



FSC® FOREST MANAGEMENT PLAN

Ponga Silva Central North Island Forests

Ponga Silva Limited

Reporting Period: April 2025 – May 2030

Author
Signature



Author
Name

Sally Moore

Author Role

Environmental Forester

Date

14 March 2025

Reviewed By



Name

Heather Arnold

Role

Environmental Manager

Date

17 March 2025

DISCLAIMER

This document has been prepared by PF Olsen Limited specifically for the purposes stated in the document and is for your information only. PF Olsen Limited has used reasonable endeavours to ensure that the data and any other information in the document including any estimates, quotes, valuations and analyses is based on reliable sources and, where applicable, industry appropriate methodology and software.

Although the information in this document is provided in good faith, PF Olsen Limited does not make any express or implied representations or give any warranties or guarantees as to the accuracy or completeness of the information. PF Olsen Limited does not accept liability for any claim, action, cost, loss or damage arising directly or indirectly from use or reliance on the information in this document and you agree to indemnify PF Olsen Limited against any losses, damages, costs, liabilities or expenses in relation to claims or disputes incurred as a result of you using or acting in reliance on the information in this document.

PF Olsen Limited
PO Box 1127 | Rotorua 3040 | New Zealand
T: 07 921 010 | info@pfolsen.com | nz.pfolsen.com

PF Olsen (Aus.) Pty Limited
Suite 6, 50 Upper Heidelberg Road | Ivanhoe | Vic | 3079 | Australia
T: 1800 054 659 | ausinfo@pfolsen.com | au.pfolsen.com

TABLE OF CONTENTS

DISCLAIMER.....	2
1. What is this Plan?	4
2. The Forest Land.....	5
3. Ecological Information	9
4. Cultural and Social Aspects	12
5. Regulations.....	14
6. Managing environmental risk	16
7. Commercial Plantation Estate.....	22
8. Harvesting Strategy	24
9. Indigenous Biodiversity	25
10. Other Special Values: Everything but the timber	32
11. Future Planning.....	34
Appendix 1: Forest Location Map	35
Appendix 2: Forest Maps.....	36
Appendix 3: Legal descriptions and forestry right map	40
Appendix 4: Archaeological Site Maps.....	43
Appendix 5: Forest Neighbours.....	46
Appendix 6: HCV Management Plan	47
Appendix 7: Ecological Workplan	50
Appendix 8: Public Access Maps	59

1. What is this Plan?

1.1 About this Plan

This **specific** forest management plan provides details about the Ponga Silva Central North Island (CNI) forests:

Forest	Region	District
Burklee	Waikato	Waikato
Te Akau	Waikato	Waikato
Waimai	Waikato	Waikato
Waiotahe	Bay of Plenty	Ōpōtiki

It is to be used in conjunction with the **standard** forest management plan¹, which outlines the typical management applied to the Forest Stewardship Council (FSC®) Group Scheme estate forests.

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

1.2 Foundation Principle

As a policy the:

- Ponga Silva Ltd has a long-term commitment to the FSC Principles and Criteria in the management unit, and to related FSC Policies and Standards, and
- Ponga Silva Ltd is committed to the PF Olsen FSC Group Scheme **SCS-FM/COC-400064** processes and associated documents.

Ponga Silva Ltd has sought FSC certification, to ensure that their forests are 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.

¹ <https://nz.pfolsen.com/site/pfolsen/ForestManagementPlan%20-%20Standard.pdf>

2. The Forest Land

2.1 Forest area

Ponga Silva CNI forests are within the Waikato and Bay of Plenty regions. The location of the forests is shown in Appendix 1. The net stocked areas have been measured from mapping produced by PF Olsen. These areas are subject to change due to farmland retirement and afforestation and are correct as of December 2024.

Forest	Productive area Current	Productive area Planned afforestation	Productive Total	Reserve – Indigenous Natural	Reserve – Indigenous Planted	Reserve – Indigenous Total	Reserve – Exotic	Farmland / Other	Total Legal Area (ha)
Burklee	403.4		403.4	51.1		51.1			493.3
Te Akau	590.2	446.3	1,036.5	158.6	33.1	191.7			1,559.5
Waimai	183.2		183.2	7.6		7.6			196.6
Waiotahe	1,287		1287	284.7		284.7	3.5	10.7	2,008.5
Total (ha)	2,463.80	446.30	2,910.10	502.00	33.10	535.10	3.50	10.70	4,257.9

2.2 Location and access

Forest	Location
Burklee	Woodleigh Road, approximately 5 km southwest of Naikē.
Te Akau	Te Akau Road, approximately. 1 km south of Te Akau village and 16 km west of Waingaro.
Waimai	Dixon Road, approximately 7 km southeast of Waikaretu.
Waiotahe	Waiotahe Valley Road, approximately 17 km southwest of Ōpōtiki.

2.3 Legal ownership

The forests are freehold, except for the following forestry right in Waiotahe Forest. There are also several areas within Waiotahe Forest currently outside the management of PF Olsen under a forestry right. These areas fall outside the scope of FSC® certification until management is handed back to PF Olsen following the termination of the forestry right.

Forest	Grantor	Grantee	Legal description	Net stocked area
Waiotahe	Manah Investments Ltd	Ponga Silva Ltd	1/1, Lot 2 DP 446988	28.2 ha

The legal descriptions of the forests, and a map of the forestry right and areas outside the certification scope are shown in appendix 3.

The following documents and agreements have been checked to ensure the legality of the forest:

- Certificates of title
- Title maps

The following agreements are in place between the forest owner and PF Olsen:

- Harvest management agreement
- Forest management agreement
- FSC client member agreement

PF Olsen is legally registered company, filing annual returns, and is audited annually by an independent financial auditor.

2.4 Markets

The location of the forest in relation to potential markets is listed in the table below.

Distances from forest to log markets

Forest	Potential market or Export port	Distance from forest (km)	Log market type
Burklee, Te Akau and Waimai	Port of Tauranga	175	Export
Burklee, Te Akau and Waimai	Max Birt Pokeno	88	Domestic
Burklee, Te Akau and Waimai	Kiwi Lumber Putaruru	129	Domestic
Burklee, Te Akau and Waimai	Oji Fibre Solutions Kinleith	154	Domestic
Waiotahe	Port of Tauranga	129	Export
Waiotahe	Claymark Rotorua	125	Domestic
Waiotahe	Oji Fibre Solutions Tasman	70	Domestic

2.5 Soil and topography

Forest	Topography & altitude (metres above sealevel)	LUC Class	Soils	Erosion potential
Burklee	Moderately steep to steep 100-200m asl	6e13	Greywacke slopes with a remnant cover of early Holocene and late Pleistocene tephra with Ultic, Brown and Allophanic soils.	Moderate to severe soil slip erosion, and moderate sheet and gully erosion.
Te Akau	Strongly rolling to moderately steep 20-160m asl	6e1, 6e3, 6e7, 6e9	Tertiary sedimentary lithologies with rock outcrops with Brown, Ultic and Recent soils.	Slight to moderate sheet and soil slip erosion, and slight earthflow erosion.
Waimai	Moderately steep to steep 40-180m asl	6e13	Greywacke slopes with a remnant cover of early Holocene and late Pleistocene tephra with Ultic, Brown and Allophanic soils.	Moderate to severe soil slip erosion, and moderate sheet and gully erosion.
Waiotape	Moderately steep to steep 40-600m asl	6e2, 7e2, 7e5	Coastal hill country and steep hills with a thin mantle of Kaharoa Ash over more weathered tephra interbedded with lapilli with Pumice and Allophanic soils.	Moderate to severe soil slip, gully, earth slip and sheet erosion.

Forestry activities such as harvesting and earthworks must be implemented having regard to the potential severe risk of erosion on the steeper sites.

2.6 Climate

Forest	Region	Climate
Burklee Te Akau Waimai	Waikato	The western coast of Waikato is windy, with the stronger winds (>30km/h) predominantly from the southwest. Spring is generally the windiest season. Average annual rainfall is around 1500mm/year, peaking in winter. Annual mean daily temperature range for the Waikato MU forests is around 14.5°C.
Waiotahe	Bay of Plenty	One of the sunniest and least windy regions in New Zealand. Winds over the Bay of Plenty region are reduced by the local topography, being sheltered by the high country to the west, south, and east. Average annual rainfall is 1500–1600mm/year with around 30% of annual rainfall during in the winter months. Bay of Plenty has a larger seasonal and diurnal temperature variation than many other parts of NZ. Annual mean daily temperature range for Waiotahe Forest area is around 13.0°C.

3. Ecological Information

3.1 Ecological District

The Ponga Silva CNI Forests are in the following Ecological Districts and Ecological Regions.

Forest	Ecological District	Ecological Region
Burklee	12.01 Raglan	Tainui
Te Akau		
Waimai		
Waiotahe	14.03 Opotiki	Whakatane
	19.01 Waioeka	Raukumara

Refer to the following information about the Ecological Districts:

<https://www.doc.govt.nz/documents/science-and-technical/ecoregions2.pdf>

3.2 FSC requirement: Reserves

Refer to the Standard FMP for further detail about the requirements of indicators 6.5.6 and 6.5.8 in the NZ FSC Standard. The forests meet both these FSC requirements. There is no reserve shortfall.

Reserve areas percentage

Forest	Productive	Reserve	Reserve	MU Reserve %
		Indigenous Natural	Indigenous Planted	
Burklee	403.4	51.1		11.2
Te Akau	1,036.6	158.6	33.1	15.6
Waimai	183.2	7.6		4.0
Waiotahe	1,322.6	284.7		17.7
MU total (ha)	2,945.8	502.0	33.1	<u>15.4</u>

Reserve areas by Ecological District

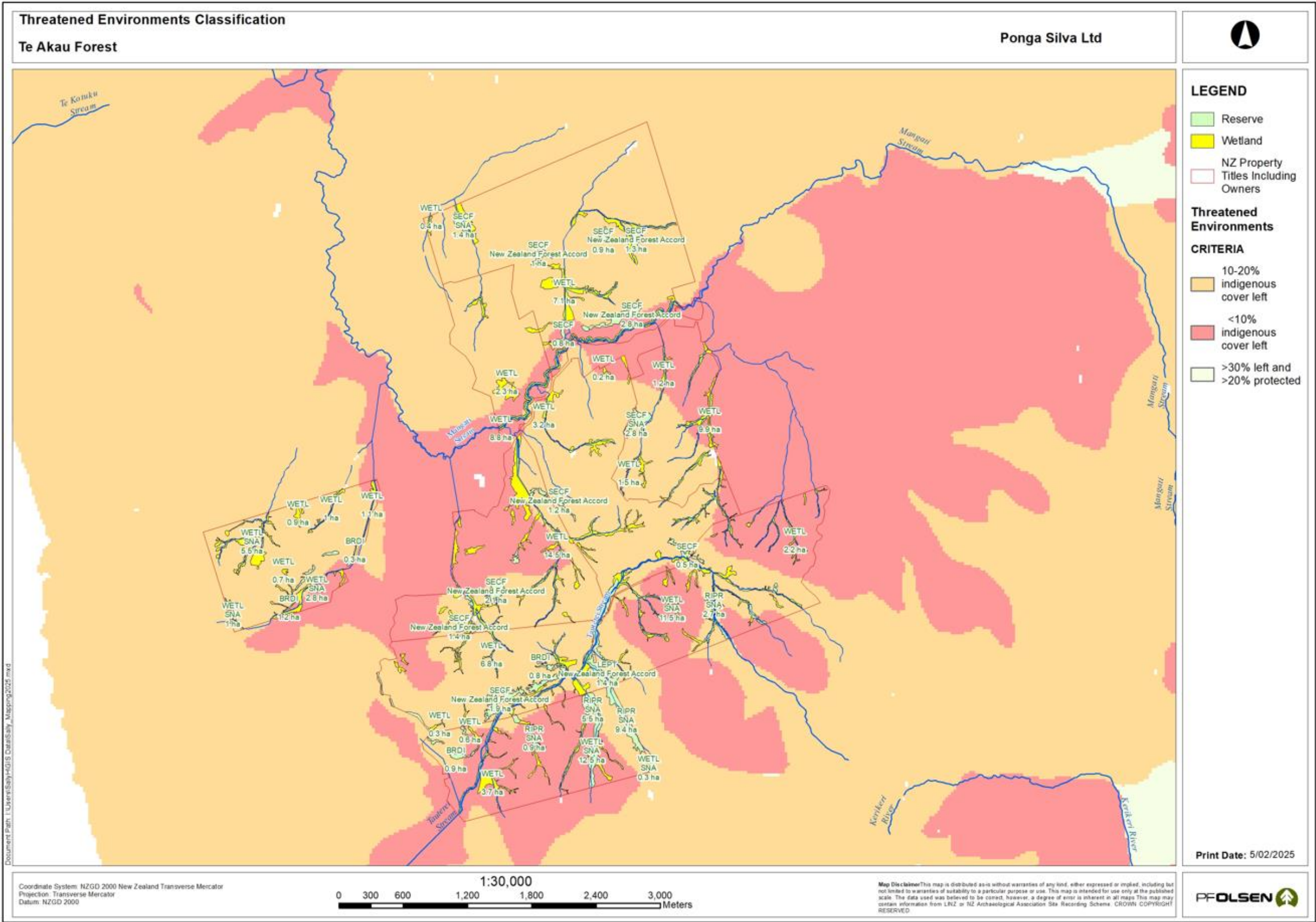
Ecological District	Reserve %	Meets FSC?	Reserve Shortfall (ha)
12.01 Raglan	14.0	YES	none
14.03 Opotiki	22.0	YES	none
19.01 Waioeka	25.9	YES	none

3.3 Threatened Environments Classification

The reserve areas in the Ponga Silva CNI Forests are within the following NZ Threatened Environments Classification (TEC).

