

## **STRUCTURAL ASSESSMENT CERTIFICATE**

### **Stud walls & BS LVLs for top and bottom plates**

We, Global Consulting Engineers, the practicing Structural Engineers hereby advise that we will be responsible for the structural certification for the proposed LVLs members.

We are appropriately qualified and competent in this area of practice and as such certify that the design and performance of the LVLs comply and are detailed below:

- **BS 90x35 F11 LVL can replace 90x35 MGP10 stud walls\***
- **BS 90x45 F11 LVL can replace 90x45 MGP10 stud walls\***
- **BS 90x35 F11 LVL can be used for top plates and bottom plates\***
- **BS 90x45 F11 LVL can be used for top plates and bottom plates\***
- **BS 90x45 F11 LVL can be used as rafters up to 4.0m continuous span 450 centres\***
- **BS 90x35 F11 LVL can replace 90x35 MGP10 stud walls\***
- **BS 90x35 F11 LVL can replace 90x45 MGP10 stud walls\***
- **BS 240x45 F17 LVL can be used for Bearers and Joists\***
- **BS 300x45 F17 LVL can be used for Bearers and Joists\***

\*(Condition to Project Structural engineers approval)

Characteristic Value Mpa.							
Product	Size	Edgewise Bending (f'b)	Compression Parallel to grain (f'c)	Tension Parallel to grain (f't)	Shear Beam (f's)	Bearing Perpendicular To grain (f'p)	Modulus of Elasticity (f'b)
BS F11 LVL Stud	90x35	60.4	41.4	32.9	4.8	4.1 Flatwise 9.0 Edgewise	11539
	90x45	65.6	39.8	40.6	47	4.3 Flatwise 8.6 Edgewise	12805
BS F17 LVL Beam	240x45	69.5	44.8	45.5	5.0	11.6	14513
	300x45	68.2	43.7	52.2	4.9	11.4	14951

Joint Type	5 <sup>th</sup> Percentile LPL (N)	Characteristics Load capacity (Rk,N)	JD Group
Nail-face-withdraw load	958.96	16.47	JD4
Nail-face-lateral load perpendicular to grain	3467.37	2557.18	JD2
Nail-face-lateral load parallel to grain	4730.42	3488.67	JD1
Nail-edge-withdraw load	560.08	9.65	JD5
Nail-edge-lateral load perpendicular to grain	2245.95	1656.4	JD1
Nail-edge-lateral load parallel to grain	2822.93	2081.9	JD1

<b>Screw-face-withdraw load</b>	<b>3428.46</b>	<b>66.56</b>	<b>JD4</b>
<b>Screw-face-lateral load perpendicular to grain</b>	<b>9436.26</b>	<b>6738.24</b>	<b>JD1</b>
<b>Screw-face-lateral load parallel to grain</b>	<b>9143.24</b>	<b>6743.14</b>	<b>JD1</b>
<b>Screw-edge-lateral load perpendicular to grain</b>	<b>2970.3</b>	<b>2119.34</b>	<b>JD2</b>
<b>Screw-edge-lateral load parallel to grain</b>	<b>4329.12</b>	<b>3192.73</b>	<b>JD1</b>
<b>Bolt-face-lateral perpendicular to grain</b>	<b>42354.54</b>	<b>21316.09</b>	<b>JD1</b>
<b>Bolt-face-lateral load parallel to grain</b>	<b>74421.77</b>	<b>38635.40</b>	<b>JD1</b>

We certify that all structural will comply with the provisions of relevant Australian Standards. The design is also in accordance with the following:

- **AS1170 Parts 1, 2, 3 & 4 Loading Code**
- **AS1684 Timber Framing Code**
- **AS1720 Timber Structures Part 1 & Part 3.**
- **AS1649 Method of test of Mechanical fasteners & connectors.**
- **AS4063 Characterisation of Structural timber Part 2:Determination of characteristic values**
- **AS4357 Structural LVL Part 0: Specifications**
- **AS4357 Structural LVL Part 2: Determination of Structural properties**

This certification shall not be construed as relieving any other party of their responsibilities or contractual obligations.

Should you require any further information please contact the undersigned.

Yours faithfully,  
GLOBAL CONSULTING ENGINEERS PTY. LTD.



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