

## Commercial assessment report of the GLT Fast Start Commercialisation Trial

*The following information has been extracted from a cost inputs model prepared by IndustryEdge, from (mainly) confidential data provided by project partners, and has been supplemented with explanatory information from the commercialisation trial.*

*This report is informed by and is wholly consistent with the **Cost and commercial operating model for manufacture of GL18+ from plantation hardwood** (submitted 5<sup>th</sup> May 2025) for the GLT Fast Start Commercialisation Trial of the ATMAC Splinters to Structures program.*

*Disclaimer: This commercial assessment has been prepared by IndustryEdge from the information available to it and with due care and diligence. This assessment does not constitute advice to any organisation or person and no liability is accepted for any decisions taken by them, based on this content.*

### Summary of commercial assessment

*This summary has been prepared in a manner and form suitable for use in the formal and potentially public reporting of the ATMAC program and the general disclaimer (above) applies equally to the summary, as to the whole assessment.*

The GLT Fast Start Commercialisation Trial is a pivotal initiative within the broader framework of the ATMAC Splinters to Structures program and more broadly into key national objectives, including increased sovereign manufacturing capacity, import replacement and the integrated effort to build dwellings more efficiently.

With limited remaining time in the ATMAC program, trials were conducted over a short timeframe: from November 2024 to June 2025. They focussed on evaluating the technical and commercial feasibility of manufacturing Glue Laminated Timber (GLT) derived from plantation hardwood, offering insights into both resource utilization and process efficiency.

The assessment draws upon a cost inputs model meticulously developed during the Commercialisation Trial. The model is based on predominantly confidential data provided by project partners. This model is further enriched with explanatory details gathered from the trial itself.

This is a foundational reference point, offering a commercial, pre-due diligence examination of metrics and operational strategies, based on analysis conducted for the ATMAC Splinters to Structures program.

### Production capacities and resource inputs

Central to the trial is the production of 100% hardwood GLT sourced entirely from plantation-grown timber, specifically Eucalyptus Globulus. This approach underscores a commitment to sustainable resource use while demonstrating the scalability and adaptability of the manufacturing processes.



For commercial assessment purposes, the 'trial' facility's maximum potential output has been projected at 10,000 m<sup>3</sup> of GLT per annum, reflecting the upper boundary of operational capabilities under ideal conditions. However, a more realistic and achievable production capacity is estimated at 5,000 m<sup>3</sup> per annum. This figure balances resource availability and the optimization of operational workflows, providing a practical benchmark for facility performance.

The emphasis on plantation hardwood as the sole resource input illustrates the commercial potential, especially as the GLT producer and others in the supply chain expect this resource to be available to GLT manufacturing facilities.

The GLT producer considers the dried sawn plantation hardwood supply is suitable for manufacturing into a range of high-strength timber beam products.

### **Key processes and indicative costs**

Building on the prior work of the ATMAC Splinters to Structures program, the commercialisation trial included comprehensive analysis of the manufacturing processes involved in producing GLT.

Each stage was evaluated with respect to its cost implications and contribution to overall price points, ensuring a thorough understanding of the operating and key financial dynamics underpinning the operation. Assessments focussed on the actual current operating environment, as well as a preferred operating environment, feeding into potential future facility design.

The primary processes examined include:

- **Log Acquisition:** Encompassing the sourcing of plantation hardwood logs, the primary input for GLT production.
- **Log Handling and Transport:** Logistics play a critical role in ensuring the efficient movement of raw resources from their point of origin to processing facilities.
- **Log Storage at Sawmill:** Initial storage measures were assessed for their capacity to preserve the quality and usability of the logs prior to milling.
- **Sawmilling:** Precision cutting techniques are employed to transform raw logs into usable timber formats, forming the basis for subsequent processing steps.
- **Drying:** Controlled moisture removal is implemented to enhance the stability and durability of the timber, preparing it for lamination.
- **Preservation and Treatment:** Processes are designed to extend the material's longevity and improve its resistance to environmental factors.
- **Dry Storage of Sawn Timber:** Post-processing storage solutions ensure the safe and accessible maintenance of the timber, preparing it for lamination.
- **GLT Manufacturing:** Specific manufacturing steps and activities to produce a 100% plantation hardwood GLT beam in an established facility.
- **Certification, Testing & Assessments:** In-process manufacturing activities, specific process testing and certification assessment to Australian Standards.
- **Specification and Supply:** Including the provision to fabricators, builders and others, of hardwood GLT beams for installation and assessments.

