

# LVL Fabrication

**TIMBERLAB**  
NATURE ENGINEERED

## FACT SHEET

### Overview

For LVL structures to achieve their greatest potential, the individual billets of LVL need to be fabricated into larger finished sections. This involves taking billets of LVL up to 1.2m wide and 90mm thick and forming them into specifically designed beams & columns.

Fabrication of LVL structures demands the same careful quality control as for Glulam manufacture. TimberLab's wide experience in gluing large structural timber members means fabricating large LVL sections is a natural progression. Achieving adequate gluing pressure and dimensional accuracy are prerequisite to achieving the designer's expectations.



*Scion Innovation Hub, Rotorua*

### Benefits

- » **Accuracy** - With the use of our 5 axis CNC bridge, TimberLab's accuracy is unparalleled, removing any uncertainty about re-work onsite.
- » **Pre-fitting** - critical connections in the factory makes on-site assembly much simpler and quicker.
- » **Factory Assembled** - Full size in-factory assembly ensures a correct fit to prepared site.
- » **Long lengths** - avoids complicated splice joints
- » **Utilities & Conduits** - Can be cut / drilled in factory for easy running of utilities onsite.
- » **Economical** - Fabricated LVL offers an extremely economical structural material.
- » **Environmental** - As TimberLab's LVL comes from only plantation timber, it is the good sustainable choice.



*Clearwater Apartments, Christchurch*



## TimberLab – LVL Fabrication

### Structural Characteristic Properties

*Bending and tension capacity may be affected by the member size. Refer to Carter Holt Harvey Design Guide for detailed design procedure.*

### Size Limitations

|              | Width (mm) * | Length (mm) | Thickness (mm) **               |
|--------------|--------------|-------------|---------------------------------|
| H1.2 treated | 1200         | 18000       | Combination of 45mm, 75mm, 90mm |
| H3.1 treated | 1200         | 13200       | Combination of 45mm, 75mm, 90mm |

*\* To maximise efficiency of LVL, size members in a job to utilise the full 1200mm width. Try to utilise offcuts in other areas in the project.*

*\*\* Any thickness can be achieved by using combinations of laminates. Allow for 4mm reduction at each glue line for manufacturing process.*

*Our standard LVL is provided with "Standard" outer veneers with natural defects such as knots, splits and glue squeeze-out permitted. Upon request, we can provide a Visual Grade option with an improved outer face veneer.*

### Visual Grade Option

| Portal Span (m)                     | Frame Spacing                                      |
|-------------------------------------|--|
| Missed overlaps in outer veneer     | Not permitted                                      |
| Opening of glue lines around scarfs | < 20mm   |
| Open knots in outer veneer          | To a maximum of 20mm diameter, maximum 8 per sheet |
| Solid knots in outer veneer         | To a maximum of 40mm diameter, maximum 8 per sheet |
| Splits in outer veneer              | Not permitted                                      |

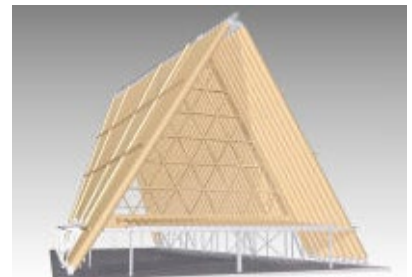
*Glue squeeze-out and paint marks are expected and can be removed by sanding.*



## TimberLab's LVL Projects – a Snapshot

### Canterbury Transitional

**Cathedral** (Christchurch)  
Fabricated LVL rafters; the structural component of the cardboard tube. Additional joinery of the rose window.



### Shirley Primary School

(Christchurch)  
Long span portal frames provide large open spaces for multiple use functions.



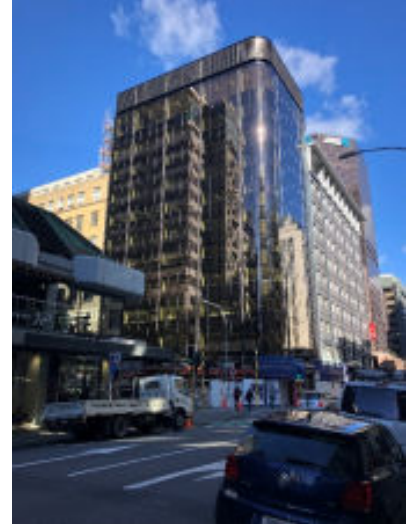
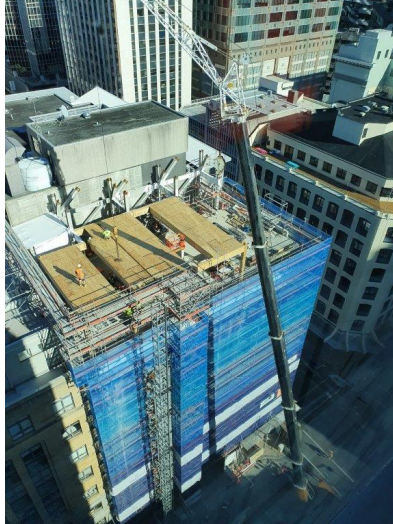


**Botany Toyota** (Auckland)

Fabricated LVL portal frames; the architectural played geometry of the portals meant careful attention to detail was required to connections.

**Featherstone Street**

(Wellington). Vertical extension – 3 levels of timber structure on an existing 8-storied office building in Wellington's CBD. Fabricated LVL beams and columns. Mass timber offers a light-weight solution for vertical extensions to existing high rise structures.

**Kaiapoi High School**

Gymnasium (Canterbury)

**Waiariki Training Centre**

(Rotorua)

Curved roof formed with LVL rafters at different pitches. Pre-cut components; easily fitted together on site, providing an impressive visual effect.

**Trimble (Christchurch)**

2 storey Post-Tensioned office block.

LVL fabricated columns, floor and roof beams. 2 Storey LVL rocking shear walls.

**Some of our Other LVL Projects**

Merritt Development (Christchurch) / Transpower (Christchurch) / Brands Laboratory (Wellington) / Rangiora College (Rangiora) / St John Vianney Church (Auckland) / Carterton Events Centre / Te Oro Music Centre (Auckland) / Ecofast House (Matakana) / West Melton Community Centre / Diocesan School (Auckland) / Tutetawha Marae (Taupo) / Sunset Beach Surf Lifesavings Club (Raglan).