

# TimberTrader

news

## Allied: forging ahead in mass timber

Page 26



Plus! Weatherproof feature p32

PAGE 5  
**BUSINESS GRANTS  
NATIONAL ENERGY**

PAGE 20  
**HARVESTED WOOD  
PRODUCT NZ UPDATE**

PAGE 46  
**EFFECTS OF MOISTURE  
ON TIMBER FRAMING**

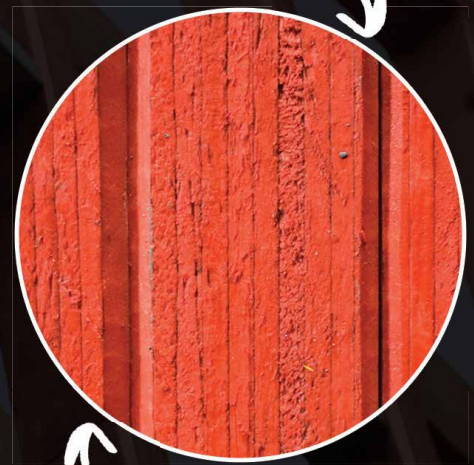
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AUSTRALASIA

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## Contents

### Industry Update

#### News

|                                  |    |
|----------------------------------|----|
| <b>New!</b> Business Grants..... | 5  |
| NTHA WHS Insights.....           | 6  |
| The two-in-one forklift.....     | 8  |
| ADM Shipping update.....         | 16 |

#### Association updates.....

#### Upcoming events.....

#### People business

|   |    |
|---|----|
| The whys, whens and hows of contracts with Peter Maguire..... | 18 |
|---|----|

#### NZ Update

|  |    |
|--|----|
| Long lived harvested wood products plus Key policy drivers for the timber industry with Michael Smith..... | 20 |
| A walk in the trees with Jessica Hockridge.....  | 23 |



#### COVER CREDIT:

Image Campbell McInnes. Left Kieran Chehab and right Stephen Chehab, at their new Allied Mass Timber warehouse.

#### Cover insert photo:

Courtesy Woodhouse.

### Features

#### Allied Forest Products: Cover feature

|   |    |
|---|----|
| Allied Mass Timber: A new division with a clear vision..... | 26 |
|---|----|

#### Woodhouse

|                              |    |
|------------------------------|----|
| Weatherproof excellence..... | 32 |
|------------------------------|----|

#### Arrow Executive Sales

|   |    |
|---|----|
| Breaking the sales talent shortage..... | 36 |
|---|----|

#### Woodwise: Ironbark.....

### Fabricator News

#### Multinail - AAA Advanced Trusses

|                         |    |
|-------------------------|----|
| Frame line feature..... | 40 |
|-------------------------|----|

#### In The Frame

|   |    |
|---|----|
| The swell effects of moisture on timber framing by Craig Kay..... | 46 |
|---|----|

#### FTMA

|   |    |
|---|----|
| Step towards a greener future with the official launch of report with Kersten Gentle and Kat Welsh..... | 48 |
|---|----|

#### Truss talk

|   |    |
|---|----|
| Balustrade structural design with Paul Davis..... | 50 |
|---|----|

Timber Trader acknowledges the Darug people, Traditional Custodians of the land on which this publication is produced, and pay our respects to their Elders past and present. We extend that respect to all Aboriginal and Torres Strait Islander peoples today.

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## Publisher's note

We appreciate the many responses from our readership on why they prefer to receive the printed version of our 52-page magazine. Some of the common themes expressed are 'We like to sit down and read it from cover to cover in our own time', 'Dad puts sticky labels on various pages and pass it around the team [sons] and expects us to discuss what others are doing in our next meeting', 'I read it, then it goes to my general manager, then to reception for our customers', 'I read the fabricator section first and pay close attention to each piece and then start from the front and work my way through it before passing it on'.

In this issue, our front cover feature delves into the evolving mass timber segment of the Australian market. Recognizing the challenges in this area, Allied Forest Products has launched a new division, Allied Mass Timber, dedicated to developing innovative solutions for handling and logistics, as well as further penetrating the volumes of mass timber sold in Australia.

In other features, we highlight the advantages of Multinail's automatic framing

machine through a partnership with AAA Trusses. This technology offers numerous benefits for both fabricators and builders.

We also showcase Woodhouse's Weatherproof product, highlighting their close collaboration with Dulux to enhance the "Woodhouse Pink" architectural primer. This partnership underscores their commitment to customer satisfaction and product quality.

Craig Kay National engineer for Tilling 'In the frame' has focused on 'The swell effects of moisture on timber framing' preparing the points in easy-to-understand language. This follows on from 'Prevention and repair of floor system squeaks – EWP' in our July/Aug issue.

Paul Davis has taken his last article on deck design and safety to the next level with 'A Slant on Balustrades' and has focused on balustrade structural design. We hope you enjoy the read and his interesting *slant*.

Each issue we highlight one of our team members and this time it is my business partner, Campbell McInnes. Campbell has been in the timber industry for 39 years and like this magazine is quickly approaching 40 years of extensive operational experience. Campbell has been managing timber

businesses in Australia and New Zealand, with responsibilities for importing, exporting, sawmills, has extensive sales and marketing experience and an incredible working knowledge of timber and the related products, coatings, connectors, and logistics to name but a few.

Campbell has been instrumental in the rebuilding of our magazine, works long hours and is focused on ensuring the best outcomes for our clients, through the editorial process, key features or ensuring clients achieve a successful campaign. He is dedicated, loyal and has your best interest at heart and through his experience will suggest, guide and provide expert ideas. Don't hesitate to reach out and see how Campbell can assist your business e: [campbellm@ttnews.com.au](mailto:campbellm@ttnews.com.au)

We hope you enjoy the features and spread of articles focused on our industry throughout this edition. We value all contributors and the role they play. Most of all we appreciate our partners, advertisers, contributors and subscribers.



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# arxada

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# Business

## GRANTS

Access state and/or federal funding to grow your business!

**T**imber Trader News has partnered with a professional grant writing business. Watch this space as not all grants are made public. We will publish grants for various states/territories for our industry here in *Timber Trader News*.

Our connection might be available to assist you with eligibility criteria, grant writing, application process and lodgement. They have a high success rate, so contact us if you would like to make an appointment. Contact: editor@timbertradernews.com

### NATIONAL ENERGY GRANT

**This is a first come, first served and it is expected funding could run out on day 1 so you must be ready and lodge on opening day!**

- Energy efficiency grants for small and medium sized enterprises (SME).
- Round 3 for projects commencing July 1st 2025 – June 30th 2026.
- Grants are available for SME's with 1 - 199 employees.
- Grants are \$10,000 - \$25,000 each.
- Aim: Improve energy efficiency and reduce emissions.
- Applications are expected to open February 2025 and close as soon as funding runs out (i.e. when enough applications have been submitted via the authorised portal for allocated funding)

#### Some of the eligible activities include:

Energy audits, Energy monitoring equipment, LED lighting upgrades, Heat pump installations, Building insulation improvements and HVAC upgrades just to name a few.

#### Exclusions are:

Solar panels, batteries and vehicles.

*It is critical you contact us and book your free consultation early for this grant.*

### MADE IN QUEENSLAND GRANT PROGRAM

#### Closes January 2025

Helps small and medium sized manufacturers to increase international competitiveness, productivity and innovation via the adoption of new technologies, and to

generate high-skilled jobs for the future.

MIQ supports traditional manufacturers to adopt industry leading equipment, technologies, systems and processes.

The objectives of MIQ are to support the Advanced Queensland Priorities and the Department of Regional Development, Manufacturing and Water's Strategic Direction by:

- Increasing the productivity and international competitiveness of Queensland-based manufacturing SMEs
- Encouraging Queensland-based manufacturing SMEs to become

Advanced Manufacturers by adopting industry leading equipment, technologies, processes and systems

- Supporting traditional manufacturing jobs and creating the new high-skilled manufacturing jobs of the future.
- Queensland-based manufacturers looking to adopt industry leading equipment, technologies, systems and processes that include energy efficiency, export, reshoring, supply chain improvements, sustainability and/or advancement of decarbonisation and net zero outcomes were encouraged to apply for matched funding grants of \$50,000 to \$2.5 million.
- Up to \$2.5 million (excluding GST) of available funding has been set aside for applications which do not involve the purchase of equipment and are seeking less than \$250,000 (excluding GST) each in funding.

To be eligible for an MIQ grant, an applicant must:

- Be a Queensland-based business whose principal activity and majority annual turnover is derived from manufacturing, as defined under Division C of the Australian Bureau of Statistics' Australian and New Zealand Standard Industrial Classification (ANZSIC), 2006
- Be registered for GST and hold an active Australian Business Number (ABN)
- Be an SME with between five and 200 full-time equivalent (FTE) employees. A minimum of 5 FTE employees must be located in Queensland. **T**

Energy efficiency grants for small and medium sized enterprises (SME).



### CONTACT US AND BOOK YOUR FREE CONSULTATION FOR ANY OF THESE GRANTS

Keep an eye out on this space going forward and we will bring you more grants as they become available. Urgent grants and updates will be communicated electronically

## Special feature:

# GBS implements the utmost safety in-store with the NTHA

Brought to you by **Graham Burchall**, Workplace Health and Safety Specialist, NTHA.



*Anthony and Matt outside the entrance to their business premises.*

As specialists in the supply, installation and certification of fire doors and frames, GBS – Fire Doors & Frames have already implemented many safety procedures that control any risks instore. Despite their best efforts, owners William/Annette, Anthony and Matt still saw a need to reach out to the National Timber and Hardware Association (NTHA) for an external safety review.

## HAZARD IDENTIFICATION SERVICE

Anthony says NTHA's Hazard Identification

Service quickly provided a thorough audit of the GBS site that would not only identify potential hazards, but also improve safety protocols.

"Our goal was to ensure that our workplace met the latest safety standards and would uncover any risks we might have missed internally.

NTHA's Workplace Health and Safety Specialist, Graeme Burchall spent a full day on site with us, walking the premises top to bottom, identifying risks and discussing solutions in real-time".

## AUDIT OUTCOMES AND HAZARD IDENTIFICATION REPORT

While there were no surprises or major concerns identified following the audit, several issues were identified including the need for a new dedicated gas cylinder cage to ensure correct storage, as well as updated signage for forklift operations.

"We established clear line marking in the yard to manage vehicle and pedestrian traffic and also introduced a driver exclusion zone during forklift operations. This improved the visibility and safety of drivers during loading and unloading activities," Anthony said. Once the audit was complete, Graeme sent GBS a quick list of priority actions, such as line marking in the yard, creating exclusion zones, and installing updated safety signage. Implementing the changes was seamless for GBS who utilised the report to create immediate and long-term improvements.

Matt says NTHA's Workplace Health and Safety audit services provided GBS with clear, actionable insights that directly improved its operations. He said their friendly and professional approach, combined with practical solutions made the entire process seamless and highly beneficial.

"A comprehensive Hazard Identification Report was invaluable with its clear breakdown of priorities. It also gave us an overall score out of 100, along with comments, explanations, and suggestions to improve our level of safety.

The ID system used in the report – along with photos, allowed us to focus on high-risk areas immediately. The process was hands-on, and Graeme ensured that our team understood the reasoning behind each recommendation," Matt said.

## OUTCOMES AND ENGAGEMENT

The changes not only ensured a safer environment for the GBS team but has also seen a noticeable improvement in team engagement with safety protocols.

“The feedback has been very positive. Our staff now feel more confident navigating the yard and warehouse, and there is a greater overall awareness of safe practices, particularly around forklift use and the movement of staff and customers throughout the yard.

There has also been an increased level of awareness around forklift safety and proper PPE usage which has helped foster a stronger safety culture,” William said.

“NTHA’s audit uncovers areas for improvement that may not be immediately obvious, and their recommendations are designed to enhance both safety and efficiency. The key is to engage fully and act on the advice. The long-term benefits will be worth it – for your business, your people and their families, William said.

Since the audit, GBS has gone on to become a finalist in the 2024 NTHA NSW Industry Awards, which is a significant achievement given the high calibre nominees



Above: Team GBS - NTHA business finalists.

in New South Wales.

William says the nomination recognises the efforts the team have made to improve workplace safety and validates the changes made in store.

“The recognition motivates us to continue refining our safety processes and maintain the highest standards in our warehouse operations,” he said.

**NTHA WHS MASTERCLASS**

In addition, NTHA has launched a 12-month WHS Masterclass program which provides expert guidance and continuous support to help drive safety improvements and ensure compliance with the latest regulations.

**To easily implement high safety standards within your business today contact NTHA’s Member WHS/HR Manager Vicki Stableford, M: 0407 850 235 or NTHA directly, P: 1800 822 621. T**



**Graeme Burchall** has a wealth of experience in safety coordination and incident investigation with a particular focus on fostering secure work environments. His professional journey includes roles as a WHS Coordinator, reflecting a diverse skill set in analytical skills, safety risk management, and strong leadership abilities. Graeme’s role at NTHA supports members with their WHS health checks, hazard identification and training.



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# The two-in-one forklift

How the HUBTEX FluX transforms timber handling by transporting long loads and pallets. **By Bruce Peatman**



This image and facing page top right: The FluX 30 lifting a large, bulky load of timber in a builder's yard.

An increasing number of businesses in the timber and building materials trade are making the switch from conventional forklifts to the HUBTEX FluX, recognising its unparalleled versatility for handling standard pallets and long goods. As a genuine two-in-one lift truck, it combines the benefits of a forklift and a sideloader, giving you the ability to meet the evolving demands of the timber industry.

With its diverse material handling requirements, the industry faces unique challenges when it comes to transporting both palletised and long-load goods. Conventional forklifts, while vital in many industries, often struggle when tasked with handling lengthy timber loads in confined spaces or when moving between indoor and outdoor environments. As timber businesses seek to optimise operations, enhance efficiency, and improve safety, innovative

material handling solutions are more crucial than ever. The HUBTEX FluX multidirectional forklift has emerged as a revolutionary solution, perfectly tailored to meet the demanding transport needs of the timber industry.

## POWERFUL AND MANOEUVRABLE - THE VERSATILE SOLUTION

Timber processing and distribution frequently involve moving a combination of palletised products and long, cumbersome loads such as beams, timber planks, and logs. Traditional forklifts require wide aisles and are limited in their ability to handle long goods efficiently, especially in tight warehouse spaces. This is where the HUBTEX FluX excels, combining the functions of a forklift and a sideloader in one vehicle. This dual capability eliminates double handling of loads which in turn,

reduces damage to timber loads; a common and expensive problem in the timber industry.

Featuring the patented HX steering system, the FluX has the ability to switch between lengthwise and crosswise travel without stopping, reducing tyre wear and maximising the efficiency of handling operations. This versatility also reduces the risk of accidents when long goods are improperly balanced on the forks of conventional machines or have to be lifted over obstacles.

## OPTIMISED FOR BOTH INDOOR AND OUTDOOR OPERATIONS

In the timber industry, operations are not confined to indoor facilities. Loading and unloading vehicles, moving materials between storage areas, and navigating outdoor timber yards require a versatile



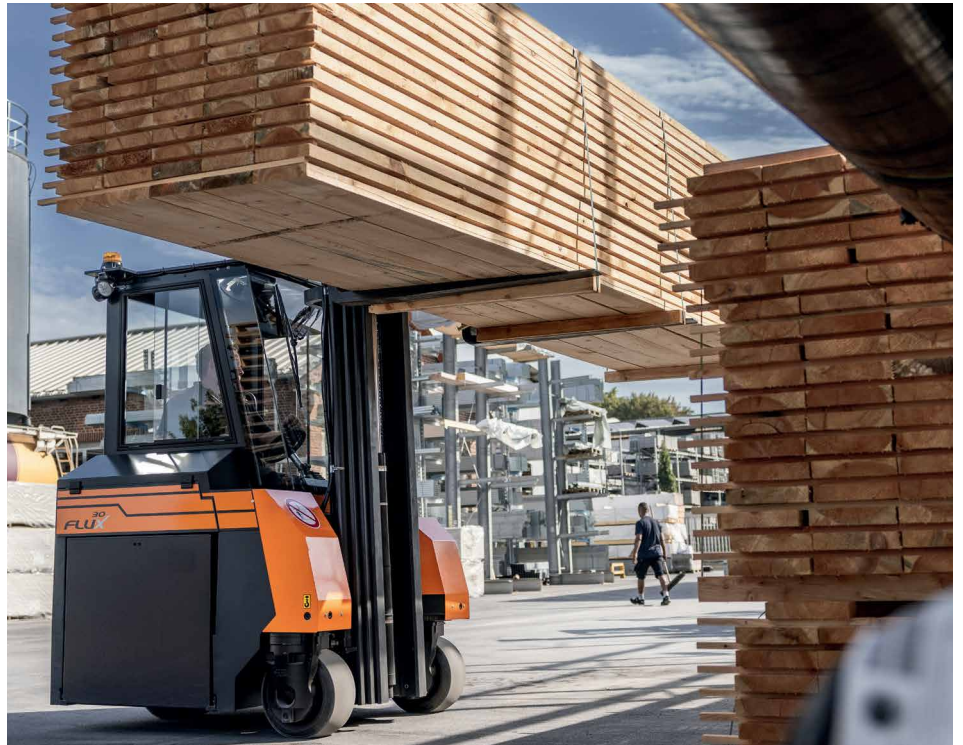
## The HUBTEX FluX transports long loads and standard pallets.

vehicle that can handle varying terrains and environments. The HUBTEX FluX, with its electric-powered, low-noise, and environmentally friendly drive, performs exceptionally well both indoors and outdoors. Whether navigating narrow warehouse aisles or traversing uneven outdoor surfaces, the FluX guarantees smooth, safe, and efficient transport of timber products.

### EFFICIENCY MEETS ERGONOMICS: OPERATOR-FOCUSED DESIGN FOR TIMBER HANDLING

The HUBTEX FluX also stands out for its focus on operator comfort and safety. Timber handling can be physically demanding, often requiring long hours of forklift operation in challenging conditions. HUBTEX has placed a strong emphasis on ergonomics in the FluX's design, providing features such as a central seating position for enhanced all-around visibility, a low entry height for easy access, and optimised lift masts that offer an unobstructed view.

Visibility is essential when dealing with bulky or long timber loads to avoid accidents and ensure precise handling. The FluX's enhanced visibility features help operators maintain control, even when navigating tight



spaces or handling awkwardly shaped timber products. Its optimised fork carriage, which includes a sideshift function, further improves the forklift's ability to manage a wide range of loads, from palletised timber goods to long beams.

### THE HUBTEX FLUX—A TAILORED SOLUTION FOR TIMBER TRANSPORT

The FluX multidirectional forklift is not just a replacement for conventional forklifts—it's a comprehensive solution specifically designed to meet the unique demands of

timber applications. By adopting the FluX, businesses can streamline their operations, reduce costs, and position themselves for future success in timber transport.

We have 3 models available to help you take your warehouse efficiency to the next level. We know better than anyone that handling long, heavy, and bulky loads in a confined space presents equipment users with difficult but special and unique challenges. **T**

**Arrange a FREE consultation with our team of specialists by calling 1300 365 621**



*The FluX has capabilities to manage a wide range of loads, from long timber to standard palletised.*

# Association news

## TDA Timber Development Association



**Andrew Dunn**  
TDA CEO

### ANOTHER YEAR IS ENDING, AND IT HAS BEEN FRUITFUL FOR TDA AND THE TIMBER INDUSTRY.

We celebrated the Australian Timber Design Awards, highlighting the absolute best in

Australian Timber Design. Congratulation goes to Bates Smart for the Australian Embassy in Washington, DC. The night was MC by Greg Nolan, Professor of Architecture at the University of Tasmania. He gave an excellent insight into the world of timber design to a predominantly architectural audience.

We also held the TimberConstruct 2024 conference and exhibition that brings the industry together with the design community to discuss the latest in timber.

