

Lumberbank Technical Statement



LumberBank

Commitment to Innovation in Timber

MAGNA LAMINATED GL17 BEAMS

PURPOSE

Magna GL17 Laminated Beams (including rafters and lintels) are both decorative and structural building elements for use in light timber-framed construction.

EXPLANATION

Magna GL17 Laminated Beams are manufactured from kiln-dried timber called Kwila also known as Merbau. (Intsia bijuga & I. palembanica)

Their manufacture is third party certified by the GLTAA (Glue Laminated Timber Association of Australia) to the relevant AS/NZ standards.

- › AS/NZS 1328:1998 (Part 1&2). Glued Laminated Structural Timber.
- › AS/NZS 8008:2022. Timber – Finger Joisted Structural timber – product and Performance Requirements
- › AS/NZS 1720.1-2010 – Timber structures Design Methods



They are manufactured from a naturally durable timber using Phenol-Resorcinol Formaldehyde (PRF), A bond adhesive.

The Magna beams are available in the following grades:

- › Appearance: A (free of defects and smoothly dressed)
- › Structural: GL17

Magna GL17 Beams (including rafters and lintels) are available in the below sizes:

Size	Length
240 x 85mm	4.8, 5.4, 6.0, 7.2m
260 x 85mm	5.4m
300 x 85mm	4.8, 5.4, 6.0, 7.2m

Structural and Mechanical properties:

Grade	Bending	Tension	Compression parallel to Grain	Beam Shear	Elasticity parallel to grain	Modulus of Ridgidity for Beams	Bearing Perpendicular to Grain
GL17	f'_b	f'_t	f'_c	f'_s	E	G	f'_p
	40	20	33	4.2	16700	1110	23

Magna Beams are supplied with a 3mm radius edge and structural verification stamp @ 2m

Product comparison & span tables available online: <https://lumberbank.co.nz/engineered/kwila-gl17c/>

For further assistance please contact:

- 0800 458 623
- sales@lumberbank.co.nz
- www.lumberbank.co.nz

The technical information and guidelines contained in this document is current as of Feb 2023 and is based on data available at time of print. Please refer to our website to check you have the most up to date information



SCOPE AND LIMITATIONS OF USE

Scope	Limitations
Location	
Both indoor and outdoor above ground situations	› Subject to specific engineering design or selected from the Magna engineered span tables.
	› Fixing materials are to be in accordance with NZS 3604:2011, section 4.0.
Building	
In all buildings where the relevant part of the building complies with the NZ Building Code (NZBC), or in existing buildings, where the designer/engineer is satisfied that the existing building is suitable for the intended building work	› Fixing materials are to be in accordance with NZS 3604:2011, section 4.0.
	› Fabricated connections to be in accordance with AS/NZS 1170.2:2011
	› Where specific fire performance is required, the beams must be specified in conjunction with a Fire Engineer

CONDITIONS OF USE

- › The specification and installation of LumberBank laminated posts and beams must be carried out by (or supervised by) a Licensed Building Practitioner (LBP) with a relevant license class and with access to all relevant technical documentation.
- › The beams must be stored, handled and installed in accordance with all Magna requirements.

PERFORMANCE CLAIMS

If designed, installed and maintained in accordance with all Magna requirements, the Magna Laminated Beams will comply with or contribute to compliance with the following performance claims:

BASIS OF COMPLIANCE

NZ Building Code clauses	Compliance statement	Demonstrated by
B1 Structure B1.3.1, B1.3.2	VERIFICATION METHOD B1/VM1	› Engineering Span tables to AS/NZS 1170:2002 › Manufactured to AS/NZS 1328:1998 and AS/NZS 8008:2022 › Fixing materials are to be in accordance with NZS 3604:2011, section 4.0.
B2 Durability B2.3.1 (a) B2.3.2 (a)	ACCEPTABLE SOLUTION B2/VM1	› Independent assessment, Class 2 timber species, Scion (8 Sep 2021 & 31 Jan 2024) a) In-service history b) Laboratory testing c) Comparable performance of similar building element
C6 Structural Stability C6.2 (a) C6.3	VERIFICATION METHOD B1/VM1 AS/NZS 1720 1-2010	› Specification to NZS 3603:1993, section 9. Design of Fire Resistance. Including revised version AS/NZS 1720.1-2010.

SOURCES OF INFORMATION

1. Where a standard is referenced it is to be read as amended by the acceptable solution or verification method as applicable.
2. Sources of information also include the Building Act 2004 and its regulations, including the Building Code (Schedule 1 of the Building Regulations 1992), Acceptable Solutions and Verification Methods, and relevant cited standards.
3. AS 1684.2—2010 Residential timber-framed construction
4. Scion, independent evaluation and supporting letter 8/09/2021

The subject product is deemed to be in compliance with the Building Act 2004, i.e., it is not subject to any local warning or ban. No description of any warning or ban made against the product has been recorded.

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