

## computeIT<sup>®</sup> SOFTWARE FOR ENGINEERS

Futurebuild<sup>®</sup> LVL is the Australasian leader in specification software for Engineered Wood Products.

computeIT<sup>®</sup> is designed to aid in the specification of heavy Laminated Veneer Lumber (LVL) structural members and non residential structural systems.

### ENGINEERING SOFTWARE SOLUTIONS

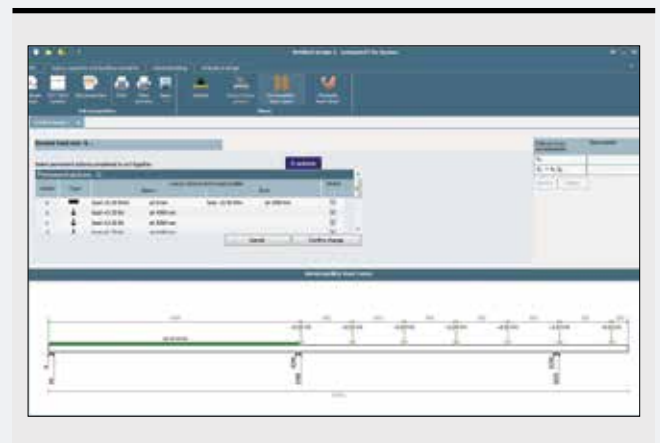
Futurebuild<sup>®</sup> LVL software solutions widen the boundaries of engineering and provide solutions for complex design problems involving timber engineering phenomena such as shear deflection, creep, duration of load and connection systems in an orthotropic material.

Many current structural analysis packages do not cater for shear deflection so composite section design, such as wood based i-beams, can be non- conservative. Software based solutions need to be easy to use but complex enough to cater for a range of design situations.

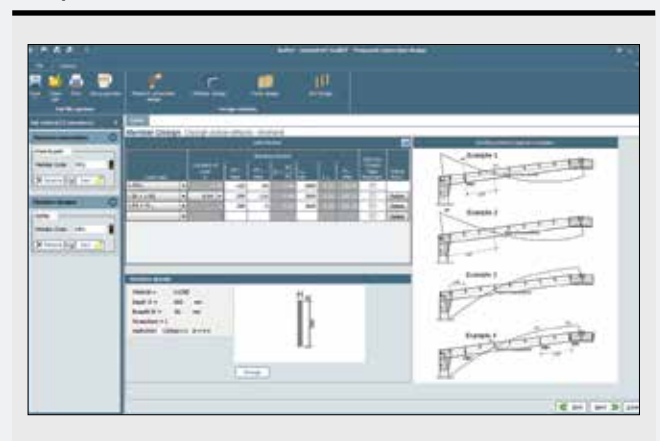
The computeIT<sup>®</sup> software suite has been developed by experienced timber design engineers to allow the transfer of both traditional and emerging technology to those new to timber design. The software allows engineers to respond to clients' needs whilst providing practical, cost effective design options using available products and channels to market.

Software packages within the computeIT suite include computeIT for beams and computeIT, toolkit. They include fully worked design examples to aid engineers with the adoption of timber engineering and EXPAN technologies, as well as comprehensive Engineering Analysis Reports clearly detailing design inputs, decisions and outcomes.

### computeIT<sup>®</sup> for Beams



### computeIT toolkit



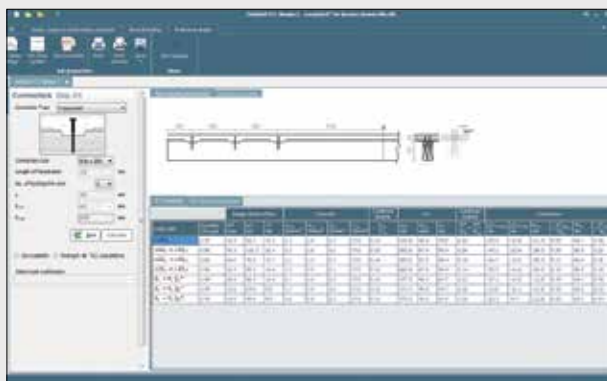
## computeIT<sup>®</sup> FOR BEAMS

computeIT<sup>®</sup> for beams is a beam analysis package that enables engineers to develop design solutions for a range of engineered wood products. This includes Timber Concrete Composite (TCC) Floor design using composite action between concrete and Laminated Veneer Lumber (LVL). computeIT for beams allows engineers the flexibility of making design decisions using LVL based structural solutions.

