

Log Market Analysis

October 2023



Photo 1: Keeping the wheels dry and the water clean, Ngahape Forest (Wairarapa).

The content of this Log Market Analysis is produced quarterly as part of 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, Gisborne and Hawke's Bay forests, as the prices 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, Gisborne and Hawke's Bay forest owners, plus a further 400,000 tonnes for a private impact investment fund manager in the same regions.

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 able to be foreseen.

Overview

Our attention on the log markets recently has been firmly on lower demand levels in China, and how that flows through to price. Production costs have been rising steadily for some time. Most supply chain costs for harvesting and distributing logs into sawmills and export markets are heavily exposed to fuel and labour cost. Rising interest rates affect the cost of ownership in the assets required for safe and efficient harvest and transport of logs.

Our goal has been to drive safety in our field operations. Safety has improved as a direct result of utilising more mechanised equipment, alongside greater capital costs and higher productivity rates. Using higher cost machines requires a highly trained and stable workforce. The payoff for this is greater unit production capacity, and when running at capacity this reduces costs per unit produced. Extended periods of bad weather and volatile pricing levels have made it more difficult to run the mechanised operations at capacity and this increases unit costs and increases risks to the investment in the expensive equipment used by our contractors.

It's our belief that harvesting the investors' tree crop needs to occur at scale and that the mechanised operations in place reduce our environmental and safety risks considerably. Nevertheless, conditions are difficult, and we need to constantly challenge our own thinking on how we manage the tree crop harvesting and sales. Price and revenue are outputs largely of the demand in our export markets and the smaller levels of usage at local sawmills.

Reduction in current harvest levels increases the duration, or term, of our investments; it simply takes longer to achieve cashflows, as well as changing the risks. Stopping harvest with the goal of restarting later is not easy, given the need to rebuild the base of capital equipment which would be lost from the region. Taking more years to harvest the investment timberlands is inevitable if we stop or slow down in the short term. Longer harvest durations add risk in future years, from the normal unquantified risks around crop loss or damage, as well as vagaries of future cost and price. If harvest and cartage contractors are lost it is very difficult to rebuild the capacity in future, given how reliant the industry is on skilled contractors.

Forest Enterprises is very focussed on the issues of revenue and cost, and how these affect the term and returns to our investors. There is no easy answer but shedding (and losing) the productive capacity to harvest would be a higher risk strategy than continuing to harvest at current returns. The current three-year trend is a general decline in average log sales price and a steady state of price volatility.

Recent good news is the return to higher price levels in New Zealand Emissions Trading Units (NZUs). Ownership of NZUs accrues to the landowner. For our investors this results in an increasing asset of tradable units as and when your Post-1989 land is re-registered in the ETS after harvest, albeit over a long timeframe.

The very recent developments of increasing conflict and destruction in the world also serve as a reminder that continuity and shared prosperity are a necessary antidote to chaos and pain. No one is shooting at us.





Photo 2: Predator control trapping in Emerald Hills Forest (Gisborne) is leading to visibly increased birdlife and sapling regeneration. Gisborne Regional Manager, Dan Fraser pictured.