2024 also saw the commencement of the Australian Forest and Wood Innovation, a new research funding body for the timber industry. The first round of projects was announced, and TDA is actively involved in two crucial projects. The first project aims to support the Australian timber window and door industry, comprising 180-200 local joinery companies, in transitioning from traditional timber to new species. This transition, necessitated by increasing energy efficiency requirements and the changing forest landscape, will future proof the sector by allowing the substitution of timber species as the wood supply changes, including engineered wood products.

The second is the exciting opportunity to look at the fundamental product the timber industry sells: sawn timber. For decades, no advancement has occurred in timber framing, disregarding the change in building layout, house size and range of timber products. The work intends to simplify specifying timber framing by prescriptive building regulations and expand the range of building types from just houses. This program will also allow the development of the next generation of timber industry experts, both within the industry and in research.

TDA also is commencing a project to find fire-safe solutions for mass timber construction. This project has the potential to

revolutionise the timber industry by allowing for more exposed mass timber in building regulations, including taller buildings. Australia, a leader in mass timber construction, has recently seen the design of three very tall hybrid buildings, such as Atlassian. Despite time constraints in obtaining code changes, the project will leverage the extensive current knowledge in this area and will involve both young researchers and senior fire engineers to develop new fire safety regulations. This

effort aims to pave the way for a brighter future for the timber industry.

As we bid farewell to a successful 2024, we eagerly look forward to the opportunities and challenges that 2025 will bring. With a promising year ahead, filled with long overdue work to further advance the timber industry, we are excited about the progress and achievements that await us. We wish you all a Merry Christmas and a Happy New Year, and we look forward to sharing more exciting updates with you in the coming year!



**Above:** Overall Winner – Embassy of Australia, Washington D.C. by Bates Smart.



**Above:** Rebecca Gilling presenting the Sustainability award – Berninnet Cultural and Community Centre by Jackson Clements Burrows.



**Above:** Rising star – Sarah Sherman of Brother Nature Design for River House.

## Timber Trade Industrial Association

### EMPLOYING A YOUNG PERSON

With Christmas/Summer school holiday period fast approaching an employer may take the opportunity to employ a young person, either to provide work experience or to cover a full-time employee absent on annual leave; if this occurs, the employer should be aware of the rules applying to the employment of young people.

Some employers may be reluctant to employ a young person (particularly under 16 years) because of perceived restrictions on their employment. While there is no national legislative framework, state and territory laws do regulate the employment of young persons on matters such as minimum age, when work can be performed and prohibition of certain types of work. There may also be age restrictions provided by the relevant industrial instrument, particularly in hospitality.

An employer may also be approached during the school holidays by young persons requesting on-the-job experience. These requests need to be properly managed.

### State/territory child employment laws

'Child labour' laws in a state or territory are not excluded by the *Fair Work Act 2009* (i.e. the state or territory law continues to be enforceable). Some of these laws may impose an age restriction on the performance of certain specified work.

### Work during school holiday

An employer may also be approached during the school holidays by young persons requesting on-the-job experience. These requests need to be properly managed.

An employer is able to employ a young >>

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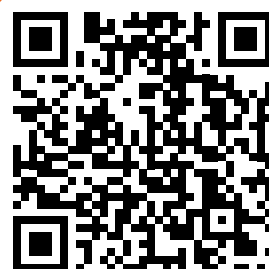
[ 360°  
HX-Steering ]



## Introducing the HUBTEX *FLUX*

Transports **long loads** and **standard pallets**.

The Flux is the perfect solution for your timber handling needs with the ability to transport pallets and long goods. A genuine two-in-one lift truck, that combines the benefits of a forklift and sideloader. The quiet and environmentally friendly electric drive and innovative 360° HX steering enable smooth changes in direction without stopping.



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person, subject to the relevant state of territory education law.

Any person below the minimum school leaving age (as determined by the relevant state of territory education law) is precluded from accepting employment that would prevent their attendance when school is open for the child's instruction or participation in school activities, unless that person is participating in a school-based apprenticeship or school-based traineeship, or an accredited work-experience program arranged through the participating educational institution.

**Industrial Instruments**

Most industrial instruments do not place a restriction on the age at which an employee may be employed however, certain classes of work (e.g. dangerous or arduous work) may be limited by the employee's age. For example, work on dangerous machinery or late-night work may be prohibited if a person is under 18 years of age.

A modern award which covers occupations that are semi-skilled or unskilled in nature may not prescribe junior rates of pay. In this case, a person is paid the appropriate adult rate of pay regardless of their age. Modern awards that do not provide junior rates include, for example:

- Building and Construction General On-Site Award 2010
- Cleaning Services Award 2010 (except trolley collecting contractors)
- Market and Social Research Award 2010
- Quarrying Award 2010

Reference should be made to the applicable industrial instrument to determine the appropriate junior rate of pay (where provided).

**Work Experience**

An employer may be approached by a young person requesting unpaid work experience during the summer school holidays to enhance their prospects of obtaining employment once their secondary school studies have been completed. The employer should approach any request for unpaid work with caution.

Generally, unpaid work experience is an arrangement between an employer and an education institution to allow a student to observe and undertake on-the-job experience without pay. As soon as productive work takes place, the person may be deemed an employee and liable to payment at the appropriate minimum wage and conditions of employment.

Whether someone is a bona fide work experience person will depend on a number of factors:

- The degree of control of the person's activities (set start and finish time),
- Statements made between the parties,

- Whether the person performs work to the Company's advantage.

**Proof of age**

Under many industrial instruments, the minimum wage is determined by the junior's age. The employer should take all reasonable care when identifying the age of a young person. This check should be done during the recruitment process, by requiring the production of a birth certificate, statutory declaration or proof of age (e.g. passport or driving licence). An employer who fails to pay the correct age owing to a misstatement of age by an employee usually cannot use this as a defence in proceedings for breach of the relevant minimum wage rate under the applicable industrial instrument, unless the employer can clearly show that reasonable measures were taken to verify the employee's statement.

**Workplace health and safety**

Under the relevant state or territory WHS/OHS legislation, a young person is required to receive the same workplace induction as other workers. In fact, the younger the person, the greater the responsibility on the employer to ensure the employee understands the necessary safety procedures in the workplace (e.g. use of safety gear, use of machinery and equipment and evacuation procedures), because a young person may have little exposure to the dangers of some workplaces.

TTIA provides the premium industrial relations Hotline for employers in all sectors of the industry. If you have a query, please contact (02) 9264 0011 or email [tia@tia.asn.au](mailto:tia@tia.asn.au).

*Brian Beecroft - Chief Executive Officer*

environment and highlights the urgent need for companies to protect themselves against financial risks. In such an uncertain economic climate, trade credit insurance has become an essential tool for safeguarding businesses from the growing threat of bad debts and customer insolvency.

The threat of rising insolvencies and the impact of these on businesses has been looming for some time, but recent statistics and feedback from businesses would indicate that these are in fact having an impact now. Other wider and well-publicised economic factors have caused disruptions and have pushed many companies to the brink, creating a heightened risk for those that extend credit to their customers. In this context, trade credit insurance serves as a crucial safety net, providing coverage against the potential loss of revenue due to customer insolvency.

As insolvencies rise, there has been a noticeable increase in claims on trade credit insurance policies. National Credit Insurance (NCI), a leading provider in Australia, has reported a gradual increase in claims, in both number and value, as more businesses find themselves unable to collect payments from customers who have become insolvent. This trend reflects the growing financial pressure on businesses, making it clear that robust credit insurance coverage is more important than ever.

Compounding challenges is the issue of late payments and overdue accounts. As businesses struggle with cash flow constraints, many are delaying payments to their suppliers, which creates a ripple effect throughout the supply chain. This situation can lead to a cycle of financial stress, where businesses are unable to meet their own financial obligations due to delays in receiving payments from their customers. In such a scenario, trade credit insurance becomes even more critical, helping businesses manage the risk of late payments and ensuring their cashflow is adequate.

Given the current economic environment, it is vital for businesses to take a proactive approach to credit management. This involves thoroughly vetting customers before extending credit, closely monitoring payment behaviours, and promptly following up on overdue accounts. By strengthening their credit management processes, businesses can minimize the risk of bad debts and better protect their financial interests. Additionally, working closely with trade credit insurance providers can help businesses assess their coverage needs and ensure they are prepared for the challenges ahead.

The rise in insolvencies across Australia presents a significant challenge for businesses that rely on extending credit to



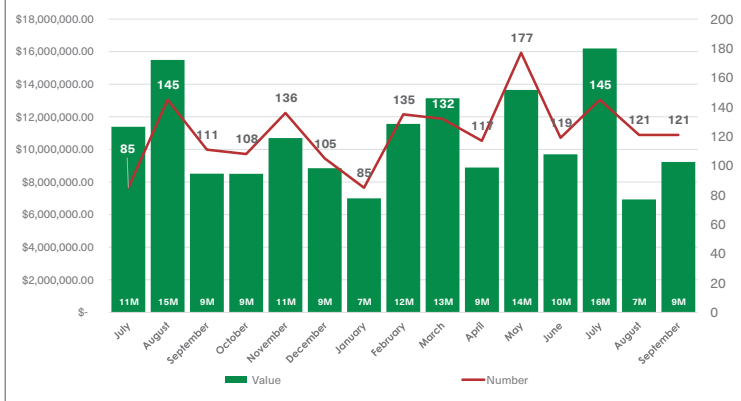
**David Little**  
NTHA CEO

**TRADE CREDIT INSURANCE/ MARKET UPDATE - AUGUST 2024**  
**Navigating the Rising Risks: The Importance of Trade Credit Insurance in Australia**

In recent years, Australia has seen a significant increase in corporate insolvencies, reaching levels not seen in over a decade. This alarming trend underscores the fragility of the business

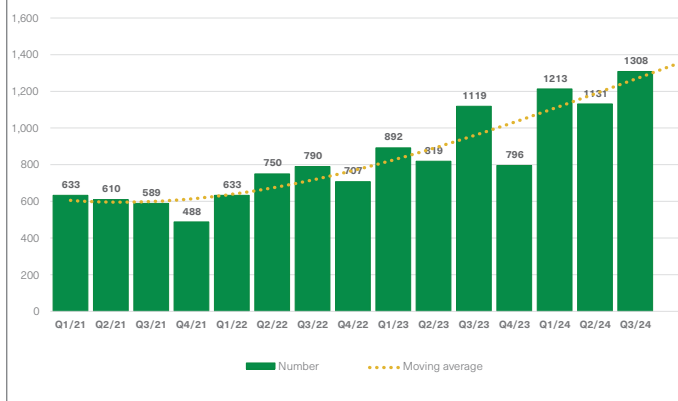
### Claims (by month)

July 2023 - Sep 2024



### NCI Incoming Collection Actions

Jan 2021 - Sep 2024



Above: Rising collection actions and followed by claims for those who are insured.

their customers. As claims on credit insurance policies increase and late payments become more common, it is essential for companies to review and enhance their credit management strategies. By doing so, businesses can better safeguard their cash flow and remain resilient in the face of ongoing economic challenges.

For businesses who would like to explore Trade Credit insurance, please contact NTHA on 1800 822 621 for assistance.

product information has caused ongoing concerns within the construction market. The proposed Scheme is ABCB's initial proposal to address this.

Proposed Scheme elements, include more traceable product information through labelling and a proposed product register, the introduction of a risk-based 'designated' products category, and the establishment of a mandatory national building product register of products in the designated category, while other products could be registered on a self-assessed basis. The register would be operated by the ABCB.

The principle of improving product conformance and the ability to verify performance against NCC requirements is necessary and important but there needs to be significant clarification and improvements made to the current proposed Scheme. The requirement of minimum and standardised product conformity information coupled with product traceability, as two of the recommendations of the National Building Product Assurance Framework, and key enablers of Chain of Responsibility regulatory compliance are also generally supported by participants in the sector.

- The ABCB closed its consultation process on the 3 October 2024 and industry lodged submissions urged consideration of the following points:
- If the Scheme proceeds, it needs a clear focus on the effective least cost implementation of what will be a big and complex project.
- The Scheme is not a substitute for ongoing due diligence.
- There needs to be an early and strong commitment by all jurisdictions if the Scheme progresses.
- The Scheme should facilitate access to and not control the required product conformance information.
- Definition of 'designated product'

categories is important for both implementation of more complex building systems and the impact of the potential registration fee impost. The granularity of timber products that the registration fee is applied to, needs to be carefully considered and reasonably defined.

- The Scheme should be considered just one part of an effective enforcement regime that will still need to function in concert.
- The Scheme should be designed to be interoperable with other such initiatives.
- The ABCB should also consider the framework of NZ's recently implemented Building Product Information Requirements (NZ BPIR) regulation, which introduces new minimum information requirements for building products by designating certain building products for which building product information must be provided and establishes the minimum requirements for that information.

The proposed Scheme does recognise that a credible product certification mark is a great way to have confidence that the manufacturing facility, the timber building product, and associated claims have been inspected, audited, tested, and reviewed against the product standards by independent experts. EWPAA provides such a mark! See [www.ewp.asn.au](http://www.ewp.asn.au) and EWPAA's technical notes.

Our renewable timber industry should remain aware of, and engaged in the development, this important regulatory and policy initiative. »



**Gavin Matthew – EWPAA CEO**

### ABCB'S PROPOSED BUILDING PRODUCT REGISTRATION SCHEME

The Australian Building Code Board (ABCB) undertakes a difficult job with an extensive brief

managing the development and implementation of the National Construction Code (NCC) and broader reforms in the built environment. It's not cheap or easy to do, and it takes significant time and effort to conduct the necessary consultation with stakeholders to get the balance right.

The Federal, State and Territory Building Ministers recently asked the ABCB to design a new risk-based Building Product Registration Scheme (Scheme) for all building products. Australia has seen significant problems caused by non-conforming products, or by the non-compliant use of conforming products with the NCC. These issues, in addition to inadequate, inconsistent or difficult to access

**NCC major reforms underway and ewpaa is working on it.**



**Nick Steel**  
TFFPA CEO

**2024-25 FIRE SEASON**

As we approach the 2024-25 fire season, the forestry sector has a key role to play in keeping

Tasmanians safe, writes **Nick Steel**.

As the days get longer and the weather warms, our

minds turn to the upcoming fire season.

Predictions are the coming summer months will see higher than average temperatures and an increased risk of thunderstorms, which of course means a raised chance of bushfires.

Tasmanian government agencies and private organisations are already coordinating responses, and the forestry industry is keen to play its part.

As the working forests' custodians, our industry is acutely aware of the risk of bushfire to our environment and regional communities.

We live and work in our state's regional towns and forests, and our businesses can

only succeed if our productive private and public forests are protected from fire. Burned forests are bad for our businesses.

We manage our production forests and reducing fire risk is key to our future. It means we're intrinsically tied to keeping our communities safe.

The active management of our production forests throughout its growth cycle, as well as vegetation reduction, not only makes our access to the estate easier, but also substantially reduces the fire risk.

It's also key to remember that our forestry industry already controls some of the largest coordinated private firefighting crews in Tasmania.

That's why we are committed to working with all relevant State Government agencies to operate in a coordinated way - not only on direct firefighting activities, but also the ongoing fire mitigation actions that occur throughout the year.

The Tasmanian forestry industry knows that the best way to protect our working forests is ongoing prevention. But in times of crisis, we know that preparedness, response and recovery are also key factors.

And key to that response is communication. Our industry believes the recently released Tasmanian Government Radio Network (TasGRN) will be an essential tool in the state's firefighting arsenal.

TasGRN is a digital, whole-of-government radio network. It will deliver public safety upgrades and functionality, especially during times of crisis.

For users it offers advanced security through encryption, better coverage across the state and allows inter-agency communications at times of emergency.

We've seen the importance the forestry industry can play in bushfire crisis, such as in the dreadful 2019/2020 bushfires on the mainland.

Local foresters were able to make a massive difference through their direct firefighting on the forest floor, as well as being able to drive firebreaks through to stop blazes threatening other communities.

Our businesses are based in the forest, we have the heavy equipment and machinery needed to fight the fires already on site, and we can respond immediately when our estates are threatened.

But for our own safety, and to ensure we can offer the most benefit, we need to have open lines of communications with other agencies.

We stand on the precipice of a potential fire summer. The forestry industry is ready to make a huge impact, and we call on the Government to share with us the resources that will allow us to keep our working forests and our communities safe. **T**

PHOTO: COURTESY DAVID BAUCHE TFFPA



**UPCOMING EVENTS**

**MARCH 2025**

**NTHA QLD STATE AWARDS**

**MARCH 22**

Brisbane City Hall -

64 Adelaide Street, Brisbane from 6.30pm

Nominations: [www.ntha.com.au/eventdetails/23284/2025-queensland-timber-hardware-industry-awards](http://www.ntha.com.au/eventdetails/23284/2025-queensland-timber-hardware-industry-awards)

Join us in celebrating the Queensland Timber and Hardware Industry night of nights.

Contact: Tahlia at [events@ntha.com.au](mailto:events@ntha.com.au)

**DANA GLOBAL WOOD PRODUCTS SUPPLY AND DEMAND TRENDS SEMINAR**

**MARCH 25-28**

Luxembourg

2 Day Global Forest Investment Conference organised plus optional tour by FEA-DANA and Emotion

Contact: [admin@dana.co.nz](mailto:admin@dana.co.nz)

**MAY 2025**

**LIGNA TRADE FAIR FOR THE WOOD AND FORESTRY INDUSTRIES**

**MAY 26-30**

Hanover, Germany

Offering a comprehensive presentation of machinery, advance technology and equipment for forestry, woodworking, furniture manufacturing, with a focus on sustainable solutions.

**NTHA SA/NT/WA STATE AWARDS MAY 30**

National Wine Centre -

Cnr Hackney & Botanic Roads, Adelaide

[www.ntha.com.au/eventdetails/23388/2024-south-australia-northern-territory-timber-hardware-industry-awards](http://www.ntha.com.au/eventdetails/23388/2024-south-australia-northern-territory-timber-hardware-industry-awards)

Join us in celebrating the SA, WA and NT Timber and Hardware Industry night of nights.

Contact: Tahlia at [events@ntha.com.au](mailto:events@ntha.com.au)

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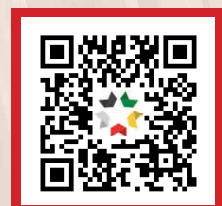
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\*subject to terms and conditions.



# Navigating global freight in 2024

Coping with congestion and rate increases.

By Rina McLaughlin

As the saying goes 'there is never a dull day in freight' and the last few months have been a testament to this cliché.

Our industry is such a crucial key to the global economy but can prove to be one of the most fragile and fickle and with 2024's myriads of different global disruptions, we are never short of a challenge.

The diatribe of the first half of 2024 has been focused on the impacts to Importers and Exporters due to the Red Sea Crisis where the continued attacks from the rebel factions in the Middle East and Countries involved in the Middle East conflict impact commercial shipping.

The diatribe of the first half of 2024 has been focused on the impacts to Importers and Exporters due to the Red Sea Crisis where the continued attacks from the rebel factions in the Middle East and Countries involved in the Middle East conflict impact commercial shipping.

Adjustments to the Global Supply Chain has led to an exodus from the Red Sea by most of the major shipping lines. The rerouting of vessels via the Cape of Good Hope will have a flow on effect which has added weeks, perhaps months, for goods to arrive at Australian ports.

- The red Sea Crisis challenge has proven unprecedented, akin to the peak of the pandemic or now fondly known as pandemic 2.0. The impacts on the industry have been as expected: -
- Transshipment congestion and delays with lull times reaching 6-8 weeks at the peak of congestion
  - Global container imbalance
  - Capacity issues and increased supply and demand
  - Blank sailings and schedule recovery
  - An increase of freight costs, globally
  - Fortnightly 'general rate increases' + 'peak season surcharge'
  - Pressure on global infrastructure to process throughput

The financial fallout of this challenge has seen an increase in rates over 1000%, with a downturn beginning in MID SEP.

The impact of these global disruptions is apparent but being as resilient as ever the industry has evolved and adapted to our current circumstances.

