Blairlogie Pine Investment

Forest and Carbon Management Plan

September 2024

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Disclosure

Forest Enterprises Limited, specifically Mr HE Hughes, the CEO, has given and before distribution not withdrawn, his written consent to the inclusion of this Report as part of the Product Disclosure Statement and Offer Register for the Blairlogie Pine Investment. Mr HE Hughes is a New Zealand Institute of Forestry Registered Forestry Consultant, a Chartered Member of the New Zealand Institute of Directors, and a director of Forest Enterprises Limited, the licenced manager for the investment.

Forest Management Plan

Summary

This Report sets out the forest management plan for a forestry Managed Investment Scheme (**MIS**) to be managed by Forest Enterprises Limited called the Blairlogie Pine Investment.

The assumptions and calculations in this Report have been independently reviewed by Forme Consulting Group Limited and commented on in their separate Forestry Audit Report (included on the Offer Register). The financial consequences of the forest management plan and the projections have been incorporated into the financial cashflow for the investment set out in the Product Disclosure Statement on the Offer Register.

Forest Description

Location and Access

The Blairlogie Pine Investment comprises a forest property located about 30km by road east of Masterton in the Blairlogie district. Access from Masterton is via the Castlepoint Road and then the Blairlogie-Langdale road. All of this route is sealed.

The property is bordered by a mixture of farmland and pine plantations.

The forest contains internal roads formed for harvesting the first rotation of trees. These roads provide excellent access for re-establishment and tending operations during the second rotation. Roads will require upgrading work prior to any harvest of the re-established (second rotation) tree crop but this will be at a significantly lower cost than that required for the harvesting of the first rotation of trees.

Legal Descriptions

Forest Block	Legal Area	Titles
Blairlogie Pine Investment	888.25	7.2880 ha, being Lot 3 DP 62096, WN33B/892, and 432.7728 ha, being Part Lot 2 DP 11340, WN42D/622, 235.6180, ha being Lot 1 DP 76216, WN42D/620, and 212.5701 ha, being Part Lot 1 DP 12382, WN42D/621

Previous Status of the Properties

The blocks were originally planted in Radiata pine, between 1992 and 1994. Harvesting of the original tree crop started in 2018 and is expected to be completed in 2027, with replanting concluding in the winter of 2028.

Gross and Commercially Stocked Forest Area

Area Definition

Area measurement has been taken from a Geographic Information System (GIS) maintained by Forest Enterprises, using orthorectified aerial imagery and Land Information New Zealand (LINZ) Primary Parcel data.

Estimated current stocked areas of commercial Radiata pine plantation forest and the areas that are to be replanted are:

Second rotation replanting	
Currently planted	237.06 ha was planted between 2019 and 2023
To be replanted	A further 533.84 ha to be planted from 2025 to 2028

The total stocked area of the combined forest estate is expected to be 770.9 at the end of the 2028 planting season as shown in the table below:

Blairlogie Pine	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Planting Programme (ha)	9.1	32.3	47.1	108.9	39.6	0	112.4	148.50	143.30	129.7
Cumulative Hectares	9.1	41.4	88.5	197.4	237	237	349.4	497.9	641.2	770.9

Areas are based on recent aerial photography and mapping. Updated photography and mapping is undertaken during the life of a forest and it is usual for the measured net stocked area to change with each update, and the changes can be material.

The difference between the total gross legal title area of 888ha and the 770.9 ha of stocked forest (which is the commercial tree crop component of the Blairlogie Pine Investment), comprises natural scrub and forest, riparian reserve, boundary setbacks, roads and landings.

ETS Land Classification

Forest	Pre-1990 Forest Land	Post-1989 Forest Land (Registered Carbon Accounting Areas)
Blairlogie Pine	82 hectares	729 hectares

The combined Pre-1990 and Post-1989 land area of 811ha does not reconcile to the total tree crop area of 770.9ha due to a different mapping standard being applied. For example, roads and skids are counted within the ETS land classification, but not in the tree crop area.

As second rotation Post-1989 forest land, it will be approximately 7 years from planting each CAA before Carbon Credits will be available to sell (based on the stock change accounting method).

