

<b>Product name</b>	GL12 Glue—Laminated Products BH1.2
<b>Product line</b>	New Zealand Radiata Pine Manufactured Glue-Laminated Structural Timber
<b>Product identifier</b>	GL12 Glue—Laminated Products BH1.2
<b>Product Class</b>	Class 1
<b>Product Sizes</b>	88x88, 112x112, 135x135, 140x90, 190x90, 240x90, 290x90

## Building Product Information Sheet (BPIR)

### Description

#### **GL12 BH1.2 Glue—Laminated Products**

Glulam is a strong, engineered, structural timber product. Glulam has superior strength, stability and stiffness to dimensional timber and can be produced in uniform or varying sizes to give strength where it is required. Lengths, dimensions, and shapes can be produced almost without limit, making Glulam unsurpassed in its versatility.

GL12 Glulam Beams and sheets combine structural integrity and durability with solid eco-credentials:

- Manufactured from plantation grown New Zealand Radiata Pine.
- Kiln dried Radiata Pine.
- Machine stress graded for structural assurance.
- Compliant with New Zealand Standards

Glulam is produced by the laminating of three or more kiln-dried, stress-tested, and finger-jointed lumber together to form continuous laminations. These laminations are pressed together using a mechanized, hydraulic press, bonded together with durable, moisture-resistant structural adhesives. Pressure treatment is used for exterior applications. Glulam can be customized as straight, curved, arched, and tapered members.

Because GL12 is manufactured from selected SG12 grade, kiln-dried material it is more stable than a sawn timber beam of the same section. The tendency of large section sawn timber to twist, split and shrink is greatly minimised in Glue-Laminated Products. A GL12 beam can reduce the overall section of members up to 40% compared to unseasoned timber, as they are pretensioned.

Glulam is stiff and sturdy and can be bent and shaped. It is able to make longer arches than traditional heavy timber and not require a supporting beam or post. (The NZ Farm Forestry Association Glulam Span Tables should always be consulted.)

As with any BH1.2 treated timber product, GL12 is not suited to exterior unprotected situations where it may be exposed to weather but may be used in any protected situation suited to H1.2 Boron treated sawn Radiata Pine.

## Relevant Building Code Clauses

- **B1 Structure** — B1.1, B1.2, B1.3.1, B1.3.2, B1.3.3 and B1.3.4.
- **B2 Durability** — B2.3.1 (a,b,c)
- **F2 Hazardous building materials** — F2.3.1

## Contributions to Compliance

### **GL12 BH1.2 Glue—Laminated Products**

#### *Clause F2.3.1 (Hazardous building materials)*

Boron has been a traditional preservative for the protection of interior structural building timber for over half a century. It has a proven record of safety and performance. Radiata GL12 BH1.2 KD is NOT a hazardous material and is safe to use, especially when simple Health and Safety protocols are in place:

- **Eyes:** Wear non-fogging goggles, full face shield, or safety glasses with side shields when cutting this product.
- **Hands and Skin:** Wear protective clothing such as overalls and shirt with sleeves, also closed in footwear. Wear puncture-resistant gloves (e.g. Leather) when handling dry wood.
- **Respiratory:** Use in well-ventilated area or outside. Wear a class P1 or P2 replaceable filter or a disposable face piece respirator should be worn if wood dust is generated.
- **General:** Wash hands before eating, drinking, smoking, using the toilet and at the end of the shift.
- Do not dispose of offcuts by burning, use approved landfills only and do not use as 'mulch' for gardens.
- Take all necessary steps to ensure your safety and the safety of others:
  - ensure adequate ventilation or mechanical dust extraction when cutting or drilling.
  - ensure the timber is well supported when cutting and nailing.
  - use appropriate safety equipment, clothing and footwear.
  - use all tools in accordance with relevant instruction manuals.
  - plan and monitor a safe approach for working at height; select and use the right equipment
  - clear the work area of any obstructions before work starts.
- treated wood offcuts should be disposed to landfill Do not dispose of offcuts by burning, use approved landfills only and do not use as 'mulch' for gardens.

## Contributions to Compliance

### **GL12 BH1.2 Glue—Laminated Products**

#### *Clause B2 (Durability)*

North Sawn Lumber has the certificate of the Grade Right timber treatment programme, and all Glue-Laminated products are manufactured and treated in accordance with NZS 3640:2003 the “Standard Operating Procedures (SOP) for Timber Treatment Plants and Treatment Auditors [Grade Right NZ,] A warranty for 15 years where a drainage plane wall cavity exists and 5 years where a face sealed cladding system exists is provided by the manufacturer of the chemical, Koppers Performance Chemicals\* (see Koppers warranty).

