

# TimberTrader<sub>1</sub>

## news



# Koalas and forestry

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# ASSOCIATION NEWS

## TABMA

David Little

### RECRUITMENT CHALLENGES

This year has brought many challenges across most industries. Not the least of these is recruiting new staff.

In response to requests from members struggling with recruitment we are pleased to announce the launch of TABMA People.

### Your Recruitment Specialists

Dedicated to providing recruitment services to our members and businesses in the wider timber and building materials supply industries, TABMA People is a full-service agency with a team that understands your industry and how to optimise attracting good candidates for your vacancy.

Recruitment agencies come in different sizes and shapes. Some will recruit any role in any industry. Others are boutique. TABMA

People is different. Owned and operated by TABMA means that you can be reassured in the knowledge that the team knows the industry and the skills needed to be proficient in your business.

### Cost Effectiveness

Being a part of TABMA means that our fees are realistic and offer TABMA and Hardware Australia member discounts.

Many studies have been done on the cost of recruitment. The time taken, advertising and management of the process adds to a considerable internal cost. If, then, you make a mistake in your selection decision, that can cost up to 2.5 times the annual salary of the position being recruited. The use of a specialist recruitment agency like TABMA People takes the pressure off your team and with a guarantee on placements, gives you comfort if the candidate doesn't work out.

### Candidate Attraction Strategy

Effective recruitment is now much more than just putting an ad on Seek and keeping your fingers crossed. An effective candidate attraction strategy will target active and passive candidates via numerous channels. The experience of the TABMA People team comes to the fore as we have many years of utilising different strategies to achieve the best results for our clients and present to them the best candidates in the market.

### THE IMPORTANCE OF TRAINING

Offering formal, accredited training to employees has proven as effective a retention tool as it is an employee attraction strategy.

People now realise that the acquisition of new skills and knowledge through formal training is important to their career progress and heightens self-esteem and confidence.

### Retail Qualifications

TABMA Training, with assistance from Hardware Australia has developed the Certificate III in Retail with tailored Timber, Hardware and Nursery streams. This qualification is delivered online, allowing students to study at their convenience.



Above: Blake Moynahan from Kincumber Mitre 10 is proud to have completed the Cert III in Retail (Hardware) as a TABMA Trainee.





Above: TABMA People aims to connect timber employers with specialised, trained staff.

Having been written for the timber and hardware industries the content is contextualised to specifically suit your business and provide real integration to your skill needs.

The Cert III in Retail can be delivered to existing workers in your business, developing their skills to enhance their proficiency in the workplace and make them more confident in their daily work. The qualification can also be part of a traineeship for new workers. Trainees are an excellent way to futureproof your workforce and a Retail Trainee is an excellent way to ensure your new workers are learning important skills and gaining invaluable knowledge. Talk to the TABMA Apprentices & Trainees team about the benefit of trainees to your workforce.

## ATIF

John Halkett

### TIMBER SUPPLY ISSUES

ATIF has been receiving enquiries from aspiring first-time timber product importers who generally do not appear to have any experience in timber product imports, but often do have a background in other product imports. Some indicated that they have prospective suppliers and always want to be given an understanding of compliance requirements.

Such enquiries appear to be motivated by an understanding of the current demand for structural timber products, and the shortage of supply, plus the perception that there are significant commercial opportunities from such imports. Callers generally appear to demonstrate an inadequate understanding of the illegal logging due diligence requirements, and other statutory and building code requirements.

Some timber product imports have given rise to concerns being expressed by ATIF member companies, and others in the timber supply chain and builders that they do not always comply, notably with the requirements of building codes.

ATIF Chairman Nils Koren has affirmed

that complaints received about possible non-compliance were taken very seriously by ATIF to protect the overall reputation and credentials of the timber supply chain.

Koren also reiterated the ongoing challenges around the issue of sourcing additional timber product supplies. He said supply sourcing continues to be exacerbated by the shortage of containers, shipping space availability, delays, port congestion and industrial action. This was resulting in steeply climbing costs and charges collectively contributing to serious difficulties across the entire supply chain and for building and construction industries.

ATIF will also continue to explore further avenues of supply, particularly of structural softwoods, including interaction with trade associations through 2022.

Supply continues to be exacerbated by container shortages, available shipping space, port congestion and industrial action.

### PROSPECTIVE TRADE SANCTIONS AGAINST RUSSIA

ATIF has written to The Hon Dan Tehan MP, Minister for Trade, Tourism and Investment regarding the potential negative impacts on the Australian timber supply chain, and on building and construction activity if trade sanctions are imposed on Russia. At their request ATIF has also provided advice to the Commonwealth Treasury on this matter.

ATIF estimates that there will be substantial detrimental consequences, notably on the supply of engineered wood products (EWP) to building and construction projects if trade sanctions are imposed. ATIF estimates that restrictions on timber product imports from Russia will result in a 10-20% reduction on employment across the supply chain. Subsequent delays to building »





activity are also likely to further exacerbate supply difficulties and put upward pressure on product and building prices.

ATIF believes the Australian housing industry will be faced with a significant risk should Russian timber product imports be threatened by trade sanctions. While the complexity and instability of the political scene in Europe is acknowledged, severe trade sanctions against Russia will result in substantial risks to the Australian housing industry.

A number of ATIF member companies import timber products from Russia, notably a range of EWP. Collectively it is estimated that these imports supply somewhere between 40% and 50% of the Australian building market demand. These products include LVL, including formwork LVL that is an essential component of all concrete constructions in multi-residential, high-rise, commercial buildings and some civil works, and I-Joist beams.

ATIF respects the moral stance that the Commonwealth Government has assumed in relation to the current Russia-Ukraine situation. This notwithstanding, ATIF believes that any sanctions placed on the Russian suppliers in a time of global timber product shortages will adversely affect the Australian economy.

**For further ATIF-related information contact John Halkett at: [john.halkett@bigpond.com](mailto:john.halkett@bigpond.com) or 0417 421 187.**

## TTIA Brian Beecroft

### FLOOD DISASTER ISSUES

Timber businesses would be aware of the deluge and weather-related havoc that was being wrought on the east coast at the time of writing.

TTIA Members have been provided with comprehensive legal advice to assist in clarifying the rights and obligations regarding their employees at this time of the devastating flood situation.

Briefly, an employer can't ask employees to start or continue to work during severe and inclement weather if it's unreasonable or unsafe. Employers don't have to pay their employees when this happens, unless an award or agreement says they do.

Where the employer has to temporarily close as a result of a natural disaster or emergency, employers will have to consider available options for employees. TTIA can advise on the options available.

There are also considerations in relation to

carer's leave in the case of schools closing and employees needing to look after children.

It should be noted that to be eligible to take community service leave, the employee must be part of a recognised emergency management body like a Bushfire Authority or State Emergency Service. Proof of this may be requested.

"Any business with any further queries relating to how the recent floods interact with employment entitlements are invited to contact the national **TTIA Timber Employers Hotline on (02) 9264 0011 or 0419 012522**".

### DISASTER RELIEF FOR SMALL BUSINESS

NSW: [www.nsw.gov.au/disaster-recovery/disaster-relief-and-support/for-small-businesses](http://www.nsw.gov.au/disaster-recovery/disaster-relief-and-support/for-small-businesses)

Queensland: [www.qra.qld.gov.au/funding-programs/funding-individuals-not-profit-organisations-and-businesses](http://www.qra.qld.gov.au/funding-programs/funding-individuals-not-profit-organisations-and-businesses)

If in any doubt about your legal rights and obligations, **the TTIA team is able to assist during or outside working hours, so don't hesitate to call us (02) 9264 0011.**

Our thoughts are with all TTIA Members and their staff affected by this emergency event and let's hope the situation on the ground improves during the course of the coming weeks.

## MGA TMA Marie-Claire McKiernan

### DEALING WITH EXCESSIVE ANNUAL LEAVE

There may be situations where businesses have employees who have accumulated an excessive annual leave balance. Below is information on how employers can deal with the issue of an employee's excessive annual leave accrual.

#### When is annual leave 'excessive'?

Generally, an employee is considered to have an excessive annual leave balance if they have more than:

- 8 weeks of annual leave, or
- 10 weeks of annual leave if they are a shift worker.

#### Dealing with excessive annual leave accrual

Some modern awards (such as the General Retail Industry Award (GRIA) & Timber Industry Award (TIA)) and registered agreements contain provisions about how employers can deal with employees who have an excessive annual leave balance. Generally, these include the following:

1. **Agreement with employee to take annual leave**

Where the employer has to temporarily close as a result of a natural disaster or emergency, employers will have to consider available options for employees. TTIA can advise.

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The first step is that employers should have a conversation with the employee to genuinely reach an agreement on how to reduce or eliminate their excessive annual leave accrual.

## 2. Direction to take annual leave

Under the GRIA & TIA, if an employer has genuinely tried to reach agreement with an employee but agreement is not reached, the employer may direct the employee to take a period of paid annual leave if the following conditions are met:

- The employer must tell the employee in writing that they need to take annual leave;
- The employer must give the employee at least 8 weeks' notice (and not more than 12 months) of when the leave will start;
- The annual leave has to be at least 1 week long;
- The annual leave cannot result in the employee having less than 6 weeks of accrued annual leave; and
- The leave must not be inconsistent with any leave arrangement agreed by the employer and employee.

## 3. Cashing out annual leave

If the employee does not wish to take a period of annual leave, another option the

employer has is to enter into an agreement with the employee to cash out their annual leave accrual.

An employer cannot force an employee to enter into an agreement to cash out annual leave – it must be mutually agreed between both parties.

Under the GRIA & TIA, there are certain requirements that must be met before an employee can cash out their annual leave. This includes the following:

- The employer and employee must enter into a written agreement to the cashing out;
- The agreement to cash out annual leave must not result in the employee having less than 4 weeks of annual leave;
- The payment for the cashed-out leave has to be at least the amount that the employee would have been paid if they took the leave; and
- The maximum amount of annual leave that may be cashed out in any period of 12 months is two weeks.

If the above requirements cannot be met, then the employee cannot cash out their annual leave entitlements.

If the employee is cashing out their annual leave, payment for the cashed out annual leave must be the same as what the

employee would have been paid if they took the leave. This means that if the employee is paid annual leave loading during their employment, it will need to be paid with the cashed out annual leave.

