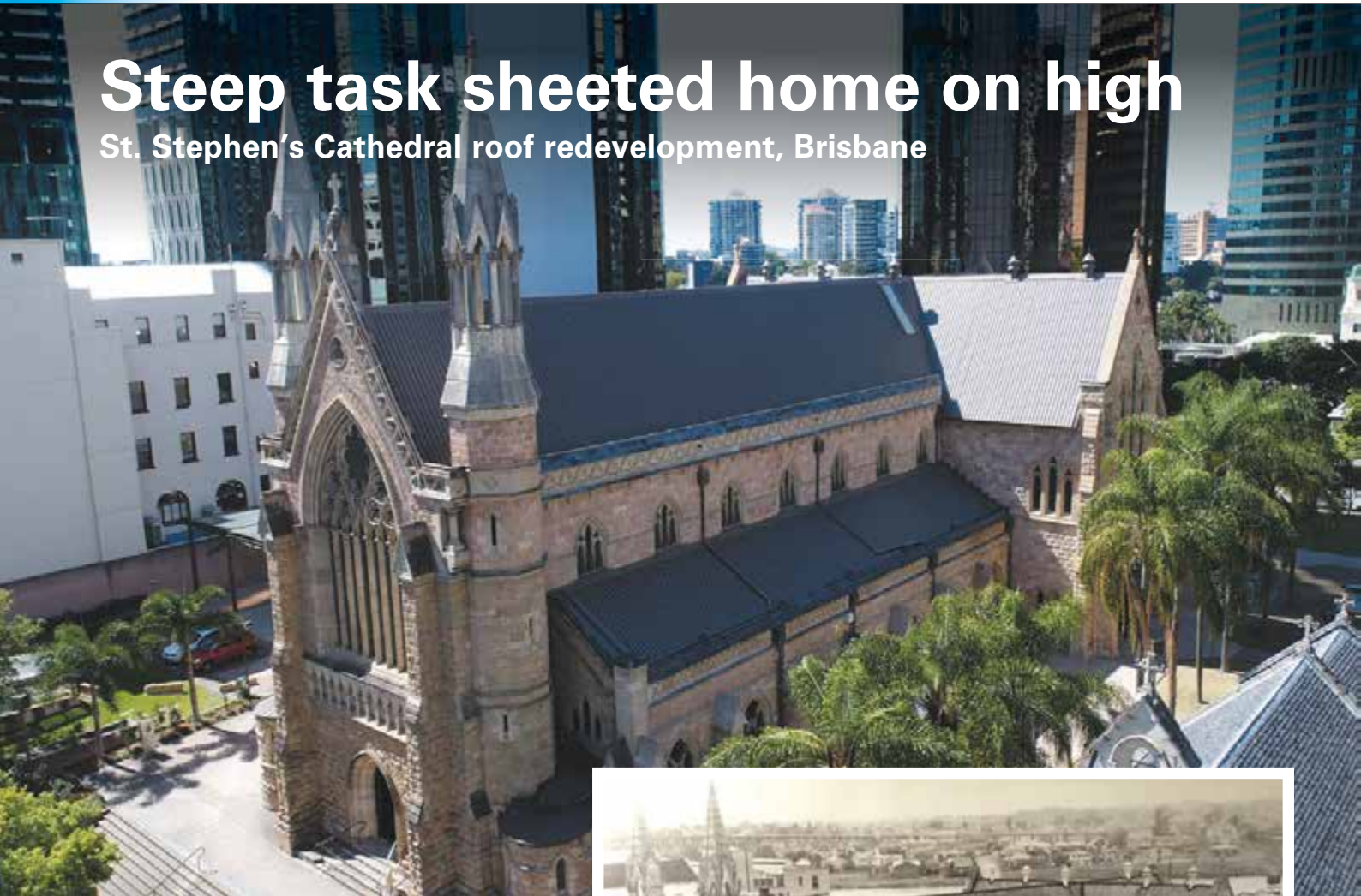


Steep task sheeted home on high

St. Stephen's Cathedral roof redevelopment, Brisbane



Advanced Australian-made steel building products have eased the replacement of the steep roof atop the centuries-old neo-Gothic St. Stephen's Cathedral in the heart of Brisbane's CBD.

