

It's more than just a stick of wood

Make sure your products are fit for use, legal, sustainable and compliant. **By George Dolezal, Principal Engineer, Meyer Timber Pty Ltd.**

Residential housing and low-rise commercial buildings across Australia continue to rely heavily on timber. Solid-sawn framing, LVL, I-joists, glulam, plywood, OSB and particleboard are all commonly used, and most builders and designers understand where they fit within a project. These products are readily available, and on face value they seem straightforward to use. Yet

it's rare that we stop and consider the depth of work that goes into manufacturing them, preparing them for the market, and ensuring they will reliably perform the function they are intended for. This is where the combination of a well-run production facility and a reputable, accountable supplier become essential. To appreciate the value they bring, it's worth breaking down what is

involved in supplying even the simplest timber product.

A logical place to start is solid-sawn timber. At first glance it might appear to be a simple proposition: cut down a tree, slice it into standard sizes and sell it. While that's the one-sentence version, the reality involves dozens of steps long before a board reaches a building site. It begins in the forest, where the environment and soil conditions must be suited to growing healthy, structurally efficient trees. Planting densities must be carefully managed, and rotation times selected to balance growth, sustainability, and yield. Once the tree reaches maturity, typically 30 to 40 years for Australian Radiata Pine, and significantly longer in colder regions such as Northern Europe, it can be harvested and transported to a sawmill.

At the mill, every log is individually scanned to determine the optimal cutting pattern that maximises structural value and recovery. The freshly sawn boards then need to be dried, usually in kilns, and this process is far more technical than many realise. Removing moisture too quickly can cause distortion, checking or twisting, so kiln operators must balance time, temperature, and airflow carefully. Once dried, the boards are planned to final size, visually and/or machine-graded, stamped and packaged. This is still only the short version; a detailed explanation would extend into multiple volumes and still not capture all the nuances.

Engineered wood products, like LVL and I-joists, share many of the same early processing steps but introduce several additional layers of complexity. Instead of cutting the log into boards, it must be peeled into veneers, sorted, dried, and prepared for reassembly. By laminating the veneers together with structural adhesives, the manufacturer can produce a more consistent and generally higher-grade product, as the natural defects in timber are redistributed and managed. However, this comes with its own engineering considerations.

The adhesive must be durable, stable, and suited to the structural demands of the product. Veneers must be dried to the correct moisture content to ensure the glue cures properly. The adhesive viscosity must be monitored so that it penetrates the veneer surface adequately, forming a reliable bond. Press settings, including pressure, temperature and curing time, must be carefully controlled. Minor variations in any of these elements can influence the final strength, stiffness, and long-term durability of the product. And as any manufacturer will attest, the list of variables does not end there.

These examples highlight the critical role of a high-quality production facility.



Regular visits to check production facilities are critical, from left is Kent Powell discussing production with the Mill manager with George Dolezal from Meyer Timber in the background completing his inspections.

PHOTO: COURTESY MEYER TIMBER

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Continuous monitoring, quality assurance and process control are essential to achieving a product that is consistent, reliable and compliant with Australian requirements. This is also where suppliers, particularly specialised timber wholesalers, play a significant role. Reputable wholesalers (such as Meyer Timber) typically employ engineers and or technical specialists to monitor and audit production plants. This may include regular inspections, reviewing quality-control procedures, verifying that manufacturing processes have not changed, and checking test results directly.

Some smaller facilities may rely on testing only a handful of LVL samples and use that data indefinitely to support ongoing production. This significantly increases the risk of non-conforming products reaching the market. By contrast, larger or more reputable plants employ multiple layers of quality assurance, from in-house testing and random warehouse sampling through to full-scale evaluations conducted by independent laboratories. The more robust the process, the lower the risk of faulty or inconsistent product, and the greater the confidence for builders, designers and end users.

