NATURE-BASED PERFORMANCE

ASSESSMENT OF FOREVER FORESTS

Prepared for Meridian Energy Limited

15 April 2025

Boffa Miskell

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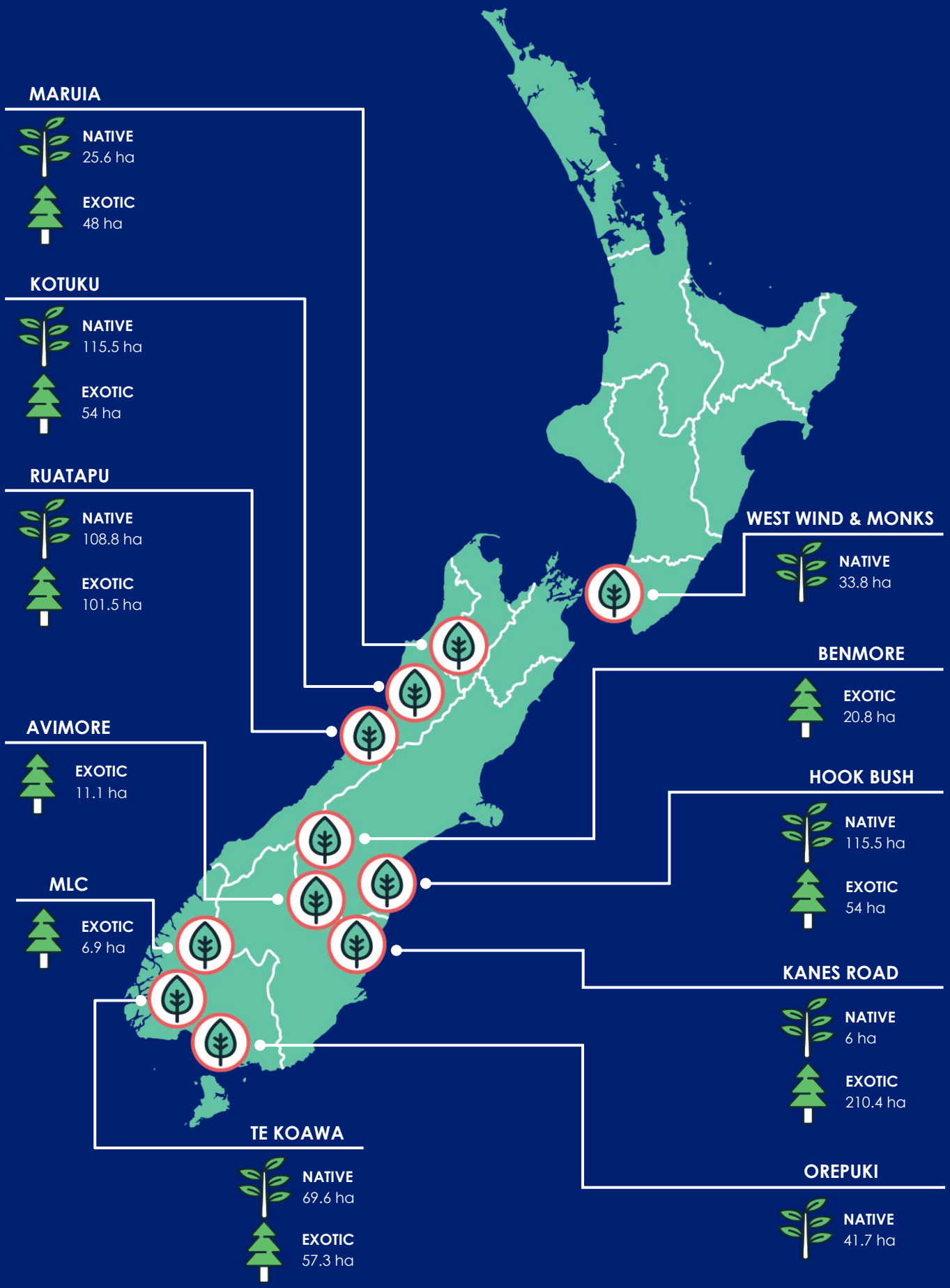
FOREVER FORESTS NATURE-BASED ASSESSMENT



1.0 INTRODUCTION

Meridian Energy's purpose '*Clean Energy for a Fairer and Healthier World'* implicitly puts environmental sustainability at the centre of decision making. To meet the renewable energy generation needs of today without compromising the environmental, social, and economic needs of future generations, Meridian must measure and address the impacts of their operations on the environment over time.

For Meridian to assess its Biodiversity Commitment to ensure no net-loss of biodiversity, and pursuing efforts to achieve net-positive impacts, an organisation-wide nature-based performance measurement is required.[1] Measurement of nature-based performance allows for Meridian to identify and evaluate its impacts and dependencies on the natural environment and track the progress of its nature-based actions and partnerships.[2]

The purpose of this report is to summarise the outcomes of Meridian's first assessment of the nature-based performance of its Forever Forest sites in New Zealand. The key outcomes are:

- **LOCATE** the proximity and/or interface of Forever Forest sites with areas of critical biodiversity importance [3]
- **EVALUATE** if able, the biodiversity-related impacts and/or benefits of Forever Forest sites
- **ASSESS** the alignment of Forever Forest sites to no-net loss and net-positive impact criteria
- **IDENTIFY** any recommended actions to improve the understanding or nature-based performance of Forever Forest sites

This summary report is supported by a comprehensive Nature-based Performance Excel Workbook and GIS Dashboard to provide a transparent evidence basis for assessment outcomes.

1.1 SCOPE OF ASSESSMENT

The scope of the nature-based performance assessment focuses on Meridian's registered Forever Forest Sites. The Forever Forests Programme is part of Meridian Energy's 'Half by 30' programme; a commitment to halve the total operational emissions that Meridian Energy produce by 2030 and offset the remaining 'unavoidable' emissions.

The Programme aims to plant up to 1.5 million permanent native and exotic hardwood trees over 1,100 hectares. Forest areas are/will be registered with the New Zealand Emissions Trading Scheme (NZ ETS) to generate certified New Zealand Unit carbon credits for retirement by Meridian.

To determine the Forever Forest sites included in this assessment a significance and materiality screening process was undertaken. During this process, three Forever Forest sites were excluded from the nature-based performance assessment due to lack of ownership, control, and influence. Meridian's involvement with these sites is limited to a forestry rights agreement with the landholder to procure carbon credits.

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[1] **No Net-Loss** is defined as the point at which project related impacts on biodiversity are balanced by measures taken to avoid and minimize the projects impacts, to undertake on-site restoration, and offset significant residual impacts on an appropriate geographical scale.

Net-Positive Impact is defined as a target for project outcomes in which the impacts on biodiversity caused by the project are outweighed by the actions taken to avoid and reduce such impacts, rehabilitate affected species/landscapes, and offset any residual impacts.

[2] Meridian Energy Biodiversity Commitment (meridianenergy.co.nz)

[3] **Critical Biodiversity** is defined as sites containing globally or nationally important biodiversity, including species classified as critically endangered, endangered, or vulnerable on the IUCN Red List - endemic species – Internationally recognised areas (e.g., World Heritage Sites, Ramsar Wetlands). Nationally important biodiversity can include legally protected areas, habitats, and species.

1.2 MATERIAL IMPACTS & DEPENDENCIES

The material impacts and dependencies for Meridian's Forever Forests Programme were identified using the ENCORE tool (Exploring Natural Capital Opportunities, Risks and Exposure).[4] Forestry activity dependencies on nature were assessed against the core provisioning and regulating ecosystem services, critical to the function and productivity of carbon forestry sites. The impacts on nature were assessed against the pressures of silviculture and other forestry activities against the five drivers of nature change

Table 1: Material impacts of nature of Meridian's Forever Forest sites, rated between Very High (VH), High (H), Moderate (M), Low (L), and Very Low (VL)

PRESSURE	RATING	DESCRIPTION
Emissions of non-GHG air pollutants	VH	Use of fertilisers and pesticides in managed forests can release non-GHG air pollutants.
Area of land use	VH	Silviculture requires large areas of land. It can contribute to the degradation of land in the proximity of the managed forests
Emission of toxic pollutants	H	In managed forests, herbicides and pesticides are used to increase productivity, which can release toxic soil and water pollutants into surrounding soil and waterways
Emission of nutrient pollutants	H	In managed forests, nitrate and phosphorus are used to address nutrient deficient deficiencies to increase forest productivity. They can lead to build up of nutrient pollutants in the area and leakage of the pollutants to surrounding areas and water bodies through runoff
Disturbances (e.g. light and noise)	H	Some silviculture and forestry activities (e.g. thinning trees) can cause disturbances such as noise pollution, generating intense noise for periods of days to weeks in a relatively small area.
Introduction of invasive species	H	Silviculture activities often involve introduction of new tree or non-tree species to increase productivity, which can become or accidentally lead to the spreading of invasive species.
Volume of water used	M	Silviculture and other forestry activities use a significant amount of water for planting trees, irrigating forests, and controlling pests.
Generation and release of solid waste	L	Silviculture generates solid waste. The majority of this waste is damaged residuals, abandoned logs, stumps, tops and branches.