If you have any questions on how to deal with employees with excessive annual leave balance, **please contact the MGA TMA Legal and IR team on 1800 888 479 or [legal@mga.asn.au](mailto:legal@mga.asn.au)**

## TIMBER PRODUCT KNOWLEDGE COURSE

MGA TMA in association with Timber Training Creswick (RTOid #4168), are excited to offer the short course: **FWPCOT3302 Access and Provide Timber and Wood Product Information**.

Registrations are open for the 2-day timber product knowledge training being held in Victoria on 8 and 9 June 2022.

The course is designed for timber and wood product salespeople who need to provide comprehensive advice to customers on the correct timber to use for their applications.

Our March course dates sold out in record time so register today via **[www.mgatma.com.au/training/creswick-timber-training-access-and-provide-timber-and-wood-product-information](http://www.mgatma.com.au/training/creswick-timber-training-access-and-provide-timber-and-wood-product-information)** T





# INDUSTRY NEWS



## Joinery **job tracking**

An app to keep on top of your order books and complex jobs.

Most busy F&T plants these days rely on job-tracking software that helps their teams manage multiple competing orders and maximise efficiencies. Now, thanks to Homag, a digital job folder is available for joiners and furniture makers, too.

As the market has both shifted to more customisation and boomed at the same time, order books at many businesses are full and there is more information than ever to keep track of on each job. Homag's productionManager allows you to bundle all the information about a single job centrally.

Carpenters and joiners can use the digital job folder to gather all production-relevant data in one place, replacing numerous paper documents in production.

Information can be imported from ordering and design systems into the productionManager web app or created directly in the software. It updates changes immediately and the same data is available to all team members via laptop or tablet. Drawings, images or further supplements can also be easily added. Because the files are web-based, everyone is working off the

same information at the same time. productionManager also tracks the progress of each job in real time, down to multiple components being assembled by different teams who can update each other via web.

The app can be billed monthly or annually and can also be cancelled within these cycles and because it's web-based software, it's always up-to-date. productionManager integrates seamlessly with other Homag software and also interfaces smoothly with imos iX, Borm ERP systems, SWOOD or SmartWOP. While data is exchanged between the different manufacturers' software solutions automatically in the background, users see a uniform and lean solution from a single source.

**For more, visit [www.homag.com](http://www.homag.com)**

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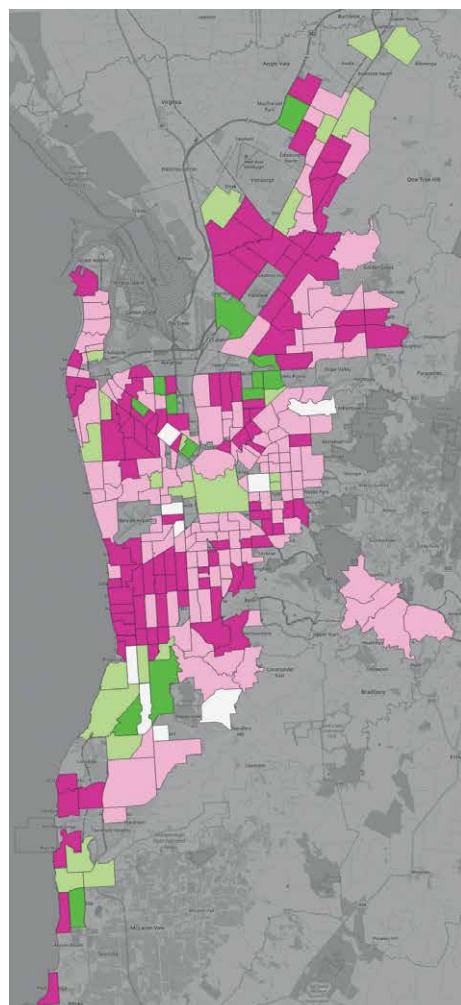




**Above:** Munno-Para-West, a northern suburb of Adelaide. In 2011 there were still multiple mature trees and more open green space.



**Above:** Ten years later, the residential tree cover had decreased by 74%, adding to the heat island effect created by many suburbs.



**Above:** A heat map of Adelaide.

## Canopy counting

Satellite technology is mapping urban heat and trees.

Aerial imagery company Nearmap began in Perth in 2007. Using satellite images of urban and regional areas, combined with sophisticated data analysis and AI imaging tools, it provides information to groups as varied as developers and disaster relief planners. Since then, it's expanded globally and been used to assist many cities in their planning. One of these is Adelaide, where it's been tracking tree cover for over 10 years.

In that time, half of Adelaide suburbs have lost at least 9.8% of residential tree cover. Compared to 2011, cover fell by 8.6%, with 131 suburbs out of 281 losing at least 10% relative tree cover in that time and only 18 seeing a relative increase of at least 10%. Suburbs with major new developments tended to fare worst. Munno Para West in the north lost a whopping 74% of cover over this period, down from 17% of the land surface at the start of the survey period having trees 2m or taller, to just 4.4% by the end.

Dr Bryan Boruff, Environmental Geographer and Associate Professor in the University of Western Australia (UWA) School of Agriculture and Environment said, "We know from previous research that removing tree canopy can increase the urban heat island effect, and result in surface temperatures up to 10° hotter than

surrounding areas. By appropriately increasing the number of trees in a local suburb we can reduce the associated health impacts and increase wellbeing."

Heat mapping data reinforces the message: cooler suburbs (shown in shades of green) also tended to be the leafiest, while the hottest had the least tree canopy (Munno Para West is the uppermost dark pink shape.)

Nearmap has supplied data to major Australian cities including Adelaide in a bid to help local governments recognise priority areas for urban reforestation. Other uses of the company's technology have included before and after reports for areas affected by natural disasters, helping to expedite insurance claims, find access routes and flag choke points in evacuation routes, helping local councils and state governments to plan ahead for future safety.

"By revealing the impact of planning decisions on our neighbourhoods, Nearmap can give urban planners, designers, councils, and government organisations the information and tools they need to create more resilient and sustainable communities," says Dr Michael Bewley, Senior Director of Artificial Intelligence Systems, at Nearmap.

**For more, visit [www.nearmap.com/au/en](http://www.nearmap.com/au/en)**





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## Fabulous fish market

A floating glulam roof will put timber front and centre at the new Sydney Fish Market.

**M**ultiplex continues the love affair with timber that saw its Marrickville Library build sweep design awards with its new Sydney Fish Market.

The sinuous roof that will form the most eye-catching part of the build will take 1600m<sup>3</sup> of glulam – along with over 150T of steel. The complex engineering, as well as the full supply to site, was contracted to Rubner Holzbau S.R.L. in Italy – a team of specialists who have managed the engineering of some of Europe's largest and most complex timber constructions.

Adam Shears, Director of Theca Timber said, "As partners of Rubner Holzbau in Australia, we were involved from a very early stage. The challenge was spelled out clearly: to identify the most sustainable and efficient way to transport the roof to site, allowing at the same time for the quickest possible erection time, remaining as faithful as possible to the original project design."

Theca Timber and Rubner Holzbau responded with advanced construction solutions and DfMA strategies. In addition to the executive design, Rubner Holzbau is responsible for the creation of prototypes for

the roof's crucial joints and the production of bespoke elements more than 30m long. The special shipment from the Italian Alps to Sydney includes unloading at the site by water, provision of technical assistance during assembly and local project management.

The building's roof is an integral part of the Market's design and sustainability strategy. It's designed to collect rainwater for reuse and for the potential production of solar energy. Its shape uses wind to extract warm air and

protects workers from southerlies. The canopy, which also includes aluminium, is designed to be as permeable as possible, minimising the need for air conditioning while diverting direct sunlight.

Rubner Holzbau and Theca Timber will be exhibiting 'in person' at the Timber Offsite Construction Conference & Exhibition, 21-22 June at Crown Promenade Melbourne.

**For more info, visit [www.timberoffsiteconstruction.com](http://www.timberoffsiteconstruction.com)**



PHOTOS: COURTESY FRAME AUSTRALIA



## In brief

**P**EFEC released a ruling on timber from Russia and Belarus on 4 March 2022, saying that under the PEFC certification scheme it is considered 'conflict timber'. It cannot, therefore, be used in PEFC-certified products, or projects where the use of PEFC-certified materials is a part of the contract (including most government and all GreenStar projects). Materials that were in stock or on the docks as part of an order before 2/3/22 are exempt from this ruling. The categorisation of timber from Russia and Belarus as conflict timber follows the adoption of the Resolution on Aggression against Ukraine by the United Nations General Assembly, see <https://digitallibrary.un.org/record/3958976?ln=en>. FSC has released a similar ruling, however, the Department of Agriculture, Water and the Environment (DAWE) has advised manufacturers that timber from Russia and Belarus will not be banned from import into Australia per se at the time we went to print. Major shipping companies suspending transport to and from Russia and economic sanctions stopping banking traffic may render this distinction moot. This is expected to have a significant impact by mid-year as 30-40% of

Australian LVL is sourced from certified Russian forests and up to 50% of Australian plywood is sourced from Chinese manufacturers with a significant portion sourced from Russian certified forests.

**W**ith a Federal election so close you can smell it, politicians are breaking out the promises and loosening the purse strings. Local members are already using their power to gain specific commitments for their regions. In Cowper, Nationals MP Pat Conaghan has announced a plan to partner with the NSW Government to deliver grants of more than \$86 million over five years. These would support the establishment of new plantations to lock in future wood supply in line with the National Forest Industries Plan. Meanwhile, South Australia's Leader of the Opposition Peter Malinauskas pulled out a sweetener ahead of that state's election (which will be happening just after we go to press), announcing \$24 million in funding to establish Mt Gambier as a forestry 'Centre of Excellence' in a package that also includes training facilities and upgraded fire towers. For the full stories, visit [www.newsofthearea.com.au/](http://www.newsofthearea.com.au/)

**plantation-grants-announced-to-consolidate-wood-supply-88512** and <https://borderwatch.com.au/news/2022/03/11/labor-chipping-in/>

**T**he unexpected collapse of Probuild at the start of March has left a lot of people out of work and pocket. For tradies who've been affected, hipages is offering one month's obligation-free trial of their online tradie marketplace and a six-month trial of Tradiecore. **Any licensed tradie with an ABN that has been impacted by Probuild entering administration can register via [www.hipages.com/backonyourfeet](http://www.hipages.com/backonyourfeet).**

**V**ictoria's ongoing stoush between the United Firefighters Union and the government over presumptive rights continues. The proposal extends a program that assumes certain types of cancers in firefighters are connected to their firefighting work to CFA members and some other non-union firefighters and crew. However, as the Victoria Forest Products Association flags, Forest Industry Brigade members have once again been left out. The VFPA is fighting for their inclusion in future.