- Most of the natural indigenous vegetation reserves fall in the >30% remaining & >20% protected category. This category has a reasonable proportion of its original (pre-human) extent remaining today.
- A third of the reserves in Te Akau Forest fall within the most threatened TEC class, <10% remaining. Many of these areas are also wetlands.
 - See section 9: Indigenous Biodiversity and appendix 7: Ecological Workplan for details on restoration efforts (refer NZ Standard criterion 6.5.5).
 - A map of Te Akau is provided over the page, showing the location of the most threatened TEC class and wetlands.

Threatened Environments Classification Forest	< 10% remaining	10 – 20 % remaining	20 – 30 % remaining	> 30 % remaining & < 10 % protected	> 30 % remaining & 10 – 20 % protected	> 30 % remaining & > 20 % protected	Total Area* (ha)
Burklee	1.1	1.4				48.6	51.1
Te Akau	50.4	108.2					158.6
Waimai	0.7	0.1				6.7	7.6
Waiotahe	0.1	1.6			55.4	227.6	284.7
Total area* (ha)	52.3	111.1			55.4	286.0	502.0



4. Cultural and Social Aspects

4.1 Forest history

The forests are recent acquisitions to the Ponga Silva portfolio. Waiotaha has previously been a FSC-certified forest under different ownership. Burklee, Te Akau and Waimai were recently purchased as drystock farms and are being afforested, and are new to FSC certification.

4.2 Current social profile

The predominant land uses surrounding the forests are pastoral farms and plantation forest, with small rural towns servicing the predominantly rural communities. The forests contribute to the social profile of the area. They are privately owned.

There is a contribution to the local economy by way of added incremental employment from the forests throughout the forest rotation, including:

- Tree nurseries
- Planting and silviculture contractors
- Pest control operators
- Forest managers
- Quality control providers
- Forest inventory contractors
- Water quality monitoring service providers
- Roding contractors
- Harvesting and cartage contractors

4.3 Historic and archaeological sites

The following table summarises the archaeology in the vicinity of the forests, from records in the NZ Archaeological Association's 'Archsite' web resource.

Forest	Archaeology
Burklee	No recorded sites within or close to forest (nearest site is approximately 8 km away).
Te Akau	Total of 22 recorded sites within the forest, with many more adjacent to the western side of the forest. Three pa sites, the remainder are pits/terraces. See forest map in Appendix 4 for site locations. One site (R14/3 – headland pa) is also

Forest	Archaeology
	protected by a conservation covenant registered on the title- see map in appendix 4.
Waimai	No recorded sites within or close to forest (nearest is site approximately 6 km away)
Waiotahe	Comprehensive archaeology - significant occupation of the area by Māori pre-1900. See forest map in Appendix 4 for site locations. Total of 41 recorded sites within the forest - terraces, pits, pa sites, middens.

Accidental discovery protocols will apply should any physical evidence be discovered during operations.

4.4 Tangata Whenua

Waikato forests (Burklee, Te Akau and Waimai)

Waikato - Tainui (a governance entity) have statutory acknowledgements across the West Coast harbours (Kawhia, Aotea, Whaingaroa, Manukau) and the Maoro/Waiuku River and the Waikato River. The Crown and Waikato -Tainui signed a Deed of Settlement on 22 May 1995.

The Waikato -Tainui Environmental Management Plan sets out the high-level guidance on Waikato -Tainui objectives and policies with respect to the environment and planning/RMA engagement.

Waiotahe Forest

Whakatōhea is an iwi with over 16,000 members. It comprises six hapū – Ngāi Tamahaua, Ngāti Ira, Ngāti Ngahere, Ngāti Patumoana, Ngāti Ruatākena and Ūpokorehe, and has an area of interest covering around 200,000 hectares in the eastern Bay of Plenty. On 27 May 2023 the Crown and Whakatōhea signed a Deed of Settlement.

An iwi management plan, 'Tawharau o Nga Hapu o Whakatohea – Whakatohea Management Plan' has been produced by Whakatohea to outline their customary rights and responsibilities with regard to the taonga in their rohe, including Waioweka River, Pakihikura (Ōpōtiki) Harbour.

Waiotahe Forest is an area of significance to Ūpokorehe, as identified in archaeological authority 2023/409.

4.5 Tenure & resource rights

There are no other known Iwi interests in the estate aside from those outlined above.

4.6 Neighbours

Appendix 5 lists the forest neighbours. Some of these parties should be consulted when operations are proposed in forest areas adjacent to their boundaries.

5. Regulations

5.1 National Environmental Standards for Commercial Forestry (NES-CF) Erosion Susceptibility Classification

The NES-CF regulations are generally based on the Erosion Susceptibility Classification (ESC) of the underlying land.

The table below shows the productive plantation area of each forest by the respective NES-CF ESC. The Waikato forests (Burklee, Te Akau and Waimai) are located on generally low erosion risk land, while Waiotahe is predominantly high erosion risk land. The majority of the forest activities will be permitted subject to meeting the NES-CF regulations. None of the forests are zoned as ESC red.

The table below shows the proportion of each forest by the respective National Environmental Standards for Commercial Forestry (NES-CF) Erosion Susceptibility Classification (ESC).

Productive area (ha) within each ESC Class

Forest	Low	Moderate	High	Very High	Very High (8e)	Total
Burklee	92.5	304.4				396.8
Te Akau	285.9	285.9				694.8
Waimai	9.6	175.7				185.3
Waiotahe	22.9	277.0	1,111.1			1,411.1
TOTAL	533.2	1,043.0	1,111.1			2,688.0

5.2 Council RMA Plans

The forests fall within the following districts and regions. Where the relevant district or regional plan has rules more stringent than the NES-CF, this is noted in the table following.

Forest	Regional plan	Rules more stringent than NES-CF	District plan	Rules more stringent than NES-CF
Waiotahe	<u>Bay of Plenty</u>	No rules more stringent	<u>Opotiki</u>	Afforestation, replanting, indigenous vegetation clearance and earthworks in coastal zone and ONFL

If consents are required at any stage, consideration must be given to the Iwi management plans (previous section).

5.3 Consents & authorities held

The following resource consents and archaeological authorities are relevant to the estate.

Forest	Consent ID	Authority	Details
Waiotahe	2023/409	Heritage NZ Pouhere Taonga	Archaeological authority for sites W16/112, W16/113, W16/115, W16/194, W16/365, W16/366, W16/369 and W16/446.
Waiotahe	50716	Bay of Plenty Regional Council	Battery culvert in Ponuihine Stream, east of stand 2/05.

5.4 Emissions Trading Scheme

Burklee Forest is post-1989 forest land and is registered in the Emissions Trading Scheme (ETS) under the averaging accounting method. This means that carbon credits are accrued until the long-term average carbon stock is achieved in the first rotation. No more credits are accrued in subsequent rotations.

The remainder of the forests are yet to be registered in the ETS, or are pre-1990 forest land. Ponga Silva would have to meet a carbon liability if there was a change in landuse from forestry within the pre-1990 forests.

6. Managing environmental risk

6.1 Assessment of environmental effects

Refer to the Standard FSC Forest Management Plan for the full assessment of environmental effects.

6.2 Natural hazards

Natural hazards are disturbances that can be a risk to social and environmental values, and important ecosystem functions. The following natural hazards have been identified in the Ponga Silva CNI forests:

- Drought
 - The forests are susceptible to mild-moderate drought during a particularly dry summer/autumn.
- Flooding/heavy rainfall events
 - The low-lying landscape is susceptible to flooding, owing to the low elevations near the coast. The forests are subject to occasional heavy rainfall events, particularly Waiotahe forest.
- Fire (also see following section on fire).
- Landslide / debris flow
 - The steeper slopes in Waiotahe Forest show isolated occurrences of land instability where previously constructed infrastructure has over-steepened slopes. This risk is recognised and care must be taken to manage the areas of instability to not worsen the situation.

Climate change: Waikato region (Burklee, Te Akau and Waimai)

Climate change predictions² identify average warming for the Waikato region of 3.2°C by 2090. This may result in:

- More 'heatwave days' (days over 25°C).

² Waikato regional climate impacts report applying CMIP6 data (2021). Drs Yinpeng Li and Peter Urlich. <https://www.waikatoregion.govt.nz/assets/WRC/Waikato-Regional-Climate-Impacts-Report.pdf>

- Fewer frosts.
- An average 20mm decrease per decade in annual rainfall overall, particularly in the Hauraki, Coromandel and Waikato districts.
- Wildfire risk (as measured by the KBDI fire danger index) will increase to 'moderate' across the region and 'high risk' in Waipa, Hauraki and Coromandel by 2090.
- Average daily extreme precipitation is expected to increase 14% by 2090, particularly in the Coromandel.
- Sea level is predicted to rise 0.4 to 0.9 m by 2090.

Climate change: Bay of Plenty region (Waioatahe)

Climate change predictions³ identify average warming for the Bay of Plenty region of 1.5 to 3.2°C by 2100. This may result in:

- 30 to 80 more 'heatwave days' (days over 25°C).
- 15 to 30 fewer frosts per year.
- Precipitation shows a marked seasonal difference, with a predicted 8 to 10% increase in winter rainfall, and 10 to 15% decrease in summer rainfall. Extreme rainfall events are likely to increase in intensity, especially around Te Urewera and Raukumara Ranges.
- Wildfire risk increases, with a 50 to 100% increase in the number of 'Very High' and 'Extreme' forest fire days.
- Sea level is predicted to rise 0.6 to 0.8 m by 2100.

These factors contribute to an overall risk of drought and flood in the future.

6.3 Erosion susceptibility: NES-CF ESC red zone

There is no NES-CF ESC red zone forest land within the Ponga Silva CNI estate.

³ Bay of Plenty Regional Climate Change Risk Assessment (2023). Tonkin & Taylor Ltd.
<https://www.boprc.govt.nz/environment/climate-change/regional-risk-assessment/>

6.4 Infrastructure damage or service disruption

The following infrastructure is within/adjacent to the forests. It is recognised that forestry operations may have an impact on the infrastructure. Any potential adverse effects are managed through operational plans.

Forest	Infrastructure/services
Burklee	Woodleigh Road runs along western forest boundary of northern block. Dixon Road runs along western forest boundary of southern block. Two sets of powerlines run through the northern block.
Te Akau	Te Akau Road and powerlines run along northern boundary. Settlement of Te Akau close to northern boundary. Ruakiwi Road runs along eastern boundary. Te Akau South Road and powerlines run along western boundary of main block. Te Akau South Road runs along eastern boundary of western block.
Waimai	Dixon Road runs along western forest boundary.
Waiotahe	Waiotahe Valley Road runs through the centre of the forest. Powerlines run north to south through the forest. A gas line bisects the forest from east to west, as recorded in the PF Olsen mapping system. Neighbour's dwelling and access to dwelling along northeast boundary (from Pukehau Pa Road). Dwelling close to forest boundary.