[4] ENCORE is maintained and continuously improved by Global Canopy, the United Nations Environment Programme Finance Initiative (UNEP FI), and the United Nations Environment Programme World Conservation Monitoring Centre (UNEP-WCMC)

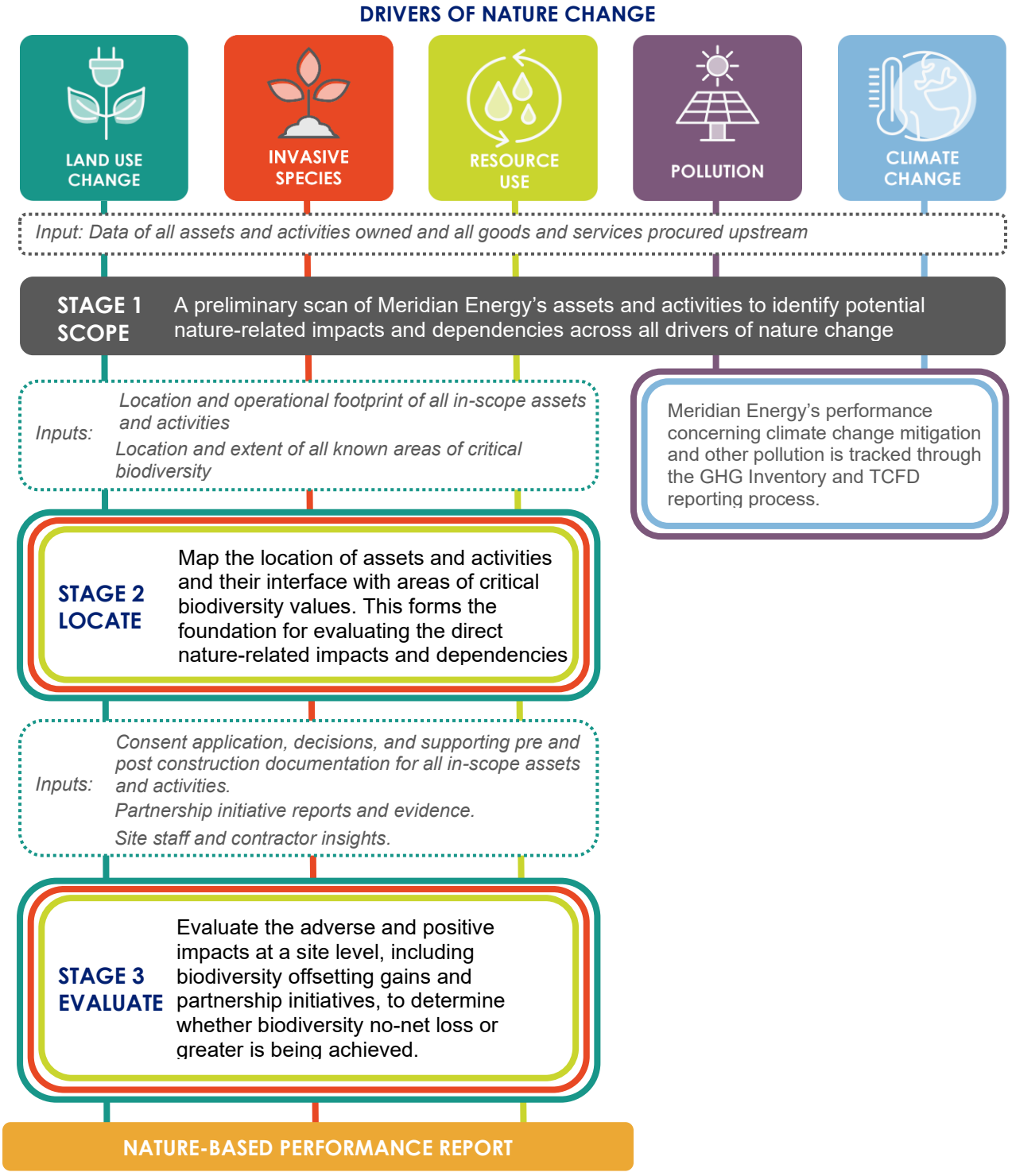
Table 2: Material nature dependencies of Meridian's Forever Forest sites rated between Very High (VH), High (H), Moderate (M), Low (L), and Very Low (VL)

DEPENDENCY	RATING	DESCRIPTION
Biomass provisioning services	VH	Silviculture and other forestry activities depend on biomass such as timber, wood, forests, and tree nurseries
Genetic material services	VH	Silviculture and other forestry activities depend on the provision of genetic for the planting of trees and production such as seeds and spores.
Soil quality regulation	VH	Silviculture relies on the maintenance of healthy soil and nutrient cycling for tree growth.
Global climate change mitigation	VH	Silviculture and other forestry activities depend on global climate regulation by ecosystems to mitigate climate change, maintain the climatic conditions necessary for the cultivation of woodlands, and reduce the frequency and intensity of major climate events that could damage the forestry site or infrastructure.
Local climate regulation	VH	Silviculture and other forestry activities depend on the capacity of ecosystems to regulate the microclimate in the locations of silviculture activities, providing stable conditions for tree growth.
Soil and sediment retention	VH	Silviculture and other forestry activities are dependent on soil and sediment retention to provide a stable substrate, erosion control, and landslide mitigation for the forest area and infrastructure.
Water purification services	VH	Silviculture and other forestry activities are dependent on water purification by ecosystems to maintain or improve the quality of the water used for the growth of standing timber.
Water supply and storage	H	Silviculture and other forestry activities depend on water supply services provided by ecosystems to ensure sufficient quantity and quality of water, for tree growth.
Flood protection and mitigation	H	Silviculture and other forestry activities are dependent on flood mitigation ecosystem services to protect infrastructure from flooding and for the maintenance of conditions for tree growth.
Air filtration services	M	Silviculture and other forestry activities depends on air filtration by ecosystems to mitigate against air pollutants, for healthy tree growth.
Solid waste remediation	M	Silviculture and other forestry activities depend on solid waste remediation by ecosystems to transform organic substances, reducing solid waste, and improving the quality of soil.
Water flow regime regulation	M	Silviculture and other forestry activities depend on the water flow regulation services provided by ecosystems. Ecosystems mitigate the peak water flows that could lead to floods and damage the forest areas and infrastructure. The regulation of water flows helps ensure sufficient water supply even during dry periods, e.g. reducing fire risk.
Storm mitigation	M	Silviculture and other forestry activities are dependent on storm mitigation ecosystem services to protect forests, buildings, and infrastructure from the impacts of wind, sand and other storms.
Pollination Services	M	Silviculture and other forestry activities depend on the services of pollinators for their natural regeneration and resilience through genetic diversity.

2.0 NATURE-BASED ASSESSMENT APPROACH

The Nature-based Performance Framework (NbP Framework) is scoped as a decision support tool, developed to provide an overview of the nature-related impacts and benefits generated by Meridian's operations in relation to a biodiversity no net-loss or net-positive impact target.

The NbP Framework approach is structured to align with key deliverables required by the Dow Jones Best in Class Index and Taskforce for Nature-related Financial Disclosures (TNFD). Additionally, the Environmental Institute of Australia and New Zealand Inc. (EIANZ) guidelines for Ecological Impact Assessment is applied in the evaluation stage of this assessment to determine whether Meridian's positive and adverse impacts demonstrate biodiversity no net-loss. The use of EIANZ guidelines supports alignment with New Zealand common practice for ecological assessments and ensures terminology and definitions in this assessment are consistent with national policy direction. The structure of the NbP Framework is shown below.



2.1 EVIDENCE BASE

The assurance of outcomes from the nature-based performance assessment depends upon the availability of credible and well-founded evidence. When applied to energy generation infrastructure this includes evidence from primary sources of biodiversity-related consent condition information, alongside the evidence of mitigation outcomes and biodiversity monitoring required at a site. Acknowledging that adverse biodiversity-related effects may have also been avoided during early site design, or previously unconsidered adverse effects may have occurred during construction of new sites, additional information not included in consent condition information can be provided to support assessment of Meridian's performance.

As carbon forestry in New Zealand is largely facilitated on many rural landholdings through the National Environmental Standards for Commercial Forestry (NES-CF) and NZ ETS, most Forever Forest sites lack the depth of environmental assessment and monitoring that other consented activities possess (e.g. energy generation infrastructure). Accordingly, to support a nature-based performance baseline assessment, other evidence sources are relied upon. These include silviculture plans, with reference to available spatial biodiversity data.

All relevant information extracted from evidence sources to support nature-based performance assessment outcomes will be detailed in the Nature-based Performance Excel Workbook, with source documents cited. This ensures any claims of no net-loss or net-positive impacts are based upon a transparent and credible evidence base to avoid allegations of over-stating Meridian's benefits or 'green washing'.

2.2 ASSESSING NO NET-LOSS

Aligning with the EIANZ guidelines for Ecological Impact Assessment, in particular the criteria for describing magnitude of effect and criteria for describing levels of effects, the identified biodiversity-related impacts and mitigation actions are assessed in relation to biodiversity no net-loss through the following means:

- **VERY HIGH ADVERSE EFFECTS** should be assessed as to whether they exceed 'limits to offsetting'. Net-biodiversity loss is the likely outcome
- **HIGH ADVERSE EFFECTS** may be able to be mitigated, but the bar will be set very high and net- biodiversity gain must be the goal, as the outcome is often less certain
- **MODERATE ADVERSE EFFECTS** can typically be mitigated using known and proven methods but will require careful design and follow-through monitoring to assume no net-loss has been achieved
- **LOW ADVERSE EFFECTS** should be easily mitigated using good design, with evidence provided to assume no net-loss
- **VERY LOW ADVERSE EFFECTS** may or may not require mitigation, and there should be no barriers to achieving no net loss

Each forestry site is assessed to identify and measure the net-impacts on biodiversity at this point in time (i.e. within the financial year the assessment is conducted). Impacts are evaluated based on the magnitude of the potential impact, the significance of the potential impact, and the performance of the avoidance and mitigation measures implemented.

As an assessment seeks to evaluate Meridian's performance of avoiding or mitigating impacts on biodiversity from its operations and other activities or improving biodiversity values, other biodiversity values that are present at a site but not impacted by Meridian are not considered in the assessment. These wider unaffected biodiversity values present on sites are acknowledged in the Meridian Energy Nature-based Performance GIS Dashboard 'Critical Biodiversity Sites' information.

