



Centenary project brings ANZAC Memorial to life

Commemorating the 100th anniversary of the First World War, a \$40-million expansion of the ANZAC War Memorial in Sydney's Hyde Park is now complete. Originally designed by architect Bruce Dellit and built in the 1930's, the War Memorial pays tribute to the ANZAC landing at Gallipoli in World War I.

In a partnership between the NSW Government and the ANZAC Memorial Trustees, the \$40 million project realises Dellit's original vision. Comprising new education and exhibition spaces and a cascade fountain, the upgrade honours those who have served and displays the stories of NSW's involvement in military and peace-keeping missions. The Memorial was officially opened by the Duke of Sussex, Prince Harry, in time for Remembrance Day 2018.

Precast brings 1930s' design to life

Inspired by the 1930's concept design, the design focus of JPW and the NSW Government Architect was on complementing the composition of the existing Memorial, which was achieved with the use of concrete as the main building material.

General Manager, Colin Ginger, from National Precast member, Precast Concrete Products, says precast concrete was chosen rather than in-situ concrete to enable better control of the quality of finish and to meet the tight construction program. "The use of precast has resulted in high quality finishes in conjunction with custom profile prestressed structural beams, loadbearing walls and columns. All elements are high quality white concrete with an off-form finish," Mr Ginger details.

JPW's Project Architect, Matteo Salval says, "we have expressed precast elements directly and honestly: detailing around these elements always tells the story about how that element works structurally or how it got assembled on site". A thorough sampling process involved testing different quantities of titanium oxide in an off-white cement mix. "The end result is a warm, yet crisp finish, with a tonal subtlety that varies at differing times of the day and in changing weather conditions," Mr Ginger adds.

Precast manufacturer

Precast Concrete Products

Architect

Johnson Pilton Walker
(JPW)

Builder

BUILT

Engineer

Taylor Thomas Whitting

Sealing

Nawkaw Australia

Client

ANZAC Memorial
Trustees, Infrastructure
NSW, Australian & NSW
Government

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Collaborating for success

A hallmark of this project was the close collaboration between the architect, engineer, builder and precaster and it has resulted in a stunning combination of structural integrity, beauty and utility.

When the project was at tender stage, Mr Ginger was excited to see a bold design utilising off-form concrete for such a prestigious project. Meanwhile, the beauty of the design could not be compromised by the significant structural complexities that were required.

“Productive design meetings were hosted by Built to resolve the significant detailing challenges,” Mr Ginger explains. “Large spans with high loads required prestressing of the horizontal elements. The relatively small geometry in the element sizes demanded innovative connection and reinforcement detailing. Working in a confined space on a major Sydney inner CBD site brought logistical challenges, as well as other buildability and practical constraints.”

Unique precast application

The precaster supplied wall panels, Tee-beams and columns for the project.

All elements were cast from purpose-built steel moulds, enabling a seamless combination of high-quality architectural finishes on prestressed, structural elements. As well, superflow concrete was utilised to improve the quality of finish, particularly on the 800mm deep beams. “Depending on the shape of the precast units and orientation of the pour, some of the elements were cast using self-compacting concrete, which had to be carefully colour matched to the other more traditional elements,” Mr Ginger reveals.

Protecting and keeping the precast new

To protect the precast concrete and extend its already lengthy service life, Nawkaw Australia’s photocatalytic coating, ecotio2, was applied. Nawkaw Managing Director, Tony Watling says the coating seals the surface of the concrete, which allows it to self-clean and prevents it from ageing, bleeding, or changing colour. “The photocatalyst coating was chosen for the ANZAC project primarily because it keeps the concrete clean and looking new,” Mr Watling explains.

“The fact that the precast concrete was of a high quality meant that there was less surface preparation. The concrete colours were already very good—we didn’t have to do any colour repair before applying the coating. Colour control and the quality was high.”

Close collaboration triumphs

According to Mr Ginger, the collaboration between all parties was unprecedented. “Even though there were many challenges and difficult discussions, all parties had the end game in sight. If not for the level of respect between the parties, the extra effort to create such a beautiful result would have been difficult to maintain,” Mr Ginger says. Built’s Director and General Manager NSW, Stephen Boss, is also delighted at the finished project.

“Built is proud and honoured to have been chosen to partner with the Anzac Memorial Trustees, Infrastructure NSW and the Australian and NSW Governments to bring Bruce Dellit’s full vision to reality,” Mr Boss says.

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