As we begin to recover, a new challenge is on the horizon with the US Strikes. A demonstration by the ILA occurred from the 30.09.24 to the 04.10.24.

Operations are gradually resuming at major ports like New York/New Jersey, Savannah, and Charleston, yet a backlog of thousands of

containers will take an estimated four to six weeks to fully rectify.

Port authorities are prioritizing the unloading of perishable goods and essential supplies, particularly in the food and automotive sectors, to mitigate disruptions.

However, shipping companies face increased costs, with trucking/shipping costs surging dramatically, leading to financial fallout and impact on Importers and Exporters.

The strike has caused an estimated economic impact of at least USD 250 million per day, with potential effects on various industries anticipated in the coming weeks. The recovery period will be crucial for restoring normal supply chain operations across the US.

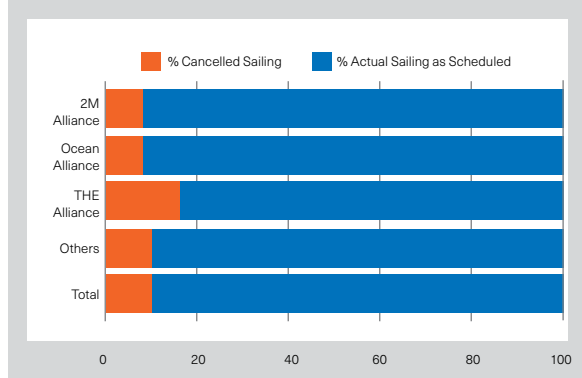
Despite these challenges the industry remains on a downturn due to demand even in the lead up to 'traditional' peak season.

Please consider the outlined issues as disruptions to supply chains are inevitable, as usual, plan accordingly and consider that additional charges will apply and these need to be factored into landed cost calculations and lead times.

## HIGHLIGHTS GLOBAL SERVICES

- Transshipment delays/congestion are ongoing as the Red Sea Crisis continues
- Omissions/blank sailings are occurring on a regular basis as the downturn destabilises global volumes and disruptions/congestion continuing – as carriers are unable to fulfil their capacity, they will initiate blank sailings as well as schedule recovery due to delays
- Equipment is imbalanced globally with demand increasing and a multitude of equipment displaced due to disruptions/congestion

Drewry cancelled vs schedules sailing (Wk 42 to Wk 46)



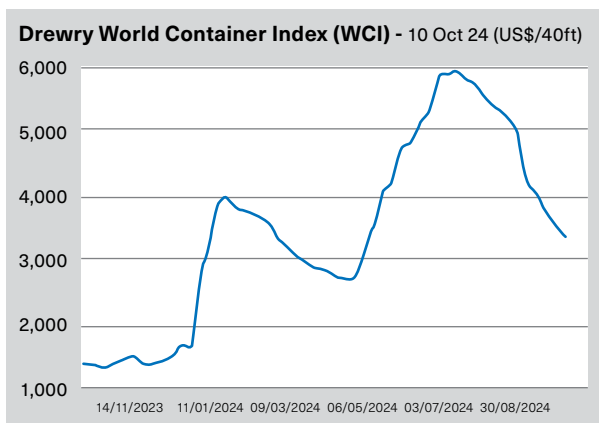
SOURCE: DREWRY WORLD MARINE, OCT 2024

- Record cuts to container shipping costs have been experienced in Q1 2023 but began to increase further in 2H 2023 – whilst rates have been relatively stable in FEB 2024, ongoing disruption to the Global Supply Chain can and will determine increases
- USEC/GULF Strikes have ended as a deal has been struck in a timely manner, minimising the global fallout – deal is to be finalised by 15.01.25 or the ILA will be able to resume industrial action
- Rate reductions 'tumble as peak comes to an early end' – 2H OCT rates have been announced from Asia – 'second' peak is expected post Golden week, and the US Strike impacts
- US rates have increased due to the Strikes – LCL/FCL rates have increased as a 'Emergency Operation Surcharge' is implemented
- AIR capacity/demand has surged, due to increasing E-commerce activity and demand planning leading up to the US Strikes

## AUSTRALIA LANDSIDE

- BMSB season from Target Risk Countries has begun at the beginning of SEP 2024. BSMB for Heat Treated product ex Canada as now been revoked
- DAFF processing delays are minimal currently as volumes remain 'maintainable'. Processing delays are expected to increase in the lead up to the Christmas break
- Investment in the Newcastle/Port Kembla/VICT terminals continues with these terminals anticipated to become higher functioning container terminals in the future
- Australian Customs have announced 'tightening' on processes and increased speculation/regulation on licensed brokers, to further engrain the importance of border controls
- Due Diligence regulations are set to change under the Illegal Logging Legislation

For further information, visit [admglobal.com.au](http://admglobal.com.au) or call contact our specialists @ [info@admglobal.com.au](mailto:info@admglobal.com.au)



SOURCE: DREWRY WORLD MARINE, OCT 2024

Above: Soaring freight container costs.



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# ‘The whys, whens and hows of contracts’

## Is it time for you?

It is contract time.  
By Peter Maguire

As we go through the biggest era of change in employment laws and modern awards that we have ever seen, it is becoming increasingly important to have written contracts that clearly set out the pay and conditions applying to each individual employee or contractor. Do yours? And are they current, compliant and complete?

### WHY DO YOU NEED WRITTEN CONTRACTS?

When you engage someone to work for you, whether as an employee or a contractor, it brings into play a host of legal obligations covered by the Fair Work Act and a variety of other legislation and, in the case of employees, modern awards and, where applicable, enterprise agreements.

There are many purposes that contracts serve such as:

1. They educate you about your legal obligations and can be a source of information for decision-making on issues that arise in the relationship with the employee or contractor.
2. They clearly set out the nature of the

relationship between you and the employee (be it full-time, part-time, casual or fixed term) or contractor.

3. They provide details on any duties or obligations that the employee or contractor is required to satisfy in the relationship with you.
4. They provide evidence of the employee or contractor acceptance of the pay and conditions as set out in the contract and, assuming the fairness of the contract, can be used in defence of any claim that might be made against you or your business.
5. Signing of contracts is also indicative of commitment by both parties to the relationship.

### HOW OFTEN SHOULD YOU REVIEW THEM?

A good time to review employment contracts is 1 July each year which is when the Fair Work Commission hands down the annual minimum wage decision which results in adjustment to the federal minimum wage and minimum wages under Awards.

If you happen to pay significantly above

award or if you are dealing with Executive staff who don't attract award coverage, you might have your own time to review remuneration or the contract itself might dictate when reviews are to take place.

You should also review employment contracts if someone's role or hours of work or other core conditions change so that the terms in the contract align with what is actually happening in practice.

The other element is that of legislative and award changes that legally alter terms of employment in a significant way that renders some contractual terms invalid. There have been around 70 changes in employment law and modern awards and the rules around employment and contracting have undergone an overhaul recently.

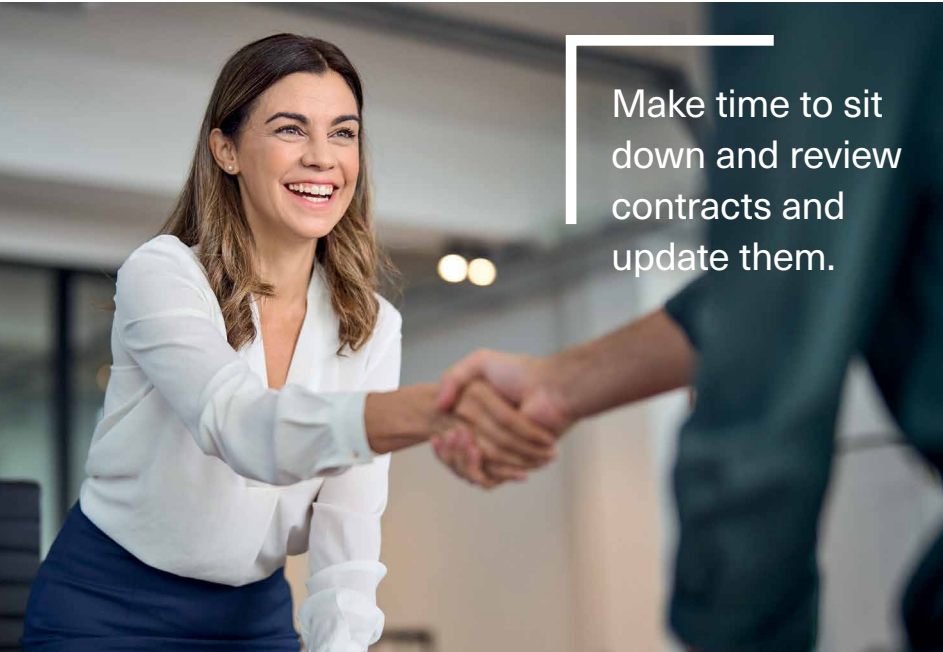
Plus the gap between employee and contractor is progressively becoming more blurred so you also want clarity, especially if the individual is not covered by a company (Pty Ltd) structure.

### WHAT ARE THE CHANGES THAT AFFECT CONTRACTS?

Some of the significant changes that need to be considered in contracts are:

1. New definitions of employee, casual employee and contractor
2. Prohibition of pay secrecy provisions
3. A new jurisdiction at the Fair Work Commission for disputes in relation to unfair contract claims
4. The "right to disconnect" and associated award provisions
5. Changes to rules in relation to annual shutdowns
6. Revised casual conversion provisions
7. New jurisdictions for dispute resolution at the Fair Work Commission regarding sexual harassment, requests for flexible working arrangements, requests for extension of parental leave and complaints regarding the right to disconnect.

These are just a few of the issues that need to be considered in constructing contracts and their relevance may well vary according



Make time to sit down and review contracts and update them.

to the industry, business setting, occupation and seniority of the role in question.

**OTHER CONSIDERATIONS**

While under the changes that we are currently seeing, we are moving back to multi-factorial assessment of the true nature of a relationship (e.g. contractor or employee), the contract is still an important piece of evidence in determining such questions.

Remember that one size does not fit all and don't just adopt a template that you got from somewhere else or that is the standard on the HR compliance system that you use. It is imperative that the contract is a fit with your business arrangements and with the individual concerned – i.e. ensure that they reflect the reality.

We have also seen a number of prosecutions of corporations in recent years for underpayment of wages related to employees being put on contracts with fixed salaries which did not provide adequate remuneration for the hours that those employees actually worked.

So, if you do want to put people on salaries or you wish to set off any award entitlements that might apply to an employee, you need to

both be very specific in the contract about exactly which award provisions are being set off and compensated for by the remuneration provided for in the contract and you have to make sure that the employee is actually better off than they would be if the award was literally applied to their employment, pay and conditions.

Also, a heads up if you have restraint provisions that the ACCC is currently considering whether restraint provisions should be regulated or, in some cases, abolished – so watch this space because there might be more changes coming.

**SOME FINAL THOUGHTS**

A lot of electronic payroll and HR platforms offer template employment contracts which many businesses deploy without really

considering whether they really accurately reflect the arrangements that are in place with an individual employee or whether they are consistent with HR policies that you might have in place with your people.

So firstly, be conscious that one size definitely does not fit all.

Secondly, there are also a lot of contracts that go into unnecessary detail and/or have unnecessary provisions in them or some that, while appropriate for a senior executive, are really over the top for most employees. Ensure that they are real and relevant to the role in question.

Finally, you want people to understand what they are committing to so keep the terms in the contract and the language explaining those terms as simple as possible. **T**

**Peter Maguire** is the owner and practice leader of Ridgeline HR, an award winning HRM consulting practice which he founded in 2000. Peter is an acknowledged expert in workplace relations compliance and also a high-performance leadership coach with over 40 years' experience in HRM. Ridgeline HR's byline is Helping PEOPLE in BUSINESS and that is essentially what Peter does – help business people with their people business.





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# Long-Lived Harvested Wood Products in NZ

The road to recognition. **By Michael Smith**

It's a sore point with some wood processors that they don't receive financial recognition for the carbon stored in long-lived harvested wood products (LLHWPs).

The issue has a decade-plus history – but help may well be at hand on the back of an open 'policy dialogue' commissioned by Te Uru Rākau – New Zealand Forest Service (part of the Ministry for Primary Industries).

In seeking feedback from representatives of the wood processing industry, building designers and developers, government agencies, and other stakeholders, Te Uru Rākau hoped to “develop policy options to encourage greater production and use of long-lived harvested wood products”.

The project will inform the Government and industry on whether and how this stored carbon benefit could be recognised through government policy.

Te Uru Rākau noted that “the carbon stored in trees as forests grow will remain longer after harvest if logs are processed into long-lived products like structural timber, rather than short-lived materials like packaging or pallets. Delaying the point when this stored carbon is returned to the atmosphere reduces Aotearoa New Zealand's [immediate] net domestic emissions.

“Long-lived products also help the transition to a low-emissions economy by displacing emission-intensive alternatives, such as using structural timber and engineered wood for construction in place of steel or concrete.”

The work has included qualitative analysis of those options in the form of a written report by consultants MartinJenkins: *Running an open policy dialogue on options to*

*recognise the 'delayed emission' benefit of long-lived harvested wood products.*

According to Olivia Sullivan, Director Forestry Systems, Te Uru Rākau, the report is still under review by the Forestry Minister Todd McClay.

At the same time the agency is continuing to develop advice for the Minister on the potential to bring harvested wood products into the Emissions Trading Scheme (ETS).

And it should be noted that all three partners in the Coalition Government are keen to pursue rewards for greater domestic wood processing. Indeed, National's election manifesto promised to investigate the “phasing in of ETS credits for wood processors based on the embedded carbon captured in longer-life timber products. This would support further investment in value-added processing and contribute to New Zealand's climate change goals.”



**Above:** LLHWPs such as structural timber and engineered wood will help NZ transition to a low-emissions economy.

## THE SCIENCE

Steve Wakelin, a scientist in the Forest Systems group at Scion, says that interest in carbon contained in wood products typically falls into one of three separate categories:

1. The role of wood products in the carbon cycle, or the actual exchange of carbon atoms between the atmosphere and terrestrial ecosystems.
2. International reporting and accounting conventions – for example, annual greenhouse gas (GHG) reporting under the United Nations Framework Convention on Climate Change (UNFCCC), Kyoto Protocol and Paris Agreement.
3. Carbon accounting reward schemes (e.g. the ETS, 'Green Tick' schemes, Environmental Product Declarations, etc.).

“Ideally the fundamental scientific research conducted to understand (1) is adopted into international reporting and accounting rules in (2), which then flow through into the rules designed for reward schemes.”

However, Mr Wakelin says there is also a need to simplify things – “for example, to set minimum achievable standards for reporting at a country level, and also to consider other

issues (economic, social, environmental, etc.) so that incentives don't lead to unwanted effects."

### LANDFILL RESEARCH

"As with forests, it's hard to discuss which activities should be rewarded domestically without understanding what does/does not actually get accounted for internationally. A good example is the life span of landfilled wood products.

"Some research has shown very little decay of wood occurs in well-managed landfills. GHG inventories (2 above) report carbon going into the pool of wood products, and carbon leaving when they are discarded and not recycled.

"They also report emissions from discarded products as they are burnt or decay in landfills, potentially based on landfill decay studies. But accounting under the Kyoto Protocol (also 2 above) only accounted for gains and losses from the pool of carbon in products in use." (Note: the Kyoto Protocol commitment period ended in 2020.)

He adds that, for accounting purposes, discarded wood products are assumed to immediately return CO<sub>2</sub> back to the atmosphere. "This avoids any incentive to add more and more wood to landfills – 'reduce, reuse and recycle' is seen as better for the environment than 'produce, use, bury, replace, bury, replace, and so on.'

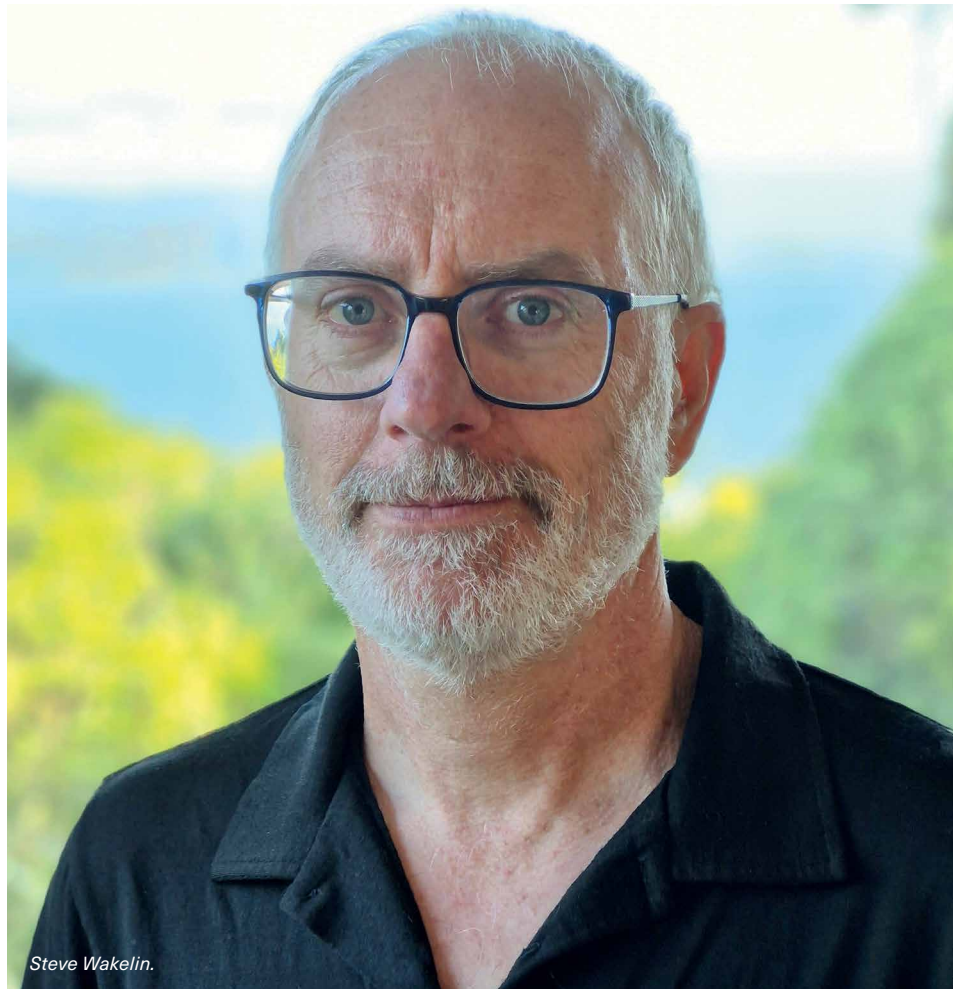
"The NZ ETS (3 above) excludes wood product storage altogether – the carbon in products is assumed to have been returned to the atmosphere at harvest."

### ACCOUNTING ASSUMPTIONS

Mr. Wakelin adds that New Zealand's current accounting approach applies various assumptions about the mix of end uses and lifespans. "For export logs these are based on a survey by Professor Bruce Manley and Dr David Evison [School of Forestry, University of Canterbury] in 2015 – while for exported timber and panels they're based on information from New Zealand producers.

"This provides the baseline against which any gains are rewarded. Products are not explicitly tracked in offshore markets in the baseline or in future reporting.

"Accounting may be more like comparing a 'baseline scenario' (e.g. where low-grade logs are converted to concrete formwork and pallets in China), versus an 'actual scenario' where they are instead converted to an engineered wood product in New Zealand, which is assigned a longer expected lifespan, whether used locally or exported. The EWP producer might be rewarded for the difference in carbon storage between baseline and actual use of logs/timber.



Steve Wakelin.

"The difference varies over time and sums to zero in the long term – i.e. if all carbon is assumed to be returned to the atmosphere in both the baseline and actual scenarios, it's just a timing issue.

"If part of the ETS, wood processors might get credits early on, but then liabilities later – similar to forest owners under 'stock change' accounting, but without any 'safe carbon' NZUs to sell.

"Or it could be more like forest owners under 'averaging accounting', with both a cap on the units that can be earned and an ongoing obligation to maintain production."