2.3 CONSIDERATIONS FOR ASSESSING FOREVER FORESTS

2.3.1 THE BIODIVERSITY IMPACTS & BENEFITS OF FORESTRY

Plantation forests for carbon sequestration and storage have become an integral and large-scale component of New Zealand's landscape. These forests provide substantial areas of lowland habitat suitable for many forest-adapted native species, such as North Island brown kiwi and long-tailed bat.

While the biodiversity benefits of native forests naturally far exceed those of an exotic plantation forest; it is highly likely that the biodiversity benefits of an exotic plantation forest would exceed those of a modified pasture landscape. Plantation forests tend to improve the landscape ecology in highly modified environments by providing surrogate forest habitat, enhancing connectivity between native forest remnants, and providing a buffer to edge effects on native forest remnants.[5]

While it is clear that exotic plantation forests can be detrimental to biodiversity values when they are established at the expense of the original or regenerating indigenous habitat, when developed in highly modified environments they can support the conservation of a range of forest-adapted native species. A total of 118 threatened species have been recorded or observed within plantation forests in New Zealand. Of these species, 54 were recorded from within exotic forests, and 44 species were observed in the managed indigenous forest remnants and wetlands that are often found within plantation forests.[4]

Exotic plantation species, especially *Pinus* species, can also have a significant impact on New Zealand's biodiversity through plant invasions outside the planted area. Wilding conifer spread is an increasing problem in New Zealand, displacing native shrub and grass ecosystems. However, in the context of Meridian's Forever Forest sites, no notable tree species with a risk of wilding spread has been planted. Meridian has predominately used Eucalyptus, *Pinus attenuata,* and Redwood species for exotic afforestation, which all have low risk of wilding spread.[6]

As the primary purpose of Meridian Energy's Forever Forest sites are to generate verified carbon credits as part of Meridian's 'Half by 30' programme, two key aspects must be noted when considering the biodiversity impacts or benefits of Forever Forest sites:

POST 1989 FOREST: To be eligible to generate carbon credits under the NZ ETS, the forested area must be classified as 'post-1989 forest', meaning it was not forested on 31 December 1989.

- Afforestation by Forever Forests, through either planting or natural regeneration, will have occurred on previously deforested land.

CARBON REMOVAL: Under current NZ ETS constraints, native forestry has the lowest and slowest carbon sequestration rate of all forest types recognised by Ministry for Primary Industries.

- For Meridian to generate the substantial volume of carbon credits required to offset their unavoidable emissions and help mitigate the most severe impacts of climate change (on society and biodiversity), exotic forest types are most suitable in the short term.

[5] *Pawson, S. M., Ecroyd, C. E., Seaton, R., Shaw, W. B., and Brockerhoff, E. G. 2010: New Zealand's exotic plantation forests as habitats for threatened indigenous species. New Zealand Journal of Ecology (2010) 34(3): 342-355*

[6] Wilding conifers | Canopy

2.3.2 TRANSITIONAL FORESTS

All of Meridian's Forever Forest sites that have been afforested with exotic species are intended to be managed as transitional forests, with the exclusion of Lake Benmore. The concept of transitional forestry is of growing interest in New Zealand, where fast-growing exotic forest species are managed to transition to a permanent native forest over 50-60 years.

While transitional forests are being scoped more frequently in New Zealand, there is currently much debate regarding the use of transitioning exotic plantation forests for native forest restoration. There is uncertainty as to which circumstances any meaningful regeneration can be achieved, how representative the restored ecosystems would be, and the timeframes needed to achieve a transition.[7] While national-scale research is required in a range of different environments to better understand and define the likelihood and outcomes of transitional forests, proactive management actions can support the regeneration of native forests on Meridian sites:

NATIVE VEGETATION COVER: The composition of the landscape cover is very influential for native regeneration. Increasing native vegetation cover to at least 25% of a forestry area has a strong positive effect on native regeneration within exotic forests. Increased native vegetation cover improves effective seed dispersal as there are more sources of seed, shorter distances for the seed to travel, and more habitat available for avian seed dispersers.[8]

- At Meridian Forever Forest sites currently:
    - Three sites are full native forestry
    - Four sites are mixed forestry with over 25% native cover
    - Two sites are mixed forestry with less than 25% native cover
    - Three sites are full exotic forestry.

PEST MANAGEMENT: Pest management is important for transitioning exotic plantation to native forest. Browsing herbivores, such as deer and goats, present a significant barrier to succession as they can prevent growth and survival of susceptible species of regenerating native plants. Rats and mice which consume seeds prevent plants from establishing, further limiting regeneration. Additionally, invasive predators which predate native birds can also disrupt avian seed dispersal for many tree species.[7]

- At Meridian Forever Forest sites, currently seven sites have known pest control in place

2.3.3 DATA & EVIDENCE REQUIREMENTS

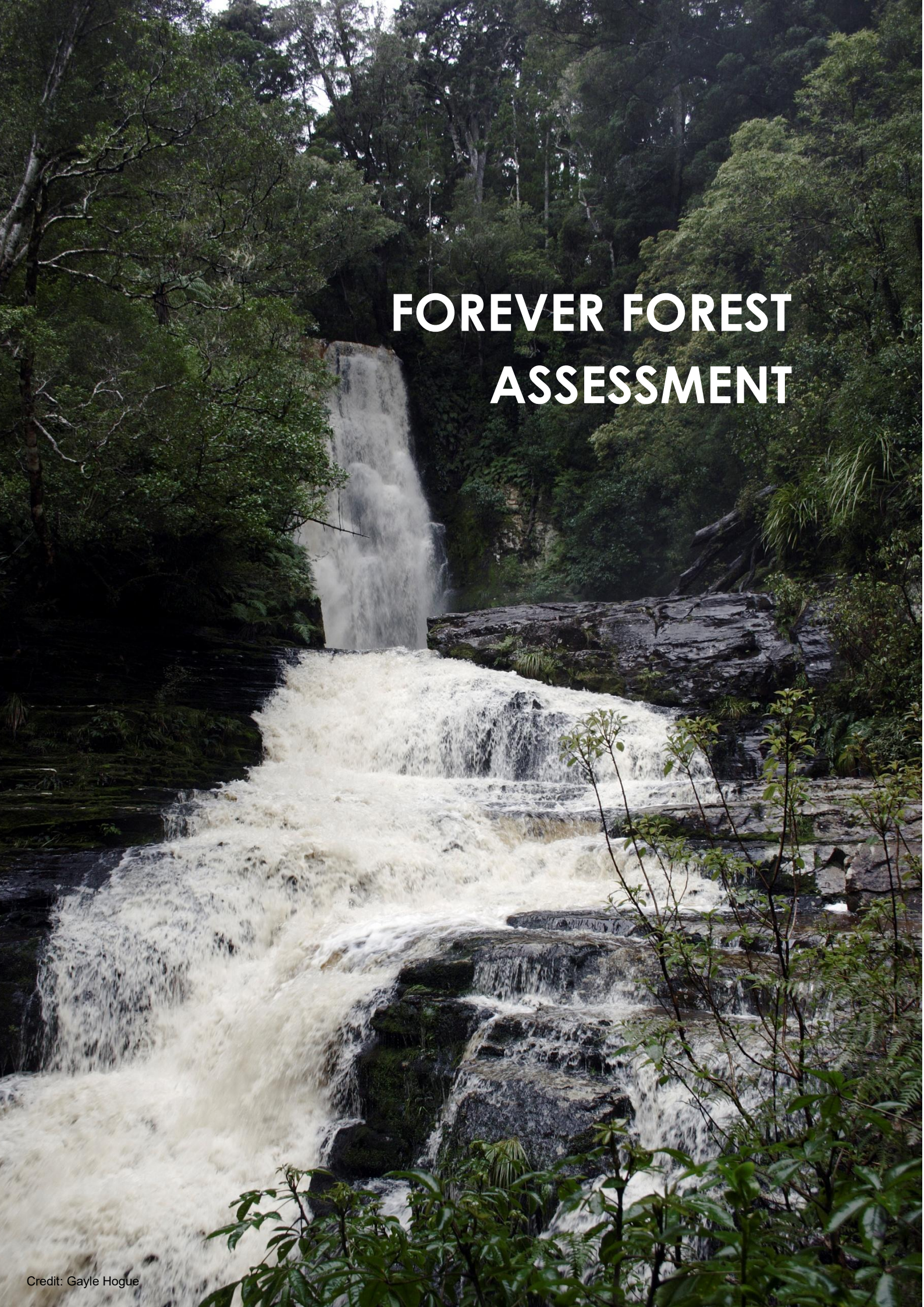
As discussed above, while the biodiversity benefits of plantation forestry sites and planned transition to native forestry appear positive and feasible, a number of site-specific factors may determine whether biodiversity outcomes are net-positive or negative. These factors include whether the local biodiversity values present at a site will inhabit exotic forest plantations (or be displaced), whether the composition of landcover adequately supports regeneration, and how the site is managing other biodiversity threats (e.g. invasive browsing herbivores).

With these details not commonly included in detail in silviculture management plans, additional biodiversity-related data and evidence is required. An Ecosystem Condition Index assessment would support the data and evidence requirements at existing and future Forever Forest sites, considering a site's ecosystem connectivity (if a site supports or disrupts movements of species across an ecosystem), vegetation spatial diversity (whether the surrounding native cover positively influences regeneration), invasive pest influences, and abundance key species.

