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responsible forestry



Pārengarenga Incorporation

# Pārengarenga Incorporation Te Kao



## FOREST MANAGEMENT PLAN as at 1<sup>st</sup> July 2025

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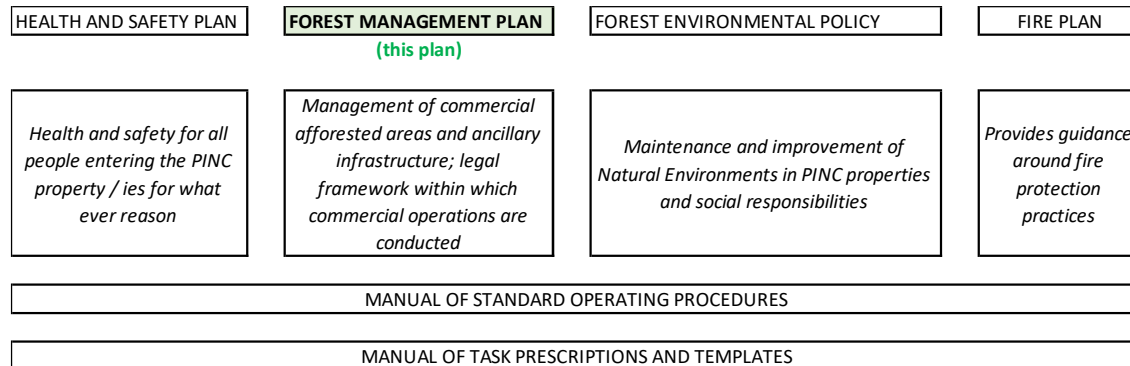


## 1. PLANNING FRAMEWORK

Parengarenga Incorporation (PINC), has compiled, or is in the process of compiling various plans which are used as planning tools and guidance for ongoing management.

The main plans are The Forest Management Plan, Environmental Management Plan, Health and Safety Management Plan and the Fire Plan. These are high level documents which point to each other as well as to procedures which help staff manage standard tasks according to prescribed methods.

The planning framework and position of this plan can be depicted as follows:





## 2. STRATEGIC PLANNING

### 2.1. Vision and values

Parengarenga Incorporation is a Māori organisation. We are committed to growing our people and communities through operating a world-class, sustainable enterprise. We manage physical assets that create an economic return on investment for our shareholders. Our operations provide environmental and social benefits for the people of Te Hiku. As kaitiaki mote whenua, we seek to create intergenerational wealth and prosperity by nurturing and enhancing the value of our whenua, awa, and ngahere.

#### Te Wawata / Our Vision

Growing our people and communities, shaping the Te Hiku future by operating a world –class, sustainable enterprise of the land and sea.

#### Te Aronga / Our Mission

By 2030, we will deliver \$1m every year to our shareholder community.

#### Te Take / Our aim

To manage a diversified and sustainable portfolio of commercial investments that leverages our physical assets.

#### Te Taiao / Our Environmental objective

We strive to be a land-based enterprise that is respected for fulfilling its kaitiaki responsibilities. We implement sustainable land management practises. We will bring back the bird-song. This will be done by establishing practices that combine modern technology, tikanga and advanced research to secure a vibrant taiao.

#### Nga Tikanga / Our values

- Whakapono Me Te Tika / Integrity, honesty, trust: We believe in an open, respectful and honest approach to achieve trust in all that we do.
- Kaitiakitanga Wairua / Guardianship , spirituality: We protect our whenua with cultural values and practices
- Manaakitanga / Respect, generosity & care for others: We respect and care for everyone and give equal opportunity within our workplace.
- Rangatiratanga / Leadership, teamwork, growth: We work with our leaders to build a strong team to produce business growth within our community.

### 2.2. Three-year Objectives

	2025/26	2026/27	2027/28
OBJECTIVES	Identify best practice performance shortfalls and action plans to improve.	Monitor and entrench action plans	Monitor and entrench action plans
	Evaluate Management and Administrative tasks and roles and develop a plan to minimise reliance on external parties.	Follow internal management and administrative staff development plan	Follow internal management and administrative staff development plan
	Finalise operational succession planning. Assess the performance of succession planning candidates and adjust the succession plan as necessary.	Develop action plans to address employee shortfalls	Develop action plans to address employee shortfalls
TARGETS	\$11m revenue	\$11.3m revenue	\$11.7m revenue
	\$400k net profit	\$425k net profit	\$450k net profit
	Benchmarking KPI targets are met	Benchmarking KPI targets are met	Benchmarking KPI targets are met
	Annual FSC® audit passed	Annual FSC® audit passed	Annual FSC® audit passed



### 3. LAND DESCRIPTION

#### 3.1. Ownership / Tenure

Block A land is Māori Freehold Land, owned by The Proprietors of Parengarenga A Block, in extent 6248.3456 hectares.

<b>id</b>	3540168
<b>title_no</b>	NA71D/732
<b>status</b>	LIVE
<b>type</b>	Freehold
<b>land_district</b>	North Auckland
<b>issue_date</b>	1989-07-13 00:00:00
<b>guarantee_status</b>	Guarantee
<b>estate_description</b>	Fee Simple, 1/1, Parengarenga A Block, 62,483,456 m2
<b>owners</b>	The Proprietors of Parengarenga A Block

Block B land is Māori Freehold Land, owned by The Members of the Committee of Management of Parengarenga 'A' Incorporation, in extent 3,977.7145 hectares (actually 3,761.2852 hectares – see below)

<b>id</b>	3559803
<b>title_no</b>	NA67B/56
<b>status</b>	PRTC
<b>type</b>	Freehold
<b>land_district</b>	North Auckland
<b>issue_date</b>	1987-04-06 00:00:00
<b>guarantee_status</b>	Guarantee
<b>estate_description</b>	Fee Simple, 1/1, Part Parengarenga B3C Block, 39,777,145 m2
<b>owners</b>	Members of the Committee of Management of Parengarenga 'A' Incorporation



Also included in Block B, is land reserved as Papakainga, but which has some trees growing on it

<b>id</b>	3962706
<b>title_no</b>	NA56D/1466
<b>status</b>	LIVE
<b>type</b>	Freehold
<b>land_district</b>	North Auckland
<b>issue_date</b>	1987-01-30 00:00:00
<b>guarantee_status</b>	Guarantee
<b>estate_description</b>	Fee Simple, 1/1, Lot 1 Deposited Plan 103374, 86,705 m2
<b>owners</b>	Members of the Committee of Management of Parengarenga 'A' Incorporation

The tree crop is under the same ownership.

Title searches reveal the following interests attached (see Appendix 10.1): -

Block A NA71D/732:

- Registration of pre-1990 land in the Emissions Trading Scheme.
- Forestry Right to The Proprietors of Parengarenga A Block.
- Mortgage of Forestry Right to Māori Trustee.

Block B NA67B/56:

- Right of ways by Provisional Register - NAPR4A/561; NAPR4A/543; NAPR542; NAPR229/137
- Right of way by Easement Instrument 8623369.2
- Registration of pre-1990 land in the Emissions Trading Scheme
- Partition Order vesting Ngatekawa Block CIR 531293.

Block B NA56D/1466:

- Right of ways by Provisional Register – NA229/137; NA4A/542; NA4A/543; NA4A/561

The forest is pre-1990 land and has received, then subsequently sold, it's original allocation of carbon credits. Registered participant is The Proprietors of Parengarenga A Block. There is no gain nor liability, provided the land remains fully afforested. The extent of stocked area has not been reconciled back to the area registered under the ETS.



### 3.2. Location

The properties are situated across the Peninsula, around the Far North village of Te Kao. Block A bounds the west coast and parts of Block B bound the east coast.

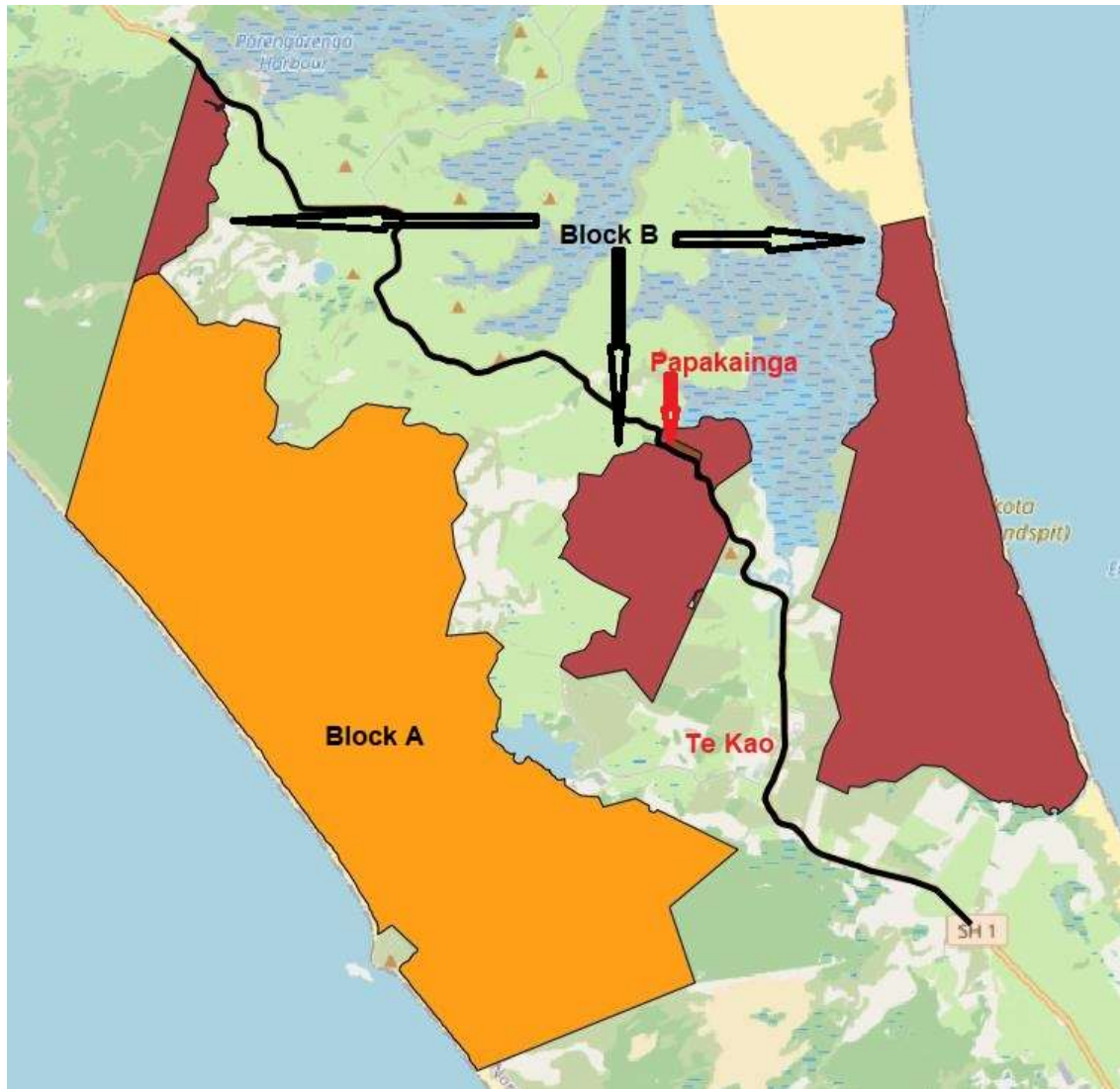


Figure 1. Location of Parengarenga Incorporation forestry land.





### **3.3. Access**

Current access to Block A for heavy vehicles is via Taylors Road, which is subject to an agreed royalty of \$30,000 each year, payable to the Wiki-Tupuni Trust, at the entire discretion of PINC. The agreement is that heavy traffic will not use Taylors Road between 18h00 and 6h00, except by prior arrangement.

PINC has a legal right to use Taylor's Road access, but alternative access could be developed if deemed of value. There are two options, one being along the existing easement off Te Ahu Road, along Oromanga, Road which is a "Restricted Roadway" registered on the land title, but this would require upgrade of a bridge which currently can only take light vehicles and having all traffic passing through the village and residential areas. Another option is through farmland owned by Parengarenga Incorporation further north, but this would increase log transport costs for most of the forest, especially the southern areas.