He notes further that "it would be fair to say the enthusiasm in the sector for the prospect of receiving NZUs via the ETS is not universal. The ETS is complex and carbon benefits might be small, temporary and/or hard to prove. But WTO rules would have something to say about alternative approaches that look like domestic subsidies."

### A SIMPLER APPROACH

As outlined in the *NZ Wood Design Guides* (Wood Processors and Manufacturers Association, 2020), a simpler and credible alternative to the ETS could be to pay [in this particular scenario] building owners\* a financial incentive based on the amount of

**"If part of the ETS, wood processors might get credits early on, but then liabilities later."**

**STEVE WAKELIN**

carbon stored in the wood.

\* (Policymakers have yet to determine just who will benefit from the creation of LLHWPs. This will depend to a large extent on how extra revenue in one part of the value chain flows through to transfer pricing.)

"The money could be from a government fund, or from other sources such as tax incentives or reductions in rates or consenting fees."

The guide also states that "a one-off payment to building owners at the time of construction may be easier to administer than a long-term carbon compliance system. Such schemes already operate elsewhere – for example, in Germany where owners of new commercial buildings in Hamburg are paid for each kg of timber used in construction."



Marty Verry.

“Many progressive developers and project teams are now enthusiastically embracing wood.”

MARTY VERRY

wood and particularly engineered mass timber. Nothing tells staff, clients and suppliers that a company cares more about sustainability than it being based on a stunning building made of mass timber.

“With regulatory support, mills will scale up investment, builders will become more familiar with wood solutions, and construction prices will converge on equivalent to traditional materials, or less.”

#### HARVESTED WOOD PRODUCTS

He says the other policy that will save the sector is to develop a scheme that recognises the carbon storage in wood products with NZUs that wood processors can then trade on the ETS. “Forests sequester carbon from the atmosphere, but wood products store it for decades or centuries.

“Few people realise that around one-third of the ‘forestry sector’s’ carbon storage is actually due to wood processors making investments to lock that carbon away. HWP value is incorporated in our Nationally Determined Contributions accounting and our Paris targets. So, it’s legitimate.

“Yet wood processors don’t receive any benefit for this carbon storage, despite investing in additional processing since the HWP baseline year of 2009, in the expectation that one day they will be treated equivalently to forestry in the ETS.”

Climate Change Minister Simon Watts has noted that we need to be aware of any removal option beyond exotic pines.

“If it reduces emissions, we can measure and validate it scientifically legit – then we should be able to get some form of credit for it.”

Verry adds that the industry and officials are close to finalising a scheme under Forestry Minister Todd McClay’s leadership.

“These two policies have the potential to address climate change and ensure a resilient wood processing and forestry sector. Without them, stand by for more global warming, higher Paris bills, more mill closures and decimated rural communities.” **T**

# Key policy drivers

Wood processors yet to receive a benefit for carbon storage.

By Michael Smith

#### KEY POLICY LEVERS WILL MAKE A DIFFERENCE

Marty Verry, Group CEO of Red Stag Timber, is no stranger to going into bat for the wood processing and forestry sector.

In a recent opinion piece he talked of two key policy levers available to central government which would recognise the role of wood processing in providing carbon-negative building materials.

“The world can literally build its way out of the climate crisis when it comes to the 20 percent of carbon emissions caused by construction. However, policy and regulation will be required.”

#### BUILDING FOR CLIMATE CHANGE

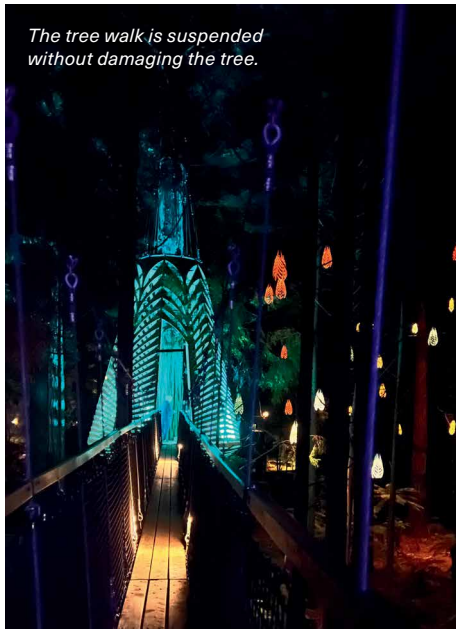
“The first policy is to ambitiously implement the Building for Climate Change programme. It will provide the regulatory stick required to

make building product suppliers decarbonise their products.

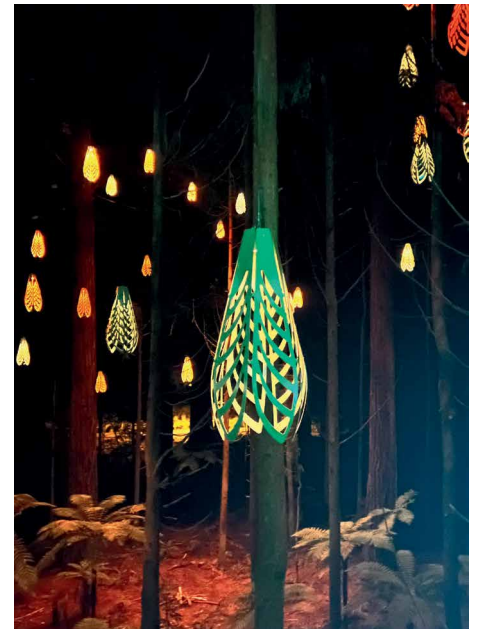
“To date, the Government has not prioritised it. The industry though recognises that regulation is the only effective lever. Indeed, it has made solid steps to decarbonise with the prospects of regulation on the way.”

Mr Verry says the Government thinks it can use encouragement and rewards, instead of regulation. “We’ll see. An estimated eight percent of global emissions are caused by each of the steel and cement industries. The Government is hoping they’ll decarbonise, but its second Emission Reductions Plan draft concedes that these types of hard-to-abate sectors will continue to emit through to 2050.

“Many progressive developers and project teams are now enthusiastically embracing



The tree walk is suspended without damaging the tree.



# A walk up in the trees

Exploring how New Zealand is making the most of forestry. **By Jessica Hockridge**

Though just across the Tasman Sea from Australia, New Zealand is a world apart in its unique natural beauty and innovative approach to forestry. Having visited twice—once as an 18-year-old and more recently—I've gained a deeper appreciation for the country's lush landscapes, particularly the Redwood Forest. On my first visit, I admired its towering trees purely for their aesthetic beauty. However, my latest trip allowed me to see these giants not only as a natural wonder but also as a part of New Zealand's forestry industry.

New Zealand's progressive relationship with forestry stretches back to 1897, when the country foresaw the need for future timber production and began trial plantings of non-native trees that grew faster than indigenous species. This foresight led to the creation of forests like the stunning Whakarewarewa Forest, where the Redwood trees—planted in 1901—have grown into towering giants over 120-year-old. These trees, which once amazed me for their sheer size, now represent New Zealand's commitment to sustainable forestry practices.

## THE REDWOOD FOREST

The Whakarewarewa Forest, better known as the Redwood Forest, is home to an astonishing 70 tree species, including Australian Eucalypts, Mexican Cypress, and, of course, the towering Californian Redwoods. Each species serves a purpose, but redwood timber stands out.

Redwood timber, prized for its durability and

striking appearance, plays an important role in New Zealand's construction industry. From residential fencing to interior panelling, the wood's versatility is well-known. Its remarkable longevity—thanks to a thick bark and high foliage—makes it particularly resistant to fire and insect damage, ensuring these majestic trees continue to serve both functional and aesthetic purposes for years to come.

The redwood trees found in New Zealand are originally from California in the USA and are the tallest living trees with some hitting over 115 metres tall and over 9 metres in diameter. Some of the Californian redwoods are over 2,000-years-old. They are a slow growing tree and due to their long lifespan the Californian redwoods have been called the 'everlasting redwood'.

The tallest redwood in the Whakarewarewa Forest is quite a bit smaller at 72 metres high and 2 metres in diameter. The New Zealand redwood trees however, are a fast growing tree which is the great for a faster turn around on timber.

The natural growing strip of Californian redwoods is quite small at only 700km long and a varying width of 8km – 56km.

Redwoods require a specific temperate climate with regular rainfall and dislike constant sea spray and heavy winds. New Zealand is very lucky as it has a matching inverted latitude to the redwood belt, so it falls into the favoured growing band. However, naturally the conditions are not exactly the same causing some differences between the trees growing on opposite hemispheres.

## USING THE FOREST

The Redwoods Forest began as a nursery, today over a century later it has become so much more. Redwood timber good for general building purposes such as fencing, internal panelling and cladding. NZ Natural Timber is one of the companies offering cladding made with the New Zealand Redwood timber. It is a stunning design choice for its beautiful tones.

Alongside the existing uses for the timber, New Zealand is exploring what else is possible. "There are 200 scientists nearby looking for new ways to use trees to create new materials and energy", writes the Redwood Treewalk.

New Zealand's forestry industry is not just about harvesting timber—it's about innovation. Scientists are exploring new ways to use trees as 'living factories,' growing the raw materials needed for eco-friendly products. For instance, plant-based chemicals are now being used to replace oil-based ones, leading to the creation of a new industrial-strength glue for wood products. This innovative approach is helping to >>

**New Zealand's forestry industry is not just about harvesting timber—it's about innovation.**

reduce the industry's environmental footprint while opening new possibilities for sustainable production.

The Treewalk also expanded on the crossover of sustainability with other industries, "We also work with other industries to find new uses for their [by-products], adding kiwifruit residue to this plastic biospife (hybrid spoon-knife) for eating Zespri Kiwifruit and adding pieces of paua shell into 3D printer 'ink' for bioplastic printing.

"To keep building our economy on forestry and forest products, we also have to protect forestry's future. That means growing resource-efficient forests and keeping them safe from pests and disease."

### VOCATIONAL EDUCATION

The legacy of New Zealand's early forestry practices continues through institutions like Toi Ohomai, which trains the next generation of forestry experts. It is New Zealand's largest vocational training facility for forestry and is found in Rotorua right near the Redwoods Forest.

Toi Ohomai offers hands-on learning in everything from forest management to wood manufacturing and carpentry. The facility ensures that students are equipped with the skills needed to lead New Zealand's forestry industry into a sustainable future.

Toi Ohomai has state-of-the-art facilities that were built using the trees grown in Rotorua and aims to provide the future workers with experienced tutors, industry recognised qualifications, hands on learning and more. The goal is to support the needs of the growing timber industry with well trained, skilled workers who are passionate about every stage of forestry from planting to the finished products made from the timber grown here in New Zealand.

### ENGAGING THE PUBLIC

For those who aren't training in the Toi Ohomai there are other learning opportunities. The Treewalk is one of the striking features of the Redwood Forest. The 700-metre-long Treewalk is a captivating journey that allows visitors to learn about forestry and how it impacts them as they explore the forest from a unique vantage point. Starting 6 metres off the ground and reaching heights of up to 12 metres, the walk features 22 platforms and 23 bridges—the longest of which spans 37 metres. Remarkably, the structure was built using 5,500 metres of locally grown and milled macrocarpa timber, demonstrating New Zealand's commitment to sustainable forestry in both design and material. The Treewalk does a great job of showcasing what can be created with timber.



Above: A display board along the ziplining journey highlighting the positives of native trees.

The Treewalk shared about its unique design:

"The tree walk was constructed with no screws or bolts attached to the trees. The tree walk is suspended without damaging the tree [at all].

"The walkway is suspended from the trees using a specially designed sling. The sling carefully wraps around the redwood trunks, without causing the tree any harm. As the trees grow, the slings can be easily adjusted to allow for the growing trees.

"Care was taken to minimise damage to the surrounding forest during construction. The platform sections were completed on site and were manually winched in parts up to the tree."

The Treewalk is an incredible display of construction and engineering, it really highlighted timber as a main feature. It was fascinating to walk across the many bridges and see the huge slings around the trees holding everything up. On each platform there was also timber plaques displaying information about the trees, the building of the Treewalk, the history of the forest, the wildlife, what is done with the timber, and what the future may hold. As we walked through we saw many people stopping on each platform to read the plaques and engage with the interactive pieces on them.

### LIGHT IT UP

As day turns to night, the Treewalk transforms into a magical experience, with lights illuminating the towering redwoods. Designed by the renowned David Trubridge company, these lights blend seamlessly into the forest, creating a serene atmosphere that highlights both the beauty of the trees and the innovative use of sustainable materials.

The David Truebridge company is internationally recognised for their designs and environmental responsibility. The lights are made from a special composite timber created out of wood waste from New Zealand's radiata pine, bonded with a non-toxic adhesive and placed on a stainless-steel frame. The lights will have a 50-year

lifespan in the forest.

The actual design of the lights was inspired by the native birds in the forest, designed to mimic the mottling on their wings and the rough shape of each of the birds.

In every step the Redwoods Treewalk was created to inspire, promote and educate on timber and the forest, so that all who visit might walk away with new knowledge about the timber and forestry industry.

### A COUNTRY'S COMMITMENT

New Zealand overall is very committed to sustainable forestry, the Redwood Treewalk was proud that "most of New Zealand's larger forest companies are either Forest Stewardship Council (FSC) certified or working towards FSC certification. FSC certification ensures that products come from well managed forests that provide environmental social and economic benefits."

My exploration of New Zealand's commitment to forestry extended beyond the Redwood Forest. During a ziplining adventure, we paused to enjoy tea made from native tree leaves. As we sipped, our guides shared fascinating insights into the many benefits of New Zealand's native trees. The company also handed out little tokens which we wrote out names on and each of these represents a tree that will be planted in the area as they partner with a Māori group to replant native trees in a previously cleared area. They focused on the company's desire to be caring for New Zealand's overall forestry and doing their part.

Forestry, timber, and building industries touch all of our lives, whether we realise it or not. New Zealand's commitment to sustainable forestry practices aims to ensure that these industries not only thrive but also contribute to a greener, more responsible future. With spaces like the Redwood Forest and initiatives like the Treewalk, New Zealand is leading the way in helping people understand, engage with, and appreciate the importance of forestry for generations to come. T



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Above: Kieran Chehab left, and Stephen Chehab right, on the new Allied Mass Timber warehouse location, where single level prototypes can be built.

# Allied Mass Timber: a new division with a clear vision

Embracing the future of sustainable mass timber construction in Australia.

By Campbell McInnes

Allied Forest Products has long been a dependable wholesaler in Australia's timber industry, providing a wide array of quality timber products to timber merchants, resellers, manufacturers, and fabricators. Since its establishment, Allied Forest Products has continually evolved to meet the diverse needs of its customers across the nation. With a legacy of over a century in timber manufacturing, handling and logistics, the company is now setting its sights on the emerging mass timber market in Australia

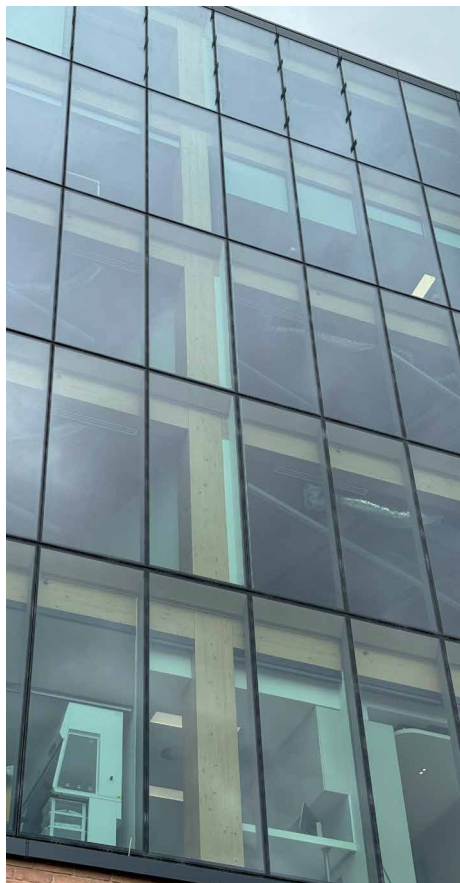
through its newly launched division, Allied Mass Timber. I sat down with brothers, Kieran, and Stephen Chehab to discuss what their motivation was to create the new Allied Mass Timber Division.

## ENTERING THE MASS TIMBER ARENA

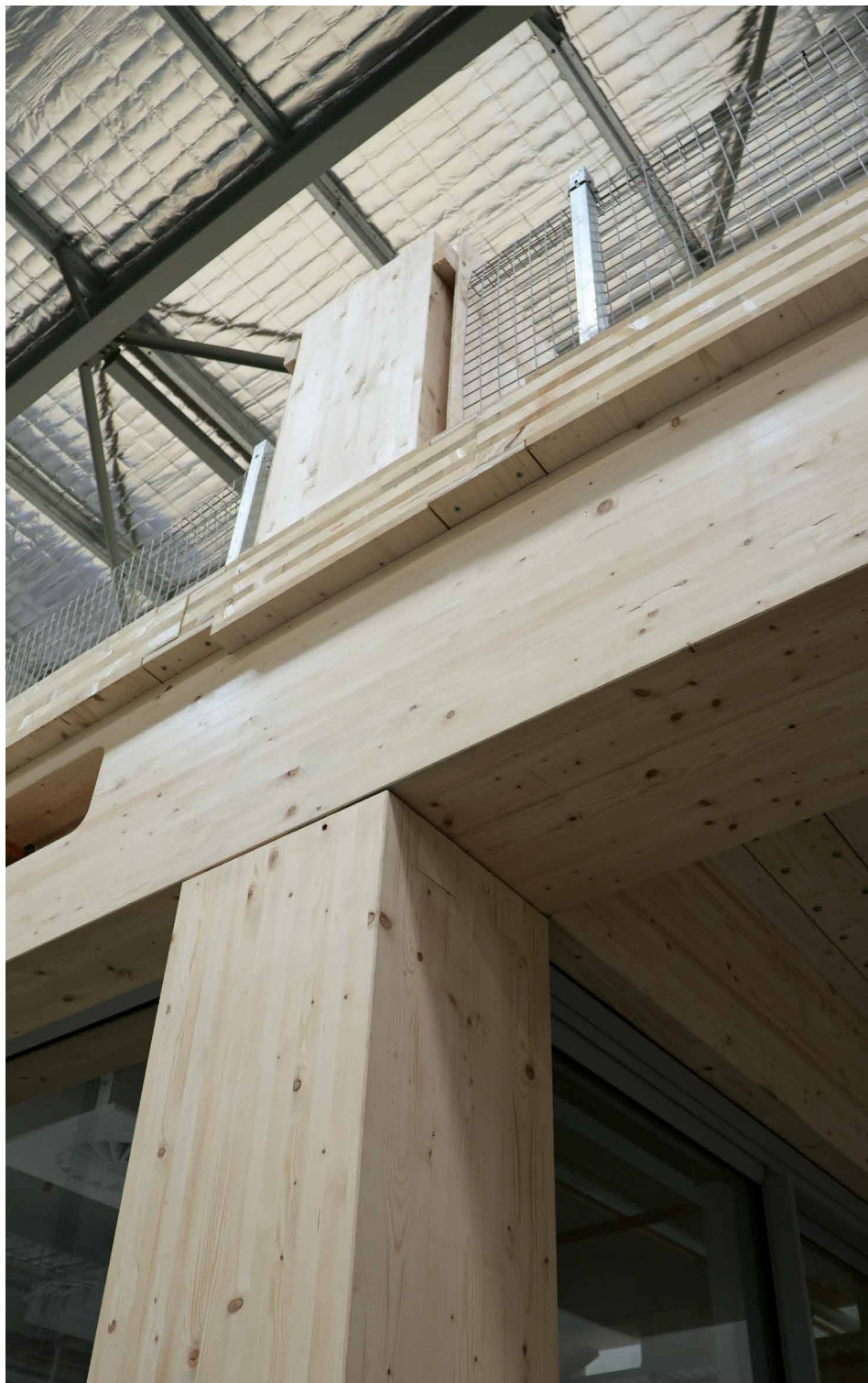
"Allied Forest Products have been involved with glulam, since 2012. Chehab, S advised, "we have been selling Hyne Timber, GL Beams from the beginning, however at the same time, we have always had open dialog with a range of overseas producers as well." Chehab, K added, "the CLT and Mass Timber market in Australia has slowly been building momentum in more recent times, however this is not a new market for us".

