



Innovative Design Solutions in Timber

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The presentation aims to give an inspirational overview of some of the recently constructed large scale timber commercial and industrial buildings. It will cover the different structural systems used in each of the example buildings with particular emphasis on the damage avoidance design principles applied, and the components designed and installed to achieve this.

The technology or methodology implemented is based on many years of research carried out at local universities for which New Zealand is well respected internationally. To enable these developments requires industry and government support and indeed many of the example buildings would not have been conceived without initiatives encouraging and financially assisting the research and development and the initial cornerstone projects. A brief look at some of these initiatives and their impact will be provided.

For industry to be in a position to encourage and support this research and development it requires a solid 'back bone', and for timber this comes in the form of well established acceptance of utilising sawn and glue-laminated timber as well as Laminated Veneer Lumber (LVL) and Cross Laminated Timber (CLT) in residential construction.

Ongoing improvements are achieved in the residential construction sector and will be covered by discussing how MiTek New Zealand Ltd utilises developing technologies such as Building Information Modelling (BIM), smart devices and frame and truss manufacturing tools to ensure timber remains competitive in the residential sector. This aims to afford balanced continuing growth of timber in commercial and industrial construction without coming at the expense of diminishing market share of timber in residential construction.