The largest eastern area of Block B is accessed across the Slade's property, off SH1 north of Te Kao. An agreement requires payment of 10cents per tonne of logs sold, only during periods of active harvesting and general access for forestry purposes is at no charge. Common courtesy is to inform the Slades of ad hoc intentions to access, prior to using this road. There is an existing strip of land which could be developed as alternative access, but while there is a good understanding between PINC and the Slades there is no need or desire to develop this. There is established and direct access off public roads to the other parts of Block B's commercial tree crop.

The most northern area of Block B is referred to as "Shenstone" and vehicular access is off State Highway 1 across neighbouring land to the north of that. No formal access agreement exists and this needs to be actioned.

There is established and direct access off public roads to the other parts of Block B's commercial tree crop.

There is an extensive network of roads already developed on the properties, which was done whilst harvesting the first rotation of pine. Ongoing costs will largely relate to maintenance of the existing infrastructure and development of new sites for processing or loading logs due to changing harvest systems.

### **3.4. Physical attributes**

Land is mainly undulating sand dunes on a coastal sand plain.

Block A Soils are predominantly recent sands in the Pinaki soils suite. These are free draining low nutrient soils, low in nitrogen and copper. There are several small, isolated patches of hard pans where tree growth is poor. Low lying areas where water can be trapped are often high in organic content and peaty. Areas close to the coast, west of No.2 Arterial Road, are typically raw sands, which are very unstructured, young, infertile and highly erodible.

Block B soils are largely Podzol soils. Orthic granular soils are dominant west of SH1 and provide for better growth than the eastern areas. Generally, conditions in Block B, particularly east of SH1, are more challenging than elsewhere.

Exposure to salt laden winds and low fertility drive lower growth rates near the coast than that further inland. It is important that existing protective coastal strips of pine are left standing to continue serving their protective function for the rest of the forest.



Numerous sites of cultural and historical significance have been identified and mapped.

Highly mechanised ground based harvesting systems can be employed, but note that there are several steep land formations which will need careful planning. Archaeology also requires careful operational planning to be undertaken.

Weather statistics for Waihopo at Kimberley Road were collected from Northland Council's Environmental Data Hub. Average annual rainfall over the last eight years was 1,212mm. January had the lowest monthly average (44mm). July had the highest monthly average of 192mm. Average temperature was 15.2°, with lows in July (average 12.2°) and highs in February (average 20.3°).

### **3.5. Regulatory environment**

#### **3.5.1. The "main" Acts**

- Forests Act 1949 (amended by the Forests Amendment Act 1993)
- Forests (Regulation of Log Traders and Forestry Advisers) Amendment Act 2020
- Resource Management Act 1991
- Health & Safety at Work Act 2015
- Heritage New Zealand Pouhere Taonga Act 2014
- Historic Places Act 1993

#### **3.5.2. Other legislation, categorised, is listed below:**

##### **a) Legal rights to harvest / land tenure**

- Te Turi Whenua Māori Act 1993/Maori Land Act 1993
- Treaty of Waitangi Act 1975
- Government Rounding Powers Act 1989
- Land Act 1948
- Maori Reserved Land Act 1955
- Land Transfer Act 2017
- Land Transport Act 1993
- Personal Property Securities Act 1999
- Public Works Act 1981

##### **b) Taxes and fees**

- Commerce Act 1986
- Companies Act 1993
- Local Government (Rating) Act 2002
- Local Government Act 2002
- Goods and Services Tax Act 1985
- Income Tax Act 2007
- Tax Administration Act 1994

##### **c) Forest Operations and Trade**

- Fencing Act 1978
- Biosecurity Act 1993
- Consumer Guarantees Act 1993
- Contract and Commercial Law Act 2017
- Co-Operative Companies Act 1996
- Fire and Emergency New Zealand Act 2017



- Sale of Goods Act 1908
- Land Transport Safety Council Code of Practice
- Log Transport Safety Council – Industry Standards
- Copyright Act 1994
- Designs Act 1953
- Statistics Act 1975
- Trade Marks Act 2002

**d) Environmental requirements**

- Climate Change Response Act 2002
- Crown Minerals Act 1991
- Conservation Act 1987
- Native Plants Protection Act 1934
- Hazardous Substances and New Organisms Act 1996
- Plant Variety Rights Act 1987
- Plants Act 1970
- Reserves Act 1977
- Wild Animal Control Act 1977
- Wildlife Act 1953
- NZS8409:2004 Management of Agrichemicals
- Soil Conservation and Rivers Control Act 1941

**e) Health and safety**

- Accident Compensation Act 2001
- Fire and Emergency NZ Act
- Hazardous Substances and New Organisms Act 1996
- Machinery Act 1950
- Misuse of Drugs Act 1975
- Trespass Act 1980
- Walking Access Act 2008

**f) Employment**

- Contracts (Privity) Act 1982
- Crimes Act 1961
- Employment Relations Act 2000
- Equal Pay Act 1972
- Holidays Act 2003
- Human Rights Act 1993
- Immigration Act 2009
- Minimum Wage Act 1983
- Parental Leave and Employment Protection Act 1987
- Patents Act 1953 and 2013
- Privacy Act 1993
- Misuse of Drugs Act 1975

**g) Regulations, Standards, Best Operating Practice**

- Approved Code of Practice for Safety and Health in Forest Operations
- National Environmental Standards for Commercial Forestry 2023



- National Environmental Standards for Freshwater Management
- NZ Environmental Code of Practice for Plantation Forestry 2007
- Climate Change (Forestry Sector) Regulations 2008
- Forest Disease Control Regulations 1967
- The Road Code
- NZ Forest Road Engineering Manual
- Forestry Earthworks & Harvesting Guidelines for Northland
- NZFOA Guidelines for the Management of Rare and Endangered Species
- Growsafe Agrichemicals User Guide

The lists above are not necessarily exhaustive.

### **3.5.3. National Environmental Standards for Commercial Forestry (NES-CF)**

The National Environmental Standard for Commercial Forestry (NES-CF) requires an assessment of risks and regulates conditions under which activities are permitted. Two of the major risk assessments are via electronic indicators on a MPI website, being erosion susceptibility and fish spawning.

Erosion Susceptibility is given four risk classifications, viz. Low (green), Moderate (yellow), High (Orange) and Very High (red). Low and Moderate risk areas have no constraints additional to standard conditions. High and Very High risk areas have additional constraints. Most of the productive area of the forest is Moderate risk and there are several smaller tracts of land classified as Low risk. Coastal dune areas, which are not production areas, are classified as Very High risk. An area of about 87 hectares west of SH1 in Block B is classified as High risk and is above the main river system - this area will need careful planning prior to harvest. Overall, erosion risks due to operations are Moderate and easily manageable using best practice.

Fish spawning indicators show the probability of Redfin Bully and Banded Kokopu spawning in some sections of rivers. This is more prevalent in Block B. Disturbance in these sections of river, during spawning periods, is not a permitted activity. Redfin Bully spawn during August, September and October; Banded Kokopu spawn during May and June each year. The areas impacted are reasonably small and it should be quite easy to schedule operations around them.

The NES-CF requires timeous notification of certain operational plans to Regional and District Councils. Northland Regional Council has established a portal to which plans must be notified. The Regional Council forwards these plans to the relevant District Council as well. Notifiable operations are:

- Annual harvest plans
- Annual earthworks plans
- River crossings
- Quarrying plans
- Re-plant and afforestation plans

The NES-CF only allows Regional or District Plan rules to be more stringent if those rules give effect to national instruments, matters of national importance or unique and sensitive environments. The PINC land falls into the Northland Region and Far North District.



### 3.5.4. Regional and District Plan Rules

#### a) Northland Regional Plan constraints:

- The usual coastal constraints apply to the sea, estuaries and adjacent beaches, but forestry operations do not directly impact any of these values.
- Lakes classified as significant freshwater bodies
  - o Lake Wahakari, on the eastern edge of the Block A and Lake Morehurehu in the middle of Block B. The lake catchments are shown as being up to one kilometre into afforested areas.
- The intertidal flats of Te Kao Bay, adjacent Block B have Marine pathway place limits.
- Outstanding Natural Character areas
  - o Intertidal flats and channels of Te Kao Bay adjacent Block B
  - o Lake Te Kahika in Block B, and its wetland outlet.
  - o Lake Morehurehu's wetland outlet
- High Natural Character areas
  - o Intertidal flats and channels of Te Kao Bay adjacent Block B
  - o Lake Morehurehu
- Ground water management unit is Aupouri Aquifer
- River water quantity management units are "Coastal River"
- Te Kao Bay has Coastal management units of "Estuary" and "Tidal"
- There is a mix of Lowland and Hill Country areas
- Council classifies virtually the whole of Block A and a small part of Block B as erosion prone, but the NES-CF erosion susceptibility classification overrides this. The only land of concern in production forestry areas, and which will need a closer look when planning to harvest, is 87 hectares west of SH1 in Block B.

#### b) Far North District Council

- Most productive land is zoned Rural Production. The coastal protection strip in Block A and most of Block B are zoned General Coastal.
- The lakes and dunes of Block B are classified as Outstanding Landscape. These do not include production areas.
- There are some areas along the eastern flanks of Block A which are classified as susceptible to floods. Almost all of the area in Block B, east of SH1 has been classified as susceptible to flood.
- There are some sites shown which have cultural significance to Māori, with some of those in stocked areas. However, there are many more sites present and mapped from prior archaeological surveys. These sites need to be recognised and appropriate treatment prescribed at operational planning stages.

#### c) Proposed Far North District Plan

- It is prudent to consider potential changes to operating environments due to changes in District Plans.
- Zones are proposed to change. Block A as Māori Purpose- Rural, Block B as Rural production.
- A new coastal environment looks to extend into some parts of productive forest, especially that of Block B, but the wording indicates this is not the intention.
- Landscape classifications appear to remain largely the same.
- There are new coastal and river erosion and flood risk zones, which appear to be more science based and accurate. For example, almost all of Block B east of SH1 is currently



shown as flood prone, but that is not the case, and the proposed new zones look more realistic.

- The whole peninsular is shown as a treaty settlement area of interest for several Iwi.
- The intention of changes as proposed do not appear to change any practicality of operating a commercial forest. However, there are two concerns:
  - (i) Maori Purpose Rural land use (Block A) does not list forestry as permitted activity and any activity not listed would be subject to a discretionary resource consent – FNDC need to be informed that forestry should be included as permitted activity subject to NES-CF regulations.
  - (ii) The other concern is to ensure that mapping is accurate so that unintentional consequences do not flow from that, for example to ensure that Outstanding Landscape boundaries do not encroach the current production forest areas. The property boundary does not match the ONL boundary on FNDC's GIS maps and FNDC need to be informed of this mapping discrepancy.

The main risk areas to consider are operations above lakes and rivers, particularly along the eastern Block B areas. Operations should not directly impact these water bodies and application of best practice should protect the values as required, even in the relatively small high erosion susceptible production areas.

Another area for specific attention is that of historic sites and cultural values. Operations need to identify the sites and plan around them to afford the required protection. There are protocols in place to do this.

#### **3.5.5. Emissions Trading Scheme**

The forest is classified as pre-1990, registered in The Emissions Trading Scheme, reference FAP-3205 and FAP-3202. "Eligible Person" is shown as Parengarenga A Incorporation. 449,800 NZUs were issued representing 7,830 hectares. All 449,800 NZUs were subsequently sold and so the balance of NZUs held is zero.

#### **3.6. Other land matters**

There is a gate key allocation system which provides access to ninety-mile beach, through the forest, for Haukainga only (home people living within strict limits). The route is off Te Ahu Road, down Oromanga Road. Oromanga Road is shown on the title as a restricted roadway. Access to the wider forest area is however restricted to business / official purposes.

Emergency services, people maintaining the Te Arai Reserve and some working staff and contractors have gate keys, for official purposes only.

Access to the land on foot is relatively easy, off beaches.

Management allow access to the forest for recreational purposes, subject to a permit system.



## 4. TREE CROP DESCRIPTION

### 4.1. Introduction

The predominant species is Radiata Pine. Radiata Pine has been determined, by long standing research and experience in the forest industry, to be economically and ecologically appropriate for the sites and management objectives of Parengarenga Incorporation. The stocked area, plus area awaiting re-plant, was 7,087.8 hectares in extent, on 30<sup>th</sup> June 2025.

A small area of minor species (11.1 ha) has marginal commercial value.

