Australian timber market dynamics:

volumes, prices, drivers and outlook

FWPA Webinar

7th July 2021

IndustryEdge™

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What we'll cover today

1. Sawn softwood trends – the decade to 2020
2. Changing local production base
3. Recent experience – 2017 to now
4. Europe dominates imports…
5. The housing pipeline
6. When the boom might end … and what happens then?

Sawn softwood trends – the decade to 2020

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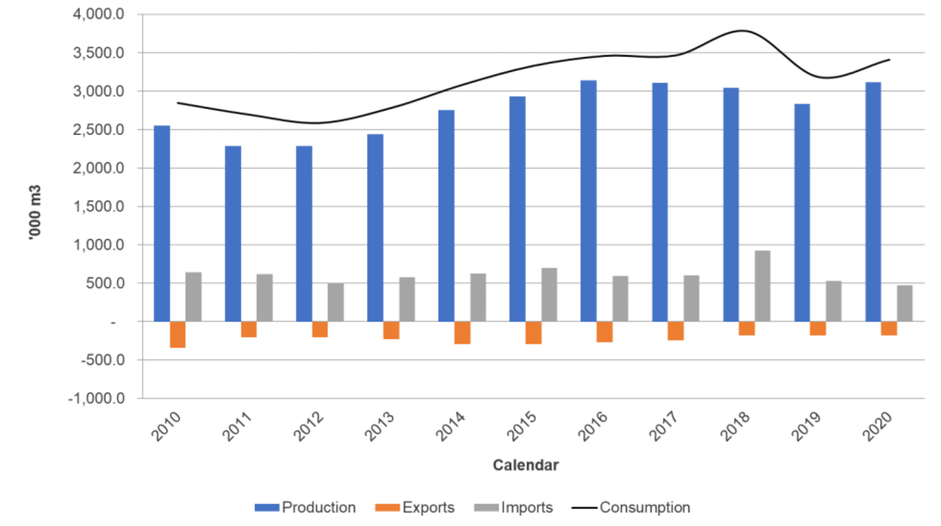
Consumption of sawn softwood is heading toward peak

Total Australian Sawn Softwood Consumption: 2010 – 2020 (‘000 m3)



	Production	Exports	Imports	Consumption
2010	2,547.2	- 342.0	641.9	2,847.1
2016	3,137.6	- 269.2	590.8	3,459.2
2017	3,109.1	- 244.0	600.9	3,466.0
2018	3,039.8	- 177.6	920.0	3,782.2
2019	2,835.8	- 182.3	531.1	3,184.6
2020	3,116.1	- 182.3	476.0	3,409.8

- 2018 calendar year saw sawn softwood consumption at record levels
- Consumption moderated in 2019 but rebounded in 2020, heading towards record levels
- Reported local sales however, were at record levels in 2020
- Imports were about half their peak

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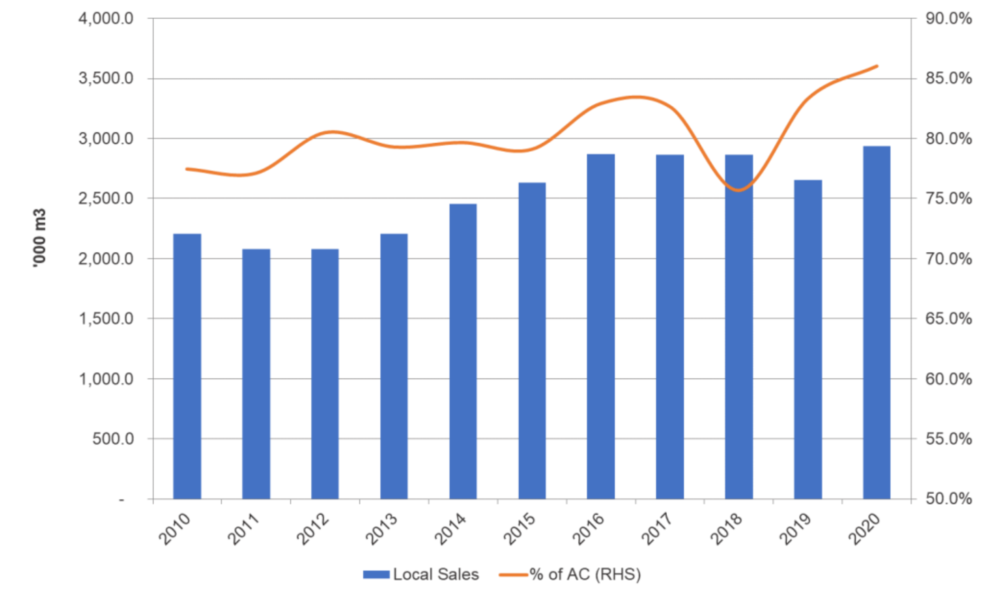
Source: FWPA, ABS, derived and IndustryEdge

Local production is pulling more than its normal weight

Sawn Softwood Local Sales & Supply Proportion: 2010 – 2020 (‘000 m3 & %)



- After exports, local sales in 2020 were 2.933 Mm^3
- 86% of total consumption
- Record contribution from the local industry, due to lower imports and record sales

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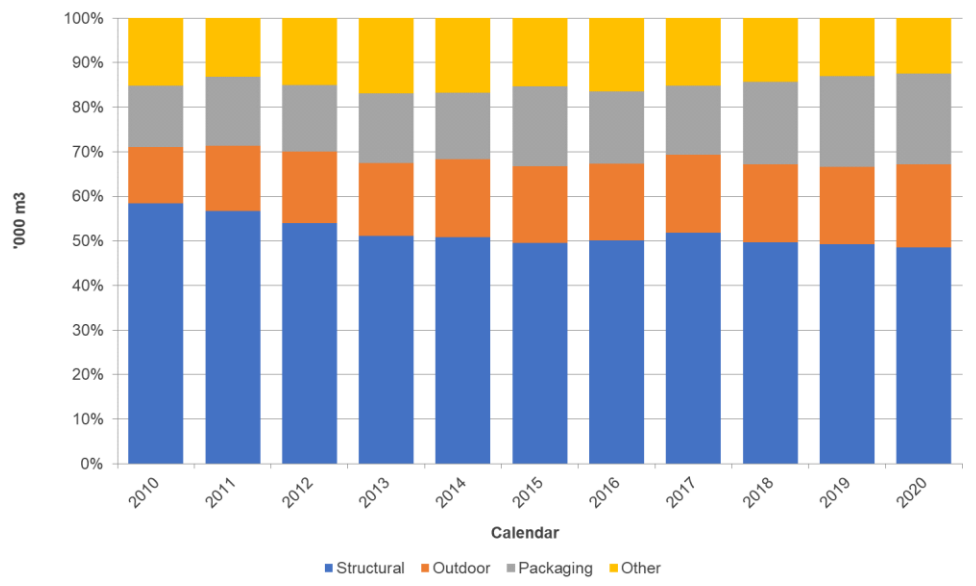
Source: FWPA and IndustryEdge

