

Log Market Analysis

As at 10 November 2018



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. It should be noted, that the log price data in this report is calculated using sales from Wairarapa forests only (Lower North Island). This price data is very similar in Gisborne but not identical.

Forest Enterprises (FE) is currently harvesting approximately 550,000 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.

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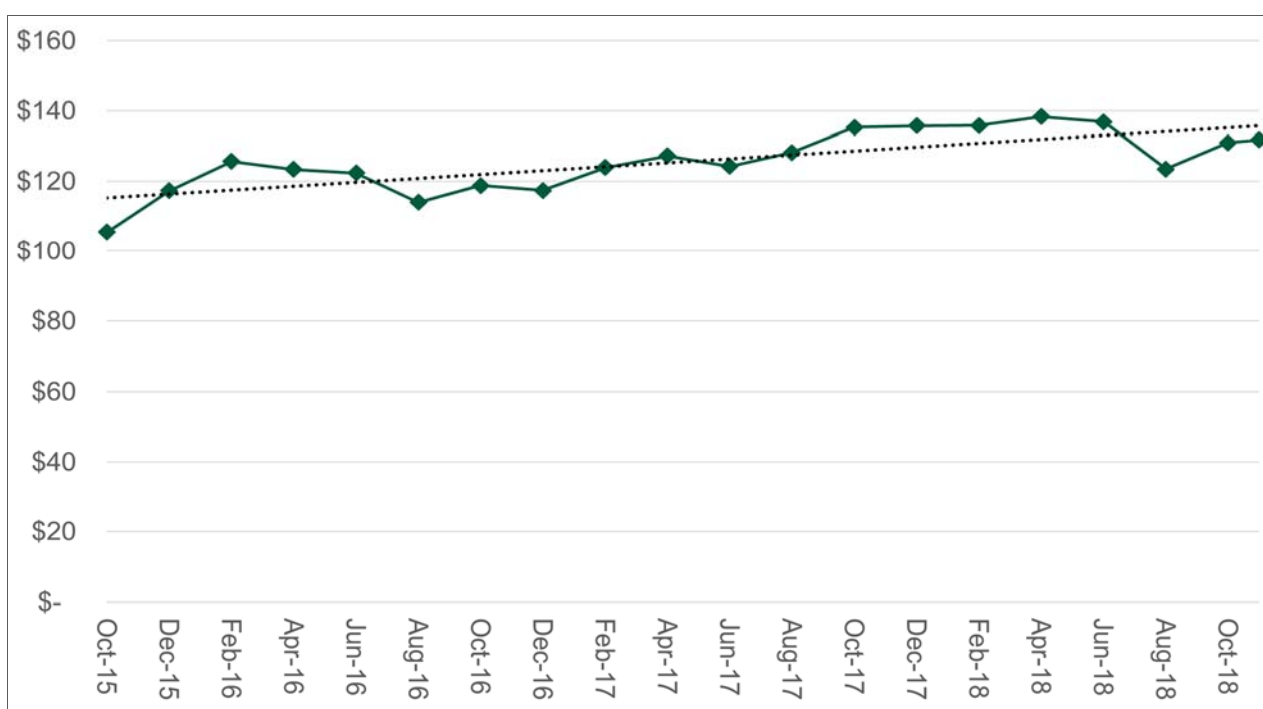
Overview

November brings dry weather and often wind. Harvesting is speeding up as the ground dries out, and log price is high which further increases pressure to cut and deliver logs. We are seeing limits to production now due to the capacity to uplift and deliver logs, rather than being limited by log supply. There are plenty of logs; so delivery is key.

Log Prices per Tonne

Grade	Forest Enterprises October 2018	Forest Enterprises 36 Month Average	Current vs 36 Month Average	Percentage of the 36m Average
Export P40	\$187.75	\$185.35	\$2.40	101%
Export A	\$141.00	\$132.80	\$8.20	106%
Export K	\$129.20	\$119.80	\$9.40	108%
Export KI	\$115.75	\$108.35	\$7.40	107%
Export Pulp	\$104.25	\$95.75	\$8.50	109%
Domestic P35	\$175.00	\$176.40	(\$1.40)	99%
Domestic S30	\$119.00	\$114.60	\$4.40	104%
Domestic S20	\$104.00	\$101.30	\$2.70	103%
Domestic Pulp	\$31.00	\$31.00		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 4 for more detail on the JAS to tonne conversions.				
Index Log Price	\$131.00	\$126.30	\$4.70	104%
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



Graph 1: Index Log Price Graph per Tonne.



