

WAIOHOTU FOREST

Torlesse Pine Company Ltd

FSC® Forest Management Plan

For the period April 2023 – April 2028



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1. What is this Plan?

About this Plan

This **specific** forest management plan provides details about Waiohotu Forest.

It is to be used in conjunction with the **standard** forest management plan, which outlines the typical management applied to the Forest Stewardship Council (FSC®) Group Scheme estate forests.

Where Waiohotu Forest is managed in a different way than described in the standard forest management plan, this is detailed within this plan, which takes precedence.

Foundation Principle

Torlesse Pine Company Ltd (TPC) is committed to adopting the Forest Stewardship Council (FSC®) Principles and meeting the FSC® Criteria relevant to forest management.

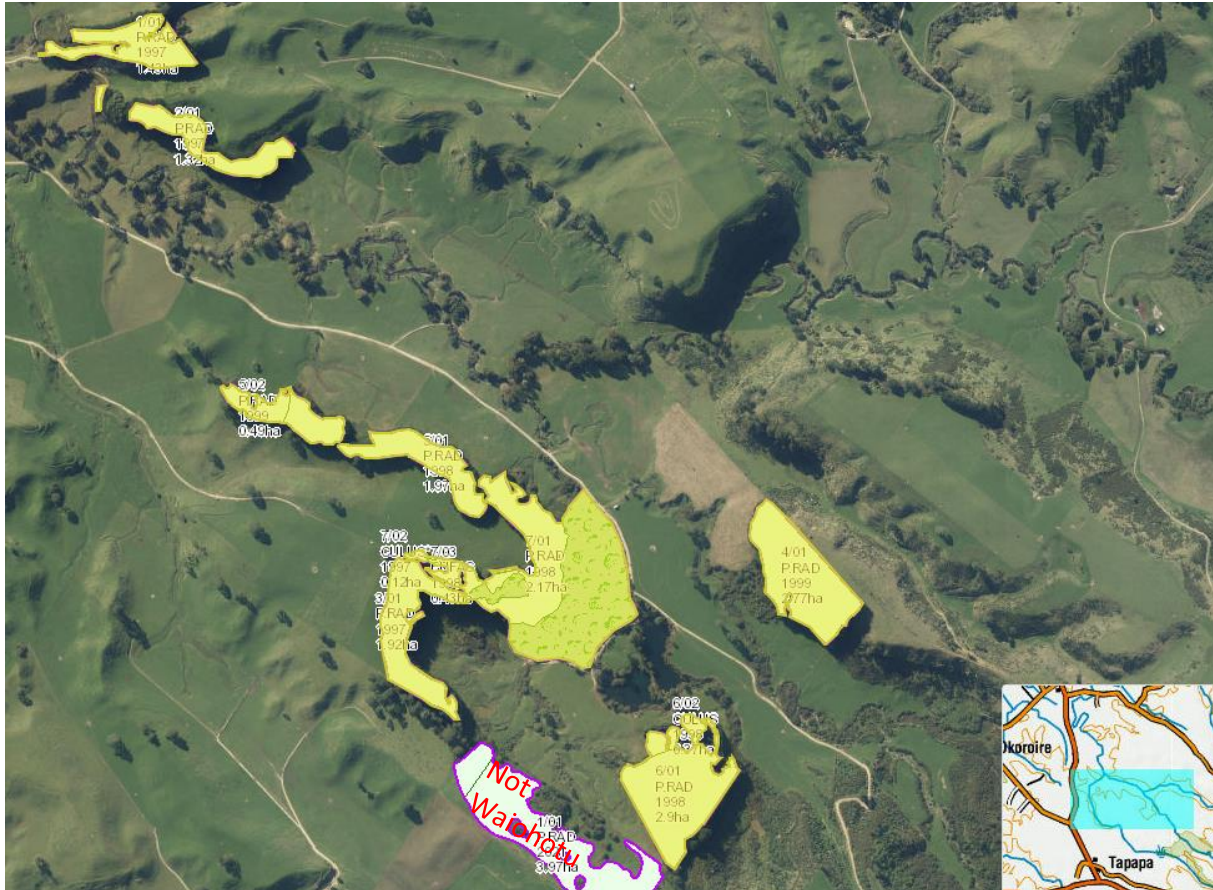
TPC is committed to the PF Olsen FSC Group Scheme **NC-FM/COC-000190** processes and associated documents.