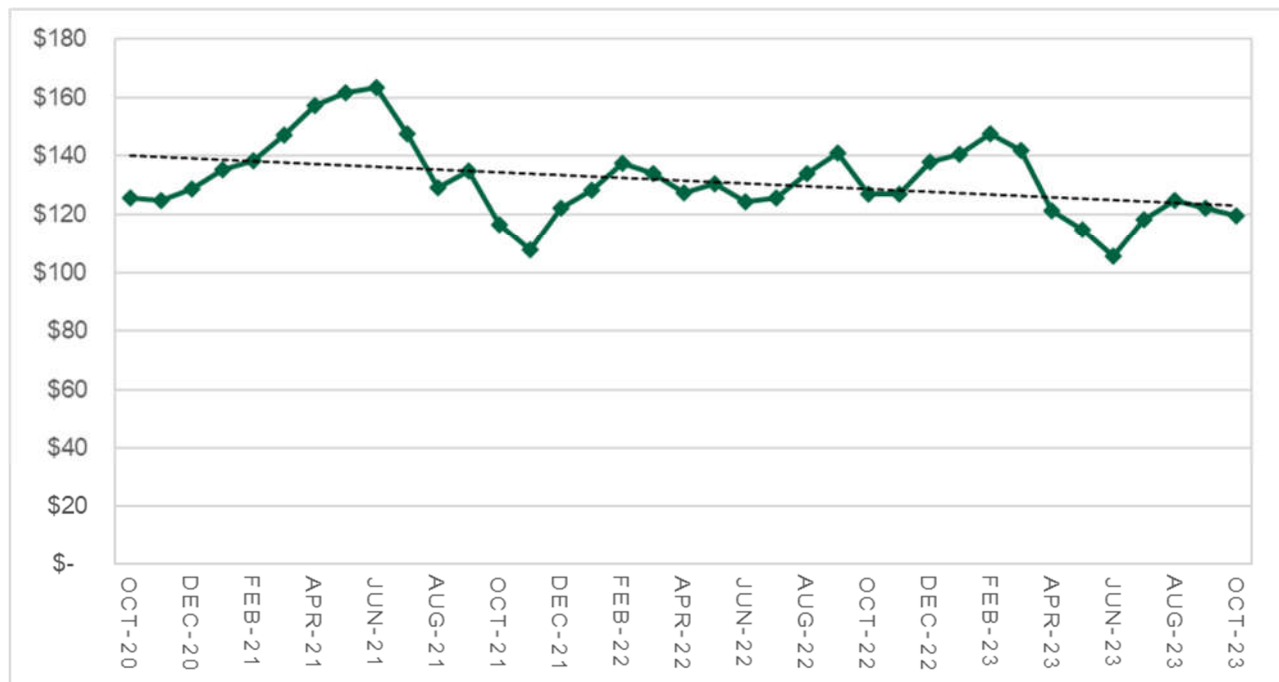
Photo 3: Mechanised harvesting in Cleland Forest (Wairarapa), Landing 12.



Wairarapa Log Prices Per Tonne

Grade	Forest Enterprises Sep-23	Forest Enterprises 36 Month Average	Current vs 36 Month Average	Percentage of the 36 Month Average
Export P40	\$170.65	\$177.00	(\$6.35)	96%
Export P30	\$139.10	\$152.60	(\$13.50)	91%
Export A	\$109.00	\$125.35	(\$16.35)	87%
Export K	\$93.95	\$110.15	(\$16.20)	85%
Export KI	\$83.00	\$102.45	(\$19.45)	81%
Export Pulp	\$71.65	\$88.95	(\$17.30)	81%
Domestic P35	\$185.00	\$183.65	\$1.35	101%
Domestic S30	\$122.00	\$126.30	(\$4.30)	97%
Domestic S20	\$107.00	\$111.30	(\$4.30)	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 \$/tonne. Refer to page 5 for more detail on the JAS to Tonne Conversion.				
Index Log Price	\$122.01	\$132.15	(\$10.14)	92%
Index Log Price is calculated using benchmarks from our Wairarapa forest crops to estimate an average log grade recovery for a 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

