

Glulam

A BI-ANNUAL NEWSLETTER FROM MCINTOSH TIMBER LAMINATES LTD: LEADERS IN GLULAM SINCE 1958 | WINTER 2011



Credits | CLIENT Evitan Events, Ngati Whatua O Orakei, Te Puni Kokiri, Ministry of Culture & Heritage

ARCHITECT Nick Dalton, Toa Architects | MAIN CONTRACTOR DESIGN AND BUILD Structurflex Ltd | STRUCTURAL ENGINEER CompuSoft Engineering

ON COURSE FOR RWC 2011

Here in our East Tamaki factory, the giant curved portal frames for the timber ribs that will be the internal shell of Te Waka O Maori have been completed.

They have been transported to a warehouse in Penrose where they will be covered in a state-of-the-art tension membrane, supplied by Structurflex, similar to that of The Cloud.

The ribs were manufactured from locally-sourced radiata pine and have purpose-made connections epoxied into them. They were specially designed for ease of assembly and relocation so the Waka can be simply transported to any international destination.

The massive 75m long pavilion will give our overseas visitors a taste of traditional and contemporary Maori culture and according to Rugby New Zealand chief executive 2011, Martin Snedden, "will be an integral part of activities".



Knoll Ridge Cafe Opens for Ski Season

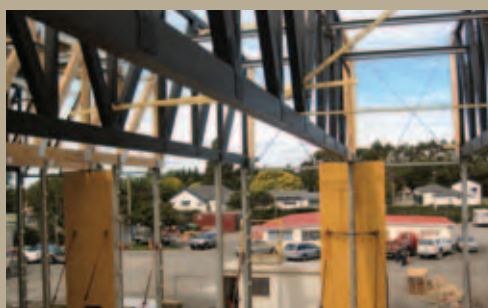
This 400 seat café, built at 2010m on the side of an active volcano is now complete and being fully utilised by patrons. It offers a comfortable place to rest after a day on the mountain.

Grant Harris – B. Arch (Hons) ANZIA, registered architect of HB Architecture says: "The building reflects the nature and form of the mountain whilst referencing the historic archetypal mountain chalet and takes advantage of the spectacular views. Above the lower ground floor service area, the predominantly glulam structural frame supports the purpose-made window system and plywood skinned roof panels. The glulam structure provides excellent strength for weight and 'warm' visual appearance reminiscent of the traditional alpine structures."

PHOTOS: SHARON MAZEY AND MTL



EXPANDING TIMBER OPTIONS – GIANT T



Fabricated from LVL, these giant trusses were fabricated at MTL plant in East Tamaki and transported 650km to Carterton to form the major structural elements for the new events centre. Spanning 25m the deepest of the trusses stands at 4.8m.

Using standard billets of LVL, McIntosh take these flat sheets and fabricate them into specially designed structural beams capable of spanning long distances and carrying substantial loads. Fabricating the raw LVL into composite beams and columns requires particular care and experience in order

to avoid serious performance problems. Accurate machining and careful gluing mean stringent quality controls need to be maintained throughout the whole process. MTL have many years experience handling LVL and are the first fabricators to be licensed under the STIC (Structural Timber Innovation Company) scheme.

While the visual appearance of LVL may be somewhat industrial it provides a strong and stiff structural material. In an exposed application at the Carterton Events Centre the fabricated LVL trusses have been painted black.

Good Bones in Tutukaka

Paul Roberts, M.D. of 2build says “the curved laminated beams, capped with a curved roof to enhance the building’s elegance against its coastal backdrop, was an architectural challenge”. McIntosh came to the fore to manufacture the structurally engineered curved beams specific to the building, transported them to site and craned them into position. “The gentle curve made the laminated beams just ooze with warmth and style. It’s a shame to put a roof on top.”

The upper curve was pre-formed and the lower section is an inverted draped curve.

“The clients wanted to create something special and thought that the exposed laminated beams would give it that wow factor with continual flow and form. The beams continue protruding through the wall and out under the covered decked areas where they are treated to external grade. McIntosh really has risen to meet the challenge that this job demands.”



