

Log Market Analysis

As at 20 November 2019



Photo 1: Wairarapa Group Forest (Rangiora Block).

The content of this Log Market Analysis is produced monthly as part of a suite of documents that comprise the regular reporting to forest owners during harvest. This standalone document is made available to other forest owners approaching harvest to keep them informed on market conditions.

We have included log price series separately for Wairarapa and Gisborne forests, as the price series differ for reasons including different customers, log specifications and locations.

Forest Enterprises (FE) is currently harvesting approximately 650,000 tonnes of logs per annum for Wairarapa and Gisborne forest owners. Most of these owners are Investors in forestry investments our company markets and manages, however some harvesting is undertaken for other forest owners.

Overall, harvest volume is increasing materially year on year.

IMPORTANT

Every effort has been made to provide current accurate information in this document, which is for information purposes only. Any opinions and views expressed are those currently held by Forest Enterprises, however the reader accepts that where they are opinions and views in respect of future prices, they may subsequently be proven incorrect. The nature of the international log market is that of price fluctuations, and these fluctuations can be material, and material changes can arise due to factors not previously able to be foreseen.

Overview

Our export agents are reporting that the Pacific Rim dynamic of log trade in China is changing, as we see increasing volumes of European logs and lumber turning up in China. The logs come by container ship and the lumber generally by rail, and volume has more than doubled recently.

TPT Forests is changing its market measures to reflect there is probably an additional million cubic metres of round wood equivalent in the China market from Europe. This has been tough to measure as its not in the usual places. Despite this, returns to our forests have grown in October and November prices are also further ahead.

Some investors have asked about the bark beetle epidemic in Europe and if there are local implications. Insects commonly have grossly disproportionate damage levels as forest health changes. The recent warm winters have meant that bark beetles breed faster and are not killed by cold conditions. Drier summers mean the spruce trees are stressed. The combination means a natural event occurs in that there are more pathogens, and more unhealthy trees, so the pathogens grow in such favourable conditions.

The likely outcome in the long term is that species adapted to dryer and hotter climates will replace the European spruce, and the natural balance changes back, as new forests grow. Southern warm adapted species are moving North in Europe, Canada and Alaska. Nature hates a vacuum. Radiata pine is well adapted to hot conditions being from Monterey in California, and in New Zealand is not affected by this bark beetle.



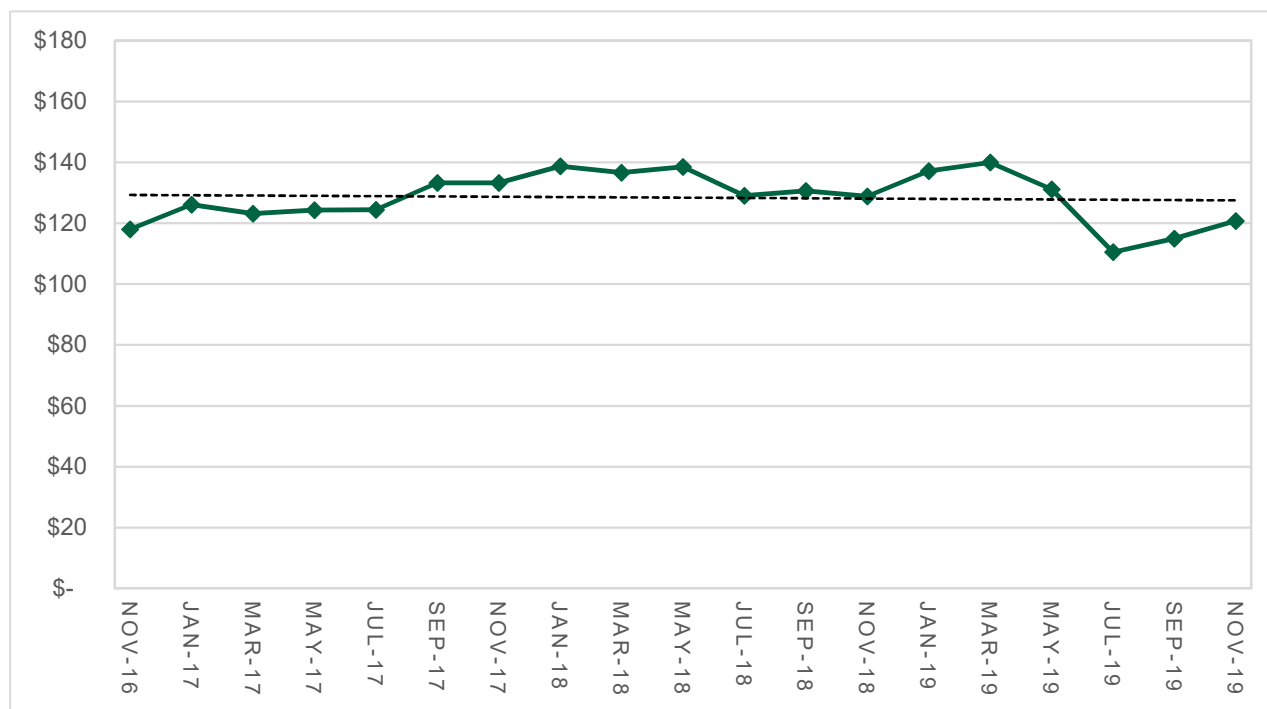
Photo 2: Cable logging in a private block in Wairarapa.