In explanation to why the new division, Chehab, K explained, "we were motivated by a dual purpose, to set up the new division: to enhance the availability of high-quality mass timber and engineered wood products (EWP) in Australia, and to efficiently manage logistics for building projects in Sydney and around Australia. We believe this strategic move will position Allied Mass Timber at the forefront of an evolving market".

With over a century of combined knowledge and experience across multiple generations, Allied Forest Products recognized the challenges of balancing timber production and importation with the timing needs of construction sites, as well as the intricacies of the mass timber construction cycle.



**Above:** The Bond building is a great example of how mass timber enhances the look and feel of a building. **Right:** Mass timber being used to create multi level buildings, with large end sections.



### BENEFITS OF USING MASS TIMBER IN CONSTRUCTION

Mass timber construction offers numerous advantages over traditional building methods, making it an increasingly popular choice in the construction industry. Looking at these benefits include:

#### Environmental Benefits

Mass timber construction is significantly more environmentally friendly than traditional methods:

- It sequesters carbon, with timber buildings acting as carbon sinks.
- The production process generates fewer carbon emissions compared to concrete and steel manufacturing.
- Timber is a renewable resource, with sustainable forestry practices ensuring continuous growth and replanting.

#### Construction Efficiency

Mass timber construction offers several advantages in terms of efficiency:

- Faster construction timelines due to prefabrication of components off-site
- Lighter weight materials can reduce transportation costs
- Construction time can be reduced, saving time and money.

#### Structural Performance

Despite being lighter than traditional materials, mass timber exhibits excellent structural properties:

- High strength-to-weight ratio, allowing it to perform well during seismic activity.
- Ability to withstand high winds and earthquakes.

#### Energy Efficiency

Mass timber construction contributes to energy-efficient buildings:

- Excellent insulation properties and can reduce heating and cooling costs.

Allied Mass Timber creating solutions for the handling and logistics of mass timber products.

As the industry continues to evolve, these advantages are likely to drive increased adoption of mass timber in various building types here in Australia. >>



**Above:** Stephen Chehab, left and Kieran Chehab, right on site to inspect their robotic unloading machine under construction.

### LOGISTICS: MATERIAL HANDLING AND TIMING

Allied Mass Timber is orchestrating a complex logistics operation to ensure the seamless supply and delivery of high-quality timber.

The complexity of logistics in mass timber construction cannot be understated. Chehab, K explained, “once timber orders are placed with an overseas producer, the production process is set in motion and cannot be halted. He added, “as the timing of deliveries is always a critical issue, Allied Mass Timbers’ newly established standalone warehouse in Ingleburn addresses this challenge head-on, offering the capability to store timber securely until it is required on-site”. With specially designed rigid and semi-trailers and a commitment to minimizing damage during transport, Allied Mass Timber ensures that timber arrives on schedule and in pristine condition.

In most cases, once timber arrives from overseas, there is generally nowhere to store

large materials onsite as well as keep them protected from the elements. Due to weather and other out of control issues, delays on large construction sites are somewhat inevitable! This is where Allied Mass Timber can fill the gap.

Damage to the timber is costly and disruptive to the whole construction operation. It is vital that the right people, who have the knowledge and experience are the ones handling timber.

Chehab, S explained, “we are utilising staff we have with over 30 years of timber handling experience. In addition, we have also hired some younger staff members, who are ex-carpenters and are trained and understand how timber can be fragile and needs to be handled. These staff members are experts in their field”.

Chehab, K added, “Allied Mass Timber has job specific machinery for handling the large, long, and sometime unique timber components, for all the various CLT and similar components”.



**Above:** The prototype at Allied Mass Timber site is used for training many different trades.

Using technology like robotics to assist with timber handling, minimise damage and increase efficiency.

With the investment that Allied Mass Timber are making, they are gearing up to be able to handle any logistic and or handling opportunity that may present itself. Chehab, S said, “we are already in talks regarding the potential of two additional logistic handling projects and both Kieran and I are excited about this. We would not be able to take on more work if it wasn't due to the implementation of the right people, machinery, and systems. Allied Mass Timber have been able to pave the way and fill any gaps that exist within the supply cycle”.

### SPECIALISED ROBOTIC HANDLING

Understanding the importance of minimizing the damage at all unloading and loading points, Allied Mass Timber have invested in a robotic machine which has the capability to either load or unload up to 45-feet of a container in one motion. The steel platform that is slid into the bottom of the full container is then mechanically retracted. This process not only allows the unloading of a container without damaging the contents but is also a quicker and much safer way of unloading goods from a 20, 40 or even 45 foot containers.

This process is yet another link in the chain that Allied Mass Timber have closed to minimise any potential risk of damage to the valuable timber cargo.

### A LANDMARK CONSTRUCTION PROJECT

Allied Mass Timber were recently approached by a large construction company to discuss the key issues around the construction of erecting mass timber buildings in Australia, this being the logistics issue. Speaking further with this construction company and understanding their issues surrounding the logistics and installation of mass timber around timing and handling of materials, created the perfect opportunity for Allied to put forward their expertise and come up with a practical solution to the logistics for this customer.

Following this meeting, Allied Mass Timber were awarded a contract to work with the local construction company on a world

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significant mass timber tower project which will be constructed in Sydney. Chehab, K said, "This mass timber structure is at the leading edge of this application with carbon sequestration construction. The building will have a combined focus on wellness, environmental innovation, and overall design excellence to create a Sydney icon". He added, "this landmark project not only signifies a monumental achievement in sustainable construction but also underscores Allied Forest Products commitment to excellence and innovation in the timber industry".

From the Allied Mass Timber site, they will not only have the service available to unload, store, and resupply mass timber to constructions sites, undamaged and on time, but can also purchase and supply to customers as well. Allied Mass Timber will be seeking to work with designers and specifiers and other customers to supply and arrange the install also.

Our involvement in this project reflects our capacity to handle large-scale, high-profile ventures while upholding the highest standards of quality and service.

### TRAINING AND INNOVATION

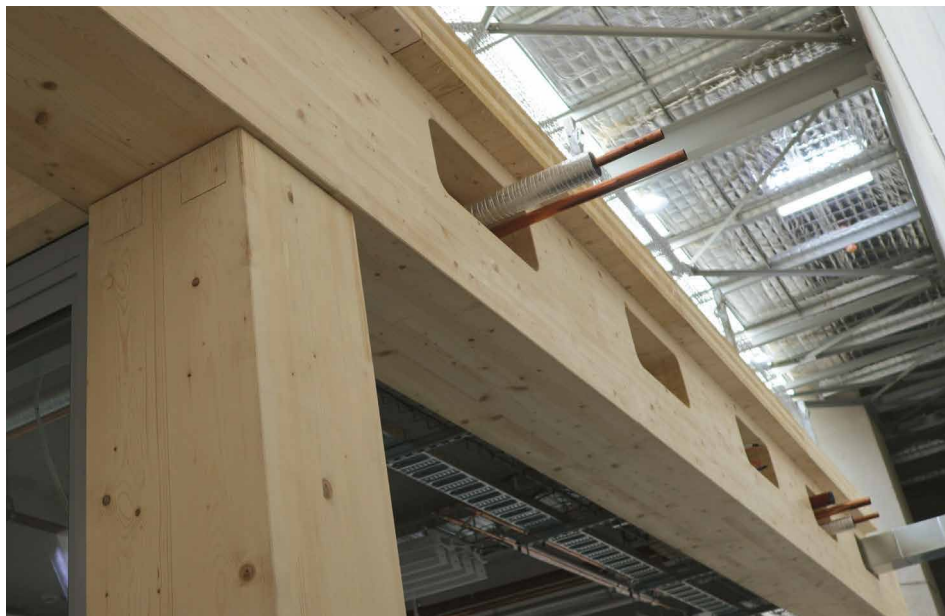
At the Allied Mass Timber site, there is a designated area for constructing full-scale building prototypes on a single level. Chehab, K advised, "this setup provides numerous training opportunities. First, it enables the actual assembly of mass timber components. Once a prototype is up, it serves as a training ground for other trades and installers, including electricians, plumbers, glaziers, and flooring teams, focusing on handling and fixings".

By offering this unique training ground, fosters an opportunity where all skilled trades can gain valuable knowledge, insight and understanding as well as address any unexpected challenges safely and in a controlled environment, potentially accelerating the installation time on site.

### SCALE AND TIMING

The prototype for this project has been built in the Allied Mass Timber warehouse and training has already been carried out.

The large project that Allied Mass Timber have been gearing up for is about to commence. Chehab, K explained "there will be approximately 16,000 m3 of timber which will equate to 400 odd containers of mass timber and timber glue laminated components of which Allied Mass Timber will be responsible for handling". The material which has been manufactured in Europe, is due to start arriving in November 2024. Chehab, S added, "our current



Above: Mass timber structures can be engineered to be very versatile.

capabilities would be to handle double this capacity". This gives them plenty of room for current expansion and additional work.

The project has commenced with the foundation work which is well on its way. The first delivery of mass timber and timber components is not due to be delivered to site until February 2025 and will continue through till the first half of 2026, with the overall construction of the building to be completed in 2027.

Chehab, S explained, "we have already started discussions with this client about other future Australian projects that are currently in the developing stages".

In addition to the timber and timber components which Allied Mass Timber are charged with storing and delivering, they will also be responsible for delivering some other building materials for this project.

The project involves the construction of a massive timber structure that will set new benchmarks in both scale and sustainability. This state-of-the-art building is designed to harmonize with the environment while showcasing the versatile applications of timber in modern architecture.

### HELPING TO SHAPE THE FUTURE

Allied Mass Timber are looking to dominate this space. They want to look at and research every possible option that may give their customers an advantage.

Like many other timber products, builders are constantly on the search for a cheaper option, without reducing the quality or integrity of the overall build. Chehab, S explained "this is no different for mass timber products, where Allied are often asked if there is a cheaper alternative?" He added "Allied Mass Timber have tested their "allBEAM" LVL product and are now able to offer their allBEAM in larger end sections.

Customers can also use these larger allBEAM in mass timber construction projects in Australia". This is not a new concept as such, as this LVL have already been used in the European market. By using an LVL product for mass timber construction, it can reduce the sizes that are required to be used which not only has the potential for cost savings, but there are also other benefits as well. Due to the testing that has been completed, their allBEAM LVL product can be produced not only in larger end section, but they can produce custom sizes, which would also be suitable for Mass Timber projects including large floor panels.

Allied Mass Timber's goal is to see more mass timber being used more broadly in Australia, which could include social housing and larger residential projects, with the hope that this product becomes a more mainstream product.

Chehab, S added, "if we can eat into the market share that historically has been dominated by the concrete and steel products and convert some of this market share into using mass timber, we will achieve a biophilic environment, as the benefits of mass timber buildings are not only environmentally positive, but they also benefit people mentally and physically as well".

Allied Mass Timber wants to be heavily involved with shaping the future for the uses of timber and mass timber construction. Chehab, S concluded, "we are excited to be involved in the Australian mass timber movement and look forward to continuing our legacy of innovation and excellence in the timber industry for generations to come".**T**

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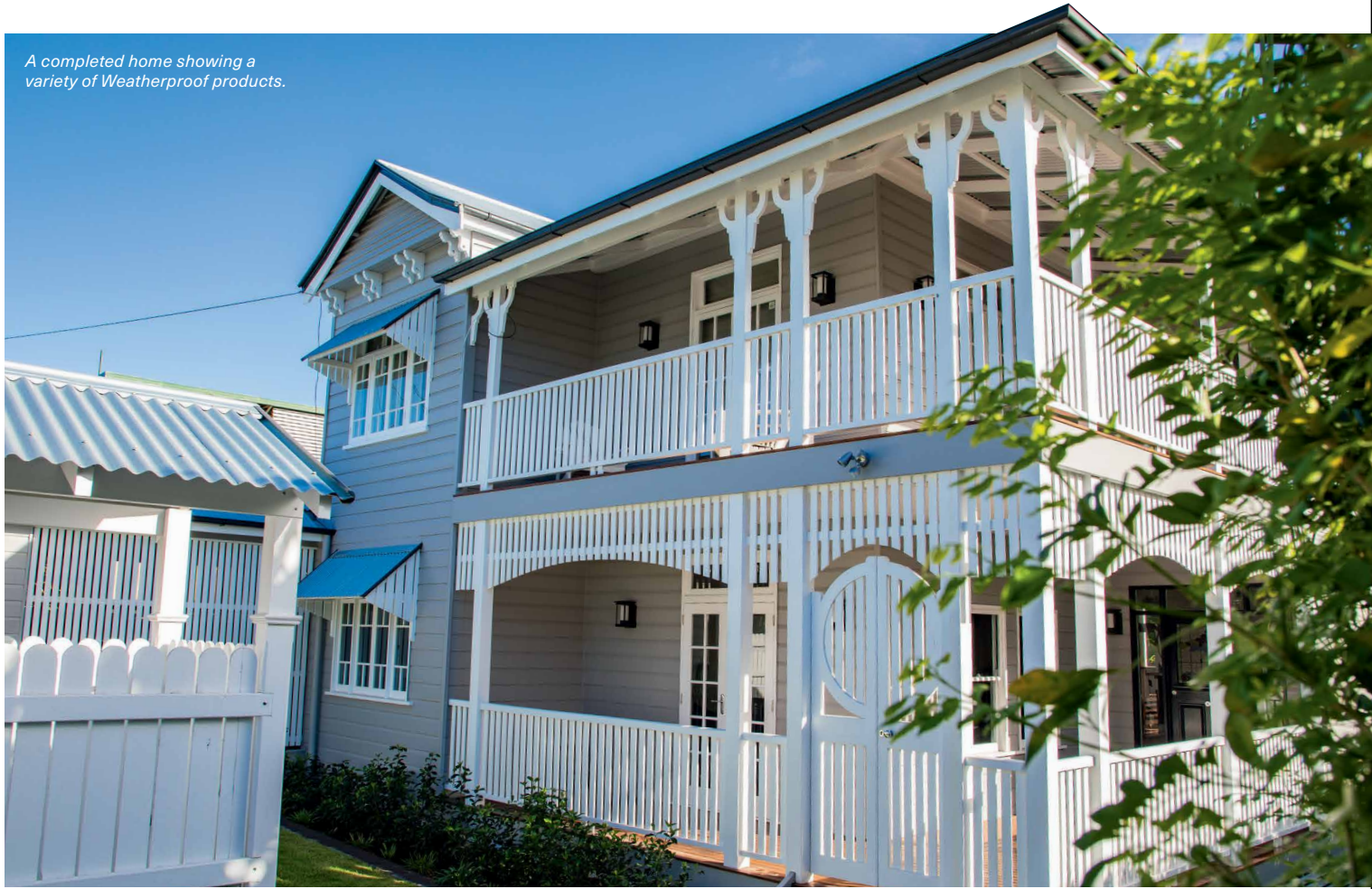


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A completed home showing a variety of Weatherproof products.



# Weatherproof excellence

The Evolution of Woodhouse Weatherproof, H3 LOSP, Pink Primed, Finger-Jointed Pine.

By Campbell McInnes

In the construction industry, the choice of materials is critical for building strong and lasting structures. Staying innovative is essential for success. One company that stands out for its quality and innovation is Woodhouse Timber Company. With over forty years in the business, Woodhouse is well-known in the timber industry for its excellent products and commitment to customer satisfaction. This article explores the ongoing development and advantages of Woodhouse's Weatherproof® timber range, showcasing Woodhouse's dedication to providing durable and high-quality options for builders and homeowners.

## A LEGACY OF QUALITY

Founded in 1983 by Chris Woodhouse, Woodhouse Timber Company has become synonymous with quality timber products in Australia. What began as a small warehouse in Brisbane has blossomed into a national operation, that is still family owned and operated, and serves as a premier

wholesaler of both interior and exterior timber products. Celebrating its 40th anniversary last year, covered by Timber Trader News in its May/June 2023 issue, the company has continually evolved while remaining steadfast in its commitment to exceptional customer service and high-quality offerings.

At the heart of Woodhouse's success lies the flagship products: Woodhouse Weatherproof exterior timber and Woodhouse EdgeLine™ interior moulding products. I sat down with Woodhouse's Product Manager, Brendan King to discuss the recent developments of the Weatherproof product, which is easily recognisable across building sites thanks to its distinctive "Woodhouse Pink Primer", a testament to its popularity and widespread use.

## QUALITY ASSURANCE AND SUSTAINABLE PRACTICES

Woodhouse's commitment to quality assurance is evident in every aspect of its

operations. The Weatherproof range is crafted from premium plantation radiata pine, sourced from sustainable forests.

The Forest Stewardship Council® (FSC® C120464) certification is a hallmark of their commitment to environmental stewardship. By opting for FSC®-certified Woodhouse timber, consumers can contribute to the preservation of forests and the sustainability of timber resources. Radiata pine, cultivated in New Zealand, adheres to stringent environmental regulations and codes of practice, ensuring that its production minimally impacts the environment.

The treatment process of Woodhouse Weatherproof timber involves a Light Organic Solvent Preservative (LOSP), which **provides robust protection** against fungal decay and termite damage. This treatment comes with a **25-year guarantee**.

Using the factory priming process with Dulux® Industrial Coating **provides a protective layer** that, when maintained correctly, also comes with a **remarkable**



**25-year guarantee.** This assurance gives builders and homeowners peace of mind, knowing they are investing in durable and resilient materials.

### COLLABORATION WITH DULUX: THE WEATHERPROOF ADVANTAGE

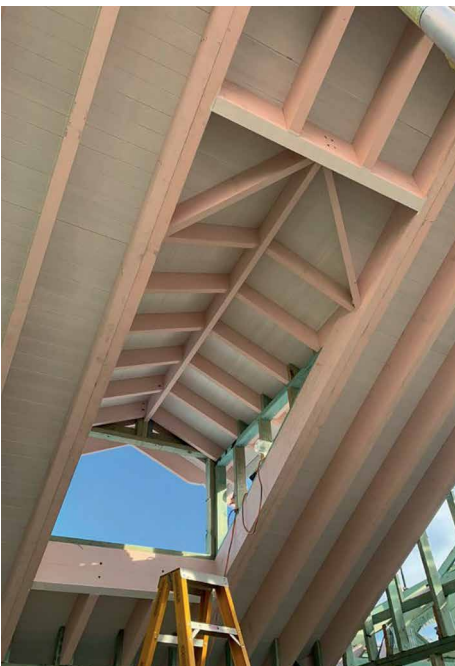
King explained, "in late 2018, Dulux contacted Woodhouse Timber to partner with them on a new version of their architectural primer. Dulux highlighted that the new formula offered improved UV and humidity resistance, alongside a low odour, making it a superior primer overall".

**Understanding that the time between installation and painting can often span weeks, and sometimes several months, was a key consideration.** Dulux focused on creating a primer capable of withstanding UV exposure to the Australian elements.

This primer seemed perfect for Woodhouse's Weatherproof range, however Woodhouse needed to ensure its



**Above:** Roof trusses constructed from Weatherproof.



**Above:** A common sight on construction sites across Australia, Weatherproof Pink!



**Above:** Homes under construction, various stages of painting, ready for top coat.

## The time between installation and painting can often span weeks, and sometimes a few months.

performance before incorporating it into their products. King emphasised, "The development process was rigorous and comprehensive. For two years, Woodhouse and Dulux worked closely, implementing a **meticulous trial program** designed to evaluate the new primer across a range of various Australian conditions and the challenges posed by environmental exposure".

First, Woodhouse and Dulux worked with manufacturing partners in New Zealand to ensure the primer would deliver better amenities to workers during application onto LOSP treated timber. King said, "Oil-based paints can have a strong odour when sprayed onto products in the production line." King added, "Reducing these odours was important to all participants in the trial."