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 November forex rate for log pricing was predicted at 0.6550 in late October and we have loaded our latest log vessel with an actual exchange rate of 0.6766 which represents some loss of value. Our medium-term average rate is 0.7034. Usually forex gains and losses are short term and positions change rapidly. USD strengthening across all currencies, lowers returns to NZD but does decrease the cost of imported materials like machinery and fuel.

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

↑ Shipping

Current fuel costs are falling and the ship market is soft; so rates are falling with some cheap spot vessels coming up. The impending low sulphur fuel regulations may well increase fuel cost for shipping from January 2020. Shippers have been making money on current rates.

↑ JAS to Tonne Conversion

JAS-to-tonne conversion rates continue to improve, up another 1% to an average of 98% for October across all export grades.

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 Price rising slowly; low inventory means price should have upside. Lots of imported lumber in the market.

South Korea Korean economy is in a tough patch with employment falling; log price under pressure.

India The rapidly weakening rupee exchange is bad for log users and putting pressure on ability to pay for logs.

↑ Log Demand

Export Log Inventory in Market

China Inventory of logs in China is a leading supply/price indicator. Inventory levels in China fell dramatically to 2.8 million JAS, and usage (or offtake) rose to 100,000 JAS per day.

South Korea Log supply is low and sawmill production also low; hard times.

India Into the Diwali holiday so the market is slow.

Japan The second largest sawmill in Japan is to close at year end 2018.



↓ 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.

US housing construction has slowed and there is excess lumber in inventory, which is reducing lumber prices.

An Australian media quote worth noting is that gravity catches up with stupidity, reports are that certain Sydney and Melbourne house prices are declining by \$1000 per week. That has the effect of rationalising the house market, so it's not necessarily bad.

China housing markets getting tougher, talk of millions of empty apartments awaiting sales.

↔ Pruned Log Grades

Pruned log demand rolls along and is a strong part of current forest returns.

↓ Domestic Construction

Housing consents is a leading indicator of demand for wood products. Housing affordability as measured by MBIE is declining meaning more buyers have less money or houses cost more than previously.

Kiwi Lumber Masterton have taken some time out of production to deal with a bad accident with tragic outcomes and we need to give time and space for people to cope with the accident.

↔ Log Supply

<u>NZ</u>	Port congestion continues to rise, volumes rising.
<u>Australia</u>	Log exports rising.
<u>Russia</u>	Log exports flat; sawn lumber rising.
<u>Pacific Northwest (PNW)</u>	Log exports trending down, 43% reduction since 2014.
<u>US South</u>	Southern yellow pine log exports (China) increased by about 1 million tonnes over 2017.
<u>Other</u>	South American pine log export volume recovering, cargo goes in containers not break-bulk shipping like NZ.



Point of Interest

Forest Enterprises co-hosted the Minister of Forestry Hon. Shane Jones at the Waingawa Rail Hub on Tuesday 13 November 2018, to demonstrate the efficiency and utility of the Wairarapa's inland log hub and rail service. There is a real enthusiasm from the coalition government to progress projects which make transport solutions safer and more efficient for our industry.

Forest Enterprises is the largest rail user in the Wairarapa.