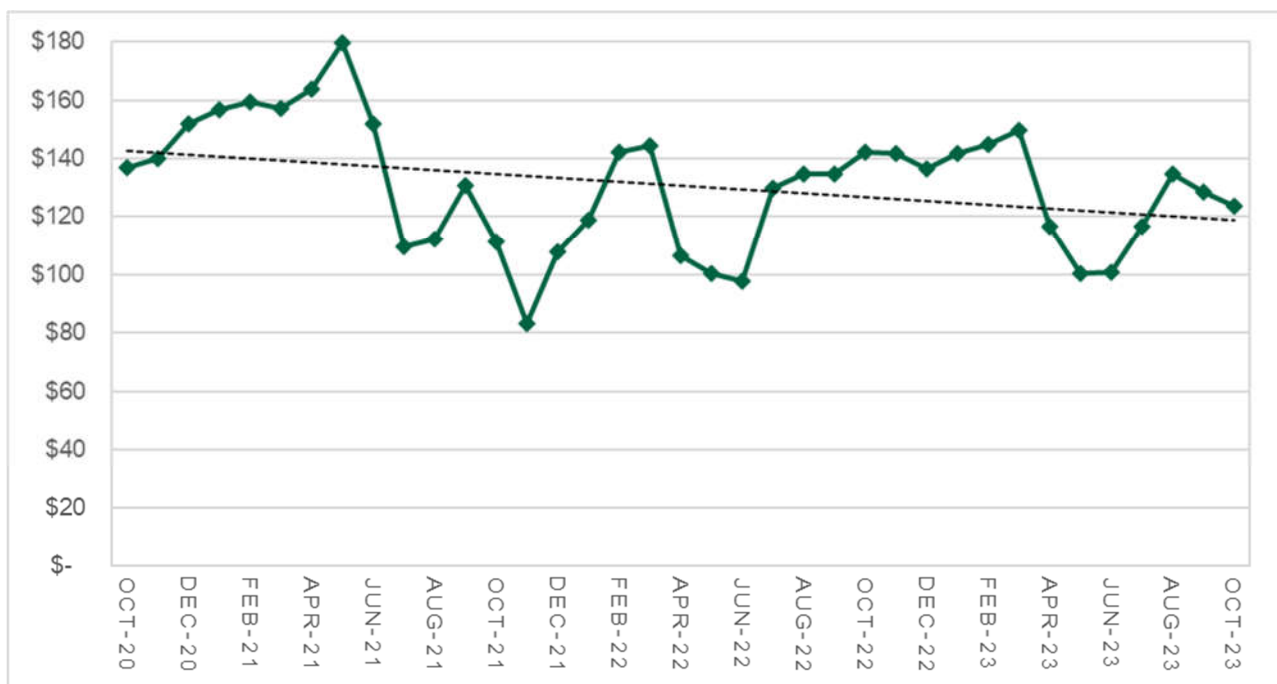
Grade	Forest Enterprises Sep-23	Forest Enterprises 36 Month Average	Current vs 36 Month Average	Percentage of the 36 Month Average
Export P40	\$190.95	\$181.80	\$9.15	105%
Export P30	\$142.10	\$141.85	\$0.25	100%
Export A	\$119.70	\$125.40	(\$5.70)	95%
Export K	\$103.35	\$109.75	(\$6.40)	94%
Export KI	\$96.65	\$102.70	(\$6.05)	94%
Export Pulp	\$84.45	\$92.20	(\$7.75)	92%
Domestic P35	\$182.30	\$180.00	\$2.30	101%
Domestic S30	\$133.00	\$137.55	(\$4.55)	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	\$128.45	\$131.05	(\$2.60)	98%
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Index Log Price is calculated using benchmarks from our Gisborne forest crops to estimate an average log grade recovery for a typical Gisborne 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.