Each of these processes has been subjected to cost analysis, providing a clear picture of the financial requirements associated with GLT production.



Importantly, this information is a crucial input to the Hardwood Timber Manufacturing Hub (HTMH) feasibility study<sup>1</sup>, and ultimately for those requiring specific assessment of the economic viability and scalability of the 'nominal' facility.

### **Development potential**

The GLT Fast Start Commercialisation Trial emphasizes the critical need for an integrated feasibility study, (which is currently underway) as a foundational step towards realizing the investment potential of sustainable timber manufacturing solutions.

Building on the inputs to this analysis, the feasibility study is meticulously examining every aspect of the production processes, resource utilization, and cost dynamics, aiming to provide a place-specific, comprehensive roadmap to guide informed decision-making.

By presenting a clear analysis of the scalability and economic viability of GLT production, the feasibility study offers crucial insights into the financial and operational pathways required for commercial success. Furthermore, its focus on locally grown renewable resources aligns with environmental best practices, enhancing the appeal of this venture within the realm of responsible and future-facing built-environment developments and processes.

The findings of this assessment and of the GLT Fast Start Commercialisation Trial are helping to shape the strategic direction of GLT production and offering a tangible pathway to investment.

As the theoretical, applied, practical and commercial research undertaken as part of the ATMAC program concludes, this integrated approach will ensure a balanced framework of innovation, sustainability, and economic opportunity, setting new benchmarks in timber manufacturing and resource management.

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<sup>1</sup> Currently underway, funded by the Victorian Government and the Victorian Forest Products Association



## Summary of recommendations

The recommendations arising from the 'fast start' element of the ATMAC Splinters to Structures project are set out below.

**Recommendation:** The HTMH feasibility study should examine opportunities for the log yard to receive a 'run of harvest' supply – based on limited in-field decision making – with visual and technology-driven log-grading options to determine which logs meet the sawmilling specification.

**Recommendation:** The HTMH feasibility study consider the appropriate mix and scale of air drying, kiln drying and reconditioning, to provide options for the integrated GLT manufacturer, as well as production of other sawn timber products.

**Recommendation:** The HTMH feasibility study and other developments associated with production of hardwood GLT, include treatment capacity, able to provide treatment from H1 to H3 standards.



## Summary of commercial operating model

The commercial operating model presented in this report (and previously specified in the Milestone 2 report) has been prepared on a 1 m<sup>3</sup> GLT output basis, as an example of the likely costs of manufacturing GL18+ grades in an existing facility.

This is based on but is not an enterprise model. The data is presented in this manner to avoid disclosing information private to the manufacturer. A spreadsheet version, containing some additional information, is available.

Based on a unit cost of manufacture of \$3,840 (delivered free-in-store) and revenue at current (JQ25) stock pricing of \$4,413, 1 m<sup>3</sup> of GL18, has a gross margin of \$574 or 12.99%.

Efforts will be required to improve yields and reduce costs, especially to provide returns suitable for investment in advanced manufacturing. These efforts, including the current feasibility study into the establishment of the HTM, have potential to improve financial outcomes.

Three stand-alone sensitivities demonstrate opportunities for significant improvement in gross margins.