TPC maintains FSC® certification, to ensure that their forest is managed in an environmentally appropriate, socially beneficial and economically viable manner and to obtain the best access opportunities to the local processing market which is seeking to source FSC® certified logs.

2. The Forest Land

Location and access

Waiohotu Forest is a 15.89 ha forest located in the Waikato region.



Distances from forest to log markets

Potential Market or Export Port	Distance from Forest	Log market
Port of Tauranga	50	Export
Waipa Sawmill	45	Domestic
Kinleith	35	Pulp

Topography

Waiohotu forest is flat/rolling to moderately steep. Ground based, and possibly small hauler log extraction methods will be utilised at harvesting.

Altitude is 50 to 150 m.

Soils

Soils are predominantly yellow-brown loams and suitable for production forestry. The forest has approximate Land Use Classification percentages as follows:

- Ile3 10%
 - IIs1 10%
 - IIIw1 10%
 - VIe1 50%
 - VIIe6 20%
-

Climate

The average rainfall at nearby Tirau is about 1,300 mm/yr and is relatively well distributed during the year.

The mean annual temperature is around 13.8°C. Frosts are common with around 50 ground frosts per year.

Legal ownership

The legal description of the forest land is:

Pt Lot 1 & Pt Lot 3, DPS 7267, Whaitikuranui 2E2 West 3C, Blocks III & IV, Patetere SD XV, COT 22C/145 and 53B/621, Valuation #: 05411-05500 and 05411-05200

The farm is freehold over which TPC holds a registered forestry right.

3. The Ecological Landscape

Ecological District Waiohotu Forest is located within the Hinuera and Tokoroa Ecological District (ED), in the Waikato Ecological Region. The District has:

The forest is located on a dairy farm with limited ecological values. A small area of indigenous trees is located in the Pond Sidling area of about half a hectare. It has some tawa and rewarewa, but due to its small size and fragmentation from other indigenous areas it is of low ecological value. It is however protected.

A small raupo dominated wetland and dammed pond are also adjacent to Pond Sidling. These areas, while small, represent a rare remnant and are protected by the farm owner. Dabchick have been observed in the pond.

A clean spring fed stream runs through the property. It has been fenced from cattle and some indigenous riparian plants established. This is managed by the farm owner and is not part of Waiohotu Forest.

FSC requirement: Ecological District

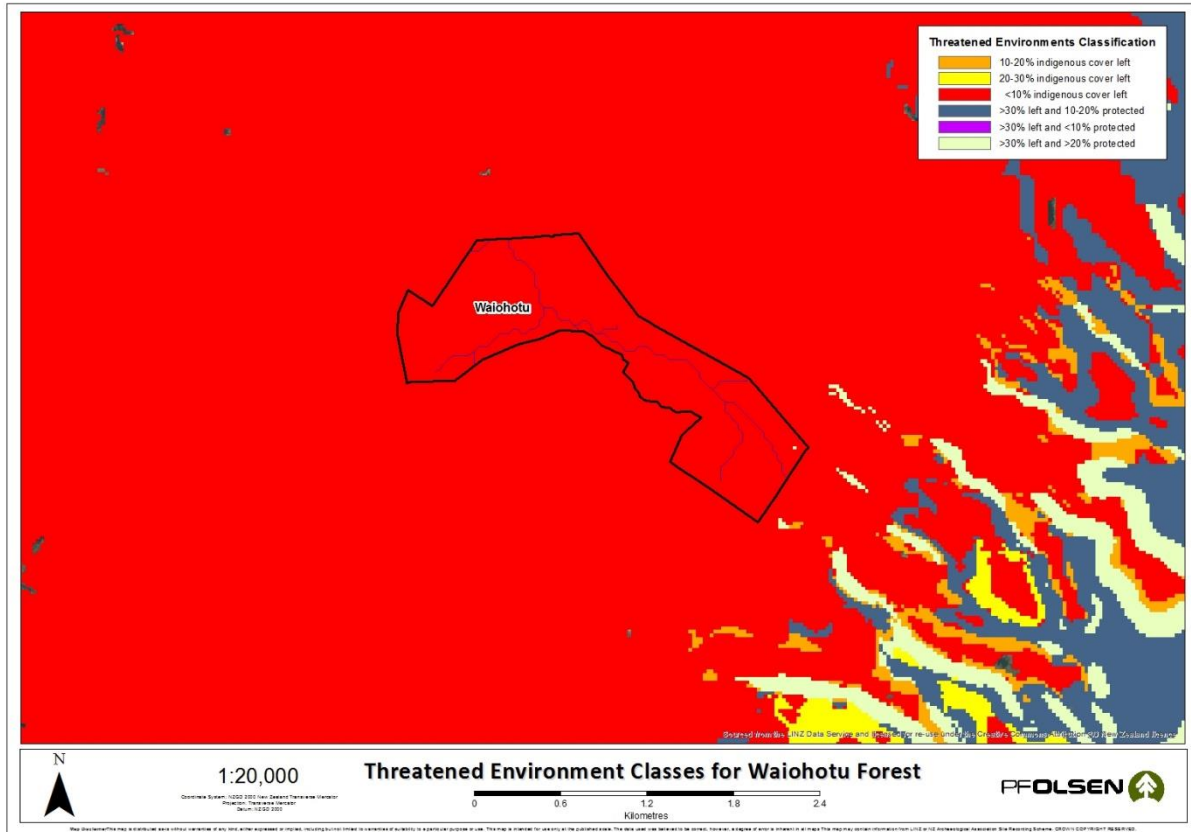
Waiohotu Forest falls within the Hinuera and Tokoroa Ecological Districts (EDs). Waiohotu Forest is required to have a 10% minimum of the working forest area (productive area + plantation forest infrastructure) set aside as reserves, by Ecological District. Where Ecological District boundaries arbitrarily bisect a forest management unit with similar ecological character and landforms, the areas bisected can be considered as one ecological unit. This is applicable to Waiohotu Forest, therefore the forest meets the 10% reserve requirement (as provided for in the guidance note of the NZ FSC Standard).