Next, performance trials were designed to rigorously test the new primer's capabilities, focusing on three key areas:

1. **Application and blocking resistance:** This aspect evaluated the primer's ease of use and its ability to prevent sticking between painted surfaces.
2. **Laboratory testing:** This comprehensive phase included:
  - Accelerated weathering simulations
  - Various adhesion tests
  - Physical external weathering tests conducted in Australia's harsh climate.

3. **Market testing:** This practical phase involved on-site evaluations at construction projects, where researchers examined:

- The installation process
- Its weathering resistance during the initial stages of construction
- Feedback from trade painters regarding their experience applying topcoats over the new primer.

All tests had successful outcomes, with overwhelmingly positive feedback from industry professionals. King noted "the consistently positive results led to the official launch of the Weatherproof architectural primer in January 2021". This new Dulux primer now comes with an impressive 25-year guarantee against common issues such as flaking, blistering, and adhesion >>



**Above:** Posts and trims in Weatherproof Pink, commonly used in new housing construction.



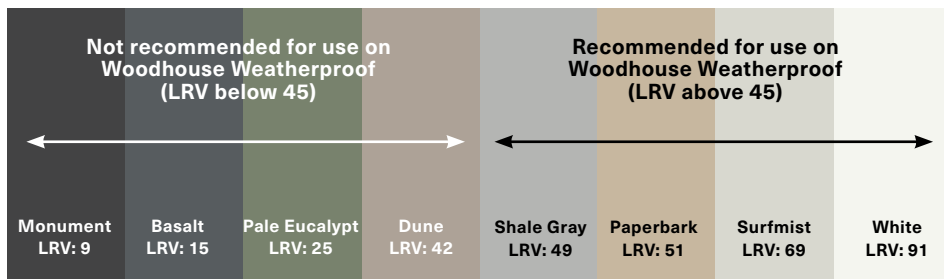
Above: Selecting Weatherproof for external work ensures a long-lasting finished product.



Above: A pack of quality Weatherproof, ready for dispatch.



Above: Test cans of Weatherproof primer, developed with Dulux.



Above: Light Reflective Values (LRVs) of common Colorbond colours.

failures, which gives Woodhouse confidence in its durability and effectiveness in the market.

### A REVOLUTIONARY PRIMER

The new Weatherproof primer is an oil-based formulation, which aligns with the Light Organic Solvent Preservative (LOSP) treatment used on the timber. Despite the emergence of water-based alternatives, the oil-based primer formulation offers unique advantages, particularly in terms of compatibility with various topcoats.

This oil-based approach has been a staple in the industry for decades, proven effective over solvent-based preservatives like those used in the LOSP treated Weatherproof range. Now, three and a half years after its introduction to the market, the new primer has consistently demonstrated its superior performance. King stated, "there is a high satisfaction with the primer's performance, noting an absence of adhesion issues or warranty for any claims".

This track record of reliability further cements the Weatherproof range's position as a leader in the exterior timber market. This success underscores Woodhouse's dedication to quality and reliability.

### WOODHOUSE PINK AND TRADEMARKS

Pink primer has a significant history in Australia's construction and painting industries, particular for external use on timber. Pink primer was traditionally a mixture of red and white lead pigments. This combination created the distinctive pink

Dedication to quality and customer satisfaction has made Woodhouse a respected name in the timber industry.

colour that became synonymous with primed exterior timber in Australia.

The use of lead-based paints, including pink primer, was used extensively in Australian homes built before 1950. Between the late 50's and early 70's, there was a gradual reduction in the quantity of lead pigment used for tinting or colouring paints. Lead-based pink primer is no longer used due to health and environmental concerns.

When asked why Woodhouse use the colour pink for their Weatherproof product, King said, "this was summed up well by Chris Woodhouse in the Timber Trader News May/ Jun 2023 editorial where he said, "The simple story behind the pink, back then, if you wanted to use a piece of timber externally, you had to prime it and the primer was pink". Woodhouse today continues to carry on the old tradition of using pink primer for their exterior Weatherproof products.

These days Woodhouse have Trademarked their "Woodhouse Pink™" colour for use in exterior softwood timbers. In addition, they also have a Trademark for their "Weatherproof™" name.

### OPTIMIZING TOPCOATS: RECOMMENDATIONS FOR PERFORMANCE

While the primer forms the essential first layer of protection, selecting the right topcoat is crucial for optimal performance. There are a range of reputable brands that offer durable and UV-resistant exterior paints; however, King states, "Woodhouse recommends using Dulux Weathershield® exterior paint. The Dulux Weathershield product line complements the Weatherproof system perfectly".

As a water-based acrylic paint with a self-undercoating system, Weathershield can be applied directly to the Weatherproof primed product after standard surface preparation. This compatibility streamlines the painting process and ensures optimal adhesion and performance. King added "by using Dulux Weathershield on top of the Woodhouse Weatherproof primer, end-users can have complete confidence in their timber protection system. They benefit from two high-quality paint products from one of the industry's leading professional paint companies, creating a robust and long-lasting finish". Furthermore, he added, "in addition to the 25-year guarantee Dulux offer on the Weatherproof primer, Dulux also offers a Limited Lifetime guarantee on the Weathershield topcoat as well".

Water-based paints provide excellent flexibility and UV resistance, making them a favoured choice for outdoor applications. They tend to perform better in managing the expansion and contraction of timber

substrates compared to traditional oil-based paints. However, the latter may still be suitable for specific applications, such as window and door trims.

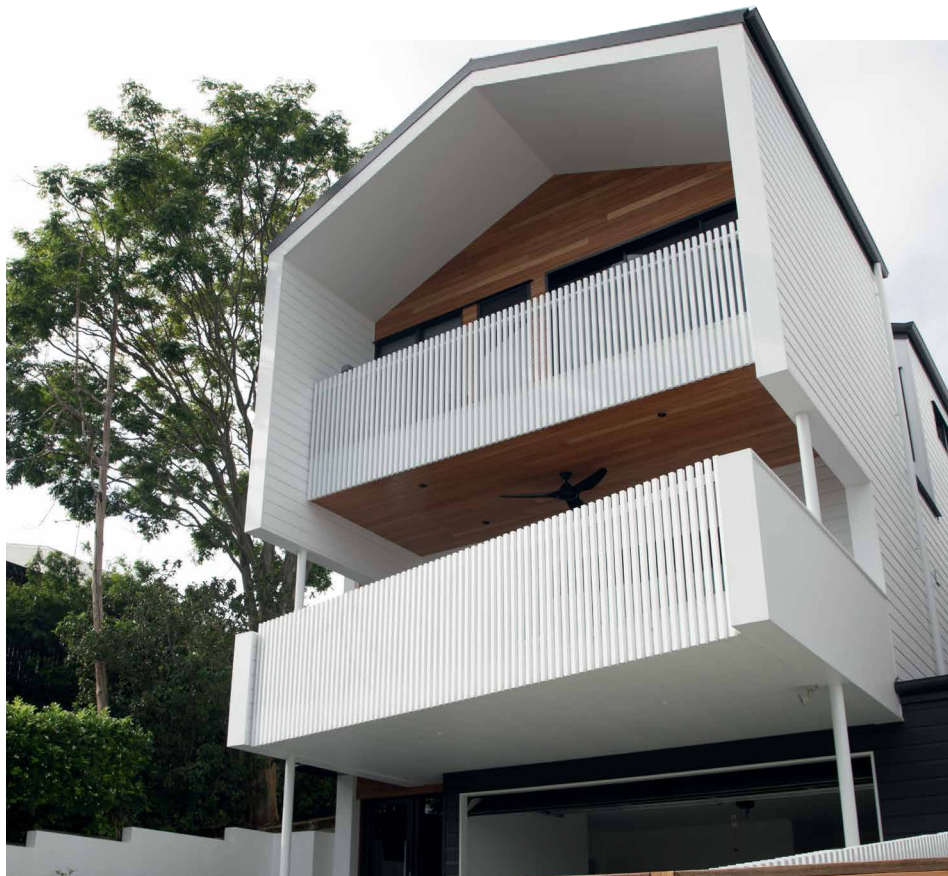
### TOPCOAT COLOUR SELECTION

When selecting a topcoat colour, it's crucial for builders and homeowners to consider the impact on the timber substrate. Dark colours with a light reflective value (LRV) of 44 and below can absorb more light, causing surface temperatures to rise.

For softwood products like those in the Weatherproof range, this can lead to surface checking, distortion, and resin bleed. To mitigate these risks, Woodhouse recommends choosing paint colours with an LRV of 45 and above.

### PAINTING BEST PRACTICES: ENSURING LONGEVITY

To maximize the performance of Woodhouse Weatherproof products, a systematic approach to painting is essential. Optimum performance of the Woodhouse Weatherproof product is achieved when finishing topcoats are applied within eight weeks of installation. If more time has elapsed and the primer appears chalky or loose, affected areas should be lightly sanded and re-coated with a high-quality wood primer. Any cut ends, notches or penetrations should be resealed with an in-can timber preservative, and reprimed. Nail holes should be filled with wood filler and sanded to an even finish. Finally, the timber should be free from dirt and other contaminants prior to applying two or more coats of a premium exterior topcoat. In some instances, cladding and linings boards may benefit from the application of an initial topcoat prior to installation. For more information, see the painting guide on the Woodhouse website.



**Above:** Quality topcoat used on Weatherproof provides an aesthetic, long lasting and easy to maintain home.

### LOOKING AHEAD: CONTINUOUS IMPROVEMENT

While Woodhouse is proud of its Weatherproof product range, the journey of innovation does not end here. The team at Woodhouse is actively pursuing new technologies to further enhance their products. King states, "we are continuing to research and develop our products, with our aim to introduce additional features that will elevate the performance of Weatherproof timber".

The dedication to quality, sustainability, and customer satisfaction has made Woodhouse Timber Company a respected name in the timber industry. The partnership with Dulux exemplifies their commitment to continuous improvement and responsiveness to market needs.

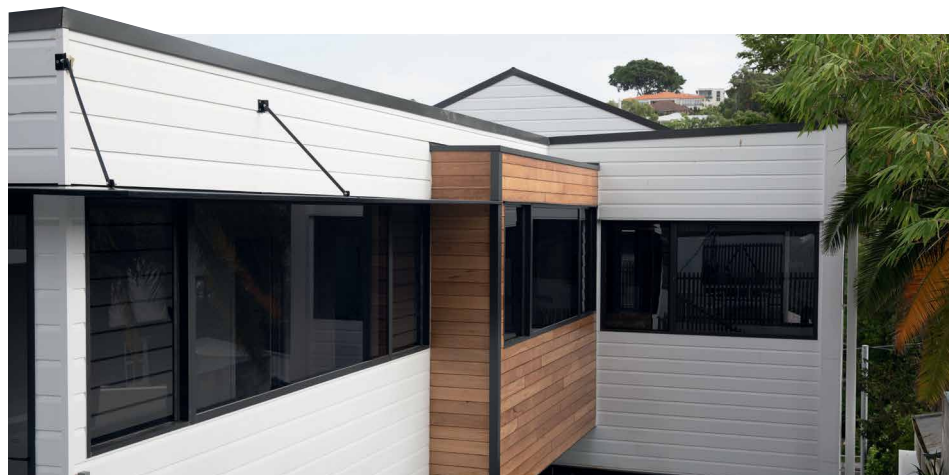
### CONCLUSION

Woodhouse Weatherproof H3 LOSP Pink Primed Pine products represent a significant advancement in timber construction materials. Through a blend of innovative design, quality assurance, and sustainable practices, Woodhouse has created a product that stands resilient against the elements while delivering peace of mind to builders and homeowners. King said, "the comfort for Woodhouse in making the right decision comes with the fact that we have had zero issues relating to adhesion, creaking or warranty claims, when using the new Dulux Weatherproof primer".

As the industry continues to evolve, Woodhouse remains at the forefront, driven by a passion to provide quality timber solutions that cater to the demands of modern construction. With ongoing partnerships and a commitment to innovation, the future looks promising for Woodhouse and its customers. King advised, "we are currently working on yet another specific innovation for the Weatherproof product range, which we hope to release early next year". **T**

**For more information about warranty details, safety data sheets, and technical specifications, visit the Woodhouse website: [woodhouse.com.au](http://woodhouse.com.au).**

Registered trademarks include Weatherproof®, Woodhouse Pink™, EdgeLine™, Dulux® and Weathershield®.



**Above:** Built for purpose, quality timber solutions, designed for Australia's harsh environment.

# Breaking the sales talent shortage

A blueprint for CEOs and business owners.

By Jason Howes & Pam Foster

Building an unstoppable business starts with having the right people in the right roles. Yet the building industry is currently facing a critical shortage of skilled sales talent, presenting major roadblocks to growth.

## THE ROOT CAUSE

Many salespeople are thrown into the deep end without proper training, coaching or tools to measure success. Expected to turn a company's performance around, most struggle to stay afloat and fall short of expectations. Without the right support, very few can thrive in such challenging conditions.

Now may be the perfect time for CEOs and business owners, to change this! Just as any building needs a solid foundation, a high-performing sales team needs the right training, structure, and mentorship to succeed.

## WHY SALESPEOPLE ARE STRUGGLING

Imagine being asked to hit ambitious targets without a roadmap. It's no surprise that many sales professionals feel disoriented and underappreciated. Without structured training and direction, high turnover and underperformance are inevitable—costly problems for any business.

The issue runs deeper. Many talented sales professionals are hired for roles that don't align with their strengths or are stuck in positions where they can't grow. It's like placing a skilled builder in the wrong trade—passionate but unable to deliver their best. Without clarity or the right support, they disengage, wasting their potential. With the right structure, training, and guidance they can thrive and contribute to your business's success.

## THE REAL COST OF MISALIGNMENT

When your sales team lacks direction and purpose, it's like revving the engine of a high-performance car—tyres spinning, smoke pouring out, but you're going nowhere fast. You've got all the power, but without the right alignment and training, you're just burning rubber. What's the real cost? Lost deals, missed revenue, and a clouded path ahead—leaving disillusioned employees to kick up the dust as they walk out the door.

We've all seen it: the talented sales rep relegated to an inside role, itching to be out on the road, or the junior executive who could be a top performer with the right training and mentorship. Instead, they're stuck spinning their wheels and eventually move on to an industry that's investing where you're not. If you're not developing your people, you're losing them.

## THE PATH TO SALES SUCCESS

So, what's the solution to the talent shortage? The answer lies in creating a structured sales trajectory program that takes ambitious professionals from inside sales roles to high-performing Business Development Managers in 12 to 18 months. It's about developing a clear, strategic path for growth that aligns individual potential with business needs.

Here's how we do it at Arrow Executive Sales:

### 1. EVALUATE: Assess Sales Potential

Building a high-performing sales team isn't about placing people based on gut feel. It starts with understanding who's on board, what drives them, and where their strengths lie. Leveraging a global technology platform, we go beyond CVs and KPIs to uncover hidden talent and "diamonds in the rough." Our evaluations focus on mindset, sales ability and coachability to ensure every team

member is positioned for maximum success in client-facing or inside sales roles.

### 2. ATTRACT: Recruit Top Talent

If your team is missing the right talent or you're short-staffed, we can help you find the ideal fit. Specialising in recruiting sales hunters who drive business growth, we leverage advanced recruitment AI and our extensive industry network to pinpoint top performers—cutting your time-to-hire by up to 85%.

### 3. INCENTIVISE: Create a Performance Framework

To attract and retain top sales talent, it's crucial to balance competitive base salaries with performance-based incentives. Structuring compensation around achievements and aligning payouts with performance helps create a driven, results-oriented team. Our solution offers clear dashboards and seamless CRM integration, giving sales teams full visibility into how their efforts impact their earnings—building trust and boosting motivation to hit targets.

### 4. ACCELERATE: Develop Sales Skills

Once you know who's got the potential, it's time to provide them with the tools and training that align with your business priorities. Our comprehensive 12-month program breaks down best practices into bite-sized, actionable lessons. It's hands-on experience, targeted coaching and strategic learning designed to build skills, boost confidence and accelerate growth.

### 5. EMPOWER: Equip for Sustained Success

We harness cutting-edge coaching technology to track progress, provide feedback and promote continuous development. Key features include:

- *Performance Visualisation*: Real-time



**Selling Behaviors**



dashboards show sales professionals exactly where they stand. This level of visibility fosters ownership and drives improvement.

- **Structured Coaching Plans:** Integrated coaching plans ensure there's no guessing what's next. Every salesperson and manager know what to work on and how to achieve their goals.
- **Individual and Team Overviews:** Gain a clear picture of your entire team's performance, making it easy to identify where to focus your coaching efforts for maximum impact.

Implementing a structured sales trajectory program and leveraging technology isn't just about driving growth—it's about building a high-performance culture.

**REAL BUSINESS GROWTH BEGINS WITH PEOPLE**

The shortage of skilled sales talent is real, but it can be overcome. Industry leaders need to take a proactive approach by investing in structured training, aligning talent with the right roles, and providing the tools and coaching needed for growth. Partnering with an industry veteran passionate about winning new business can make all the difference. Expert coaching hones sales skills, instills a winning mindset, and empowers your team to exceed targets and drive growth.

Ready to build a world-class sales team? The blueprint is here, and the time to act is now. **T**



**TALENT & CLIENT ENGAGEMENT PARTNER**

**Pam Foster** is a Talent Scout who helps businesses grow by finding the right people. With over 15 years of experience, she's all about solving recruitment challenges and crafting talent strategies that fit like a glove with each company's culture and goals.

Pam has teamed up with some of Australia's biggest names and fastest-growing startups, including bp Australia, Dan Murphy's, Nimble, Nutrition Warehouse, Princess Polly, and Woolworths Limited. She's not just filling roles—she's diving deep into your business, getting to know your values, culture, and what makes you tick, so she can find candidates who are the perfect match for your team.

**Jason Howes and Pam Foster** of Arrow Executive Sales build high-performing sales teams that close more deals and drive business growth. To learn more about their Sales Trajectory Program, contact Jason Howes or Pam Foster at 1300 903 527 or visit [www.arrowexec.com.au](http://www.arrowexec.com.au)



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# Woodwise: Ironbark

Close up of pink/red blossoms of native Mugga or red ironbark eucalyptus tree.

Ironbark – Would you like that in Red or Grey?

In this issue we are going to focus on Red Ironbark.

Red Ironbark – a true hardwood master (Botanical name: *Eucalyptus sideroxylon*) and sometimes referred to as Mugga Ironbark.

This Australian hardwood is known for its superior even 'handsome' looks. It grows throughout Victoria, across the western slopes of New South Wales, up into Queensland and has been a favourite for over 200 years for its durability and strength.

## CHARACTERISTICS

Red ironbark is a very distinctive tree of Australian eucalyptus and can be easily identified by its hard, deeply furrowed, rough bark ranging from a dark grey to blue hue. The bark, instead of being shed, accumulates on the tree and becomes rough after drying out and becomes impregnated with red kino.

The tree typically grows to around 30m - 35m high (98ft - 114ft) and produces diamond shaped flowers which are typically white, cream, red or pink in colour from April to December. The red ironbark heartwood is usually a deep dark red to red brown in colour. Whereas the sapwood is a distinctive pale-yellow colour.

The timber's texture is fine and even comes with an interlocked grain. It is extremely hardwearing and very durable, allowing for a wide range of external applications. It is listed (unseasoned) as S2 in the high strength group and J1 as very high joint group and SD3 (seasoned) reasonably high strength group but remains in JD1 for joints.

The drawback is the red ironbark is hard to work, limiting some applications where fine detailing is required. It is slow to dry, and care needs to be taken to minimise surface

checking. The red ironbark tree is known for piping, where a hollow forms in the centre of the trunk and this reduces recovery rates and therefore impacts the sectional sizes of sawn timber. Red ironbark is listed as being readily available in Australia.