6.5 Pests and diseases

Plant / animal pest	Waikato Regional Pest Management Plan programme ⁴	Bay of Plenty Regional Pest Management Plan ⁵ programme
Arum lily	Site-led (wetlands)	Advisory pest
Blackberry	Sustained control	Sustained control
Broom	Sustained control	
Chilean flame creeper	Eradication	Exclusion
Cotoneaster		Sustained control
Darwin's barberry	Progressive containment	Exclusion Progressive containment
Feral goat	Site-led (Hunua Ranges)	Eradication Progressive containment
Gorse	Sustained control	Sustained control
Magpie	Sustained control	Advisory pest
Old man's beard	Progressive containment	Progressive containment Sustained control
Pampas	Sustained control	Advisory pest
Rabbit	Sustained control	Advisory pest
Ragwort	Sustained control	Sustained control
Reed sweetgrass	Site-led (wetlands)	Sustained control
Rook	Eradication	Eradication
Taiwan cherry		Sustained control
Thistle	Sustained control (nodding & plumeless)	Progressive containment (variegated)
Wallaby	Progressive containment	Eradication Progressive containment
Wasp	Sustained control	Advisory pest
Wild ginger	Sustained control	Sustained control
Wilding conifers	Progressive containment	Species dependent: Progressive containment Sustained control
Willow (grey, crack)	Site-led (wetlands)	Advisory pest
Woolly nightshade	Sustained control	Progressive containment Sustained control
Yellow flag iris	Progressive containment Site-led (wetlands)	Progressive containment

⁴ Waikato Regional Pest Management Plan

<https://www.waikatoregion.govt.nz/assets/WRC/RPMP/RPMP-2022.pdf>

⁵ Regional Pest Management Plan for the Bay of Plenty Region

<https://atlas.boprc.govt.nz/api/v1/edms/document/A4743933/content>

**Pest control
programme**

Pest issues specific to the estate are detailed below. Refer to the Ecological Workplan for pest control specific to the indigenous reserves.

Wilding conifers (Waiotaha)

- Survey forest boundary annually.
- Treatment of any found.
- Pull, spray, or cut/paste stump.

Pampas, woolly nightshade, blackberry

- Survey forest boundary annually.
- Based on survey, decide on a timeline to create 10m weed free buffer along boundaries where neighbouring block is relatively weed free.
- Control along roadsides as required to maintain access.

Possum

- Survey forests every 5 years.
- Apply control when required.

Deer, pigs, goats

- Control when sign becomes apparent, particularly during the establishment phase of the plantation.
- Ground shooting via forest access permit system.

6.6 Fire

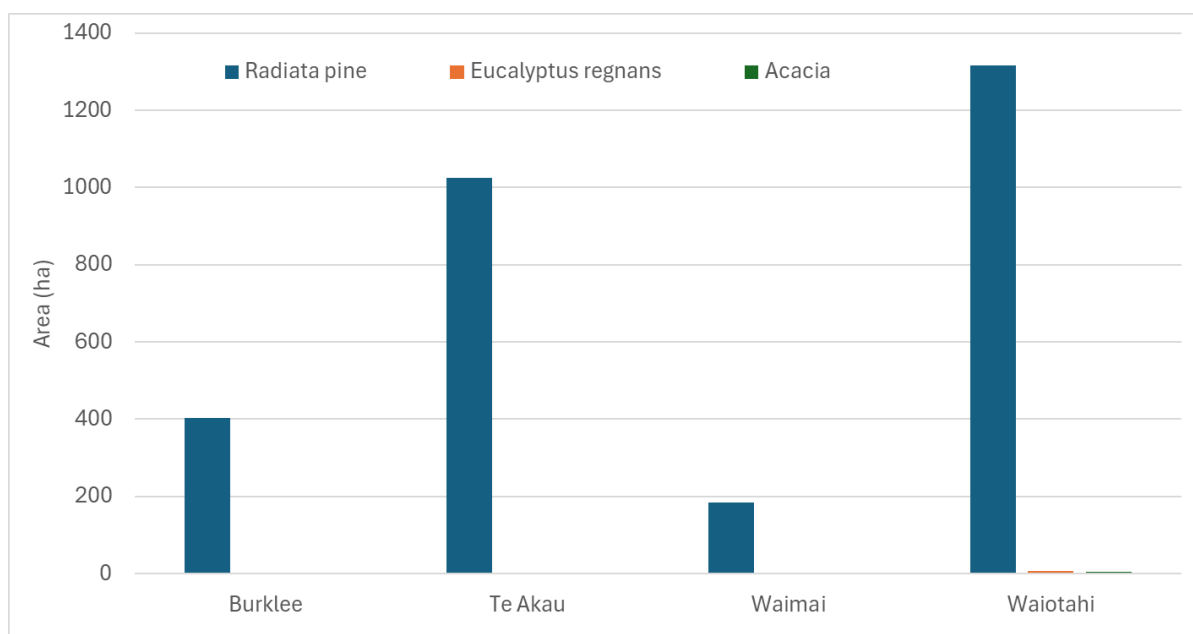
The Ponga Silva CNI forests fall within the Fire and Emergency NZ (FENZ) Waikato and Bay of Plenty Zones. The Waikato and Bay of Plenty Fire Plans⁶ reference the thresholds for fire restriction levels and the coordination of forestry risk management responses between forest owners/managers and FENZ.

7. Commercial Plantation Estate

7.1 Current crop

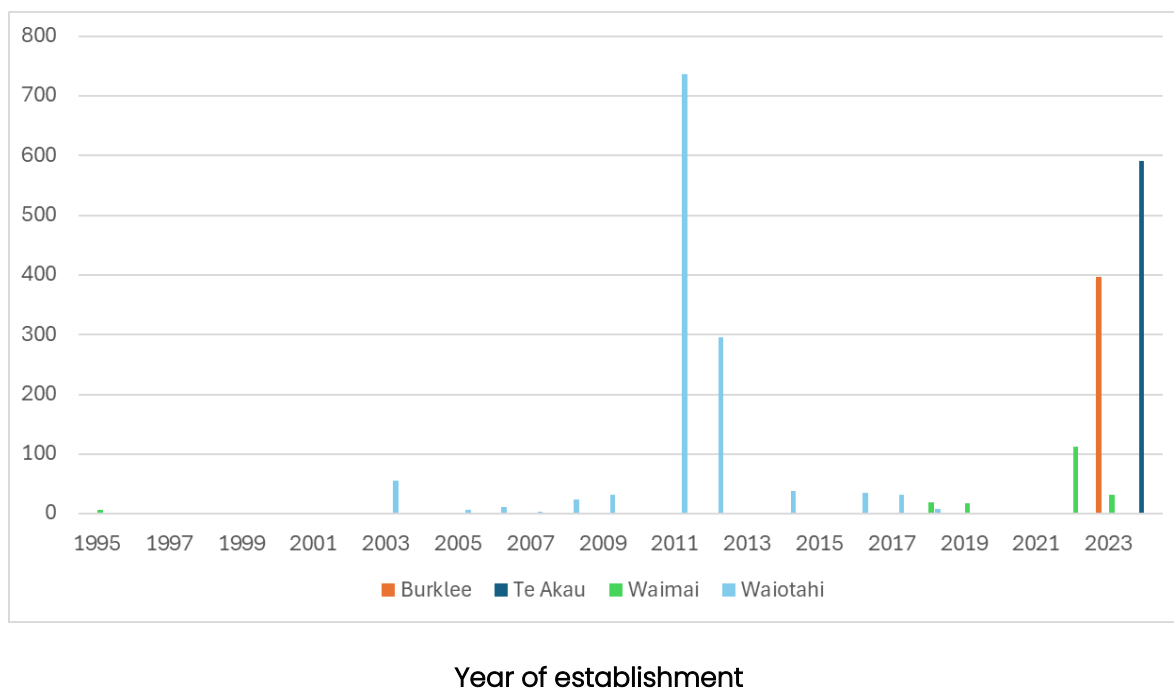
The predominant plantation species is *Pinus radiata*. This species exhibits excellent growth and structural quality in the region, has a proven record (including in relation to disease risk), has large local domestic processing demand, and as well, has proximity to an export port.

Other species have been planted for non-productive purposes, such as flax and manuka.



Productive forest area by species

⁶ <https://www.fireandemergency.nz/outdoor-and-rural-fire-safety/fire-plans/>



note: excludes 6 ha planted prior to 1985 in Waiotahi

7.2 Tending

The future tending regime:

1. Lower altitude areas: unpruned framing regime, one waste thinning operation.
2. Targeted high growth sites, lower altitude areas: clearwood regime, two pruning lifts, one or two waste thinning operations.
3. Higher altitude areas: unpruned framing regime, one waste thinning operation.

7.3 Tree nutrition

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

8. Harvesting Strategy

8.1 Harvesting strategy

Topography allows for a relatively equal mix of hauler and ground-based harvesting in the Waikato forests, and hauler-based harvesting in the steeper Waiotahe forest. The potential range of harvest age is 25 to 32 years, depending on growth rates, likely markets and contractor availability.

In the next 5 years 60.6 ha of 2003 and 2005 planted radiata pine in Waiotahe forest may be harvested.

8.2 Infrastructure

Infrastructure is largely in place throughout Waiotahe, as the current plantation forest is in its 2nd or 3rd rotation. Prior to harvesting, infrastructure maintenance and minor upgrades may be required.

Basic access infrastructure is present in the other forests which has enabled planting and will provide access for any tending operations. Harvesting infrastructure will be constructed up to a year ahead of planned harvest.

9. Indigenous Biodiversity

9.1 Natural indigenous vegetation reserves

Natural indigenous vegetation reserves are the areas of naturally occurring indigenous vegetation within each forest that have been identified as part of the ecological survey. These areas are not all legally protected but are managed to meet the FSC Principles and Criteria.

Appendix 7 shows the ecological workplan for the Ponga Silva CNI Forests.

Natural indigenous vegetation reserve areas by protection category⁷

Forest	Special	Important	Limited	Total (ha)
Burklee		43.4	7.7	51.1
Te Akau	57.7	92.5	8.4	158.6
Waimai		6.2	1.4	7.6
Waiotahe	0.5	279.2	5.0	284.7
Total (ha)	58.2	421.3	22.5	502.0

Protection granted to the natural indigenous vegetation reserves

Forest	HCV (ha)	SNA ⁸ (ha)	NZ Forest Accord (ha)	Management plan (ha)	Total (ha)
Burklee			23.5	27.6	51.1
Te Akau		57.7	15.7	85.2	158.6
Waimai			1.2	6.4	7.6
Waiotahe	0.5		275.6	8.6	284.7
Total (ha)	0.5	57.7	316.0	127.8	502.0

⁷ Protection categories as described in the PF Olsen EMS. See the Standard Forest Management Plan, available on the PF Olsen website, for further details <https://nz.pfolsen.com/InfoResources/About+FSC/management+plans.html>

⁸ Significant Natural Areas (SNAs) are areas that contain significant indigenous vegetation and/or significant habitats of indigenous fauna. SNAs are identified by the local territorial authority and protected by the Resource Management Act 1991.

9.2 High Conservation Value (HCV) Forests

Natural areas within Ponga Silva CNI Forests were assessed against the HCV criteria. One small area in Waioatahe Forest met the HCV criteria (2024 Wildland Consultants report⁹).

The HCV management plan is in Appendix 6.

⁹ Natural area survey and High Conservation Value Assessment of Waioatahe Forest, Bay of Plenty. Wildlands (2024). Contract Report No. 6604d.