Coastal protection strips of pine (391 ha) need to be retained to continue serving its protective function for the productive forest areas. This area is therefore not a productive crop, but is managed as a commercial interest in protecting the productive crop.

Approximately 80% of the pine tree crop is being managed on a framing regime. No pruning has been done and the trees have been thinned out to between 350 and 650 stems per hectare (spha). An extensive thinning program is in progress, with approximately 3,200 hectares of the current crop still to be thinned.

The remaining 20% is being managed on a short rotation regime, historically planted at 1,000 spha, but since 2024 at 1,600 spha. No thinning is planned for this regime and average harvest age is expected to be around 15 years.

The forest is being managed on a non-declining yield basis. with the intention of normalising the forest as quickly as possible.

Regeneration strategy is to replant areas harvested from January to December each year, during the winter following December, i.e., areas harvested January 2025 to December 2025 will be replanted July 2026.

PINC does not have its own downstream processing facilities and log marketing is done on an arm's length willing buyer / willing seller basis. Domestic markets close to the forest are favoured against export markets due to lower price volatility and lower distribution risks.

### 4.2. Areas

Areas are measured in hectares to one decimal point. Management maintains electronic mapping and stand records. Operational areas are marked up monthly by staff using Avenza maps, or a drone, and stand records and shapefiles are updated accordingly. Stand records are being kept on a spreadsheet system now and maps are updated via QGIS.

<b>Block A NA71D/732</b>	<b><u>6248.3256</u></b>	<b>Title Area</b>
<i>made up of:</i>		
Productive P.radiata, planted	4888.2	
AR	115.5	
Minor spp	11.1	
Unproductive P rad	332	
Other unproductive areas	<u>901.5256</u>	balancing item
	<b><u>6248.3256</u></b>	





Block B tree crop was previously leased by Taumata Plantations Ltd. PINC have bought back the forest lease (November 2021) and now own and manage all trees on their land. During due diligence for purchase of the Block B lease, significant gaps were noticed, and net stocked areas were reduced by, on average, 3.5%.

There is one parcel of land in Block B Certificate of titles which does not in fact belong to PINC:



This parcel is referred to as Te Mingi and belongs to Muri Whenua. It was included in title NA67B/56 by mistake. The share register needs to be re-organised before an official change to title deeds can be effected. This is an ongoing work. The property area of Block B reduces by extent of 216.4293 ha to a nett 3761.2852 ha.

The parcel of land immediately to the south of Te Mingi is referred to as “Shenstone”. Logs were removed across the western parcel of land (Summit Forest, was then Juken Nissho) during the prior harvest and this is currently still the only way to get logs out. Preliminary field inspections revealed heavy competition with Kanuka and other vegetation, many large gaps in the stands and no silvicultural treatment since re-planting. Older satellite imagery found in Google Earth indicate that this area was mostly harvested during 2005, with a small area remaining to harvest as at December that year, but it is not clear when the area was re-planted. There is also uncertainty about whether the pine is regeneration or planted crop, but December 2005 imagery shows windrow slash indicating an intention to re-plant and 2012 imagery shows lines indicative of planting lines. We have assumed a replant date of 2006 and have reduced a rough outline of pine areas by 50%. Some inventory has been conducted to assess the forest growing on this area and it now needs to be properly mapped (there are a lot of gaps).

A Papakainga is on separate title and there are young trees growing on a part of that land. This area under trees has been given the same attributes as the neighbouring trees previously leased by TPL, as they appear to be the same age and neither area has had any treatment since re-planting. This property has been included under Block B, as it is immediately adjacent.





<b>Block B: NA67B/56</b>	3977.7145	Title Area
<b>Block B- Papakainga: NA56D/1466</b>	8.6705	Title Area
Less Te Mingi (Muri Whenua)	216.4293	
	<b>3769.9557</b>	<b>Effective title Area</b>
<i>made up of:</i>		
Productive P.radiata, planted	2084.1	
Unproductive pine	58.646	
Reserve	933.3567	
Utility	6.796	
Water	56.3294	
Retired Cutover	13.5706	
Roads and Skids	44.7761	
Shenstone	258.4032	
Estimated nett stocked area	<b>93.1</b>	
Unproductive areas	165.3032	
Other unproductive areas	313.9777	balancing item
	<b>3769.9557</b>	



#### 4.3. Area reconciliation

<b>TOTAL ESTATE</b>	<b>10018.28 Title Area</b>
<b>Made up of (as at 1st July 2023):</b>	
Planted P rad	6972.3
AR	115.5
Minor spp	11.1
Unproductive P rad	390.6
High Conservation Value Areas	1333.5
other natural areas	260.4
Stock gaps	810.5
Utilities	5.9
Other unproductive areas	13.8
Roads and landings	104.7
	<b>10018.3 hectares</b>

Year planted	2024	CHANGE	2025	Explanation of differences
1972	55.5	0.0	55.5	
1975	101.1	0.0	101.1	
2000	230.3	-111.9	118.4	111.9 ha harvested
2001	286.6	-102.4	184.2	102.4 ha harvested
2002	228.5	0.0	228.5	
2003	221.5	0.0	221.5	
2004	43.5	0.0	43.5	
2005	201.6	0.0	201.6	
2006	495.1	0.0	495.1	
2007	451.9	0.0	451.9	
2008	376.1	-45.3	330.8	45.3 ha harvested (short rotation)
2009	341.2	0.0	341.2	
2010	373.4	0.0	373.4	
2011	467.6	0.0	467.6	
2012	638.3	0.0	638.3	
2013	450.8	0.0	450.8	
2014	718.4	0.0	718.4	
2015	566.2	0.0	566.2	
2016	189.3	0.0	189.3	
2019	26.2	0.0	26.2	
2021	79.3	0.0	79.3	
2022	113.3	0.0	113.3	
2023	96.1	0.0	96.1	
2024	224.7	0.0	224.7	
2025	0.0	255.4	255.4	Re-establishment, May and June 2025
<b>Totals</b>	<b>6,976.5</b>	<b>-4.2</b>	<b>6,972.3</b>	

Awaiting re-establishment	<b>126.1</b>	<b>-10.6</b>	<b>115.5</b>	
Prepared	0		0	
Not prepared	126.1		115.5	
	<b>7,102.6</b>	<b>-14.8</b>	<b>7,087.8</b>	Areas released to riparian areas from Cpts 402 and 403, after planting. Some awkward slithers between Cpt 403 and the legal boundary were also removed from production.

Table 1. Area statement as at 30th June 2025.

#### 4.4. Stand history, records and management

Stand records were maintained by PF Olsen until 2015 (Block A), which was the end of second rotation planting. The records passed on to PINC had partial details of initial planting density and subsequent thinning quality control.



No work was executed in Block A from handover at the end of 2015, until 2019. However, from 2019, some thinning has taken place, some old crop areas have been harvested and some early clear fell harvest of stands deemed too old to thin (due to wind damage risk), has also occurred. Harvesting of the mature second rotation crop has commenced, on a non-declining yield basis and with the aim of normalising the forest as quickly as possible. Production thinning is being done to minimise the overall cost of thinning and to utilise the growth already in the late thin stands.

The tending regime applied to the Block A second rotation crop, until 2015, was to execute one thin to waste at age 10 – 12 years (mean height of 14 to 16 m), to a final crop stocking of 350 – 400 stems per hectare (spha). Since 2019, thinning has been a combination of waste (steeper areas) and production (flatter areas), with a target final stocking of 500 spha ( $\pm 50$  spha). Average final stocking prior to 2019 was 377 spha and since 2019 average final stocking was 497 spha. There is a program in place to bring the entire tree crop into a thinned state, through a combination of production and waste thinning.

When HFMNZ (Manulife) handed over Block B to PINC, only one age class had been thinned (YOE 2011). A mechanised thinning operation commenced in Block B during June 2023. The program to thin the current crop in Block B was 1,664 hectares in extent and 1,380 hectares remain to be thinned as at 1<sup>st</sup> July 2025. Stands in the Papakainga and Shenstone blocks have no stand records attached. The Shenstone block has been assumed to be YOE 2006 and at final stocking. The Papakainga area (Block B stand 1/11) has been assumed to be YOE2012, with a thinning still to take place, as per the neighbouring Block B stand 1/3.

Records are updated monthly, as operations in each stand are completed. External resources visit the forest monthly and provide guidance to staff involved in quality control and operational mark ups.



## 5. SUSTAINABLE YIELD ESTIMATION

### 5.1. Inventory

As at 30<sup>th</sup> June 2025, 176 ha of standing trees had a PHI or MRI inventory and a further 2700 ha had completed thinning QC data.

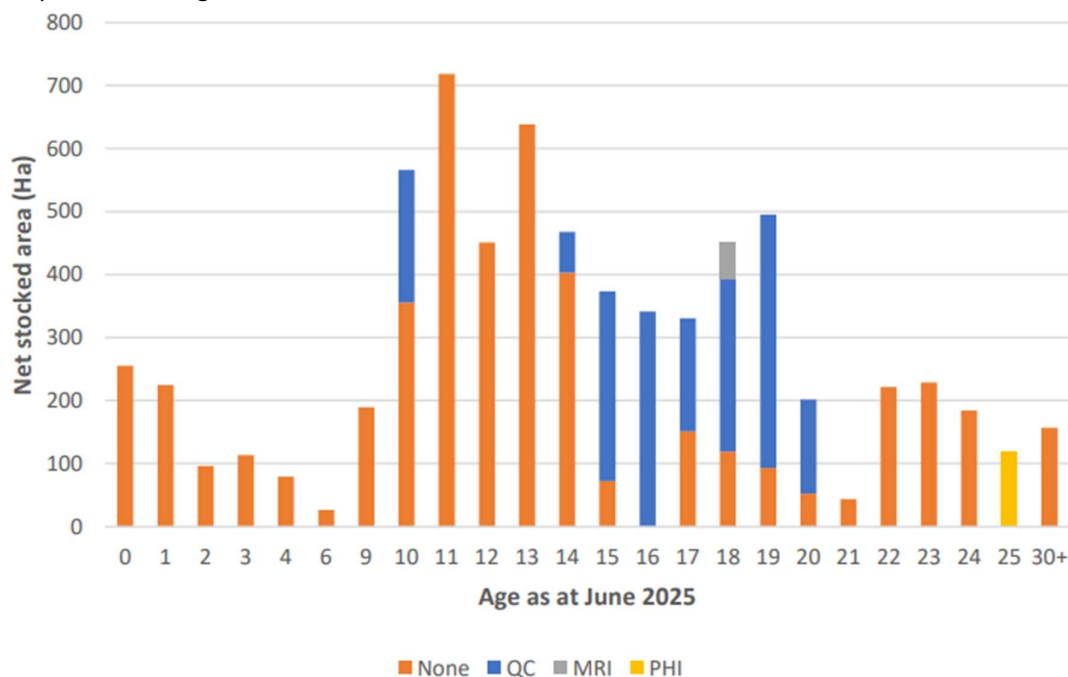


Figure 2. Area of inventory as proportion of production area.

### 5.2. Log grades

There are a limited number of domestic markets close to the PINC forest, one being in Kaitaia and another two near Waipapa. PINC supply into all of these markets. Export wharf gate is some distance away and is only supplied if domestic mills cannot take volume of available log grades. The strategy is to maximise volume into domestic mills and FSL has assumed a similar pattern of supply will prevail.

Grade	Description	Price point	Log length (m)	Branch size (cm)	Minimum SED (mm)
S30	Large domestic sawlog	Waipapa	4.9; 5.5; 6.1	7	300
V75	Large domestic sawlog	Kaitaia	4.9; 5.5; 6.1	7.5	250
RW	Domestic postwood	Waipapa	3.7; 7.4	7	80
SS	Domestic postwood	Waipapa	3.7	7	180
SW	Industrial sawlog	Waipapa	3.7; 4.9	10	200
A	Large export	Marsden Point	3.9; 5.9	12	300
K	Medium export	Marsden Point	3.9; 5.9	12	200
Pulp	Domestic pulpwood	Kaitaia	2.65; 5.3	UL	100

Table 2. Market potential log grades

### 5.3. Late thin areas

There is a significant area which had not been thinned to waste on time. A program to clear fell some of these areas and either production thin or waste thin the remainder, has been established and is progressing well. Some ground under the older un-thinned trees is too steep for production thinning.