Wairarapa Log Prices Per Tonne

Grade	Forest Enterprises Oct-19	Forest Enterprises 36 Month Average	Current vs 36 Month Average	Percentage of the 36m Average
Export P40	\$168.40	\$182.90	(\$14.50)	92%
Export P30	\$139.95	\$145.25	(\$5.30)	96%
Export A	\$116.20	\$135.15	(\$18.95)	86%
Export K	\$101.05	\$119.75	(\$18.70)	84%
Export KI	\$94.05	\$112.80	(\$18.75)	83%
Export Pulp	\$78.70	\$97.60	(\$18.90)	81%
Domestic P35	\$170.00	\$175.85	(\$5.85)	97%
Domestic S30	\$117.00	\$120.70	(\$3.70)	97%
Domestic S20	\$102.00	\$105.70	(\$3.70)	96%
Domestic Pulp	\$31.00	\$31.00	\$0.00	100%
Export sales units are volumetric (JAS) while domestic sales units are paid per tonne. The Export JAS prices have been converted to tonnes. Refer to page 5 for more detail on the JAS to Tonne Conversion.				
Index Log Price	\$120.75	\$128.45	(\$7.70)	94%
Index Log Price is calculated using inventory measurements from our Wairarapa forest crops and establishing an average log grade recovery for our typical Wairarapa Forest. Applying these estimates to our long run prices per grade has derived an Index Log Price. This index price helps to estimate the average logs sales predicted for a typical forest.				