9.3 Biodiversity values by forest

Forest	Flora	Fauna present or highly likely
Burklee	Overview Mature secondary indigenous forest types, with varying degrees of weed incursion and historical grazing damage to lower tiers. Treeland and shrubland (kanuka, manuka, mahoe) typical of north Waikato farmland. One small patch of mānuka/sphagnum moss shrubland which is a rare vegetation type within Raglan Ecological District. Ecological values - Part of SNA within forest- SNA 16607 kahikatea-(rimu)-(matai) forest. - Adjacent to QEII covenant (northwest of forest).	Birds - NZ pipit/pīhoihoi (At Risk- Declining) Fish - Longfin eel (At Risk- Declining) - Inanga (At Risk- Declining) Lizards Likely to be present: - Ornate skink (At Risk- Declining) - Elegant gecko (At Risk- Declining) - Copper skink (At Risk- Declining) - Forest gecko (At Risk- Declining) Invertebrates Likely to be present: - Mistletoe carpet moth (At Risk- Declining) - Dusk dragonfly (At Risk- Naturally uncommon)

Forest	Flora	Fauna present or highly likely
Te Akau	Overview Mostly wetland vegetation which provide important buffering functions for the Tauterei and Mangati Streams. Exotic species are a significant component of much of the wetland vegetation- small areas of raupo reed land, wi-soft rush and exotic grassland, often with grey willow, poplar, ti kouka present. Other areas of fragmented broadleaved forest and patches of indigenous scrub. Forest types such as kahikatea/tawa forest and treeland, <i>Salix</i>-tī kōuka forest and scrub, and totara or kahikatea or kanuka treeland over exotic grasses. Harakeke-mānuka-māhoe-māpou-karamū shrubland confined to fragmented limestone bluffs. Threatened flora - Northern rātā (<i>Metrosideros robusta</i>; At Risk- Declining) Ecological values - Numerous SNAs within or adjacent to the forest, mostly wetlands with 'local' significance level: 16577, 16783, 16865, 17013, 17124, 17199, 17212.	Birds - Weweia/New Zealand dabchick (Threatened- Nationally Increasing) - North Island fernbird/mātātā (At Risk- Declining) Fish - Longfin eel (At Risk- Declining) - Inanga (At Risk- Declining) - Freshwater mussel (At Risk- Declining) - Redfin bully (At Risk- Declining) Lizards Likely to be present: - Ornate skink (At Risk- Declining) - Elegant gecko (At Risk- Declining) - Copper skink (At Risk- Declining) - Forest gecko (At Risk- Declining)

Forest	Flora	Fauna present or highly likely
Waimai	Overview Mostly regenerating secondary indigenous scrub (ponga, māhoe, mānuka, ti kouka). Some wi-soft rush/<u>exotic grasses</u>-watercress grassland in low lying gully areas.	Fish • Longfin eel (At Risk- Declining) • Redfin bully (At Risk- Declining) Lizards Likely to be present: • Ornate skink (At Risk- Declining) • Elegant gecko (At Risk- Declining) • Forest gecko (At Risk- Declining) Invertebrates Likely to be present: • Mistletoe carpet moth (At Risk- Declining) • Dusk dragonfly (At Risk- Naturally uncommon)

Forest	Flora	Fauna present or highly likely
Waiotahe	Overview Mostly regenerating secondary warm indigenous forest types owing to elevation and proximity to the coast. Forest types such as kahikatea forest, (rimu)/hard beech-rewarewa-tanekaha-tawa forest, tawa-rewarewa-tanekaha forest with varying degrees of understorey intactness and weed density. Threatened flora - Northern rātā (<i>Metrosideros robusta</i>; At Risk-Declining) - Climbing rātā* (<i>Metrosideros fulgens</i>; Not Threatened) Ecological values - Adjacent to DOC Waioeka Conservation Area and Waiotahe Scenic Reserve.	Bats - Long-tailed bat (Threatened- Nationally Critical) Birds - North Island kākā (At Risk- Recovering) - NZ falcon/kārearea (Threatened- Nationally Increasing) - Long-tailed cuckoo/koekoeā (Threatened- Nationally Vulnerable) - NZ pipit/pīhoihoi (At Risk- Declining) - North Island robin/toutouwai (At Risk- Declining) - North Island weka (At Risk- Relict) Fish - Longfin eel (At Risk- Declining) - Torrentfish (At Risk- Declining) - Inanga (At Risk- Declining) - Bluegill bully (At Risk – Declining) - Redfin bully (At Risk – Declining) Herpetofauna - Hochstetter’s frog (At Risk- Declining) - Striped skink (At Risk- Declining) possible - Forest gecko (At Risk – Declining) possible - Copper skink (At Risk – Declining) possible - Elegant gecko (At Risk – Declining) possible Invertebrates - Raukūmara tusked wētā (At Risk- Naturally Uncommon)

* Threat classification lowered from Threatened – Nationally Vulnerable to Not Threatened in 2024, however species suffering disease and mortality from myrtle rust infection.

9.4 Rare and threatened species management

The general management of these species is shown below. Specific ecological management activities are outlined in the Ecological Workplan (Appendix 7). iNaturalist¹⁰ (Biodiversity in Plantations) will be used to record sightings of important indigenous fauna or flora discovered in the forest.

Biodiversity group	Management response
Flora	Indigenous vegetation will benefit from the removal of domestic stock (ponies) within the natural areas, possum, feral pig, deer and goat control, and careful harvesting along the boundary of indigenous vegetation. Natural areas will also benefit from the control of ecological plants pests that have been identified as a threat.
Birds	Birds identified as present or highly likely within the Ponga Silva CNI forests will benefit from reserve/riparian protection and wider pest control implemented across the forests. This includes the <u>eastern falcon</u> , identified within Waiotaha. The NZFOA New Zealand Falcon Management Guide: Plantation Forestry ¹¹ , and maintain sightings reporting system is to be followed.
Bats	Long-tailed bats are likely to be present in Waiotaha Forest as suitable bat habitat is present, and populations are known nearby. Populations will benefit from wider pest control, and riparian and reserve protections implemented across the forests.
Lizards & frogs	Herpetofauna identified as present or highly likely within the estate will benefit from wider pest control, and riparian and reserve protections implemented across the forests.
Fish	These species will be afforded protection from forestry operations in parallel with riparian protection. Note specific spawning restrictions (NES-CF Fish Spawning Indicator tool ¹²).
Invertebrates	Invertebrates identified as present or highly likely within the estate will benefit from wider pest control implemented across the forests. These species will be afforded protection from riparian and reserve protections implemented across the forests.

¹⁰ <https://www.inaturalist.org/projects/biodiversity-in-plantations>

¹¹ <https://www.wingspan.co.nz/PDF/Forestry-Management-Protocols-final.pdf>

¹² <https://www.mpi.govt.nz/forestry/national-environmental-standards-commercial-forestry/fish-spawning-indicator/>

10. Other Special Values: Everything but the timber

10.1 Public access

Please refer to the Standard FMP for public access categories and descriptions. Public access maps are included in appendix 8.

Public Land

Burklee Forest

- Adjoins legal roads Woodleigh, School and Dixon Roads.
- Adjoins an unnamed formed legal road on the western boundary of the northern block of Burklee Forest. This unnamed road runs north south off Woodleigh Road.

Te Akau Forest

- Adjoins formed legal roads Te Akau South, Te Akau Coast, and Ruakiwi Roads.
- Adjoins an isolated fragment of unformed legal road near the Tauterei Stream.

Waimai Forest

- Adjoins formed legal road Dixon Road.

Waiotahe Forest

- Adjoins formed legal road Waiotahe Valley Road.
- Adjoins unnamed formed legal roads along parts of the Waiotahe River, and along some of the eastern boundary.
- The Waioeka Conservation Area also adjoins the southern boundary of the western block. Another part of the Waioeka Conservation Area is separated from the property by an unformed legal road on the eastern boundaries of two blocks.
- The Te Whenua o Te Whakatōhea—Waiōtahe Scenic Reserve is adjacent to the north boundary of the western block.
- Adjoins unformed legal road parcels near the north and west of the northern block.
- Adjoins a small local purpose reserve (esplanade) along Waihotaha Valley Road
- Adjoins various sections of unformed legal road parcels near the southern property boundaries within Waiotahe Valley, one of which adjoins the Waiotahe River Conservation Area.

10.2 Recreational access by permit

Please refer to the Standard FMP for more information on landowner managed public access.

The Ponga Silva CNI forests are usually open for recreation. Access to the privately owned forest areas is managed through the PF Olsen forest access permit system. For information on how to apply for a permit, please phone the PF Olsen Rotorua Office phone number (07 921 1010).

Anyone who accesses the estate is expected to abide by the intent of the Outdoor Access Code and signage or barriers at access points and within the forest.

Closures will apply during times of high fire risk, any *force majeure* state and during forestry operations over private forestry land.

10.3 Non-Timber Forest Products

There are no FSC certified non-timber forest products¹³ from the Ponga Silva CNI forests.

¹³ 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.

11. Future Planning

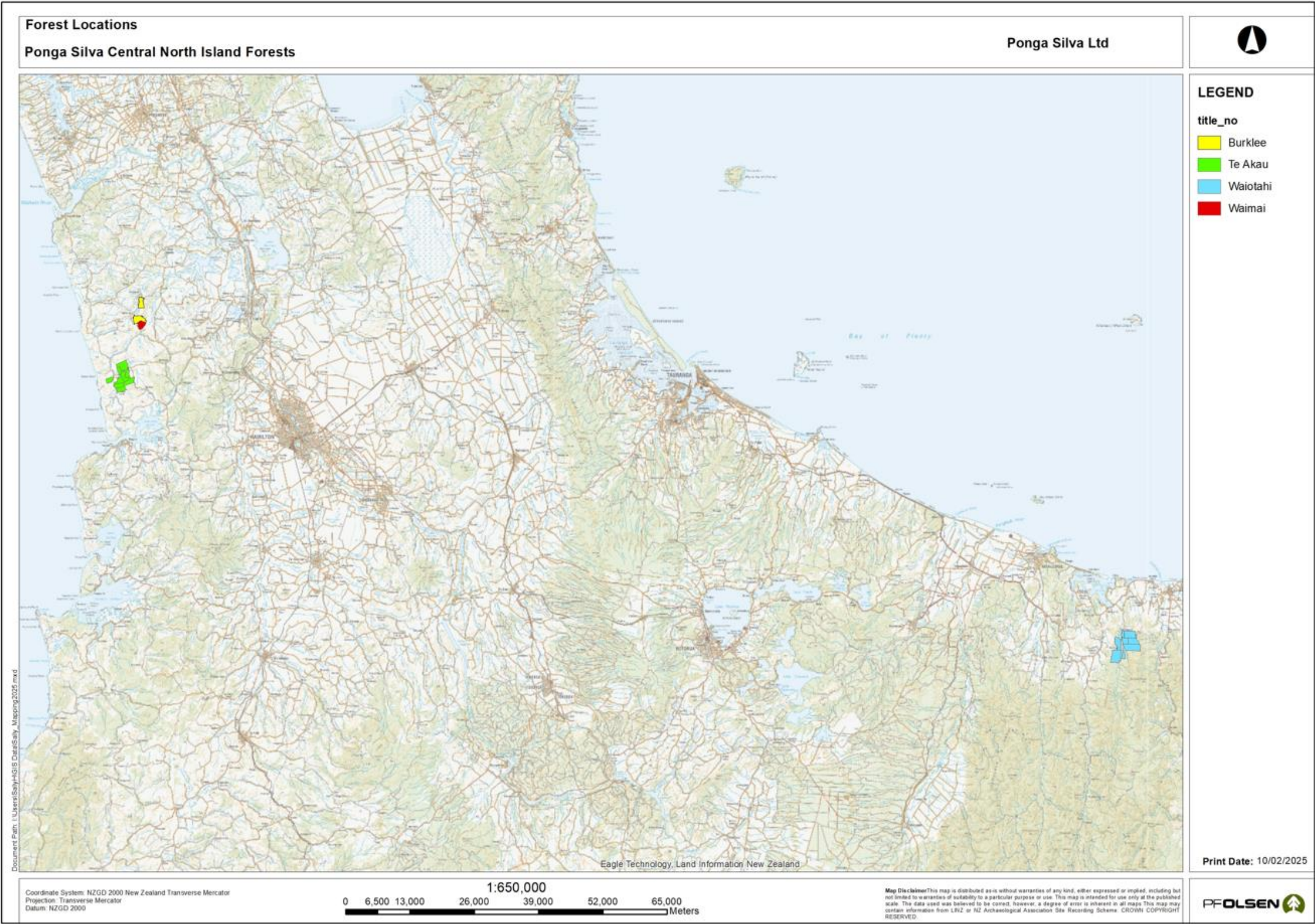
11.1 Plan changes & reviews

The next major review date for this plan is January 2030 (5 years).