IMBER TRUSSES USE NEW TECHNOLOGY



Efficient Connectors: Another innovation by MTL and a first for New Zealand, these achieved a substantial cost saving for the client by offering an alternative to the heavy connector plates and large bolts originally proposed for the truss connections. They involved the use of specially designed rectangular rivets, orientated with their long sides parallel with the timber grain direction. Contoured heads bind into the predrilled holes in the steel connector plates and achieve a tight rigid joint.

Earthquake Resistant Timber Shear Walls: In what is becoming a light weight and efficient alternative to concrete tilt up shear walls, MTL manufactured 11 large timber shear walls 2.4m wide, 6.7m high and 180mm thick. They were fabricated from LVL panels and incorporated vertical hollow sections for locating steel post tension ties that create efficient earthquake resistant shear walls. MTL look forward to seeing many more of these innovative designs.



McIntosh – Hosts to RWC Visitors

Winning With Wood is a seven week festival of forest and wood-related activities around New Zealand in September and October 2011 to showcase innovation in all aspects of the forestry and wood products sector.

The National Wood Innovation Showcase is a network of displays set up across New Zealand that highlight innovation in the wood industry. Displays are being put

together at multiple sites in the North and South Island to showcase a range of wood innovation from New Zealand companies. NZ Trade & Enterprise will be directing interested visitors to these sites; McIntosh Timber Laminates is privileged to have been chosen as one of the hosts and we'll have some exciting manufactured wood products on display.

CONTACT NUMBERS

We have had new numbers for some time but have continued to keep the old ones operative. However we'd really appreciate it if you could update your records and start using the new numbers:

Tel: 64-9-253 9349

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SHORT CUTS TO DISASTER

Pitfalls to beware of: low-priced product isn't always best

The manufacture of glulam must comply with the strict requirements of the standards that are specific to our industry as follows:

- > AS/NZS 1328 – The Manufacture of Glue Laminated Timber
- > AS 5068 – Finger Jointed Timber Code

McIntosh Timber Laminates Ltd is a licensed manufacturer under AS/NZS 1328, license No. 2061 and AS 5068, license no. 2715.

The license proves that the manufacturer is performing to the

required standards which make it a necessary protection for the client. Clients can only be assured of quality products if manufacturer carries a current license. **IT PAYS TO CHECK!**

Not only does MTL undergo internal checks and external certification but we stand by our product; we make every effort to ensure that **all guidelines are followed at all times** so you can trust our product to do what is expected of it. This is the part of the MTL commitment to our valued clients.

For full specifications, visit our website www.mcintosh.co.nz

CONTACT US TODAY

We welcome your feedback and questions on anything Glulam. Please phone or email; we are always available to help.

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SHORT CUTS SEEN	MTL PRACTICE
Short laminate lengths creating excessive and unsightly predominance of finger joints This detracts from strength and quality	MTL works to an average distance between finger joints in the same lamination of approximately 2.3m
Variable thickness of laminations within one member. Laminations laid up in different directions Compromises performance and introduces potential weakness with possible failure	Consistent selection of regular lamination thickness ensures durable high strength performance
Butt joints These create stress concentrations and are incapable of transmitting direct stress	No butt joints are used in the manufacture of MTL Glulam <i>Quote from the Code: "TM/4 does not recommend the use of butt joints anywhere within Glulam timber and most especially in tension members and outer zones of beams"</i>
Inferior timber grading Can lead to excessive deflection or failure under load	Using our state-of-the-art A Grader MTL ensures high standards of strength and appearance are met

Check out our new website!

We are thrilled to announce that our newly updated website is now live and is generating numerous new enquiries. Please visit us and give us any suggestions or opinions via Customer Feedback under the About Us Page.

www.mcintosh.co.nz

F.S.C. CHAIN OF CUSTODY

MTL is completing documentation that will formalise our certification as suppliers of Glulam products that achieve FSC (Forest Stewardship Council) Chain of Custody requirements. Strict adherence to these standards means that our clients can be assured that our products are manufactured from sustainable and renewable forest resources.

Want to find out more?

Phone or email us to receive price lists, or information packs.

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