[7] Forbes A, Norton D 2021. Transitioning exotic plantations to native forest: A report on the state of knowledge. Wellington, Ministry for Primary Industries. 37 p

[8] *Marshall, G. R., Wyse, S. V., Manley, B. R., and Forbes, A. S. 2023: International use of exotic plantations for native forest restoration and implications for Aotearoa New Zealand. New Zealand Journal of Ecology (2023) 47(1): 3516.*

FOREVER FOREST ASSESSMENT



Credit: Gayle Hogue

3.0 FOREVER FOREST SITES

3.1 MANAPŌURI LAKE CONTROL

LOCATION:	Southland
TYPE:	Exotic plantation forest
SPECIES:	Eucalyptus
YEAR ESTABLISHED:	2021
FORESTRY AREA:	6.9 ha
TRANSITION TO NATIVE:	Yes, within 50-60 years
PROXIMITY TO CRITICAL BIODIVERSITY:	Within forestry site boundary

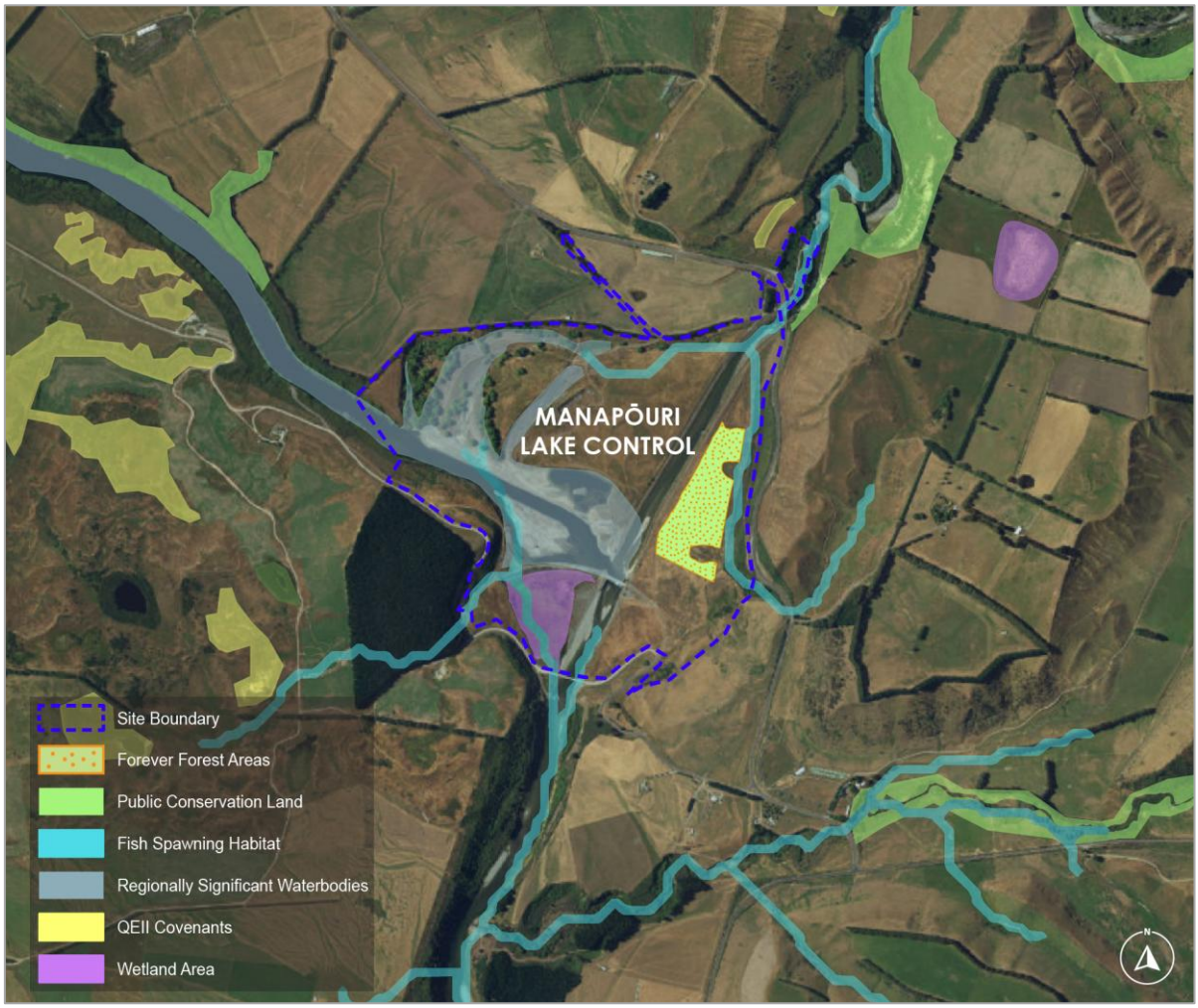


Figure 1: Manapōuri Lake Control Forever Forest sites with known biodiversity areas of importance shown

3.1.1 INTERFACE WITH NATURE

The Manapōuri Lake Control site is intersected by the Waiau River - a Southland Regionally Significant Wetland and Sensitive Waterbody (Environment Southland), a connecting wetland area, and multiple fish spawning habitat areas, including Brown Trout, Rainbow Trout, and Southern Flathead Galaxias (MPI). The Mararoa River Marginal Strip (Public Conservation Land) is located immediately north of the site. Twelve QEII covenant areas surround the site within 2km. To the west of the site is Paddock Hill conservation area.

3.2 BENMORE

LOCATION:	Canterbury
TYPE:	Exotic plantation forest
SPECIES:	Pinus attenuata
YEAR ESTABLISHED:	2020
FORESTRY AREA:	20.8 ha
TRANSITION TO NATIVE:	No transition to native
PROXIMITY TO CRITICAL BIODIVERSITY:	Within 2km of site boundary

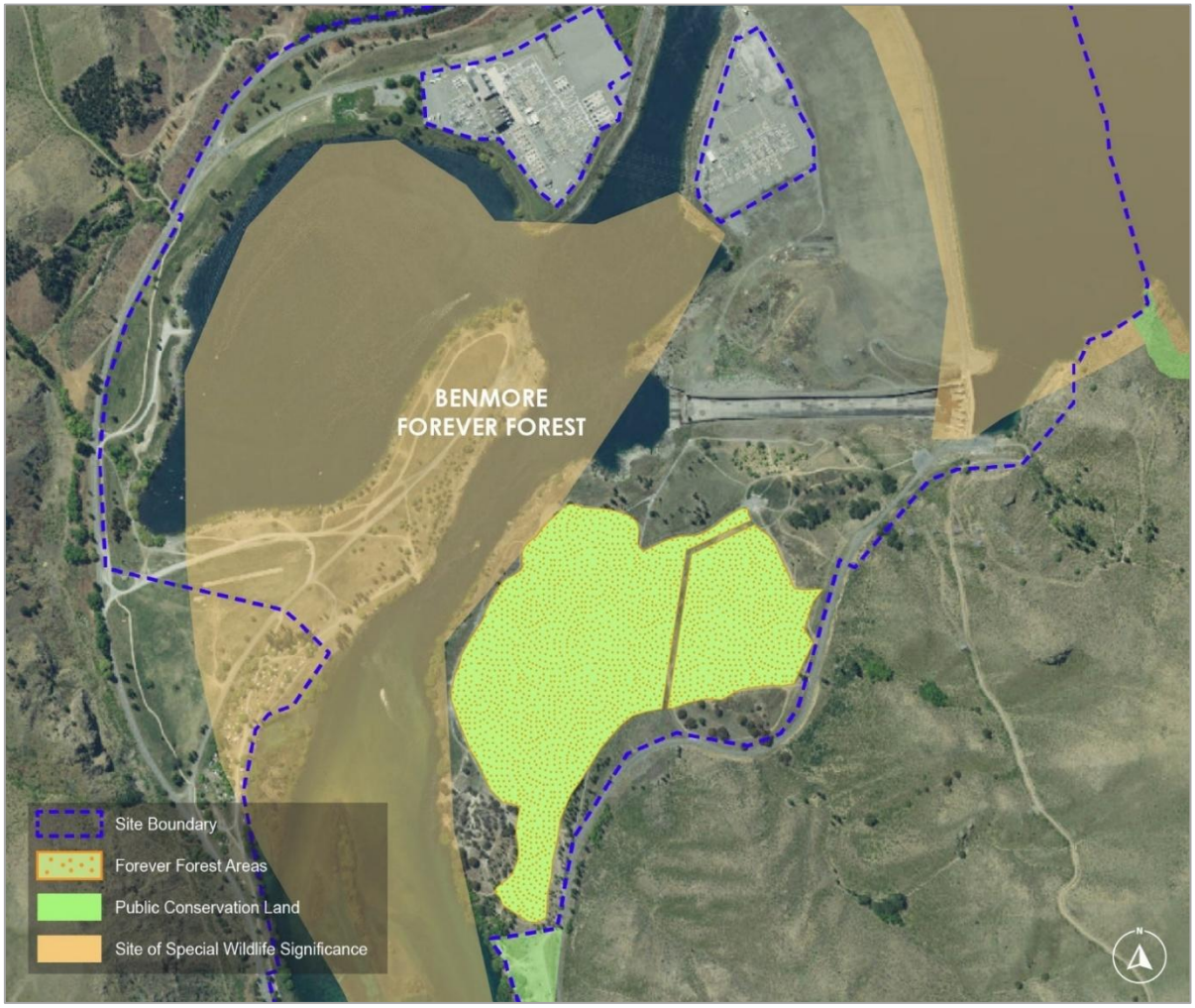


Figure 2: Benmore Forever Forest sites with known biodiversity areas of importance shown

3.2.1 INTERFACE WITH NATURE

No critical biodiversity values are identified within the Benmore forestry site boundary, which is located south of the Benmore hydro station. Surrounding the western boundary of the forestry site is Lake Benmore, a Site of Special Wildlife Significance (DOC), with notable wetland areas to the south. This designation highlights the lake's importance for wildlife, particularly waterbirds, due to the presence of shallow margins, mudflats, and braided river tributaries. Immediately south of the site is Briar Gully Camping Ground (Public Conservation Land) administered by DOC, and Loch Laird Camping Ground on the western bank of Lake Benmore.