Reserve areas in Waiohotu Forest by Ecological District

Ecological District	Total Forest Area (ha)	Reserve Area (ha)	Reserve %	Meets FSC?	Reserve Shortfall (ha)
Hinuera	1.41	0.0	27%	YES	N/A
Tokoroa	14.46	4.31		YES	N/A

**Threatened
Environments
Classification**

Waiohotu Forest falls under the Threatened Environments categories of <10% remaining. The remaining indigenous vegetation associated with the forest has been identified and afforded the appropriate protective status.



4. Cultural and Social Aspects

Forest history As a small woodlot, Waiohotu Forest has no history of significance.

Current social profile The predominant land uses surrounding Waiohotu Forest are pastoral and dairy farming. Forestry plantings are scattered throughout the district.

The forest is small and has little effect or relevance to the local community. It does provide an alternative land use and some wind protection for the farm that it is located on.

Historic and archaeological sites The 'Archsite' web resource does not record any known historic sites in Waiohotu Forest, or within 1 km of the forest boundary.

Associations with Tangata Whenua Local Tangata Whenua have been previously consulted and are not concerned with the woodlots due to their small size and low intensity.

Tenure & resource rights There are no current resource consents or Heritage NZ Authorities that apply to Waiohotu Forest.

Neighbours The table in Appendix 2 lists the forest neighbours. Some or all of these parties should be consulted when operations are proposed in forest areas adjacent to their boundaries.

4. Regulations

National Environmental Standards for Plantation Forestry (NES-PF)

