BRANZ Appraised
Appraisal No. 845 [2014]

J-LINTEL LVL LINTELS

Appraisal No. 845 (2014)
Amended 07 September 2017

BRANZ Appraisals
Technical Assessments of products for building and construction.

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Product

1.1 J-Lintels are Laminated Veneer Lumber (LVL) 190 x 90 mm and 140 x 90 mm timber lintels.

Scope

2.1 J-Lintels have been appraised for use as structural lintels for non-specifically designed timber frame buildings designed and constructed in accordance with NZS 3604 and specifically designed buildings in accordance with NZS 3603. J-Lintels are treated for use where Hazard Class H1.2 or less applies.

Building Regulations

New Zealand Building Code (NZBC)

3.1 **In the opinion of BRANZ, J-Lintels, if designed, used, installed and maintained in accordance with the statements and conditions of this Appraisal, will meet the following provisions of the NZBC:**

Clause B1 STRUCTURE: Performance B1.3.1, B1.3.2 and B1.3.4. J-Lintels meet the requirements for loads arising from self-weight, imposed gravity loads arising from use, earthquake, snow and wind [i.e. B1.3.3 (a), (b), (f), (g), and (h)]. See Paragraphs 8.1 to 8.6.

Clause B2 DURABILITY: Performance B2.3.1 (a) not less than 50 years. J-Lintels meet this requirement. See Paragraph 9.1.

Clause F2 HAZARDOUS BUILDING MATERIALS: Performance F2.3.1. J-Lintels meet this requirement and will not present a health hazard to people.

Technical Specification

4.1 J-Lintels are structural Laminated Veneer Lumber (LVL) framing timber available as 190 x 90 mm and 140 x 90 mm sections and are supplied in a range of lengths up to 3.0 m. It is Boron preservative treated in accordance with the requirements of the JNL Preservation Treatment Standard, to meet preservative requirements of Hazard Class H1.2. The timber treatment is subject to an independent Timber Treatment Programme as part of the CodeMark certification. J-Lintels are kiln dried to a nominal moisture content of 18%.

4.2 J-Lintels are manufactured from Radiata pine renewable forest resources using a phenolic formaldehyde resin adhesive. The bonding of J-Lintel between plies is Type A complying with AS 2754.1.

4.3 J-Lintels are Certified by the Engineered Wood Products Association of Australasia (EWPAA) as Special Products - Structural LVL, in accordance with AS/NZS 4357.0. They have been verified primarily as LVL8 and LVL10.

4.4 Preservative treatment of the J-Lintels is carried out at a certified treatment plant.

4.5 The J-Lintel formaldehyde emission class is Eo in accordance with AS/NZS 4357.0 Table 1.

4.6 Juken New Zealand Ltd have Forestry Sustainability Council [FSC] certified forests and chain of custody certified mills.

J-Lintel Marking

4.7 J-Lintel is branded every metre as follows: JNL logo "EWPAA Certified Structural LVL", Mill number [either 921 or 922], "A-Bond", "Formaldehyde Emission Class Eo", "Preservative Treatment ", "921 Boron Where Hazard Class H1.2 or less applies", CodeMark and AsureQuality logo, " J-Lintel", "LVL 10" or "LVL 8".

Handling and Storage

5.1 J-Lintels must be handled and stored as other kiln dried framing timber and exposure to moisture minimised.

Technical Literature

6.1 Refer to the Appraisals listing on the BRANZ website for details of the current Technical Literature for J-Lintels. The Technical Literature must be read in conjunction with this Appraisal. All aspects of design, use, installation and maintenance contained in the Technical Literature and within the scope of this Appraisal must be followed.

Design Information

General

7.1 J-Lintels are an alternative to conventional sawn timber framing and being a manufactured engineered wood product J-Lintels will provide straight and stable framing members. J-Lintels can be used for standard framing and as members for pre-nail frames.

7.2 J-Lintels are Certified by the Engineered Wood Products Association of Australasia [EWPAA]. The Certification is for Structural LVL manufactured in accordance with AS/NZS 4357.0 as LVL8 and LVL10.

7.3 J-Lintels are for use as structural lintels for non-specifically designed timber frame buildings designed and constructed in accordance with NZS 3604 and specifically designed buildings in accordance with NZS 3603.

7.4 J-Lintels are boron treated in accordance with the JNL Preservation Treatment Standard. They are used as a substitute to H1.2 treated Radiata Pine solid timber specified in NZS 3602 with amendments set out in NZBC B2/AS1, Paragraphs 3.2 Timber.

Structure

Non-Specific Design

8.1 J-Lintels may be used as framing timber in accordance with NZS 3604 where SG 8 or SG 10 dry in service 190 x 90 mm and 140 x 90 mm members are specified.

8.2 LVL manufactured in accordance with AS/NZS 4357 is an acceptable construction material as specified by NZS 3604 2.3.9.2. It is suitable for substitution with solid timber as specified by NZS 3604 2.3.9.5.

Specific Design

8.3 The characteristic properties for J-Lintels shall be taken as MSG 8 for LVL 8 or MSG 10 for LVL 10 as given in Table 2.3 NZS 3603. For the purpose of joint design in accordance with NZS 3603 4.1.1 assign the appropriate group as shown in Table 1.

Table 1 - Classification for J-Lintels for joint design NZS 3603 (Table 4.1)

	Nails in lateral loading		Nail in withdrawal	
	Parallel*	Perpendicular*	Parallel*	Perpendicular*
J-Lintel LVL8 LVL10	J4	J4	J5	J4

* Parallel and Perpendicular refer to the direction that nails are inserted with respect to the LVL laminations.