Sensitivity 1 - Increase Green Sawnwood Yield					
Green Sawnwood Yield	<b>41%</b>	42%	43%	44%	45%
Gross Margin	<b>12.99%</b>	13.38%	13.74%	14.09%	14.42%

Sensitivity 2 - Reduce Drying Costs					
Cost of Drying	<b>\$300/m<sup>3</sup></b>	\$275/m <sup>3</sup>	\$250/m <sup>3</sup>	\$225/m <sup>3</sup>	\$200/m <sup>3</sup>
Gross Margin	<b>12.99%</b>	14.88%	16.77%	18.66%	20.55%

Sensitivity 3 - Increase Recovery of GLT from Dry Sawnwood					
Recovery of Dry Sawnwood to GLT	<b>30%</b>	33%	36%	39%	42%
Gross Margin	<b>12.99%</b>	17.47%	21.20%	24.34%	27.04%

In combination, the following modest adjustments yield a 24.67% gross margin – about double that of the base case:

- Green Sawnwood Yield = 42%
- Cost of Drying = \$250/m<sup>3</sup>
- Recovery of Dry Sawnwood to GLT = 36%

Summary outputs of the base case are provided on the final page.



## Process flows and indicative costs

*The following information is based on producing 100% hardwood GLT from plantation grown resource, where maximum capacity for 'higher strength' plantation hardwood GLT is considered 10,000 m<sup>3</sup> GLT output per annum, but likely facility production of those products is 5,000 m<sup>3</sup> per annum.*

The following processes have been assessed for cost and price points, from a GLT manufacturing perspective:

- Log acquisition and merchandising
- Log handling and transport considerations
- Log storage at sawmill
- Sawmilling
- Drying
- Preservation and treatment
- Dry storage of sawn timber
- GLT Manufacturing
- Warehousing and dispatch.

### Log supply

#### *Log acquisition*

Effective, targeted and specific log acquisition is critical to the efficient manufacture of GLT. In the Green Triangle or any other region with a large supply of potential plantation eucalypt log inputs, GLT specific log supply is a small proportion of total supply (which can reach 3 million GMT per annum), less than or equal to 100,000 GMT per annum. As further development work continues, other sawnwood products may be possible, with the option of increasing total log intake to a sawmill.

The initial log supply (December 2024) was based on a very detailed specification, carefully followed and monitored by the log supplier at harvest. This supported subsequent sawmilling, drying and yield recovery, but added harvesting costs.



Specific Harvesting: December 2024



Source: GTFIH

Initial Logs Supplied December 2024 [Image 1: Whiteheads Sawmill, Image 2: Timber Training Creswick\*]



Source: GTFIH

\* Small quantity of oversize logs

A second supply of logs (March 2025) was provided from a range of otherwise underutilised resource largely derived from windrows, over-dimension trees and burned logs. This supply approach was selected to assess the sawing performance of variable logs.

Since the global pandemic, international pulpwood markets have anecdotally been depressed. This has resulted in the average age of eucalypt plantations increasing. The likelihood is that over the next decade, there will be a larger proportion of over-dimension trees, more suitable as sawlogs and for other solid wood production methods, than logs from younger trees.



## Second Log Supply March 2025



Source: GTFIH

Because of the differences in scale of annual plantation hardwood supply and demand for logs for sawnwood and GLT production, commercial partners will be well-positioned to make appropriate and ongoing log selection and supply decisions.

Regardless of the supply regime, the 'affordable maximum price' for log inputs to a sawmill producing sawnwood entirely for GLT production will be highly dependent on the quality, specification and precise source of log from a GLT perspective, and its yield to finished GLT. The latter will be impacted by the quality of the sawmill and its fitness for specific purpose, and the subsequent drying capacity, labour inputs, handling and other logistics and operational considerations.

To avoid disclosing commercial-in-confidence discussions between parties engaged in the commercialisation trial, the commercial model discloses a *nominal affordable maximum price*, based on a log input to finished GLT product recovery of just 12.3%.

At scale and meeting these yield recoveries, the 'affordable maximum price' of plantation eucalypt log inputs is about **\$90/GMT** delivered to sawmill.

How parties work together to deliver that input price is a matter for them, including the options of supplying logs from a wide range of sources and with greater quality variations.