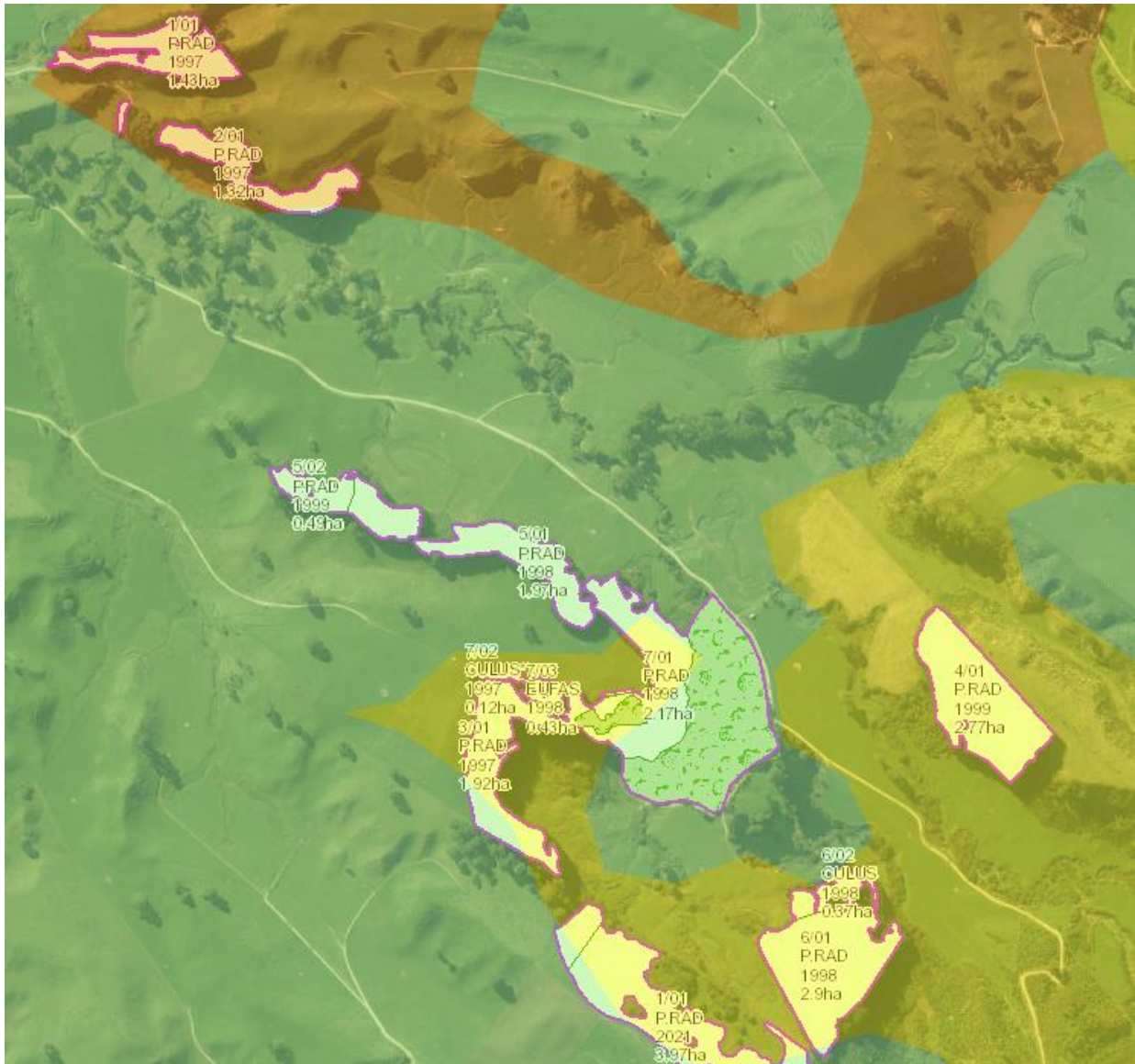
The National Environmental Standards for Plantation Forestry are a Resource Management Act regulation. They have replaced most council rules except where the councils may have more stringent rules in accordance with the regulations. The NES-PF applies to forests of greater than 1 hectare, established for commercial reasons and will be harvested.

The regulations are generally based on the Erosion Susceptibility Classification (ESC) of the underlying land. The following table shows the proportion of each forest ESC.

In general, earthworks will need resource consent in orange ESC zone > 25°, and in the green and yellow ESC zones most operations will be permitted subject to meeting the NES-PF regulations. The ESC coverage of Waiohotu is shown in Map 4.

Productive plantation area (ha) within each ESC Class

Forest	Low ESC	Moderate ESC	High ESC	Total
Waiohotu	3.99 ha	9.15 ha	2.75 ha	15.89 ha



Council RMA Plans

Waiohotu Forest is within the South Waikato District and the Waikato Region.

The South Waikato District Council and the Waikato Regional Council have their own planning documents and associated rules, developed through public process. Neither the Waikato Regional Council plans nor the South Waikato District Council plan have rules for forestry that are more stringent than the NES-PF.

Consents & authorities held

There are no current resource consents or Heritage NZ authorities that apply to Waiohotu Forest.

Emissions Trading Scheme

Forests in New Zealand are governed by rules related to New Zealand's Kyoto commitments to reduce the nation's carbon footprint and contribution to associated climate change.

The forest was planted on "Kyoto compliant" land that was not forest as at 31st December 1989 (Waiohotu Forest was established between 1997 and 1999). These forest areas have not been registered to participate in the NZ Emissions Trading Scheme and are not subject to the accrual of emissions credits and liabilities under that scheme.