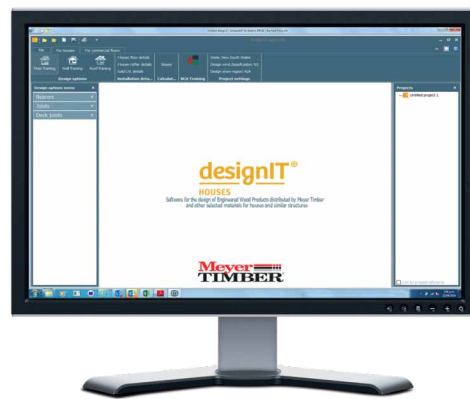
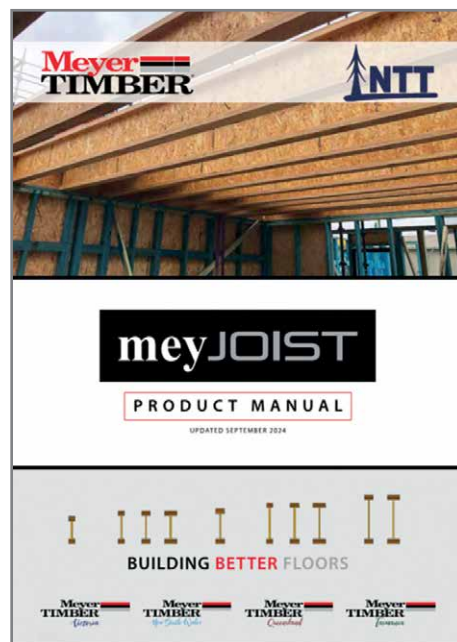
Of course, technical compliance is only one part of the picture. Timber products must also be legal and sustainable. Several key pieces of legislation apply in this space, including the Modern Slavery Act and the Illegal Logging Prohibition Act. These frameworks ensure that the timber is sourced from legally managed forests and that workers involved throughout the supply chain are treated ethically. Recent amendments to the Illegal Logging Act impose greater responsibility on importers. They must now declare species information accurately, and shipments can be DNA tested on arrival. If test results don't align with declared documentation, the shipment can be seized, and the importer may face criminal charges.

In addition, traceability must be maintained all the way back to the specific forest compartment where the timber was

harvested. This ensures the timber is not contributing to deforestation and the associated impacts on climate change. While this level of documentation is essential, it does add significant work for importers. Members of ATIF (the Australian Timber Importers Federation) generally have strong systems in place and access to support, but not every importer operates with the same level of diligence. As always, timber purchasers should carry out their own checks and ensure they are satisfied with the integrity of the supply chain behind the products they choose.

Once the right timber products have been sourced, technical support becomes a crucial part of the equation. As noted earlier, reputable wholesalers invest in engineering capability and technical knowledge. Solid-sawn timber is comparatively straightforward to specify thanks to clear guidance in Australian Standards such as AS 1684, Residential timber-framed construction. However, when it comes to engineered wood products, generic information is far more limited, and designers rely heavily on the supplier's technical resources. Quality suppliers should be able to provide span tables, design manuals, software, installation guides and prompt responses to technical enquiries. These tools offer peace of mind and valuable support when a project sits slightly outside the norm. This level of service requires investment and is reflected in the cost of the product, but it enables builders to focus on what they do best, constructing homes, rather than resolving avoidable technical issues.

Finally, it is important to consider what happens if something goes wrong. Even with best-practice systems, selling thousands of cubic metres of timber each month means occasional issues are almost inevitable. When purchasing from a long-established, reputable wholesaler, customers can be confident that problems will be managed promptly and professionally. By contrast, suppliers without adequate technical support or product liability insurance may leave the builder or contractor to resolve the issue,



Above: Software and Product Manuals provide confident specification for Engineered Wood Products.

which can be both costly and time-consuming.

Ultimately, it really is far more than just a stick of wood. Every timber product must meet strict manufacturing and performance standards, undergo rigorous checking, and be sourced legally and ethically. It must also be backed by technical support throughout its life cycle, with the understanding that many products will remain in service for half a century or more. When evaluating timber purchases, it is worth considering not just the product itself but the integrity, capability and reliability of the company behind it. A single issue without proper support can escalate quickly, so ask yourself: is the risk worth taking? **T**

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