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

Change	Date	Section/Page
Added Taiwan cherry into Pests and diseases list	22/05/2025	6.5
Added annual check for Taiwan cherry in Waiotahe forest into Ecological Workplan	22/05/2025	Appendix 7
Added weed surveillance (pampas, woolly nightshade, blackberry) into Ecological Workplan.	22/05/2025	Appendix 7
Added further details of public access in Burkle, Te Akau and Waiotahe Forests, and improved map legend symbology.	5/06/2025	10.1 and Appendix 8
Clarified areas outside scope of certification in Waiotahe Forest- updated area table, maps	6/06/2025	2.3 Legal ownership, Appendix 2 & 3
Amended spelling of forest name from Waiotahi to Waiotahe	11/06/2025	Throughout

Appendix 1: Forest Location Map



Forest Map

Burklee Forest

Ponga Silva Ltd

Coordinate System: NZGD 2000 New Zealand Transverse Mercator
 Projection: Transverse Mercator
 Datum: NZGD 2000

1:25,000

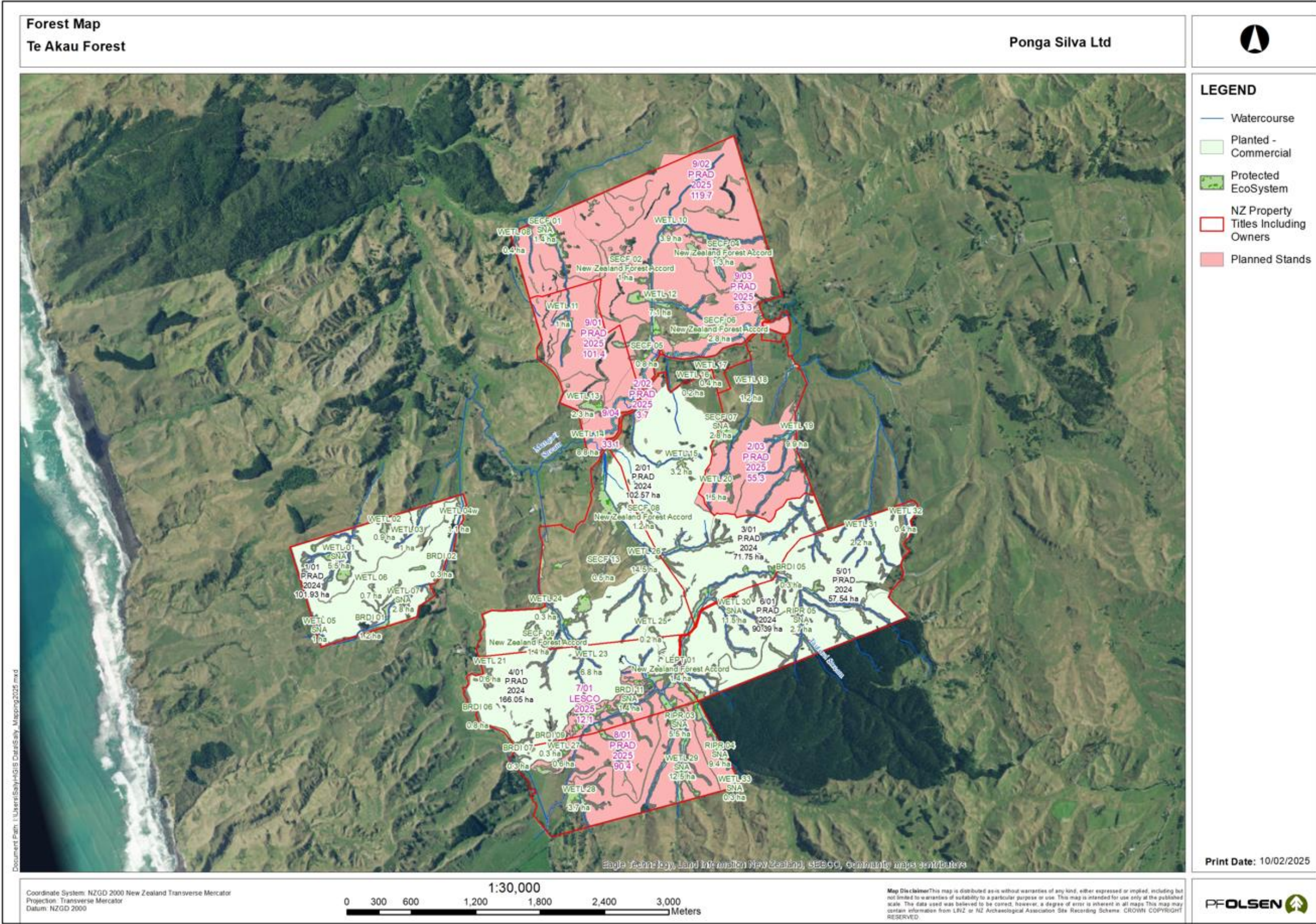
0 250 500 1,000 1,500 2,000 2,500 Meters

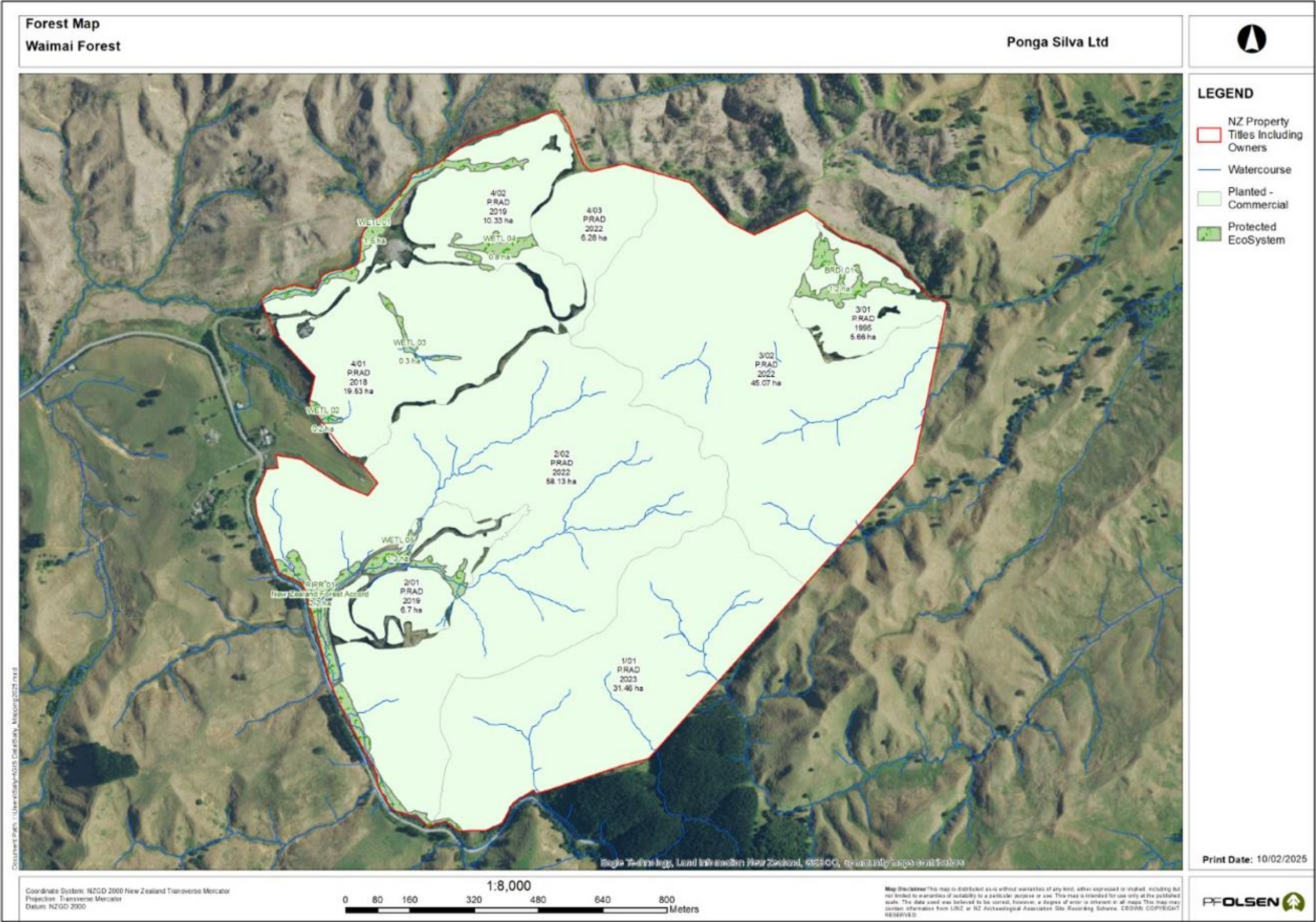
Map Disclaimer: This map is distributed as-is without warranties of any kind, either expressed or implied, including but not limited to warranties of suitability for a particular purpose or use. This map is intended for use only at the published scale. The data used was believed to be correct, however, a degree of error is inherent in all maps. This map may contain information from LINZ or NZ Archaeological Association Site Recording Scheme. CROWN COPYRIGHT RESERVED.

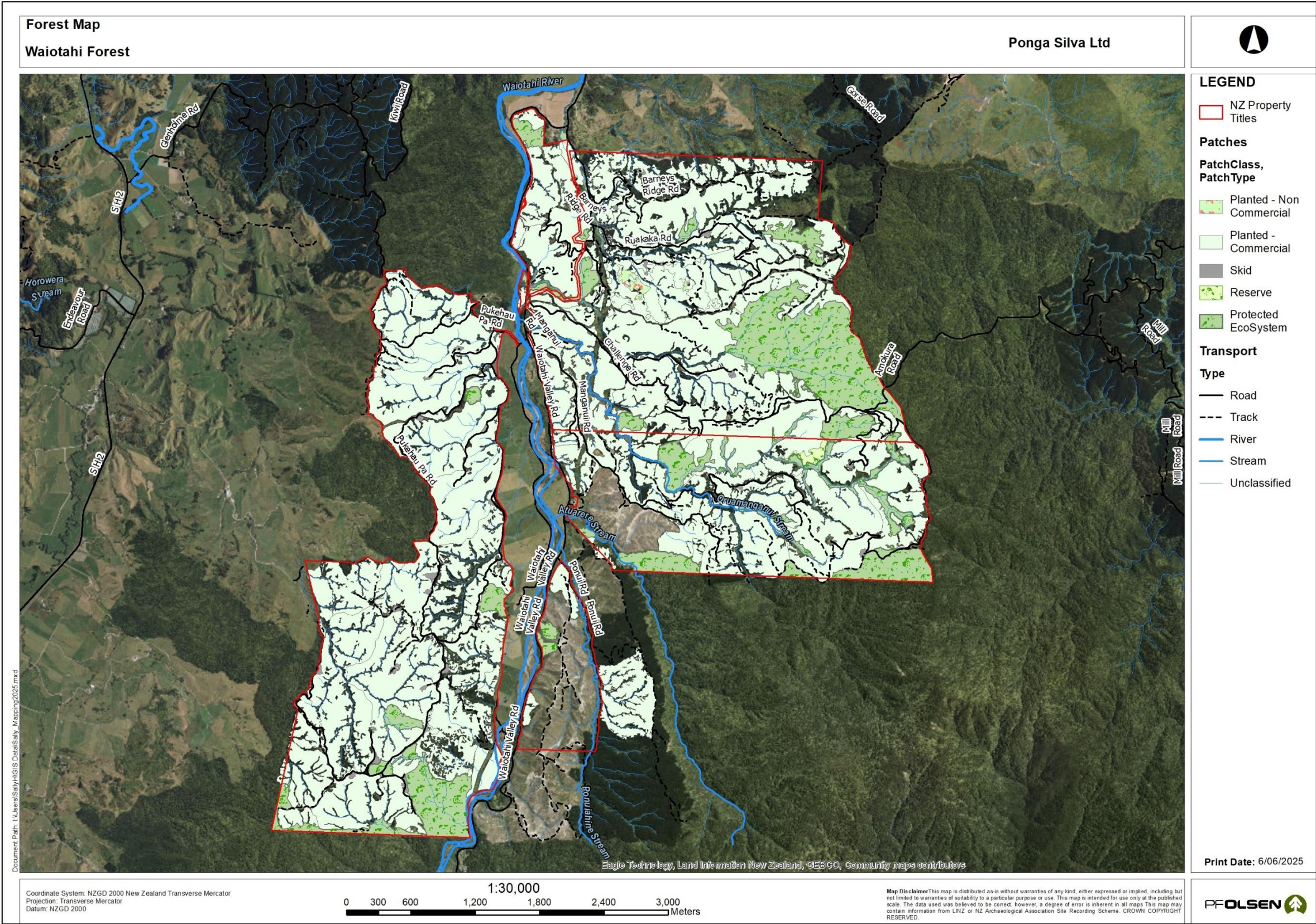
LEGEND

- NZ Property Titles Including Owners
- Stream
- Watercourse
- Planted - Commercial
- Protected EcoSystem