5. How We Manage Environmental Risk

Assessment of environmental risks

As a broad assessment over Waiohotu Forest, the **potential** for adverse impacts across the range of operations and forest sites is indicated in the Environmental Assessment matrix below.

- At risk are the environmental values/issues
- The level of potential risk is rated high 'H', medium 'M' or low 'L', or not applicable 'NA'
- These ratings indicate the level of care required to minimise the potential for adverse effects, which translate into performance standards in prescriptions.

Risk assessment for key forest management activities

Forestry Operational Activities	Environmental Values / Issues											
	Erosion & Sediment Control	Water Quality	Soil Conservation & Quality	Air Quality	Aquatic Life	Indigenous Vegetation	Historic & Cultural Values	Landscape & Visual Values	Neighbours	Public Utilities	Recreation Values	Threatened Species
Harvesting	H	H	H	NA	L	H	H	L	H	L	L	M
Earthworks	H	H	H	NA	L	L	H	L	L	L	L	L
Slash Management	L	L	L	NA	L	L	NA	L	L	L	L	L
Stream Crossings	H	H	L	NA	H	L	NA	NA	L	L	H	NA
Mechanical Land Preparation	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	L
Burning	L	L	L	H	L	L	NA	H	H	L	H	L
Planting	NA	NA	NA	NA	NA	L	H	L	L	L	L	L
Tending	NA	L	NA	NA	L	L	NA	L	L	L	L	L
Fertiliser Application	NA	H	NA	L	H	L	L	NA	L	L	L	M
Agrichemical Use	NA	H	L	L	H	H	L	L	H	L	H	H
Oil & Fuel Management	NA	H	L	NA	H	L	L	NA	L	NA	L	L
Waste Management	NA	L	NA	L	L	L	L	L	L	NA	L	L
Forest Protection	NA	L	NA	L	L	L	L	L	L	NA	L	NA

Infrastructure damage or service disruption

Waiohotu Forest has no public access tracks within the forest and no other infrastructure/community service values.

Pests and diseases

Pests and diseases are managed according to statutory obligations and best practices as identified by scientific research and past experience, with the type and intensity of treatment (if any) subject to what is at risk and the age of trees.

Fire

The forest is within the Ngā Tai ki te Puku Emergency NZ region for forest fire management. Fire plans contain additional key information regarding the protection of land and management of fires.
[Fire Plan for Waikato, Ngā Tai ki te Puku, 2021 – 2024](#)

Crop insurance

Not Publicly Available

Public liability insurance

Not Publicly Available

6. Commercial Plantation Estate

Forest area The net stocked areas have been measured from mapping produced by PF Olsen.

Forest Area (ha)

Total Forest Area (ha)	Net-stocked area (ha)	Cutover (ha)	Awaiting Planting (ha)	Reserves (ha)
20.2	15.89	0	0	4.31

Current crop Waiohotu Forest is predominantly a radiata pine forest, *Cupressus lucitanica* and *Eucalyptus fastigata*.

Treestocks established in the forest are summarised below.

Species	Area (ha)	Area (%)	Year Planted
<i>Pinus radiata</i>	15.0	94.3	1997-1999
<i>Cupressus lucitanica</i>	0.5	3.1	1997/1998
<i>Eucalyptus fastigata</i>	0.4	2.5	1998

Productivity indices

Forest	Site Index (m)	300 Index (m ³)
Waiohotu	36	27.5-32.5

Tending The tending regime executed to date in Waiohotu forest is thinning and pruning.

Tree nutrition The soils are not generally deficient in nutrients for healthy tree growth.

7. Harvesting Strategy

Harvesting strategy

Waiohotu Forest will be harvested as closely as possible to the optimum economic age as practical. This is the age at which the growth in volume and improvement in quality is offset by the cost to maintain the forest for another year. The optimum rotation length for radiata pine is expected to be within 25 to 30 years, while the optimum rotation lengths for eucalyptus and cypresses is 20 – 40 years and 35+ years, respectively.

Of importance in this assessment is the actual growth of the tree crop, the market for the wood at the time of the harvest and the outlook for the near future. These factors, together with logistics such as the availability of suitable harvest contractors and the requirements of resource consents, will determine the actual harvest time.

Harvesting is not planned to take place during the 5-year period of this management plan, although this may change depending on the markets, growth (possible inventory) and the land owners motivations.