3.3 AVIMORE

LOCATION:	Canterbury
TYPE:	Exotic plantation forest
SPECIES:	Pinus attenuata
YEAR ESTABLISHED:	2020
FORESTRY AREA:	11.1 ha
TRANSITION TO NATIVE:	To be determined in 2025
PROXIMITY TO CRITICAL BIODIVERSITY:	Within 2km of site boundary

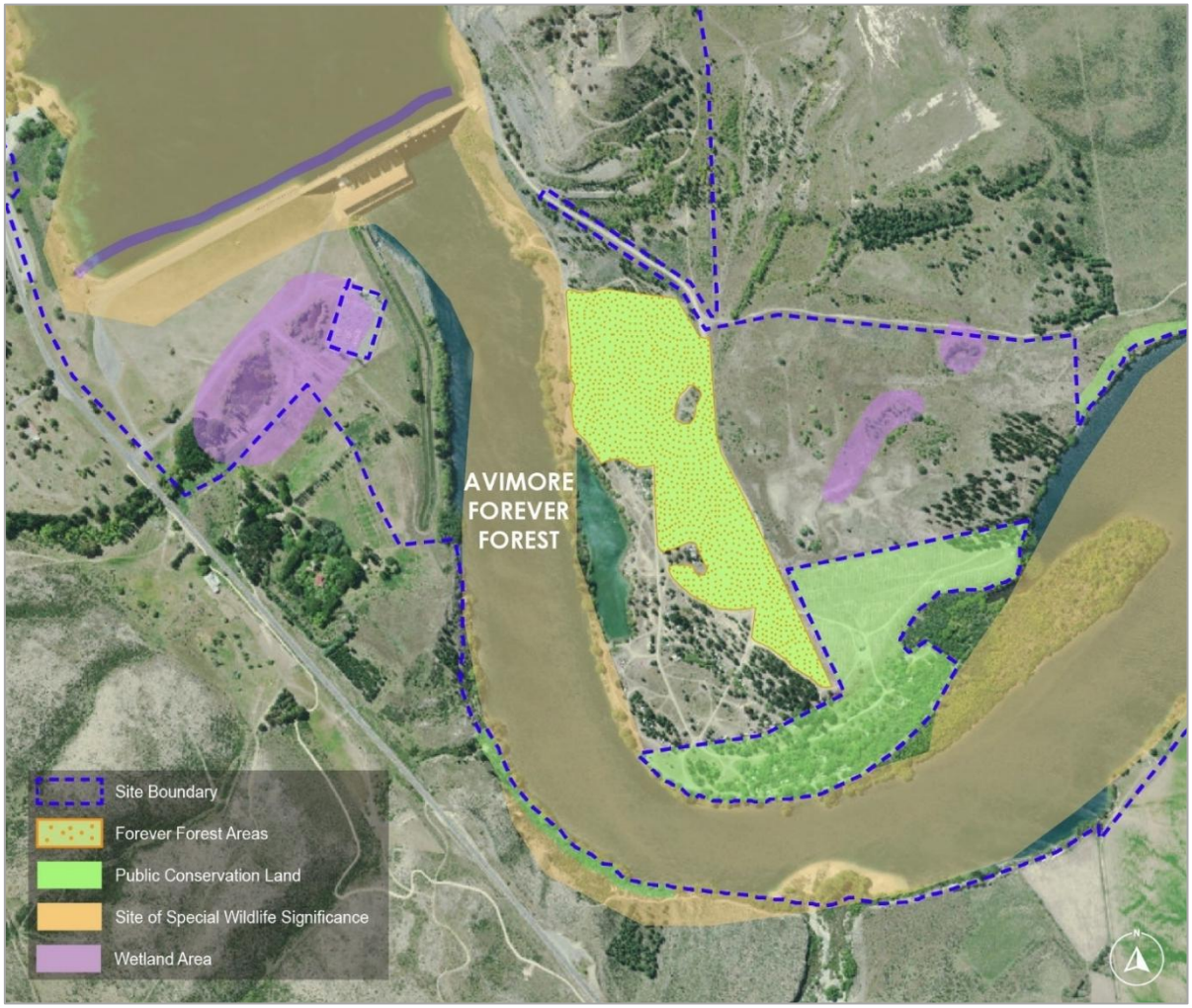


Figure 3: Avimore Forever Forest sites with known biodiversity areas of importance shown

3.3.1 INTERFACE WITH NATURE

No critical biodiversity values are identified within the forestry site boundary. Surrounding the western boundary of the site is Lake Avimore, a Site of Special Wildlife Significance (DOC), with notable wetland areas surrounding the site. Like Benmore, this designation highlights the lake's importance for wildlife, particularly its diversity of waterbirds, including the Nationally Vulnerable Great Crested Grebe. Fisherman's Bend Camping Ground is located to the immediate south of the site, administered by DOC.

3.4 HOOK BUSH

LOCATION:	Canterbury
TYPE:	Mixed forestry, predominantly exotic
SPECIES:	Pinus attenuata (42.6 ha), Redwood (53.3 ha), Natives (8 ha)
YEAR ESTABLISHED:	2022
FORESTRY AREA:	103.9 ha
TRANSITION TO NATIVE:	Yes, within 50-60 years
PROXIMITY TO CRITICAL BIODIVERSITY:	Within 2km of site boundary

Figure 4: Hook Bush Forever Forest sites with known biodiversity areas of importance shown

3.4.1 INTERFACE WITH NATURE

No critical biodiversity values are identified within the forestry site boundaries at present. However, Meridian is currently finalising a QEII covenant for the pre-1990 native area that sits in the middle of the site. Meridian inherited this obligation to covenant when they bought the site The Site is bordered to the west by Mount Studholm Conservation Area, Gunn Bush Conservation Area, and Hook Bush Conservation Area, all areas of special wildlife significance. These areas are ecologically significant in the Waimate District, containing significant remnant areas of lowland native forest. Seven QEII covenants surround the site to the north, south, and east. There is also Brown Trout spawning habitat to the north.

3.5 KANES ROAD

LOCATION:	Otago
TYPE:	Mixed forestry, predominantly exotic
SPECIES:	Pinus attenuata (196.6 ha), Macrocarpa (13.8 ha), Natives (6 ha)
YEAR ESTABLISHED:	2023
FORESTRY AREA:	216.4 ha
TRANSITION TO NATIVE:	Yes, within 50-60 years
PROXIMITY TO CRITICAL BIODIVERSITY:	Within 2km of site boundary

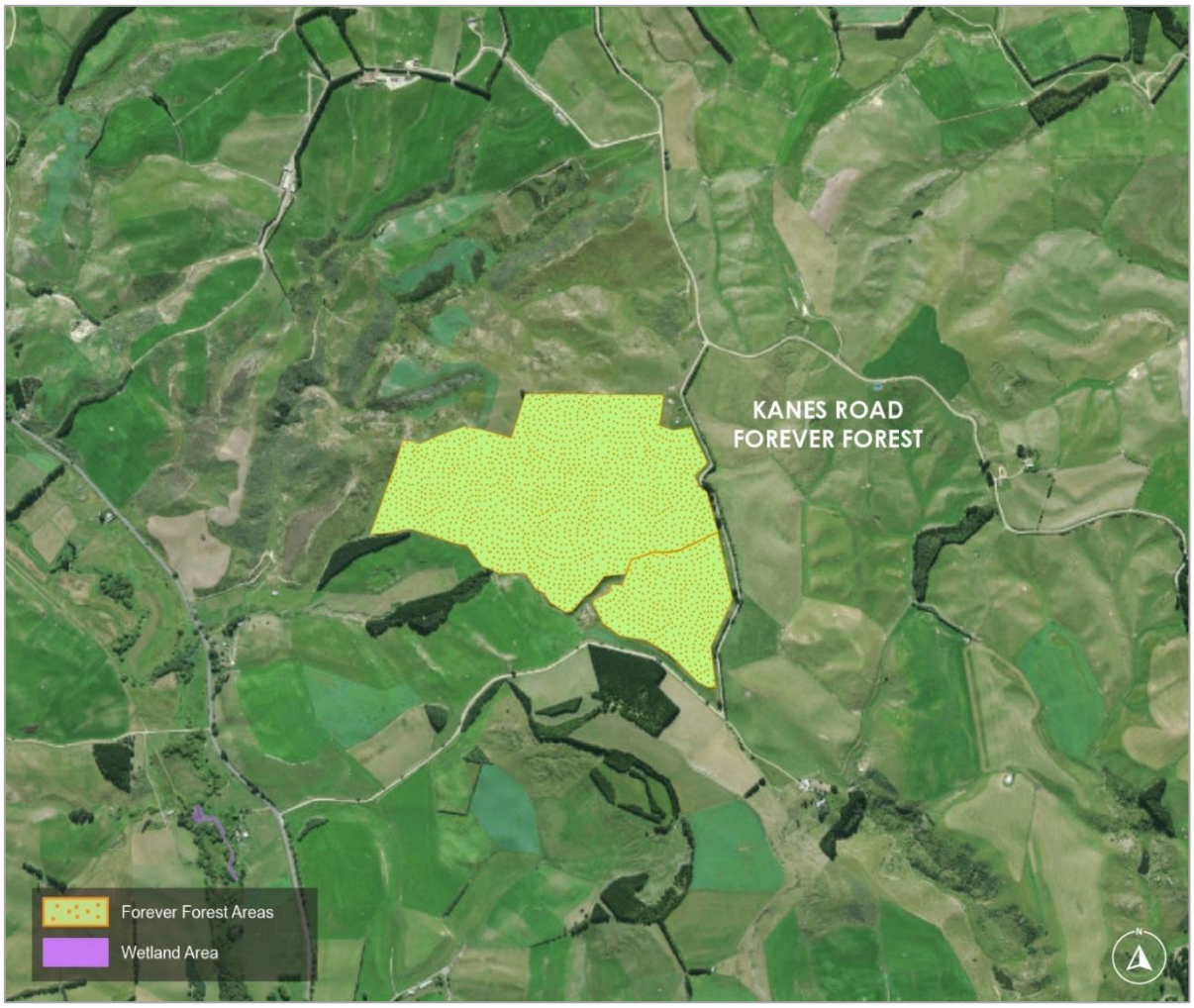


Figure 5: Kanes Road Forever Forest sites with known biodiversity areas of importance shown

3.5.1 INTERFACE WITH NATURE

No critical biodiversity values are identified within the forestry site boundary or within 2km of the forestry site, with the exception of a small wetland area located to the south-west. The adjacent lands are predominantly used for agriculture production and some small blocks of farm forestry.