Originally built in 1848, maintaining the stunning cathedral was no easy feat with its classic sandstone masonry and delicate stained-glass windows so when its roof fell into disrepair, great care, high-quality materials and expert workmanship were needed to guarantee the safe removal and installation of the new roof.

St. Stephen's is a heritage listed building and so must adhere to the Queensland Government's Conservation Management Plan to ensure the structure is meticulously conserved and managed.

According to the roofing contractor Certified Roofing, the project was not without its challenges.

"Not only did the chosen roof material need to seamlessly blend in with the historic architecture of the building, it also needed to be of the highest quality to ensure many more years of withstanding the harsh Queensland weather," Certified Roofing director, **Mick Bentham** said.

With this in mind, it opted for Stramit Speed Deck Ultra® for the entire roof remodel in which fastenings are protected beneath the decking and can outlast exposed fasteners of through-fixed roofing.

"Not only are the sheets light, the profile also has a large water-carrying capacity and great weather-tightness," he said.



"For the new roof we've used COLORBOND® steel in the colour Jasper® with a Base Metal Thickness (BMT) of 0.48mm."

Mr Bentham said the Archdiocese Services chose the colour from the COLORBOND® steel colour palette which was the closest match to the old roof colour and perfectly suited the traditional architecture of the building.

"By the end of the installation, the St. Stephen's community loved the results and indeed it surprised many that we were able to retain the traditional commanding look of the cathedral, using such advanced modern materials," he said.

But respecting heritage values was only part of the challenge of replacing the grand and very steep roof structure.



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"Using a full-length run of metal sheeting helped immensely to ease onsite erection for the steep 60-degree inclined roof compared to using short sheets and the fact that we used a concealed fastening system also helped speed the process up," he said.

"Citi Cranes were employed to drive on the grounds of the cathedral instead of using a large 180-tonne crane from the road. We blocked off three lanes on adjacent Charlotte Street from 10pm at night and used a Franna crane to lift roof packs from the trucks over the precinct wall onto the grassed area.

"From there we used a forklift to lift the sheet packs onto 'skates' where it took six men to push the packs by hand around each side of the cathedral ready to be craned up onto the scaffold loading bays. This was all done between 10pm and 6am whilst the city was asleep."

Bentham describes the evolution of the cathedral roof as fascinating as "there was little information on the roof's past, but we know it was originally slate then replaced with galvanized metal sheets".

All they had as a reference was the black and white photo taken in the 1800s.

"When old roof sheets were pulled off we found that the roof was nailed to the 30mm thick timber ceiling planks, so we decided to add the 65mm top hat section battens and screw them into the main rafters of the church," he said.

New ventilators were re-created by the project's steel fabricator and placed in the same positions as depicted in the heritage photo.

Working on a heritage listed building in a tight construction site brought its own challenges in terms of keeping to the project schedule and ensuring safe work.

"Working on a building standing three storeys high with a steep roof in the middle of the city with thousands of people walking around each day and that the Cathedral still carried out its daily lunchtime Masses sure had its challenges," Mr Bentham said.

"We had the chosen scaffolding company provide an approach that would comply with workplace health and safety regulations, be practical and would be able to withstand the weight of the new steel roofing craned up onto the scaffold as well as storing the old material whilst carrying out the works.

"We ended up creating four large loading bays at the top of the scaffold around the cathedral that would support the weight of the entire roof."

He said that by using COLORBOND® steel, a high quality proprietary coated steel product with superior paint finish technology, sheets held with Stramit's patented concealed fixing and the fact the roof is 60-degree pitch that lowers the likelihood of water pooling and condensation build-up, the roof structure should last many more years to come.

PROJECT TEAM

Client: Archdiocese Services of Brisbane

Project Manager: Mick Bentham

Roofing Contractor: Certified Roofing

Scaffolding: Wacol Scaffolding

Cranage: Universal Cranes

Steel Fabricator: F&M Fabrications

ASI Building Products Supplier: Stramit Building Products

ASI Steel Manufacturer: BlueScope