



Precast wins top prize at national concrete awards

Perth's internationally-renowned St George's Cathedral choirs have a new home that is befitting of their eminent reputation. Set between the heritage Burt Memorial Hall, the 1888 Cathedral and the 1859 Deanery, the Cathedral's new Song School is a stunning two-storey precast concrete structure designed by Palassis Architects that isn't just a treat for the ears.

Having recently won the prestigious award at the biennial Concrete Institute of Australia's Awards for Excellence – the coveted Kevin Kavanagh Trophy – as well as the prize for its Commercial Buildings category as an outstanding contribution to the quality of concrete in Australia, the striking \$4.8 million development is also music for the eyes.

The Song School has a striking white precast concrete façade. The building's two tuning fork spires and lancet-inspired arches mimic the Cathedral's existing lancet windows and preserve the view of the revered Ascalon sculpture in the forecourt. Partly-subterranean, it has a minimal footprint and maximises existing sightlines.

According to National Precast's Chief Executive Officer Sarah Bachmann, winning the awards is a remarkable achievement for Australia's precast concrete industry. "The Song School project is a magnificent example of the architectural precast we produce in this country and it is befitting that two of our members, SA Precast and J Woodside Consulting (JWC), have been recognised for their involvement," she states.

ARCHITECTURAL VISION HINGES ON PRECAST

Palassis Architects have been providing expert heritage and architectural design services to the Anglican Diocese since 2007 and the design and documentation for the new Song School is the latest development in their repertoire. As the latest stage within the Cathedral Precinct's Master Plan, the unique brief for the design demanded that the new structure seamlessly fused with its surrounding 140-year-old architecture.

To achieve this architectural vision, Adelaide-based company SA Precast was contracted to manufacture a diverse collection of white precast concrete elements for the project. These included curved beams for the rehearsal room, two precast concrete spires, three lattice feature wall panels, the first storey supporting columns for the second storey shells and the shells for the second storey that form the colonnade. The elements were manufactured with a white cement and featured a lightly textured off-form finish.



Project
Song School

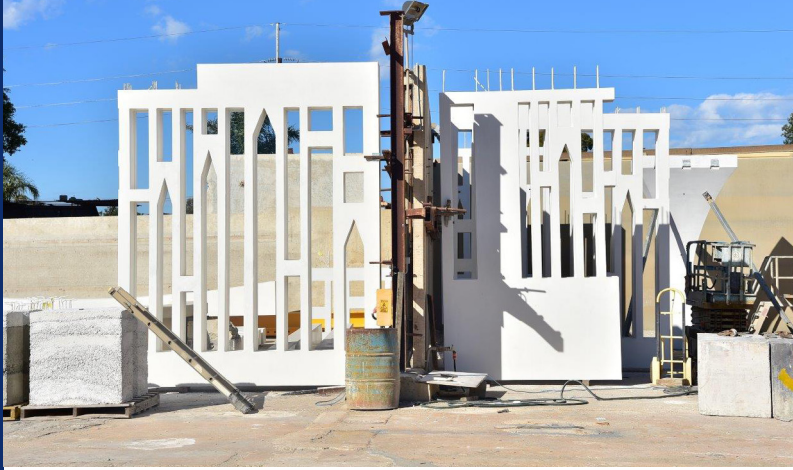
Precaster
SA Precast

Architect
Palassis Architects

Erection Engineer
J Woodside Consulting

Builder
PACT Construction

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"The finish of this project is simply stunning. The array of white elements creates an almost ethereal landscape and showcases the ability of prefabricated architectural precast to achieve what is a splendid vision that has been imagined by the architect," Ms Bachmann reveals.

LOGISTICS CHALLENGES INSPIRE DESIGN CHANGES

Like any project of such complexity, there were challenges along the way. Where the precast was concerned, the challenges spread across the design, manufacture, transportation and erection of the elements.

Claude Pincin, Managing Director of SA Precast explains. "For the vaulted units, to achieve the required concrete cover and allow for transportation across the Nullarbor Plains to Perth, the initial 70mm design was amended to a thicker 135mm thickness with revised connections and 10mm reinforcement," he details. "Special formwork was made in Melbourne using computer-generated profiles."

In order for the spires to be erected and fixed in position before lining and levelling, a semicircular base plate was cast into the slab beneath the spires with bolts and starter-bars.

As well, the restriction of the tight inner-city site posed a challenge for the installation process. This meant that all precast concrete units had to be lifted approximately 60 metres from the truck to be placed in their final position.

As part of the erection design, J Woodside Consulting (JWC) designed special purpose-made lifting frames for the vaulted units and spires. Principal of JWC John Woodside was involved in the temporary bracing and erection of the precast units, and says it was an intricate process.

"This involved designing special lifting frames that allowed the units to hang vertically during erection," he explains.

AWARD-WINNING RESULTS

National Precast's Chief Executive Officer, Sarah Bachmann, believes the award-winning outcome of the Song School is a testament to the quality of precast concrete that her organisation's members produce.

"Special Architectural Precast – known as SA Precast – is one of our oldest members and one of Australia's leading architectural precasters. We are delighted they have won these awards as recognition of their outstanding achievement for the Song School project," Ms Bachmann says.

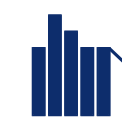
Not only has the Song School enriched Perth's CBD with a beautiful and contemporary structure, but it also showcases precast concrete's ability to create high quality and complex construction.

"There is no doubt the aesthetic beauty of this project is a vision to behold. It has certainly pushed the boundaries of precast concrete and is a testament to what off-site prefabrication can achieve," Ms Bachmann says.



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