





XLT is a range of products by XLAM that bring the benefits of mass timber to residential and light commercial construction. The XLT range includes 'ready made' panels, structural flooring, beams, columns, bracing and portal structures.

Mass timber is strong, sustainable, durable and offers impressive structural properties. The XLT range is made from Australian grown plantation Radiata pine offering painless onsite alterations, easy handling and fast install. Using timber alternatives means that you can minimise the reliance on fabricated steelwork and pair timber XLT products with timber framing.



Certificate CM70140



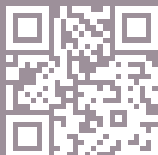
AUSTRALIAN
GROWN & MADE



Responsible
Wood



PEFC
PEFC/21-31-15



XLT BEAM

XLT Beam is a high-capacity laminated structural beam offering flexible end section options to suit a variety of applications and presents cost efficiency. Manufactured from treated or untreated Radiata Pine and produced on a large-scale mass timber press, XLT Beam offers a solid wood alternative to LVL or steel with significant cost savings.

XLT Beam carries trusted CodeMark certification in both Australia and New Zealand, ensuring proven compliance and reliability.

TYPICAL APPLICATIONS:

- Rafter
- Floor joists
- Lintels (upper and lower)
- Bearers
- Purlins

SIZES AND AVAILABILITY

STANDARD WIDTHS:

65mm, 75mm, 90mm, 130mm, 170mm

- Suitable for most residential and light commercial applications.
- Typical applications covered by CodeMark-certified span tables (see XLAM Structural Design Guide – XLT section)

WIDER BEAMS (UP TO 340mm):

- Used for high-load scenarios, long spans, or as compression members.
- Require design to AS 1720.1 or NZS AS 1720.1 by a structural engineer.

AVAILABLE LENGTHS:

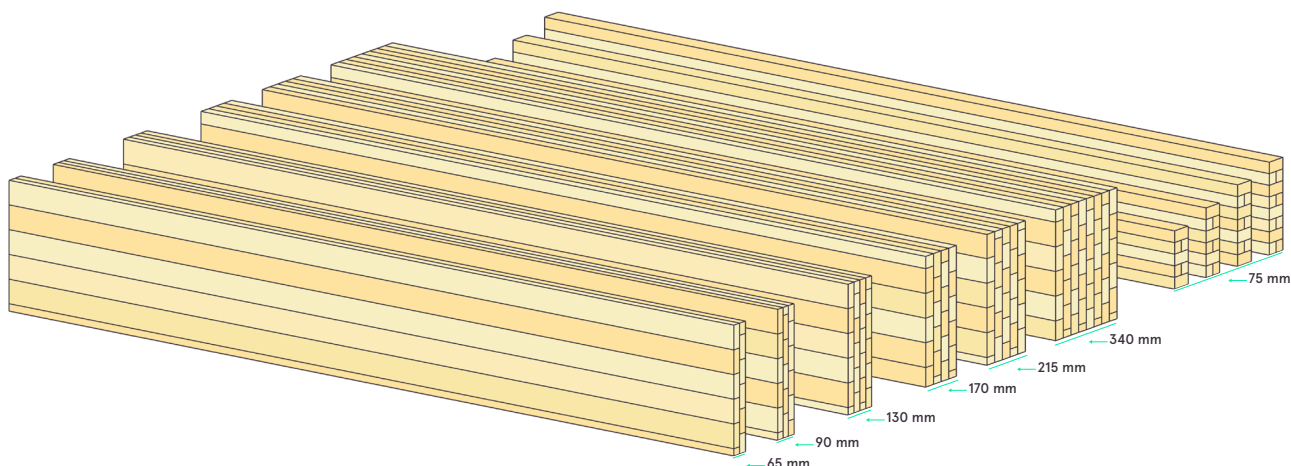
- 3.6m, 4.8m, 5.4m, 6.0m.
- Lengths > 6.0m are available to order.

CUSTOM SECTIONS:

- Deeper cross-sections available for XLT Beam90, XLT Beam130, and XLT Beam170 (up to 8x width).
- For beams 170–340mm wide, contact XLAM.

