Log Market Analysis

As at 19 July 2019



Photo 1: Te Karaka Forest. Gisborne.

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 600,000 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

July's log market conditions are very tough with low demand and falling price in export markets. Sawmill price has also fallen but not to the same extent as export grades. Many woodlot and marginal forest operations are closing down. Stopping production on those marginal sites will reduce supply of logs, and in the medium term will result in the market clearing and price/demand conditions reverting to trend.

Forest Enterprises has long-term contracts with our teams cutting and delivering logs so our response to price is more measured. We are slowing down crews, targeting domestic log grades and taking managed time off. These measures reduce costs in the short term and enable us to continue harvest operations as conditions improve.

Forest Enterprises believes in supporting local customers to reduce risk in log pricing. Wairarapa index price is less affected than Gisborne because we have more local sawmill customers in the Wairarapa. However, we now have two more domestic sawmill customers online for Gisborne and trial loads are underway. Returns from this business are better than current export returns but lower than the long run trend price. In simple terms, greater customer or product diversity means lower price volatility but does not always give higher price.

This is a tough time for the industry, but not unprecedented.



Photo 2: Storm clouds over China?

Wairarapa Log Prices Per Tonne

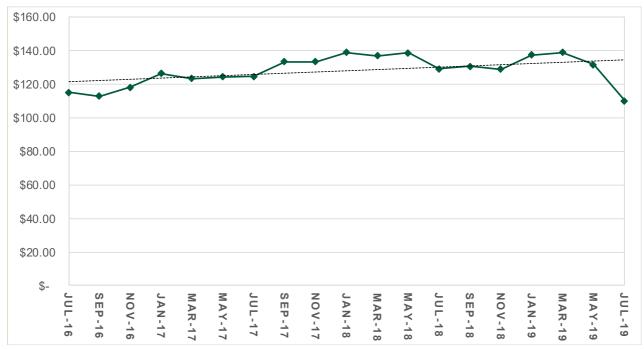
Grade	Forest Enterprises June 2019	Forest Enterprises 36 Month Average	Current vs 36 Month Average	Percentage of the 36m Average
Export P40	\$171.05	\$183.25	(\$12.20)	93%
Export P30	\$136.15	\$145.00	(\$8.85)	94%
Export A	\$114.65	\$136.20	(\$21.55)	84%
Export K	\$101.60	\$120.55	(\$1.65)	84%
Export KI	\$95.50	\$113.45	(\$17.95)	84%
Export Pulp	\$87.25	\$97.60	(\$10.35)	89%
Domestic P35	\$175.00	\$176.90	(\$1.90)	99%
Domestic S30	\$124.00	\$119.90	\$4.10	103%
Domestic S20	\$109.00	\$105.10	\$3.90	104%
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	\$119.90	\$128.65	(\$8.75)	93%
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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

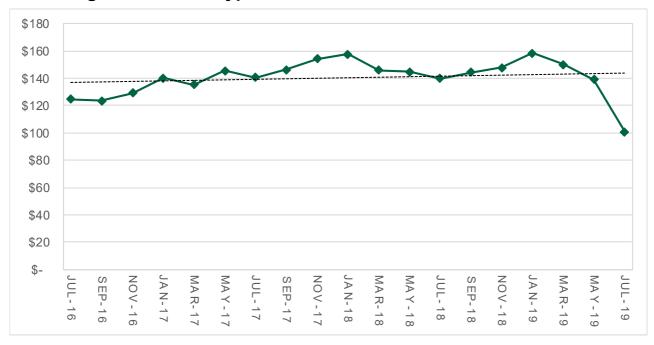
Grade	Forest Enterprises June 2019	Forest Enterprises 36 Month Average	Current vs 36 Month Average	Percentage of the 36m Average
Export P40	\$168.20	\$180.75	(\$12.55)	93%
Export P30	\$141.90	\$149.55	(\$7.65)	95%
Export A	\$133.15	\$140.75	(\$7.60)	95%
Export K	\$118.35	\$125.65	(\$7.30)	94%
Export KI	\$107.55	\$115.30	(\$7.75)	93%
Export Pulp	\$94.25	\$102.55	(\$8.30)	92%
Domestic P35	\$180.00	\$180.00	\$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 4 for more detail on the JAS to tonne conversions.

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Index Log Price	\$133.55	\$142.35	(\$8.80)	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 Gisborne Forests



Investors will notice that the Gisborne price series only includes domestic price for Pruned 35 due to log customers. This is because there has been only East Coast Lumber sawmill in Wairoa purchasing a limited number of logs in the Gisborne region. We are expanding our supply to new pruned mills in July.



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 July is forecast at 0.6597. Our long run average rate is 0.665 and this has been relatively steady recently. Forex has been relatively kind lately.

