



futurebuild[®]

CASE STUDIES

Te Oro

Glen Innes Music & Arts Centre

Summerset Retirement Village

Ellerslie

SEP 2018

TE ORO – GMAC

CHALLENGE:

CREATE A UNIQUE ARCHITECTURAL BUILDING SHAPE USING A FIT FOR PURPOSE STRUCTURAL SOLUTION.

SOLUTION

Consultation with local iwi and the community uncovered a recurring theme that would become the driving aesthetic for Te Oro - the intrinsic connection we have with our natural environment. "The building was conceptualised as an arboreal canopy, under which learning and creativity could occur with interiors strongly linked to the natural world and Futurebuild® Laminated Veneer Lumber (LVL) suited this concept perfectly", explains Lindsay Mackie, Principal Architect from Archimedia.

Comprising three pavilions interlinked by two glazed transitional areas, the numerous sound, art and performance spaces are housed within a series of hoop-like 'ribs' that support LVL rafters. The 'ribs' were formed by portal frames, each prefabricated from Futurebuild LVL to form a unique shape.

PRODUCTS AND SERVICES:

Initially specified as a steel portal structure, the Futurebuild Commercial Preliminary Design Service gave the architect the confidence to change to Futurebuild LVL. Lindsay Mackie elaborates "We wanted to use timber – a sustainable product that locked up carbon, and the warm tactility of timber was more sympathetic to the users and their activities".

Futurebuild supported the development of the final structural solution with design advice and software based design tools. Karl Dawe explains "Structurally, LVL was easy to incorporate into the design with the help of the *computelT*® software".

ENGINEER:

BGT STRUCTURES

ARCHITECT:

ARCHIMEDIA

BUILDER:

HAWKINS CONSTRUCTION



SUMMERSET VILLAGE

CHALLENGE:

PROVIDE A LIGHTWEIGHT STRUCTURAL FLOOR SOLUTION WITH INHERENT ACOUSTIC AND FIRE PROPERTIES.

SOLUTION

Timber Concrete Composite (TCC) floors provide the advantages of both Laminated Veneer Lumber (LVL) beams and a concrete screed/slab, combined using defined connection methods to provide composite action. The use of TCC floors gave Summerset Group Holdings an acoustic and fire rating already incorporated in a structural floor solution. The ability to provide the TCC floor system in prefabricated modules allowed the majority of the fabrication work to be completed off-site. The floors were then delivered by truck in 2.7m wide modules and lifted into place, ready for placement of mesh and concrete screed. The lightweight nature of the TCC floor systems allowed the supporting structure to be completed with Futurebuild® LVL framed walls, in lieu of more expensive support structures.

PRODUCTS AND SERVICES:

Initially sized and scoped using Futurebuild Commercial Preliminary Design Service, the engineers at Silvester Clark were able to use the TCC floor design module in computeIT for Beams to optimise a fit for purpose structural solution, using the Futurebuild LVL range of products and available section sizes.

ENGINEER:

SILVESTER CLARK

ARCHITECT:

SUMMERSET GROUP HOLDINGS

BUILDER:

SUMMERSET GROUP HOLDINGS



SPECIFY WITH CONFIDENCE.



FUTUREBUILD®
STRUCTURAL LVL

hy
ONE®

FUTUREBUILD®
STRUCTURAL LVL

hy
SPAN®

FUTUREBUILD®
LVL TRUSS CHORDS

hy
CHORD®

FUTUREBUILD®
STRUCTURAL LVL
BEAMS

hy
90®

FUTUREBUILD®
LVL ENGINEERED
I-JOISTS

hy
JOIST®

FUTUREBUILD®
LVL FORMWORK
BEAMS

tru
FORM®

FUTUREBUILD®
LVL SCAFFOLD
PLANKS

hy
PLANK®

FUTUREBUILD®
LVL FORMWORK
EDGE BOARDS

edge
FORM®



designIT

computeIT

siteAPPS



Residential

DESIGN
SERVICES

Commercial

Preliminary
DESIGN
SERVICES

futurebuild

Freephone: 0800 808 131
www.futurebuild.co.nz

Information contained in these Case Studies relates specifically to Futurebuild® Laminated Veneer Lumber manufactured by Futurebuild and must not be used with any other LVL manufacturer's product no matter how similar they may appear. For technical literature or further information contact us on 0800 808 131 or visit www.futurebuild.co.nz.