The treated wood is guaranteed to withstand insect attack and fungal decay and remain structurally fit for purpose for these periods when installed correctly. For radiata pine GL12 BH1.2 structural timber products used in framing and Interior construction. BH1.2 treatment is specified to ensure a long life and trouble-free service under the Building Code. Typical examples are framing and truss timbers and subfloor support, along with structural internal walls.

## Contributions to Compliance

### GL12 BH1.2 Glue—Laminated Products

#### *Clause B1 (Structure)*

- When GL12 BH1.2 Glue Laminated Structural Timber is used correctly as it is engineered and designed to, it is designed to safeguard people from injury and loss of amenity and protection of other property.
- GL12 BH1.2 Glue Laminated Structural Timber is required to fulfil the functional requirements of buildings and structures throughout their lives, through strength testing, correct installation, and design.
- There is an exceptionally low probability when used of a structure rupturing, becoming unstable, losing equilibrium, or collapsing during their intended duration when the correct product is used for its intended use. This is reinforced by our strict quality control of all Grade Standards.
- All our GL12 Glue Laminated products are Manufactured in accordance with AS/NZS 1328.1:1998, AS 5068-2006 and certified by the Grade Right Grade Verified Wood Products QA Programme. (valid to 31/03/2025)
- Weight for strength, a Glulam beam is stronger than both steel and concrete. This means that Glulam beams can span very long distances with minimal intermediate support required. Dependent upon specific loading conditions a steel beam may be 20% heavier and a reinforced concrete beam 600% heavier than an equivalent Glulam beam for carrying the same load. The resulting lighter structure can lead to significant economies in foundation construction. (See the NZ Farm Forestry Association Glulam Span Tables)
- The process of glue laminating timber eliminates the natural performance variations that characterise solid sawn timber. As Glulam beams are engineered wood products that are manufactured to meet specific performance criteria, the specifier and user can be assured that Glulam products will consistently perform as expected.
- This product is not suited to exterior unprotected situations where it may be exposed to weather but may be used in any protected situation suited to H1.2 Boron treated sawn Radiata Pine. However, it may be used for a selection of the following applications where timber dimension, grade and treatment are specified by an Engineer or Designer and where the application meets the New Zealand Building Code/ NZS3604
- Floor framing,
- Roof framing and trusses,
- Wall framing,
- Mid-floor framing,
- Interior flooring,
- Purlins,
- Rafters,
- Valley boards,
- Ceiling battens,
- Internal walls,
- Joists,
- Enclosed balcony handrails
- Subfloor framing

## Scope of Use

### **GL12 BH1.2 Glue—Laminated Products**

GL12 BH1.2 is a non-hazardous product that has been used in New Zealand with a proven safety record when used as recommended. This treatment provides effective timber preservative and resistance to fungal decay and insect attack. The preservative formulation is applied to dry timber using a controlled vacuum pressure process in an industrial timber treatment plant that ensures deep penetration without compromising the integrity of the wood.

GL12 BH1.2 glue laminated timber should be handled in a manner to prevent damage to edges and faces:

- Avoid overstressing the product. This includes dropping, jarring or dragging and unintentional saw cuts.
- Protect when handling with forklifts, or any other means of lifting or transporting.

#### Storage

- GL12 BH1.2 glue laminated posts should not be exposed to rapid changes in moisture or temperature.
- Store the GL12 BH1.2 glue laminated posts flat on evenly spaced bearers that extend across the full width of the posts.
- During construction it is important to keep moisture out. To prevent the GL12 BH1.2 glue laminated sheets and posts absorbing water place a layer of plastic underneath the bearers.
- If the GL12 BH1.2 sheets and posts cannot be stored under cover, place timber fillets between the timber and cover with a waterproof cover and allow for good air circulation.

GL12 is a manufactured structural timber. GL12 BH1.2 is used in situations where there is no risk of moisture.

The benefits of GL12 BH1.2 Glue Laminated Timber are:

- GL12 BH1.2 is manufactured from selected grade, kiln-dried material. It is more stable than a sawn timber beam of the same section. The tendency of large section sawn timber to twist, split and shrink is greatly minimised in Glue-Laminated Timber. A GL12 beam can reduce the overall section of members up to 40% compared to unseasoned timber, as they are pretensioned.
- Easier and lighter to handle and fix.
- Superior Fire Resistance compared to steel – GL12 BH1.2 has an excellent fire rating.
- Lower maintenance- Glulam does not rust or corrode.
- Appearance- natural warmth and beauty of timber.
- Will not buckle or distort in response to temperature changes- Direct fixing of plates, joists and other connections is much easier.

