

Restoration testament to passion and skills

Kelly Deeks

Heritage restoration specialist Insight Unlimited has completed its 40th heritage earthquake repair project in Christchurch, with the successful delivery of the Rose Historic Chapel back to its management trust, and the wedding and concert bookings are already being received to secure this iconic venue.

Work began on the chapel soon after February 22 2011, when the building was almost lost in the earthquake. Temporary bracing was the first thing required to stabilise the building.

"During the multiple earthquake events that followed February 22, as components of the building were collapsing, the protection of the Italian marble altar and the high valued decorative stained glass window panels became a priority in the early stage of stabilisation," says Insight Unlimited managing director John Radburn.

"There were concerns the chancel arch wall would totally collapse onto the altar, so after some make safe stabilisation work, a 10mm steel plate structure was built over the three tonne marble altar.

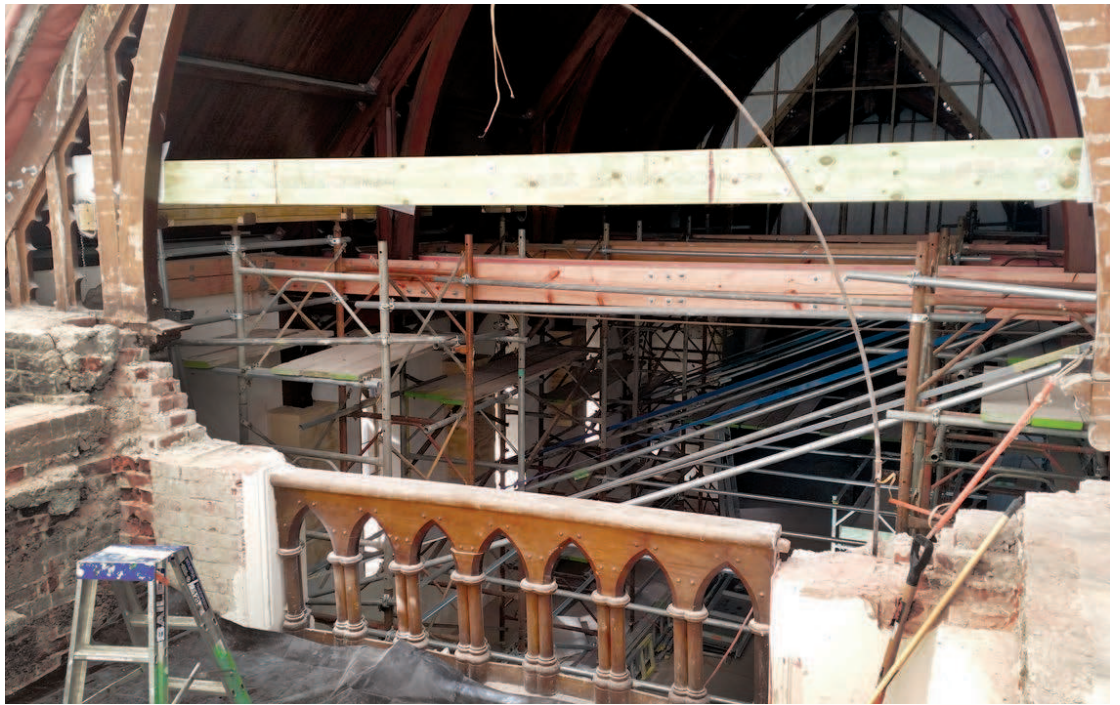
"This remained in place until it was carefully removed to make way for the reinforced concrete wall strengthening to the exterior wall supporting the altar."

The marble altar was successfully removed during the deconstruction phase of the project and stored to the centre of the nave area before the restoration of the Italian marble work was undertaken.

Its reinstatement required a temporary engineered designed steel frame which was constructed over the restored altar and in conjunction with block and tackle and an all-terrain vehicle, the restored altar was slowly manoeuvred back into its original position. A huge challenge overcome with enormous success.

"Smiles were aplenty," John says.

During the deconstruction phase, as with any historic restoration, the removal of layers of material within historical buildings can produce surprises.



A single layer of brick had to be removed from a wide gable brick wall located at the nave entry to the church, necessitating a new standalone structure to be built to support the roof.

A seismic strengthening component of the designed rebuild was to remove a single layer of brick from an existing failed 500mm wide gable brick wall located at the nave entry to the church, in readiness for the reinforced concrete shear wall.

This wall supported the high level internal basalt and external limestone the main roof was perched upon.

"Removing the inner skin of brickwork while not damaging the balance of the wall become an impossible task due to the insufficient strength left in the remaining shattered brickwork."

The design change required a standalone structure to support the roof to allow the balance of the stone walls and brickwork to be deconstructed and to make way for the new concrete foundations and concrete wall to take the stainless steel pinning of the high level recovered stonework.

"Goldfield's stonework around the chapel is considered a work of art, and the Rose Window at the chapel entrance a masterpiece," John says.

"Projects of such esteem reach these lofty goals through a collection of passionate individuals like John McVicar of Plasterworks and stained glass

conservation specialist Graham Stewart."

John says the project's most significant challenge was accommodating the seismic strengthening work into the design with minimal loss of heritage fabric.

This required close collaboration between Insight Unlimited project manager Richard Bullett, Opus engineer Soon Ong, conservation architect Dave Pearson, and a very dedicated Higgs Construction site manager Ray MacFarlane.

"Largely the success of this project is attributed to attention to detail from Richard and Ray."

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