# **Bideford Forest Investment**

# **Forest Management Plan**

# Summary

This Report sets out the Radiata pine forest management plan for a forestry Managed Investment Scheme to be managed by Forest Enterprises Limited called the Bideford Forest Investment.

The assumptions and calculations in this Report have been independently reviewed by Forme Consulting Group Limited and commented upon in their separate Forestry Audit Report (included in the Product Disclosure Statement 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.

## **Disclosure**

Forest Enterprises Limited, specifically Mr HE Hughes, the CEO and Forestry Director, has given and before distribution not withdrawn, his written consent to the inclusion of this Report as part of the Product Disclosure Statement and Offer Register for the Bideford Forest Investment.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 Description**

#### **Location and Access**

The Bideford Forest Investment consists of two forest properties: Pinedale and Tividale.

These properties (or blocks) are located about 32km by road north-east of Masterton in the Bideford district. Access from Masterton is via Te Ore Ore-Bideford and Mangapurupuru Roads, of which 29km is sealed.

The properties are bordered by a mixture of farmland and pine plantations, including plantation forests managed by Forest Enterprises and others under different management.

Both blocks are well served by internal roads formed for harvesting the first rotation of trees. These roads will provide excellent access for re-establishment and tending operations as well as for forest inspection, maintenance and protection during the second rotation. Whilst they will require some upgrading work prior to harvesting the re-established (second rotation) tree crop, this will be at a significantly lower cost than that required for the harvesting of the first rotation of trees.

## **Legal Descriptions**

Forest Block	Area	Titles
Pinedale	556ha	Mangapurupuru Road, 600803, WN58C/237; 600803, WN406/158; 600803, WN39A/462
Tividale	287ha	Mangapurupuru Road, 600822, WN44C/16

## **Previous Status of the Properties**

The blocks were originally planted in Radiata pine, mostly in the early 1990s. The original tree crop has now been largely harvested and replanted, with the last of the harvesting to occur in 2023 and the last of the replanting to occur in 2024.



## **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:

Forest Block	
Pinedale	282.4ha planted between 2016 and 2022 with a further 150.9ha to be planted from 2023 to 2024
Tividale	120.0ha planted between 2019 and 2021 with a further 114.1ha to be planted from 2023 to 2024

Planting setbacks from roads and waterways have been applied to current stocked areas to arrive at areas available for replanting.

The total stocked area of the combined forest estate is expected to be 667.4ha at the end of the 2024 planting season as shown in the table below:

Forest Block	2016	2018	2019	2020	2021	2022	2023	2024	Total
Pinedale	0.3	13.1	25.3	92.6	129.0	22.0	17.8	133.0	433.1
Tividale	-	-	94.2	10.5	15.3	-	114.1	-	234.1
Total Area (Hectares)	0.3	13.1	119.5	103.1	144.3	22.0	131.9	133.0	667.2

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 area in the table above differs from the total expected stocked area of 667.4ha due to rounding.

The difference between the total gross legal title area of 843ha and the 667.4ha of stocked forest (which is the commercial tree crop component of the Bideford Forest 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 (original areas registered and approved by MPI)
Pinedale	112 hectares	353.5 hectares
Tividale	15 hectares	248 hectares

No Carbon Credits will be received by the Scheme under the legislation for Pre-1990 forest areas. As second rotation Post-1989 forest land, it will be approximately 8 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, with the aspect tending mostly to the north. They both drain into the Mangapurupuru Stream which, in turn, drains into the Ruamahanga River which reaches the coast at Palliser Bay.
- The range in altitude is from 80m above sea level to a high point within Tividale of 368m. The mean altitude of the properties is 243m.
- 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, not genetic modification) of the tree stocks used to replant the forest.
- Average annual rainfall in this area is approximately 1,000mm-1,200mm.



## **Forecast Forest Productivity**

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

Based on information from the forests' first rotation, we have assessed an area weighted average 300i for Bideford Forest of 28.7m³/ha/yr. This is from first rotation trees of approximately GF16². The improved average 300i using genetically improved treestock is assessed as 30.8m³/ha/yr.