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

Shipping

Shipping rates continue to ease as demand falls and charterers try to win back some margin. Oil price is flat so no relief there. Ship owners having hard times from other issues such as reduced american soy bean trade from swine flu devastating the Chinese pig herds.

JAS to Tonne Conversion

JAS-to-tonne conversion rates weakened by 1.5% to an average of 96.8% for June across all export grades. This is to be expected in the winter season.

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 low, hoping to be bottomed out?

<u>South Korea</u> Follows China, down; hopes that domestic mills come more competitive.

<u>India</u> Down.

Log Demand

Export Log Inventory in Market

<u>China</u> Inventory of logs in China is a leading supply/price indicator. Inventory levels in China

remains at about 4.26 million JAS; daily sales OK at about 69,000 JAS per day, but this leads to higher 'days of stock'. Days of stock is the inventory divided by usage so is currently about 62, which is too high to maintain price. The speed that logs turn to lumber

and lumber turns to cash drives market sentiment.

South Korea Low stocks and low demand; tough conditions as industrial output and exports are

declining. Korean sawmills hoping lower pine price will bring them back to profitability.

<u>India</u> South African patula pine in market but not well received with quality and fumigation

issues; uncertainty around price due to oversupply conditions in China.

<u>Japan</u> Low demand; Japan has high stock of domestic Tsugi logs. Japan sawmills looking more

competitive as import log prices fall. Imported Chinese panel products much lower cost

then domestic production.

NZ Domestic

Domestic price and demand corrected towards lower export pricing levels but not as sharply. Some mills now worried about supply as woodlots shut down.





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. Lots of new houses completed in Methven!



Pruned Log Grades

Good demand for domestic pruned logs with price down slightly. Investment in pruning produces a sales price premium for investors, as well as diversifying the product mix from log sales.



Domestic Construction

Housing consents is a leading indicator of demand for wood products. There is steady activity in new house construction but hampered by access to skilled labour.

Log Supply

<u>NZ</u> Woodlots and high cost forests stopping activity; supply slowing rapidly.

Australia Reducing; Australia often has high inland transport cost.

<u>Russia</u> Sawn lumber from Russia slowing as Eastern Europe supply grows. Russian

log market has generally transitioned to sawn lumber supply rather than

logs.

<u>Pacific Northwest (PNW)</u> Slow; beetle damaged areas largely cut out or degraded. Trump trade war

damaging US log export to China business with high tariffs imposed by

China.

<u>US South</u> Cleaning up cyclone and storm damaged plantations; high output.

Other Tropical hardwood market in China in turmoil, massively oversupplied and

buyers running out of cash. Eastern Europe cleaning up forests with storm damage and pine bark beetle mortality areas; supply displacing higher

transport cost sawn lumber from the Americas.

Point of Interest

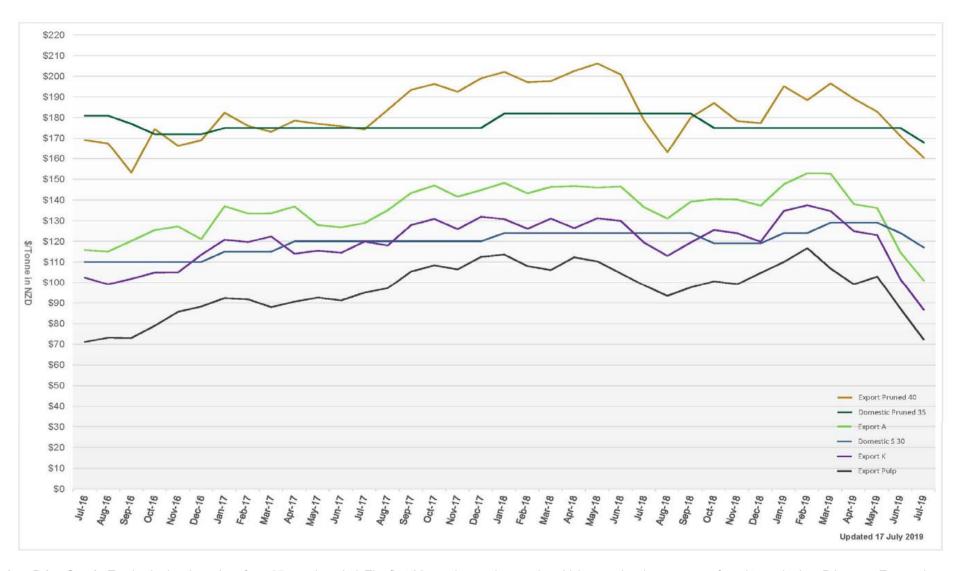
High price is the cure for high price? Volatility in the long run A grade log market. This is not our first rodeo.



Photo 2: TPT sourced graph of log price trend.



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.

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