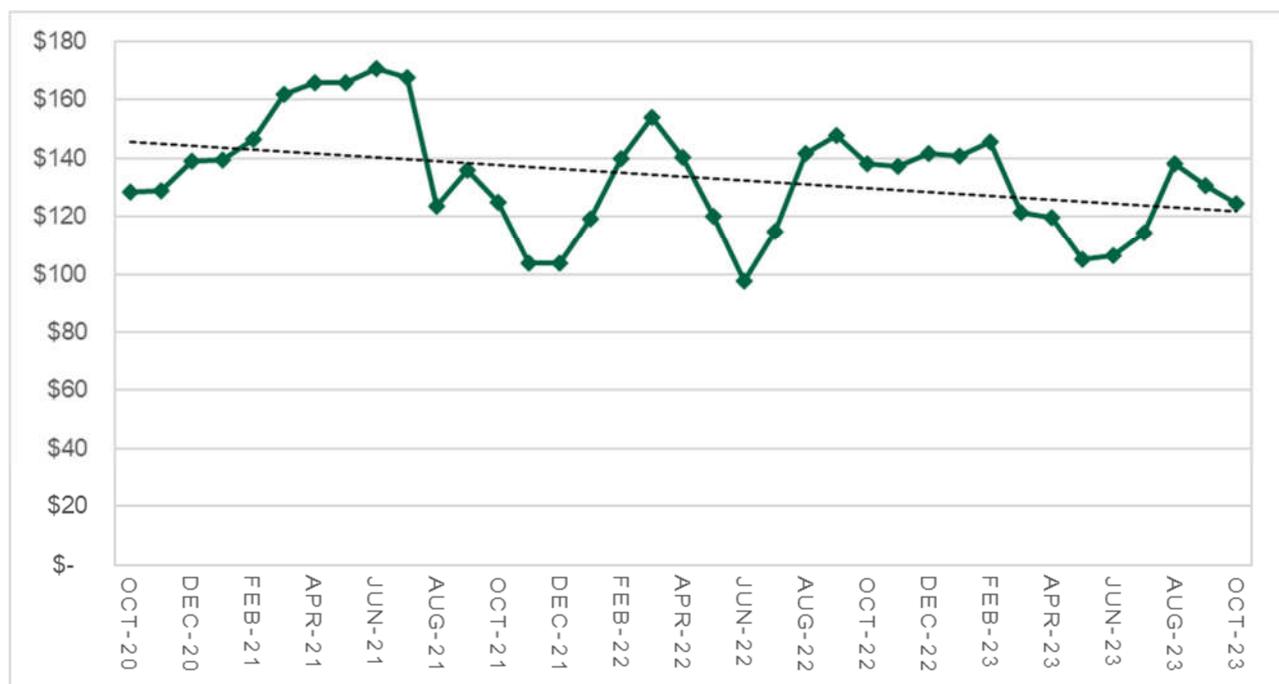
Index Log Price for our typical Gisborne Forests



Hawke's Bay Log Prices Per Tonne

Grade	Forest Enterprises Sep-23	Forest Enterprises 36 Month Average	Current vs 36 Month Average	Percentage of the 36 Month Average
Export P40	\$196.85	\$185.90	\$10.95	106%
Export P30	\$139.85	\$148.50	(\$8.65)	94%
Export A	\$120.65	\$126.80	(\$6.15)	95%
Export K	\$107.40	\$115.10	(\$7.70)	93%
Export KI	\$96.40	\$104.30	(\$7.90)	92%
Export Pulp	\$84.85	\$89.65	(\$4.80)	95%
Domestic P35	\$217.00	\$183.25	\$33.75	118%
Domestic Pulp	\$57.30	\$50.45	\$6.85	114%
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	\$130.63	\$133.90	(\$3.27)	98%
Index Log Price is calculated using benchmarks from our Hawke's Bay forest crops to estimate an average log grade recovery for a typical Hawke's Bay 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 Hawke's Bay Forests



Factors Influencing Current Log Price

Key:

↑ More Benefit to the Investor

↓ Less Benefit to the Investor

↔ Neutral

Price, Costs and Logistics

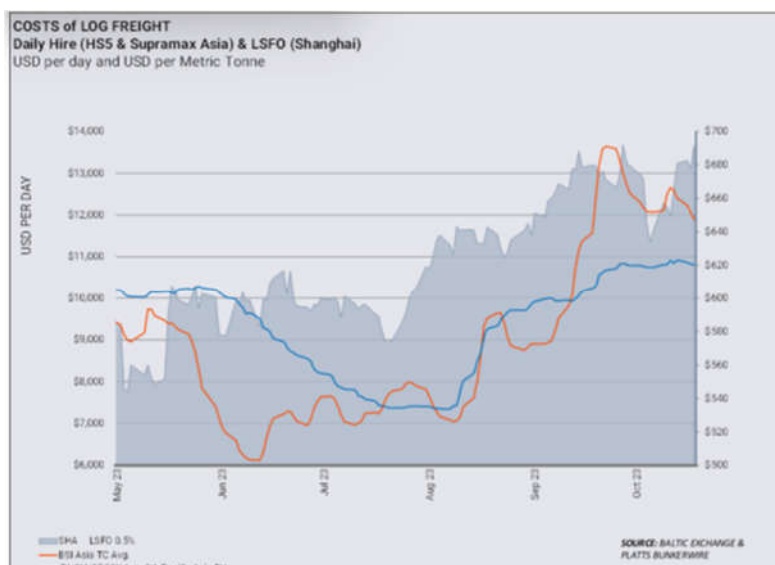
↑ Forex

Export logs are priced in USD. Exchange rates are often affected by merchandise imports and exports as well as a general level of confidence in the New Zealand economy in comparison with trading partners. There has been considerable fluctuation in forex rates in the recent quarter, which is related to increased global conflict and uncertainty. The exchange rate position for a recent vessel was of about USD60c which is an improvement in trade terms for New Zealand compared with last quarter's USD62.1c. This increases our export log price in NZD terms. The rate is still moving in investors favour, giving increases in sales revenue but also higher inflation in imported goods costs (fuel, machinery etc).

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

↔ Shipping

Shipping costs have increased since the last quarter. Current shipping rates are below previous years rates as shown on the chart but are showing a rising trend recently. We are informed that shipping cost in the near term is likely to remain relatively low risk. Bunker fuel price recently fell, but the behaviours of oil cartels are changing around regional groupings and cooperation between major petroleum exporter groups is unsettled.



↑ JAS to Tonne Conversion

JAS-to-tonne conversion increased over the quarter averaging 103.3% at 30 September 2023.

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 correlated with the conversion of weight to volume in the logs.

Conversion has seasonal trends and varies between log grades, log length and log quality. Accounting for conversion is necessary to report comparable values from different sales options. Our convention is to report all prices in the 'per tonne basis', which accounts for the weight to mass conversion.

↔ Log Price, Export CFR

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

- China Lower volatility recently.
- South Korea Low, with low prospect of improvement.
- India No change; waiting for fumigation rules to be resolved.
- Japan Low, and with little relevance to Forest Enterprises-managed investment log sales.



Log Demand

↔ Export Log Inventory in Market in Market

<u>China</u>	Inventory of logs in China is a leading supply/price indicator. Inventory levels in China has fallen steadily to about 3.2 million JAS. Log supply declined from 65 days of supply to a healthy 53 days at current usage of about 60,000 JAS per day. The speed that logs turn to lumber and lumber turns to cash drives market sentiment. Chinese sawmills buy in USD per JAS and sell lumber in local currency and using a local Chinese log scale method.
<u>South Korea</u>	Soft demand in an over supplied market.
<u>India</u>	No change; predictions of future benefits continue to come from India but no business yet.
<u>Japan</u>	Low demand and price and given recent current conditions Japan is not influencing log price or revenue for Forest Enterprises-managed forests.

↑ Pruned Log Grades

Demand for New Zealand pruned lumber is strong internationally with one major customer in Europe making cladding, decking, panelling and exterior timber products called Abodo. Abodo undergoes an industrial process which makes the lumber more durable and thus of great benefit for high-end building materials. Our large Taupo customer Tenon supplies clear lumber to Abodo which uses FSC certified timber only.

↑ New Zealand Domestic

We have two major framing mills in the Wairarapa and one in the Manawatu region. Kiwi Lumber in Masterton is a very large customer and we have recently made the log supply more uniform by tweaking the log grade specification. Simplifying the log product mix makes the log supply chain operations more efficient. Amongst other things, Kiwi Lumber in Masterton manufactures structural lumber for construction purposes.

↑ Housing and Business

When the endless general election is finally resolved we expect to see some changes in housing supply and market conditions, depending on the exact makeup of the new Government. It's clear that supply of housing is below the required level to meet social needs.

↑ Log Agency

The harvest financial summary table included in harvest reports now has a line showing the net effect or price change from the log agency agreement post shipping washups. Positive washup cashflows have occurred recently. The agency agreement sets a fixed return to the export agent, rather than a margin and in return the agent shares the in-country market results in detail with Forest Enterprises and our investors.