3.6 KOTUKU

LOCATION:	West Coast
TYPE:	Mixed forestry, predominantly native
SPECIES:	Redwood (54 ha) & Natives (115.5ha)
YEAR ESTABLISHED:	2015 (natural regeneration) 2023 (exotic)
FORESTRY AREA:	169.5 ha
TRANSITION TO NATIVE:	Yes, within 50-60 years
PROXIMITY TO CRITICAL BIODIVERSITY:	Within forestry site boundary

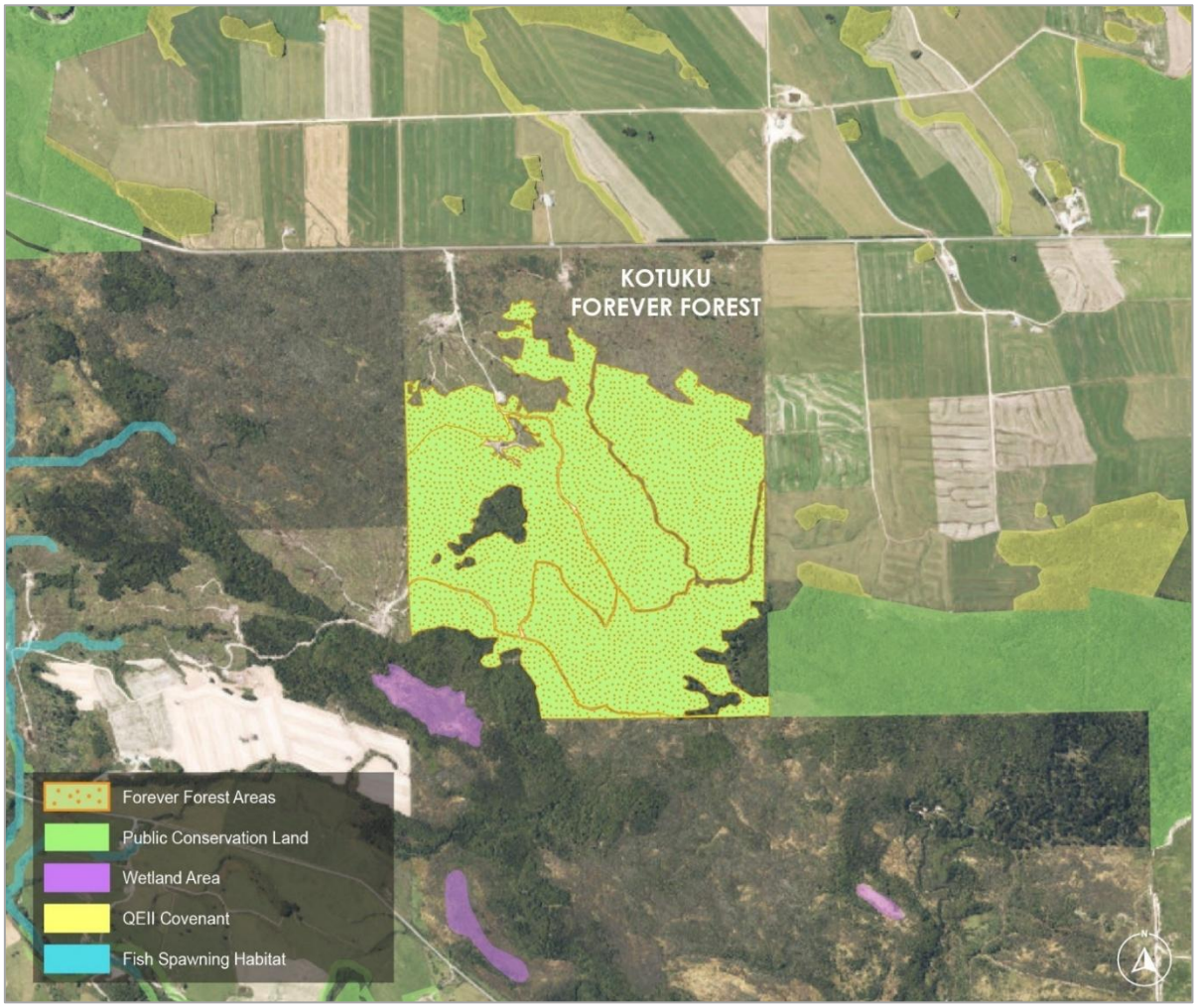


Figure 6: Kotuku Forever Forest sites with known biodiversity areas of importance shown

3.6.1 INTERFACE WITH NATURE

Within the forest site boundary at the south-western corner, is a notable wetland area. This is surrounded by remnant native forest, not included in carbon forestry operations. Dwarf Galaxias fish spawning habitat is found to the west of the site. The site is surrounded by a number of Public Conservation Land areas and QEII covenants, including Bell Hill Farm Conservation Land, Arnolds River Conservation Land, Moana Scenic reserve, and Deep Creek Ecological Area. These areas contain large remnant native forest ecosystems, including podocarp forests, beech forests, and wetlands.

3.7 MARUIA

LOCATION:	Tasman
TYPE:	Mixed native and exotic forestry
SPECIES:	Native (25.6 ha), Redwood (36.3 ha), Eucalyptus (11.7 ha)
YEAR ESTABLISHED:	2006 (natural regeneration) 2021 (exotic)
FORESTRY AREA:	73.6 ha
TRANSITION TO NATIVE:	Yes, within 50-60 years
PROXIMITY TO CRITICAL BIODIVERSITY:	Within 2km of site boundary

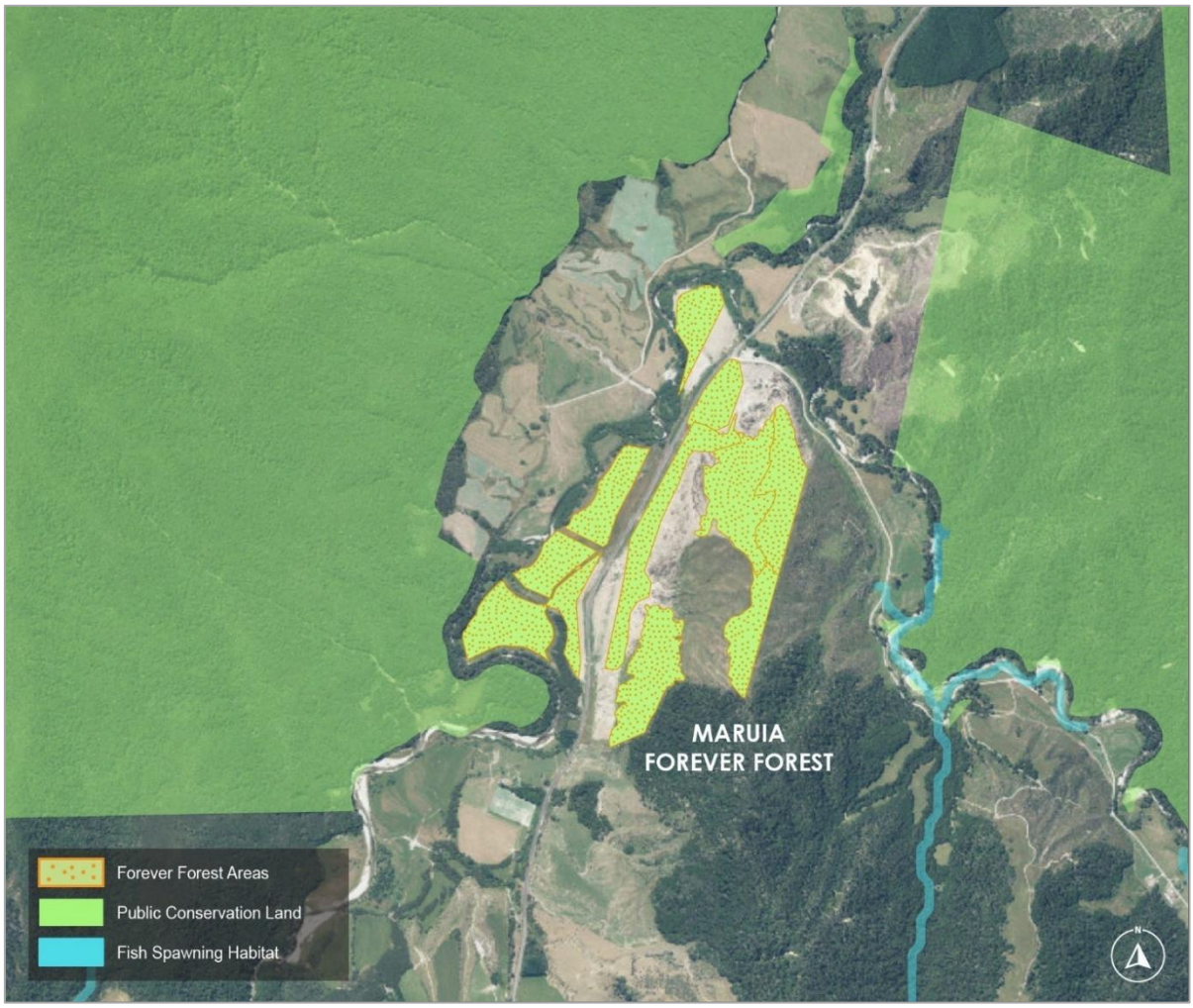


Figure 7: Maruia Forever Forest sites with known biodiversity areas of importance shown

3.7.1 INTERFACE WITH NATURE

No critical biodiversity values are identified within the forestry site boundaries. The forestry site is surrounded by Public Conservation Lands. To the immediate east of the site is Rappahannock River Conservation Area, and to the immediate west is the Warwick River Conservation Area. In the reaches to the east of the site, northern flathead Galaxias fish spawning habitat is found and Koaro fish spawning habitat to the south.