Infrastructure

The required roading and other infrastructure work for harvesting will be detailed in the Annual Cutting Plan. Forest infrastructure includes roads, tracks, landings, bridges and culverts.

During harvest planning upgrades of existing roads/culverts/bridges and planning for new roads, landings and crossings will be identified and scheduled. The type of infrastructure designed and constructed is influenced by topography, harvest duration and intensity of use.

Once established, these infrastructural assets require maintenance.

8. Indigenous Biodiversity

Protected ecosystems

No work is planned in the small terrestrial and wetland ecosystems (except possum control).

The table below details the areas in each protection category within Waiohotu Forest, categorised by protective function.

Protected ecosystem and reserve areas by protection category (ha)

Protective Function	Protective Category		Total Area
	Limited	Passive	
Terrestrial Ecosystem		0.3	0.3
Wetland Ecosystem	4.0		4.0
Total Area (ha)	4.0	0.3	4.3

Threatened species

To date, the only rare species sighted within Waiohotu forest has been two sightings of Dabchicks within the wetland reserve. These birds are classified as Nationally Vulnerable.

Stream protection and riparian setbacks

A summary of the stream categories within the Waiohotu Forest is shown below. The total length of waterways within the forest is 5.43 kilometres.

Length of stream by REC class

REC Class	Length (m)	Length (km)
VSmall_Low_Wet_Soft	494.8	0.49
Med_Low_Wet_Soft	923.2	0.92
Large_Low_Wet_Hard	594.8	0.59
Large_Low_Wet_Soft	2,582.8	2.58
Small_Low_Wet_Soft	652.2	0.65
Small_Low_Wet_Hard	177.6	0.18
Total	5,425.4	5.43

Fish

No fish species have been identified from the NES-PF Fish Spawning Indicator tool within Waiohotu Forest. The Freshwater Environments New Zealand indicates that brown trout, long fin eel and Gollum galaxis may be present.

**High
Conservation
Value (HCV)
Forests**

To date, no High Conservation Value Forests have been identified.

9. Other Special Values: Everything but the timber

Recreational usage

The forest is open for legitimate use subject to entry by permit. No current permits have been issued.

Public access roads

There is one public road at the western boundary of the farm, but no forest stands near this location. All signage of roads and tracks must be followed and those using the routes require a permit if there is any intention to access the forest from the road routes or across the farm.

Public road locations are publicly viewable in the Herenga ā Nuku / Walking Access Commission website¹. Any users are expected to abide by the Outdoor Access Code² published by Herenga ā Nuku.

Other special values

In the regional landscape context, Waiohotu Forest and its indigenous ecosystems in combination provide well-defined 'environmental services'. These include:

- Enhanced water quality, and buffering of regionally significant water bodies from agricultural nitrification;
- Soil stabilisation and conservation;
- Providing a buffer against flooding during storms;
- Temperature moderation in waterways for maintenance of aquatic life including threatened native species and world-renowned sports fisheries;
- Enhance wildlife and plant habitat leading to increased biodiversity;
- Expanded habitat opportunities for some declining and or threatened fauna;
- Carbon sequestration and buffering of the effects from a nationally adverse carbon generation footprint.

Some of these environmental services have quantifiable and significant financial value (e.g. nitrogen and carbon).

Over the term of this plan, the regulatory environment will continue to be actively monitored and where possible efforts made to secure the introduction of properly structured market mechanisms to ensure forestry is not disincentivised, relative to other land uses. Other environmental services will continue to be supplied or enhanced based on good corporate citizenship and responsible environmental management.

¹ <https://www.herengaanuku.govt.nz/maps/outdoor-access-maps/>

² <https://www.herengaanuku.govt.nz/knowledge/responsible-behaviour/the-outdoor-access-code-2/>

**Non-Timber
Forest Products**

There are no FSC certified non-timber forest products³ from Waiohotu Forest.

³ In FSC standards, the reference to non-timber forest products is a reference to such products that are able to carry the FSC label. It is not a reference to the presence or absence of other co-products from the forest areas that do not seek to carry the FSC label.