#### **Local Authorities and Land Use Environmental Consents**

The main influence of local authorities on forestry activities is with respect to environmental management. This includes granting resource consents which may have various conditions attached to them, and the monitoring of permitted and consented forestry activities. This process has recently undergone significant change with the implementation on 1 May 2018 of the National Environment Standards for Plantation Forestry (NES-PF). These standards recognise ten different forestry activities from land preparation to harvesting and seek to standardise the treatment of forestry as a land use throughout New Zealand.

As part of the NES-PF, all land in New Zealand has been classified and mapped in terms of its erosion risk. There are four risk classes, or zones, recognised: Green (low risk), Yellow (moderate risk), Orange (high risk) and Red (very high risk). Whether a certain activity requires a resource consent, and the type of consent required, depends on the nature of the activity and the erosion risk of the land where it is planned to be undertaken. 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 where they are large in scale and on Red and Orange (high risk) erosion zone land. Similarly, harvesting can be controlled on Red Zone land.

The Bideford Forest consists of 0.5% Red Zone, 70.9% Orange Zone, and 28.7% Green Zone (no Yellow Zone present).

Earthworks will be much smaller in terms of the volume of material moved than during the construction of roads and landings for the first rotation harvest, and will be subject to a Restricted Discretionary Resource Consent over part of the total forest area (Orange Zone). This is a standard requirement for the large majority of Forest Enterprises' current earthworks activity in preparation for harvesting and is not at all problematic.

Any environmental controls imposed on forestry activities planned as part of this investment are not onerous and are part of normal and routine forest planning and management. Resource planning costs have been incorporated in the investment's cashflow projection.

# **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<sup>3</sup> logs and small branch sawlogs in a relatively short rotation of 25 to 30 years. It is particularly well suited to the Wairarapa as evidenced by the first rotation growth and yield in these forest properties 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.



<sup>&</sup>lt;sup>1</sup> 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.

<sup>&</sup>lt;sup>2</sup> '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.

<sup>&</sup>lt;sup>3</sup> Clearwood is the forestry term for wood which is free of knots and other defects.

#### **Establishment**

Genetically improved seedlings have been planted to date and will be used for the remaining planting in 2023 and 2024. This proven high-quality stock produces high growth trees of extremely good form in terms of straightness and branch size.

The trees have been (and will be) planted at a square spacing of 3.2m by 3.1m to produce a target planting density of 1,000 stems per hectare. The square spacing results in relatively even growth, branch size control, assists tree selection for the tending operations and the final crop, and results in less exposure to wind after thinning.

The trees will be release sprayed<sup>4</sup> in the spring following planting to remove competing weed growth. Prior to winter, a survival survey of the previous year's plantings will determine if any blanking<sup>5</sup> of failed trees is required. Provision has been made in the cashflow for regen thinning (20% of area to be replanted), as well as blanking (and subsequent release spraying) of 3% of the total planted area. Normally however, less is required.

## **Maintenance**

Existing roads used for harvesting the first crop rotation 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 investment's cashflow projection.

## Silvicultural Regimes

It is proposed to apply two silvicultural regimes consistent with maximising the return from the forest balanced with some diversification in the type of logs that will be produced. Harvest is the primary strategy for the Clearwood Regime (mainly Pre-1990 forest land). For the Framing Regime (mainly Post-1989 forest land), the primary strategy is the sale of carbon credits earned by growing trees, and the secondary strategy is harvest if investment returns are greater from harvesting than selling carbon credits.

#### Framing Regime

The main regime to be applied to the majority of the area (about 83%) is called a framing regime. This involves just one thinning<sup>6</sup> at age 10 years to 600 stems per hectare and no pruning. It is a low investment cost regime that will produce high volumes per hectare of medium to large diameter logs, mostly with small to medium size branches. These logs are well suited to both the domestic sawmilling industry and the production of quality framing grade timber for construction, as well as the log export market. Over the past few years there has been an increasing trend towards this low-cost regime amongst forest growers in New Zealand.