FSL has used LiDAR derived terrain models to estimate the late thin areas that will need to be thinned to waste, and this has been modelled.

#### 5.4. Short Rotation Crop

PINC has isolated about 1,400ha to be dedicated to a short rotation crop, aimed at producing quality postwood. Feasibility studies assumed an average rotation age of 15 years will result in an average 90 hectares per annum of sustainable harvest. Each year 90 hectares of re-planting will be done at a stocking of 1,600 spha – this commenced from the winter of 2024.

#### 5.5. Wood quality

Trees in the PINC forest are of high quality due to the soils and climate in the area. Typical of coastal sand forests, the wood is dense, with small branches and good form.

**PINC will not use genetically modified seedlings.**

#### 5.6. Yield tables

Data from 2019 harvests in older first rotation stands (+50 years old) was used to develop yield tables for all the older first rotation stands which need to be harvested.

In Block A, MRI and PHI data inventories were undertaken during 2018; 2021 and 2025. These inventories were processed though YTGEn software to generate estimates of yields for full rotation harvests to be undertaken into 2025/6. Mid rotation thinning pre -assessments and post thin quality control measures have also been collated from both blocks. Base data (Spha, DBH, MTH) from inventory results was input to the industry Pine Radiata calculator to estimate Site index and 300i parameters for coastal, middle and inland areas. Thinning to waste was modelled at 10 years old and production thinning was modelled at 15 years to derive clear-fell recoverable volume estimates from the respective long rotation regimes. Short rotation yield models eliminated thinnings. Ongoing reconciliation of actual yields (in tonnes); thinning pre-assessment data, quality control data, mid-rotation inventory and pre-harvest inventory add to the body of knowledge to improve yield modelling.

Data from yield tables used to assess sustainable yields are shown below:

Regime	Short Rotation			Clearfell							
				Production thinned			Unthinned	Waste thinned			Old_Crop
Zone	C	M	I	C	M	I	M	C	M	I	C
V75	0%	0%	0%	25%	28%	26%	0%	26%	27%	27%	0%
S30	0%	0%	0%	14%	11%	20%	0%	15%	15%	22%	5%
PW	50%	50%	50%	3%	4%	2%	47%	3%	2%	3%	0%
Scragg	0%	0%	0%	35%	38%	30%	8%	37%	31%	27%	0%
Strainer	25%	25%	25%	12%	9%	12%	20%	10%	15%	12%	0%
A	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	11%
K	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	16%
KI	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	24%
Pulp	25%	25%	25%	10%	10%	10%	25%	10%	10%	10%	44%
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
TRV(m3/ha)	432	497	569	372	436	496	535	380	447	507	275

Table 3. Clearfell Yield estimates by grade mix, at 25 years old



PRODUCTION THIN YIELD TABLES		Grade mix % of TRV		
Model	Age (yrs)	Postwood	Pulp	TRV (m <sup>3</sup> /ha)
PT-Inland	15	50%	50%	100
PT-Middle	15	50%	50%	88
PT-Coast	15	50%	50%	72

Table 4. Production thinning yield estimates by grade mix, at 15 years.

### 5.7. Yield benchmarking

Average yields from 234 ha of production thinning during the last three financial years was 94 tonnes per hectare, from mainly middle stands at an average age of 16½ years. Yields assumed in these models are 92m<sup>3</sup>/ha from middle areas at age 17 years. Yield models appear realistic.

Average yield from 250 hectares of mature stands, at an average age of 24½ years, from January 2023 to June 2024, was 512 tonnes per hectare. The harvested area was in eastern, inland areas of Block A. Inland yield models used in this valuation deliver 488m<sup>3</sup>/ha at 24 years and 507m<sup>3</sup>/ha at 25 years (and 567m<sup>3</sup>/ha at 28 years). Yield models appear realistic.

### 5.8. Yield monitoring

Actual yields from harvesting operations, in tonnes per hectare, are monitored monthly and year to date via monthly reporting processes. These are collated into an annual monitoring report.



6. WOODFLOWS

6.1. Harvest strategy

The current age class distribution of the productive pine area is shown below:

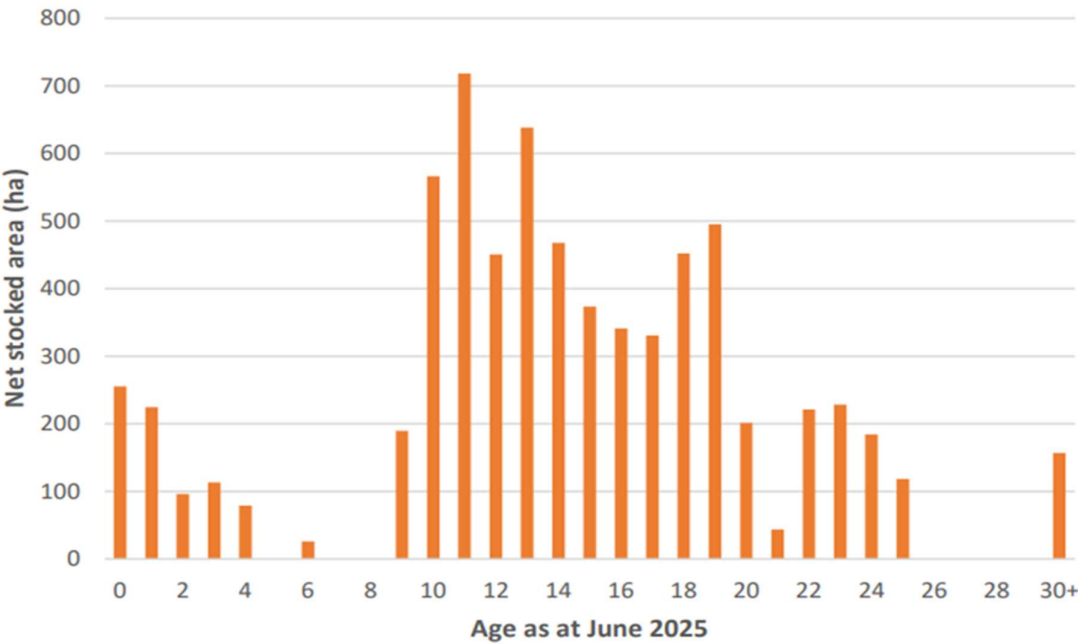


Figure 3. Age class distribution, as at 30<sup>th</sup> June 2025

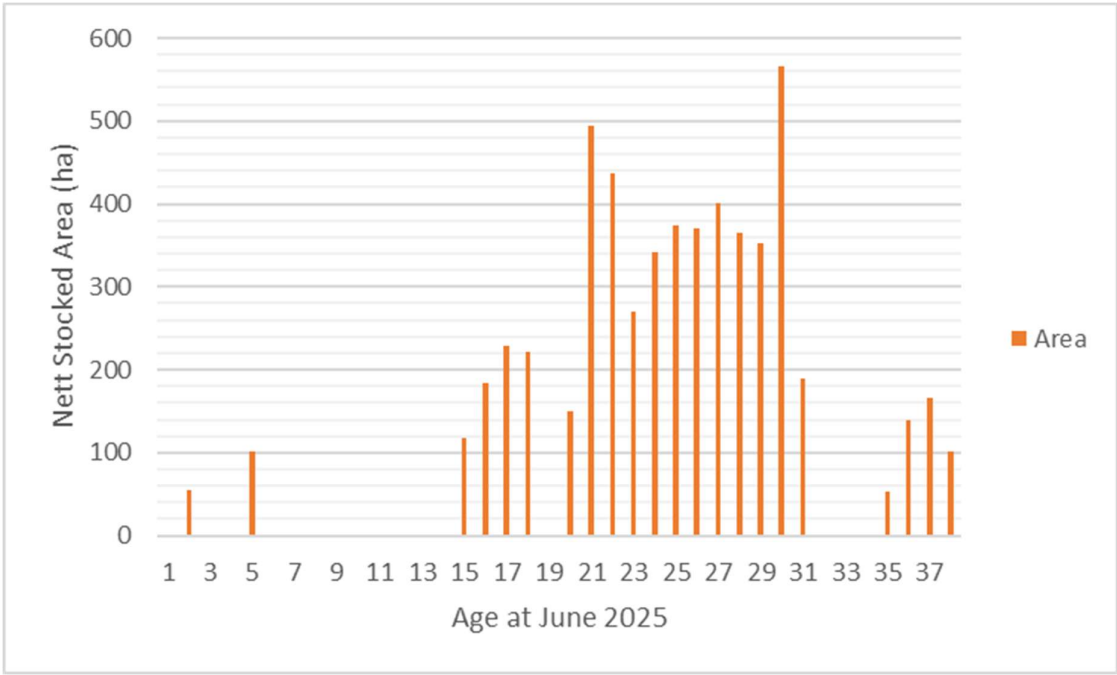


Figure 4. Age class distribution of full rotation crop, as at 30<sup>th</sup> June 2025

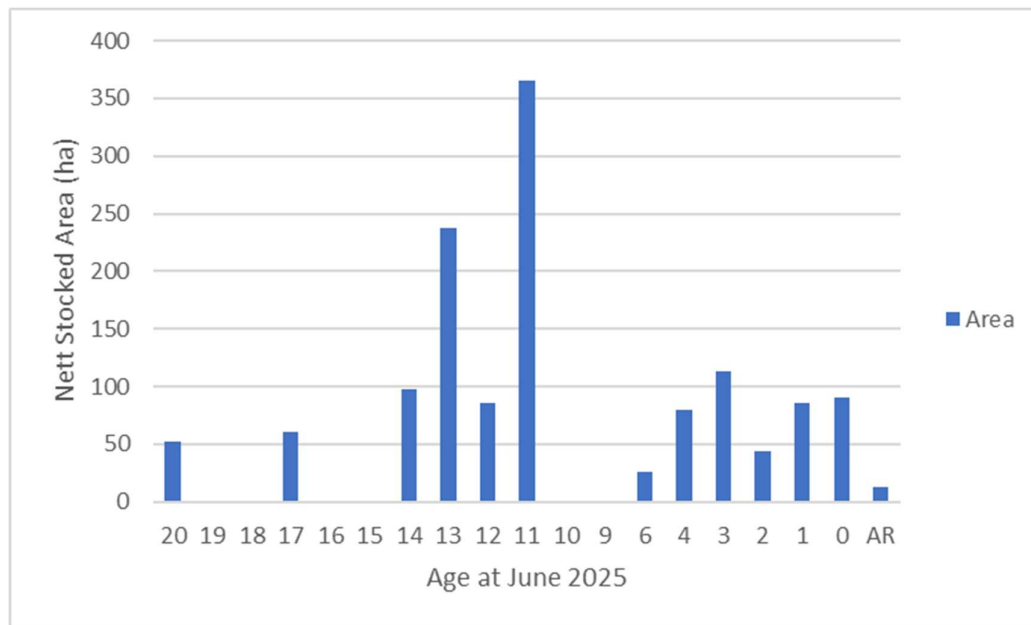


Figure 5. Age class distribution of short rotation crop as at 30th June 2025

PINC have a strategy to employ local people to staff operations on a continuous and sustainable basis. This is a multi-generational approach, quite different to an investor not connected to the land who may harvest at optimal age classes and employ contractors to come and go as the work program fluctuates. PINC have embarked on a harvest strategy which yields non-declining volumes and will eventually “normalise” the forest, ie have areas of equal productive capability in each annual age class from year 1 to rotation age ( $\pm 27$  years old in full rotation and 15 years old in short rotation).

The following constraints were applied to develop a harvest strategy.

- A little more than 1300 hectares, which has not been thinned, has been allocated to a short rotation regime. Of that area, 180 hectares has been planted since 2024 at a stocking of 1,600 spha with the reminder at an historic stocking of  $\pm 1,000$ spha. This area will be harvested at 60 hectares per annum until production thinning ends and then at an average of 90 hectares per year thereafter.
- Production thinning will continue until there are no more late thin stands, on suitable terrain, outside of the areas allocated to short rotation. This program for the current crop should end during FY 2026/7. There was 260 hectares of forest in this category at 30<sup>th</sup> June 2025, with a yield expectation of approximately 23,000m<sup>3</sup>.
- Continue harvesting second rotation thinned stands, with a minimum age of 24 years for the first five years, then 25 years. Maximum age 35 years. Annual clear fell harvest volume is set to be non-declining. Volumes start at 75,000m<sup>3</sup> per annum and go up to 99,000m<sup>3</sup> per annum from FY 2031/2.
- Old crop first rotation trees will be harvested annually, when production thinning comes to an end, constrained to a maximum of 10,000 m<sup>3</sup> per annum, until all the first rotation trees in the valuation area have been harvested. There is 157 ha in this category with a yield expectation of approximately 43,000m<sup>3</sup>.
- It is not feasible to production thin approximately 96 ha of late thin areas, which is also too late to thin by chainsaw and too big for the short rotation crew as well. The woodflow model assimilates this area into the full rotation crop.