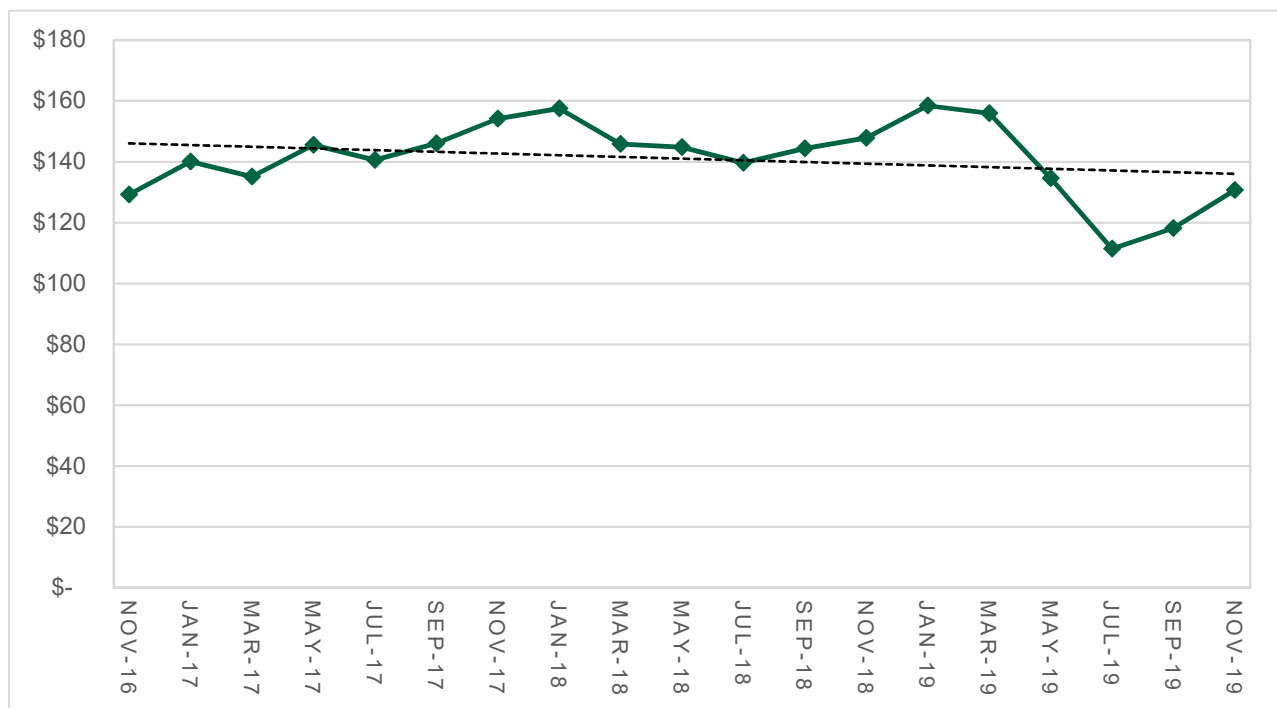
Index Log Price for our typical Wairarapa Forests



Gisborne Log Prices Per Tonne

Grade	Forest Enterprises Oct-19	Forest Enterprises 36 Month Average	Current vs 36 Month Average	Percentage of the 36m Average
Export P40	\$162.00	\$180.35	(\$18.35)	90%
Export P30	\$125.35	\$147.80	(\$22.45)	85%
Export A	\$117.85	\$139.65	(\$21.80)	84%
Export K	\$100.85	\$125.00	(\$24.15)	81%
Export KI	\$93.95	\$114.55	(\$20.60)	82%
Export Pulp	\$85.35	\$102.50	(\$17.15)	83%
Domestic P35	\$175.00	\$179.60	(\$4.60)	97%
Export sales units are volumetric (JAS) while domestic sales units are paid per tonne. The Export JAS prices have been converted to tonnes. Refer to page 5 for more detail on the JAS to Tonne Conversion.				
Index Log Price	\$120.10	\$141.35	(\$21.25)	85%
Index Log Price is calculated using inventory measurements from our Gisborne forest crops and establishing an average log grade recovery for our typical Wairarapa Forest. Applying these estimates to our long run prices per grade has derived an Index Log Price. This index price helps to estimate the average logs sales predicted for a typical forest.				

Index Log Price for our typical Gisborne Forests



Investors will notice that the Gisborne price series only includes domestic price for Pruned 35 due to log customers. As of July 2019, we have been supplying three domestic sawmills with pruned logs from our Gisborne Forests.



Factors Influencing Current Log Price

Key:



More Benefit to the Investor



Less Benefit to the Investor



Neutral

Price, Costs and Logistics



Foreign Exchange (Forex)

Export logs are priced in USD. FE's rate in October was forecast at 0.6339. We last shipped at a rate of 0.6444 which is less favourable.

FE takes no forward position or hedge in currency trading. Hedging imposes transaction costs without giving certainty of improved outcomes.



Shipping

Costs to ship owners continue to rise, but demand for bulk shipping is falling due to seasonal downturns as well as declining international trade. Charter rates and daily hire are falling, in exporters favour, putting pressure on ship owners.



JAS to Tonne Conversion

JAS-to-tonne conversion rates are improving as expected as we move into the dryer season, increasing from an average of 99.5% to 100.2% across all export grades for October 2019. This is a good result and improves returns to growers.