## PRIMARY USE

Red ironbark is ideal for heavy engineered structures that require durability and superior strength and is listed as being ideal for bridges, wharfs, poles, railway sleepers and is used in mining, which really speaks volumes! Red ironbark is listed as being suitable for building and construction, framing, flooring, decking, especially given the durability of this hardwood, plus cladding and can be used for both indoor and outdoor furniture. **T**



Above: Red ironbark – through the rough bark comes hard compacted, furrowed with age and a unique colour.

### Further information:

With thanks to Wood Solutions:

[www.woodsolutions.com.au](http://www.woodsolutions.com.au)

and The Wood database:

[www.wood-database.com](http://www.wood-database.com)

Wikipedia the free encyclopedia:

[www.en.wikipedia.org](http://www.en.wikipedia.org)



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*The curved conveyor transporting the stud and noggins to the wall frame assembler.*

# Faster, safer, better framing

Installing a new Multinail frame line has lifted productivity and satisfaction at this truss plant – and at a cost that isn't scary. **By Donyale Harrison**

Central to the success of any frame and truss manufacturer is production levels. They're vital to profits and the ability to expand. Anything that can reliably and economically increase production is an attractive prospect, which is what led Victoria's AAA Advanced Trusses to investigate the new automated Multinail frame line.

"We've had a long relationship with Multinail," says Andrew Clements, CEO at

AAA. "For years we've been running three of their PieceMaker saws and we've always used their presses. As their machinery arm has developed, we've bought more from them and we were actually running one of their old frame lines from about 10 years ago, which has been great.

"But one of the things that has driven our relationship with the company is that they're always innovating, so when they were telling us about the new automated

frame line, we took a good look."

That good look turned into a purchase order and at the time of this interview the new frame line had been up and running for about six weeks.

"We saw improvements straight away," says Clements. "Wall frames are about 40-45% of our business and we're now able to produce more, at higher quality and with less stress on our team members.

"At the moment, in an eight-hour shift,





**Above:** This nocking station is where the noggins are cut to length and nailed to the studs.

we're getting 35-40% more out of those frame lines with the new machinery than we did with our old, and we have room to improve on those numbers when we hit our next peak production period. The quality was important to us, too, and we immediately saw an improvement in the reliability of high-quality frames because the automation removed a lot of the variability."

On the production side, it's a clear win, but what did it take to get there?

### STAFFING WINS

AAA Advanced Trusses began life in 1986 in Narre Warren East, with Andrew's father Colin at the helm.

"He began with two employees, cutting trusses on pull-out saws," says Clements. "Over the years we moved into frames, which were just nailed up on the floor in the early days, and then posi-struts. Now we're on a five-hectare site in Dandenong South with 200 employees selling all these products plus all the posts and hardware builders need to complete their frames."

Like every manufacturing business in Australia, AAA has faced challenges holding onto old staff members and recruiting new

ones. "A lot of what we do has traditionally been pretty hard work," Clements says.

"Framing has been a big part of our business and in the past, we'd be: 'Guys,



**Above:** The unique curved conveyor allows the stud and noggins to travel to the auto framer.

"At the moment, in an eight-hour shift, we're getting 35-40% more out of those frame lines with the new machinery than we did with our old."

come and nail up frames,' and to be honest, the response was usually 'urgh'. The job got done, but no one was racing to do it. With this new automated line, framing is suddenly more attractive."

Even in the short period of time since installation, the AAA team has felt the difference.

"There have been a lot of updates," notes Clements. "The new automated frame line really takes the human element out of it, so the guns are set at the same angle and held at the same distance every time, which means you very rarely get a skewed nail and if you do, it's because of a fault in the timber not because someone got tired and didn't have the nail gun at the right angle.

"From the staff side, it's all less labour-intensive. There's a lot less bending down. They're not having to use nail guns so their fingers aren't hurting. There are a whole lot of small but stressful manual jobs that have been removed."

Instead, there's more engaging work making sure that the machine can get things right. "The operators are now doing things like looking out for upcoming bits of timber with knots or other problems and saying 'Yeah, that's going to be in a bad place' and putting in new timber," Clements says. "They can use their expertise to make judgement calls like that and the various jobs on the line have distinctions between being more or less physical."

The installation of automation has also changed who Clements can have working on the frame line. "Some of our employees have been here a long time, so if I have an older employee with, say, a bit of a bad back, I can put them on different parts of that machine that are less labour intensive," he says.

"There are jobs where they can literally just sit there all day and not have to lift, or be lifting one piece of timber at a time, rather than doing the more arduous work of nailing. So that also means I have more jobs that are suitable for smaller people and people with >>



Above: The auto framer, where the top and bottom plates are nailed to the stud and noggin, to create the wall frame.

“You get good productivity out of it at a price point where most fabricators can afford it... Ours is already paying for itself.”



Above: Computerised nocking station which is fast and simple to operate.

less upper body strength. And of course, from an OH&S point of view, it's much safer.”

The safety improvements don't just come from the automated frame line taking on many of the more physical roles. “The new machinery has infrared laser stops near the dangerous parts,” says Clements. “So, if someone leans in and puts their hand to a certain point, the machine will cut out. We all make mistakes, so it's great to have a backup when people accidentally stick their fingers where they shouldn't be sticking them.”

The training requirements are also lower for staff moving onto the machines compared to traditional models and the digital nature of the machinery also makes it more attractive to younger hires.

“Training someone up happens pretty quickly,” Clements says, “And because it's all computerised, the machines work directly from the designs done in the office, which

makes life easier for the guys on the floor; they don't have to think too much and can get into a good flow of pushing out the metreage.”

### A GOOD FIT

As with any machinery addition, there were physical changes at AAA. “You need a bit of space in your plant,” says Clements. “There's a fair bit happening with the conveyor belts and different components, including the nog nailer, and obviously you need somewhere to set down the wall frames at the end.

“But a thing I liked is that Multinail could modify the length of the wall framing unit to suit the space available and my needs, because they understand that every truss and frame plant is set up a bit differently.”

One other key reason behind his decision to go with this particular option was that Multinail offered various levels of automation for the line. “They make other machinery that you can add on, like an automated stacking system that you can put at the end of the frame line,” Clements says. “We didn't think we needed that at this time, as our processes mean our wall frame stacks aren't too big for the team to lift onto trucks, but other truss plants swear by them because of the safety factors. Because we were able to buy just what we needed, it made the whole thing a much less risky financial decision.”

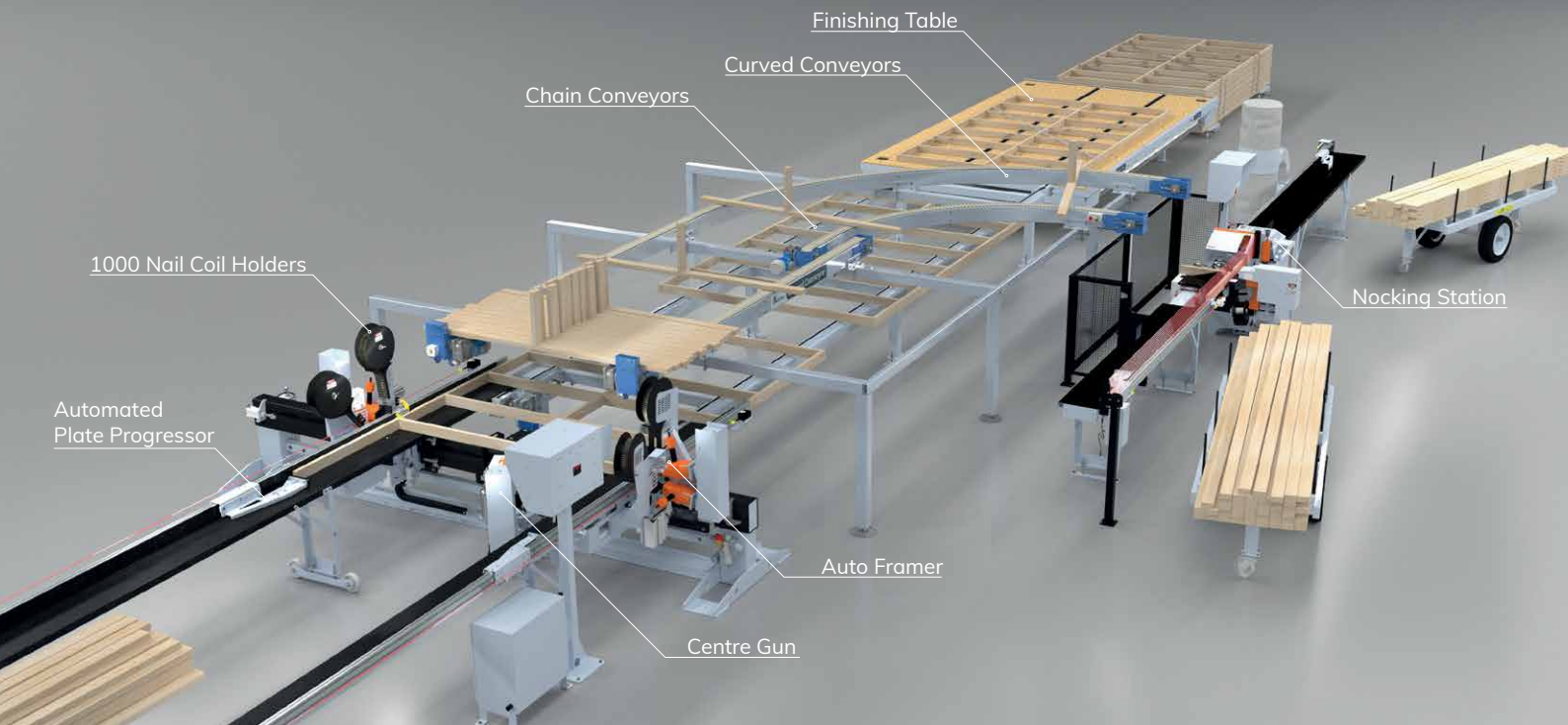
Especially in the current market, that lowering of risk has been deeply welcomed by Clements and the team at AAA. “For me, the best thing about this frame line is that, while it's not fully automated – it's not doing the whole frame including cutting and everything else – it still does a fantastic job,” he says. “You get good productivity out of it at a price point where most fabricators can afford it.

“And I think that there's a real reassurance in that. We don't know what's around the corner. We've just gone through Covid and timber shortages, all these sorts of things you can't necessarily predict. That sort of uncertainty is scary, but it's reassuring when you're not outlaying that much money yet you're still getting most of the improvements you'd get from a fully automated line. Ours is already paying for itself.”

The Multinail marque also played important roles in Clements' decision. “It being Australian-owned and -based was a big part of that,” he says. “We've had some great European saws over the years that do a fantastic job, but the one time something goes wrong, which is always the worst time, you need to be on the phone at night talking with the engineer in Germany or Switzerland and then you might have to wait for parts.

“These guys are based outside of >>>

# Multinail's Frameline System offers endless combinations to suit your business.



## Multinail's Frameline System

**The Auto Framer** streamlines wall frame assembly. It is designed for speed and accuracy, significantly increasing production output and reducing labour costs.

**The Centre Gun** reduces operator workload, increasing production speed and lowering OHS risk. It provides consistent output throughout the day and produces clean, machine-made walls. By minimising manually fired nails, it reduces nail strike risks and, when used with a Nocking Station or Component Nailer, ensures a safer work environment.

**The Automated Plate Progressor** indexes to the next stud position after each stud is nailed. This process repeats until the frame is completed.

**The Nocking Station** cuts and nails the stud/nog components. This reduces manufacturing steps in your factory, increases quality and

increases production. The Nocking Station is crucial to the speed of the wall line.

**Curved Conveyors** are built to seamlessly transfer studs and minor sub-assemblies from the assembly point to the Auto Framer operator. Their design optimises workflow and minimises manual handling, ensuring a smooth production process.

**Chain Conveyors** transport frames from the framer to the dispatch area, allowing for the final assembly of door and window frames. By eliminating manual handling, these conveyors enhance safety and boost overall efficiency.

**The Finishing Table** is designed to construct, assemble, and transport major sub-components, providing a dedicated space for finalising wall frame assemblies. Its sturdy design supports precision work, ensuring a quality finish.

## Why Multinail?

### Made in Australia

Our machinery is built by us, so nobody knows it better.

All parts are locally sourced and delivered fast.

We have a team of 15 experienced service technicians, dedicated to you and your machinery.



“We’ve had such positive experiences with the Multinail over a long period.”

Brisbane and they’ve got a warehouse here, around the corner from us in Melbourne, which makes life a lot easier. I think that too often we take service needs for granted, but having that ready support makes a real difference.”

Last year, the company changed nailplate suppliers to Multinail, “So we don’t actually make posi-struts, they’re MultiStruts now,” Clements corrects his earlier comment.

“One of the things that drove that change was the relationship we had with Multinail, because we had such positive experiences with the machinery arm over a long period of time.

“It’s not just that they’re always trying to come up with new ideas to help truss and frame manufacturers, it’s that they want our input. As they say, they can supply all the software and machinery, but they’re not truss manufacturers. They want to hear about our needs physically building the truss or the frame.”

Underpinning all these plusses has been the support provided by Multinail. “I can’t fault them,” says Clements. “They’ve always been great and if there was ever an issue on their side, they’ve never hidden away from anything, just put their hand up and sorted the problem out.

“If I ever had any cynical idea that this level of quick and thorough response was all to encourage us to change to them for nailplates, I reckon that since we’ve changed, they’ve gone up another level, which has been even more reassuring.”

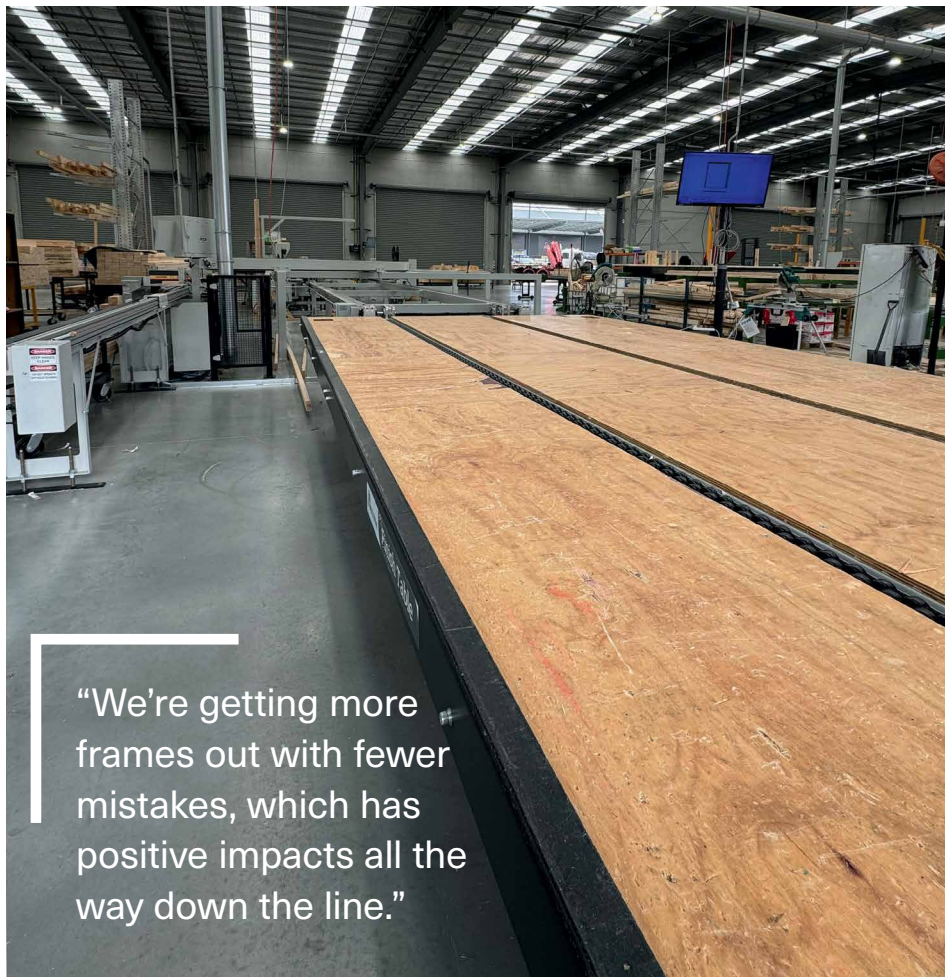
### IMPACTS ON BUILDERS

AAA isn’t the only business that has benefitted from the new frame line. Its customers have also been noticing the difference.

“Most of our work is residential, with a bit of medium density around metro and regional Melbourne,” Clements says.

“At times when we’re up and really firing, we probably do around 80 to 90 house frames a week. Things are a bit quieter at the moment, but already our builder clients have certainly noticed the difference with the quality and the way we manufacture.

“It’s not just that we can get a frame out faster, it’s having a better-quality frame.



“We’re getting more frames out with fewer mistakes, which has positive impacts all the way down the line.”

Above: Finishing table, where any final components are installed, like bracing and fixings.



Above: Auto framing simplifies the process but can make both common and raked walls.

There’s less stuff they have to do on site. When their lock-up carpenters are coming through and buzzing walls, everything is more flush. They don’t have to worry about bowed studs or people putting studs in the wrong way or skewed nails hanging out. The

next tradesmen down the line appreciate it as well.”

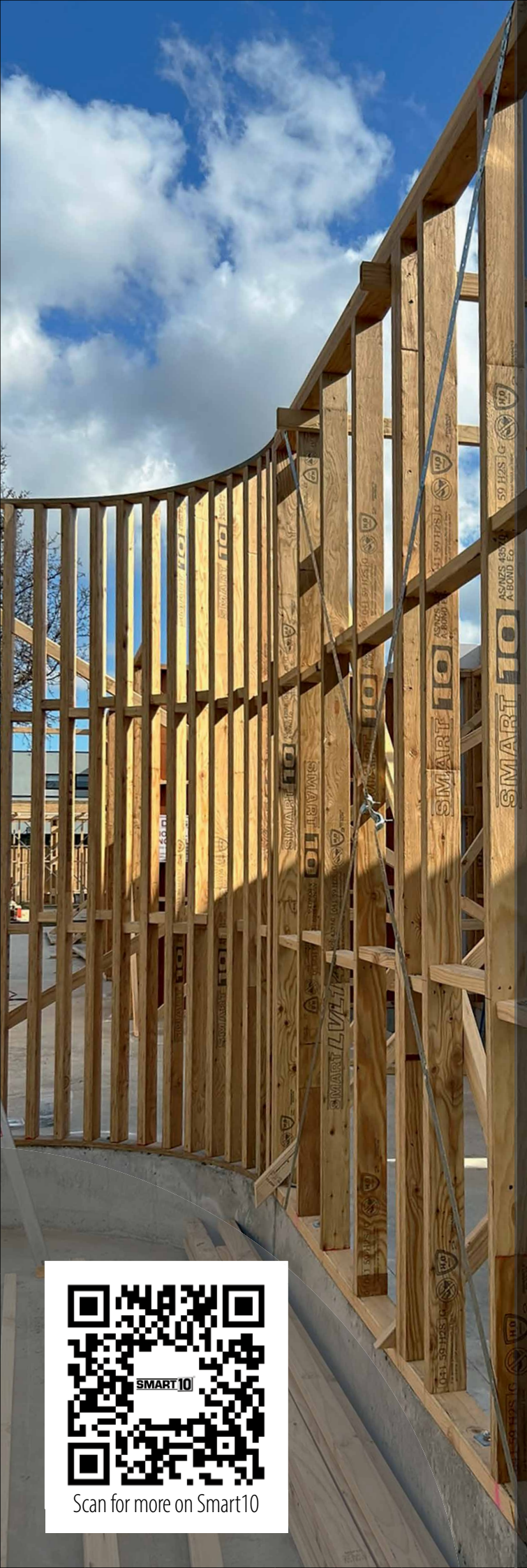
Thanks to the reliable increase in precision on the automated frame line, the already low levels of error at AAA have dropped again. “When we do have an issue, it’s usually a minor human error by the front office team rather than in the actual manufacturing, but now we’re getting more frames out with fewer mistakes, which has positive impacts all the way down the line from installation to certification,” says Clements.