Print Date: 10/02/2025

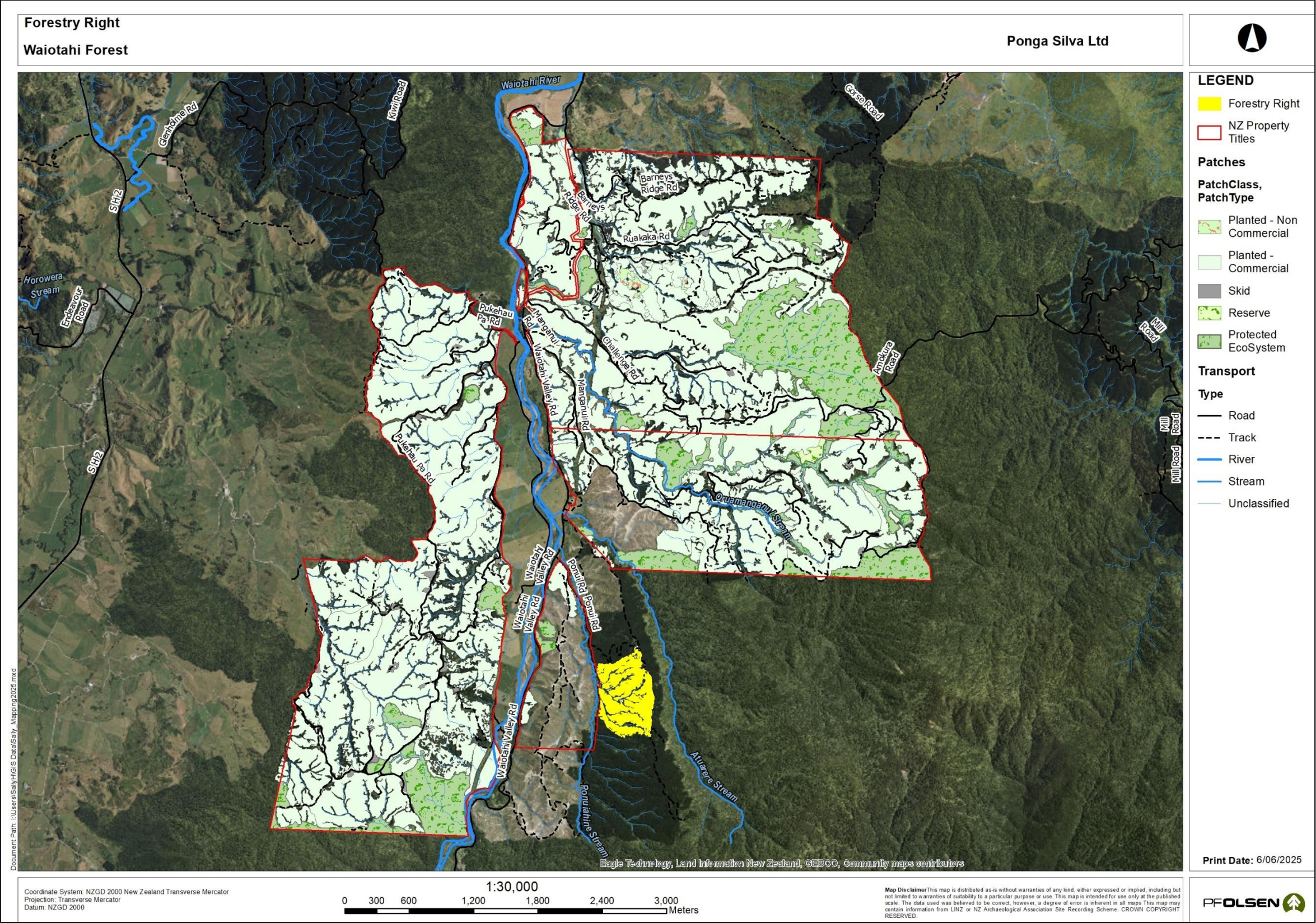


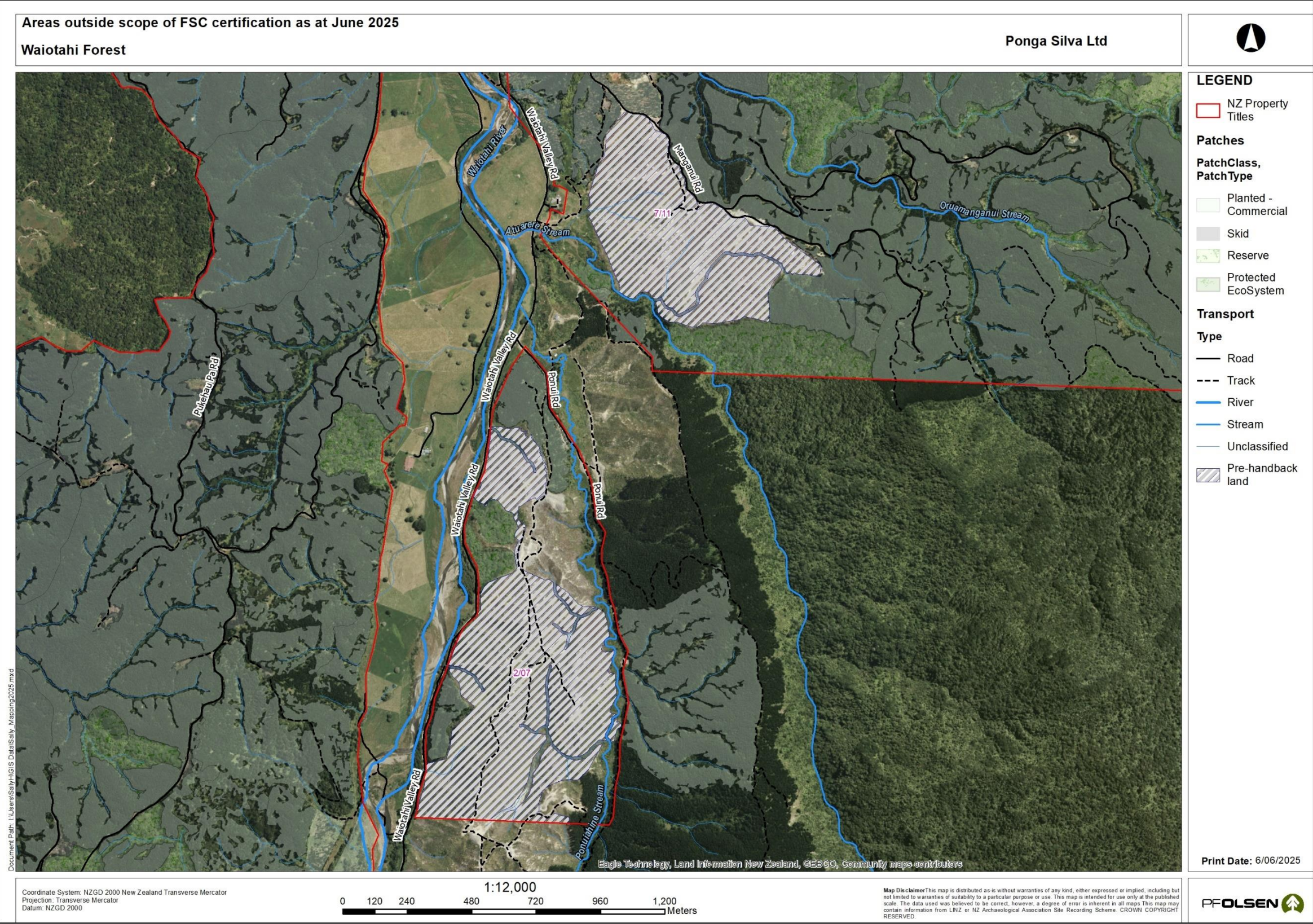




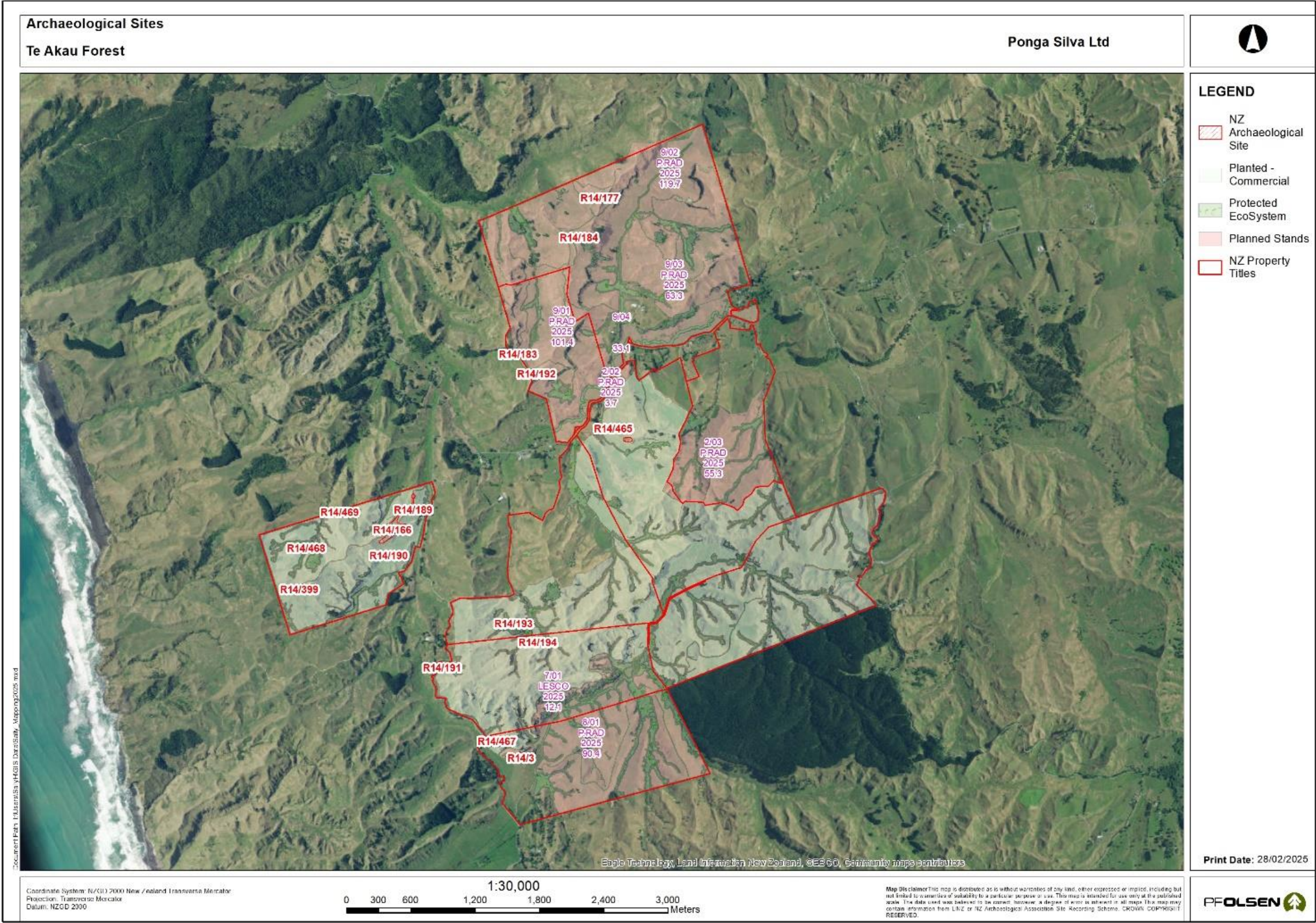
Appendix 3: Legal descriptions, forestry right map, areas outside scope

Forest	Legal description
Burklee	Fee Simple, 1/1, Lot 2 Deposited Plan 601704, 2,924,419 m2 Fee Simple, 1/1, Allotment 143 Parish of Whangape and Lot 1 Allotment 128 Parish of Whangape, 2,008,698 m2
Te Akau	Fee Simple, 1/1, Lot 6 Deposited Plan 304873, 1,577,645 m2 Fee Simple, 1/1, Lot 3 Deposited Plan 504508, 1,810,125 m2 Fee Simple, 1/1, Lot 4 Deposited Plan 504508 and Lot 1 Deposited Plan South Auckland 91003 and Lot 4 Deposited Plan 410299, 1,987,698 m2 Fee Simple, 1/1, Part Lot 1 Deposited Plan South Auckland 26189, 1,334,425 m2 Fee Simple, 1/1, Section 10 Block IX Whaingaroa Survey District, 1,520,252 m2 Fee Simple, 1/1, Section 7 Block VII Whaingaroa Survey District, 1,999,147 m2 Fee Simple, 1/1, Lot 2 Deposited Plan 304868 and Part Section 8 Block VI Whaingaroa Survey District and Section 25 Block VI Whaingaroa Survey District, 3,232,784 m2 Fee Simple, 1/1, Lot 2 Deposited Plan 410299, 1,199,998 m2 Fee Simple, 1/1, Section 28 Block VI Whaingaroa Survey District, 930,676 m2
Waimai	Fee Simple, 1/1, Lot 1 Deposited Plan South Auckland 77856, 1,966,310 m2
Waiotahe	Fee Simple, 1/1, Allotment 449-450 Parish of Waiotahi, 2,994,673 m2 Fee Simple, 1/1, Allotment 457, 495 Waiotahi Parish, 2,485,780 m2 Fee Simple, 1/1, Part Allotment 445 and Allotment 446 Parish of Waiotahi, 1,470,754 m2 Fee Simple, 1/1, Lot 1 Deposited Plan 446988, 4,252,580 m2 Fee Simple, 1/1, Lot 1 Deposited Plan 6733/AK, 194,067 m2 Fee Simple, 1/1, Lot 3 Deposited Plan 446988, 886,940 m2 Fee Simple, 1/1, Lot 1 and Lot 6 Deposited Plan 7956, 735,765 m2 Fee Simple, 1/1, Part Section 1 Block I Waioeka Survey District, 4,569,347 m2 Fee Simple, 1/1, Lot 2 Deposited Plan 438925, 2,487,400 m2 Fee Simple, 1/1, Allotment 516 Parish of Waiotahi, 7,310 m2 Forestry Right: Fee Simple, 1/1, Lot 2 Deposited Plan 446988, 5,158,510 m2





Appendix 4: Archaeological Site Maps







Appendix 5: Forest Neighbours

Not Publicly Available.