Export logs are sold in Japanese Agricultural Standard cubic metres (JAS). JAS is a measure of useable log volume rather than weight. Payments to most contractors are made based on weight, which is appropriate for handling heavy material. This means the return to the forest owner is affected strongly by the conversion of weight to volume in the logs.

Conversion has seasonal trends and varies between log grades, length and log quality. Accounting for conversion is necessary to report comparable values from different sales options. Our convention is to report all prices converted to the 'per tonne basis', which would appear different if compared with a per cubic metre (JAS) series. Hence why our harvest reports show monthly JAS/tonne conversion per forest.



Log Price, Export CFR

CFR (Cost and Freight) is the price in USD paid by the end user/buyer.

China Stable log price so long as supply remains balanced. Forex between USD and RMB is helping us in NZD terms as RMB weakens.

South Korea Low price and demand.

India Price matching China or lagging one month.

Japan Low price.

Log Demand



Export Log Inventory in Market

China Inventory of logs in China is a leading supply/price indicator. Inventory levels in China continue to decline to about 3.65 million JAS. Daily sales rose to about 72,000 JAS per day. Days of stock is inventory divided by usage and has fallen from 56 to 51 recently; higher than in October. The speed that logs turn to lumber and lumber turns to cash drives market sentiment. Euro spruce lumber represents additional stock in inventory above the conventional metrics.

South Korea Local producers struggling to compete with imported ply and lumber, tough conditions.

India Some European spruce lumber making it to India. Pine usage is flat but New Zealand has lost market share to Uruguay.

Japan Pine is used for packaging machinery; that trade is slow, so demand is low.



Pruned Log Grades

Strong demand in both Gisborne region and the Southern North Island. Prices are holding up for good quality pruned logs.





NZ Domestic

Domestic price and demand steady, with long term customers continuing to take our logs at steady pricing levels. Woodlot activity is improving slowly as export price recovers and the mud dries in the paddocks.



Housing and Business

Housing drives panel, lumber and furniture sales and therefore log demand. Housing timber use has two primary markets: new house starts, or remodel and renovate. These two uses have different cycles based on relative consumer optimism. Building trades remain in tight supply and new houses becoming common to see.



Domestic Construction

Residential consents up 6% on last year, but regional differences exist.

Log Supply

NZ

Production levels appear to be starting to move up; our railyard and trucking measures are tightening up.

Australia

Pine log export levels falling.

Europe and Russia

The European beetle damage is not abating, and there is a race to cut the trees before there is any degrade or rot. Rail capacity to move the lumber to China is already fully committed.

Pacific Northwest (PNW)