3.8 RUATAPU

LOCATION:	West Coast
TYPE:	Mixed native and exotic forestry
SPECIES:	Native (108.8 ha), Alder (97.4 ha), Redwood and Douglas Fir (4.1 ha)
YEAR ESTABLISHED:	1992 (natural regeneration), 2024 (exotic)
FORESTRY AREA:	210.3 ha
TRANSITION TO NATIVE:	Yes, within 50-60 years
PROXIMITY TO CRITICAL BIODIVERSITY:	Within forestry site boundary

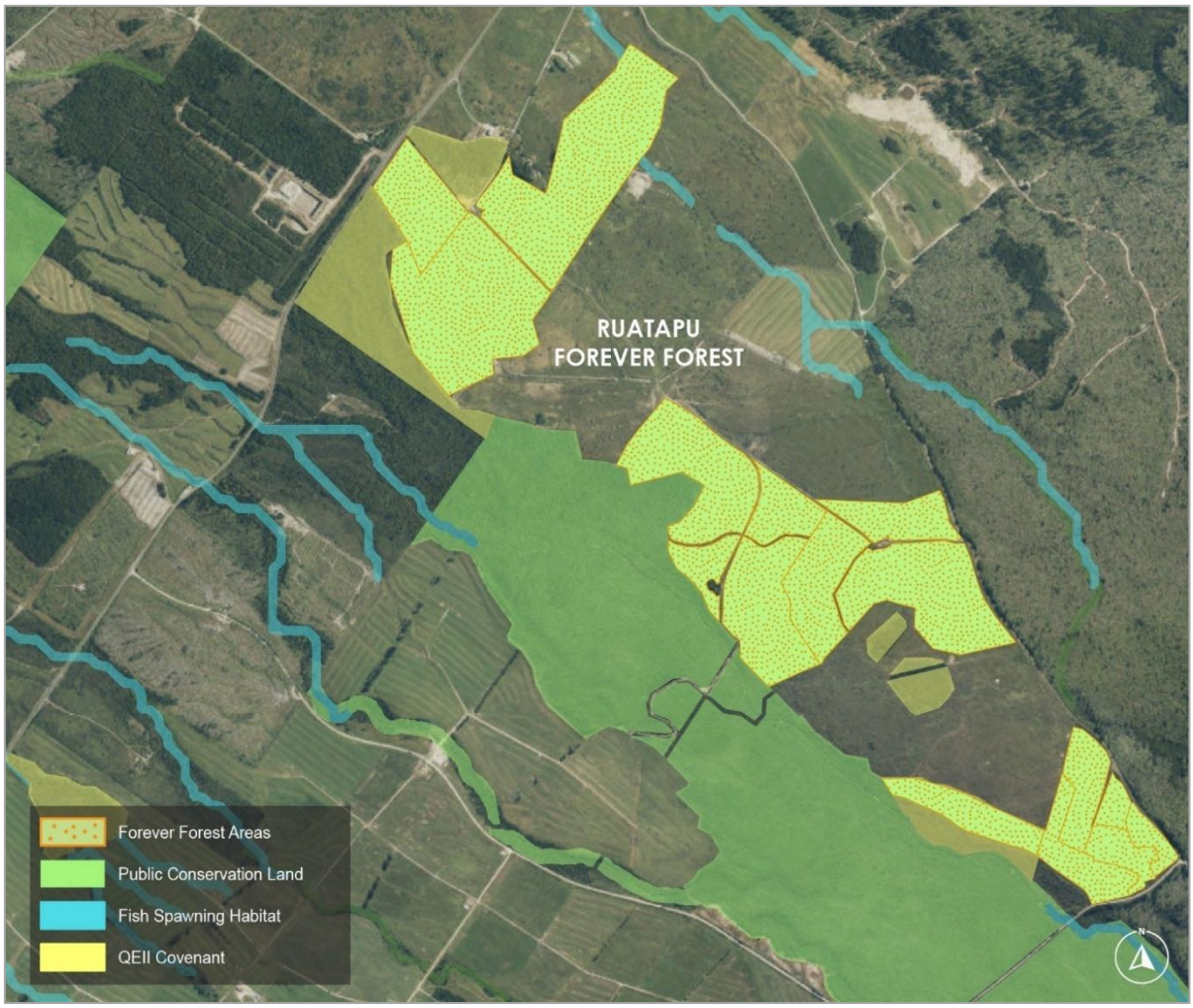


Figure 8: Ruatapu Forever Forest sites with known biodiversity areas of importance shown

3.8.1 INTERFACE WITH NATURE

Two QEII covenant areas exist within the forest site boundary, covering remnant native forestry. Giant Kokopu fish spawning habitat and Redfin Bully fish spawning habitat is also found in waterways crossing the northern extent of the site. The site is located adjacent to Woolhouse Creek Conservation Area and Totara - Mikonui Forest Conservation Area to the South, and Butlers Conservation Area to the North. Totara Lagoon Wildlife Management Reserve is located to the immediate west of the forestry site and contains numerous notable wetland areas.

3.9 TE KOAWA

LOCATION:	Southland
TYPE:	Mixed native and exotic forestry
SPECIES:	Native (69.6 ha) Pinus Attenuata (57.3 ha)
YEAR ESTABLISHED:	1992 (natural regeneration), 2024 (exotic)
FORESTRY AREA:	126.9 ha
TRANSITION TO NATIVE:	Yes, within 50-60 years
PROXIMITY TO CRITICAL BIODIVERSITY:	Within forestry site boundary

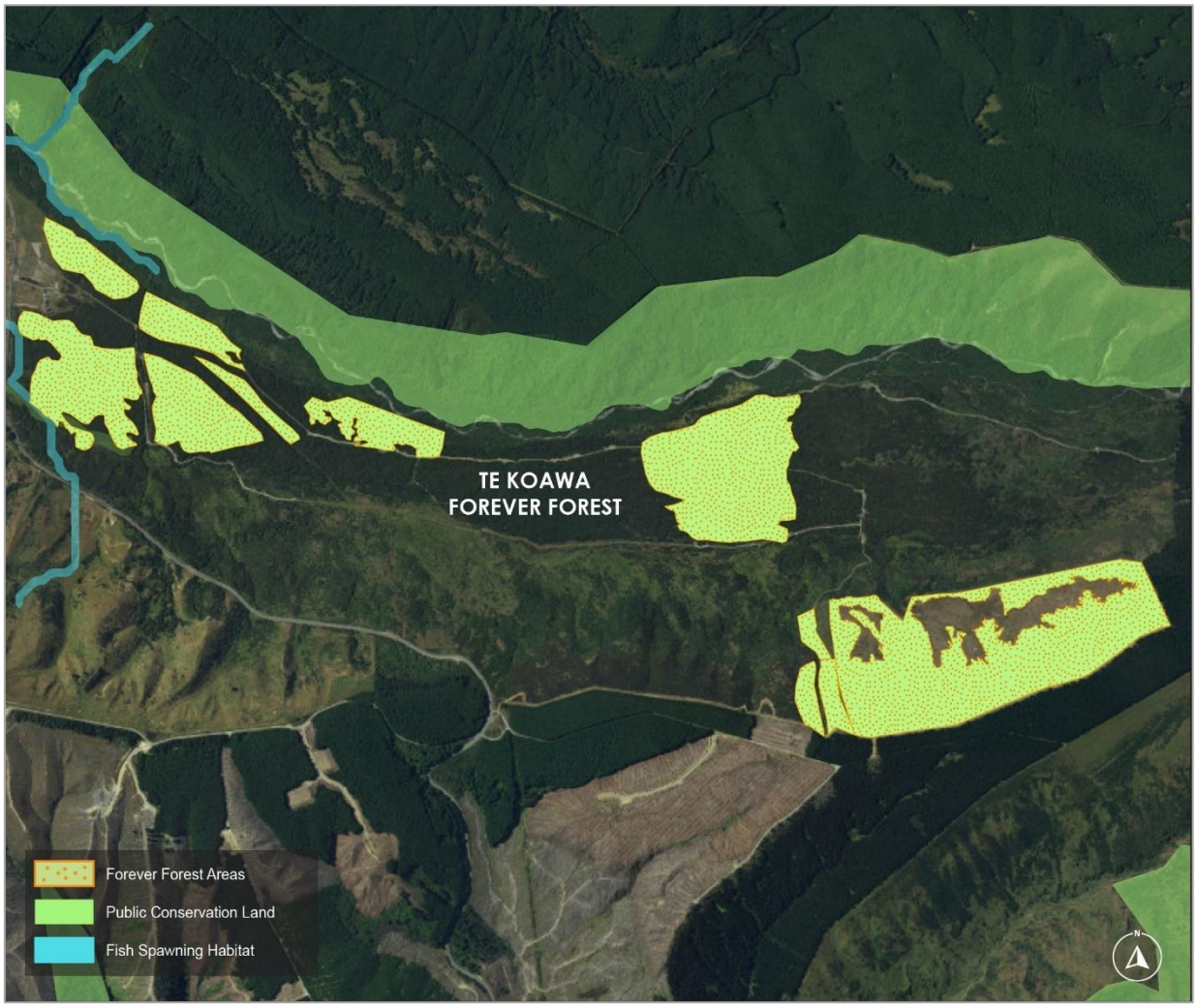


Figure 9: Te Kōawa Forever Forest sites with known biodiversity areas of importance shown

3.9.1 INTERFACE WITH NATURE

The Jericho Stream Conservation Covenant area intersects the western area of the site where native regeneration is being supported. Within the site boundary is Rainbow Trout fish spawning habitat and Brown Trout fish spawning habitat. The site is bordered to the north by the Redcliffe Creek Marginal Strip and is located adjacent to the Takitimu Conservation Area and Robertson FHF Acquisition Conservation Area. To the south the site is neighbouring the Jericho Forest Conservation Area.