Sales breakdown – the big picture

Australian Sawn Softwood Production by Type: 2010 – 2020 (%)



	2010	2020	CAGR10
Structural	1,489.3	1,512.0	0.2%
Outdoor	319.3	584.7	6.2%
Packaging	352.2	632.6	6.0%
Other	386.4	388.9	0.1%
Total	2,547.2	3,118.1	2.0%

- As a proportion of total sales – structural grades were 48.5% in 2020, down from 58.5% in 2010
- Plenty of drivers for this:
  - Better utilisation of resource
  - Smaller dimension logs
  - Possibly higher producer margins for some outdoor and packaging grades
  - Changes in contributions to the industry data series
- Undeniably strong growth in Packaging and Outdoor product sales

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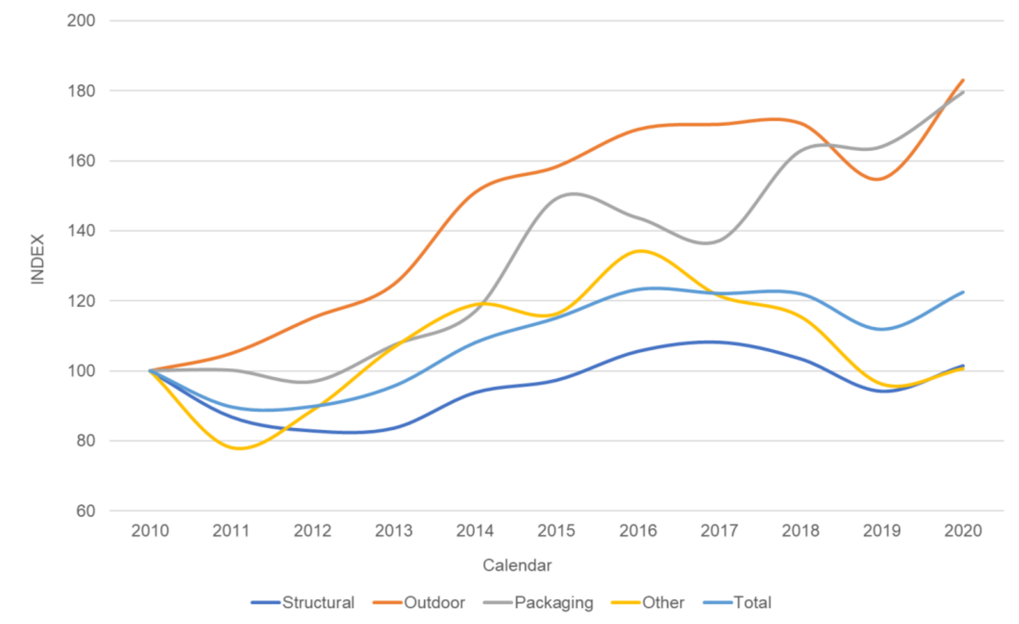
Source: FWPA, downloaded from Wood Market Edge online and IndustryEdge

And here, the differential is even clearer…

Index Growth: Local Softwood Sales: 2010 – 2020 (Base: 2010 = 100)



Source: FWPA and IndustryEdge

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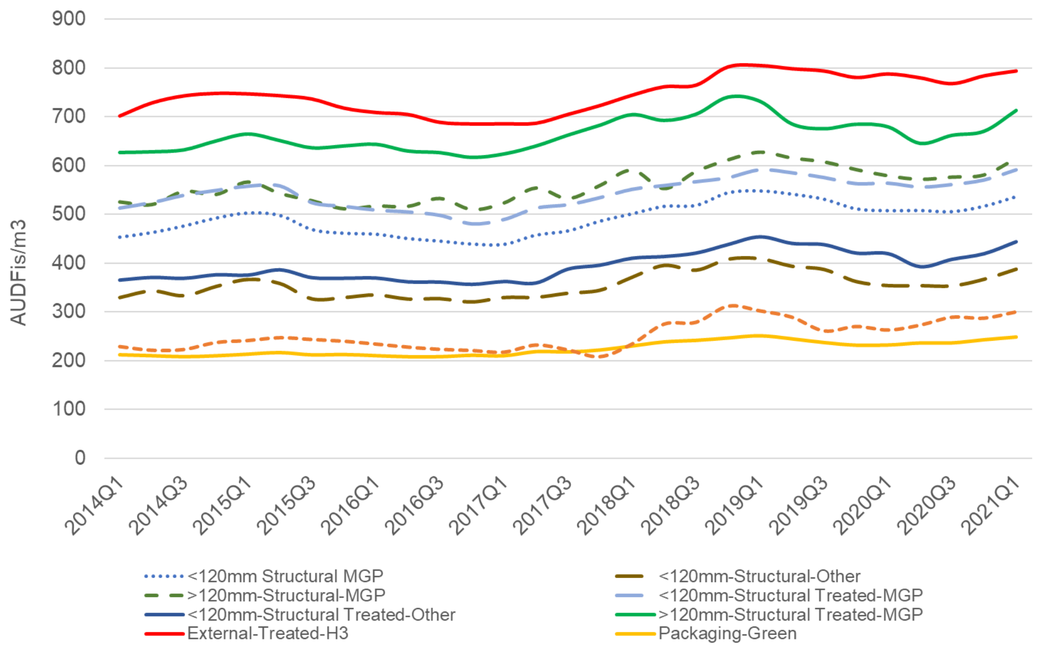
Why is sales growth strongest in grades other than structural?

Selected Quarterly Sawn Softwood Prices: MQ'14 – MQ'21 (AUDFis/m3)