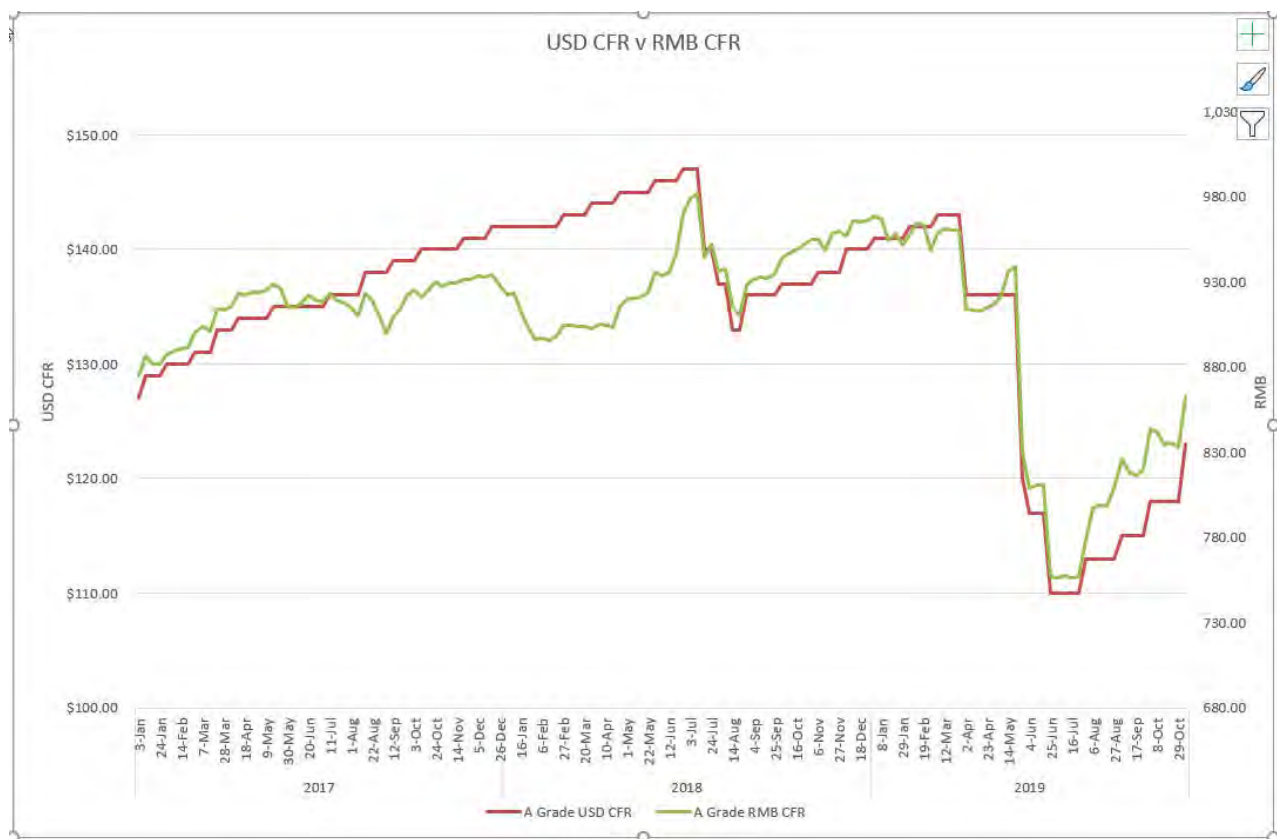
Exports declining and exporters leaving the business.

Other

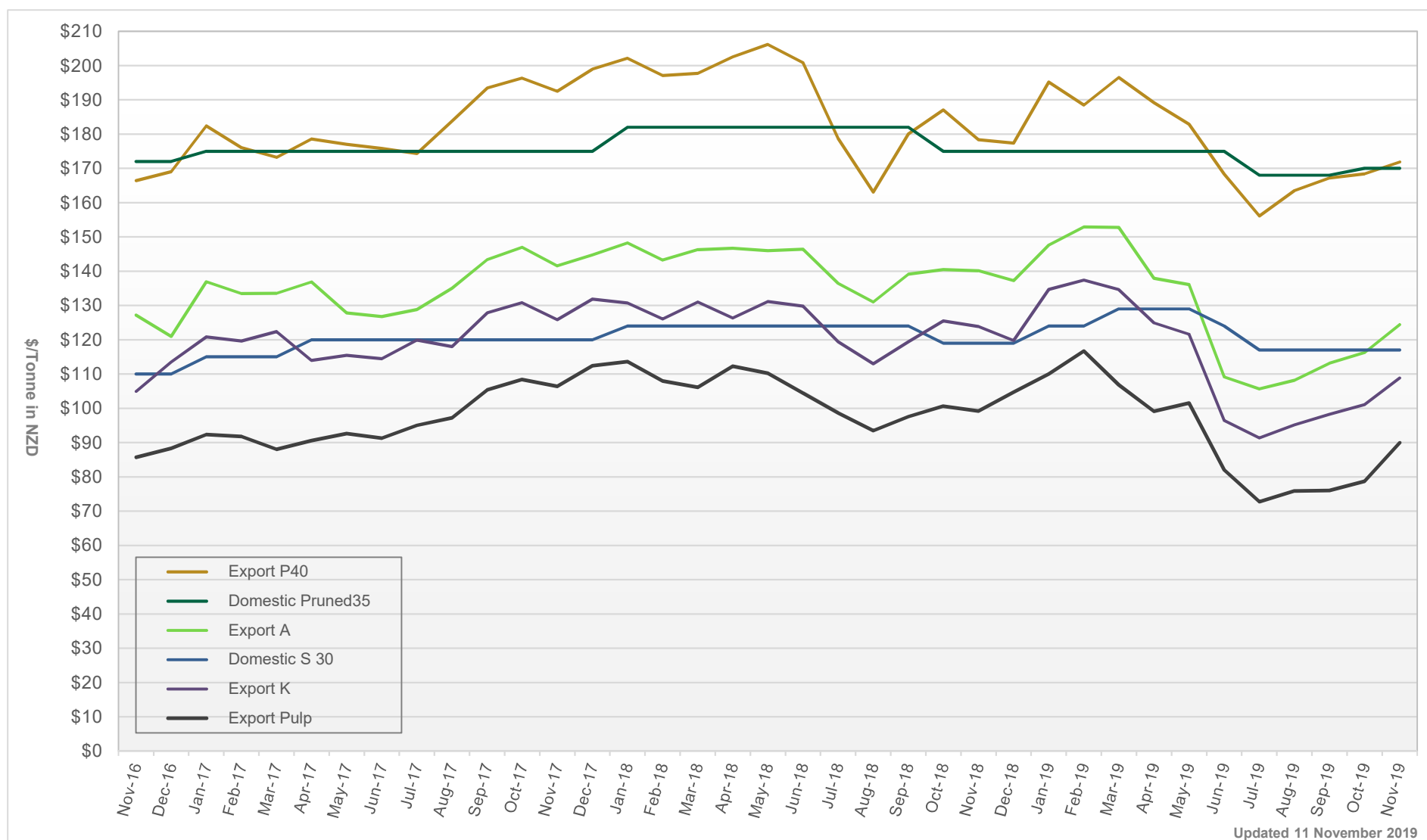
Uruguayan production stopped declining, adjusted to current market conditions.