Topography, Altitude, Soils and Climate

- The forest properties are medium hill country. The property is incised by watercourses draining via various streams into the Tauweru River and the Whareama River.
- The range in altitude is from 60m above sea level to a high point of 375m. The mean altitude of the properties is just under 200m.
- Soils are entirely brown orthic soil over a mix of Sedimentary (sandstone, mudstone) and Greywacke rock. Brown soils are very common in New Zealand and occur in locations that do not typically experience either severe summer drought or extreme winter rains. They are naturally fertile for forestry use without impervious pans that can restrict tree root growth. Their capacity to support high levels of tree growth and yield is borne out by the production results of the first rotation of forest, and this will be enhanced with the genetic improvement (based on tree selection and breeding) of the tree stocks used to replant the forest.
- Average annual rainfall in this area is approximately 1,000mm-1,250mm.

Forecast Forest Productivity

Forest productivity is expressed using a measure known as the 300 Index[1] (300i). This is a measure of volume productivity in *cubic metres per hectare per year* (m^3/ha/yr) for a defined reference regime.

Based on information from the forest's first rotation, we have assessed an area weighted average 300i for Blairlogie Pine forest of 26.5m^3/ha/yr. This is from first rotation trees of approximately GF16[2]. The improved average 300i using genetically improved treestock is assessed as 28.5m^3/ha/yr.

[1] 300 Index is a forestry term used to express the productivity of a site in terms of volume growth. It is the mean annual volume increment in cubic metres per hectare of a 300 stem per hectare Radiata pine stand at age 30 years. As a measure of productivity used in modelling and forecasting tree growth and stand yield, it is relevant even where crops are not intended to be thinned to a stocking as low as 300 stems per hectare or grown to age 30.

[2] 'GF' stands for Growth and Form and is a rating system used to compare treestocks. In general terms, the higher the GF rating, the higher the assessed projected performance in terms of the growth and form of the resulting trees.

Local Authorities and Land Use Environmental Consents

Local authorities have an influence on environmental management. This includes granting resource consents with various conditions attached to them, and the monitoring of permitted and consented forestry activities. The National Environment Standards for Commercial Forestry (NES-CF), which came into force in late 2023 recognises eight core forestry activities from land preparation as part of tree crop establishment to earthworks and tree crop harvesting.

The NES-CF seeks to provide nationally consistent regulations to manage the environmental effects of forestry as a land use. As part of the NES-CF, all land in New Zealand has been classified and mapped in terms of its erosion susceptibility risk. There are four risk classes, or zones, recognised: Green (low risk), Yellow (moderate risk), Orange (high risk) and Red (very high risk). The key forestry activities impacted by the erosion susceptibility class of the underlying land are earthworks and harvesting. Earthworks can be controlled by the Greater Wellington Regional Council on Red and Orange (particularly areas over 25 degrees slope) erosion zone land.

The Blairlogie Pine forest consists of 64% Red Zone, 4% Orange Zone, 4% Yellow Zone and 28% Green Zone.

In this second rotation investment, Forest Enterprises does not contemplate that the consenting process or any conditions applied to forest operations being onerous.

Forest Management

Forest Enterprises specialises in the management of Radiata pine plantation forests. Radiata accounts for around 90% (1.5 million ha) of all plantation forests established in New Zealand. It displays very good growth rates and can be managed to produce high value clearwood[3] logs and small branch structural sawlogs in a relatively short rotation of 24 to 30 years. It is particularly well suited to the Wairarapa as evidenced by the first rotation growth and yield in this property and nearby forests.

Forest Audits

All forests are audited annually by Forme Consulting Group Limited to ensure that approved management plans are completed to specification and quality standards, and management is consistent with good forestry practice.

Establishment

Genetically improved seedlings are used for the new treecrop. This stock produces high growth trees of good form.

The trees are planted at a spacing of 3m by 4m to produce a target planting density of about 833 stems per hectare. The spacing results in relatively even growth, branch size control, and assists tree selection for the final crop.

The trees will be release sprayed[4] in the spring following planting to remove competing weed growth. A survival survey of the previous year's plantings will determine if any blanking[5] of failed trees is required. Provision has been made in the cashflow for regeneration thinning (5% of area to be replanted), as well as blanking (and subsequent release spraying) of 3% of the total planted area. Normally less is required.

Maintenance

Existing roads used for harvesting the first crop will be used for all establishment and tending operations. Annual maintenance will be required to keep the water tables and culverts clear. This has been provided for in the cashflow projection.

Silvicultural Regimes

It is proposed to apply a framing regime consistent with optimising the growth potential of the site for both carbon and good quality timber. The primary crop strategy is the sale of carbon credits earned by growing

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[3] Clearwood is the forestry term for wood which is free of knots and other defects.

[4] Releasing is removing competing weed growth from around young trees, normally by spraying.