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Above: Members of the Hyne team with the Snowy Valleys Council Mayor and Councillors.

## Happy Birthday, Hyne!

Looking very good for 140, the team took time to celebrate.

Since 1882, Hyne Timber has been keeping Australians building. Five generations after the company was founded, James Hyne hosted a community event as part of Tumbbarumba's annual Tumbafest.

"Hyne Timber has proudly sponsored Tumbafest for many years and this year's event was perfect timing for us to also

celebrate our 140 years with some of our key community supporters," Hyne said.

"We wanted to give back to the wider community that has supported us through the 21 years we have been part of the town, so we sponsored the Hyne Community Markets to make them accessible to all without the need for a ticket."

Hyne Timber also hosted a small marquee by the creek, with invited guests including Justin Clancy MP and Snowy Valleys Mayor, Ian Chaffey who both said a few words of support to commemorate the milestone.

James Hyne thanked the Tumbafest committee for getting into the birthday spirit and paid tribute to the many workers and the community around them who have helped the company survive and thrive through trials and tribulations – including the Maryborough flood that was inundating operations there as he spoke.

One of the Tumbbarumba Mill's longest-serving team members, Doug Peel, was invited to cut the birthday cake using a novelty, timber-handled hand saw.

"I've been working at the site in Tumbbarumba for 42 years, double the time Hyne Timber has owned it, even after losing an arm there at 19," Peel said

"It was a real honour to be part of the company's 140-year celebrations with James Hyne and to be asked to cut the cake. The surprise hand saw certainly got a laugh from the crowd. It isn't too often you see a cake cut like that!"



Above from top: Fran Brown, Glen Muller, Uncle John Casey and Auntie Lorna; Erin Gilliland hands out the first slices of cake to enthusiastic eaters; Doug Peel cutting the cake with James Hyne



Above: Mike Beardsell, Jon Kleinschmidt, Tom Bruce-Jones and Belinda Lengenberg.



## UPCOMING EVENTS



### APRIL

#### ADTW

The Australian Timber Design Workshop, sponsored by WoodSolutions, is a two-day intensive professional workshop for building design professionals interested in timber-rich construction. On 20-21 April, \$250-1100, facilitated by Prof Gregory Nolan. **For more, visit <https://short-courses.utas.edu.au/courses/australian-timber-design-workshop-2022>**

### MAY

#### BUILT ENVIRONMENT WEEK

Melbourne will host BE Summit, DesignBUILD, Total Facilities and Digital Construction Week at the Melbourne Convention Centre 10-13 May. The event is a one-stop expo for building professionals with a focus on BIM. **For more, visit <https://designbuildexpo.com.au/>, <https://totalfacilities.com.au/register/> and <https://besummit.com.au/>**

### JUNE

#### TIMBER OFFSITE CONSTRUCTION

Experts will talk about advances in building design and construction through the lens of existing projects, with in-person and live streaming of local and international speakers and a mix of live and online delegates, including single-session tickets. Running 21-22 June at the Crown Promenade Melbourne. **Details and registration available at [www.timberoffsiteconstruction.com](http://www.timberoffsiteconstruction.com)**

### SEPTEMBER

#### PREFABAUS 2022 CONFERENCE

Set for the Brisbane Conference and Exhibition Centre, on 5-7 September.

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# Multi media

FTMA Australia's new podcast and report make it easier than ever to get the news you need.

Like most of us, Kersten Gentle isn't a fan of 2022. "I told a friend the other day, if I see four horsemen riding down the street, I'm out of here!" says Gentle, executive officer of the Frame & Truss Manufacturers Association of Australia.

Managing the interests of an industry juggling supply chain issues, unprecedented demand, a global pandemic and now floods while still recovering from the Black Summer fires requires a hell of a ring master and a good set of acts. Recently, Gentle has added two to FTMA's lineup.

## TRUSTED INSIGHT

The first is a new report, *Trusted Insight*, commissioned by FTMA with guest specialists every second month and regular reports in the alternating months from Tim Woods, managing director of IndustryEdge.

Throughout the pandemic, FTMA has asked Woods to write timber and housing updates which the Association has made available to everyone in the industry. The new publication expands on this brief and provides more detailed analysis with useful takeaways for members.

The first issue came out in February, titled *Price is not the enemy: it's an unprofitable supply chain that's out to kill us!*

Using language as straightforward as the title, the paper outlines why the current issues with rapidly climbing timber prices are far from being a problem. Instead, they

represent an opportunity for us to reset the supply chain so that timber products aren't always having their margins squeezed by people making real money elsewhere in construction. As Woods writes:

"Ultimately, the final price paid by the end consumer represents the total value that can be shared throughout the supply chain. The price you receive represents the total value that can be shared in the supply chain, up to and including your business.

"If that final price is inadequate to meet the income needs of the entire supply chain, one or more businesses in the chain are at risk. In a supply chain, the weakest link (from an economic standpoint) is a threat to the health, and sometimes even the survival, of all.

"In the most dramatic situations, a supply chain fails and businesses and sectors disappear or decline to irrelevancy, usually because a 'disruptor' product enters the market with a more efficient and durable supply chain."

He goes on to discuss the impacts of rising inflation and timber's role in that, as well as providing data to show that the cost of structural timber relative to the overall



Above: Kersten Gentle has taken her industry advocacy to a new platform with a podcast (top).

**"This is our way of acknowledging that we haven't been able to sit down and have a cup of tea and talk about these issues face to face."**

cost of a home build has fallen by nearly half since June 2004.

A range of potential predictions – including the possibility that supply will fall further, made well before the Russian invasion of Ukraine – round out the report, helping fabricators to plan as best as is possible in these changing times.

### EFFIN TEA TIME

Though its formal name is F&T Time, the dual pronunciation is no accident. Gentle's new podcast aims to get news out to her membership quickly and easily.

"A lot of our people are working long hours and have family responsibilities when they get in," she says. "So they can't be online all day. Magazines like *TTN* and newsletters like ours are great, because they give you all the things you need to know in one place, but sometimes things are changing quickly and we need to get information out without that lag.

"Podcasts are ideal because you can listen while you're driving, or while you're making lunch. Our industry has done some great technical podcasts over the years, but I'm all about the people and the issues."

It's not a hypothetical; as we spoke, Gentle was in the middle of putting together a special podcast on the PEFC ruling regarding wood products coming out of Russia and Belarus being listed as Conflict Timber, which had happened just days before.

"That's the beauty of the podcast," Gentle says. "We can reach out on the day and talk with experts. I've just been on the phone with Leon from Tilling so we can hear his take. Kurt from Vida is flying in today and we're going to be talking tomorrow. People need to know, and sometimes they need to know now."

During the Covid era, it's been impossible for Gentle to make her usual rounds of the states to visit members, so the podcast is one way of getting stories out, and a fairly painless one at that.

"This is our way of acknowledging that we haven't been able to sit down and have a cup of tea and talk about these issues face to face," says Gentle.

The software cost just \$230 and Nikita Gentle, FTMA Marketing Co-ordinator has had to learn on the go as she edits the

podcasts in-house. Husband, Scott, has done the voiceover for the intro and, Gentle adds, "my nephew's going to write us a little jingle if they take off. The whole idea is to talk to people in the industry and get out stories you can listen to while you're working or driving."

At the time of writing, there are two scheduled podcasts as well as the special episode. The first was with Tim Woods, covering some of the same territory as in *Trusted Insight*, as well as looking at areas he thinks are ripe for investment.

"He thinks the future is in dwellings, but in mid-rise," Gentle says. "So members need to start looking at the mid-rise space and what they can do there. Right now, they've been so busy fighting for timber and to sort staffing issues, they haven't worked on these problems."

The second was with Ross Hampton, CEO of Australian Forest Products Association (AFPA) talking about his organisation's advocacy work, how to get involved in the elections coming up and the marathon that is lobbying.

In the special edition on the impact of Conflict Timber, Responsible Wood's Simon Dorries outlined what the PEFC ruling means and who it will affect, while Tilling's Leon Quinn flagged that Australian importers were already investigating new sources of EWP and VIDA Australia's Kurt Schrammel assured listeners that European companies are committed to their Australian customers and coming up with EWP alternatives.

For the next episode, something a little friendlier, says Gentle: "I'm doing a short one with Jim Cheney because I want to promote FTMA's Clive Martella Service to Industry Award, which Jim won last time."

### COMMUNITY BUILDING

With initiatives like these, Gentle's stewardship of FTMA can bring to mind the old Friendly Societies of the 19th and 20th centuries. While her primary focus has been on advocacy and information sharing, there is a strong thread of community support that runs through her work.

Mental health has been an ongoing focus for Gentle. "It's been a really rough time. I think a lot of us have been playing down how hard it has been, but the truth of the



Edition 1 | Feb 2022

## FTMA Trusted Insight

PRICE IS NOT THE ENEMY: IT'S AN UNPROFITABLE SUPPLY CHAIN THAT'S OUT TO KILL US!

WITH TIM WOODS OF INDUSTRYEDGE



FTMA Trusted Insight

February 2022

### Price is not the enemy: it's an unprofitable supply chain that's out to kill us!

With Tim Woods of IndustryEdge

A new year is the perfect time to challenge some of the old thinking that may have been holding us back. New year's resolutions and all that.

Sometimes, the challenges are confronting and that may prove the case here, also.

We all know that in 2021, building costs and building material prices rose sharply. It is hard to avoid the commentary that "someone else is making money from these prices, but not me." The problem with that approach is it suggests higher prices are a problem and bad for business.

That is a serious error and is the type of thinking that creates behaviours that bring supply chains unstuck.

What has been very difficult for the timber supply chain is very sharp price increases for materials, including timber.

A supply chain with little experience of managing price movements has literally been shocked by the magnitude and pace of the required increases.

Here we set out why higher prices are good for supply chains, including for the housing industry, fabricators and the timber supply chain and how we might manage prices in the future, to maintain a healthy supply chain.

