1. Potius Panels Description

Potius Panels are a fabricated panel system built predominantly from engineered timber, resulting in a structurally efficient system with high dimensional accuracies. Often, Potius Panels will provide the structural, thermal and fire performance requirements of a building system and sometimes also provide the acoustical and air barrier systems, depending on the design.

Figure 1: Nelson College - A two storey classroom teaching block with a Potius midfloor.

2. Timelines and Project Pipe Line

Potius must receive reasonable notice of changes in the project design, changes to the Potius Panels and/or construction program which may affect the agreed supply dates. Agreed changes are made subject to availability of space in the fabrication schedule at that time. If your project overlaps with another project in our fabrication schedule then this may result in delivery delays.

3. Shop Drawings

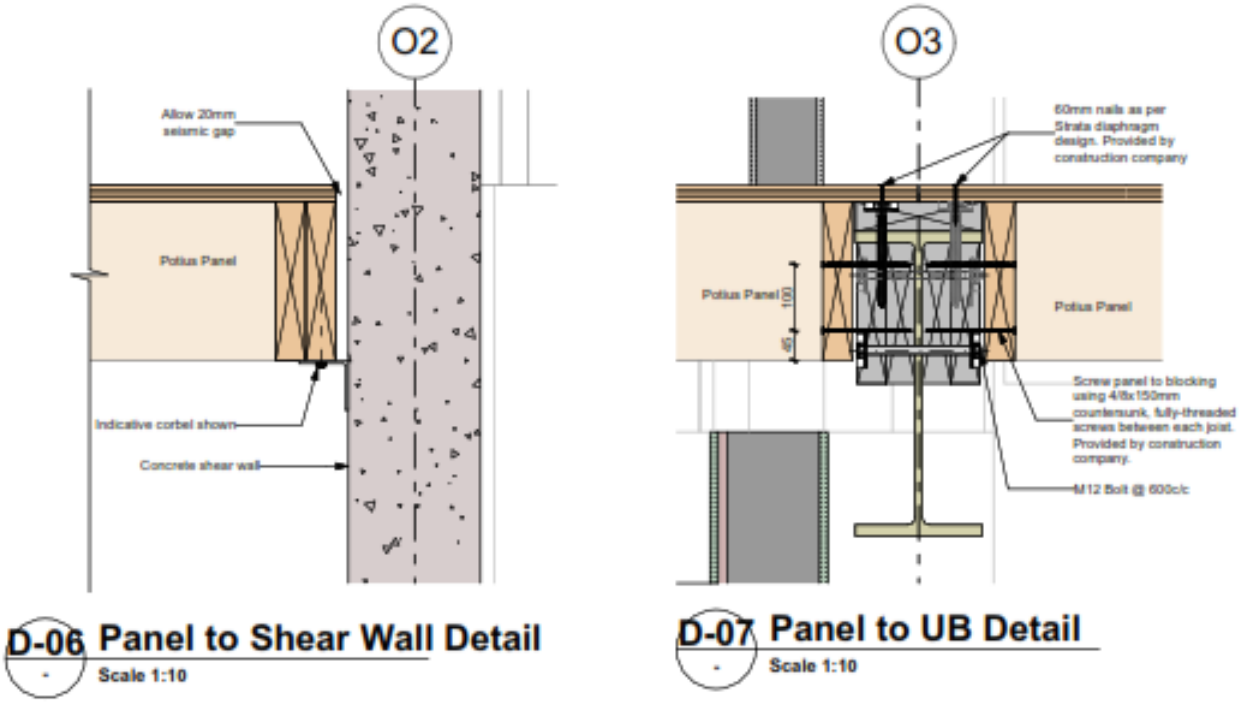

Figure 2: Shop drawing of Potius details to concrete and steel gravity structure

Potius produces shop drawings for design and consent drawings and further detailed shop drawings for fabrication. Shop drawings are produced on request (recommended) and are available in 3D and 2D images for coordination with the other design disciplines. It is important that the shop drawings are co-ordinated with the rest of the building structure to ensure there is suitable tolerances for site fitting.