[5] Blanking is the forestry term used to describe the planting of replacement trees in areas where it is assessed that insufficient trees have survived to ensure adequate selection for the final crop.

trees, and the secondary strategy is harvest if returns are greater from harvesting than selling carbon credits.

Framing Regime

The framing regime to be applied involves one thinning[6] at a Mean Top Height[7]of 15m to 550 stems per hectare. This regime will produce high volumes per hectare of medium diameter logs, with small to medium size branches. These logs are suited to both the domestic sawmilling industry and the production of quality framing grade timber for construction, as well as the log export market. There has been a trend towards this low-cost regime amongst forest growers in New Zealand.

On this land, NZUs will be earned from carbon sequestration.

There will be a natural spread in growth rates within the forest, influenced by altitude and aspect.

The following tables indicate the timing of tending operations that will be applied:

Age	Tending Program	Target Mean Top Height	Target Stems per Hectare
10.0	Thin to final crop	15.0 metres	550
Slight timing variations may result from the optimum scheduling of the thinning			

The growth models in Forecaster[8] will be used to schedule the tending to ensure the optimum timing of each operation. For the framing regime the objective is to balance tree diameter growth and restriction of branch diameter in the lower logs.

Changes to the tending program may be proposed if new research indicates such changes would, on a cost-benefit analysis, enhance the projected rate of return from the forest.

Records, Mapping and Inventory

Forest Enterprises uses the Geographic Information System (GIS) ArcGIS in conjunction with the stand record system called GeoMaster. GeoMaster is the repository of stand records that can be interrogated to supply specified data and reports. ArcGIS is how a wide range of maps are produced. Both systems support forest planning, management and reporting. These are industry standards for mapping and record keeping in forestry and are comparable with the general ledger in the financial sense. These systems have been used to produce the maps and data underlying the analyses in support of the Product Disclosure Statement.

Aerial imagery in support of mapping and updating area records is captured throughout the life of the tree crop or stand. Aerial imagery capture uses a range of methods broadly outlined as follows:

- At about tree age 4 years, once planted tree crops are well established and growing and are clearly visible from the air, undertaken in support of tending operations – often using a drone.
- Immediately prior to the mid-rotation inventory at about age 12-14 years, undertaken in support of planning, valuation and reporting – using aerial photography or LiDAR technology[9].
- Immediately prior to the pre-harvest inventory at about age 23-25 years, in support of harvest planning – using aerial photography or LiDAR.
- If required, regularly during the harvesting phase to monitor and report production and crop yields – using a drone.
- If required, prior to re-establishment of the next rotation of trees in support of the necessary planning for land preparation and planting activities – using a drone.

6 Thinning is removing trees within a stand to promote growth from the remaining crop.

7 Mean Top Height is the mean height of the 100 largest diameter trees per hectare

8 Forecaster is a suite of computer models for Radiata pine developed by SCION, New Zealand's Crown Research Institute for Forestry.

9 LiDAR is a relatively new remote sensing survey method that can be used to complement ground-based inventory and reduce the overall cost of obtaining area and crop condition data and information.

Forest Protection

There are a number of risks to forests that can be significantly reduced through good management practice and relevant insurance cover.

Fire

Fire risk is not great as there is little uncontrolled access to the forest with gates remaining locked except during the day when forestry operations are in progress. Fire insurance cover details are provided in the Financial Statements annually reflecting the current cover. Response to vegetation fires is managed by Fire and Emergency New Zealand.

Wind

Young trees with rapid initial foliage growth, which is not always matched by root development, can be at risk of toppling[10]. Re-standing and remedial pruning have proven to be very effective corrective methods to address toppling events and a provision has been made in the cash flow for 5% of the area requiring such treatment. Windthrow[11] after thinning can also occur.

Animals

Allowance has been made in the early years for hare and rabbit control. As part of an Animal Health program, regular possum monitoring and control is carried out in this region by Greater Wellington Regional Council.

Security

Public trespass is not expected to be a problem because there is limited vehicular access to the forest blocks and the road gates will be locked.

Disease

Dothistroma, a fungal disease that causes loss of foliage (pine needles), is a rare occurrence in the Wairarapa, historically not reaching levels where control would be required. Scattered patches of *Cyclaneusma* needle cast have sometimes been seen in Wairarapa forests but this is not a serious risk to growth. Red Needle Cast is present in the Wairarapa and affects most forests sporadically, causing some loss of growth in the years when Red Needle Cast occurs. This has been considered in the modelling by calibrating against first rotation yields.