#### Supply chain health should not be a competition

There is an adage that a successful business is one with both successful suppliers and customers. In part this means every business is dependent upon the success of the supply chain, from the start to the end.

For fabricators, that means success relies on the customers being successful – that's the builders – and everyone is across that. We know we need them to be profitable!

However, it also means success depends on the suppliers and the supply chain being successful and profitable. For fabricators, that means we are all tied to the success of sawmills, trucking businesses, wholesalers, harvesting contractors, forest owners, maintenance businesses, investors and everyone else playing a part, regardless of how small, in delivering a house to a family.

A truly healthy supply chain would result in each business being paid adequately for the value they add in the process. That does not mean each business receives an 'equal' share, but it does mean they earn sufficient income for them to continue to invest and stay part of the supply chain.

Supply chains without this adequacy – could we call it fairness? – are fragile. The risk of part of the supply chain losing interest and under-investing or even divesting increases if their returns are inadequate.

FTMA TRUSTED INSIGHT #1

1

INDUSTRYEDGE Pty Ltd, 2022

Now, past performance is no guarantee of future success, but for all that period, the average annual inflation rate has been 2.2% per annum, and we can safely surmise over the next two to three years, it will be only a little different, probably tracking higher than 3%, but not for very long.

#### How to avoid price 'stags' and maintain supply chain health

In business, as in life, uncertainty is death. If you don't know the future price of your materials, how do you quote the next job, for instance?

To achieve some certainty, most businesses use tools that provide assessments of demand for their entire supply chain, as a means of assessing the demand for their own products. That allows them to order materials and coupled with other data – like the CPI we looked at earlier – can even allow for some price planning.

The latest structural timber demand forecast – which is theoretical and based on housing approvals and historic consumption, continues to show that demand for timber will peak in March 2022 – in around one month's time – before it begins to decline and returns to manageable levels late in the second half of 2022.

This forecast, from IndustryEdge's Wood Market Edge online platform does not tell us about two other important elements: supply-chain capacity and supply. The forecast only tells us how much timber the market is likely to need at a particular point in time, to build the housing in front of it in normal times.

On supply chain capacity, the reality is that much of that theoretical demand will not be built for some time. The building supply chain has no spare capacity and in fact, much of the system has reduced capacity over the last two years. Labour, materials and the "friction" of work here, there and everywhere and all the associated delays, has taken its toll. That includes fabricators, of course.

In any event, the forecast is below, using a combination of new approvals and uncompleted work, along with two decades of consumption data.



FTMA TRUSTED INSIGHT #1

6

INDUSTRYEDGE Pty Ltd, 2022





**Above:** Each podcast starts with Gentle asking the interviewee how they take their 'effin' tea.

matter is, there are lot of business owners who are truly struggling," she says. "There is so much hardship in the world right now with war and people still struggling with Covid-19, now floods when we're still getting over the fires.

"Trauma sticks around. We need to talk through these things and find ways to get everyone through this incredibly rough time. Everything that we as an Association and as an Industry can do to help our members come together and connect helps with that goal. I know there's a bunch of gruff old buggers out there who pretend they don't need to talk about it, but put a beer in front of them and let them go, and they will all admit they feel a lot better afterwards."

She jokes that it would have been easier to cancel the upcoming FTMA 2022 Conference, given Covid, but instead says, "It's going ahead as we recognise the importance of members getting together. It will include fundraising with Mates in Construction as I've been truly worried about some of our members throughout the pandemic. I'm honoured that some trusted me enough to give me calls during lockdowns, especially in Victoria, asking me to check in on another fabricator or simply say 'Can I just talk to you for half an hour?' That's a privilege. They're all looking out for their staff but not for themselves. And that takes its toll."

The other area where Gentle is pushing for change is for more women in the

**"Our industry doesn't recognise and celebrate our own enough. We have the most amazing people in this industry."**

industry. "There's not enough of us!" she exclaims.

"There's not enough diversity overall, which is a problem in itself because you get a better range of solutions and a more resilient culture with more diversity. But there are still holdouts of sexism that deter women from entering the industry."

Some of that is overt – I've personally sat in conference audiences and heard "here she goes" when Gentle has spoken up, but seen that men in similar industry roles are able to ask questions for their membership uncriticised. At the start it used to get Gentle down, but she fiercely defends her right to ask

questions and represent her members.

Some is unintentional. Men-only dinners, or suppliers taking builders on weekend trips, but excluding senior female sales representatives... "If these are actually business events, that's no longer acceptable," says Gentle. "Our industry has come a long way in my 30 years. In the beginning, I'd often be the only female at the table, but the numbers are slowly changing and as a result some men in our industry need to change their way of thinking or acting."

The FTMA Board has provided solid backing for Gentle's initiatives. "One of the best things about our Board is that, while we're an employer organisation, we're one with a lot of family businesses and small businesses," says Gentle. "These are people who know that if you want your company to thrive, it's to your benefit to be collaborative and inclusive and share information as widely as possible within the industry."

This includes reaching out to unions – too often depicted as the enemy within construction industry narratives.

"I have a great relationship with Michael O'Connor [the national secretary of CFMMEU Manufacturing]," Gentle says. "We've had our ups and downs, but we've worked productively for years. Which meant I could ring him during Covid and say 'Listen, what passes the pub test here and what doesn't?'"

"Because we had to work together. Everything I promote is about my members

working with their employees to get through this together. It can't be adversarial if you want to succeed."

While it's not outside the realms of possibility that O'Connor will one day pop up on F&T Time, the focus remains on informing members and telling members' stories. "I want it to be a mixture of the issues and the personalities," says Gentle. "Our industry doesn't recognise and celebrate our own enough. We have the most amazing people in this industry, but we rarely hear from them."

Issues including absenteeism – up to 65% in regions smashed by Covid at the moment – and booked-out schedules will be upcoming topics, and she hopes members will come forward with their own ideas, too.

"Broadly speaking, we're still in a difficult time," says Gentle. "It's leadership and communication that keeps people going through. We need to keep people connected. Any tools we can use to do that better are very welcome!" **T**

**To listen to the F&T Time podcasts, visit <https://fttime.buzzsprout.com/1945033> or to download Trussted Insight and learn more about other FTMA initiatives, visit [www.ftmanews.com](http://www.ftmanews.com)**

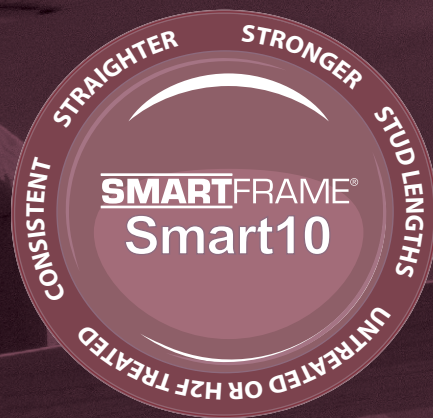


**Above:** The FTMA 'studio', looking out onto some prime Victorian timberlands.



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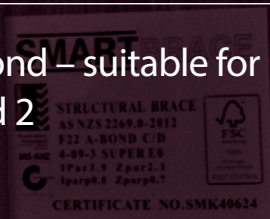
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# Koalas and forestry

A focus on wildlife at HVP Plantations is helping South Australia's koalas breed strong.

Over 15 years of work on koala safety is paying off for HVP Plantations. Recently, the private plantation company responded to a request from the South Australian Government to relocate six male Strzelecki koalas from HVP managed Gippsland eucalypt forests to a koala breeding program at SA's Cleland Wildlife Park (CWP).

These koalas have robust genetics and are considered a good choice to support and strengthen the SA koala gene pool. As in much of Australia, koalas have been badly affected by drought, huge fires and floods, as well as habitat loss and disease.

"Some portions of the Australian koala population suffer from what is known as a 'genetic bottleneck', a by-product of coming close to extinction, and then repopulating from just a handful of the remaining population," Tim McBride, HVP Plantations Environment and Certification Manager, says.

"The weak gene pool has led to some koalas being more susceptible to kidney and renal failure, among other afflictions such as chlamydia. Strzelecki koalas have a complex genetic makeup that sees them better equipped to deal with the onset of diseases such as chlamydia."

Too often, forestry and wildlife are framed as adversarial forces by voices on both sides.

In reality, foresters and ecologists often work together closely, attempting to maximise the health of these environments and minimise the impacts of harvesting.

For this project, working with a team from Koala Life and in partnership with CWP and the Victorian and SA governments, HVP humanely caught four adult male koalas, who were given health checks before being driven to their new home across the state border.

"HVP Plantations are very fortunate to have a healthy Strzelecki koala population within our Gippsland eucalypt plantations," says McBride, who studied Wildlife Science at the University of Washington in Seattle.

"It's definitely been a long journey for HVP," McBride says. "We started being mindful about koalas and our harvesting practices some 16 or 18 years ago.

"As part of this, we engaged two experts in koala ecology here in Victoria, Dr Peter Menkhorst, and Dr Steve Phillips. With those scientific minds, we developed a new management plan around how we would minimise the impacts of harvesting on such an iconic Australian critter."

Since 2014, the plan has been refined in a series of practical developments. The first step is identifying risk to koalas at each operation site. "That starts at a desktop

planning stage," says McBride. "We spent a lot of years with the ecologists learning about koala habitat and preferential feed trees and things like that. We've built up our knowledge of the surrounding habitat outside the intensively managed blue gum, and other eucalypt plantations that we have. This helps us to identify risks to the animals that might be within our plantations and whether it's a high, medium or low risk. Once we've established that at risk index, then we set about developing an actual survey plan."

HVP works with Hazelwood Forestry, based in nearby Churchill. "They've pioneered the use of drones in our local area," McBride says. "They use expensive, forward looking infrared cameras on their drones and they go out before any kind of operation."

Because the cameras work on heat signatures, the crew do their work at 3am when the differential heat signatures between mammals and the surrounding environment are greatest.

"They can locate koalas throughout hectares of our plantation with these awesome tools," McBride says. "And we can pinpoint those locations and follow them up in the daytime to make sure that we've got the right tree. We send that specific location information to our harvesting contractors



through phone-based apps and they then have real-time information about where these animals are, relative to our machinery."

Operations are directed away from koala populations and day spotters are used to check that a population has moved away from nearby harvesting before the machinery moves at all in their direction.