4. Shop Drawing and Fabrication Tolerances

Potius builds in a tolerance of 5mm into its shop drawings to allow for fitting on site. Further to this our fabrication process has a tolerance of +/- 2mm during manufacture in the factory. Moisture incurred on the panels during transit, storage and erection can affect the tolerances of the panels. If your panels do not fit on site, please contact us before cutting or adapting the panels.

5. Storage of Potius Panels

Figure 3: Storage on a flat level site under a roof, on gluts

When unloading panels check all packs to ensure panels have not shifted or been damaged in transit. Take photos for insurance purposes. The panels shall be stored in their packs on level flat 100x100 gluts with no twist. The panels should never be placed on uneven ground, even for a short period. The wrapping shall be maintained over the panels to keep rain out and/or ideally under cover. If a roof is not available use tarps as a primary protection against the elements. Adequate ventilation and ground clearance must be maintained to ensure moisture does not build up within the packs under the plastic. Panels should not get wet as this may cause swelling, distortion and discolouration.

6. Before Erecting Panels

Before erecting the panels check the foam insulation (where applicable) has not contracted leaving gaps in insulation. For minor holes – fill with PU foam such as Sika®Boom or similar. If excessive shrinkage of the foam has occurred contact Potius immediately. Check the Panel is straight and that there are no bowed elements. If there is significant distortion (more than 2-3mm) contact Potius. Check the panel for water damage. If water damage has occurred contact Potius. Check the moisture

content of the panels before enclosing. Framing timber should have a moisture content less than 16%.

7. Lifting and Installing Potius Panels

Lifting and manoeuvring panels must be undertaken by appropriately qualified people and equipment in accordance with all Health and Safety legislative requirements and relevant site H&S management systems. Potius panels can come preinstalled with lifting screws (such as the Rothoblaas Wasp lifting system) on request. If a panel does not fit as it should DO NOT FORCE IT. Check the panel dimensions. Do not alter the panel without prior approval from Potius. Do not drill holes greater than 25mm without prior approval from Potius. If a panel distorts after it has been installed contact Potius.

8. Appearance of Potius Panels

Potius Panels are made from Structural engineered wood products, which are visually attractive, however can contain manufacturing marks, resin marks, knot holes and other timber related defects. Sanding the panels, either during prefabrication (by request) or on site can enhance the visual appearance of the panels. If the panels are to be exposed in the finished building, then we recommend that he panels are sealed with an appropriate paint or clear coat sealer.

Figure 4: Lifting in a residential midfloor using lifting hooks (Wasp)

9. Weather Exposure and Durability during Construction

Where possible limit the amount of exposure of Potius panels to the exterior environment. Moisture and UV sunlight can both discolour but also affect the dimensional tolerances of the panels. In a horizontal situation, were water may pool on the panels, it is recommended that the water is swept off the panels or the panels are covered before a roof is installed. The panels can handle a certain amount of weathering without effecting their structural performance because we use materials such as crossbanded LVL with a marine grade adhesive, PU foam insulation and fabrication adhesive and mechanical fasteners.

Figure 5: These Potius Panels have had long term exposure to weather resulting in swelling, discolouration and some splitting.