AVAILABLE SECTION SIZES (DEPTH X WIDTH IN mm):

XLT Beam65	XLT Beam75	XLT Beam90	XLT Beam130	XLT Beam170
200 x 65	200 x 75	200 x 90	200 x 130	200 x 170
240 x 65	240 x 75	240 x 90	240 x 130	240 x 170
300 x 65	280 x 75	300 x 90	300 x 130	300 x 170
360 x 65	320 x 75	360 x 90	360 x 130	360 x 170
400 x 65		400 x 90	400 x 130	400 x 170
450 x 65		450 x 90	450 x 130	450 x 170
			500 x 130	500 x 170
				550 x 170



Note: 255mm and 300mm wide sections not shown

LAMINATE LAYUP

XLT Beam is a face-glued laminated product manufactured using the layups shown in the figure above.

- Laminates are 85 mm wide and 30–42.5 mm thick (depending on beam series).
- Laminate stagger: $\frac{1}{2}$ or $\frac{1}{3}$ of laminate width.

STRUCTURAL DESIGN

LOAD CAPACITY:

Span tables (CodeMark certified) are provided in the XLAM Structural Design Guide – XLT section.

Tables cover single and double span conditions.

Designs outside the span tables require structural engineer input or Hyne Design software.

FLOOR SYSTEMS:

- Superimposed dead load (SDL): 50 kg/m² (including finishes & services)
- Distributed live load: 1.5 kPa

- Concentrated live load: 1.8 kN

ROOF SYSTEMS:

- SDL: 40 kg/m² (light metal roof) or 90 kg/m² (tiled roof)
- Distributed live load: 0.25 kPa (25 kg/m²)
- Concentrated live load: 1.8 kN

WIND LOADING:

- Wind classification: up to N3 (AS 4055) / Very High (NZS 3604).

STRUCTURAL PROPERTIES

XLT Beams are manufactured in a single proprietary grade, XL-10, with properties determined by testing to AS/NZS 4063 and certified under CodeMark.

Strength Grade	Bending Strength (f' _b) (MPa)	Tension Parallel to Grain (f' _t) (MPa)	Shear Strength (f' _s) (MPa)	Compression Parallel to Grain (f' _c) (MPa)	Compression Perpendicular to Grain (f' _p) (MPa)	Modulus of Elasticity (E) (MPa)	Modulus of Rigidity (G) (MPa)	Avg. Density (kg/m ³)
XL-10	22	7.7	2.1	17	10	10000	670	500

COMPLIANCE

XLT Beam is tested in accordance with AS/NZS 4063.1 and satisfies the relevant NCC deemed-to-satisfy or NZBC deemed-to-comply provisions, supported by CodeMark certification.

AUSTRALIA:

- Complies with AS 1684.2–2021, AS 1684.3–2021 Section 1.11(i) and AS 1720.1 1.3.1(h) grading requirements.
- NCC 2022 Building Code of Australia, compliance via deemed-to-satisfy provisions.
- CodeMark Australia: CM70140.

NEW ZEALAND:

- Complies with NZS 3604:2011 Section 2.3.9.6 (NZBC housing).
- Meets NZS AS 1720.1:2022 Sections ZZ1.3.1(h) & ZZ1.3.2 (NZBC other building classifications).
- New Zealand Building Code (NZBC) compliance via deemed-to-comply provisions.
- CodeMark New Zealand: CMNZ70119.

GENERAL PRODUCT NOTES

CONNECTIONS:

- Designed in accordance with AS 1720.1 or NZS AS 1720.1 for nails, screws, bolts.
- Joint group: JD5.
- Proprietary connectors may be designed to a relevant ETA using characteristic density: 430 kg/m³.

DURABILITY:

- Applications of XLT are to be limited to the following exposure classes:
 - Building internal (Service Class 1)
 - Building external, above ground, protected (Service Class 2)
 - External exposed (Service Class 3) is not suitable for XLT products.

Note: Service class definition as per AS 5068–2006

- Manufactured from kiln-dried timber.
- Protect from:
 - Sun and rain exposure in service.
 - Direct contact with structures without air gap or DPC.
 - Extreme moisture or humidity.

- Supplied untreated or T3+ treated.

- T3+: CodeMark certified for H3 AUS / H3.2 NZ.

DIMENSIONAL STABILITY:

- Length: 0.01–0.02% per % MC change
- Width & depth: 0.2–0.25% per % MC change
- Ex-factory MC: < 15%

FIRE DESIGN:

- CodeMark: limited to applications without FRL/FRR.
- Fire-resistant designs are feasible with project-specific fire engineering.