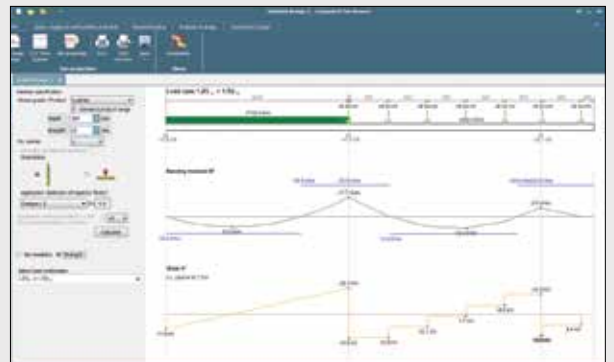
computeIT for beams provides users with an easy to use interface that allows engineers to:

- Enter complex beam design situations, including statically indeterminate beams and cantilevers.
- Enter a number of different load types including point loads, UDLs and trapezoidal/triangular loads.
- Enter beam restraint information for calculation of capacities in accordance with AS 1720.1:2010.
- Make engineering decisions based on engineering outputs including, deflection, bending moment and shear force diagrams.
- Design connections using a number of common connection details.
- Analyse a number of different members to produce cost effective design solutions.
- View graphical representations of beam geometry, loading and design action effect diagrams.
- Select loading combinations to AS/NZS 1170.
- Apply design actions from other members within a job.
- Create a job specific Engineering Analysis Report including designed members and connections.
- Optimise TCC Floor design using all three shear connections: trapezoidal notch with coach bolts, triangular notch with coach bolts and an un-notched shear connector using angled SFS screws.
- The TCC Floors module also includes the ability to specify and design solutions including Fire Resistance Rating (FRR).

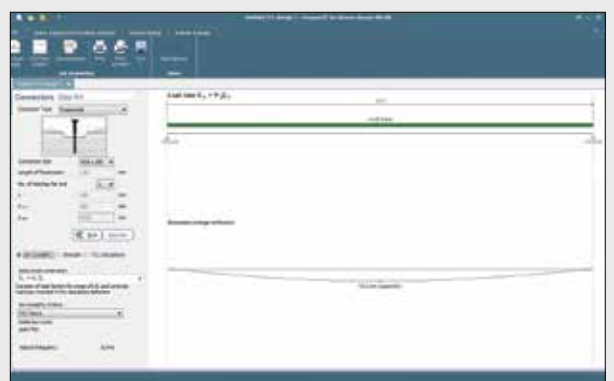
### TCC Floor Design – Analysis and Design



## computeIT<sup>®</sup> for Beams



### TCC Floor Design – Serviceability



## COMPUTEIT® TOOLKIT

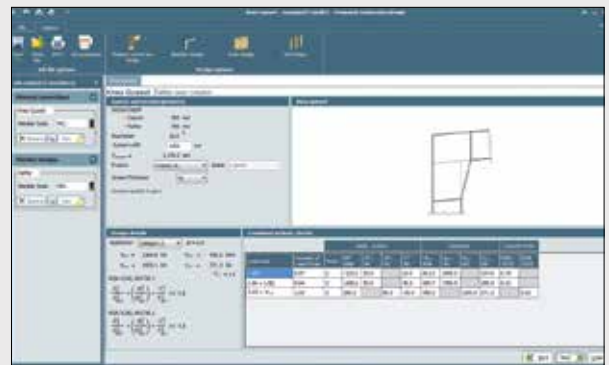
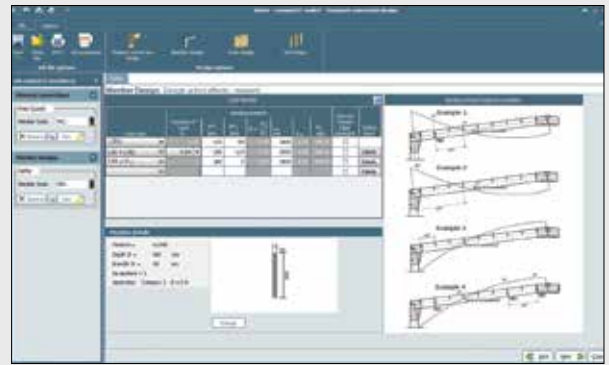
computeIT® toolkit is a series of design tools to allow engineers the flexibility to quickly and easily design solid and box section structural beam and column members including moment resisting connections, beam and column members subject to combined actions, and purlins and girts.

Included in the computeIT toolkit is the Quick Connect moment resisting connection design technology. The Quick Connect technology uses a threaded rod, washers and nuts for easy connection on site through factory fitted LVL sleeves. It also provides engineers with alternate moment resisting connections such as nail and screw rings used in portal frame solutions.