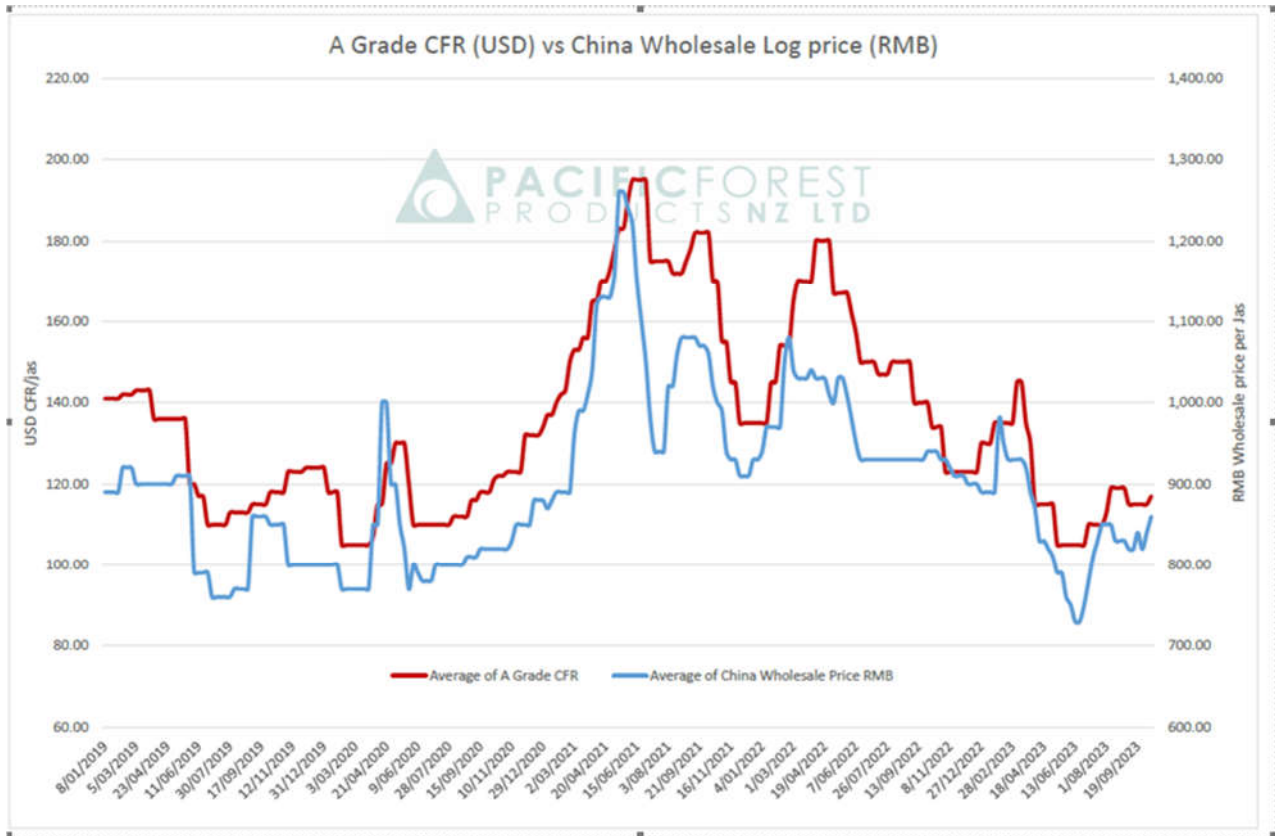
Log Supply

<u>New Zealand</u>	Harvesting the wind damaged forest in the Turangi region continues at pace to recover as much timber as possible. Other forest areas have seen general reductions in log production, especially around the East Cape. Areas with large domestic sawmill demand continue at steady production rates compared with export dominated regions.
<u>Australia</u>	Australia has been operating largely an internal market since log exports to China ceased several years ago. This is useful to see as New Zealand has been unable to reproduce that achievement and we rely heavily on log exports for our forest sales. Australia is entering fire season which is much more serious than in New Zealand.
<u>Europe and Russia</u>	There is much less European lumber turning up in China recently.
<u>Pacific Northwest (PNW)</u>	Low lumber production in Canada caused by fire damage has led to opportunities for European lumber imports to the US where lumber demand remains high. The wildfires are a major source of emitted carbon to the atmosphere (smoke). Canada is the second largest producer of lumber behind the US, but supply is declining due to forest loss.

