.2.2 Weed Monitoring and Control

Weed density is low within MWF Stage 2 and along the Transmission Corridor, and there are few pest plants in proposed work sites (Figure 1). It is therefore recommended that weed management aims for an effective zero density of woody weeds and pest plants listed in the Otago Pest Management Plan (OPMP, Otago Regional Council 2019) within a pre-defined distance from works sites. As weeds generally invade disturbed areas, this focussed approach is likely to result in minimal adverse effects of weeds on existing values due to construction and operation of the wind farm. In addition, most of the works areas will be grazed following completion of works, and browsing by stock and farm management is likely to limit spread of woody weeds.

To limit spread of existing woody weeds and OPMP species, weed management prior to construction should:

- Survey and control weeds at and within 20 m of construction works. Sites to target, due to existing woody weeds, include the edge of the plantation forest block to the east of turbine 10, areas around the proposed culvert south of turbine 9, and the wind mast anchors near turbine 42.
- Register the areas where weeds were controlled for special treatment during earthmoving activities, making sure the surface soils at the control site are buried as deeply as possible under other soil to prevent germination of seeds in the soil e.g. deep within Surplus Fill Disposal (SFD) sites.
- Ensure there are no adverse effects on ecological values from weed control operations though:
    - Preventing spread of any weed propagules through disposal at a suitable waste disposal facility off-site, or on-site in such a way that no spread of weeds will occur.
    - Complying with NZS 8409 2021 Management of agrichemicals and applicable rules under the Otago Land and Water Regional Plan.
    - Undertaking weed control using certified staff or contractors.

Ongoing weed monitoring and control frequency:

- Every six months while works are being undertaken.
- Annually thereafter, for four years after construction and rehabilitation has been completed, or for such a period until woody weeds and OPMP species cease colonising the areas disturbed by the construction activity.

5.3 Wetland and Aquatic Compensation Sites

Weed density is low within the Wetland and Aquatic Compensation Sites, but weed monitoring and control will be undertaken to help prevent the spread and establishment of

weeds. This will prevent ecological values being lost due to displacement of indigenous species by woody weeds over the long term.

Baseline survey and control:

- A baseline weed survey will be undertaken prior to any other compensation or rehabilitation works being undertaken within the compensation site to determine the locations and densities of woody weeds and pest plants listed in the OPMP. Any such weeds identified will be controlled before other compensation or rehabilitation works are undertaken.
- The areas where weeds were controlled will be recorded so that these sites are easily located for follow-up monitoring.

Ongoing weed monitoring and control frequency:

- Following the baseline survey and control, weed monitoring and control will be undertaken annually for four years after construction and rehabilitation has been completed, or for such a period until woody weeds and OPMP species cease colonising the areas disturbed by the construction activity.

6.0 Weed Control Criteria

The following weed control criteria apply to works sites within the Wind Farm Development Area and Transmission Line Corridor, as well as the Wetland and Aquatic Compensation Sites:

- Maintain all woody weed species at effective zero density within 20 m of works sites.
- Maintain all pest plant species listed in the Otago Pest Management Plan at effective zero density within 20 m of works sites.
- Control shall be undertaken in a timely manner following monitoring.
- Control can use manual and herbicide-based methods.
- Monitoring and control has been undertaken annually for four years after construction and rehabilitation has been completed, or for such a period until woody weeds and OPMP species cease colonising the areas disturbed by the construction activity.

7.0 Reporting

All woody weed control activities should be recorded and an annual report submitted to ORC outlining the weed control activities undertaken.

8.0 References

Golder Associates. 2010. Invasive Woody Weeds Plan. Prepared for TrustPower Ltd.

Otago Regional Council. 2019. Otago Pest Management Plan 2019-2029.

SLR. 2025a. Wetland and Aquatic Compensation Plan. Mahinerangi Wind Farm Stage 2. Prepared for Tararua Wind Power Limited.

SLR. 2025b. Vegetation, Wetland, and Terrestrial Invertebrate Assessment. Mahinerangi Wind Farm Stage 2. Prepared for Tararua Wind Power Limited.