## Conditions of Use

### GL12 BH1.2 Glue—Laminated Products

- Must be installed by a licensed building practitioner (even where restricted building work does not apply) It must be installed in accordance with the specifications and installation details described in NZS 3604 or as detailed by the Chartered Professional Engineer, and good building practice.
- GL12 BH1.2 is not suited to exterior unprotected situations where exposed to weather but may be used in any protected situation suited to H1.2 Boron treated sawn Radiata Pine.
- GL12 does not cause corrosion on galvanised fixings as GL12 is manufactured from material, which is kiln dried after treatment, the treatment salts are thoroughly fixed into the timber. They will therefore not subsequently leach out or affect galvanized fixings. For additional protection it is recommended that any bolts be greased before inserting into GL12 Protim treated timber and beams that are exposed to the weather.
- As GL12 BH1.2 is pretreated before laminating, all pieces are fully treated, so any cutting etc. does not need a paint on treatment applied to the cut portion. However, any cuts to be sealed as per sealing specifications.
- Structural GL12 BH1.2 timber should not be used where it will be subject to loadings that are above design limits.
- Structural GL Timber must be installed in accordance with good building practice, sound design principles, and in accordance with the specifications and installation details provided by the engineer and/or other qualified design professional.
  - It is the responsibility of the builder to purchase the correct grades and treated levels from the supplier and install them according to the consented design/plan. In the case of prefabricated buildings, the responsibility rests with the frame and truss manufacturer. Where grades which are not available have been specified, builders should ask the designer to redesign in available grades and amend the consent.
- Design responsibility lies with the building owner and the professionals that they engage. The specifier for the project must ensure that the details in the specification for their individual projects are appropriate for the intended application. The specifier must also ensure that additional detailing is provided for specific design or any areas that fall outside the scope and specifications of normal GL12 BH1.2 Glue-Laminated Structural Timber.
  - Designers should be aware there are now three sets of design tables within NZS3604, and they need to ensure plans and specifications are clear and include grade, size of timber, spacing etc. as this information is critical at consent and build stages.
    - Where subject to a building consent refer to the building consent plans and specifications for the size and location of the GL12 BH1.2, the depth of the footing, and fixings. Where specific assemblies are not contained in the building consent documentation, refer to:
      - NZS 3604:2011
      - AS/NZS1328:1998
      - information from all suppliers (structural brackets, coatings, etc.).
    - the NZ Farm Forestry Association Glulam Span Tables should always be consulted.

## Contact Details

<b>Manufacture location</b>	New Zealand / Aotearoa
<b>Legal and trading name of manufacturer(s)</b>	North Sawn Lumber Ltd
<b>Manufacturer address for service</b>	458 Marsden Point Road, PO Box 7, Ruakaka
<b>Manufacturer website</b>	<a href="http://www.nslumber.co.nz">www.nslumber.co.nz</a>
<b>Manufacturer email</b>	<a href="mailto:info@nslumber.co.nz">info@nslumber.co.nz</a>
<b>Manufacturer phone number</b>	027574 3394
<b>Manufacturer NZBN</b>	9429035559368

## Documentation

- NZ Timber Preservation Council Inc  
[NZ Timber Preservation Council \(nztpc.co.nz\)](http://nztpc.co.nz)  
*Timber Preservation Information*
- IBUILT GLUE LAMINATED POSTS DESIGN & INSTALL GUIDE
- [IBuilt-Glulam H5 posts design-Guide.pdf](#)  
*Certification Design Maintenance*
- Koppers FramePro Brochure  
<https://www.kopperspc.co.nz/pdfs/Fram..>  
<https://www.kopperspc.co.nz/resources/sds.html>  
[https://www.kopperspc.co.nz/pdfs/Koppers\\_NZ\\_Warranty.pdf](https://www.kopperspc.co.nz/pdfs/Koppers_NZ_Warranty.pdf)  
*Maintenance Test results/resources/warranty*
- Grade Right NZ Ltd Grade Verified Information Sheet:  
<https://www.graderight.co.nz/home/>  
*Certification Installation Test results*
- Grade Right NZ Ltd Grade Verified :  
<https://www.graderight.co.nz/home/>  
*Certification of Engineered Wood Products QA Programme*
- Asure Quality  
[Forestry & Timber Certification – AsureQuality](#)  
*Forestry Timber Certification*
- AS/NZS1328.2.1998 – Guides for AS/NZS 1328 part 1 for the selection, production and installation of glue- laminated structural timber.
- AS/NZS8008 (Int): 2014 Timber – Finger jointed structural timber performance requirements.
- New Zealand Farm Forestry Association  
[4998\\_2016052682355-1464207835 \(nzffa.org.nz\)](http://4998_2016052682355-1464207835.nzffa.org.nz)  
*Glulam Span Tables*