

UNLOCKING THE VALUE OF MASS TIMBER

A Guide for Cost Assessors

Published 2024 by Australian Sustainable Hardwoods Pty Ltd.

Version 1.0. Sept 2024.

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Purpose of this document:

The value proposition in [MASSLAM](#) & ATC construction differs to that of conventional construction.

The cost evaluation of a mass timber project must account for these differences in both tangible and intangible outcomes.

When assessing mass timber against traditional construction, it is observed that many comparisons regularly fail to be aware of and/or account for the significant cost benefits of mass timber.

This document has been developed to help outline the key areas of cost for consideration, as advised by those who have built mass timber projects successfully, with the intention of saving projects from being prematurely steered toward traditional construction as a result of accounting misconceptions or incomplete understanding.

Notes:

- *The below advice is general in nature and can be project specific.*
- *Items have been listed in priority of greatest to least financial impact – although it is important to acknowledge that non-financial impacts are sometimes of greater importance.*
- *Please speak with your MASSLAM & ATC specialist for project specific details.*

Item	Has this been factored (Y/N)	Estimated cost benefit - Project specific	Implications
Major implications:			
1. Faster construction			What are the daily costs allocated to construction and what financial benefit do they bring if completion is realised earlier (ie: 30% faster) as is achieved and measured on historical MASSLAM projects? (upwards of 30% saving in install fees, plant, on site admin and equipment hire)
2. Faster occupancy			Resulting from faster construction, earlier occupancy results in greater income and/or reduced interest on loans. (rental yield x number of additional months tenancy. Reduced interest payments).
3. Reduced joinery			Traditional construction materials are often hidden behind attractive joinery items to improve visual/livability outcomes. MASSLAM & ATC does not need to be covered in expensive joinery as it is the aesthetic and the structure. Additionally, the aesthetic nature of the structure enables reduced need for natural floorings and furnishings as the warmth of timber has already been achieved. (Panels, flooring, batten systems, and joinery add anywhere from \$60-500m ² each)
4. Reduced foundations			Reduced weight may result in reduced foundations. (savings equivalent to ~\$800 for every m ³ of concrete reduced in foundations)
5. Eliminated need for transfer slabs			Specific to ATC / MASSLAM solution paired with basement carparking or similar spans. (cost saving equivalent to 100% of transfer structure components allowance).
6. Increased rental yield.			Up to 10% higher rental yields are currently being achieved as a result of the benefits of mass timber construction to occupants.
7. Reduced number of trades.			Mass timber sites require as few as 4 tradespersons, far fewer than traditional construction. (saving equivalent to % of reduced staff/hourly rates)
8. Cost certainty			For those with experience installing mass timber, prefabrication provides certainty on cost of goods delivered to site. Less contingency and variations.

Item	Has this been factored (Y/N)	Estimated cost benefit - Project specific	Implications
Major implications:			
9. Confidence in superior coordination			High levels of ability to coordinate deliveries and/or avoid inclement weather. (avoid pouring concrete in the rain resulting in double time payments for workers).
10. Ability to re-print fabrication			Upfront design costs are greatly reduced if repeating builds in future. (potential saving equivalent to 5% of superstructure).
11. Reduced fire encapsulation			Specific to MASSLAM / ATC when using verified performance pathway. (savings between \$20-90m ² in fire checking alone) not including the additional weight and carbon requirements of the fire protection.
12. Reduced deliveries			Lighter materials and panelised construction reduces deliveries. (cost saving equivalent to reduced loads to site. i.e. – 20x less deliveries).
13. Reduced need for contingency in build			Fewer ‘unknown-unknowns’ as design is completed to LOD400 early. Mitigation of on site works due to design gaps. Clash detection and early coordination of services
14. Earlier follow-on trades			Service and fit-out trades can commence soon after the structure for that level has been completed (no back-propping to be stripped, timber is an easy substrate to work with and does not create silica dust)
15. Energy efficiency			Mass timber structures enhance a buildings performance via improved air-tightness and reduced thermal bridging, reducing operational costs.
16. Environmental incentives/subsidies			Timber is a carbon positive material with significant environmental and sustainability credentials. Loan and grant incentives are on offer from clean energy financiers.
17. Deconstruct able			At end of life, buildings can be designed to be deconstructed and reused/reassembled. Benefits to those designing improved circularity.
18. Streamlined transaction cost			Each purchasing transaction costs time and increases risk of delay. Prefabricated delivery greatly reduces transaction cost.

Mild implications:			
1. Increased occupancy wellbeing.			Crucial for people in need (social housing etc.)
2. Delivered/installed superstructure is better than carbon neutral (rather than a significant contributor to GHG emissions).			Traditional construction offsetting their emissions may need to be factored. Opportunities exist for carbon life cycle decisions to eliminate on-site PV systems in favour of purchased green power results in reduced need for rooftop solar. Rooftop solar is as much about showing environmental outcomes as it is about reducing carbon. Expressing mass timber allows developers to show these credentials in other ways, while purchasing green energy from the grid and passing liability/risk of operating PV systems to energy providers. (Saves equivalent to that of PV system).
3. Faster load bearing capacity of structures.			Follow on trades can commence earlier and are working in preferable conditions often just 1-2 floors away from the live deck No back propping or formwork installation and stripping requirements
4. Scaffold efficiencies			The integration of pre-installed fall protection and prefabricated, top-hung façade/curtain wall systems mitigates the need for scaffolding.
5. Crane size			The reduced weight of material and elements means smaller and cheaper cranes can be used to construct a mass timber building.
6. Safety			Lighter materials, prefabricated solutions, smaller crews, less noise and less dust all improve the safety of a mass timber construction site.

Side benefits:

1. Australia needs 1.2m homes, urgently. According to the HIA, we need 25% more skilled trades to realise this. Prefabrication does this work offsite.
2. Increased safety of installers.
3. Less hot works & dust (including silica dust).
4. Fewer deliveries to site.
5. Significant reduction in construction noise.
6. Significantly reduced on-site waste.
7. Building is built with truly renewable materials
8. Consumers and occupants are becoming more sustainability focussed. Mass timber buildings may be future proofing occupant desirability
9. Supply risk effectively zero if production slot is booked
10. Sustainable and high performing homes have 14% more interest than typical homes (Domain, 2024)
11. Beautiful aesthetic

Additional Resources:

1. [ASH Affordable Housing Report](#)
2. [WoodSolutions Cost Comparisons Design Guide](#)
3. “From a DfMA perspective, ASH were excellent to deal with from modelling of GLT elements, input/coordination with consultant team and other timber suppliers/designers. Their review of GLT and steel connections was invaluable. [The finished product is] high quality with very little work or finishing required on site” – ICON Construction