“So our clients know that their orders will come out that bit faster and even better than the great frames we were already delivering.”

Clements is already looking ahead to the next boom periods. “With the new frame line, we can plan to do more,” he says. “It’s given us confidence to go and get more work, knowing that when we need to, we can turn it right up and get things happening quickly without endangering the quality.

“It’s really encouraged us to look at more automation, in fact, we’ve got something in the pipeline at the moment, but I’ll keep that under wraps for now. Stay tuned!” **T**

**For more on Multinail’s frame lines, visit [www.multinail.com.au](http://www.multinail.com.au) and for more on AAA Advanced trusses, visit <https://aaatrussesandwindows.com.au/>**



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# The swell effects of moisture on timber framing

Understanding the dimensional changes in timber. **By Carig Kay nation product engineer, Tilling**

**T**imber, a material widely used in construction, is renowned for its strength, versatility, and sustainability. However, one of the critical challenges with timber framing is its susceptibility to moisture. When exposed to varying humidity and water, timber undergoes dimensional changes—primarily swelling when absorbing moisture and shrinking when drying. Understanding the swell effects of moisture on timber framing is crucial for builders, engineers, and architects to ensure the durability and structural integrity of timber-framed structures.

## 1 TIMBER'S HYGROSCOPIC NATURE

Timber is a hygroscopic material, meaning it can absorb and release moisture from the surrounding environment. This occurs because wood is composed of microscopic cells that can hold water in two forms:

- i. Free Water: Water in the cell cavities (does not affect the timber's size).
- ii. Bound Water: Water absorbed in the cell walls, affecting the dimensions of the timber.

The hygroscopic behaviour of timber is influenced by the relative humidity (RH) of the environment. When RH rises, timber absorbs moisture, causing it to swell. Conversely, when RH drops, timber releases moisture, leading to shrinkage.

## 2 EQUILIBRIUM MOISTURE CONTENT (EMC) AND FIBRE SATURATION POINT (FSP)

The degree of swelling or shrinkage depends on the moisture content in relation to two critical thresholds:

- i. Equilibrium Moisture Content (EMC): The point where timber neither gains nor loses moisture, typically determined by the surrounding environment's humidity and temperature.
- ii. Fibre Saturation Point (FSP): This is the moisture content (usually around 25-30%) where the cell walls are fully saturated, but the cavities contain no free water. Swelling primarily occurs when timber absorbs moisture beyond its FSP. Below the FSP, moisture changes directly



*Above: Correctly detailed tall LVL wall studs including curve.*

affect the dimensions of the wood. As the moisture content drops below FSP, the wood shrinks, and when it rises above FSP, the wood swells.

## 3 MECHANISMS OF SWELLING IN TIMBER FRAMING

When timber absorbs moisture, its dimensions expand due to water binding to the hydroxyl groups in the cell walls. This process leads to the separation of cellulose microfibrils, increasing the volume of the timber. Swelling is anisotropic, meaning it occurs differently in three directions:

- i. Tangential swelling: Occurs along the grain's curvature, typically the most

significant (can be up to twice that of radial swelling).

- ii. Radial swelling: Occurs perpendicular to the growth rings.
- iii. Longitudinal swelling: Occurs along the grain's length and is usually minimal compared to tangential and radial swelling.

Tangential swelling is typically the most pronounced, and engineers must account for this when designing timber frames. Failure to accommodate for this expansion can lead to warping, buckling, or cracking in structural components.

## 4 FACTORS INFLUENCING THE SWELL EFFECTS

Several factors affect how timber swells in response to moisture:

- i. Species of timber: Different species of timber have varying cell structures, densities, and natural oil contents, which affect how they respond to moisture. Hardwoods and softwoods have different shrinkage and swelling behaviours. Denser woods often have lower EMCs but swell more once moisture absorption occurs.
- ii. Laminated Veneer Lumber (LVL) tends to swell more than a solid sawn section of the same species primarily due to its construction and the exposure of more surfaces to moisture. LVL is made by bonding together thin layers (veneers) of wood with adhesives under pressure. These glue lines between the layers can act as moisture barriers or, in some cases, conduits for moisture, depending on the adhesive and the conditions. The presence of glue lines increases the complexity of moisture movement through the material.
- iii. Since LVL is composed of multiple veneers, it has more surface area for moisture to enter compared to solid wood. More exposed edges, especially at the ends of the veneers, allow for increased absorption of moisture, leading to more swelling.
- iv. In solid sawn lumber, moisture tends to move more uniformly through the wood, while in LVL, moisture can accumulate



Above: Extensive use of LVL as studs, lintels and rafters.

- at the glue lines and between veneers, causing uneven swelling and more expansion overall.
- v. Initial moisture content: Timber that has been well-seasoned and dried to a lower moisture content before installation is less susceptible to significant swelling. The typical target moisture content for construction timber is between 12% and 15%.
- vi. Temperature: Temperature affects the rate of moisture absorption and evaporation. Higher temperatures can accelerate the uptake or loss of moisture, leading to faster swelling or shrinkage.
- vii. Surface treatments: Timber treated with water-repellent coatings, oils, or paints can limit moisture absorption, thereby reducing swelling. However, untreated surfaces exposed to water will absorb moisture readily.

## 5 IMPACTS ON TIMBER-FRAMED STRUCTURES

Swelling due to moisture ingress can have significant structural and aesthetic impacts on timber-framed buildings:

- i. Dimensional stability: The swelling of timber members can cause joints to loosen or deform, especially in mortise and tenon connections, which rely on tight-fitting elements for structural integrity. Movement within joints may also compromise the load-bearing capacity of the frame.
- ii. Warping and bowing: Uneven moisture absorption, especially when only one side of the timber is exposed to water, can cause warping or bowing of the timber. This can affect the alignment and evenness of structural elements, such as

beams, columns, and wall frames.

- iii. Cracking and splitting: In cases where timber is restrained and cannot swell freely, stresses may build up within the wood, leading to cracking or splitting. This is common in thick sections of timber where moisture gradients between the outer layers and the core cause internal stress.

## 6 MITIGATING MOISTURE-RELATED SWELLING IN TIMBER FRAMING

To prevent excessive swelling and its negative impacts, several strategies can be employed:

- i. Proper seasoning and drying: Ensuring that timber used in construction is adequately dried to its equilibrium moisture content before installation reduces the potential for significant swelling. Kiln drying or air-drying are common methods.
- ii. Moisture barriers and seals: Applying waterproof coatings or installing moisture barriers (such as vapor retarders) can help control the ingress of water into timber framing elements. These methods reduce the timber's exposure to humidity changes.
- iii. Ventilation: Good airflow around timber elements can help control moisture levels by allowing excess moisture to evaporate. Proper ventilation in roof spaces, walls, and floors is crucial in preventing moisture buildup in timber frames.
- iv. LVL frames especially should be enclosed as quickly as reasonably practical, or installed during extended periods of dry weather, to prevent swelling of the studs sufficient to generate lateral displacement in frames and around openings

- v. Ensure that floors can drain by creating drainage holes in the floor substrate
- vi. Remove bottom plates in door openings as soon as possible to prevent longitudinal swelling in the bottom plate of the frames.
- vii. Install plasterboard lining 10 mm off the floor as per manufacturers' recommendations to allow for swell that may have occurred in the bottom plate.

## 7 REMEDIAL MEASURES FOR AN EXCESSIVELY SWELLED FRAME

In the event that framing does get very wet, and construction is to continue immediately, the following remedial steps are recommended:

- i. Enclose the frame as soon as possible
- ii. Knock out noggings in the wall frames to keep the frame end studs straight. Replace noggings before lining once the framing moisture content is below 20%.
- iii. Do not line the frames until the moisture content is below 20%
- iv. If planing is deemed necessary, planing of the top and bottom veneers of LVL is allowable to return the thickness of the framing element back to original
- v. It is NOT recommended to plane back the depth of LVL as it will shrink back to an undersized member once equalised to internal moisture content conditions.

## 8 CONCLUSION

The swell effects of moisture on timber framing are a fundamental consideration in the design, construction, and maintenance of timber structures. By understanding the hygroscopic nature of wood, its response to environmental changes, and the factors that influence swelling, builders and engineers can implement strategies to minimize these effects and enhance the long-term performance of timber-framed buildings.

Using well-seasoned materials, applying moisture controls, and designing for movement are all essential steps in mitigating the challenges posed by moisture on timber framing.

Ultimately, managing the moisture dynamics within timber-framed structures ensures greater durability, reduced maintenance costs, and a longer lifespan for the building. **T**



**Craig Kay is the national product engineer for Tilling.**  
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Above: Cover from the full report.

Above: (L-R), Dr. Alastair Woodard (WPV), Kersten Gentle (FTMA), Lesia Goodwin (Gippsland Forestry Hub), Jon Lambert (Heartwood Unlimited).

# Steps Towards a Greener Future - official launch of report

Recommendations for Australian Government. **By Kat Welsh**

FTMA, in collaboration with Wood Products Victoria, the Gippsland Forestry Hub, and the Department of Agriculture, Fisheries and Forestry, launched an important document on the 18<sup>th</sup> October 2024. The recently published *Steps Towards a Greener Future* is a report specifically highlighting what is needed to support an environmental trajectory for the future of Australian housing.

The concise and researched findings within the report, makes 23 recommendations on how Australian government could meet their environmental

responsibilities (*Net-Zero by 2050*), as well as delivering their housing commitment of 1.2 million new homes over the next 5 years (*National Housing Accord 2022*). It looks at the different issues and provides a solution within 4 main categories.

The report focuses on carbon capturing, sustainable forestry, engineered wood design with offsite prefabrication, and ultimately the important message of 'if we can build out of timber, we must'. It goes into details about carbon storage and how - like many other countries are fostering - Australia can make the best choices now to protect

and contribute to global emission targets, as well as looking after the critical needs of housing its citizens.

The Morwell Innovation Centre (Victoria) hosted the launch which featured FTMA's CEO Kersten Gentle, Wood Products Victoria's Dr. Alastair Woodard, and Heartwood Unlimited Managing Director Jon Lambert. Kersten introduced Carbon Warrior, FTMA's environmental project arm, and talked about the original CW policy proposal *4 Steps Towards a Greener Future*, carbon capturing, investing in renewables, and legislating requirements for bio-based materials in future construction. She exemplified other countries that are already legislating the use of renewable materials into construction policies, and the necessity for Australia to follow suit.

Alastair introduced the *Steps Towards a Greener Future* and gave an inspiring outlook over just how simple the answers could be with the right policies in place. "The building sector has a huge impact. We use 12-20% of the water consumption, 25-40% of energy use, we produce 30-40% of Greenhouse Gas emissions, and 25-40% of solid waste generations," said Alastair. He spoke about looking at the impact of our choices when it comes to thinking about the bigger picture and the need to account for life cycle assessments in the future of construction - how the materials were mined, produced, shipped, erected, maintained, as well as end-of-life decisions (embodied and operational emissions). The report also focuses on the notions of circular economy and decisions for the beginning and end of intended purpose, that must be accounted for.

"I can't tell you what an opportunity this is at the moment for the forest and wood products sector. We've got this global

PHOTOS: KAT WELSH



Everyone focused on the presentation and facts being delivered.

concern about this big bad CO2, and we can do something really positive about it. It's a once in a generation opportunity,' said Alastair.

The 3<sup>rd</sup> presenter, Jon Lambert, gave a realistic insight into the sustainable forestry industry within Australia and the challenges that are faced by the sector when it comes to current government regulations. Currently, up to 40% of Australia's demand for timber comes from overseas - with a country so vast it begs the question why aren't we planting more?

A panel discussion followed, particularly focusing on what the contents of this report can do to assist Australia moving into the future - supporting the environment, its people, economy, and industries. It was clear that governments, federal and state, need to drive a significant change.

For FTMA *Steps Towards a Greener Future* is a concise way to keep driving awareness and education for initially the



Above: Kersten Gentle (FTMA).

frame and truss industry, but a much bigger picture that surrounds us when it comes to sustainable materials. The report will be sent to state and federal politicians and has already had preliminary interest from key political portfolios.

To find out more about the report, its purpose, or how it could be used, please make contact with FTMA. T

Kat Welsh FTMA Communications



L-R, Jon Lambert, Kersten Gentle, Lesia Goodwin, Dr. Alastair Woodard.

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# Balustrade structural design

A tilt at balustrade design. **By Paul Davis**

Welcome, dear reader, to the *italicised* world of *balustrade structural design*! If you find yourself tilting your head slightly while reading, don't worry—it's just italics working their magic. So, brace yourself for a journey that's as slanted as my excessive font choices!

One of the things that I bang on to my customers and engineers alike is that a building is not just a collection of components, it is a set of components that integrate together to form a *structural system*. So, it's important that not just the components are correctly designed but that they are arranged and connected in a coherent manner. So, when it comes to decks (or landings) there are two major parts for the design, the floor to hold people up *and the balustrade so they don't fall off the deck!*

The design of balustrades can be really quite challenging, and you would not generally be involved in that part of the design. But these balustrades are not objects free-floating in space – they connect to your timber floor structures. And it's actually *the system* formed by the floor structure and the balustrade that keeps people safely on the deck.

Last month I said that *"If there is a structure in a house that is going to kill someone, odds on it's a timber framed deck."* The balustrade is a roughly equal killer. So, the design of balustrades needs attention, which means that the design of floor-balustrade system needs attention!

Even for a domestic situation in the sort of scenario when a teen party gets a bit wild and people crowd against the balustrade at two meter spacing then each post has about 150 kg horizontal at its top. And with a height of a meter, the post is applying a twist onto the floor structure that is higher than the twist that you might apply to a bolt with a massive torque wrench.

The required load to be resisted is even higher in public spaces and it is simply *effing ginormous* if the area of the building is susceptible to crowd loads.

So those sorts of twisting loads (torques)

simply cannot be applied to the flooring or a typical timber floor joist that runs parallel to the edge of the deck – you would just get spiral splitting of the timber.

So, typically, there needs to be members of adequate strength that run perpendicular to the edge and span under the floor. Those members may be the floor joists or bearers. They may even be additional to the joists and bearers. But the point is there *needs to be something*. And it needs to be strong enough, configured properly, and in the right place so that the post can be connected to it.

I am not suggesting that it's the job of a truss and frame designer to design the deck to resist the loads. There are no span tables and as far as I know no software that is available to non-engineers to do this work. At the risk of being accused of being self-serving, *it really is a job for an engineer*.

If it's a proprietary balustrade system, then it should really be up to the balustrade provider to make sure it can be connected for adequate strength. Having said that, there is a fair chance that the balustrade supplier will make no attempt to ensure an adequate structure to fix to. And so, like a lot of problems that arise in the building industry, it occurs *at the interface* between trades and suppliers.

You don't want this disconnect to lead to a failure that leads to fall leading to a death or injury *from your floor*. It really is in your interests to make sure that it is clear as to who is designing the balustrade and its twist-resisting system. And that design will need integrating into the floor framing layout.

So, the trick here is to get in early at quoting stage and make it clear that (unless you want to do it) that you are not responsible for this aspect of the design. I'd then be backing that up by repeating the



message when you deliver a design, provide a design certification for a job, or provide the materials for the job. So at least then somewhere, somehow, someone, will have to face the music and pay for that aspect of the design and material costs. And when that is done, you may need to incorporate additional or revised elements into your framing.

If you are supplying the timber for the balustrade (whether it's an open balustrade or a dwarf stud wall), then responsibility to make sure that a safe structural design occurs probably falls fair and square on your shoulders. It's not just something that you can farm off to others *"as per AS1684"* because those details just aren't in there. Perhaps your client's engineers could do the design but, once again, I suggest you get in early at quoting stage to make sure that happens. If you don't say something, sadly, it's very likely that nobody will.

And there you have it, folks! We've navigated the *italicised twists and turns* of balustrade structural design *for timber structures*. *If your brain feels a bit more emphasised than usual*, it's a sign that you've truly immersed yourself in the topic. I hope I have introduced a new slant to your world! **T**



**Paul Davis** is an independent structural engineer managing his own consulting firm Project X Solutions Pty Ltd. The views in this column are Paul's and do not reflect the opinions of *TimberTrader News*.  
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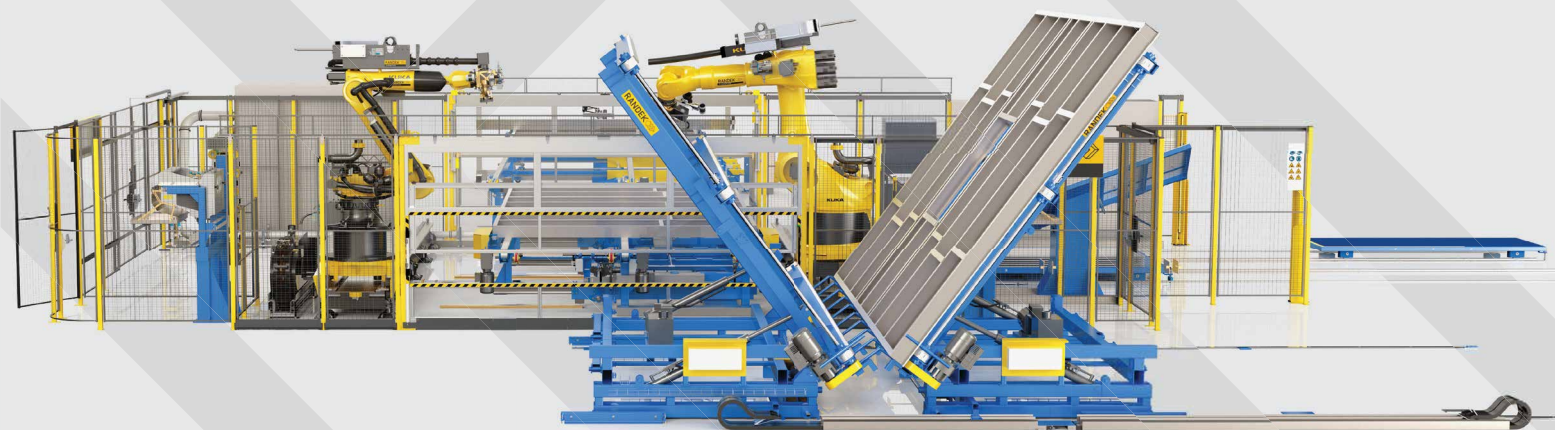
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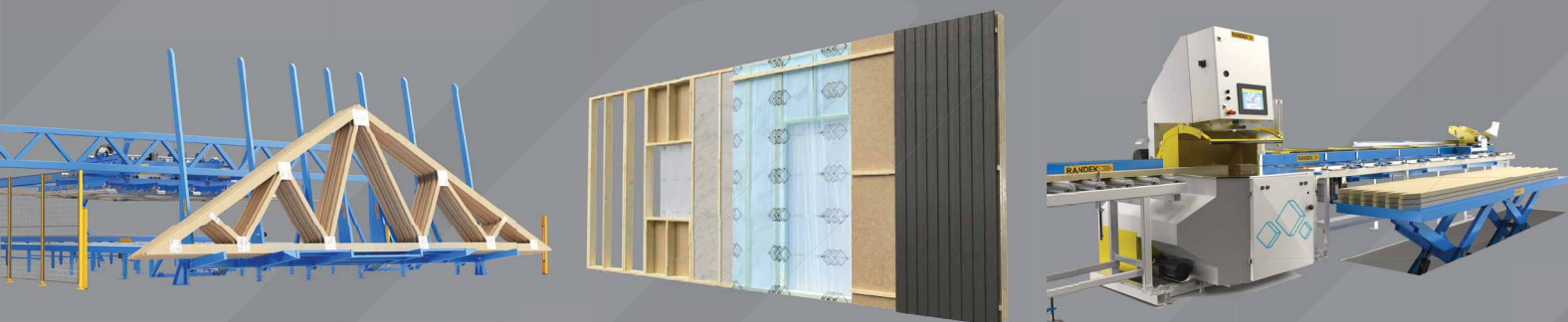


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