Woodflows from currently growing stock, using current yield models, to target a normalised forest, are presented below:

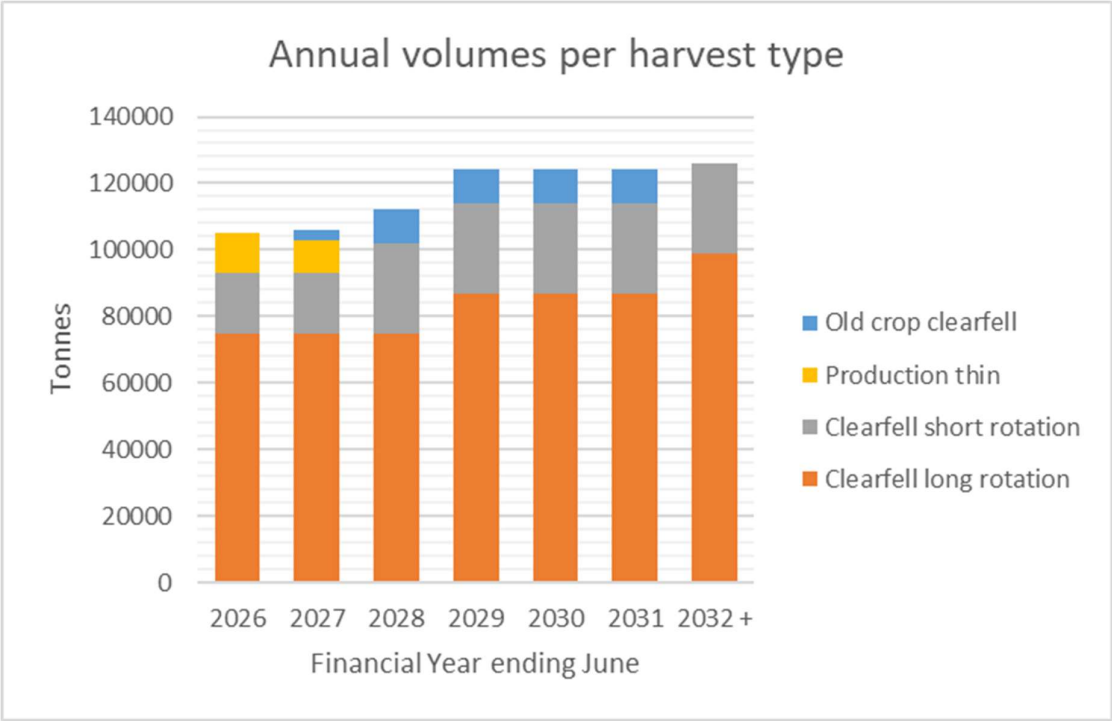


Figure 6. Annual wood flow



## 7. OPERATIONAL PLANNING AND CONTROL

### 7.1. Long term and medium term plans

The harvest strategy to deliver a sustainable harvest volume and linking that into available markets is the starting point for long term planning. Long term and medium term operational schedules are largely allocated on an age class basis.

Annual Operational Plans schedule compartments and stands to fit medium and long term plans. Each compartment requiring some form of treatment requires the preparation of an operational plan.

### 7.2. Operational Plans

All operations require an operational plan covering

- Hazard assessment
- Environmental risk assessment, including statutory requirements
- Assessment of heritage and cultural constraints
- Operational prescriptions
- Supporting maps in digital and paper formats

### 7.3. Operational Methods

#### a) Planting

- All planting is re-plant of harvested areas.
- Rule of thumb is that areas harvested between January and December each year are planted the following winter.
- Pre-plant planning includes assessment of environmental values and a review of setbacks from sensitive areas such as waterways, riparian zones, indigenous vegetation and sites of cultural significance.
- Slash from harvesting is left broadcast, unless it will impede planting results.
- Planting is done manually, using plant boxes and planting spades.
- Slow release fertiliser, is applied for each new seedling at the same time as planting. Fertiliser is applied only to help the seedlings get a good start. Slow release fertilisers are used to avoid risks of leaching to waterways.

#### b) Tending

- Weed assessments to date have not resulted in prescription of chemical application and the only tending required has been hand pulling of pine regeneration from prior crop seed.
- Foliage sampling of four year old stands commenced during 2024. Samples were analysed by Scion and fertiliser recommendations for the first stand have been made. An aerial fertiliser application is planned for this stand during 2025. Data will be collected from fertilised areas and control (un-fertilised) areas to establish response.

#### c) Thin to waste

- Where thinning takes place, this is done either by chainsaw, or tracked machine.
- Stands are thinned to 500 stems per hectare ( $\pm 50$  spha).
- Thinning by chainsaw (manual method) has typically low environmental impacts. Prescriptions protect sensitive areas such as rivers and indigenous vegetation. Sites of cultural significance cannot be damaged and therefore do not require pre-operational assessment.



- Thinning by machine (mechanised method), can potentially damage sites of cultural significance and so these need to be assessed prior to operations. Prescriptions protect other environmental values such as rivers and indigenous vegetation. Pre-operational assessment should include drone imagery to identify areas where it is necessary to thin and areas where this is not necessary.
  - Over the next four years, PINC will establish small (0.5ha) chemical thinning trial plots, over a representative variation of growing conditions. Industry research has shown chemical thinning to be cost-effective, but PINC need to first establish whether crop trees will survive and thrive, or not, on their land after thinning.
- d) Production thinning
- Production thinning areas are only on terrain with gentle slopes, as the remaining crop trees would get damaged and the operation is also not feasible on steep slopes for cost, health and safety reasons.
  - A full harvest plan needs to be prepared prior to operations commencing
  - The operation is fully mechanised with felling and processing of logs by tracked machine and extraction by forwarder.
  - An interrow is cut and trees in-between the interrows are thinned out to arrive at target stocking of 500spha ( $\pm 50$ ).
- e) Clearfell harvest
- Clearfell harvest is being executed on long and short rotation regimes.
  - A full harvest plan needs to be prepared prior to operations commencing
  - Operations are highly mechanised with the only manual elements being QC and felling by chainsaw where slopes are too steep for machines.
  - Long rotation felled trees are typically bunched for a skidder to extract to landings, where logs are processed and loaded out.
  - Short rotation harvest usually uses a forwarder to extract logs which are processed by felling machines in the cutover – the same crew is used for production thinning and short rotation clearfell. Research is underway to establish cost-effective methods of harvesting short rotation trees once the current production thinning cycle has finished (from FY 2027/8).

#### 7.4. Operational controls

All operations need to be monitored on an ongoing basis with records of such being prepared at least once post operation and sometimes with in-progress reporting as well. Minimum requirements are:

- a) Planting
- Quality Control (QC) sample plots during planting
  - Map and stand record updates to reflect the new crop status after planting
  - Seed certificates are obtained to verify sources. **It is policy that GMOs are not used.**
  - Survival and competition assessments in the autumn following planting
- b) Tending
- Survival assessments also inform status of natural regeneration and presence of other weeds
  - At other times, conduct a walk through assessment of weeds, before and after treatment.
  - Sample measures of tree crops fertilised, including control areas, to establish response levels.
  - Monthly mark up of completed areas.



- c) Thinning to waste
  - Before and after assessments by sample plots and/or transects
  - Monthly mark up of completed areas
  - Stand record updates to reflect the status after thinning
- d) Production thinning
  - Before and after assessments by sample plots and/or transects
  - Monthly monitoring inspections and mark up of completed areas
  - Stand record updates to reflect the status after thinning
- e) Clear fell harvest
  - Monthly harvest monitoring inspections and mark up of completed areas.
  - Stand record updates to reflect the status after harvesting (cut-over)



### 7.5. Annual Operational Plan July 2025 to June 2026.

		Cpt-stand	YOE	Stocked Area	Work area	Priority 1 Lands	ESC	Fish Spawning	Historic and cultural sites of significance	Water	Indigenous Vegetation	HCVA	NRC	FNDC	Other comments
Harvest	Clearfell - mature Budget 185 ha / 78375 tonnes	408-1	2000	218.4	116	nil	moderate	nil	None known - see Sunrise Archaeology site instructions dd July 2024 - ADP potential low	Ephemeral only	nil	nil	nil	nil	Active, work area is allowable cut area
		407-1	2001	68.2	68.2	NIL	moderate	nil		Perennial river of low risk (4L) flows through the middle of the compartment	nil	nil	nil	nil	Contiguous to Cpt 408, closer to the coast.
					184.2										
	Clearfell - Short Rotation Budget 60 ha / 18,000 tonnes	424-1	2005	52.5	52.5	nil	moderate	nil in harvest area	several - see Sunrise Archaeology site instructions dd July 2024	4 x perennial rivers flowing out of the stand, to the western coast - fell and extract away from these gully systems	several fingers are shown on the harvest plan map as natural areas - fell and extract away	nil	nil	nil	
		436-1	2008	151.1	7.5	nil	moderate	nil in harvest area	several sites, nearby, but none in harvest area - see Sunrise Archaeology site instructions dd Dec 2023	Internal systems all ephemeral; western boundary is a 4H river but harvesting will not take place adjacent this sector (reserved for production thinning)	Only riparian vegetation to the west	nil	nil	nil	
					60										
Thin	Production Budget 135 ha / 13,500 tonnes	431-1	2007	103.1	103.1	nil	moderate	nil	N02/1123 - see Sunrise Archaeology site instructions dd Dec 2023	4H river adjacent NW boundary	Riparian	nil	nil	nil	100% PT
		442-1	2010	72	34.4	nil	moderate	nil	nil	ephemeral (5)	nil	nil	nil	nil	27.6 ha has been thinned to waste - 34.4 ha remains for production thinning
		436-1	2008	151.1	91.1	nil	moderate	nil	None known - see Sunrise Archaeology site instructions dd Dec 2023 - ADP potential high	4H river adjacent NW boundary	Riparian	nil	nil	nil	60ha allocated to short rotation harvest - remaining 91.1 ha for production thinning - area split must still be assessed and mapped. May not complete by end of PY.
END OF PROGRAM (GAP IN AGE CLASSES)		446-1	2011	107.6	55.2	nil	moderate	nil	nil	ephemeral (5)	nil	nil	nil	nil	52.4 ha has been thinned to waste - 55.2 ha remains for production thinning
					283.8										