However, an integrated facility can introduce a range of efficiencies that could allow for higher log input prices.

### *Log handling, merchandising and transport considerations*

If logs are specifically harvested for sawmilling to manufacture GLT inputs, full truck loads can be harvested and delivered to the sawmill.

However, in a 'select from run of harvest' approach, where specific logs are identified during a general harvest and set aside for later supply to the sawmill, it is expected there will be increased handling and/or transport costs, including, but not limited to:

- Potential application of 'end-stop' treatments to reduce splitting with increased likelihood of logs not being delivered on day of harvest.
- Collection of logs separate from collection of 'general harvest' logs.

It is likely that the selected supply of plantation eucalypt log, log handling and transport costs to the sawmill will be higher than for the remainder of the harvest. These costs may be offset by log specifications and supply that could include logs that would otherwise remain unprocessed for any commercial purpose.

### Plantation Hardwood Logs Being Loaded to Bins for Processing at Whiteheads: December 2024



Source: GTFIH

This poses the option of providing ‘run of harvest’ supply direct to the log yard for merchandising via visual and technology-driven grading, potentially reducing log supply costs but expanding the required size of the log yard and adding some operational complexity.

Ultimately, log acquisition, selection, merchandising and transport management will depend on circumstances and strategic decisions, including investment decisions.

**Recommendation:** The HTMH feasibility study should examine opportunities for the log yard to receive a ‘run of harvest’ supply – based on limited in-field decision making – with visual and technology-driven log-grading options to determine which logs meet the sawmilling specification.

## Sawmilling and drying

### *Log storage at sawmill*

Consistent with most sawmilling regimes, especially for hardwoods, storing logs onsite, prior to sawing, needs to include sprinkler and water recovery and recycling systems, to keep logs moist and reduce the risk of splitting and other defects in logs.

Minimising the time between logs arriving at the sawmill and being sawn is also important as a means of reducing splitting in logs, where the alternative might be to apply an ‘end stop’ treatment at harvest. It is possible that applying end-stop treatments on a relatively small proportion of total harvested logs could be disruptive to the general harvesting process and ultimately, incur more costs through the supply chain than the costs of accommodating some splitting.

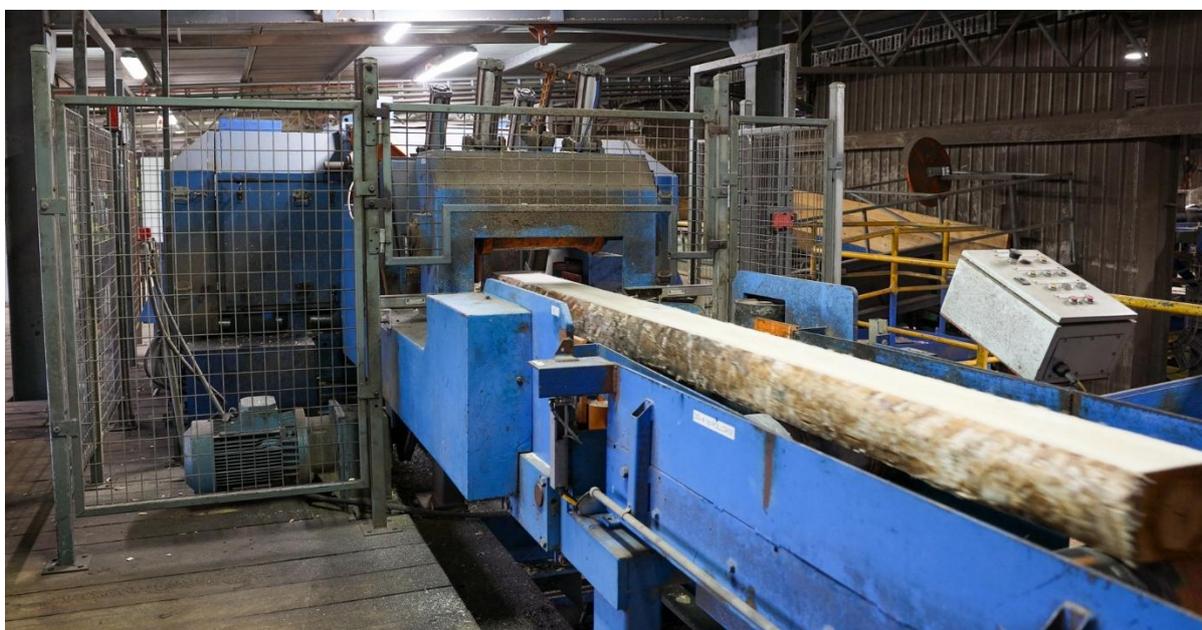
Two sawmilling options are considered.