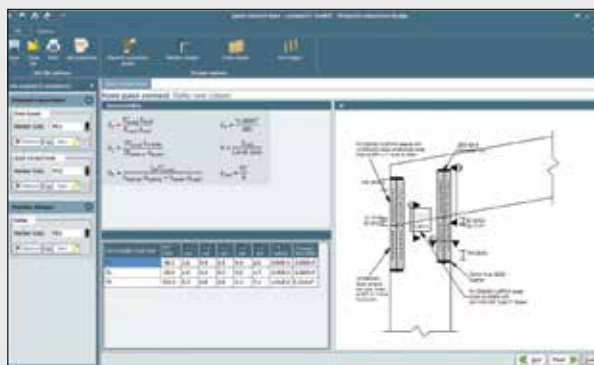
Developed by experienced timber design engineers using the most up to date information from design standards, the computeIT toolkit provides users with the opportunity to:

- Design moment resisting connections with commonly available materials and connectors.
- Design solid and built up members subject to combined actions easily, considering the effects of alternate restraint options.
- Select loading combinations for analysis to AS/NZS 1170, with automatic selection of duration of load factor.
- Analyse different members to determine cost effective options.
- Design solid and i-beam purlins and girts, including support and restraint details.
- Create a job specific Engineering Analysis report including designed members and connections.

## computeIT® toolkit



## Quick Connect – Serviceability



## Composite Member Design



## FUTUREBUILD® LVL PRODUCTS



hyONE® is a 90 mm thick high stiffness LVL product manufactured primarily for lintels or floor beams where large spans or depth restrictions apply or when a timber solution is sought over a steel solution.



hySPAN® is a versatile LVL product: it has high structural properties and is available in a wide range of sizes and lengths. hySPAN is typically specified for structural beams and is also used for lintels, rafters and floor joists in residential structures.



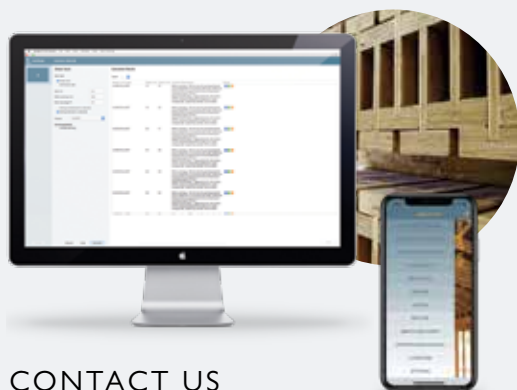
hyCHORD® is available in smaller section sizes to match ordinary kiln-dried timber. hyCHORD is primarily specified as roof truss chords, but can also be used for lintels, rafters, purlins, floor joists, wall studs or other members where smaller section sizes are required.



hy90® is a LVL product manufactured primarily for lintels and beams to fit within 90 mm light timber frame walls. It has lower structural properties than hySPAN but its thickness offers better member stability when used as long span structural beams or columns.



hyJOIST® is an engineered 'I-beam' utilising LVL flanges and a plywood web. It is ideally suited to floor joist and rafter applications due to its light weight, straightness and the ability to cut large holes through the web (e.g. for services or ventilation).



## CONTACT US

**0800 585 244**  
**info@futurebuild.co.nz**  
**www.chhsoftware.co.nz | www.futurebuild.co.nz**

## SERVICES

Futurebuild® LVL Services include Technical Support accessible via literature, software and toll free calls to qualified Timber Engineers.

### Experienced Timber Design Engineers

The Futurebuild LVL in-house technical team includes Chartered Professional Engineers who are available to speak to you about issues ranging from design and specification to the suitability of details for fabrication and erection advice.

### Free Preliminary Design Service\*

The Preliminary Design service is available to explore the use of LVL in non-residential structures. It provides engineers, developers and contractors of appropriate projects with a service to explore the cost, programme and environmental advantages of LVL based systems in portal frame structures, commercial flooring systems, multi-storey buildings and other large building systems.

\* Subject to qualification of project type, size, scale and status. Contact 0800 585 244 to determine if your project qualifies.

## RESIDENTIAL SOFTWARE SOLUTIONS



designIT® is a software tool for all building practitioners for designing with the Futurebuild LVL range of engineered wood products and other selected materials for houses and similar structures. Quick and simple to use yet deceptively powerful software, designIT is useful for the selection of beam sizes without the need for engineering knowledge or the exercise of professional engineering judgment.



The designIT site app has been developed as a handy reference tool for the specifier or tradesperson on the go. The designIT site app is a trimmed down version of designIT for houses developed by Futurebuild LVL.

## NON-RESIDENTIAL SOFTWARE SOLUTIONS



designIT® for commercial floors gives building industry professionals a tool for designing commercial, industrial and other heavily loaded floors with the Futurebuild LVL range of engineered wood products and other selected materials.