Table 5. Annual operational plan (part 1) 2025/6



Thin	Waste (Manual) Budget 300 ha	456-1	2015	94.2	0	nil	moderate	nil	N02/1127?	4H flows to farm; lake and/or wetlands in middle of the stand	Riparian around wetlands, and in low lying areas adjacent southern and western boundaries	nil	nil	nil	If any area left is after June 2025
		3-9	2014	107.5	107.5	nil	moderate	nil	None known, see SA site instructions dd Oct 2024 - ADP unlikely	4H river adjacent north, east and south boundaries	nil	yes, riparian zones along north, east and south boundaries	nil	nil	First stand for TTW in Block 8. Needs full aerial survey to map out gaps.
		2-5	2015	141.9	141.9	nil	High in northern sectors; Moderate in the south	Adjacent western boundary of southern sector	None known, but no report - ensure Sunrise Archaeology survey prior to operations	Class 4 river runs through the middle of the stand	Riparian - HCVA	Yes, Riparian zone and river in valley running through the middle of the stand	nil	nil	Very "gappy", and a lot of pampas - needs full aerial survey (drone).
		3-10	2015	77.1	77.1	nil	moderate	nil	None known, but no report - ensure Sunrise Archaeology survey prior to operations	4H river adjacent western and northern boundaries	Riparian - HCVA	Yes, riparian zone and river adjacent western and northern boundaries	nil	nil	Block 8, not as gappy as Cpt 2 but also needs full aerial survey to assess gaps and weeds.
					326.5										
Thin	Thin to Waste - mechanised Budget 200 ha	1-3	2012	85.1	80	nil	moderate	yes, 400m of river in middle of stand	several sites, but none relocated - see Sunrise Archaeology site instructions dd Dec 2023	4H river in middle of block; harbour adjacent north boundary	Riparian	nil	nil	nil	Check whether the short rotation harvest for Papakainga area (55ha) is likely, if unsure still thin the full area.
		4-5	2013	44.3	44.3	nil	moderate	nil	None known, see SA site instructions dd Oct 2024 - ADP potential is moderate	4H; 4M; 4L; 5	Riparian	BLK8/7 adjacent southern and eastern boundary	nil	nil	
		5-31	2013	99.9	99.9	nil	80% low; 20% moderate	nil	None known, see SA site instructions dd Oct 2024 - ADP potential is moderate	4L	Riparian	Drains into BLK8/6 to the south	nil	nil	
		6-14	2013	138.1		nil	moderate	nil	N02/1152 - see SA site instructions dd Oct 2024 - ADP potential	4H	Riparian	Eastern areas in fork of BLK/6	nil	nil	
					224.2										
Re-plant	Re-plant June 2025 Budget 285 ha	408-1		218.4	218.4	nil	moderate	nil	None known - see Sunrise Archaeology site instructions dd July 2024 - ADP potential low	Ephemeral only	nil	nil	nil	nil	will be between 20 and 40 hectares harvested after December 2025 - add to budget as contingency - 90 hectares as short rotation (1600 spha) and remainder as full rotation (1,000 spha)
		424 -1		52.5	52.5	nil	moderate	nil	several - see Sunrise Archaeology site instructions dd July 2024	4 x perennial rivers flowing out of the stand, to the western coast - fell and extract away from these gully systems	several fingers are shown on the harvest plan map as natural areas - fell and extract away	nil	nil	nil	Full rotation at 1,000 spha
		434-2		13.1	13.1	nil	moderate	nil	nil	4H river, and lake internal to harvest area	Riparian	nil	nil	nil	Full rotation at 1,000 spha
					284										
Tend (Release)	Budget 480 ha	401-3	2024	61.6	61.6	nil	moderate	nil	Nil	ephemeral (5)	Nil	nil	nil	nil	
		402-2	2024	85.8	85.8	nil	moderate	nil	N03/3; N03/780; N03/781	4H river	Riparian only	nil	nil	nil	
		418-3	2024	77.3	77.3	nil	moderate	nil	Nil	Lake; Rivers 4H and 4M	Riparian only	nil	nil	nil	Assess all potential tending areas first, may not need tending, pine regen' biggest risk
		402-3	2025	11.5	11.5	yes, nw corner									
		403-3	2025	153.9	153.9	Yes, Northern sector, aligns with LOW ESC area	60% moderate; 40% low	Redfin Bully; Aug; Oct	nil	4H river adjacent northern boundary	Riparian and potentially other in northern sector	nil	nil	nil	
		403-4	2025	45.4	45.4	nil	moderate	nil							
		434-3	2025	44.6	44.6	nil	moderate	nil	nil						
					480.1										
Tend (Fertile)	Budget 60 ha	415-2	2021	65.5	30	nil	moderate	nil	Nil	ephemeral (5)	Nil	nil	nil	nil	aerial application of fertiliser trial - (Scion brew)
					30										

Table 6. Annual operational plan (part 2) 2025/6



## 8. FOREST PROTECTION

### 8.1. Fire Protection

With weather patterns normally experienced in New Zealand during the period late spring/summer, fire can be a real threat to the forest. This can be minimised by:

- Having an effective fire plan;
- Active prevention measures which include restrictions on allowable access, fire prevention signage, publicity when fire danger prevails, access to adequate water sources, constructing and maintaining firebreaks, and selective forest grazing to reduce fuel within stands;
- Effective detection systems which include good communication systems, mapping, and fire plan alert procedures;
- A close link with the relevant fire authorities, and an understanding of equipment and trained manpower requirements, and
- Good forest management that recognises the influence of terrain, roading network and accessibility, and fuel build-up from silvicultural practice, that will influence fire prevention and control measures.

PINC has insured the forest against fire damage. Current insurance cover can be summarised as follows:

Policy Loss Limit \$7,000,000 any one claim & in the aggregate  
 Fire, impact Malicious Damage limit \$39,335,284  
 Volcanic Eruption limit \$100,000  
 Hail limit \$40,000  
 Earthquake limit \$100,000  
 Landslip limit \$100,000  
 Strike Riot and Civil Commotion \$100,000  
 Wind limit Not taken  
 Flood Not taken  
 Snow & Ice Not taken  
 Pest & Disease Not taken  
 Limits above set against the above perils are the maximum payable as a result of that peril. All sums insured are any one claim and, in the aggregate, any one year. Where there is no value expressed against any peril above, then no cover is provided.

PINC have their own Fire Engine and basic fire fighting equipment. They undertake staff training every year prior to fire season commencing and provision a standby roster during the annual end of calendar year operational shut down (end December to begin January).

A separate Fire Plan provides more detail.

### 8.2. Forest Health

As shown under land description, soils are not very fertile, being low in nitrogen, phosphate copper and sometimes boron. This is typical of these coastal areas. There is anecdotal evidence that mid-rotation fertilising has been considered in Block A, but never implemented due to the lack of a convincing cost-benefit argument. Fertilising was done in a part of Block B, where 210 hectares of the 415 hectares planted during 2012 was fertilised during 2017 (293kg/ha Triple Superphosphate and 261 kg/ha Urea). No other fertilising has taken place. See tending sections regarding foliage sampling, fertiliser recommendations and planned fertilisation of 5 year old trees.



The last health survey to hand, for Block A, was completed end 2011 (aerial survey at 1,000m parallel transects), to beginning 2012 (ground survey, drive through with 15 health plots). No significant pest or pathogen issues were found. The last health survey to hand, for Block B, was completed end 2019 (ground survey, drive through with 10 health plots). YOE2012 areas were noted to be struggling, despite the application of fertiliser during 2017 (293kg/ha Triple Superphosphate and 261 kg/ha Urea). No other fertilising has taken place. See tending sections regarding foliage sampling, fertiliser recommendations and planned fertilisation of 5 year old trees.

Ongoing informal monitoring by operational staff has revealed no unexpected health issues in the forest.

### **8.3. Pest Control**

The Pest Management Plan provides more detail on control of pests, or potential pests in the natural environment..

Animal pests include opossum, wild dogs, pigs and horses.

Plant pests include:

Acacia – throughout the forest

Oxylobium - mainly Block B

Gorse – throughout the forest

Pampas – throughout the forest

Wilding pines – mainly in dune lands.

PINC has commenced a rodent and mustelid pest trapping program.

PINC have established a program to monitor natural areas and have also commenced monitoring of natural areas. Young trees are monitored for weed competition and controlled to ensure tree crop survival and growth.

Access can be restricted where weeds such as Acacia encroach low usage roads. Roads need to be monitored and a program to maintain key routes open needs to be followed.

**Note that biological control agents are not used and a full risk assessment by suitably qualified people would need to be carried out if such was considered.**

## **9. CULTURAL AND HERITAGE MATTERS**

### **9.1. Archaeology**

Under the Heritage New Zealand Pouhere Taonga Act 2014 it is the landowner's responsibility to identify any historic sites on their land prior to undertaking any work which may disturb or destroy such sites. Records of archaeological and historical places are maintained in the NZ Archaeological Association (NZAA) Site Recording Scheme <http://www.archsite.org.nz/>.

PINC has engaged the services of Sunrise Archaeology to advise on regulated matters related to archaeology. Sunrise Archaeology has assisted PINC to obtain 3 active authorities from Heritage New Zealand. Work continues to assess sites before and after operations, for compliance with authority conditions and discovery of new sites.





A local committee is in place to assist management in protecting sites of cultural significance. Some sites, known to local Iwi and considered important, but not included in official records, are also protected.

There are numerous archaeological sites located within and adjacent to the boundaries of this forest estate. Surveys commissioned in recent years have resulted in more exact locations being fixed for many of these sites. Location of archaeological sites recorded on the NZ Archaeological site register (including updated locations) and culturally significant sites as published in the Far North District Council Plan are shown in Appendix 11.5

**Note:** Consents to modify a “registered” archaeological site as scheduled in the Far North District Plan also requires resubmission of the Heritage NZ application to the District Council for an additional resource consent from that organisation.

Identification of sites of significance and how to work around those is a key element in operational planning processes.

## 10. CITES

CITES (the Convention on International Trade in Endangered Species of Wild Fauna and Flora) is an international agreement between governments.

Its aim is to ensure that international trade in specimens of wild animals and plants does not threaten the survival of the species in the wild, and it accords varying degrees of protection to more than 34,000 [species](#) of animals and plants.

The full list of New Zealand CITES listed species are available online at <http://www.doc.govt.nz/about-doc/role/international/endangered-species/cites-species/nz-cites-listed-species/>.

**PINC does not trade in any listed species.**



## 11. APPENDICES

### 11.1. Legal titles



**RECORD OF TITLE  
UNDER LAND TRANSFER ACT 2017  
FREEHOLD  
Search Copy**



R. W. Muir  
Registrar-General  
of Land

**Identifier** **NA71D/732**  
**Land Registration District** **North Auckland**  
**Date Issued** 13 July 1989  
**Prior References**  
 NA45A/819

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<b>Estate</b>	Fee Simple
<b>Area</b>	6248.3456 hectares more or less
<b>Legal Description</b>	Parengarenga A Block
<b>Registered Owners</b>	
The Proprietors of Parengarenga A Block	

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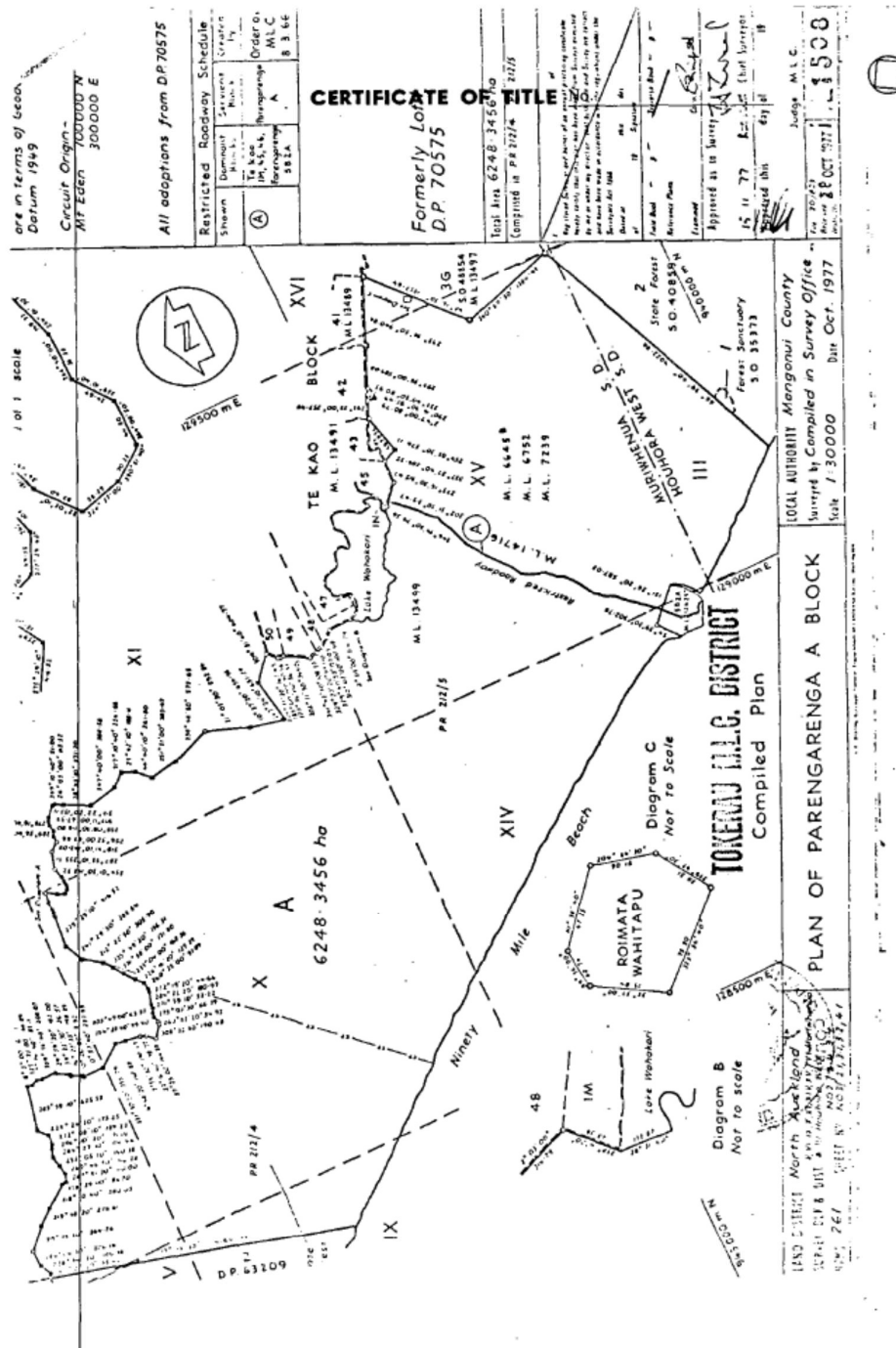
#### Interests