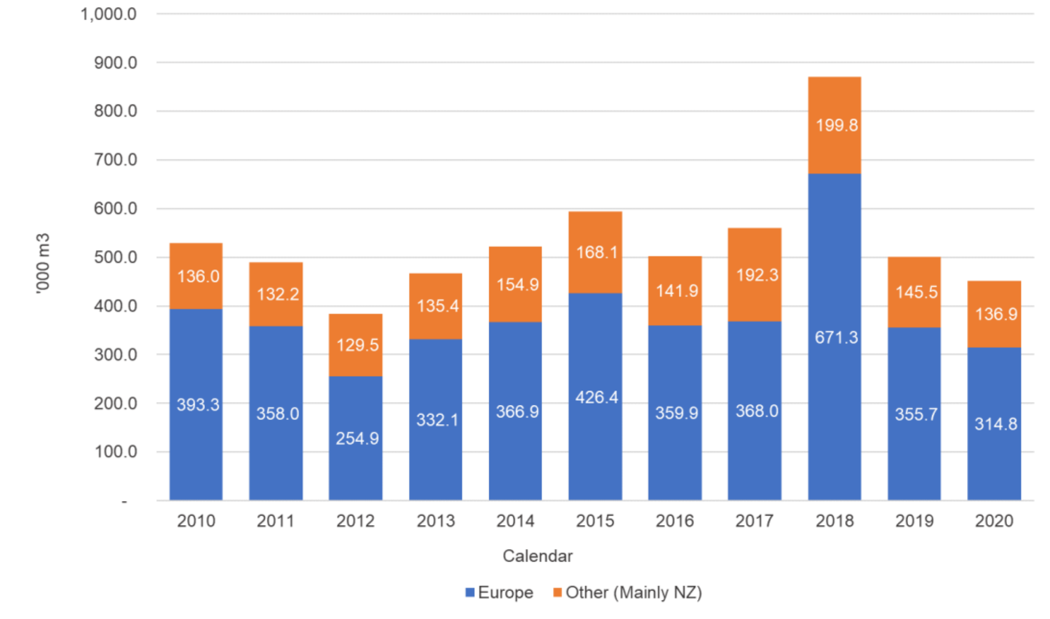


- No certainties, but it could be a mix of the following:
  - Declining average log sizes
  - Emphasis on processing 'whole of log'
  - Higher prices for some products (e.g. External Treated – H3)
  - Better margins for some lower-priced products

Source: FWPA and IndustryEdge

A decade of imports

Sawn Softwood Imports by Region: 2010 – 2020 ('000 m^3)



- Imports have been quite variable over the decade
- However, they are ever-present and much needed, as we know
- Emphasis is on supplies from Europe, but the largest single supplier is New Zealand

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Source: ABS, derived and IndustryEdge: Data downloaded from Wood Market Edge online

Recent experience – 2017 to now

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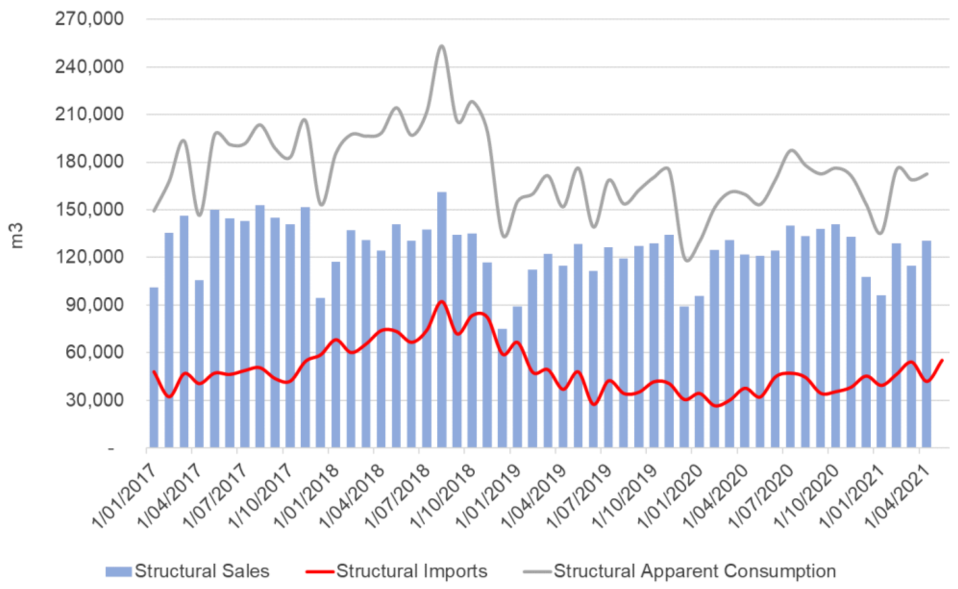
The role of imports seems clear

Structural Apparent Consumption: Jan '17 – May '21 ('000 m³)



LATEST: Structural imports: May 2021 = 55,720 m³.
Highest since January 2019

Structural consumption: YE April 2021 = 2.014 Mm³.
Highest since August 2019

- Structural grades are about 95% of sawn softwood imports
- Core of imports seems to be around 430,000 m³ pa (36,000 m³/month)
- Anything above or below appears to be the 'flex' volume, responding to the market
- The 'floor' looks to be about 30,000 m³/month
- Upper limit: depends on the global market

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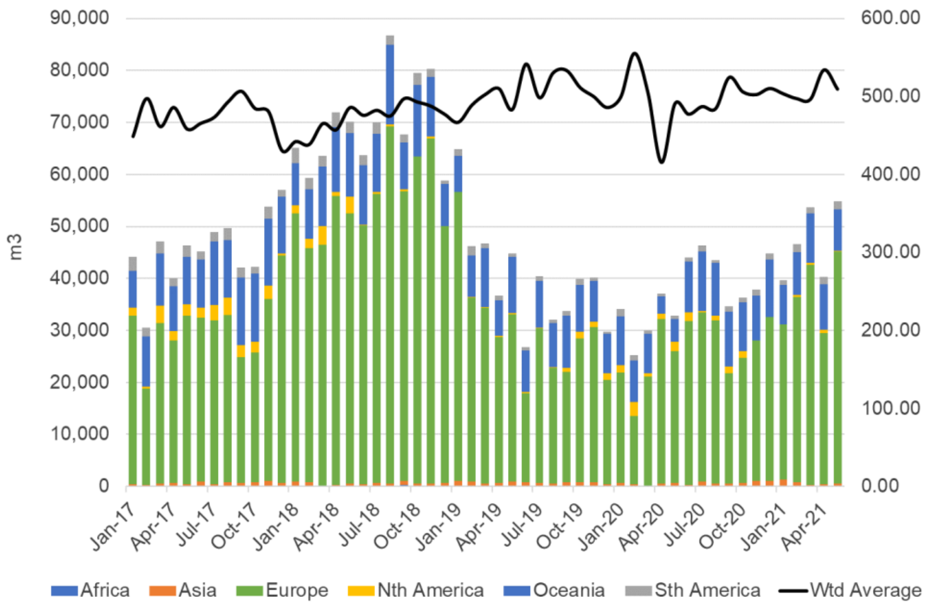
Source: FWPA, ABS and IndustryEdge: data downloaded from Wood Market Edge online

Recent imports confirm dominance of European supply

Structural Imports by Region: Jan ’17 – May ’21 (‘000 m^3)



- Shipments from Oceania (NZ) are consistent and stable
- European supply dominates all time periods