As McBride says: "We ensure the animals have a very easy time understanding that something is changing, and they're encouraged to move out of the area. We organise our harvesting so that we're strategic about not blocking off the animals' movement corridors and keeping generations of feed trees available."

Regular follow-up inspections confirm animal movements, with live updates going out to all active operations. The data also helps HVP to plan for changes after natural disasters, such as fires, where more koalas might require feed trees for some years, or urgent wildlife rescue intervention.

The result is a Forest Management Plan that will tie in well with the new draft Victorian Koala Management Strategy and which already acts as a resource for groups like CWP. "Although we only caught four, not six," McBride jokes. "Which means we were slightly outsmarted by koalas." **T**

For more, visit [www.hvp.com.au](http://www.hvp.com.au)

"We organise our harvesting so that we're strategic about not blocking off the animals' movement corridors and keeping feed trees."



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*A suburban Brisbane street on 28 February, 2022. The Brisbane River rose past 3.85m, but below 2011 levels.*

# Building for floods

With once-a-century floods now happening regularly, the industry and suppliers need to work with builders, developers and owners to help them make homes more resilient.

Shane Stone, the head of the National Resilience and Recovery Agency, can tell people they 'shouldn't be living among the gum trees' till he's blue in the face, but the reality of Australia is that housing in our capital cities is beyond the financial reach of millions and most of our regional cities are built in areas that are at risk from fire or flood. Sometimes both.

While there is legislation in place to protect homes from being built in at-risk areas, the real-world definition of what is at risk has changed dramatically since those areas were defined. Climate change seems to deliver

record rain events and cataclysmic fires or winds most years now. And sea level rises continue to accelerate.

Unless a government is going to pay for individuals, housing developments or towns to relocate, most people will continue to own the block of land they own after a disaster and rebuild there if the zoning allows. So far, no government, State or Federal, seems keen on the buyback option, despite expert modelling showing that it will be cheaper in the long term in multiple cases.

After too many recent natural disasters, recovery has been mostly left to individuals

and their communities. Homeowners, their insurers (where homes can in fact be insured) and their builders have been left making decisions about what and where to build.

When it comes to fire, we have spent years helping people make material and design choices that dramatically increase their and their home's chances of survival.

When it comes to flood, however, the message seems not to have come through as clearly. In NSW, the State Government only gave councils the power to halt developments in probable flood zones in May 2021. There are hundreds of thousands of properties





across the state that are on ground at risk of flood over the coming decades and most of them are not built like classic Queenslanders.

We do know how to deal with this.

The Australian Building Codes Board updated Construction of buildings in flood hazard areas, ABCB Standard 2012.3, in 2019 (download at [www.abcb.gov.au/resource/standard/construction-buildings-flood-hazard-areas-standard](http://www.abcb.gov.au/resource/standard/construction-buildings-flood-hazard-areas-standard)). While acknowledging that no building code will guarantee the survival of a structure in the worst floods, it outlines a straightforward set of guidelines for construction in flood zones.

Similarly, the Queensland Development Code MP 3.5 covers construction of buildings in flood hazard areas.

The problem is that these guides rely on interpretation by the builder, who relies on what the developer or homeowner will – or is able to – pay. With housing costs soaring, it's human nature these parties will try to keep additional expense to a minimum.

Unfortunately, climate change will not be keeping future disasters to a minimum.

It falls to us to present the best possible recommendations to our clients in ways they can use to deliver best possible rebuilds.

## DESIGN TO SURVIVE

We're not starting from scratch here. There are multiple expert reports out there with highly detailed information, including materials information and recommendations from major suppliers in our sector.

One of the more comprehensive guides to building in flood hazard areas was released in 2006, by the NSW Government – *Reducing Vulnerability of Buildings to Flood Damage* report. (Download it from <https://cupdf.com/document/reducing-vulnerability-of-buildings-to-flood-damage-2017-05-11-reducing-vulnerability.html>)

It looks at design principles rather than giving prescriptions, so remains very pertinent 16 years later.

Citing the Hawkesbury-Nepean system as being particularly damaging to vulnerable flooding, it seeks to reduce the impact of floods on residents and the cost of post-flood repairs. Focusing on new builds and rebuild rather than attempting to retrospectively floodproof existing homes, the guidelines are predominantly for wet flood proofing: where it is accepted that water will move through many homes, but where that movement is designed to cause minimal damage to the structure and walls of the building.

As the introduction says, "Measures to reduce flood damage are more cost-effective at the design stage. The key aim is to minimise flood damage to the structural load bearing components of a building to prevent the structure from failing and leading to costly rebuilding or even demolition. Preferably, reinstatement of a flooded home should involve little if any content replacement, cleaning and minor repairs."

It's a long read, but it provides an excellent basic primer to designing for homes in flood-prone areas. Key points in the design guidelines include focusing on the sites of structures and watercourses within a property; structures that can withstand or (better) accommodate the pressure of flood waters, both laterally and as they rise; walls and cavities (including insulation) that dry quickly and thoroughly so as to minimise mould and rot; wall, floor and ceiling materials that do not lose structural integrity when wet; foundations that will withstand the force of the water; and, where possible, default two-storey designs to help protect belongings and residents.

While all these recommendations do add cost at the time of building, there is a clear, often dramatic, difference between additional cost at building time and remediation costs post-disaster. In every case modelled, the additional building costs were more than recouped, multiple times over in most.

Section 4.3 sets out parameters for building materials. Although the report doesn't contain information for some materials that post- ➤



*This Church Bay, Christchurch, home uses Magnum Board as weatherboard cladding, as well as lining.*



materials (in particular floors and other structural components that are vital in keeping people and possessions safe in the house as well as expensive and difficult to replace) and those that can be sacrificial, such as internal cladding. Money can be saved on the latter if necessary, as they are comparatively cheap and easy to replace.

The report writers have adopted a pragmatic approach to materials, noting that economics will often dictate choices. While the prices in the document are well out of date, the engineering, geotechnics and design guidance remains sound and the styles of homes discussed are common throughout the Eastern Seaboard (though Queensland builders already have a strong focus on flood safety for the most part.)

### PASSING THE TEST

Since the huge floods of 2011 (and in some cases before), major suppliers have been including flood risks and damage responses in the materials information they pass on to their customers. They have worked actively with clients, both directing materials choices and supplying detailed information on post-flood drying/remediation watchpoints.

Tilling and Meyer both provide extensive information about their joists, ply and LVL products, down to noting that horizontal surfaces in joists may require particular care as silt can accumulate there after a flood.

As they say, some products are only recommended for areas where any inundation will quickly recede – usually within a few days and certainly not more

**You can differentiate between components that should be made from flood-resistant materials and those that can be sacrificial.**

date its writing, there is still strong guidance when it comes to suitable choices and a range of price points are considered.

A point reiterated several times is that you can differentiate between components that should be made from flood-resistant



**Above:** Brisbane during the 2011 floods. Changes to dam management since then saw water levels rise less this year despite significantly more rain falling.

PHOTO: (TOP) COURTESY HEALTH-BASED BUILDING; (BELOW) BRISBANE/SHUTTERSTOCK



## How Material Absorbency Affects Flood Vulnerability

CLASS	HIGH	MODERATE	LOW	NIL
<b>A</b>	<ul style="list-style-type: none"> <li>• masonry</li> <li>• concrete</li> </ul>	<ul style="list-style-type: none"> <li>• standard-grade magnesium oxide boards with no added plaster content</li> </ul>	<ul style="list-style-type: none"> <li>• solvent-based neoprene adhesives</li> <li>• two-part epoxy adhesives</li> <li>• rubber based sealants</li> <li>• silicone sealants</li> <li>• Magnum Board and other high-grade magnesium oxide boards</li> </ul>	<ul style="list-style-type: none"> <li>• copper</li> <li>• brass</li> <li>• plastic membranes and sheeting</li> <li>• nylon fittings</li> <li>• glass</li> <li>• glass bricks</li> </ul>
<b>B</b>	<ul style="list-style-type: none"> <li>• plasterboard</li> </ul>	<ul style="list-style-type: none"> <li>• plywood</li> <li>• structural hardwood</li> </ul>		
<b>C</b>		<ul style="list-style-type: none"> <li>• low durability timbers</li> <li>• good quality adhesives</li> <li>• low quality tiles</li> <li>• water-based paints</li> </ul>	<ul style="list-style-type: none"> <li>• high durability timbers</li> <li>• good quality tiles</li> <li>• rubber-based adhesives</li> <li>• epoxy putty sealants</li> <li>• stone epoxy formed in place</li> </ul>	<ul style="list-style-type: none"> <li>• galvanised steel</li> <li>• aluminium</li> </ul>
<b>D</b>	<ul style="list-style-type: none"> <li>• insulation</li> <li>• building paper</li> <li>• wall paper</li> <li>• ceiling plasterboard*</li> <li>• normal particle- board</li> </ul>	<ul style="list-style-type: none"> <li>• hardboard</li> <li>• dry area adhesives</li> <li>• water-based acrylic adhesives</li> <li>• water-based urethane adhesives</li> <li>• water-based acrylic sealants</li> <li>• PVA emulsion cements</li> <li>• lino, carpets, cork</li> </ul>	<ul style="list-style-type: none"> <li>• oil based paints</li> </ul>	<ul style="list-style-type: none"> <li>• bright steel</li> </ul>

SOURCE: ADAPTED FROM REDUCING VULNERABILITY OF BUILDINGS TO FLOOD DAMAGE

**Across:** absorbency rankings. **Down:** vulnerability classes – **A** Minimal damage under most circumstances. **B** Susceptible to physical damage when wet, otherwise no long-term damage. **C** Subject to damage after prolonged immersion, but will recover when effectively dried. **D** Subject to permanent damage if subjected to relatively short periods of wetness. \* Plasterboard fails due to increased weight and weakened state

than two weeks – while others are able to withstand more extensive immersion.

One example of the latter is the Foreverbreathe Demonstration Home, which was built close to Flockton Basin, a flood-prone part of Christchurch, NZ, where the city has been trialling flooding responses, including barriers and pumping stations.

"We were deliberate in our approach," says Robin Curtis, co-founder of Health-Based Building (see 'Breathe easy' in TTN Jan 2022). "Because there are a lot of geographical issues for homes here, it's a good location for a company like ours that's trying to prove the worth of a construction system."