- a. *Non-integrated sawmilling*: is common for hardwood GLT manufacturers, which are often separate from sawmills. Though conducted by necessity, timing, costs and yields were assessed with sawmilling and drying conducted in separate facilities, requiring transport between facilities.
- b. *Integrated facilities*: are preferred, where the sawmill and drying facilities are integrated with the GLT manufacturer.

*a. Non-integrated sawmilling*

In an operating model where the sawmill is non-integrated and contracted by the GLT producer to 'toll saw', a lower volume, slower throughput sawmill will be preferred. A sawmill able to process  $\leq 1,000$  m<sup>3</sup> of logs per week or approximately 50,000 m<sup>3</sup> per annum is considered optimal, operating at a nominal ratio of 5:1 or a 20% yield to finished product.

**Plantation Hardwood Log Cant at Whiteheads Sawmill: December 2024**



Source: GTFIH

However, the national market for high-strength GLT (GL18+) is only about 10,000 m<sup>3</sup> per annum, with the likely result that at scale, an integrated sawmill would be more likely to produce a maximum 5,000 m<sup>3</sup> per annum and therefore process about 25,000 m<sup>3</sup> of logs per annum.

It is instructive that from the initial log supply, a mobile sawmill delivered a similar green sawn timber yield (41%) as the stationary, faster sawmill (42%), but the dried sawn board recovery was greater from the slower milling activities.

## Sawn Plantation Hardwood Timber at Whiteheads Sawmill: December 2024



Source: GTFIH

From the second log supply, the green sawn timber yield was 42%, despite the useable portion of the logs being reduced (and removed from the calculations of yield) because of the irregularity of sizes, dimensions and quality from a sawnwood perspective.

These green sawn timber yields are instructive for future operations because they provide options for log supply, guidance on the pace and processes of sawing, and significant opportunities to increase yields.

On a toll basis, sawmilling costs are expected to be about **\$145/GMT** of log input.

### *b. Integrated sawmilling*

An integrated hardwood sawmill with drying capacity and a GLT manufacturing facility is estimated to have sawmilling costs lower than toll sawmilling and could be expected to have higher yields than a non-integrated sawmill.

### *Drying*

Integrated drying operations can include banded and weighted air drying, for periods up to 60 days.

Kiln drying of banded and weighted timber can be of either green sawn timber (est. 21-28 days) or previously airdried timber (est. 1-5 days) to stabilise moisture levels throughout the timber before further processing.

## Sawn Timber Air Drying: December 2024



Source: TTC

The trade-off between time (air drying) and costs (kiln drying) needs to be balanced operationally and will vary based on seasonality and moisture content of green sawn wood, as well as potentially on demand for finished product and availability of dry sawnwood in storage. The GLT manufacturer considers the optimal moisture range for sawnwood to be 10-18%, prior to further processing.

In an integrated facility, or at least, a consistent, organised and managed drying relationship, average drying costs are expected to be less than the modelled **\$300/m<sup>3</sup>** of dry sawn wood output.

**Recommendation:** The HTMH feasibility study consider the appropriate mix and scale of air drying, kiln drying and reconditioning, to provide options for the integrated GLT manufacturer, as well as production of other sawn timber products.