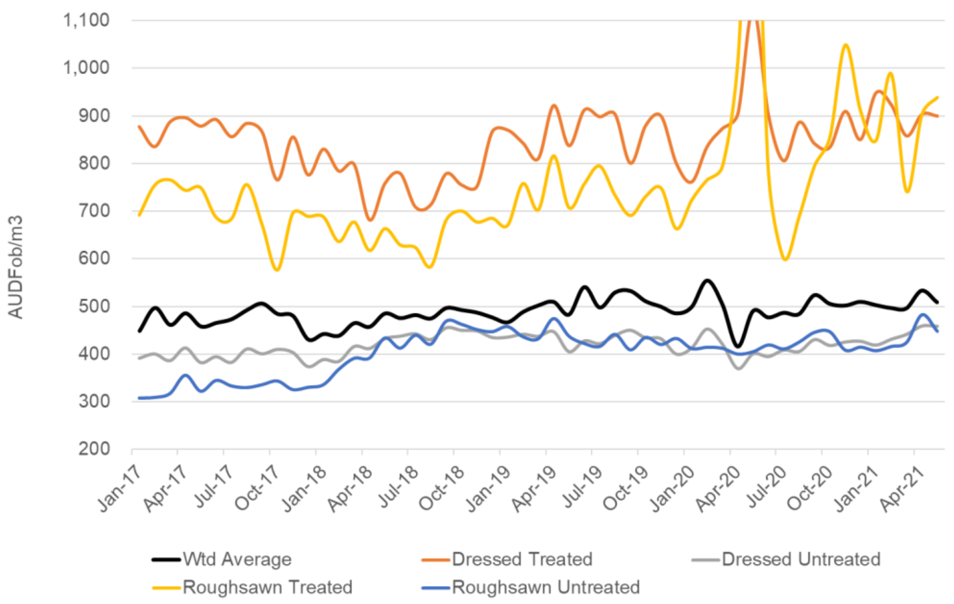
	YE May '20	YE May '21	% Change
Austria	15,431	18,402	19.3%
Chile	8,466	11,638	37.5%
Czech Republic	47,075	42,571	-9.6%
Estonia	61,862	65,442	5.8%
Finland	11,931	14,748	23.6%
Germany	33,509	78,278	133.6%
Latvia	4,685	14,682	213.4%
Lithuania	34,594	37,496	8.4%
New Zealand	94,312	112,724	19.5%
Poland	18,869	23,736	25.8%
Russian Federation	22,514	26,849	19.3%
Sweden	30,462	59,640	95.8%
Other	30,322	21,596	-28.8%
Total	**414,033**	**527,801**	**27.5%**

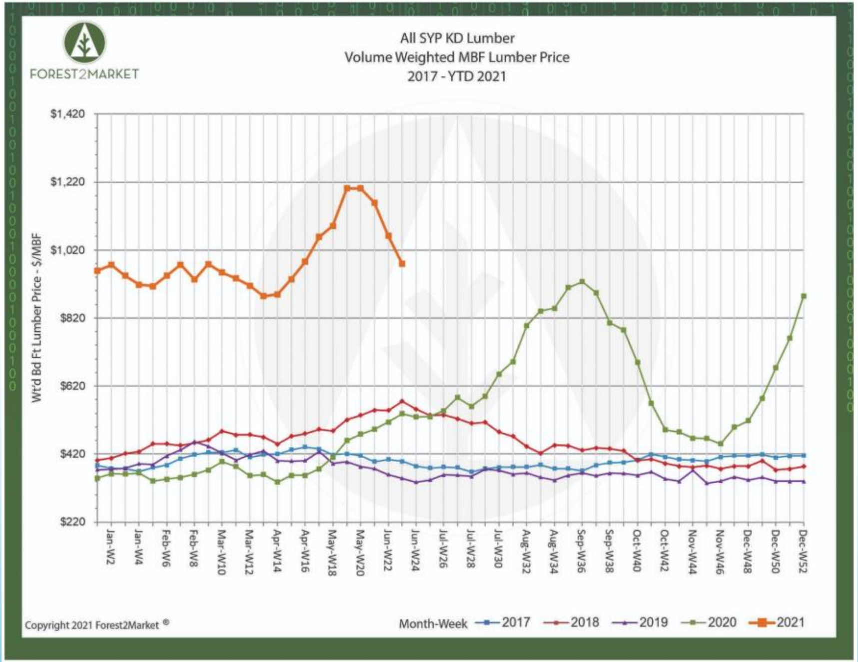
European producers are not ignoring Australia – but they cannot keep up any more than domestic processors

Source: ABS and IndustryEdge: data downloaded from Wood Market Edge online

How do Australian import prices compare with the US experience?

Structural Imports by Type: Jan ’17 – May ’21 (AUDFob/m³)





Over the year-ended May 2021, the weighted average import price to Australia fell 0.2%, while average prices in the US were … dramatically higher

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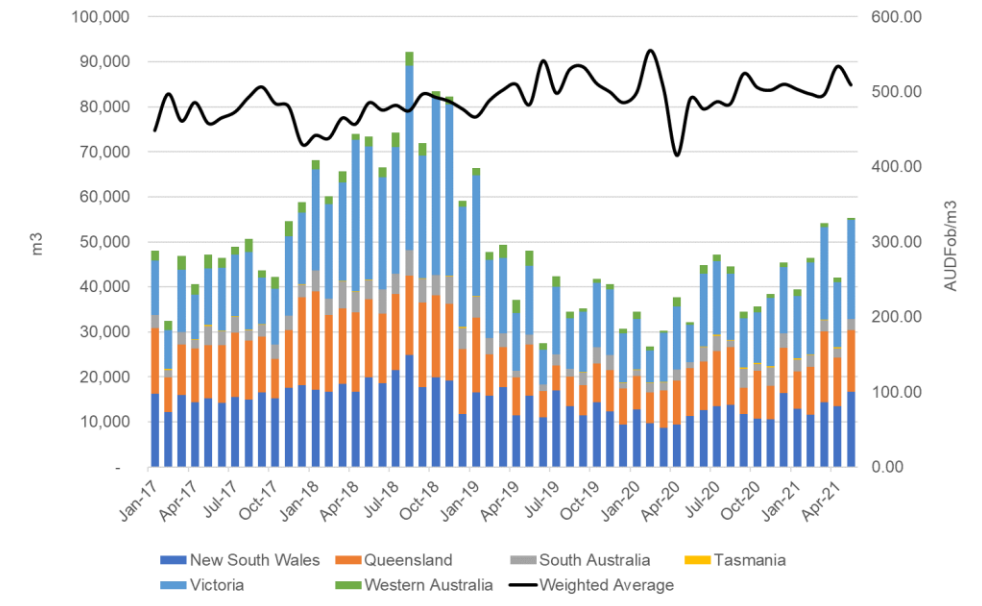
Source: ABS and IndustryEdge: data downloaded from Wood Market Edge online