Appendix 6: HCV Management Plan

High Conservation Value Area Management Plan

Forest	Waiotahe		
Stand	PRIF-05	Area (ha)	0.5 ha
		Location	NZTM E 1967047 NZTM N 5776681
Species composition	Kahikatea forest Situated on a low-lying terrace adjacent to the Ruakaka Stream, kahikatea (<i>Dacrycarpus dacrydioides</i>) form a dense continuous canopy (c.25-30 metres tall). Titoki (<i>Alectryon excelsus</i> subsp. <i>excelsus</i>) and pukatea (<i>Laurelia novae-zelandiae</i>; c.20 metres tall) are present in the subcanopy but rare. Epiphytes present in the canopy include kōwharawhara (<i>Astelia solandri</i>), makawe (<i>Asplenium flaccidum</i> subsp. <i>flaccidum</i>), and leather leaf fern (<i>Pyrrosia elaeagnifolia</i>). The understorey is dominated by dense tree privet (<i>Ligustrum lucidum</i>) c.3-8 metres tall. Species present in the shrub tier include kawakawa (<i>Piper excelsum</i> subsp. <i>excelsum</i>), mātātā (<i>Histiopteris incisa</i>), and <i>Diplazium australe</i>. Ground cover species include <i>Doodia australis</i>, <i>Oplismenus hirtellus</i> subsp. <i>imbecillis</i>, creeping clubmoss (<i>Selaginella kraussiana</i>), tradescantia (<i>Tradescantia flumensis</i>), and occasional seedlings of putaputawētā, titoki, and ornamental cherry (<i>Prunus</i> sp.). This area is modified as there are several small vehicle tracks through the area as well as abundant sign of pony grazing.		
HCV assessment	Although the site is small, mature kahikatea-dominant forest has been greatly reduced in extent in Ōpōtiki Ecological District. Almost all areas of this type have been previously cleared for the purpose of timber extraction and developing pastoral farmland, as per ecologist report (Wildland Consultants Ltd 2024).		

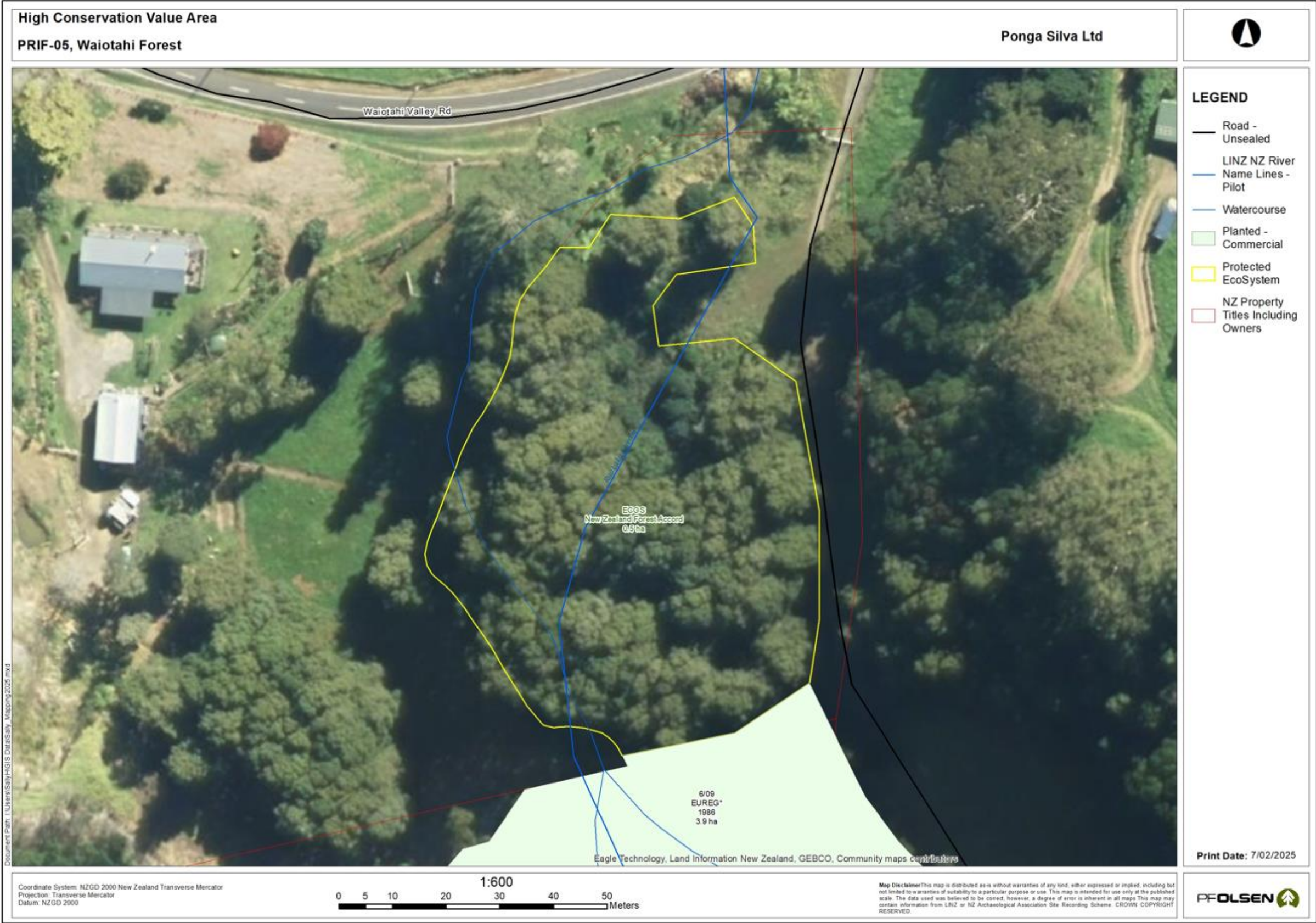
HCV class	HCV 3 Ecosystems and habitats Rare, threatened, or endangered ecosystems, habitats or refugia.	
Management strategy	The management strategy implemented for this site is described in the table below.	
	HCV Category	Management Strategy
		Enhancement
	HCV 3	Restore and/or develop rare or threatened ecosystems, habitats, or refugia.

Management actions and monitoring

Management actions are the works required to meet the management strategy. The monitoring is prescribed to assess the effectiveness of the management strategy and actions.

This HCV plan is subject to a full 5-yearly review, at which time modifications will be made if the management strategies are not effective.

Refer to Appendix 7 – Ecological Workplan for the management actions.



Appendix 7: Ecological Workplan

Review Date: April 2025

High Conservation Value Areas

Activity Type	Required actions	Area/s	Timing
Annual walk-through check	Forest manager to do annual onsite check of sites. Note any issues including weeds (especially Taiwan cherry), wilding pines, animal browse.	HCV site (PRIF-05)	Annual
Weed control	Assess and create plan for staged control of tree privet and tradescantia. Initial control focus on removing large fruiting privet trees. Implement annual control until all visible individuals removed, then do annual checks for reoccurrence.	HCV site (PRIF-05)	Create plan by December 2025, and then Annual
Stock control	Remove stock (pony) access to site. Consider if fencing is practical.	HCV site (PRIF-05)	Create plan by December 2025
Photopoint monitoring	Establish photopoint vegetation monitoring of site (ground and aerial via drone). Repeat photos annually.	HCV site (PRIF-05)	By December 2025 and then Annual

Other areas

Activity	Action detail	Area/s	Due date
Wilding conifer survey of wetlands and SNA areas	Survey all wetlands and SNA areas for wilding conifers, remove where present. NB: this is a NES-CF afforestation requirement.	All wetlands and SNAs within Burklee, Te Akau, Waimai Forests	End 2026, and 5-yearly thereafter
Taiwan cherry surveillance	Survey forest for presence of Taiwan cherry. Remove individuals found, or for larger infestations identified, create and implement specific control plan.	Waiotahe forest	Annual
Weed surveillance	Annual survey of pampas, woolly nightshade and blackberry. Based on survey, decide on a timeline to create 10m weed free buffer along boundaries where neighbouring block is relatively weed free. Control along roadsides as required to maintain access.	All forests	Annual
Wilding conifer control	Survey forests. Remove any found.	Waiotahe RIPR-02, SECF-21, SECF-22, SECF-23 Waimai BRDI-01 and RIPR-01	End 2026, and 5-yearly thereafter

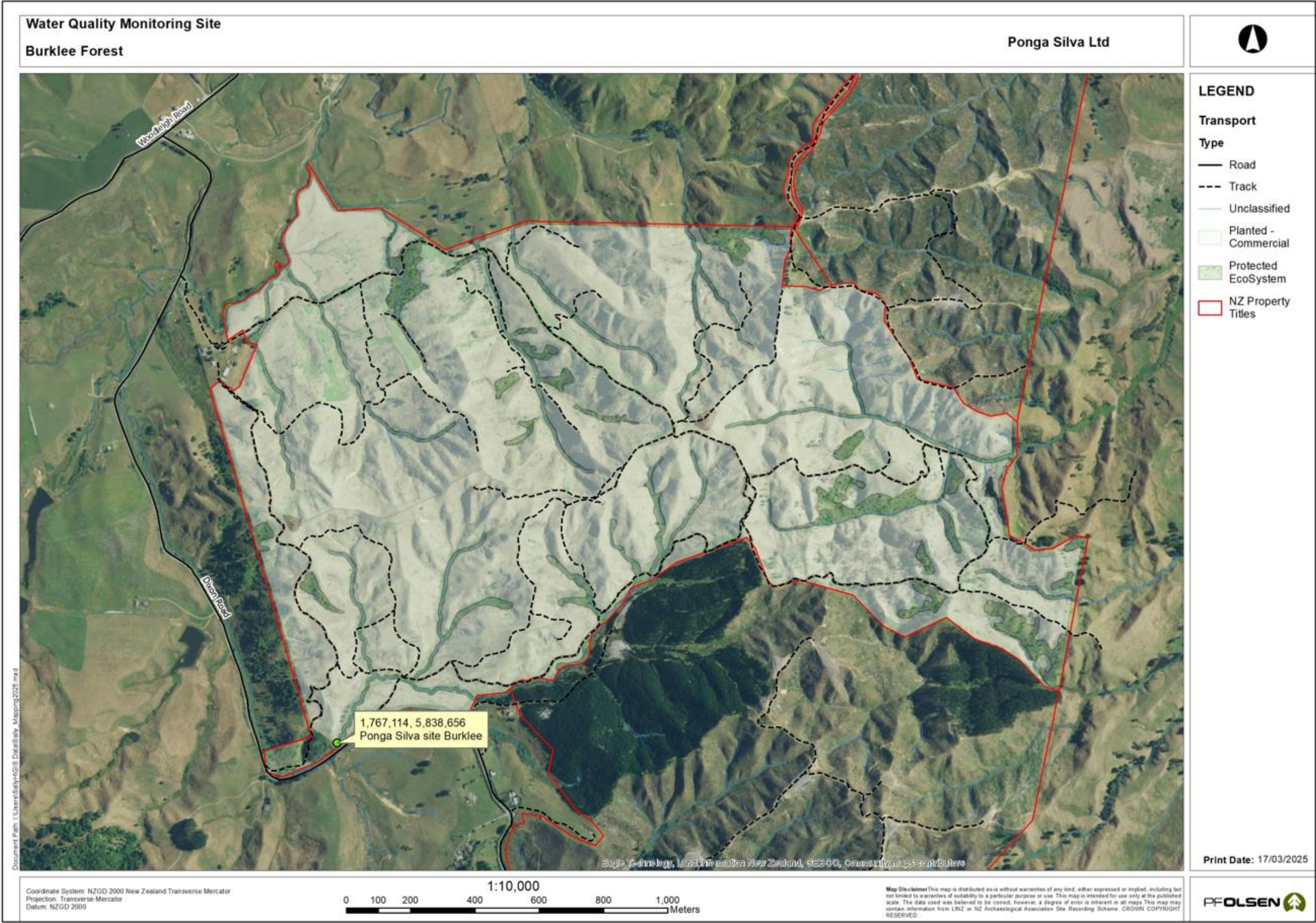
Activity	Action detail		Area/s	Due date
Pest weeds - high priority	Pampas	Burklee SECF-05 Te Akau WETL-01		Initial control by end of 2026. Follow up by end 2027.
	Salix	Te Akau WETL-01, WETL-30		
	Creeping clubmoss	Burklee SECF-01, SECF-02, SECF-03, WETL-06, WETL-11		
	Barberry	Burklee and Te Akau Forests		
	Woolly nightshade	Burklee and Waimai Forests		
	Wild ginger, privet	Te Akau Forest		
	Ivy	Waiotahe Forest at NZTM E1967032, N5772491		
Pest weeds - medium priority	Pampas	Te Akau RIPR-03, RIPR-04		Initial control by end of 2027. Follow up by end 2028.
	Salix			
	Blackberry	Te Akau RIPR-03		
	Arum lily	Te Akau Forest		
	Reed sweetgrass	Burklee Forest		
	Yellow flag iris	Te Akau Forest		
Pest weeds - low priority	Pampas	Te Akau WETL-30		Initial control by end of 2028.
	Salix	Waimai wetlands (WETL-01 to 05)		
	Blackberry			

