

**TIMBER DESIGN SOCIETY & CANTERBURY STRUCTURAL GROUP COMBINED  
MEETING**

**Challenges and Solutions in the Design of a 10 Storey CLT Building**

**Daniel Moroder**



Date: **Wednesday, 18 July 2018**  
Time: **5:30pm social, 6.00pm presentation**  
Venue: **Aurecon offices - Level 2, Iwikau Building, 93 Cambridge Terrace,  
Christchurch**

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***Abstract***

Australia has joined the world in pushing the boundaries of timber construction. In recent years several tall timber buildings have demonstrated the significant advantages of mass timber construction, especially in multi-unit, multi-level residential buildings. Recent modifications to the National Construction Code of Australia have provided a deemed-to-satisfy pathway for timber structures of up to 25 meters (or 8 stories), further accelerating the adoption of tall timber buildings.

One such structure is a ten storey aged care facility currently under construction in Sydney, Australia. The entire structural system is composed of engineered wood, predominantly of Cross Laminated Timber (CLT). The architectural design required large open spaces and expansive glazed façades.

Design and construction challenges meant that innovative solutions and approaches were required, supported by learnings from past projects, both in Australia and around the world. This presentation will provide an overview of the design challenges and discusses a range of solutions to issues.

### ***Presenter Bio***

Daniel Moroder is a structural engineer at PTL Structural Consultants and is specialized in the design of multi-storey timber and timber buildings in general. Originally from Northern Italy, Daniel obtained his bachelor's and master's degree from the University of Bologna, he also got specific seismic engineering training at the Universidad de Chile and UC San Diego. Following several years in industry, he obtained his PhD at the University of Canterbury working on multi-storey timber buildings.

In 2015 Daniel returned to structural engineering consultancy with PTL where he is continuing to push the boundaries of timber design. He is also the vice-president of the NZ Timber Design Society and co-editor of the Timber Design Society Journal. Daniel is also involved in NZ and European Timber Design Standards.