

KAIKOURA ISLAND

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BARRIER

**BUILDING MATERIALS ARE KEY
TO UNLOCKING THE BENEFITS
OF PREFABRICATION**

The collaboration between Architecture+Women-NZ and Strachan Group Architects (SGA) is supported by Carter Holt Harvey (CHH) Woodproducts and has been a successful partnership between timber products and great prefabricated design.



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BARRIER

The installation of a lodge onto the uninhabited Kaikoura Island off Great Barrier Island and has given the scenic reserve and the Motu Kaikoura Trust a new lease of life after an arson attack destroyed the previous lodge in 2014.

The lodge is part of a crown owned scenic reserve, and will be used for education and environmental purposes as well as being a source of revenue for the trust. Given the island's remote and hard to access location, the majority of the build was prefabricated in Auckland.

As with any design and build, the materials used and the hands using them were crucial. Under the watchful eye of trained craftsmen, architectural graduates (with little experience of construction) were able to prefabricate walls, flooring and roof panels for transportation to the remote island.

The strong and functional nature of CHH Woodproducts' timber products, in this case **Ecoply® Barrier** (structural rigid air barrier system), Ecoply Flooring (structural plywood solution) and **Futurebuild® LVL** (Laminated Veneer Lumber), meant the prefabricated panelled walls could be put together with ease and without the need for specialist tools.

The setting of the lodge invited the core of the building to match its surrounding. CHH Woodproducts' plywood and LVL product ranges are manufactured in New Zealand from sustainable plantation pine. This kept the carbon footprint low and ensured these engineered wood products met the sustainable vision encompassed in the lodges design.

Futurebuild hySPAN® and **hyCHORD®** were used for the precision and consistency these products are known for. The precise manufacturing of LVL creates a product that is straight, true, strong, and dimensionally stable, and this ensured the build was accurate to the nearest degree - critical in prefabrication construction.

"We love the fact that LVL is straight and comes in long lengths. With prefab, precision is required so panels, cassettes and cartridges fit together well" comments Dave Strachan (SGA).

The strong yet lightweight nature of hySPAN and hyCHORD were also important to keep the weight of the build to its minimum while still achieving the strength requirements necessary for a very high wind zone. With the need to helicopter the prefabricated cassettes from a barge to the final site, lightweight timber is not just easier to work with, but reduces the weight for transport requirements. Using hyCHORD for studs enabled SGA to increase the stud centres to further keep down the weight of the panels.

The Ecoply Barrier product was able to provide structural bracing as well as form a weathertight, air tight second line of defence against moisture. Its permeable properties ensure any moisture behind it in the frame will be able to escape, ensuring a dry interior.

The Ecoply Structural Flooring Longspan Plywood product comes with a tongue and groove system that removes the need for blocking, whilst the F11/F8 standard stress grade provides additional properties which makes it great for flooring as opposed to normal Ecoply F8/F8 plywood or singular F8/- plywood products.

The rebuild has been an impressive feat, not only has it been a feature on the prefabrication scene, it has had personal impacts on the participants involved. As Lynda Simmons from Architecture+Women-NZ comments "it has been an incredible project and the 16 participants have described the 20 weeks as being a life-changing experience".

Merryn Jolly, CHH Woodproducts' Product Manager summarises, "it was great to be part of a project which supports New Zealand's natural environment and gave us the opportunity to partner with Architecture+Women-NZ. I know from experience the great work women do in the manufacture of timber products in New Zealand, and to see women using these materials made me proud to support this project".

Contact CHH Woodproducts today or visit the following sites for more information:

- To learn more about Futurebuild LVL visit www.chhfuturebuild.com
- To learn more about Ecoply Barrier visit www.ecoplybarrier.co.nz
- To learn more about Ecoply visit www.chhwoodproducts.co.nz

Thanks to Architecture+Women-NZ and Strachan Group Architects (SGA).