10. Future Planning

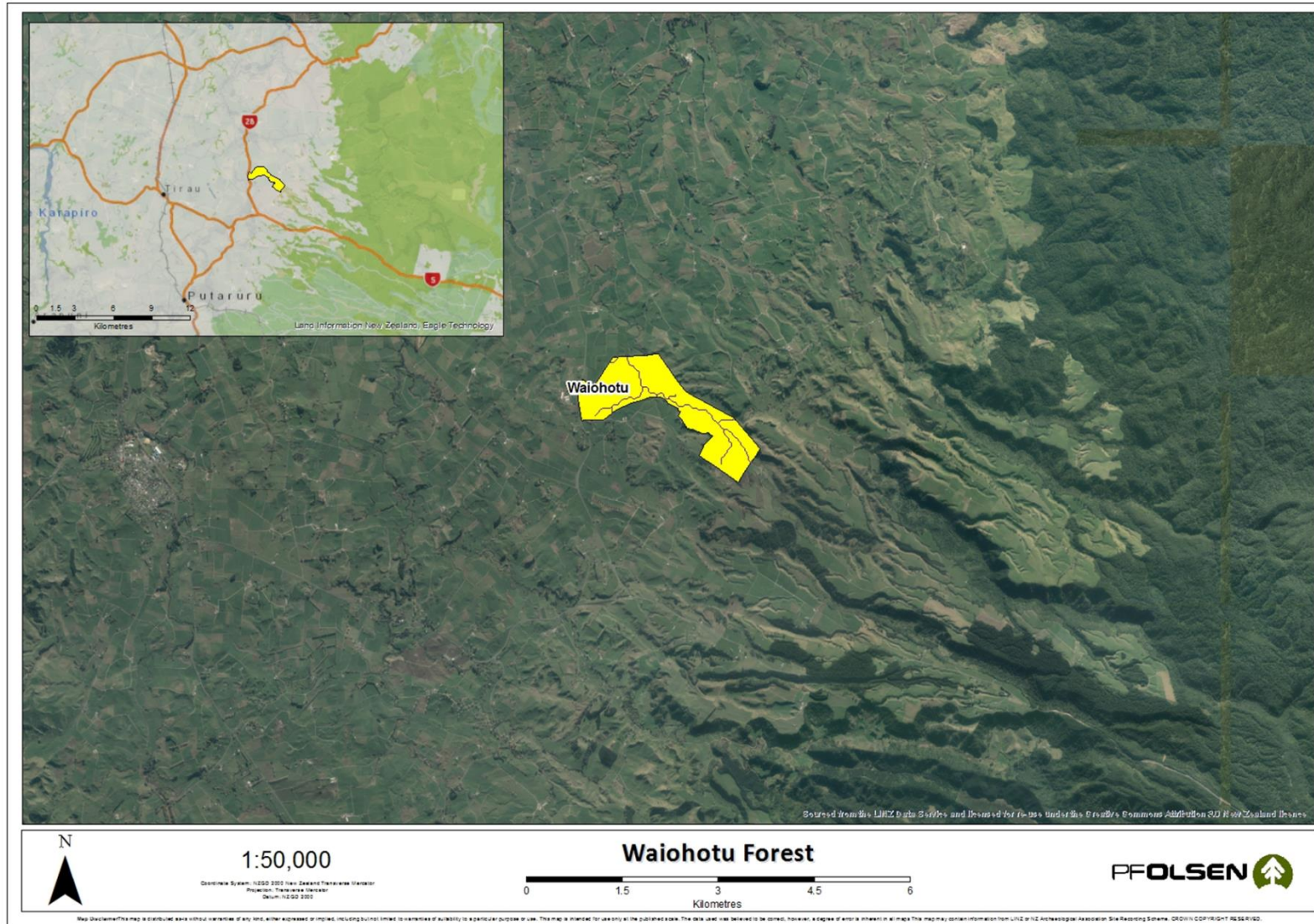
Plan changes & reviews

The next major review date for this plan is July 2028

Minor revisions may be made at any time. Any material changes made will be documented below.

Change	Date	Section/Page

Appendix 1: Forest Location Map



Appendix 2: Forest Neighbours

Not Publicly Available

Appendix 3: Schedule of Ecological Management

Review Date:

Date due	Purpose	Activity	Action detail	Date completed
As required	Animal pest management	Join other regional efforts and document results	Use ground control methods as required. Coordinate operations with the Regional Council and the Department of Conservation. Record Kill returns, RTC (possum) and RTI (rat).	
Ongoing	Flora and Fauna Monitoring	iNaturalist entries	Species and status frequencies (especially new finds) entered by public, crews, operational supervisors.	