Imports by State point to demand in Victoria and Queensland

Structural Imports by State: Jan ’17 – May ’21 (m^3)



	YE May ‘20	YE May ‘21	% Change
NSW	140,748	158,502	12.6%
QLD	93,567	129,178	38.1%
SA	25,678	32,922	28.2%
TAS	927	2,144	131.3%
VIC	138,380	190,742	37.8%
WA	14,734	14,313	-2.9%

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Source: ABS and IndustryEdge: data downloaded from Wood Market Edge online

The housing pipeline

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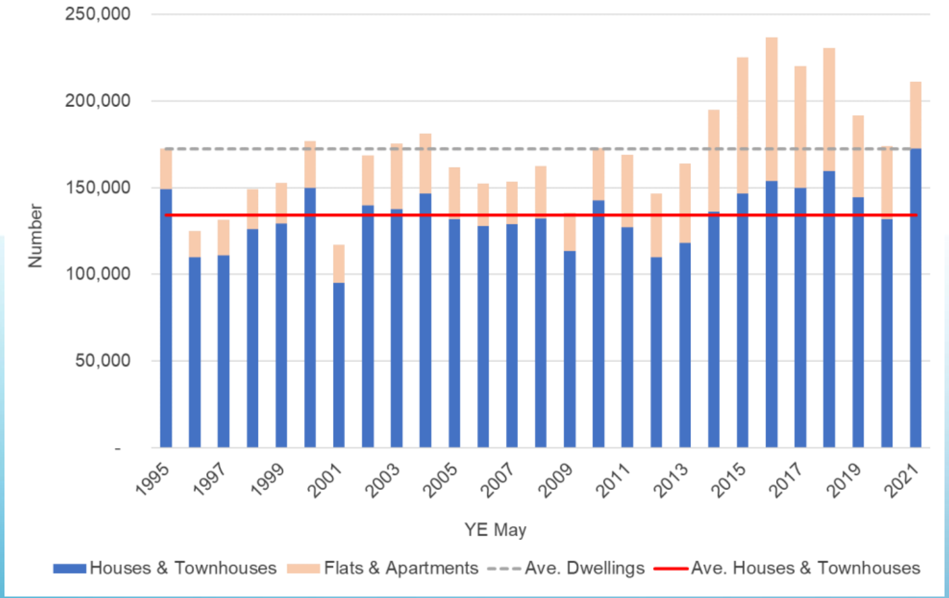
Approvals through the roof

Approvals: Houses & Townhouses v Flats & Apartments: YE May 2005 – YE May 2020 (Number)



	Houses & Townhouses	Flats & Apartments	Total
YE May 2020	131,728	42,238	173,966
YE May 2021	172,586	38,641	211,227
Long Term Ave.	134,169	38,194	172,363

- Approvals of houses and townhouses at record levels and are up 31% YE May
- 38,000 annual units above long term average
- Houses and townhouses alone are above the total long term average
- Little wonder there are supply and labour shortages

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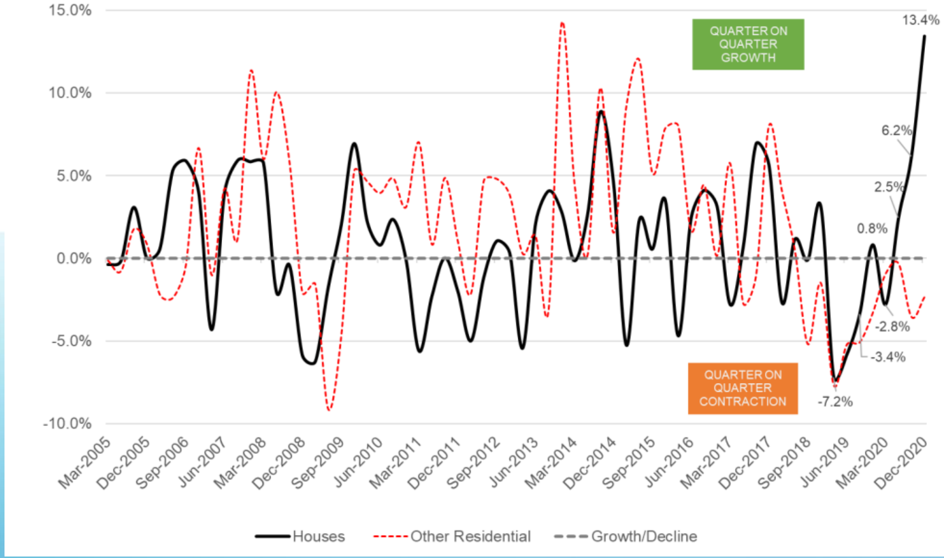
Source: ABS, derived and IndustryEdge

Pipeline growth: massive, without precedent and its all houses

Australian Building Work Pipeline: Quarterly Changes: MQ'05 – DQ'20 (AUDBn)



- Pre-pandemic, the pipeline of building work was trending down, but declines were flattening out, Q-o-Q
- Then, the pipeline exploded – all of the growth was in free-standing houses!
- Driver was clear: fiscal stimulus, combined with low interest rates
- Housing is highly responsive to stimulus measures. It is the modern 'go to' in times of trouble

When it comes to housing stimulus, the key questions are 'how much', 'to whom' and 'for how long'

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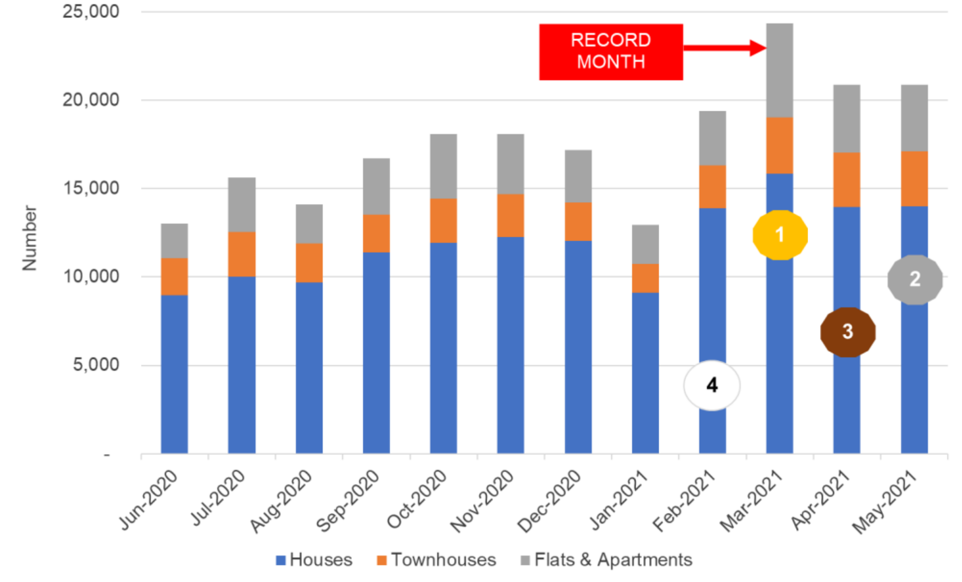
Source: ABS, derived and IndustryEdge