#### **Clearwood Regime**

The other regime is called a clearwood regime and is to be applied to a specific area of 116ha in the forest. It involves pruning the trees in two lifts to a pruned height averaging 6.0m, and one thinning to a target stocking of 375 stems per hectare. This regime, in addition to producing unpruned logs similar to those from the main regime, will also produce about 25-28% in volume terms, in the form of pruned logs. These logs are suitable for processing into knot-free timber that is in demand in both the domestic and export markets. They also provide some diversification of produce. It is, however, a higher cost regime and unless the price difference between pruned logs and large unpruned logs increases substantially, a higher rate of return is achieved from the lower cost framing regime.

The specific 116ha of the clearwood regime is a contiguous area all within the original Pinedale forest, that can be managed, and harvested if necessary, separate to the rest of the forest. Of the 116ha, 95ha (82%) is classified as Pre-1990 forest land which is not eligible to earn NZUs (carbon credits) under the Emissions Trading Scheme (ETS). This area will be managed and harvested without consideration being given to carbon sequestration<sup>7</sup> (i.e. NZUs) as there are none. On the other hand, the framing regime that will be

<sup>7</sup> Carbon sequestration is the process of removing carbon dioxide from the atmosphere, thereby reducing the total concentration in the atmosphere. Living trees sequester carbon through photosynthesis. Carbon can be stored in biomass such as trunks, branches, leaves, and roots.



<sup>&</sup>lt;sup>4</sup> Releasing is removing competing weed growth from around young trees, normally by spraying.

<sup>&</sup>lt;sup>5</sup> 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.

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

applied to 551ha, is mostly on Post-1989 forest land (477ha or 87%). 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. As noted earlier, we have assessed the expected average forest 300i as 30.8m³/ha/yr.

The following tables indicate the timing of tending operations that will be applied to each of the two regimes:

### Framing Regime

Age	Tending Program	Target Mean Top Height	Target Stems per Hectare			
10.0	Thin to final crop	15.0 metres	600			
Slight timing variations may result from the optimun scheduling of the thinning						

#### **Clearwood Regime**

Age	Tending Program	Target Mean Top Height	Target Stems per Hectare				
5.0/6.0	Prune to average height 3.5 metres	7.0 metres	375				
7.0/8.0	Prune to average height 6.0 metres	10.0 metres	375				
8.0/9.0	Thin to final crop	12.0 metres	375				
Slight timing	Slight timing variations may result from the optimun scheduling of the thinning						

The growth models in Forecaster<sup>8</sup> will be used to schedule the tending to ensure the optimum timing of each operation. For the Clearwood Regime, the objective is to restrict the diameter of the defect core and maximise the volume of clearwood produced in the sawing or peeling of the pruned log, while at the same time produce quality sawlogs above the pruned zone. For the Framing Regime the objective is to balance tree diameter growth and restriction of branch diameter in the lower logs.

Forest Enterprises is a member of key forest industry organisations<sup>9</sup> and fully utilises the information and research findings that membership provides. 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 the means by which 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<sup>10</sup>.
- Immediately prior to the pre-harvest inventory at about age 23-25 years, in support of harvest planning using aerial photography or LiDAR.
- Regularly during the harvesting phase to monitor and report production and crop yields using a drone.

<sup>10</sup> 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.



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<sup>8</sup> Forecaster is a suite of computer models for Radiata pine developed by SCION, New Zealand's Crown Research Institute for forestry.

<sup>&</sup>lt;sup>9</sup> Forest Enterprises belongs to many industry organisations including the New Zealand Forest Owners Association, the New Zealand Farm Forestry Association and the New Zealand Institute of Forestry (NZIF).

 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.

## **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 set out below. 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<sup>11</sup>. 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<sup>12</sup> after thinning can also occur. Wind loss insurance cover details are set out below.

#### **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 taken into account in the modelling by calibrating against first rotation yields.