8.4 Where J-Lintels are intended for use in specific design applications with nail plates, connection design properties must be verified by test. As a generalisation the nail plate tooth loads will be less than Radiata pine. Juken New Zealand Ltd must be referred to for further technical information.

Wall Bracing

8.5 Proprietary wall bracing systems may be used with J-Lintels.

Wall Cladding

8.6 Cladding systems where the fixings are as described in NZBC Acceptable Solution E2/AS1, Table 24 are suitable for use with J-Lintels.

Durability

Serviceable Life

9.1 J-Lintels are expected to have a serviceable life similar to conventional timber framing.

Maintenance

10.1 J-Lintels will not normally require maintenance and can be considered the same as solid timber.

External and Internal Moisture

11.1 J-Lintels must be protected from moisture by exterior cladding and internal lining which must meet the provisions of NZBC Clause E2 and Clause E3.

Installation Information

Installation Skill Level Requirement

12.1 Installation can be carried out by a competent building contractor.

General

13.1 For non-specific design building applications J-Lintels must be installed in accordance with NZS 3604.

13.2 J-Lintels must be used and installed in accordance with the information contained in the contract documents.

13.3 J-Lintels must be treated as kiln dried timber and exposure to moisture minimised.

13.4 Prior to the application of lining materials the moisture content of J-Lintels must be 20% or less as required by the lining manufacturer.

13.5 Care should be taken when using moisture meters with LVL timbers as different readings will be given compared with solid timber. Equivalence tables have been published by SCION for moisture meter use with J-Lintels LVL timber. These tables have not been assessed by BRANZ and are outside the scope of this Appraisal.

Inspections

14.1 J-Lintels require the same inspection as solid timber framing.

Basis of Appraisal

The following is a summary of the technical investigations carried out.

Tests

15.1 Tests on J-Lintels for structural properties, nail withdrawal and moisture equivalency, were carried by SCION Rotorua as part of the Engineered Wood Products Association of Australasia [EWPAA] certification procedure.

Other Investigations

16.1 Structural and durability assessments have been provided by BRANZ technical experts.

16.2 Site visits to assess installation methods and the practicability of installation have been made by BRANZ.

16.3 The Technical Literature has been examined by BRANZ and found to be satisfactory.

Quality

17.1 The manufacture of J-Frame LVL Lintels has not been examined by BRANZ, but details regarding the quality and composition of the materials used were obtained by BRANZ and found to be satisfactory. BRANZ has taken note of certifications covering quality aspects associated with the product.

17.2 J-Lintel quality is independently verified by EWPAA by testing and inspection. EWPAA certification is an ISO Type 5 system certified by JAS-ANZ

17.3 J-Lintel preservative treatment is certified by an independent third party timber treatment program as part of the CodeMark certification.

17.4 The quality of J-Lintel supplied to the market is the responsibility of Juken New Zealand Ltd.

17.5 Designers are responsible for the design of framing and buildings. The building contractor is responsible for the quality of the installation and construction.

17.6 Building owners are responsible for the maintenance of the building.

Sources of Information

- NZS 3602: 2003 Timber and wood-based products for use in building.
- NZS 3603: 1993 Timber Structures Standard.
- NZS 3604: 2011 Timber-framed buildings.
- CodeMark Certificate AQ-180615-CMNZ Rev 3.
- JNL Preservation Treatment Standard, 01 September 2017.
- AS/NZS 2754.1: 2008 Adhesives for manufacture of plywood and laminated veneer lumber [LVL].
- AS/NZS 4357.0: 2005 Structural laminated veneer lumber.
- Ministry of Business, Innovation and Employment Record of amendments - Acceptable Solutions, Verification Methods and handbooks.
- The Building Regulations 1992.

Amendments

Amendment No. 1, dated 08 June 2016.

This Appraisal has been amended to clarify timber treatment statements.

Amendment No. 2, dated 07 September 2017.

This Appraisal has been amended to update paragraphs 4.1, 4.3, 4.7, 7.2, 7.4, 17.1 and 17.3.

BRANZ

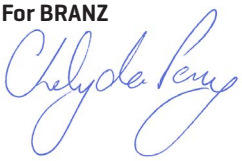
In the opinion of BRANZ, J-Lintel LVL Lintels are fit for purpose and will comply with the Building Code to the extent specified in this Appraisal provided they are used, designed, installed and maintained as set out in this Appraisal.

The Appraisal is issued only to Juken New Zealand Limited, and is valid until further notice, subject to the Conditions of Appraisal.

Conditions of Appraisal

1. This Appraisal:
   a) relates only to the product as described herein;
   b) must be read, considered and used in full together with the Technical Literature;
   c) does not address any Legislation, Regulations, Codes or Standards, not specifically named herein;
   d) is copyright of BRANZ.
2. Juken New Zealand Limited:
   a) continues to have the product reviewed by BRANZ;
   b) shall notify BRANZ of any changes in product specification or quality assurance measures prior to the product being marketed;
   c) abides by the BRANZ Appraisals Services Terms and Conditions.
   d) Warrants that the product and the manufacturing process for the product are maintained at or above the standards, levels and quality assessed and found satisfactory by BRANZ pursuant to BRANZ's Appraisal of the product.
3. BRANZ makes no representation or warranty as to:
   a) the nature of individual examples of, batches of, or individual installations of the product, including methods and workmanship;
   b) the presence or absence of any patent or similar rights subsisting in the product or any other product;
   c) any guarantee or warranty offered by Juken New Zealand Limited.
4. Any reference in this Appraisal to any other publication shall be read as a reference to the version of the publication specified in this Appraisal.
5. BRANZ provides no certification, guarantee, indemnity or warranty, to Juken New Zealand Limited or any third party.

For BRANZ



Chelydra Percy
Chief Executive

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19 May 2014