Media Release

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Up to 70m span LVL portal frames and trusses plus more efficient connections in new WoodSolutions Technical Design Guides

Design and engineering professionals can now discover the advantages of optimised solutions for a range of long span Laminated Veneer Lumber (LVL) portal frames and trusses and a new, easy to specify rod-based connection. Two new Technical Design Guides: Long Span Roofs – Portal Frames and Trusses and Quick-Connect – Moment Connection have been published and are available for free download on the WoodSolutions website: www.woodsolutions.com.au.

Executed in a range of materials, portal frame and truss designs have proven a popular solution for applications ranging from warehousing and manufacturing to sports arenas. Timber, and in particular LVL, has not gained the popularity it deserves, largely owing to engineers’ and designers’ lack of familiarity with the material and its performance parameters. The lack of easy to specify, cost efficient moment connections has also been a drawback, especially in larger projects.

The two new WoodSolutions Technical Design Guides have addressed this lack of information by providing engineering and design professionals with detailed design approach for a variety of connection types - to access the free guides visit www.woodsolutions.com.au: Guide #32 – Long Span Roofs – Portal Frames and Trusses and Guide #33 – Quick-Connect – Moment Connection.

Guide #32 contains configurations for three types of efficient timber roof configurations: mono-pitch portal frames, double-pitch portal frames and Pratt trusses. Design examples for each of these three configurations cover a range of large clear spans (10 metres to 70 metres) and different clear heights.

Guide #33 introduces the quick-connect joint, a semi-rigid moment-resisting connection that has been developed by Auckland University, New Zealand as an alternative to current nailed gusset or epoxy grouted steel rods solutions for timber portal frame buildings. The quick-connect moment connection has been specifically designed to minimise the on-site work needed to produce the joint, making it both economical and expedient.

About WoodSolutions™ & Forest and Wood Products Australia Limited (FWPA)
WoodSolutions™ is managed by FWPA and supported by companies and organisations in the Australian forest and wood products industry. FWPA is the forestry and wood industry’s service provider, investing in research and development, and providing research results to the forest and wood products industry in Australia. FWPA aims to improve the competitiveness and sustainability of the Australian forest and wood products industry through innovation, and investment in effective and relevant R&D. FWPA undertakes industry-level activities where a collective approach can deliver more effective and valuable commercial outcomes than individual action.
“At the design end of the process, architects and building designers will find the Guides useful in introducing and explaining new design options,” said Fred Moshiri, structural engineer with the Timber Development Association, “then, when it comes to the next steps, engineers will be able to make use of the worked examples and calculations to realise the design in timber.”

The new Guides are based on the results of years of research by the Structural Timber Innovation Company (STIC), a unique collaboration between Australian and New Zealand commercial and academic partners to create innovative structural timber solutions. Part of the EXPAN prefabricated construction systems, the new guides complement two recently published titles covering longer span timber cassette and composite flooring systems.

These two new publications join the suite of more than 30 WoodSolutions Technical Design Guides. The Guides have been downloaded more than 100,000 times from the WoodSolutions website – www.woodsolutions.com.au.

“As a complement to the other two guides in the EXPAN series, these provide a comprehensive reference to using EXPAN’s innovative timber building systems,” said Eileen Newbury, Marketing and Communications Manager of Forest and Wood Products Australia, “one of the challenges we face is to ensure that the design and construction sectors are aware of these exciting new developments so they are able to take full advantage of the many benefits they offer.”

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