Loss of Carbon stores

Where a forest suffers a natural disaster or other accidental events that damage the forest (including windthrow, landslide, naturally caused fires, pests and disease) the ETS allows an application for a “temporary adverse event suspension” to pause carbon accounting. If approved, there is no need to surrender (pay back) the accumulated carbon units as the pause will endure until the forest is re-established and achieves the same level of carbon storage as it had before the event.

Insurance

Insurance cover is updated annually and cover for the current year will be set out in the Annual Financial Statements.

The forest is currently insured for fire cover under a special purpose group forest insurance scheme for Forest Enterprises managed forests. The value of the cover is an agreed sum per hectare for like areas in each forest. Forest Enterprises identifies the like areas based upon the age classes present and their treatment. The group policy functions on a ‘first loss’ basis. The agreed value per hectare will be paid up to a total for all events for the 12 months insured. The policy is organised by Sage Partners Ltd, a New Zealand based forestry insurance provider underwritten by Lloyd’s of London. Standard & Poor’s has assigned the financial strength rating of AA- stable outlook to Lloyd’s.

Forest Health

Forest Health is monitored by regular inspections and forest fly-overs.

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[10] Toppling is a forestry term to describe the leaning over of young trees within a socket of soft ground following strong wind events associated with heavy rain.

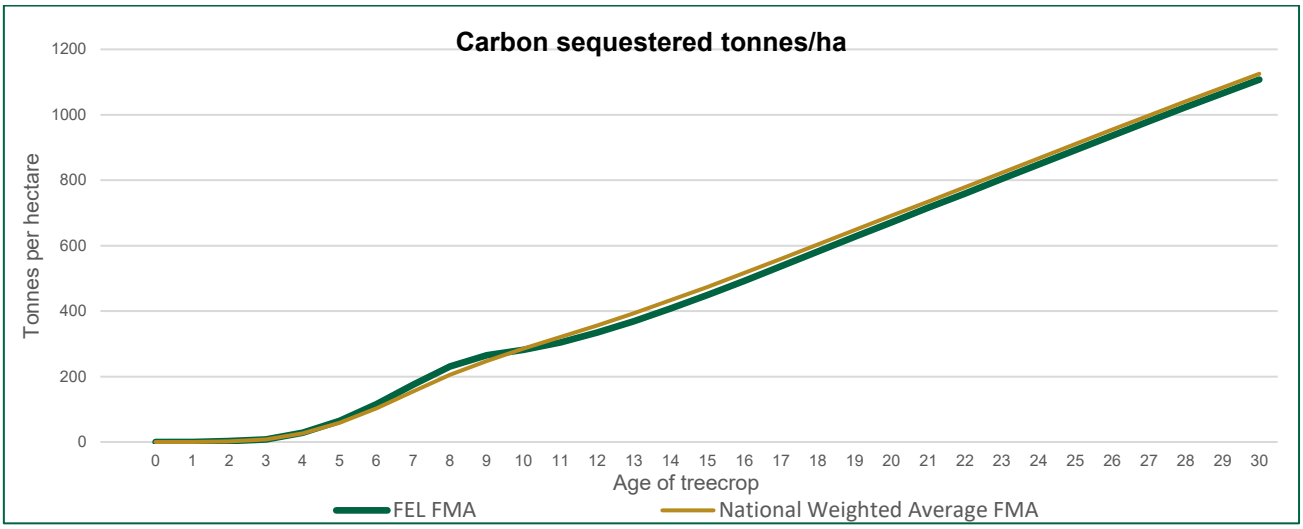
[11] Windthrow is the forestry term to describe when trees are pushed over or uprooted by wind.

Growth and Yield

Two yields tables have been produced, for Carbon Yields and Log Yields respectively. As the Forest will be managed with a primary goal of producing carbon, log yield tables are provided as a reference for the expected productivity of the site.

Carbon Yields

Carbon Yields have been based on current lookup tables for Forest Enterprises Managed Forests registered in the Emissions Trading Scheme. These tables are expected to be a conservative assessment of carbon yield as they are based predominantly on clearwood regimes, while Blairlogie Pine Investment will now be managed under a higher yielding framing regime. Genetic gain of seedstock is expected to provide further increase in growth. Modelling carbon using the C-Change model in Forecaster produced higher carbon stocks than the Forest Enterprises lookup tables used. The chart below compares carbon yields of FE Managed Forests registered in the Emissions Trading Scheme (FEL FMA), with the national average.



Log Yields

Log volume estimates were calculated from Forecaster using the 300 Index growth model.

Using actual harvest yield results from the previous crops, a weighted 300i average was estimated, and then the genetic gain was calculated with the dedicated Forecaster functionality.