Photo 2: Top row: Erica Kinder (Southern North Island Wood Council), Steve Chapple (C3), Bert Hughes (Forest Enterprises), Kieran McNulty MP, Guy Farman (Farman Turkington). Front Row: Hon. Ron Mark MP, Minister Jones, Craig Allen (C3)

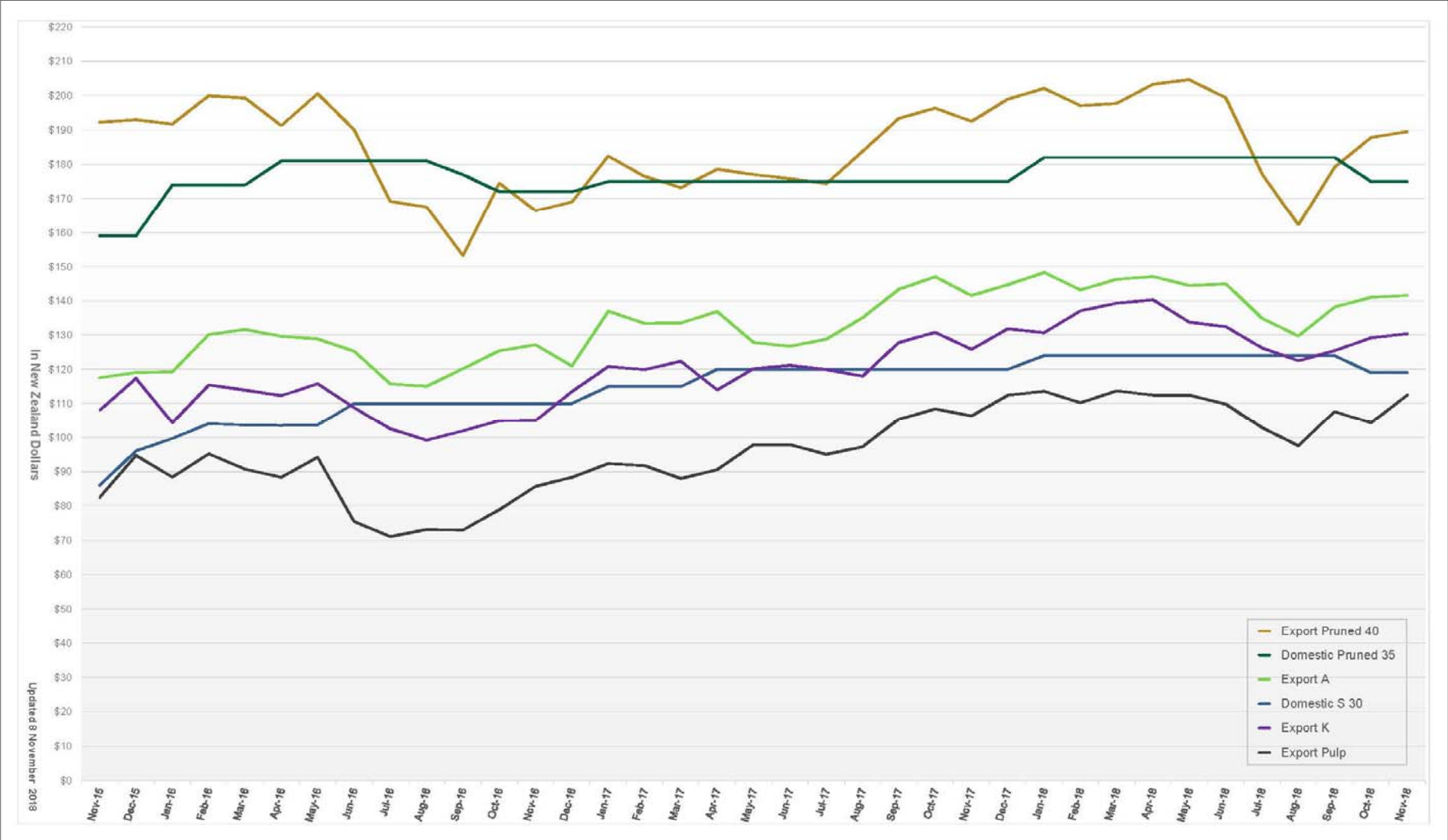
Trial loads of the new 58 tonne heavy trucks to Wellington, reducing the number of log trucks on roads.



Photo 3: New 58 Tonne trucks on the road November 2018. (Photo courtesy of McCarthy Transport Limited)



Lower North Island Log Price Graph per Tonne



Graph 3: 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.





Photo 4: Pinedale Forest, Wairarapa. October 2018.



Photo 5: Hauler Tower, Te Hau Forest. Wairarapa.