In response to the site, the house is built on MicroPro treated timber piles, rammed 5m into the ground, "This raised the house at an affordable cost," Curtis says. "We also incorporated concrete around the piles, which meant we minimised our concrete use, but provided resistance to land slippage above the house."

**"Using the products we use in our system, the interior wall linings, rigid air barriers and claddings don't need to be ripped out."**

In the home itself, Magnum Board is used widely as a rigid air barrier, lining, flooring, ceiling and cladding material. A high-quality, high-density magnesium oxide board, it's a key part of Curtis's building system, along with wool-based insulation.

"This is a massive step forward for houses in flood-prone areas," he says. "After a flood, when the insurance company comes through to recondition the house and dry it out, they remove everything that needs to go and bring in industrial driers so the house can be rebuilt and people can return home. Usually that means ripping out the plasterboard, because of mould issues

and damage if anything is pushed into it while its wet, and fibreglass insulation, which fails when it gets soaked.

"Using the products we use in our system, the interior wall linings, rigid air barriers and claddings don't need to be ripped out or replaced because the products have this ability to be submerged in water for reasonable periods of time and will dry out fully with no loss of performance."

Importantly, the wool insulation in Curtis's system retains performance and will dry out in situ ("Sheep are drip-dry," he quips). With a permeable coating, Magnum Board allows moisture that has come into the walls to



## “Florida has spent billions on pumping systems to protect their cities, and they just can’t keep up with the worsening effects of climate change.”

evaporate, thus drying the frame inside, so there’s no need to pull out linings or other areas where the board is used. It also won’t grow mould, “so the health risks from damp buildings that often follow floods and which can last years don’t arise,” says Curtis.

A key distinction between Curtis’s demonstration build and the standard Aussie home is the framing. “In Australia, we’re mostly using H2 treated timbers, which can have poor durability once wet if the water stays around for more than a fortnight or if they’re not dried properly,” says Glenn Lawrenson of McCormacks Australia. “In New Zealand, frames and studs are more commonly hardwood, treated to hardwood-like durability or heavier steel, so there’s less urgency when it comes to drying them out. But there’s nothing stopping the Australian customer using framing timbers with a higher treatment level that can stand up to more of a soaking. The MicroPro Robin used on the Demonstration Home goes up to H4 and H5, so will cope with permanently wet soils and is pretty safe, too.

“The other major problem people have is with their insulation, which is why we like Robin’s system. Especially because there’s not a massive difference in the price points between his system and a standard build.”

Lawrenson notes that in most cases, standard timber frames are able to survive an inundation, especially when waters

retreat quickly and the frame can be dried in a steady and timely way. Problems arise when soaking is prolonged or when high levels of silt are caught inside the frame.

Curtis points out that insurance companies have driven changes to building codes around the world in response to repeated disasters. “This may well be the next thing they look at. Drying the frame of the house is the most important aspect of recovery. That’s why the first step at the moment is usually to pull out linings, even when they haven’t failed; they’re trying to get to the frame and to rip out the insulation and then bring in the driers. You need that for untreated or H2 timber or light-gauge steel.

“But now the building codes in disaster-prone areas like Florida and California are changing. The first choice is evacuating areas like this, but if there’s no financial support, most people can’t manage that. And many people don’t want to: they like where they live. The next line of defence is changing your house design styles – raising your foundations – and also using building materials that will cope with inundation with just a hose-out required. The materials need to dry out quickly, to not grow mould and to be healthy and liveable for people moving back in, not slowly rotting as so many of the houses in Florida are.”

Curtis flags that financial interests will quickly drive changes to how we build.

“Because it’s not just happening in places with cheaper housing like Lismore; it’s the Brisbane River, it’s parts of Sydney,” he says.

“Once you start looking at million-dollar-plus homes, which is a lot of Australian cities, that’s huge exposure for the banks and the insurers. They’re going to insist on building codes that recognise there are better ways to build. The problem we have now is that the only people having those conversations are at the more elite end of building, usually top-end designs with architects involved. We need a more industry-wide approach, to have a conversation we’re all involved in.”

He worries that if the decisions are left up to various levels of government, then the solutions will be ones that are exciting but not necessarily effective. “When we were developing our system, we looked at a lot of places that had similar problems to what we face in New Zealand,” Curtis says.

“Florida was one: they have spent billions on pumping systems to protect their cities, and they just can’t keep up with the worsening effects of climate change. So now they’re focused on materials that will survive the disaster events they have, and they’re changing their standards to reflect that.

“You may still need to lose your carpet and your kitchen cabinets to dry your house back to the 18% moisture levels required to re-sheet it, but you keep a lot more, so it’s faster and cheaper to recover.”

### AFTER THE RAINS

When this story was written in mid-March, the rain had finally stopped and waters were going down across NSW and Queensland. Fingers crossed, conditions will continue to improve and the clean-up will be well progressed or near completion by the time you read this. Sadly, another major flood will always come.

In the immediate aftermath, even before the water and mud clears, there are resources readily available to help owners make decisions about what is and what is not recoverable. Major suppliers including Meyer and Tilling have produced detailed guides for their branded product and have engineers on board who are well-placed to give specific advice, from recommendations for drying to watchpoints around silt and moisture collection on EWP.

There are also excellent technical guides available from Industry bodies, with specific advice for assessment and repair. Timber Queensland updated their Guide to Assessment and Repair of Flood Damaged Timber and Timber-Framed Houses ([www.timberqueensland.com.au/Docs/News%20and%20Events/Guide-to-Assessment-and-Repair-of-Flood-Damaged-Timber-and-Timber-Framed](http://www.timberqueensland.com.au/Docs/News%20and%20Events/Guide-to-Assessment-and-Repair-of-Flood-Damaged-Timber-and-Timber-Framed)



Above: Post-flood clean-ups see millions of dollars worth of items, some treasured, become landfill.



**Houses-Ver5-Feb-2022-.pdf**) in February this year. It includes a comprehensive series of easy tests to determine the damage done by rot and some valuable photo assistance in a guide that's short enough to flick through on your phone onsite. The list of handy links at the end includes a recommended moisture meter to guarantee your timbers have returned to <18% moisture (the Delmhorst J4 with sliding hammer electrode if you're buying).

WoodSolutions Design Guide 12, *Impact and Assessment of Moisture-affected Timber-Framed Construction* ([www.woodsolutions.com.au/publications](http://www.woodsolutions.com.au/publications)) covers much of the same ground as the Timber Queensland guide in its flood-based Chapter 2, but has more details on general wetting and coastal tidal surges elsewhere.

Additionally, this guide contains two appendices to direct the user through moisture testing, outlining the moisture content ranges of various timber products under Australian Standards, methods of measurement and both the use of and limitations of resistance and capacitance meters, plus where each method is best deployed or avoided.

For those who get this magazine early, WoodSolutions is also running a free Zoom event titled Resources for Recovery: Post-Flood Assessment and Repair ([www.woodsolutions.com.au/events/woodsolutions-proudly-sponsors-resources-recovery-post-flood-assessment-repair](http://www.woodsolutions.com.au/events/woodsolutions-proudly-sponsors-resources-recovery-post-flood-assessment-repair)) on March 24, featuring a panel of experts from Timber Queensland. It will be available afterwards on the WoodSolutions Webinars page.

The appendices of the Hawkesbury-Nepean report also contain a simplified explanation of hydrostatic and hydrodynamic forces, which may be helpful in determining whether some damage is likely to be structural or cosmetic and so help local builders and engineers when it comes to triaging structures that can be rebuilt safely.

It will never be possible to save everything, but by focusing on likely risks from natural disasters whenever we build, we can design and construct homes that are more able to withstand them. From the style of house, to its materials, to detailing like solid doors and hopper rather than sash windows, we can deliver homes that will be more likely to survive floods (and – most importantly, more likely to retain enough structural integrity to keep the people within or on top of them safe until help arrives) and cost less to rebuild after the disaster passes.

Even simple changes like installing kitchen cabinets on legs (with or without removable kickboards) that add height and ventilation will be enough to save some kitchens from ending up on the nature strip.



**Above:** *The ForeverBreathe Demonstration Home: the wall linings will survive a flood with just a clean.*

**“We can’t keep ripping houses apart every time floods occur. Our supply chains won’t cope. We need to build resilience into the sector.”**

“We can’t keep ripping houses apart every time these events occur,” Curtis says. “And that’s not just because we’re going to keep having major events, it’s because our supply chains on many products are becoming more tenuous and less profitable. In New Zealand, if we get yet another catastrophic event on the West Coast, and we’ve just had two, we don’t have the materials. Those mainstream products don’t exist in this country in quantities that let you rip them off every time they get wet.

“It’s very similar in Australia. That’s an important aspect of what we’re looking at: it’s not just making life easier for the people

living in these areas, we’re building resilience into the building sector.” **T**

**For more details, visit [www.healthbasedbuilding.com.au](http://www.healthbasedbuilding.com.au), [www.meyertimber.com.au](http://www.meyertimber.com.au) and [www.tilling.com.au](http://www.tilling.com.au). To download QDC MP 3.5, visit [www.hpw.qld.gov.au/data/assets/pdf\\_file/0015/4263/mandatory3.5constructionofbuildingsinfloodhazardareas.pdf](http://www.hpw.qld.gov.au/data/assets/pdf_file/0015/4263/mandatory3.5constructionofbuildingsinfloodhazardareas.pdf) and to download a recording of the WoodSolutions webinar, see the Thursday Timber Webinars link at [www.woodsolutions.com.au/webinars](http://www.woodsolutions.com.au/webinars)**



# PEOPLE BUSINESS

with Peter Maguire



## Contracts are critical

Don't leave room for uncertainty: get your workers' status right and in writing.



There have been a number of developments in the past year that make it imperative that businesses:

- Have written contracts for all employees and contractors and
- Ensure that the content of the contract does not contradict the intended relationship with the other party as an employee or a contractor and
- Also make sure that the contracts reflect current standards as per the Fair Work Act and any relevant modern award.

Recently, there have been two significant High Court of Australia decisions on the question of whether a worker is an employee or a contractor.

While these cases had quite different

outcomes, what they had in common was that the Court found that it is primarily the contract entered into and the terms contained in it that determine the nature of the relationship.