9.0 Closure

Sincerely,

SLR Consulting New Zealand

[redacted]

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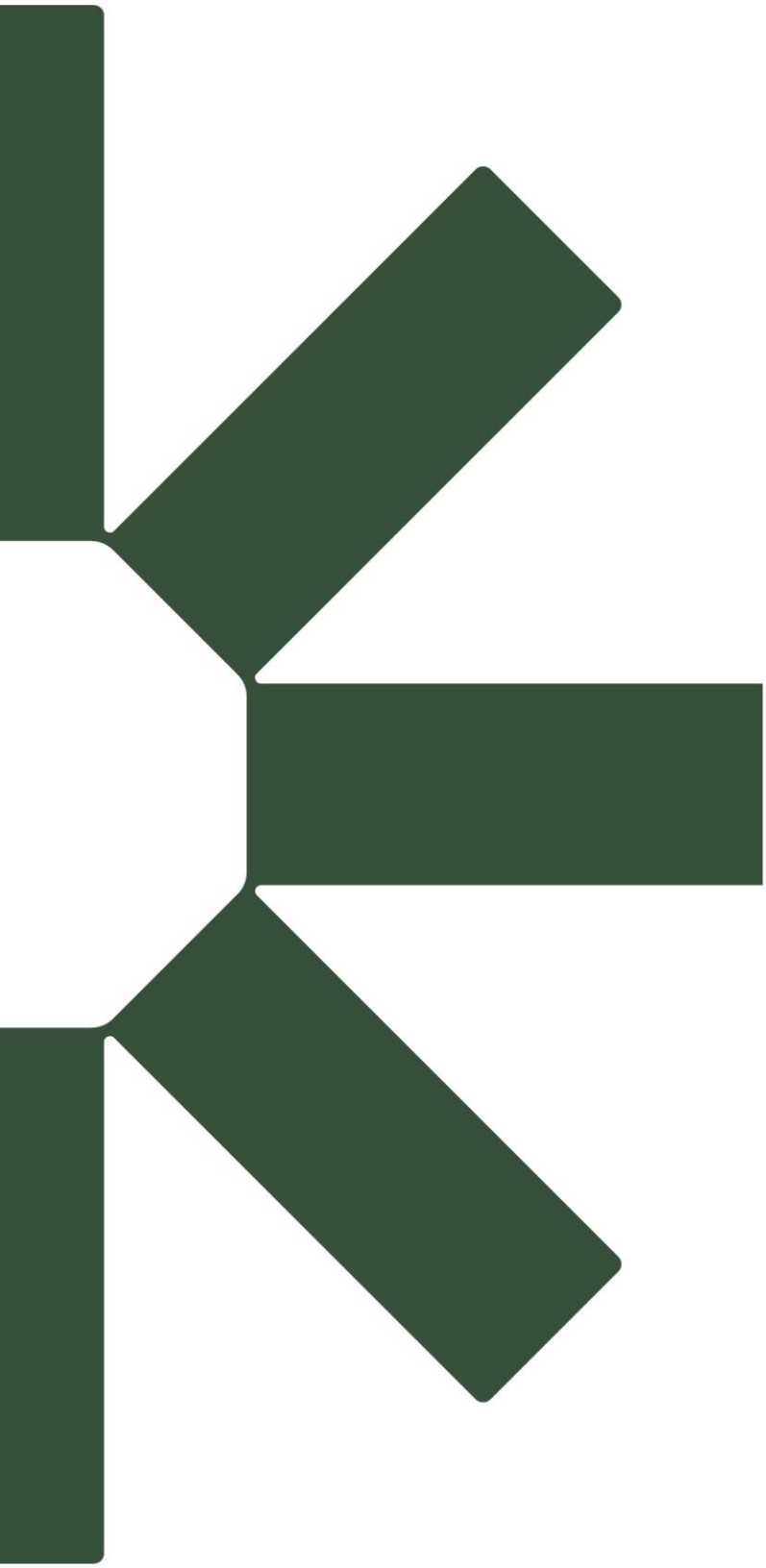

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