**Weighted Sawn Timber About to Enter Kiln: February 2025**



Source: TTC

## Timber Being Loaded to Kiln at Timber Training Creswick: February 2025



Source: TTC

### Preservation/treatment

Not all GLT is available preserved or treated, based on the specific end-use applications of the beams. It is currently uncommon for hardwood GLT graded GL18+ to be provided treated.

However, a viable commercial operating model will include timber preservation capability, integrated to the drying process or directly adjacent to it.

Preservation of some dry sawn timber, as part of the commercial trial, involved timber being transported to a third party for drying, at a transport inclusive cost of **\$250/m<sup>3</sup>** of dry sawn timber input.

The operating cost of an integrated treatment process is currently about \$200/m<sup>3</sup> during the trial phase, and is expected, based on likely uptake of treatment, to be about **\$125/m<sup>3</sup>** of dry sawn timber input to GLT, noting it is assumed there will be 100% recovery to GLT of the post-treated dry sawn timber.

Recognising there are challenges with adequate ingress of chemicals into hardwood species, the commercialisation trial opted for treatment of sawn timber prior to lamination. The preferred method was LOSP,<sup>2</sup> with treatment to the H3 (outside, above ground) standard, but warranted

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<sup>2</sup> Light Organic Solvent Preservative



for uses suitable under H1 (inside, above ground). Future treatment options include moving to the ACQ methods.<sup>3 4</sup>

For durability reasons, it is unlikely – treated or otherwise – that GLT manufacturers would recommend the plantation hardwood GLT be used in exposed, outdoor settings.

#### Dried Sawn Timber Entering Preservation Chamber: May 2025



Source: Davids Timber

Drying and preserving timber as part of an integrated process will reduce handling and transport and would provide the added efficiency of ensuring that only timber being manufactured into GLT is treated.

**Recommendation:** The HTMH feasibility study and other developments associated with production of hardwood GLT, include treatment capacity, able to provide treatment from H1 to H3 standards.

#### Dry storage of sawn timber

In an integrated environment, where sawmilling, drying and treatment occur adjacent to and specifically for production of GLT, the dry storage of sawn timber will include all the internal production and any sawn timber purchased from other sawmills, especially softwood.

The equation for minimum dry storage capacity is straight-forward for each timber type, where the main variable is the 'turn rate', or how many days or weeks of production needs to be available in the on-site store.

There may be seasonal factors that limit access to logs, necessitating the maximum 'hold' time to be longer, and therefore, requiring greater dry store capacity, and similarly, additional

<sup>3</sup> Ammoniacal Copper Quaternary

<sup>4</sup> For further information see <https://www.tpa.com.au/timber-treatment/>

capacity may be required to accommodate sufficient quantities of various sawn timber dimensions.

**Dried Sawn Plantation Hardwood Timber Arriving at GLT Manufacturer: March 2025**



Source: WTIBeam

For sawn plantation hardwood, to manufacture GL18+ products, the storage equation for a facility producing 5,000 m<sup>3</sup> of plantation hardwood GLT per annum, based on the modelled 30% yield from dry sawnwood to GLT might be:

GLT production capacity per week	m <sup>3</sup>	100
Yield from dry sawnwood to GLT	%	30% (333 m <sup>3</sup> dry sawnwood)
Maximum weeks in store	wks	6 weeks
Dry storage capacity	m <sup>3</sup>	2,000
Margin for alternative dimensions (20%)	m <sup>3</sup>	2,400

If supply of logs was potentially less often than once per six weeks, maximum dry storage capacity would need to be increased.

As a result of the above and in the context of the expected growth in demand and consistency of that demand, the commercialisation trial identifies the necessity for increased dry sawn timber storage.

It should be noted this calculation requires operational clarification based on the model and patterns of supply. For a GLT manufacturer, the data here represents only the plantation hardwood portion of their dry sawn timber stock.

The dry store can be directly linked to the finished goods warehouse.

### GLT manufacturing

The commercialisation trial, and data presented confidentially by WTI Beam, confirms that depending on the grade of GLT being manufactured, the total cost of GLT manufacture from the receipt of sawnwood to the delivery of finished product to the customer, ranges from **\$1,300-\$1,500/m<sup>3</sup> of GLT**.