3.10 OREPUKI

LOCATION:	Southland
TYPE:	Native forest
SPECIES:	Native
YEAR ESTABLISHED:	(Unknown)
FORESTRY AREA:	41.7 ha
TRANSITION TO NATIVE:	Currently permanent native
PROXIMITY TO CRITICAL BIODIVERSITY:	Within 2km of site boundary

Figure 10: Orepuki Forever Forest sites with known biodiversity areas of importance shown

3.10.1 INTERFACE WITH NATURE

No critical biodiversity values identified within the forestry site boundaries. Within 2km to the east of the forestry site is Longwood Forest Conservation Area. The area is recognised for its diverse native flora and fauna, with over 100 native plant species recorded. Notable species include the threatened rōhutu, and the nationally vulnerable southern rātā. The other adjacent lands are predominantly used for agriculture production with significant pockets of remnant and regenerating native bush.

3.11 MONKS

LOCATION:	Wellington
TYPE:	Native forest
SPECIES:	Native
YEAR ESTABLISHED:	(Unknown)
FORESTRY AREA:	29.4 ha
TRANSITION TO NATIVE:	Currently permanent native
PROXIMITY TO CRITICAL BIODIVERSITY:	Within forestry site boundary

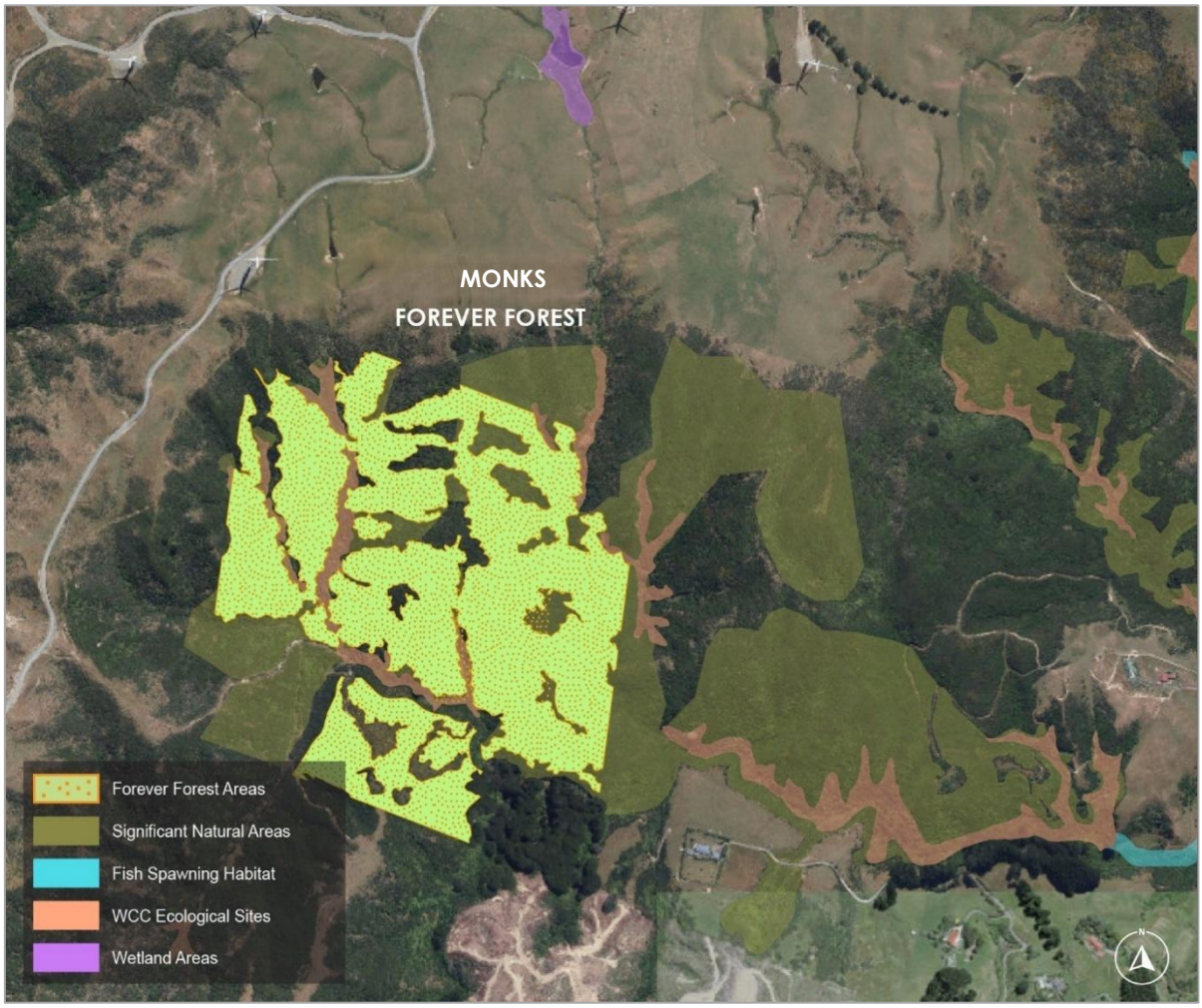


Figure 11: Monks Forever Forest sites with known biodiversity areas of importance shown

3.11.1 INTERFACE WITH NATURE

The forestry site is surrounded by Makara Stream - Terewhiti Station Ecological Site of significance and is identified in Schedule 8 of the Proposed District Plan as a Significant Natural Area. To the northeast of the site is Johnnys Bush Conservation Covenant Area. In the tributaries of the Makara Stream is Brown Trout, Redfin Bully, Banded Kokopu, and Giant Kokopu fish spawning habitat.

The forestry site is also located within the 'Capital Kiwi' project area, with an extensive mustelid trap network operating across the site to support the restoration of a large-scale kiwi population within the Wellington Region.

3.12 WEST WIND

LOCATION:	Wellington
TYPE:	Native forest
SPECIES:	Native (4.4 ha)
YEAR ESTABLISHED:	(Unknown)
FORESTRY AREA:	4.4 ha
TRANSITION TO NATIVE:	Currently permanent native
PROXIMITY TO CRITICAL BIODIVERSITY:	Within forestry site boundary

Figure 12: West Wind Forever Forest sites with known biodiversity areas of importance shown

3.12.1 INTERFACE WITH NATURE

The forestry site is surrounded by a Wellington City Council Ecological Site of Significance (ECNZ Bush Reserve) and is identified in the Proposed District Plan as a Significant Natural Area. To the immediate east of the forestry site is the Quartz Hill Forest remnant ecological sites, identified as a Significant Natural Area in the Proposed District Plan and protected in part by a QEII covenant. To the west of the site, the Makara Conservation Covenant Area run adjacent to the coastline, containing Opua Bay and Opua Stream Gully ecological sites and notable wetland areas. Redfin Bully and Brown Trout fish spawning habitat is found in proximity to the forestry site. Like Monks, the forestry site is located within the Capital Kiwi project area.

3.13 INTERFACE WITH NATURE OVERVIEW

Table 3: Meridian Energy Forever Forest sites interface with known biodiversity areas of importance as of April 2025

Site Proximity		Fish Habitat	Wetland Area	Covenant Area	Conservation Area	Significant Natural Area
MLC	*Within Site Boundary*	✓	✓	-	-	✓
	Within 2km of Boundary	✓	-	✓	✓	-
Benmore	*Within Site Boundary*	-	-	-	-	-
	Within 2km of Boundary	✓	✓	-	✓	✓
Avimore	*Within Site Boundary*	-	-	-	-	-
	Within 2km of Boundary	✓	✓	-	✓	✓
Hook Bush	*Within Site Boundary*	-	-	-	-	-
	Within 2km of Boundary	-	✓	✓	✓	✓
Kanes Rd	*Within Site Boundary*	-	-	-	-	-
	Within 2km of Boundary	-	✓	-	-	-
Kotuku	*Within Site Boundary*	-	✓	-	-	-
	Within 2km of Boundary	✓	-	✓	✓	-
Maruia	*Within Site Boundary*	-	-	-	-	-
	Within 2km of Boundary	✓	-	-	✓	-
Ruatapu	*Within Site Boundary*	✓	-	✓	-	-
	Within 2km of Boundary	✓	✓	-	✓	-
Te Kōawa	*Within Site Boundary*	✓	-	-	✓	-
	Within 2km of Boundary	-	-	-	✓	-
Orepuki	*Within Site Boundary*	-	-	-	-	-
	Within 2km of Boundary	-	-	-	✓	-
Monks	*Within Site Boundary*	-	-	-	-	✓
	Within 2km of Boundary	✓	✓	-	-	✓
West Wind	*Within Site Boundary*	-	-	-	-	✓
	Within 2km of Boundary	✓	✓	✓	✓	✓

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