Point of Interest

Effect of changing RMB-USD on NZD returns. Thanks to our Gisborne export partner PFP for the chart.



Lower North Island Log Price Graph per Tonne



Log Price Graph: Tracks the key log prices for a 37-month period. The first 36 months are the months which comprise the average referred to under Log Prices per Tonne above. The 37th month shows the indicative prices scheduled for the current month. Export sales units are volumetric (JAS) while domestic sales units are paid per tonne. The Export JAS prices have been converted to tonnes.



NGATAWHAI GROUP FOREST INVESTMENT

We are proud to provide this opportunity to invest in a sustainable, productive future for New Zealand.

The Ngatawhai Group Forest in Wairarapa is 627 stocked hectares of outstanding pine forestry, as well as 200+ hectares of permanent native bush and wetland.

This is existing forest land Forest Enterprises managed over three decades, through to the productive harvest of the first rotation crop.

Ready planted for its second crop rotation, this forest is now available for the next generation of investors.

Investment Overview:

- Initial Investment: Minimum initial application cost \$9,726 for 200 shares, plus affordable annual contributions.
- Additional shares may be purchased at \$48.63 per share.
- Projected annual contributions: Calls are projected to average around \$1,011* per year for 8 years, then drop to an average of around \$291* per year until harvest commences in 2038. The first call is 30 June 2020.
- Projected total investment: \$20,797*
- Projected gross return: \$129,060*
- Projected gross IRR: 9.33%*
- Harvest period (income): 2038-2046

* Per 200 shares, based on 2% per annum inflation and Forest Enterprises' 36-month log price series to 30 June 2019. Refer Cashflow on pages 28-29 and other financial information in section 6 of the Product Disclosure Statement from page 25.

To learn more and for a copy of the product disclosure statement, contact Nikki Coulmann:

0800 746 346

ncoulmann@forestenterprises.co.nz

forestenterprises.co.nz/new-investments

Ngatawhai Group Forest Investment is a managed investment scheme structured as a limited partnership, offered by Forest Enterprises Growth Limited, issued and managed by Forest Enterprises Limited.

Forest Enterprises is the business name of Forest Enterprises Growth Limited and its subsidiary Forest Enterprises Limited. Forest Enterprises Limited is licensed to manage Managed Investment Schemes (excluding managed funds) which are primarily invested in forestry assets.