### ZG OPERATIONS V JAMSEK

This case was about two truck drivers who had worked as independent contractors for over 20 years for ZG Operations. They were originally employed by the company but switched to become independent contractors when the company told them that their jobs would not be secure if they didn't make the switch.

After the company discontinued their engagements in 2017, the workers then made claims for pay, leave and superannuation

entitlements on the basis that they should have been characterised as employees.

The court found that the contracts clearly defined the relationships as independent contracting plus the workers formed partnerships with their wives and they bought trucks which were significant investments.

The court concluded that these workers were genuine independent contractors, as characterised in the contracts.

**Key takeaway:** for genuine independent contracting relationships, make sure that:

- you have a proper written contract for service which clearly identifies the relationship as an independent contractor and
- the terms in the contract are consistent with an independent contractor relationship.

### CFMMEU V PERSONNEL CONTRACTING

This case was about a labourer (Mr McCourt) engaged by a labour hire company, Personnel Contracting, to work for Hanssen Pty Ltd. McCourt was an unskilled British backpacker on a working holiday and he didn't have his own business. The CFMMEU and McCourt made a claim that he was actually an employee and should have been paid under the Building and Construction General On-site Award 2020.

The court found that the 'Administrative Services Agreement' under which McCourt was engaged provided Personnel Contracting with rights of control and direction over McCourt eg in relation to who he worked for and McCourt was contractually obliged to cooperate. As a result, the court deemed this relationship to be more characteristic of an employee than an independent contractor and ruled accordingly.

PHOTO: TYLER OLSON/SHUTTERSTOCK



**Key takeaway:** you should ensure that:

- If you are wanting the relationship to be that of an independent contractor, the terms in the contract are consistent with that or
- if the relationship is in reality characteristically that of an employee, you contract the worker accordingly and don't try to disguise it as that of an independent contractor.

## CHANGES TO CASUAL EMPLOYMENT

On 27 March 2021, The Fair Work Act was varied to provide a new definition of casual employment. Here is the relevant excerpt from the Fair Work Ombudsman's website:

"A person is a casual employee if they accept an offer for a job from an employer knowing that there is no firm advance commitment to ongoing work with an agreed pattern of work.

"For example, if an employee is employed as casual, their roster changes each week to suit their employer's needs, and they can

refuse or swap shifts, that could mean they are casual.

"Specifically, under the Fair Work Act, a person is a casual employee if:

- they are offered a job
- the offer does not include a firm advance commitment that the work will continue indefinitely with an agreed pattern of work
- they accept the offer knowing that there is no firm advance commitment and become an employee."

If there is in fact, a commitment to an ongoing pattern of work in the contract, that could well mean that the employee would not be deemed to be a casual and could create exposures as a result.

## MODERN AWARD REVIEWS

There have been substantial changes made to modern awards over the past two years though the Modern Award Review process that has been going on since 2013.

It is important that employers pick up on

any variations that have been made to minimum terms of employment in modern awards and ensure that contracts are not inconsistent with current award provisions.

There have also been changes to National Employment Standards with respect to the requirement for issue of Casual Employee Information Statements and variations to Parental Leave provisions in relation to stillborn babies and those who die within the first 24 months of life.

## THE BOTTOM LINE

If you do not have written contracts for employees and contractors, get them.

If you do have them but you haven't reviewed them for a while, get them professionally reviewed.

Finally, make sure that they are truly reflective of the nature of the relationship.

For example, if there is an ongoing commitment to an agreed pattern of work, it isn't casual so you should contract the person as a full-time or part-time employee. **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.



## Why I read TimberTrader News

I have been a regular reader of TTN for over 20 years and during that period have followed the articles every single month to gain an inside view of updates within the timber frame prefabrication industry.

During this time, the primary content has consistently provided a diverse coverage of highly relevant information for readers within the spectrum of timber and timber products, and prefabricated frame and truss manufacturing.

In particular the Autobuild News has been of high interest to anyone interested in building prefabrication,

not only for those in the industry to learn of the latest developments, but also others seeking understanding of the fundamental requirements.

Another important element has been the Industry News section, which in my view is one of the few comprehensive sources of regular information from business organisations associated with the timber and prefabrication industries.

More recently the greater in-depth articles have provided excellent coverage of many elements of the industry, and in particular the coverage for my Frame Australia



**Above:** Kevin Ezard's Frame Australia will celebrate its 23rd conference this November.

event 'Timber Offsite Construction' has been excellent, providing a valuable contribution through summarising the event topics and speakers for the benefit of TTN magazine readers.

Kevin Ezard, FRAME AUSTRALIA

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# IN THE FRAME

By Craig Kay, national product engineer, Tilling



## Don't fight the system

The guidance of AS 1684 has its limits and pushing outside them isn't worth the risk.

The typical reader of this column would be well aware that the provisions of the AS 1684 Light Timber Framing standard underpin the structural basis for most house structural design in Australia.

This standard specifies requirements for building practice and the selection, placement and fixing of the various structural elements used in the construction and alterations of timber-framed Class 1 and Class 10 buildings. It also provides building practice and procedures that assist in the correct

specification and determination of timber members, bracing and connections.

This document also contains a large volume of supplementary span tables that are based upon the provisions of AS 1684.1-1999. Just to add some confusion, AS 1684.1-1999 has technically been superseded by AS 1720.3:2016, however AS 1684.1-1999 has not been withdrawn because it is still the basis of parts 2-4 of the AS 1684 series.

Its status as a deemed-to-satisfy (D.T.S.)

solution under the national construction code (NCC) makes it a powerful tool in the hands of building designers and builders.

However, what some people unfortunately do not understand is that AS 1684 has a clearly defined scope with limitations to the building size and shape that the deemed-to-satisfy provisions apply to.

1. The maximum number of storeys of timber framing shall not exceed two.
2. The maximum width of a building shall be 16,000mm, excluding eaves.

AS 1684 has a clearly defined scope and limitations to its provisions.



PHOTO: SHAHRAM BABAKHANIAN/SHUTTERSTOCK.COM



3. The maximum wall height shall be 3000mm [floor to ceiling, as measured at common external walls, that is, not gable or skillion ends].
4. The maximum roof pitch shall be 35°.
5. For single or upper storey construction, the spacing of bracing elements, measured at right angles to elements, shall not exceed 9000mm.
6. For the lower storey of two-storey or subfloor of single- or two-storey construction, bracing walls shall be spaced in accordance with Clause 8.3.5.9.
7. Roof construction shall be hip, gable, skillion, cathedral, trussed or pitched, or in any combination of these.

AS 1684 references the wind classifications within AS 4055 - Wind loads for houses standard. Parts 2 and 4 apply to areas within Australia with wind classifications of N1-N4 and Part 3 is for areas within Australia with wind classifications C1-C3. This standard therefore is only for structures that meet the same size and shape limitations as AS 1684. Both standards are subsets of the more generic overarching timber Design Standard AS 1720.1 and joint Australian and New Zealand AS/NZS 1170 loading standard.

More often than not, however, architectural and engineering plans for timber building of all shapes and sizes (especially three-storey townhouses) that do not fit the above limitations are regularly presented to the Tilling SmartFrame Design

Centre for further design/detailing and material take off, marked up with details such as:

1. Wind classification N3.
2. Timber framing in accordance with AS 1684.

One has to wonder if this is ignorance on behalf of the design professional or is the designer deliberately, because of the lack of other guidance, trying to extrapolate the specific deemed-to-satisfy provisions within the limits of AS 1684 to structures outside those limitations.

Either way, this is erroneous practice and has the potential to cause serious problems for the structural integrity. Further, the use of AS 1684 in areas outside its scope removes its status as a D.T.S. solution, and now plunges the user into the murky world of a 'Performance Solution' and would thus now attract the new requirements of Part A2.2(4) of the NCC.

AS 1684 is a 'system' and the design of individual elements assumes the supporting structure around it has been built in accordance with this system. A good example of this is window lintels. Design models for window lintels assume that the lintel is built into a wall with parallel framing members and that these elements contribute to the overall stiffness of the element. Other elements have similar system effects built in, such as assumed end fixity and the number of elements acting together.

Notwithstanding this, I do have some sympathy for designers seeking to specify and detail timber frames in three-storey structures struggling to find D.T.S. solutions. Countries such as Canada do include provisions in their documents equivalent to our AS 1684 but, unfortunately, we currently do not. Designers can get valuable and practical advice on designing timber framed structures that do not meet the AS 1684 restrictions by visiting WoodSolutions Technical Design Guide website at [www.woodsolutions.com.au/publications](http://www.woodsolutions.com.au/publications).

The timber industry is currently working on a significant revision of AS 1684 to widen its scope to a larger range of residential structures including at least three (3) storeys, and better incorporate EWP to sit alongside the large volume of solid timber into a D.T.S. solution.

In the meantime, designers will need to involve a structural engineer to analyse any residential structure that does not fit into the limited scope of AS 1684, rather than the risky approach of trying to extrapolate its provisions to projects that it was never intended for. **T**



For more information on this topic, contact Craig Kay and the Tilling engineers via email at [techsupport@tilling.com.au](mailto:techsupport@tilling.com.au)

## Decision makers from the following industries read *TimberTrader News*:

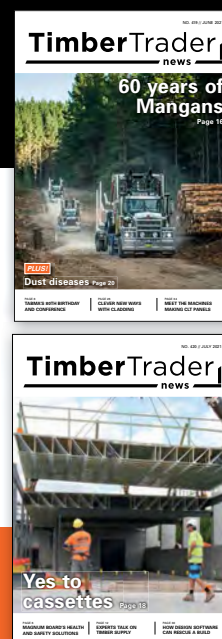
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- Architects
- Timber Suppliers to the building industry
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- Government bodies associated to the building industry
- Associations that represent the timber and building industries

If you wish to sell your products to decision makers that work in these industries, or inform the decision makers in these industries about your company and what it is doing, then you need to promote your products and services to these readers in *TimberTrader News*.

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# FTMA NEWSLETTER

with Kersten Gentle



## Planning ahead

Whether you're talking timber supply or career longevity, a little planning can deliver a stronger future.

This month we look at two very different but equally important future considerations.

### MORE TREES IN THE GROUND

They say the best time to plant a tree was 30 years ago, but the second best time is NOW and the announcement by the Prime Minister in February to put 150 million trees in the ground over the next five years is very welcome news to a stressed supply chain.

This program is about securing an Australian supply of timber for future generations and the \$86 million investment is the largest in planting from any Australian Government for the past 30 years.