8789545.1 Notice pursuant to Section 195(2) Climate Change Response Act 2002 - 14.6.2011 at 7:00 am  
 10329807.1 Forestry Right pursuant to the Forestry Rights Registration Act 1983 to The Proprietors of Parengarenga A Block - 13.4.2016 at 1:02 pm  
 10329807.2 Mortgage of Forestry Right 10329807.1 to Maori Trustee - 13.4.2016 at 1:02 pm



Identifier

NA71D/732





**RECORD OF TITLE  
UNDER LAND TRANSFER ACT 2017  
FREEHOLD**

**Guaranteed Search Copy issued under Section 60 of the Land  
Transfer Act 2017**



R.W. Muir  
Registrar-General  
of Land

**Identifier** **NA67B/56**

**Land Registration District** **North Auckland**

**Date Issued** 06 April 1987

**Part-Cancelled**

**Prior References**  
NA51B/716

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**Estate** Fee Simple

**Area** 3977.7145 hectares more or less

**Legal Description** Part Parengarenga B3C Block

**Registered Owners**  
Members of the Committee of Management of Parengarenga 'A' Incorporation

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**Interests**

Appurtenant hereto is a right of way created by Provisional Register embodied in the register NAPR4A/561

Appurtenant hereto is a right of way created by Provisional Register embodied in the register NAPR4A/543

Appurtenant hereto is a right of way created by Provisional Register embodied in the register NAPR542

Appurtenant hereto is a right of way created by Provisional Register embodied in the register NAPR229/137

Subject to Part XXIV Maori Affairs Act 1953

8554851.1 Partition Order vesting Ngatekawa Block CIR 531293 issued - 29.7.2010 at 7:00 am

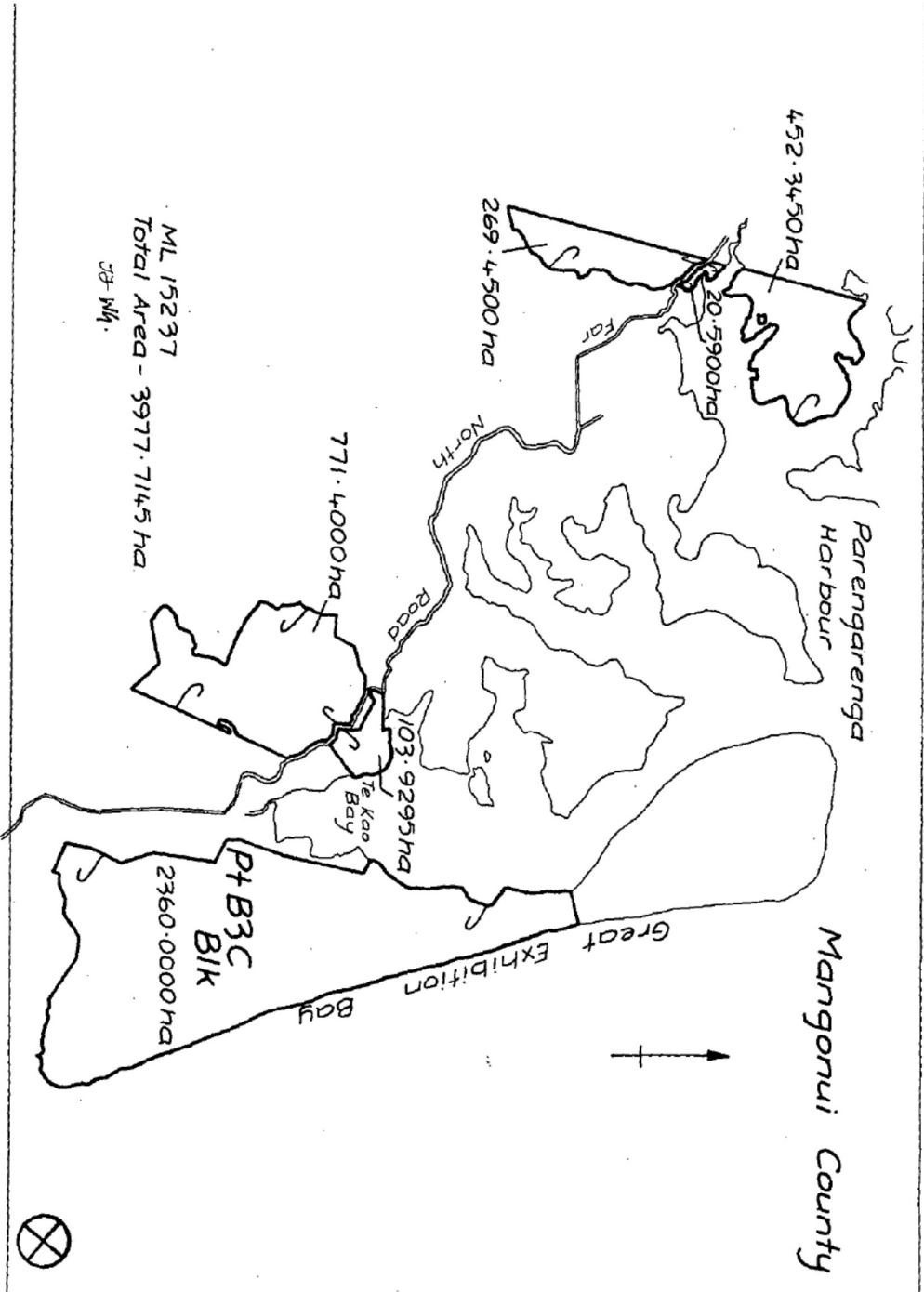
Appurtenant hereto is a right of way created by Easement Instrument 8623369.2 - 23.12.2010 at 12:51 pm

8932382.1 Notice pursuant to Section 195(2) Climate Change Response Act 2002 - 5.12.2011 at 4:36 pm

9168904.1 Notice pursuant to Section 195(2) Climate Change Response Act 2002 - 31.8.2012 at 4:52 pm



Identifier **NA67B/56**





**RECORD OF TITLE  
UNDER LAND TRANSFER ACT 2017  
FREEHOLD**

**Guaranteed Search Copy issued under Section 60 of the Land  
Transfer Act 2017**



R. W. Muir  
Registrar-General  
of Land

**Identifier** **NA56D/1466**  
**Land Registration District** **North Auckland**  
**Date Issued** 30 January 1987

**Prior References**  
NA51B/716

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**Estate** Fee Simple  
**Area** 8.6705 hectares more or less  
**Legal Description** Lot 1 Deposited Plan 103374  
**Registered Owners**  
Members of the Committee of Management of Parengarenga 'A' Incorporation

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**Interests**

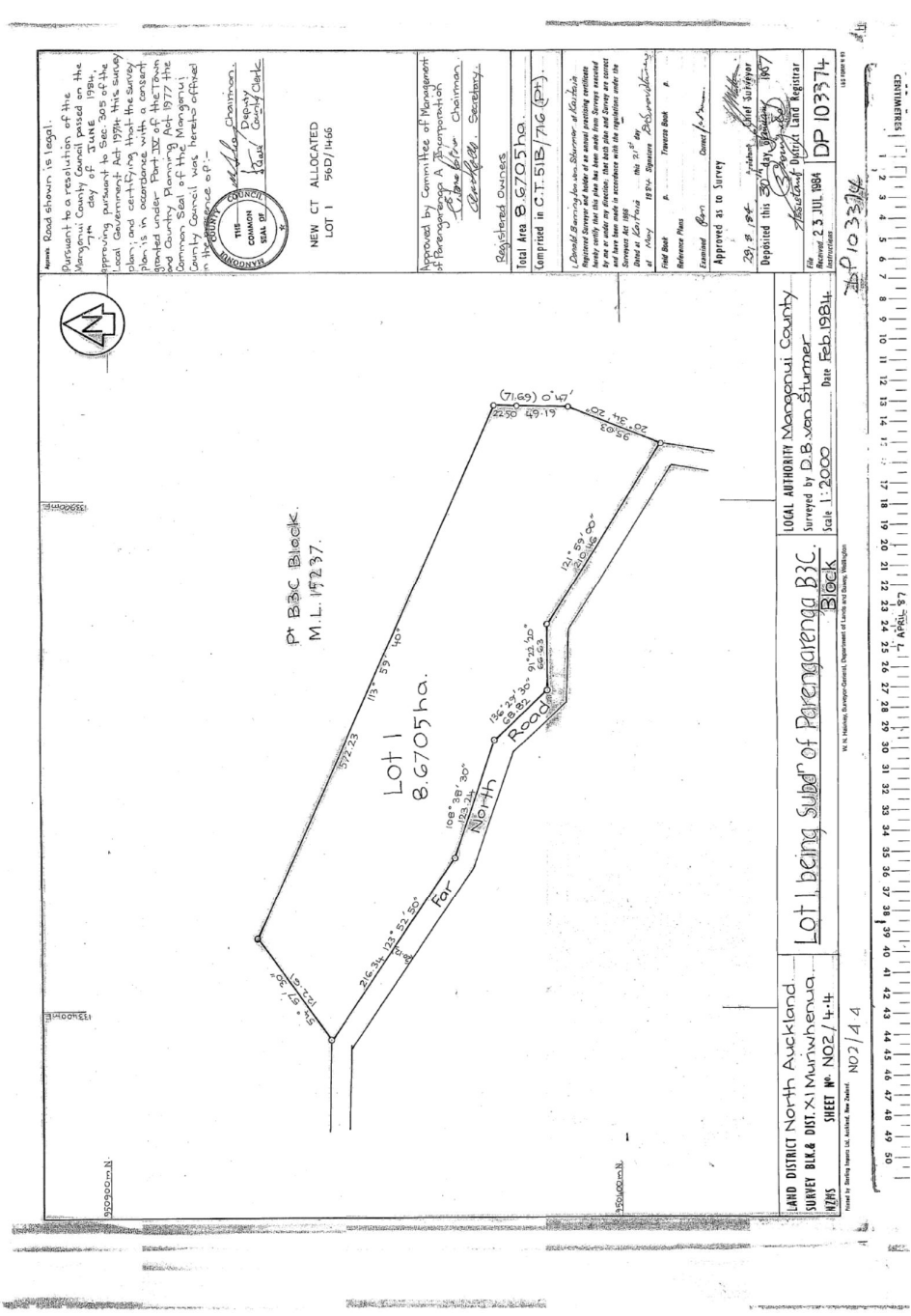
Appurtenant hereto are rights of way created by Provisional Register NA229/137  
Appurtenant hereto are rights of way created by Provisional Register NA4A/542  
Appurtenant hereto are rights of way created by Provisional Register NA4A/543  
Appurtenant hereto are rights of way created by Provisional Register NA4A/561  
Subject to Part Section XXIV Maori Affairs Act 1953 (affects part)  
8932382.1 Notice pursuant to Section 195(2) Climate Change Response Act 2002 - 5.12.2011 at 4:36 pm  
12082829.1 Status order declaring that the status of the within land shall cease to be General Land and shall become Maori  
Freehold Land - 9.4.2021 at 12:08 pm