### Insurance

The forest is insured under a special purpose group forest insurance scheme for Forest Enterprises managed forests, with fire and wind cover included. 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 total first loss limitation is \$20 million for defined events including \$5 million for wind, and \$5.1 million for replanting.

The policy is organised by Insurance Facilitators Pty Ltd, an Australian based specialist forestry and crop insurance provider on behalf of and as underwriting agent for HDI Global Specialty SE – Australia (HDI). Standard & Poor's has assigned the financial strength rating of A+ (Strong) to HDI.

#### **Forest Health**

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



<sup>&</sup>lt;sup>11</sup> 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.

<sup>&</sup>lt;sup>12</sup> Windthrow is the forestry term to describe when trees are pushed over or uprooted by wind.

## **Growth and Yield**

The harvest of both the Framing and Clearwood regime crops is anticipated from age 26 onwards. The 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 of 907 cubic metres per hectare for the framing regime and 716m3/ha for the clearwood regime. These yields have been converted to tonnes per hectare using a conversion factor of 1.0m³/tonne¹³. 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 26 for comparative purposes) is as follows:

## Framing Regime

Log Type (Grade)	Tonnes per Hectare	% of Total Recoverable Volume
Domestic M30	305	34%
Domestic M20	191	21%
Export A	232	26%
Export K	64	7%
Export KI	8	1%
Export KIS	100	11%
Domestic Pulp	6	1%
Total Recoverable Volume	907	100%

## **Clearwood Regime**

Log Type (Grade)	Tonnes per Hectare	% of Total Recoverable Volume
Export P40	93	13%
Domestic P35	83	12%
Domestic P30	17	2%
Domestic M30	107	15%
Domestic M20	174	24%
Export A	95	13%
Export K	49	7%
Export KI	13	2%
Export KIS	19	3%
Domestic Pulp	67	9%
Total Recoverable Volume	716	100%

<sup>&</sup>lt;sup>13</sup> Source: Ellis and Crawley 2014, <u>Practical Log Scaling Guide</u>, Pg 24.





# Forecaster Growth Model Settings<sup>14</sup>

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	12	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

# **Calculation of Harvest Receipts**

## **Markets**

A range of markets have been included in the analysis based on point of sale during the current first rotation harvest. Export logs will be exported through Port of Wellington, with domestic logs destined for sawmills in Masterton and Dannevirke.

The combination of framing and clearwood regimes will produce a range of log types or grades, including some pruned logs, suited to several markets. This is to provide some diversification in the log types produced but with a clear focus on maximising the return from the forest, and so emphasis on the framing regime.

# Harvest Related Costs, Log Prices and Forecast Gross and Net Revenue (Stumpage) from Harvesting

Based on Forest Enterprises' wider experience and in particular our recent and current experience harvesting Pinedale and Tividale forests, we have estimated harvest related costs for the new investment as at 30 September 2022. These are all of the costs that occur from the point of the standing tree in the forest (on the stump) to the delivered logs at their points of sale.

As with all of our recent forest investment offerings we have assumed 36-month average log prices by log type (grade) in the projection of the gross revenue from harvesting. These average prices are as at 30 September 2022.

Harvest related costs and log prices applied are shown in the following two tables:

Harvest Related Activity	Cost (\$/Tonne)
Logging & Loading (Clearwood Regime all in Pinedale)	33.12
Logging & Loading (Framing Regime across both forests)	35.71
Harvesting Management and Log Marketing	5.00
Harvest Road Construction & Upgrades	3.00
Harvesting Road Maintenance	3.00
Other Costs - Levies & Contingency	2.83

<sup>&</sup>lt;sup>14</sup> MAPD – Mortality Additive Percentage Adjustment MMPA – Mortality Multiplier Percentage Adjustment