LVL PRODUCT TECHNICAL STATEMENT

Company	Nelson Pine Industries Ltd
Date of Issue	PTS Version 2, June 2016
Product	NelsonPine LVL
Product Description	NelsonPine LVL is an engineered wood product consisting of radiata pine veneers laminated together to produce structural framing materials. Common applications include; studs, joists, rafters, beams and lintels.
Scope of Use	NelsonPine LVL is suitable for internal framing applications within the scope of NZS3604 and by specific design with NelsonPine Design Software. NelsonPine LVL is suitable in industrial and commercial applications, subject to specific engineering design by design professionals in accordance with NZS3603.
Conditions and Limitations	NelsonPine LVL is supplied as either untreated (UT) or H1.2 treated and may be used in these hazard class applications as per NZS3602 and/ or the EWPAA LVL Treatment Position Statement (Sept 2014). UT or H1.2 treated NelsonPine LVL cannot be used in structural weather exposed situations.
Compliance with the New Zealand Building Code	When correctly specified and installed NelsonPine LVL meets the following provisions of the NZBC: **Clause B1 Structure:** NelsonPine LVL meets the performance requirements B1.3.1, B1.3.2, B1.3.3 and B1.3.4 with respect to NZS3603 and NZS3604 and the NelsonPine LVL technical literature. **Clause B2 Durability:** NelsonPine LVL meets B2.3.1 with respect to NZS3602 and the EWPAA LVL Treatment Position Statement (Sept 2014). **Clause C1- C6 Fire Performance:** NelsonPine LVL may be used as part of a fire resistant solution when specifically designed. **Clause F2 Hazardous Building Materials:** NelsonPine LVL meets this requirement. **Clause G6 Airbourne and Impact Sound:** NelsonPine LVL may be used for walls, floors and ceilings as a component of the framing solution.
Design and Installation Instructions	NelsonPine LVL has the following design tools to assist with specification and installation: NelsonPine LVL Specific Design Guide May 2012 NelsonPine LVL Stain and Paint Guidelines July 2014 NelsonPine LVL8 H1.2 General Framing March 2015 NelsonPine Design Software

Quality Assurance	Nelson Pine Industries Ltd has stringent quality assurance processes in place to monitor the structural and visual requirements by product type. Nelson Pine Industries is independently third party audited by the EWPAA. The EWPAA Product certification scheme provides the basis for NelsonPine LVL meeting AS/NZS4357. Conformance with AS/NZS4357 makes NelsonPine LVL suitable for structural appplications in acccordance with NZS3603 and NZS3604. Nelson Pine Industries Ltd is accredited by Telarc with ISO9001 Quality Management Certification.
Environmental	NelsonPine LVL is manufactured from renewable plantation radiata pine grown in New Zealand. NelsonPine LVL is Forestry Stewardship Council (FSC) certified. Nelson Pine Industries Ltd is accredited by Telarc with ISO14001 Environmental Management Certification.
Product Support	For product support and to download technical information please refer to our website www.nelsonpine.co.nz Or contact us: Address: Nelson Pine Industries Ltd Lower Queen Street Richmond Nelson 7050 Email: LVL@nelsonpine.co.nz Phone: 0800 800 438
Helpful links	Specific Engineering Design guide http://www.nelsonpine.co.nz/wp-content/uploads/LVL_Specific_Engineering_Design_Guide.pdf Commercial Buildings Brochure http://www.nelsonpine.co.nz/wp-content/uploads/NelsonPine-LVL-Brochure-web.pdf NelsonPine LVL8 H1.2 General Framing http://www.nelsonpine.co.nz/wp-content/uploads/NPI-LVL8-H1.2-Brochure.pdf Paint and Stain Systems Brochure http://www.nelsonpine.co.nz/wp-content/uploads/LVL_paint_and_stain_systems_brochure.pdf Moisture Meter Correction Figures for NelsonPine LVL Framing http://www.nelsonpine.co.nz/wp-content/uploads/Moisture-Meter-Correction-Factors.pdf NelsonPine LVL H1.2 MSDS http://www.nelsonpine.co.nz/wp-content/uploads/NPIL_H1.2_MSDS-2012_05.pdf EWPAA LVL Treatment Position Statement http://www.ewp.asn.au/sites/default/files/Treatment%20Standards-1.pdf

NelsonPine®
Laminated Veneer Lumber LVL

Nelson Pine Industries Ltd
Lower Queen Street, Richmond, Nelson, New Zealand
PO Box 3049, Richmond, Nelson 7050. T: +64 3 543 8800. F: +64 3 543 8890. E: LVL@nelsonpine.co.nz **www.nelsonpine.co.nz**