This produced a total recoverable volume at age 24 of 700 cubic metres per hectare for the framing regime. These yields have been converted to tonnes per hectare using a conversion factor of 1.0m^3/tonne. The use of this conversion factor comes from Forest Enterprises' current 3D log scaling project in the Wairarapa.

The assessed breakdown of the recoverable volume by log at harvest (at age 24 for comparative purposes) is as follows:

Log Type (Grade)	Tonnes per Hectare	% of Total Recoverable Volume
Domestic M30	223	32%
Domestic M20	192	27%
Export A	161	23%
Export K	72	10%
Export KI	8	1%
Export KIS	40	6%
Domestic Pulp	4	1%
Total Recoverable Volume	**700**	**100%**

Forecaster Growth Model Settings

Model	Setting	Model	Setting
Growth Model	300 Index	Tree Volume Table	182
Regional Drift	-0.3	Tree Taper Table	182
Monthly Adjustment Model	8	Breakage Table	1
Height Age Table	112	Branch Model	Generic
Sweep Model	Generic	BIX Model	Knowleskimberley1997
Forking Model	Generic	Mortality Additive % Adjustm.	0.37
Carbon Sequestration	C_Change	Mortality Multiplier % Adjustm.	30

Carbon Management Plan

Summary

The Blairlogie Pine Investment is eligible to accumulate New Zealand Units (**NZU**) under the NZ Emissions Trading Scheme (**ETS**) under certain conditions.

To participate in the ETS and earn carbon credits, a forest must meet certain criteria including:

- Being a forest on post-1989 forest land;
- The trees comprise eligible species such as Pinus radiata, capable of sequestering carbon;
- Registration in the ETS which carries obligations to measure and report on the carbon sequestered in the forest and any emissions from the activities in the forest;
- Once the carbon sequestered is verified, NZUs are issued to the forest owner and these carbon credits can be sold on the carbon market.

It is the Manager's policy to ensure that the Blairlogie Pine forest maintains registration under the ETS and continues to earn carbon credits to the fullest extent practicable. The NZUs are scheme property.

The goal of our MIS is to provide a return to investors from investment in land and tree crops.

To achieve investment returns the Manager, Forest Enterprises must manage compliance with regulation around the land and the tree crop so that the tree crop grows in value. Value in tree crop includes all opportunities to turn crop to money and includes improvement to land conditions including fertility and tree crop species choice or regime choice.

The two current major categories for tree crop revenue are timber and carbon.

Objective

The Manager must optimise the accumulation of NZUs and manage the registration of Blairlogie Pine LP as a participant in the New Zealand Emissions Trading Scheme (**ETS**). Units received are held in the New Zealand Emissions Trading Register (ETR). The Manager must also manage the land to ensure that scheme property is safeguarded.

The Scheme objectives will be met by prudent investment into land, and the optimal growth of timber and carbon on that land. The Manager is responsible for managing the growth and sales of the tree crop and any scheme property.

Cashflow management

Cashflows that drive return and pay investment costs arise from either log sales or NZU sales.

- Cashflows from the tree crop will be under the control of the Manager. This may include cashflows from sale of carbon credits, or log sales arising from harvesting.
- Cashflows from the NZU sales will be managed to optimise revenue and reduce risk.

Carbon flows will be reported and managed by Forest Enterprises.

The investment costs will be funded by calls in early years and by carbon sales.

Carbon will be accounted for in the ETR, and Forest Enterprises will have authority to sell units annually to provide operating cash flows and to distribute surplus cashflow returns to investors.

Once the carbon flow is established then the Manager must budget the annual unit accumulation and sell the accumulated units as per the following rules.

Rules

- The Manager intends to sell 75% or more of the units accumulated in any year if the long-range return on carbon is projected to be higher than the return on harvesting.
- From 2034 once material numbers of units accumulate annually, unit sales must occur quarterly in each financial year, transacted on the 1st working day of the second month of the quarter. One quarter of the annual unit sales by volume will be transacted in each event.
- Units must be offered on market, or at the current prevailing market price with transactional evidence.

- The Investment will retain proceeds from the sale of NZUs to meet working capital requirements with surplus proceeds distributed to investors every 6 months from 2034 (Prior to 2034 all sales proceeds are expected to be retained for working capital).
- Where carbon unit price is lower than timber harvest or stumpage value the Manager may opt to harvest timber and repay any carbon liability arising so long as the net effect is favourable to current investment level value, that can be measured as an increase in Net Present Value.

Bert Hughes
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NZIF Registered Forestry Consultant