				36 month Average	
			Spot Price at 30-Sep 2022	Price at 30-Sep 2022	Prices Applied in Forecast
le)	Point of Sale	Cartage Cost (\$/Tonne)	(\$/Tonne)	(\$/Tonne)	Cash Flow (\$/Tonne)
Export P40	Wellington	37.33	207.80	177.25	177.25
Domestic P35	Dannevirke	33.52	180.00	179.70	179.70
Domestic P30	Wellington	37.33	175.85	152.95	152.95
Domestic M30	Waingawa	20.01	127.00	123.65	123.65
Domestic M20	Waingawa	20.01	112.00	108.65	108.65
Export A	Wellington	37.33	142.95	127.60	127.60
Export K	Wellington	37.33	125.90	113.35	113.35
Export KI	Wellington	37.33	116.80	104.15	104.15
Export KIS	Wellington	37.33	103.40	89.95	89.95
Domestic Pulp	Waingawa	-19.65 *	31.00	31.00	31.00

<sup>\*</sup> the cartage cost for Domestic Pulp has been purposely adjusted so that the net stumpage from this low volume product is close to \$0 as it is in harvesting operations in the Wairarapa

We have taken the age 26-year yields for each of the two regimes discussed above with the planned area for each regime and combined these with the 36-month average log prices, plus our estimates of harvest related costs, into a forest model. This model, combined with the costs of tending and forest management, provides the cashflow projection underlying the economics and rate of return of this investment. An important output of this model are projections of the gross and net revenue (often called net stumpage) arising at harvest. These are shown for each of the two regimes in the following tables:

# Projected Net Stumpage by grade in (\$/m3) and (\$/ha) for Each Regime

### Framing Regime

			Logging, Mktg & Mgt, Roading and			
	Tonnes per	Price at Point of	Ancillary Harvest Related Costs	Cartage Costs	Net Return	Net Return
Log Type (Grade)	Hectare	Sale (\$/Tonne)	(\$/Tonne)	(\$/Tonne)	(\$/Tonne)	(\$/Hectare)
Domestic M30	305	123.65	- 49.54	- 20.01	54.10	16,525
Domestic M20	192	108.65	- 49.54	- 20.01	39.10	7,516
Export A	232	127.60	- 49.54	- 37.33	40.73	9,449
Export K	63	113.35	- 49.54	- 37.33	26.48	1,659
Export KI	8	104.15	- 49.54	- 37.33	17.28	146
Export KIS	100	89.95	- 49.54	- 37.33	3.08	307
Domestic Pulp	6	31.00	- 49.54	19.65	1.11	7
Total or Average	907	116.23	-49.54	-27.43	39.26	35,610

Using spot prices as at 30 September 2022, the projected net stumpage per hectare would increase from \$35,610 to \$43,074.

#### **Clearwood Regime**

			Logging, Mktg & Mgt, Roading and			
	Tonnes per	Price at Point of	Ancillary Harvest Related Costs	Cartage Costs	Net Return	Net Return
Log Type (Grade)	Hectare	Sale (\$/Tonne)	(\$/Tonne)	(\$/Tonne)	(\$/Tonne)	(\$/Hectare)
Export P40	93	177.25	- 46.95	- 37.33	92.97	8,627
Domestic P35	83	179.70	- 46.95	- 33.52	99.23	8,246
Domestic P30	17	152.95	- 46.95	- 37.33	68.67	1,196
Domestic M30	107	123.65	- 46.95	- 20.01	56.69	6,063
Domestic M20	175	108.65	- 46.95	- 20.01	41.69	7,294
Export A	95	127.60	- 46.95	- 37.33	43.32	4,099
Export K	48	113.35	- 46.95	- 37.33	29.07	1,386
Export KI	13	104.15	- 46.95	- 37.33	19.87	253
Export KIS	19	89.95	- 46.95	- 37.33	5.67	106
Domestic Pulp	67	31.00	- 46.95	19.65	3.70	246
Total or Average	716	124.13	-46.95	-24.76	52.42	37,517

Using spot prices as at 30 September 2022, the projected net stumpage per hectare would increase from \$37,517 to \$44,184.

**Bert Hughes** 

**CEO and Forestry Director** 

Bet Hugher

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