In general, manufacturing costs for higher strength hardwood GLT (GL18+) are toward the higher end of the average range because production is slower and other inputs like adhesives and labour are higher.

### Grading of Sawn Timber, Prior to Finger-Jointing: April 2025



Source: WTI Beam

This cost analysis includes all production inputs, excluding sawnwood. Indicatively, the following are included:

- Energy and other utilities
- Labour
- Adhesives
- Consumables (eg. wrapping, stacking, labels, small tools)
- Maintenance



- Testing
- Equipment rental agreements (eg. forklifts)
- Dry storage, warehousing and despatch
- Transport

Return on funds and other business measures are not included.

**Finger-Jointed Plantation Hardwood Lamella, Prior to Planing: April 2025**



Source: WTIBeam

Importantly, the yield from dry sawnwood to GLT is modelled at 30%. This is a realistic outcome from the commercial trial because of re-work, testing, some initial sawnwood dimensions being smaller than required to accommodate shrinkage of sawn hardwood as it dried, and so on.

It can be anticipated that the longer term dry sawnwood yield to GLT will increase toward 50%.

### Certification testing and assessments

As for all its products, WTIBeam undertook specific certification testing, of processes, intermediate products (eg. fingerjoints) and of finished plantation hardwood GL18+ beams.

#### Plantation Hardwood GLT Beam Ready for Certification Testing: May 2025



Source: WTI Beam

As part of the commercialisation trial, WTIBeam has achieved certification of proprietary branded GL18+ products to the Australian Standards. Certification was provided by Bureau Veritas.

These new products will be available in the Australian market in the second half of 2025.

As part of the trial, Holmes McLeod Consulting Engineers (HMC) were engaged to observe and validate the internal testing processes and outcomes, and the certification testing process, to provide added assurances to the GLT manufacturer and the supply chain, but also to support the ATMAC Splinters to Structures program.



HMC advises they are satisfied with the processes and outcomes and are preparing a report to that effect.

### Destructive Testing of GLT Beam at Field Day: April 2025



Source: GTFIH

### Warehousing and despatch

The commercial model for the GL18+ plantation hardwood GLT assumes regularity of availability will increase demand for 'stock' supplies to two-thirds of total production. For a 5,000 m<sup>3</sup> GLT output, annual 'stock' would be 3,330 m<sup>3</sup>, with 'job lot' and 'one off' combining to provide the remaining one-third or 1,670 m<sup>3</sup>.

From a warehouse capacity perspective, 'stock' is misleading, as the term relates more to a supply volume and/or customer type, than to a standard product.

A stock order is only available to a pre-qualified customer and refers to the number of units ordered (in multiples of 4 or 5 of the same grade and dimensions). However, a stock order will be received, manufactured and supplied within fourteen (14) days in most cases.

## Plantation Hardwood GL18+ Beams – Stock Packs – Ready for Customer Delivery: June 2025



Source: WTIBeam

Although some dimensions are more common than others, GL18+ can be supplied in more than thirty (30) dimensional sizes and at almost any length required, meeting three appearance grades.

GLT manufacturers therefore do not hold significant stock production.

Maximum warehouse capacity for stock is unlikely to exceed four weeks of supply, or about 400 m<sup>3</sup> of finished goods storage capacity for plantation hardwood GLT. Maximum warehouse capacity for job lots and one-off orders will be more variable and is less likely to be consistent. A further 400 m<sup>3</sup> of finished goods storage capacity is likely required for this product.

### Specification and supply

During the commercialisation trial, a series of simple supply agreements were established with potential end-users of the GL18+ plantation hardwood beams. The agreements provided recipients with one or more beams for installation in different dwelling types at no cost, but with requests for images and feedback on installation and/or other issues.

Once agreements were reached, those receiving beams engaged directly with the GLT manufacturer to normalise the supply experience. To date, no beam recipient has reported issues or difficulties with the beams they received.