TERMITE PROTECTION:

- Must comply with NCC/NZBC via physical or chemical barrier systems.

CONSTRUCTION NOTES

The installer must follow the project drawings and specifications, ensuring the work meets the quality standards agreed with the builder. The notes that follow are critical from both a structural engineering and compliance perspective.

NOTCHES:

Notching of bending members should be avoided whenever possible, especially on the tension side of a member. Tension-side notching of beams is not permitted except at end bearings and then only under specific conditions. Notching results in a significant decrease in strength by inducing internal forces perpendicular to grain resulting in splitting along the grain. Refer to AS 1720.1-2010 Section E9 for design guidance.

Note: Notches must be approved by the certifying structural engineer experienced in timber design.

Taper cuts are permitted subject to the limitations shown in the figure below.

HOLES:

Round drilled holes in uniformly loaded simply supported beams are allowed only in a zone located within the central 1/3 of the beam depth and at least 1.5 XLT Beam depth (1.5D) away from the face of the support.

Additionally the following limitations apply:

- Maximum hole size is 40mm diameter or 1/10th of the beam depth, whichever is the smaller.
- The maximum number of holes shall not exceed one hole per every 1.5m of span and spacing between holes must be a minimum of 8 hole diameters (based on the diameter of the largest adjacent hole) with the distance measured from the nearest edges of the adjacent holes.

Holes not meeting these limitations, positioned in any of the critical zones or in a continuous beam must be approved by the certifying structural engineer experienced in timber design.

FRAMING:

Framing must comply with the relevant standards for timber framing or general timber structures, and the design must be capable of supporting the permanent action of XLT Beam, along with linings, permanent fixtures, and any required imposed live loads. Project loading requirements should be confirmed with the project engineer.

LOAD SUPPORT:

Line loads and concentrated point loads must have a structural support pathway directly underneath.

GROUND CLEARANCE:

The NCC requires a minimum ground clearance of 150mm to the underside of bearers where inspection of termite management systems is not required. Where inspection is required, a minimum clearance of 400mm from the ground surface must be provided.

On sloping sites, this 400mm clearance may be reduced to 150mm within 2m of external walls. Maintaining a minimum 400mm clearance is recommended as good practice.

Note: NZBC has similar requirements to achieve minimum ground clearance for access during inspection and maintenance

STORAGE:

- Refer to XLAM Site Guide – available at xlam.co/resources
- Support clear of ground, on bearers.
- Protect from weather until installation.
- Keep factory wrapping until use.
- Contractor responsible for site storage and protection.

INSTALLATION NOTES

- Clean surfaces before connection.
- Position beams as per design.
- Ensure all edge distances for fixings are adhered to.
- Do not cut/notch/drill without engineer approval.
- Seal all cut ends/holes immediately with end-grain sealer to protect cut surfaces and minimise moisture ingress.
- Lifting equipment/fixings must be designed by a temporary works engineer.
- The structural engineer must inspect the constructed works and certify that the structure has been built in accordance with the engineering drawings and specifications.
 - Inspections must be carried out before any structural elements, or their connections are concealed by linings or other finishes.

HEALTH & SAFETY

- Contact XLAM for XLT Beam Safety Data Sheet (SDS).
- Follow standard Health & Safety precautions when machining timber.
- Provide dust extraction; use PPE if dust exceeds WorkSafe standards:
 - Dust mask (AS/NZS 1715)
 - Safety glasses (AS/NZS 1337)
- Ensure fall protection when working at height.
- Provide adequate ventilation in work/storage areas.

MANUAL & ASSISTED HANDLING:

- Handle XLT Beams as per accepted timber practice.
- Use mechanical aids where beams are too heavy for manual handling.
- Avoid dropping or dragging beams.



Detailed product description and
install instructions available at
xlam.co/xltbeaminstall

Note: Full responsibility for the design and compliance with the Building Codes of Australia and all relevant Australian Standards rests with the design professional specifying and certifying the product. XLAM will not accept any liability for the failure of any other elements of the building which cause a subsequent failure of an XLAM product.

MASS TIMBER MADE EASY.



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This document supersedes all previous versions.