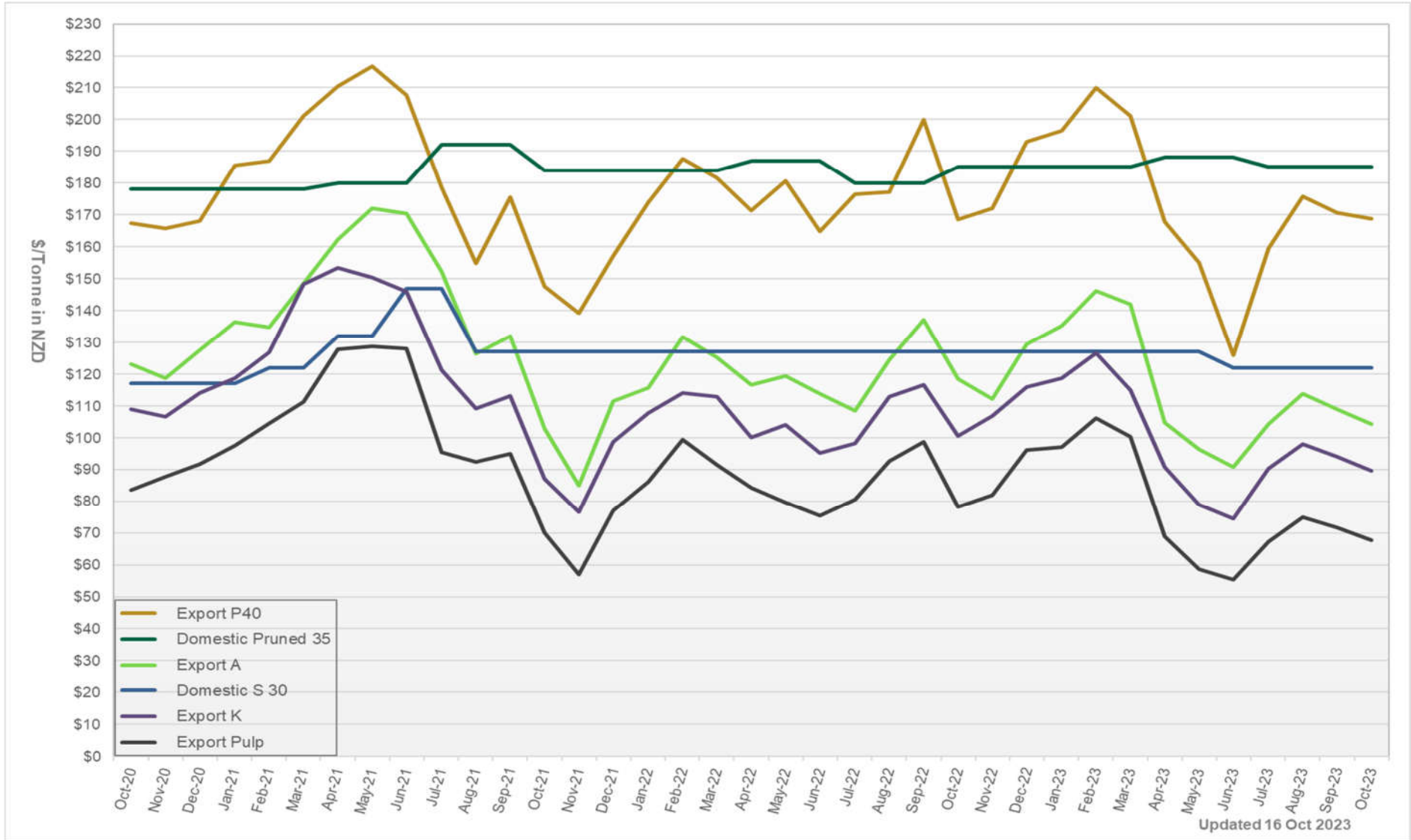


Point of Interest

This graph from export agent PFP shows the relationship between price in the China market in local terms compared with A-grade (export) log price. The relationship between the two price points indicates relative positions for buyers and sellers in the China market.



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. These log price averages do not reflect any price adjustments that may occur following washups with our log export partners.