Identifier

NA56D/1466





## 11.2. Forest Management Units – Block A

PROGRAM FROM 1 JULY 2025											
			5003.7	4888.2	258.8	3599.1	1145.8				
Block	Comp	Stand	Total area	Planted	Prod thin	Thin2 waste	Short Rotatic	Species	YO	Seedling	Rotation
A	240	1	36.8	36.8	0	36.8		P.rad	1975	?	1
A	247	2	64.3	64.3	0	64.3		P.rad	1975	?	1
A	401	3	61.6	61.6	0	61.6		P.rad	2024	23/227; 23/501	3
A	402	2	85.8	85.8	0	0	85.8	P.rad	2024	23/227; 23/501	3
A	402	3	11.5	11.5	0	11.5		P.rad	2025	23/222 23/501	3
A	403	3	153.9	153.9	0	153.9		P.rad	2025	23/222 23/501	3
A	403	4	45.4	45.4	0	0	45.4	P.rad	2025	23/222 23/501	3
A	404	3	31.4	31.4	0	31.4		P.rad	2000	96/30	2
A	404	4	12.8	12.8	0	12.8		P.rad	1972	?	1
A	404	5	5.4	5.4	0	0	5.4	P.rad	2022	20/224	3
A	405	3	50.5	50.5	0	50.5		P.rad	2000	95/290	2
A	405	4	42.7	42.7	0	42.7		P.rad	1972	?	1
A	405	5	7.9	7.9	0	0	7.9	P.rad	2021	20/753	3
A	406	2	36.5	36.5	0	36.5		P.rad	2000	95/290	2
A	407	1	68.2	68.2	0	68.2		P.rad	2001	00/217; 99/387; 98/611	2
A	408	1	116	116	0	116		P.rad	2001	00/217; 00/514; 98/611; 99/387	2
A	408	2	102.4	0	0	102.4		P.rad	AR		
A	409	1	80.8	80.8	0	80.8		P.rad	2002	01/212	2
A	410	1	78	78	0	78		P.rad	2002	01/212	2
A	411	1	69.7	69.7	0	69.7		P.rad	2002	01/212	2
A	412	1	73	73	0	73		P.rad	2003	02/307	2
A	413	1	90.3	90.3	0	90.3		P.rad	2003	01/212	2
A	414	1	58.2	58.2	0	58.2		P.rad	2003	02/307	2
A	415	2	65.5	65.5	0	0	65.5	P.rad	2021	20/753	3
A	416	2	82.3	82.3	0	0	82.3	P.rad	2022		3
A	417	1	43.5	43.5	0	43.5		P.rad	2004		2
A	418	3	77.3	77.3	0	77.3		P.rad	2024		3
A	419	2	25.6	25.6	0	0	25.6	P.rad	2022		3
A	419	3	43.8	43.8	0	0	43.8	P.rad	2023		3
A	420	2	42.5	42.5	0	42.5		P.rad	2023		3
A	421	1	51.9	51.9	0	51.9		P.rad	2005		2
A	422	1	46.4	46.4	0	46.4		P.rad	2005		2
A	422	2	27.3	27.3	0	27.3		P.rad	2005		2
A	423	1	23.5	23.5	0	23.5		P.rad	2005		2
A	424	1	52.5	52.5	0	0	52.5	P.rad	2005		2
A	425	1	111	111	0	111		P.rad	2006		2
A	426	1	87.2	87.2	0	87.2		P.rad	2006		2
A	427	1	78.8	78.8	0	78.8		P.rad	2006		2
A	428	1	125	125	0	125		P.rad	2006		2
A	428	2	11.9	11.9	0	11.9		P.rad	2007		2





A	429	1	57.8	57.8	0	57.8		P.rad	2007		2
A	429	2	15.8	15.8	0	15.8		P.rad	2007		2
A	429	3	9.8	9.8	0	9.8		P.rad	2023		3
A	430	1	85.8	85.8	0	85.8		P.rad	2007		2
A	431	1	103.1	103.1	103.1	0		P.rad	2007		2
A	432	1	177.5	177.5	0	177.5		P.rad	2007		2
A	433	1	80.6	80.6	0	80.6		P.rad	2008		2
A	433	2	8.3	8.3	0	8.3		P.rad	2008		2
A	434	2	13.1	0	0	0	13.1	P.rad	AR		2
A	434	3	44.6	44.6	0	0	44.6	P.rad	2025	23/222 23/501	3
A	435	1	90.8	90.8	0	90.8		P.rad	2008		2
A	436	1	151.1	151.1	91.1	0	60	P.rad	2008		2
A	437	1	97	97	0	97		P.rad	2009		2
A	438	1	131.2	131.2	0	131.2		P.rad	2009		2
A	439	1	106.2	106.2	0	106.2		P.rad	2009		2
A	440	1	6.8	6.8	0	6.8		P.rad	2009		2
A	441	1	50.1	50.1	0	50.1		P.rad	2010		2
A	442	1	72	72	0	72		P.rad	2010		2
A	443	1	204.5	204.5	0	204.5		P.rad	2010		2
A	444	1	46.8	46.8	0	46.8		P.rad	2010		2
A	445	1	23.2	23.2	0	0	23.2	P.rad	2011		2
A	446	1	107.6	107.6	64.6	43		P.rad	2011		2
A	447	1	51.9	51.9	0	0	51.9	P.rad	2011		2
A	448	1	22.4	22.4	0	0	22.4	P.rad	2011		2
A	449	1	68.5	68.5	0	0	68.5	P.rad	2012		2
A	450	1	169.2	169.2	0	0	169.2	P.rad	2012		2
A	451	1	85.3	85.3	0	0	85.3	P.rad	2013		2
A	452	1	139.7	139.7	0	139.7		P.rad	2014		2
A	453	1	155.1	155.1	0	0	155.1	P.rad	2014		2
A	454	1	6.2	6.2	0	0	6.2	P.rad	2014		2
A	455	1	116.3	116.3	0	116.3		P.rad	2015		2
A	456	1	94.2	94.2	0	94.2		P.rad	2015		2
A	457	1	26.2	26.2	0	0	26.2	P.rad	2019		2
A	458	1	5.9	5.9	0	0	5.9	P.rad	2021		3

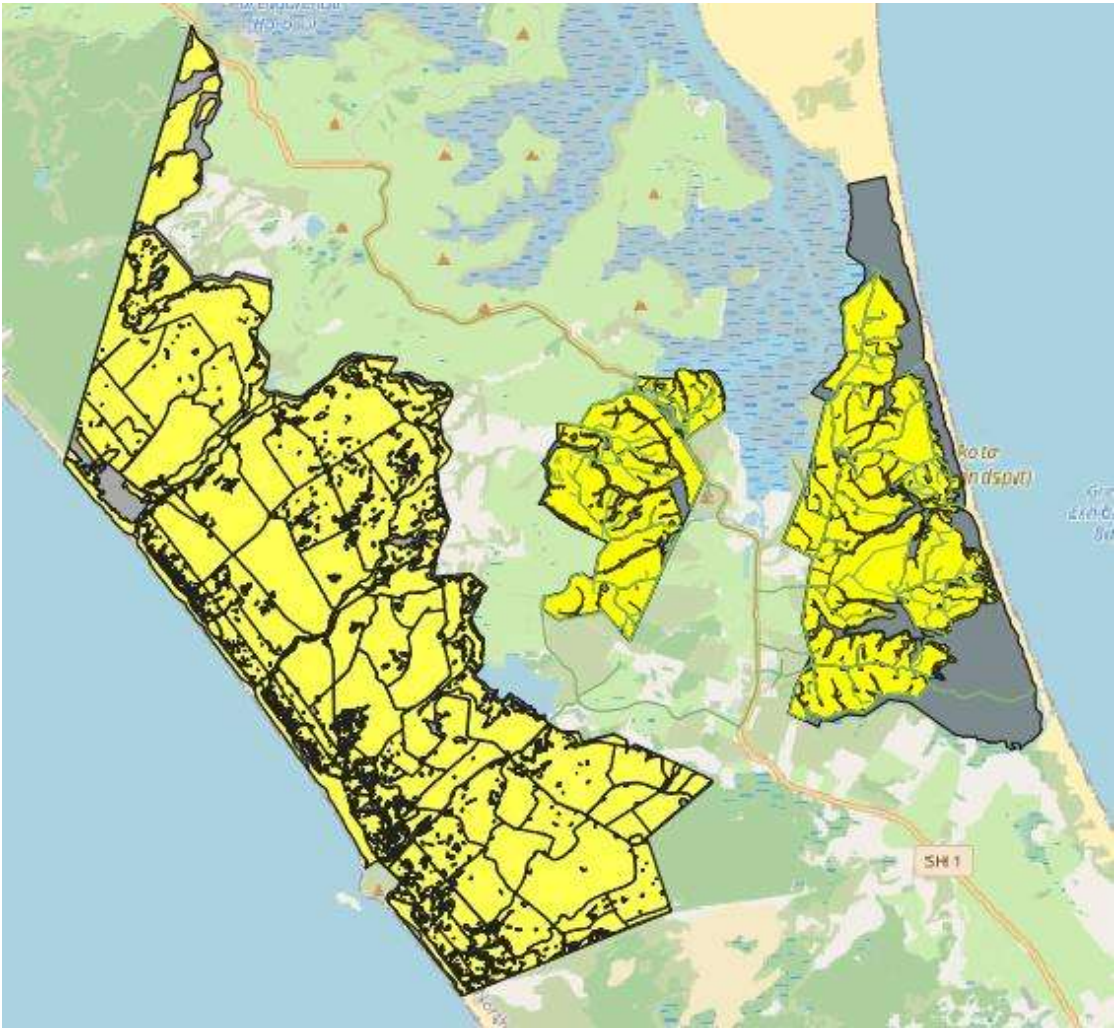


### 11.3. Forest Management Units – Block B

PROGRAM FROM 1 JULY 2025											
			2084.1	2084.1	0	1879.9	204.2				
Block	Comp	Stand	Total area	Planted	Prod thin	Thin2 waste	Short Rotatic	Species	YOF	Seedlot	Rotation
B	1	11	4.1	4.1	0	4.1		P.rad	2012	11/630	2
B	1	3	78.6	78.6	0	78.6		P.rad	2012	11/630	2
B	2	5	141.9	141.9	0	141.9		P.rad	2015	14/546	2
B	2	6	86.4	86.4	0	86.4		P.rad	2016	13/645; 14/546	2
B	3	8	93.1	93.1	0	93.1		P.rad	2013	12/600	2
B	3	9	107.5	107.5	0	107.5		P.rad	2014	13/645	2
B	3	10	77.1	77.1	0	77.1		P.rad	2015	14/546	2
B	3	12	47.6	47.6	0	47.6		P.rad	2016	14/546	2
B	3	13	55.3	55.3	0	55.3		P.rad	2016	14/546	2
B	4	5	42.7	42.7	0	42.7		P.rad	2013	12/600	2
B	4	6	88.9	88.9	0	88.9		P.rad	2014	13/645	2
B	4	7	98.6	98.6	0	16.8	81.8	P.rad	2014	13/304	2
B	4	9	16.3	16.3	0	16.3		P.rad	2015	13/660B	2
B	5	21	25.9	25.9	0	25.9		P.rad	2011	08/795	2
B	5	22	11.5	11.5	0	11.5		P.rad	2011	08/795	2
B	5	25	12.9	12.9	0	12.9		P.rad	2012	11/630	2
B	5	26	19.4	19.4	0	19.4		P.rad	2012	11/630	2
B	5	27	90.4	90.4	0	90.4		P.rad	2012	11/630	2
B	5	28	79.6	79.6	0	79.6		P.rad	2012	11/630	2
B	5	30	51.5	51.5	0	51.5		P.rad	2012	11/630	2
B	5	31	96.4	96.4	0	96.4		P.rad	2013	12/600	2
B	5	32	40.7	40.7	0	40.7		P.rad	2015	13/660B	2
B	6	9	64.1	64.1	0	64.1		P.rad	2012	11/630	2
B	6	14	133.3	133.3	0	133.3		P.rad	2013	12/600	2
B	6	16	122.4	122.4	0	0	122.4	P.rad	2014	12/600	2
B	6	17	59.7	59.7	0	59.7		P.rad	2015	13/660B	2
B	7	16	225.1	225.1	0	225.1		P.rad	2011	08/795	2
B	7	17	20	20	0	20		P.rad	2015	14/546	2
B	8	1	93.1	93.1	0	93.1		P.rad	2006	?	2



**11.4. Map of afforested areas**





11.5. Sites of Significance - Map