FTMA is cautiously excited about this announcement, but we strongly believe we need right-to-harvest legislation to be introduced alongside this policy.

Over the years we have seen instances where koalas, for example, have moved into plantations or where governments have actually turned a private plantation into a park, even though the trees are simply another crop.

Forestry is all about long-term investments and we need to have policies in place to ensure the trees that are planted can be harvested.

FTMA congratulates the Federal Government on this announcement and hopes we go into this Federal election with the same commitments given by the ALP, as Australia needs to get trees in the ground now and we need to be given certainty of harvest in 30 years' time.

### REBUILD & DESIGN – THE NEXT STAGE OF YOUR CAREER

Rebuild & Design is a new program by FTMA Australia which targets workers such as builders who have either been injured on the job, or are simply seeking a new career, as we believe builders make great designers.

I know first-hand how debilitating a workplace accident can be as my husband Scott had a log roll on his back in 2004.

Scott had previously worked as a wool presser, builder, brickies labourer and tree climber, to name a few of his career choices, but, given he was millimetres away from being a paraplegic, he had to retrain himself, as he could no longer do physical work.

Scott was lucky as he had a stubborn determined wife who convinced him that I needed help in the office of my old job and over a six-month period we retrained him. Today Scott is Operations Manager of a business and his Excel computer skills leave mine for dead.

Even though Scott went through hell, he looks back now and thinks it is the best thing that has happened to him (besides meeting me of course!)

Builders are halfway there in being great designers. They know all the technical information, they know how to take off plans and know the terminology, they just need to learn the software and they have a great career waiting for them.

I asked a number of designers who had come into the job from building and fabricator backgrounds what they like about their careers, to which they replied:

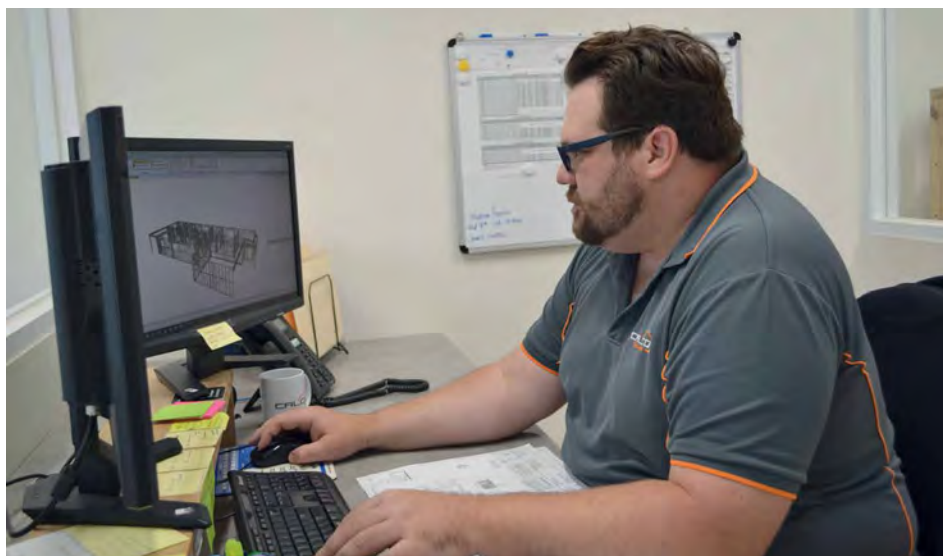


## Builders are halfway there in being great designers.

"Having the trade background is a significant advantage. It provides a solid appreciation for the impact of designing decisions, gives an established understanding of what it is you need to achieve when designing and helps from a problem-solving perspective."

"You're always learning and growing. There are days you're estimating standard houses one day, 12 townhouses the next or a massive house that is an architectural masterpiece. I'm never bored in the role; there is always something new, something to learn."

"You go home safe every day. Some days you're mentally tired, but you have energy to go to the gym or go for a walk after work. On the weekends, you have energy to play with the kids or visit friends and family. I like that there is longevity in this role, you can do this role for a few years or 25-years-plus."



Above: Retraining for a role as a designer is a natural fit for builders and fabricators.

"I like the flexible hours (if needed), the challenges of some designs, learning a lot about the building industry in general, not just the framing side, and seeing new and innovative products and software come into the market."

"The role is family-friendly and I am able to use flexible hours to fulfil all of my duties and even work from home."

"I love being given the freedom of creativity in designing and problem solving or taking a complex job that has many design and information holes and producing an end product that goes together seamlessly on site. It's interesting."

"I now have a job that I enjoy, I am not being injured and getting my backside burnt off all day, I don't have to unpack and then pack up tools every day, I am not losing money when it rains, I am not chasing builders for payment, and it's a niche role that I can keep doing well after I would have had to otherwise hang up the nail bag."

The frame and truss sector is screaming out for designers, so if you have been injured whilst on the tools, please contact us at [training@ftma.com.au](mailto:training@ftma.com.au) and let us help with the next stage of your career.

Kersten Gentle T

For more information contact FTMA on 0418 226 242 or via email at [kersten@ftma.com.au](mailto:kersten@ftma.com.au)

## Coming up in TimberTrader news

### RECYCLED TIMBER

Coming up in the May 2022 issue of *TimberTrader News*, a **special feature on:**

- Selling timber with a story.
- Market demand for hardwoods that meet both sustainability and performance needs.



Does your company want to be a part of this in-depth feature? For advertising your products and services to our 5000+ readers, contact Julie McConachy on 0409 381 813 or email [juliem@paragonmedia.com.au](mailto:juliem@paragonmedia.com.au) For editorial opportunities, contact Donyale Harrison on 0417 487 497 or email [donyale.harrison@paragonmedia.com.au](mailto:donyale.harrison@paragonmedia.com.au) **ADVERTISING AND EDITORIAL DEADLINE: Friday 1 April, 2022.**

# TRUSS TALK

with Paul Davis



## It's complicated

Taking on tricky designs can challenge your relationships with clients and physics.

You may know me as a timber engineer, but I also design a whole lot of other weird stuff. A lot of these are secondary structures in larger projects such as high-rises, subdivisions, industrial sites and hospitals.

These include those spidery rope playground structures, funky steel and aluminium planter boxes, architect's-fantasy pergolas, stage structures, mezzanines, climbing walls, facade maintenance access structures, structures to hang equipment off, bridges in subdivisions... the list goes on.

A consistent problem with this type of work is that the big-picture design is done by CBD-based architects and engineers and their drawings come through via the construction project manager. They flick it on to the subcontractor for a 'design and construct' service. And then it comes to the designer. Sometimes the information is very poor quality, or lacking in critical details or questions for higher up the food chain go unanswered.

As a classic example, last year I designed an X-ray machine support structure. It turned out, once I got the details, that it was a heavy monster that moved like a gantry crane and the head of the X-ray machine could swing wildly around, much like an industrial robot. The trouble was no one could tell me the additional loads caused by it gyrating about. In the end I had to have a Zoom meeting with someone in Japan before I got useful answers!

As truss designers you may have come across a similar problem when your trusses are required to hold something unusual and the quality of information about the loads, location and mounting method is poor. A fabricator recently flicked me an email where the project manager, presumably

himself in the dark, wanted a design to support a special load assuming it could be anywhere in the room!

There are effectively four ways to deal with this: tell the builder you're not interested, persist and force them to provide quality information (the 'Call Japan if you have to' option), run a huge number of different load cases in your truss software with the design load or, finally, install a secondary structural grid. I'll explain the last two options in more detail.

You may want to allow for a moving load or a load at an unknown location. The difficulty is that for a given truss, the worst load locations for say the heel plate, bottom chord, any given web or perhaps a member splice can all be different.

A brute-force approach to this would be to input point loads at say 100mm centres along every truss bottom cord. But the loads can't all be in the same load case, otherwise you vastly overload the truss with the sum of all the loads. Consequently, each load location needs a separate load case. Although my generic structural engineering software has this capability, I suspect that this would be very hard to do this in any of the specialist truss design applications that you use. You could send it to your nailplate supplier's engineers, but I suspect even they will struggle.

The other option is to supply a separate structural ceiling grid. This is constructed from hanging beams loading the truss bottom chords at defined locations. The hanging beams support ceiling joists running parallel with the trusses. There are no other loads applied directly to the truss bottom chords. You can even add a plywood ceiling to reinforce the grid if needed. Using this

approach, the loads are spread through the grid and so reduce the peak load on the trusses, there are only a few load locations on a truss to design for, and the loads can be directed to optimal locations on the trusses – typically the panel points. And the ceiling grid itself is a relatively straightforward design.

Both the brute-force design and the ceiling grid approaches can cost a lot of money. But, particularly in the current market, these sorts of customers aren't always that price sensitive – they just want someone to solve their problems for them with a minimum of hassle. So, these jobs have the potential to be quite lucrative. Essentially, you are being paid to do the thinking for all the people further up the food chain.

I have worked on all sorts of structures and in buildings on fire, under water, after cyclones, in the desert, in the snow and hanging off the sides of buildings. Already this year I have designed a mountain biking course structure and a wall to resist the impact from massive loaders. Even if these are tricky things to design, they keep life interesting! Tackling more difficult jobs might just do the same for you! **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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Josh Wright  
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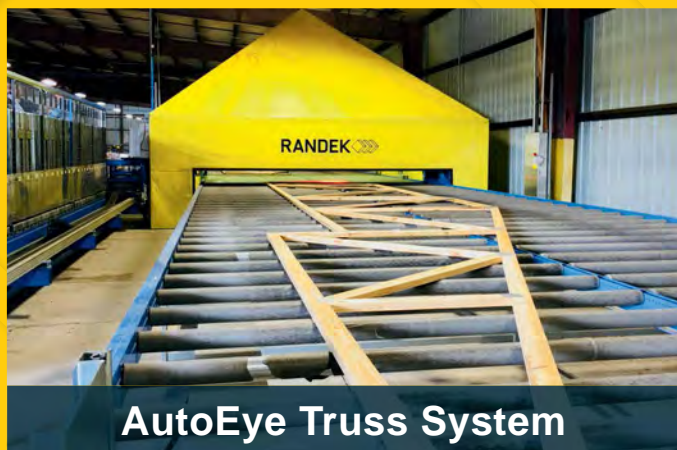
  
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