2021: Housing's Olympic standard performance

Dwelling Approvals by Type: Jun '20 – May '21



- The last four months saw <u>house</u> approvals at their highest months ever:
  - February: 13,907 (4)
  - March: 15,852 (1)
  - April: 13,965 (3)
  - May: 14,014 (2)
- This is the end of the 'sign ups' under stimulus and will reduce in coming months
- But we have to add the June quarter to the pipeline of work

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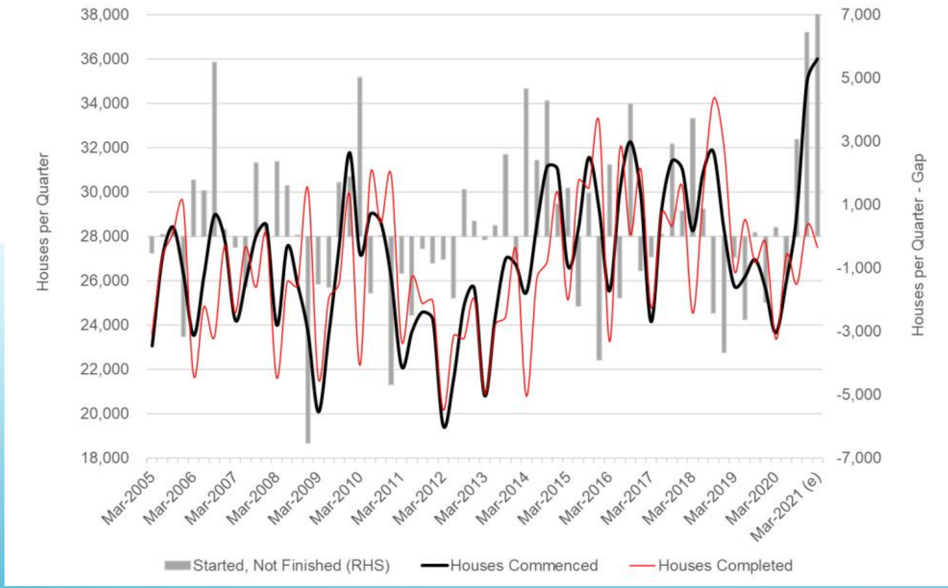
Source: ABS, derived and IndustryEdge

Huge number of houses still to be built

Australian House Commencements v Completions: MQ’05 – DQ’20 (Number)



- Approvals continuing at near record levels each month
- We calculate March quarter saw about 8,500 more Commencements than Completions* and June quarter will be the same, or worse
- That is: two consecutive quarters with the largest ever commencements and the biggest ever over-hang of uncompleted work

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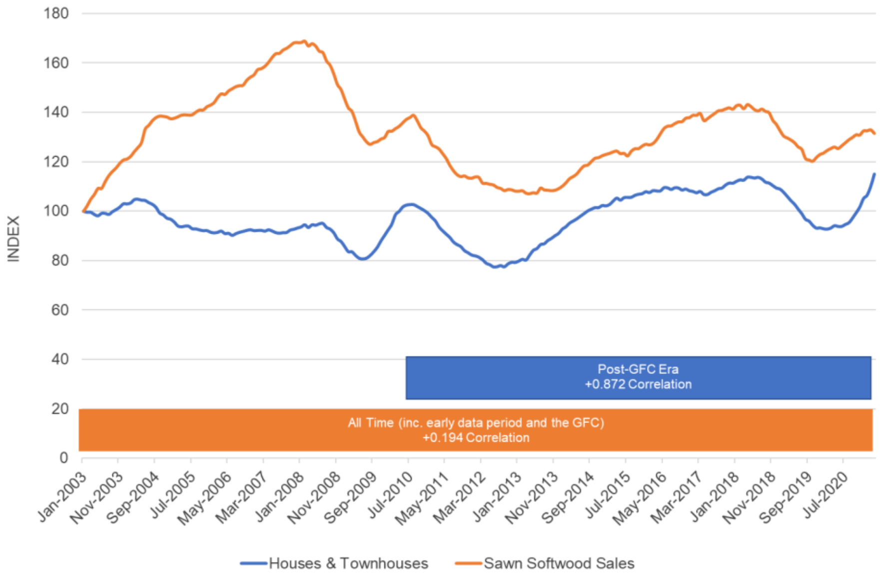
* Formal data not yet available for the March quarter

Source: ABS, derived and IndustryEdge

How long will the demand (the work) continue?

Sawn Softwood Sales v House & Townhouse Approvals Index: Jan ‘03 – Mar ‘21



- About 16 months of average activity was booked in the last 12 months – and every month adds more
- At least one year before the pipeline is built, and … that assumes immediate return to average monthly approval levels, and … building supply, activity and effort continuing at the same hectic pace and intensity
- The irregular and disrupted ‘pandemic correlation’ has only shifted slightly

The correlation between sawn softwood sales and house & townhouse approvals tells us the big lift in approvals means a sustained lift in demand for timber

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Source: FWPA, ABS and IndustryEdge: data downloaded from Wood Market Edge online

What happens when the current house boom ends?

- Be ready for a sharp reduction in approvals and activity, because:
  - Pent up demand will be built out
  - Zero net overseas migration for at least two years
  - Less new households formed
- No fiscal stimulus (we cannot afford it!)
- Likely higher interest rates (RBA's comments early July are instructive)

After a couple of cycles of 'booms without busts', are the conditions right for a very sharp downturn when this boom ends?

Some observations on the road ahead

- Structural production can only flex up marginally
- Imports are unlikely to fill the gap before end 2021
- Housing pipeline will not be built out until at least mid-2022
- But when it is built out… get ready for a fall!
- Structural timber prices need to increase to attract imports, and also to support new local investment in plantations and processing

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About IndustryEdge

IndustryEdge is Australia's leading market information and analysis firm operating in the forestry, fibre, wood products, pulp, paper and paper products industry.

IndustryEdge is based in Geelong, outside Melbourne in Australia.

As a dedicated, sector focused analysis firm with twenty-five years experience, our small team are experts in:

- Supply chain volume, value and cost analysis;
- Market dynamics, including policy and regulatory impacts;
- Trade analysis, including imports and exports;
- Economic analysis, including projections and forecasts

IndustryEdge's work is focused on quantitative assessments, using granular data, much of it researched 'in the field' by *IndustryEdge* and our partners. From weekly tracking of woodchip vessels, production and sales data across sectors and global trade data, IndustryEdge collates extensive data series to assist clients to make informed decisions.