One recipient – a regular customer – who had also purchased beams from the GLT manufacturer, was unable to tell which beam was plantation hardwood and which were other hardwood beams. From an appearance perspective, the GLT manufacturer expects beams will be available in standard grades, including appearance (A) grades for internal exposed use.



Importantly, all recipients are familiar with hardwood GLT beams, so issues around weight (heavier than a similar dimension softwood beam) were unlikely to arise.

**Trial Beam Installed in Residential Dwelling – South Western Victoria: June 2025 [1]**



Source: WTIBeam

**Trial Beam Installed in Residential Dwelling – South Western Victoria: June 2025 [2]**



Source: WTIBeam

## Conclusions

Arising as the final phase of the ATMAC Splinters to Structures program and utilising residual funding, the GLT Fast Start Commercialisation Trial appears successful in that:

- a. It produced plantation hardwood GLT beams, successfully installed into real buildings
- b. Achieved certification of the 100% Eucalyptus Globulus GLT beams, against Australian Standards
- c. Provided open learning and engagement opportunities for a wide cohort in and related to the forestry and wood products industry
- d. Demonstrated Australia's hardwood plantations can be transformed into highest-value built environment products.

From a commercial perspective, the trial has provided a highly-instructive, end-to-end analysis of opportunities to produce a needed Australian product and to supply a local market with an import replacement product. Importantly, there are commercial opportunities throughout the supply chain for plantation owners and growers, log yard operators, sawmillers and those involved in the manufacture of GLT.

Critically, the trial has also identified process improvement opportunities, able to add value and increase efficiencies, to the benefit of the supply chain. Most significant of these is the opportunities that can arise from developing an integrated manufacturing facility, incorporating as much of the manufacturing process as possible.

Commercial participants should be delighted that leveraging this trial and the ATMAC Splinters to Structures program, the Victorian Government and Victorian Forest Products Association and its members have invested in a feasibility study (currently underway) to advance this major integration opportunity.

*IndustryEdge*

*23<sup>rd</sup> July 2025*



Summary of commercial operating model for hardwood GLT facility

Sawmilling	Ratio	m3	Price	Cost	Residues
Log inputs to sawmill (\$/GMT)	1.0000	1.0000	90.00		
Green sawn board recovery	0.4100	0.4100			0.5900
Dry sawn board recovery	1.0000	0.4100			
Log inputs per m3 dry sawn boards		2.4390			
Log cost per m3 dry sawn boards				<b>219.51</b>	
				<b>145.00</b>	
Sawmilling (\$/GMT)			145.00		
Drying cost / m3 dry sawn boards			300.00	<b>300.00</b>	
<b>Total cost dry sawn boards (Fis/m3)</b>				<b>664.51</b>	
<b>Glulam Manufacturing</b>					
Dry sawn timber inputs to glulam (\$/m3)	1.0000	1.0000	664.51		
Recovery to glulam	0.3000	0.3000			0.7000
Dry sawn timber inputs per m3 glulam		3.3333			
Dry sawn timber preservation (\$/m3) input to glulam			125.00	<b>125.00</b>	
Dry sawn timber cost per m3 glulam				<b>2,340.04</b>	
Glulam production costs/m3			1500.00	<b>1,500.00</b>	
<b>Total glulam cost (Fis/m3 wholesale)</b>				<b>3,840.04</b>	
<b>Sales Value</b>					
Glulam ave sale price			4,273.14	<b>4,273.14</b>	
Woodchips (\$/GMT)			60.00	<b>35.40</b>	
Briquettes/pellets - Dry (\$/t) - Bulka Bags			150.00	<b>105.00</b>	
<b>Total</b>				<b>4,413.54</b>	
<b>Net Return</b>					
Total/m3 GLT Output				<b>573.50</b>	
Gross Margin	12.99%				
<b>Notes</b>					
Log input m3 / m3 glulam		8.1301		731.71	
Yield recovery		12.30%			