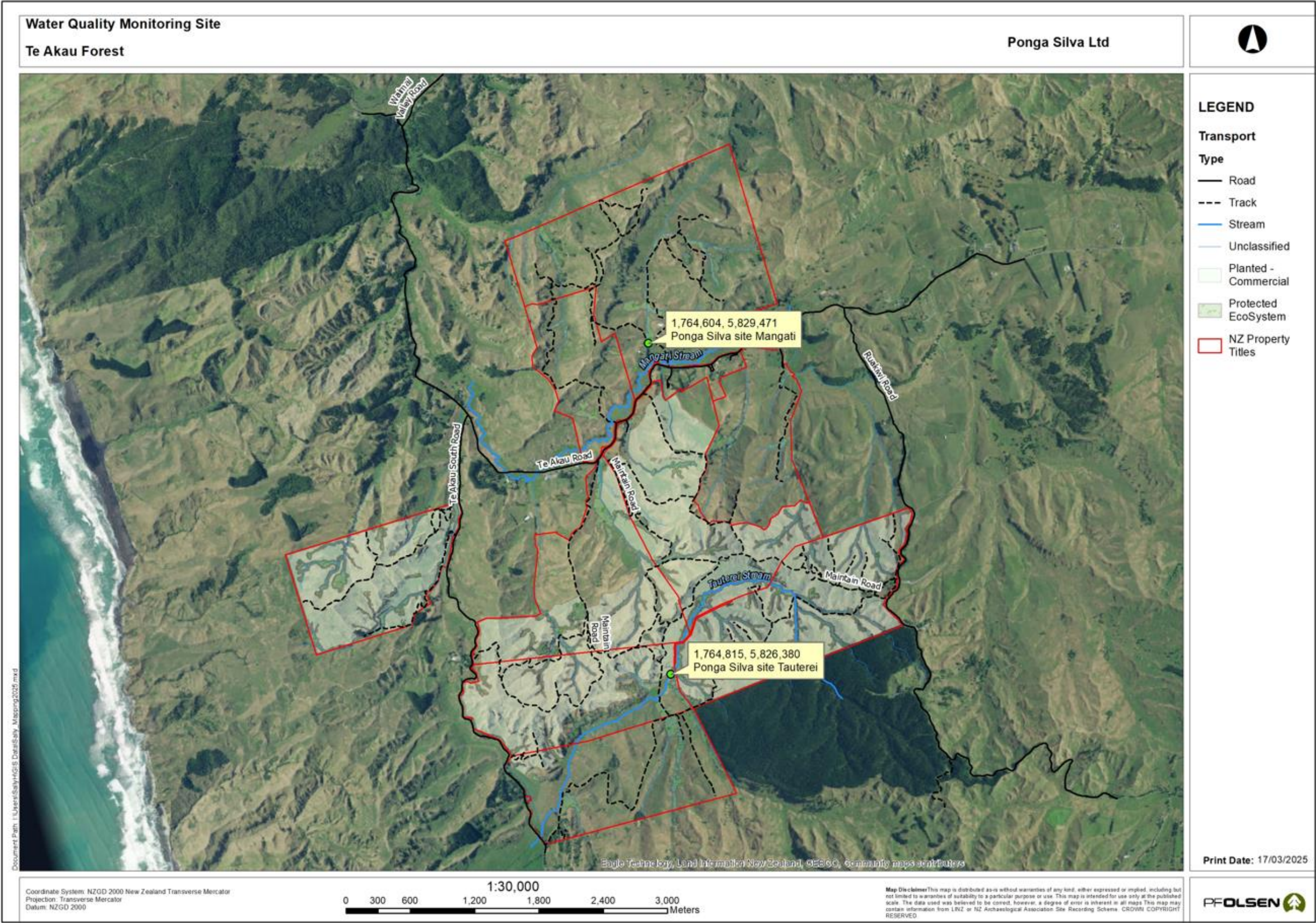
Activity	Action detail		Area/s	Due date
	Arum lily	Burklee Forest Waimai Forest		Follow up by end 2029.
	Reed sweetgrass	Te Akau Forest		
	Privet	Waiotahe RIPR-02, SECF-01		
Animal pests - possum control	Survey whole forests every 5 years. Implement annual control in Te Akau wetlands - At Risk species habitats.		All forests - particular focus on higher-ranked indigenous reserves including Te Akau WETL-01, SECF-11 and WETL-23 as they are known habitat for At Risk/Threatened fauna (dabchick and fernbird).	5 yearly and annual
Animal pests - ungulate control	Control when sign becomes apparent, particularly during the establishment phase of the plantation. Ground shooting via forest access permit system.		All forests, particularly Burklee (goats).	Ongoing
Train crews Provide kārearea identification resources	Include photos of species in rare species ID posters and train (during inductions) crews to be alert for presence of threatened species (especially kārearea and bats) and to avoid damage within operational areas. Record any sightings in iNaturalist database.		Waiotahe	Ongoing
Bat monitoring	Deploy bat detection boxes prior to harvesting to determine presence or otherwise of bats, particularly along streams and large tracts of indigenous vegetation (e.g. adjacent DOC reserves).		Waiotahe	Summer prior to planned harvesting

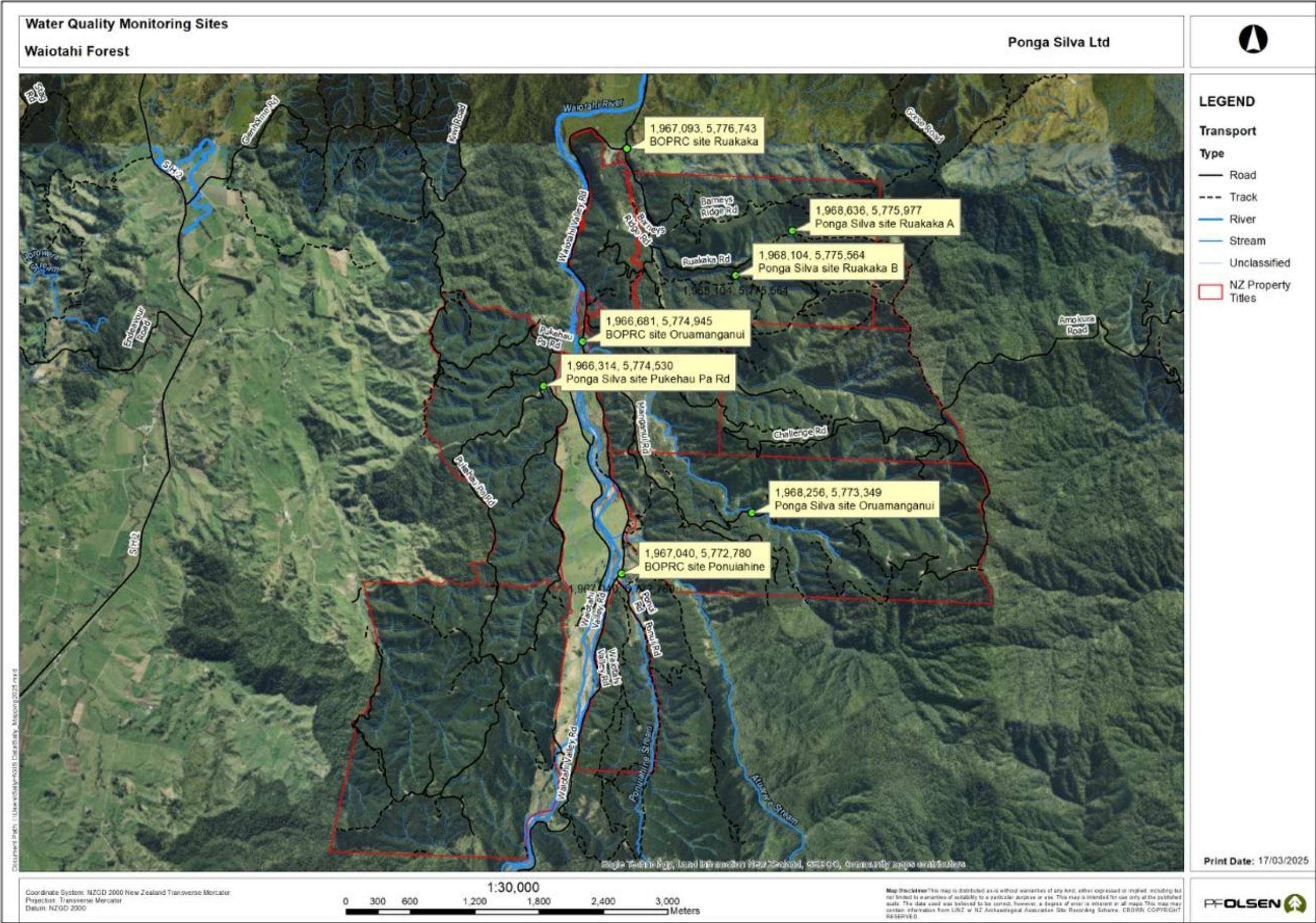
Activity	Action detail	Area/s	Due date
	Record any sightings in the iNaturalist database and DOC bat database. If bats are discovered, apply forestry bat management protocols and review existing harvest sequence in consultation with DOC if required.		
eDNA water testing	Undertake comprehensive eDNA water testing to: • establish aquatic / amphibious / riparian terrestrial rare species presence. • provide water quality indicator (TICl). If threatened species are identified: • Findings will be reported in iNaturalist • Review forestry and harvesting operations to ensure that any potential impacts are recognised and managed appropriately to not adversely affect the threatened species (in line with the National Policy Statement for Indigenous Biodiversity). If an unexpected result is produced, a repeat test will be implemented. Regime: Implement annually for forest catchment age 0 to 5 years to monitor effects of post-harvest canopy closure. Switch to 5-yearly during mid-rotation (age 5, 10, 15, 20, 25 years), and increase frequency to annual just prior and during next harvest.	9 proposed sites, as described in the table below and on the maps on the following pages. Exact site location is subject to change based on practical access and stream suitability.	Establish baseline February 2026. Implement annually or 5-yearly as per regime outlined.

eDNA Water Testing Sites

Forest	Site location (NZTM)	Description	Sampling frequency
Burklee	E1767114, N5838656	Tributary of Te Meinga Stream. Sample as it leaves Burklee Forest from Dixon Road.	Annual monitoring – establishment phase – riparian setbacks created during afforestation. Sample annually until age 5, then switch to 5-yearly.
Te Akau	E1764604, N5829471 E1764815, N5826380	Mangati Stream. Sample as it leaves Te Akau Forest. Tauterei Stream. Sample as it leaves Te Akau Forest.	Annual monitoring – establishment phase – riparian setbacks created during afforestation. Sample annually until age 5, then switch to 5-yearly.
Waimai	Represented by Burklee Forest sampling		
Waiotaha	Seven sites proposed, including three of the Bay of Plenty Regional Council water quality monitoring sites.		Initial monitoring to establish pre-harvest baseline. Implement annual monitoring once harvesting commences in the large catchment.
	Site location (NZTM)	Description	
	E1967093, N5776743	BOPRC site Ruakaka Stream	
	E1966681, N5774945	BOPRC site Oruamanganui Stream	
	E1967040, N5772780	BOPRC site Ponuahine Stream	
	E1968636, N5775977	Ponga Silva site Ruakaka A	
	E1968104, N5775564	Ponga Silva site Ruakaka B	
	E1966314, N5774530	Ponga Silva site Pukehau Pa Road	
	E1968256, N5773349	Ponga Silva site Oruamanganui Stream	







Forest locations are also available online via the PF Olsen interactive web map: [FSC® Certified Forests](#)