Through *Wood Market Edge online*, delivered with our global partner Forest2Market, IndustryEdge publishes Australia's only market data and analysis for the forestry and wood products industry in Australia and New Zealand. The platform includes access to extensive and growing datasets on Asian wood products trade.

The *Pulp & Paper Edge Data & Information Service* provides clients with monthly access to detailed market data (including downloadable files), analysis and commentary and is supported by our global partner Fisher International and information sharing relationships with Hawkins Wright and Brian McClay & Associates

We publish more than 30 client-centred datasets every month and our analytical content is widely syndicated.

As observers, advisors and assistants, we are 'in the market' constantly. As an example, our global woodchip market analysis tools provide unique predictive capabilities to our clients, the world over. This tool assists them to predict volumes on a port-to-port basis, to coordinate shipping and evaluate sales opportunities.

IndustryEdge conducts diverse consulting assignments that include everything from strategic planning support, supporting new trade transactions, through analyzing supply chains, to conducting due diligence activities. Our clients include Federal and State Government agencies, national and local industry associations and local and international firms.

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Wood Market Edge online

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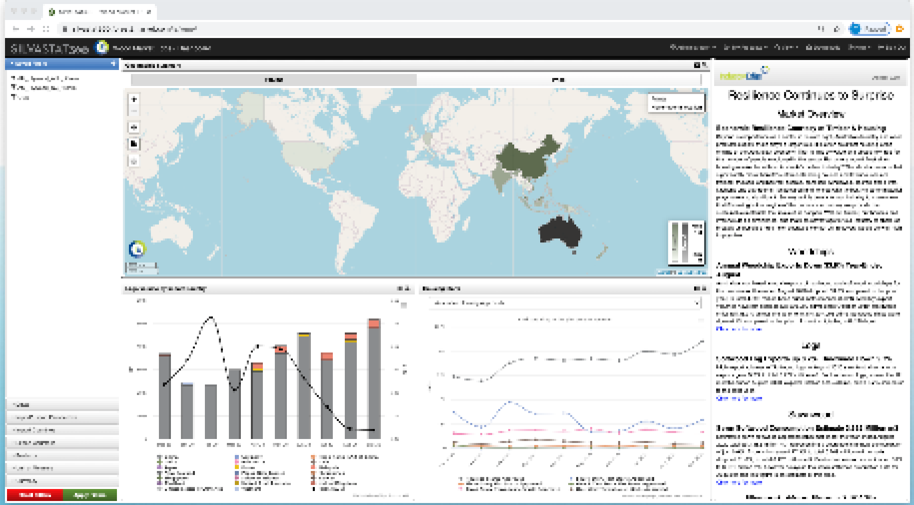
Putting the latest data, analysis and insights at your fingertips

Subscribers login and have immediate access to complete data, up to date analysis and powerful visualisations



On the main dashboard, use the simple filters to see the data you need, then download the data and charts you require

Wood Market Edge online provides 24/7 access to:

- ✓ The most granular data available
- ✓ World leading visualization tools
- ✓ Crisp, insightful analysis from IndustryEdge, every month
- ✓ Monthly (in some cases, weekly) updates

With more and more global data being loaded to the platform, Wood Market Edge online remains:

- ✓ Focused on forest and wood products
- ✓ Committed to Australia and NZ

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What data is currently available on Wood Market Edge online?

This image shows woodchip trade visualisations, including our unique vessel tracking tools that show woodchip exports from port-to-port, often up to two months ahead of official data

Data and visualisations for Australia and New Zealand

- Sawn softwood production/sales
- Sawn softwood consumption Sawn wood imports & exports
- Particleboard imports & exports
- MDF imports & exports
- Plywood imports & exports
- Log exports
- Woodchip exports
- Real time woodchip vessel tracking
- Wood pellet exports
- Fuelwood exports
- Housing approvals, commencements and completions

All data is available at the species, grade, dimension, country of origin or destination and port level, where available

Global data and visualisations

- Vietnamese woodchip exports to all countries
- Chinese woodchip imports from all countries, at the regional level
- Chinese softwood log imports from all countries, at the regional level
- Japanese woodchip imports from all countries at the port level
- Taiwanese woodchip imports from all countries at the port level

And in the monthly analysis, our economic, pulp and freight briefings, along with the latest market developments for all major wood products as well as housing markets

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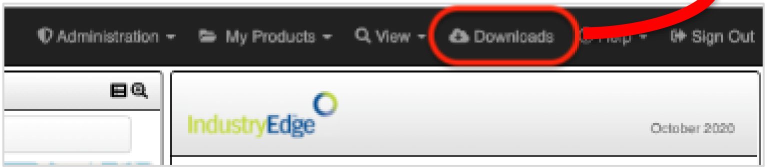
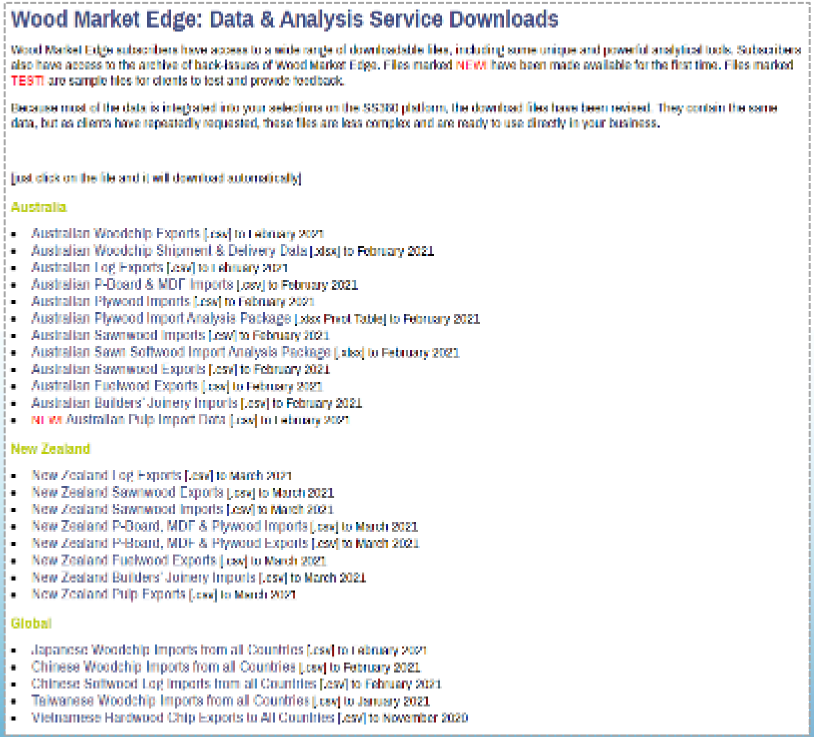
Download the data you need, when you need it

Click the Downloads button on the Dashboard to go straight to the online data warehouse





Wood Market Edge: Data & Analysis Service Downloads

Wood Market Edge subscribers have access to a wide range of downloadable files, including some unique and powerful analytical tools. Subscribers also have access to the archive of back-issues of Wood Market Edge. Files marked NEW have been made available for the first time. Files marked TEST! are sample files for clients to test and provide feedback.

Because most of the data is integrated into your selections on the SS360 platform, the download files have been revised. They contain the same data, but as clients have repeatedly requested, these files are less complex and are ready to use directly in your business.

[just click on the file and it will download automatically]

Australia

- Australian Woodchip Exports [.csv] to February 2021
- Australian Woodchip Shipment & Delivery Data [.xlsx] to February 2021
- Australian Log Exports [.csv] to February 2021
- Australian P-Board & MDF Imports [.csv] to February 2021
- Australian Plywood Imports [.csv] to February 2021
- Australian Plywood Import Analysis Package [.xlsx Pivot Table] to February 2021
- Australian Sawnwood Imports [.csv] to February 2021
- Australian Sawn Softwood Import Analysis Package [.xlsx] to February 2021
- Australian Sawnwood Exports [.csv] to February 2021
- Australian Fuelwood Exports [.csv] to February 2021
- Australian Builders' Joinery Imports [.csv] to February 2021
- NEW Australian Pulp Import Data [.csv] to February 2021

New Zealand

- New Zealand Log Exports [.csv] to March 2021
- New Zealand Sawnwood Exports [.csv] to March 2021
- New Zealand Sawnwood Imports [.csv] to March 2021
- New Zealand P-Board, MDF & Plywood Imports [.csv] to March 2021
- New Zealand P-Board, MDF & Plywood Exports [.csv] to March 2021
- New Zealand Fuelwood Exports [.csv] to March 2021
- New Zealand Builders' Joinery Imports [.csv] to March 2021
- New Zealand Pulp Exports [.csv] to March 2021

Global

- Japanese Woodchip Imports from all Countries [.csv] to February 2021
- Chinese Woodchip Imports from all Countries [.csv] to February 2021
- Chinese Softwood Log Imports from all Countries [.csv] to February 2021
- Taiwanese Woodchip Imports from all Countries [.csv] to January 2021
- Vietnamese Hardwood Chip Exports to All Countries [.csv] to November 2020

In addition to the pre-loaded online charts and data, at a click you can download:

- Charts you created using the platform
- Data behind your charts

In addition…

From the online data warehouse, download detailed data from a large and growing library

Downloadable files include analytical tools and client 'test' files, for feedback during IndustryEdge's ongoing development activities

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Screenshot shows files currently available for download from Wood Market Edge online. IndustryEdge constantly adds files to meet subscriber needs and test future visualization options

Constantly developing new data tools and visualisations

Since Wood Market Edge online went live in early 2020, IndustryEdge has added extensively to the data on the platform and available to download.

The development strategy and pipeline is simple:

1. Acquire or develop data that subscribers need
2. Create datasets and test them, initially as downloads
3. When confirmed, build new data visualisations
4. Inform subscribers and provide implementation support

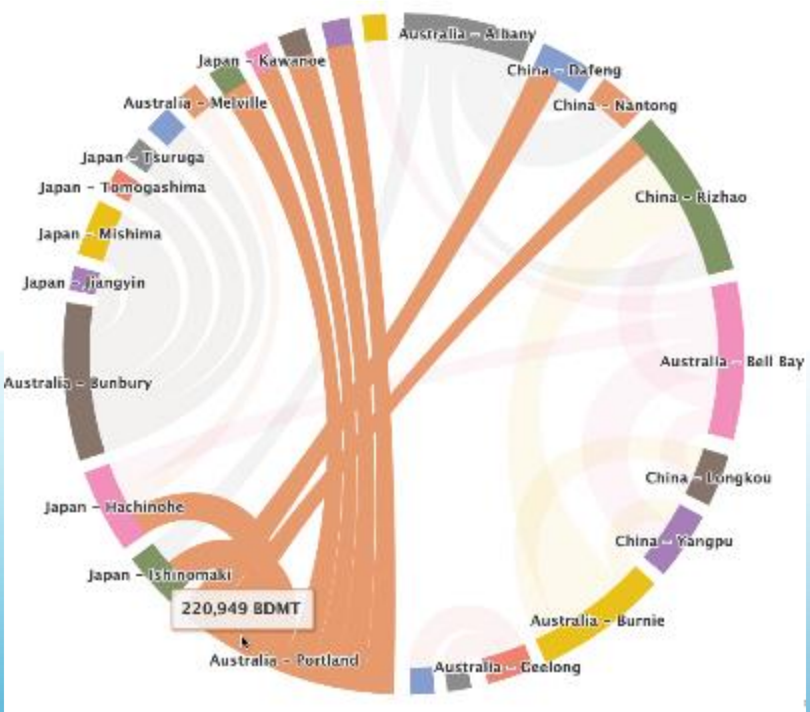
Current Development Pipeline

- NZ Pulp Exports
- AUS Housing & Sawnwood Consumption Analysis
- AUS Furniture Imports (inc. Kitchens)
- Chinese, Japanese, Korean Pulp Imports

Recently Competed Upgrades

- NZ Panel Product Imports
- NZ Panel Product Exports
- AUS Builder’s Joinery Imports
- AUS Pulp Imports

Powerful tools and professional support



Screenshot shows port-to-port trade tracking visualization, providing subscribers with instant reference to key points in international trade. This example is showing woodchip exports from the Port of Portland in Victoria

IndustryEdge provides ongoing support to Wood Market Edge online subscribers, with:

- Online demonstrations
- Regular confidential discussion on topics raised by subscribers. Recent topics have included:
  - Port-to-port analysis of wood panel imports
  - Delivered price analysis related to a new market participant
  - Potential log sales opportunities
  - Volume and price forecasting options
- Provision of offline 'test' data files
- Continuous data sourcing, providing new data for the platform

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How to access Wood Market Edge online

For online demonstrations, confidential discussions on your data needs and subscription options, contact:

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- ✓ Corporate accounts mean no limits to the number of users and no ‘seat fees’
- ✓ Full access to all data and visualisations
- ✓ No download limits
- ✓ Client support provided from Australia

Wood Market Edge online is developed, provided, maintained and serviced by IndustryEdge in Australia, delivered with the full support of and in conjunction with our partner, Forest2Market

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