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Music for the eyes

White precast concrete elements for the Cadogan Song School in Perth, Australia

Nestling in a confined space between four existing buildings, three of which are protected historic monuments, The Song School project was brought to life with a unique mission - to design and build a structure that blends seamlessly into the surrounding 140-year-old landscape. The result is a striking two-storey concrete and glass building, partly below ground, which echoes the existing lancet windows of the cathedral. One of its distinctive hallmarks is the prefabricated white concrete arches.



Photos: Andrew Pritchard / 2018 National Australian Architecture Awards

Kevin Palassis' design plays with the lancet windows of the cathedral and preserves the view to the surrounding buildings.

Since 2007, the Australian architectural firm Palassis Architects has implemented a number of projects for the Anglican diocese in the historical cathedral district in the Western Australian city of Perth. The district is home to the three protected buildings St. George Cathedral (1881-88), the Burt Memorial Hall (1917) and the Dean's Office (1859). As an addition to the complex of buildings in the Cathedral District, the Cadogan Song School was recently built to provide space for the St. George's Cathedral Choir and the Anglican diocese of Perth.

The cathedral-like Cadogan Song School occupies 200 square meters of space and is a two-storey building made of white concrete and glass. The partially underground building is located north of Burt Hall, with direct access to the underground hall, while the main entrance is accessible from the plaza level.

Inspired by the lancet windows of the cathedral, the dramatically curved arches of the Song School create a visual balance of old and new among the existing buildings that surround it. The Song School was therefore built partly underground to minimize the space required and to preserve the existing view. The transparent glass structure also ensures that important view of the Ascalon sculpture on the forecourt and of the historical quarter is retained.

Inside the Song School there is an arched hall, whose forms are derived from the classical underground crypt typical of cathedrals. The partially underground rehearsal room was designed acoustically and tailored to the needs of the choir.



From the spiral staircase to the "tuning fork" spire, the Cadogan Song School offers music for the eyes.



The school is located on the foundations of the Cathedral and Burt Memorial Hall, showing a well considered influence on the visual definition of the eastern views. The architectural design is particularly impressive due to the consideration of form, use and material in the size of the district and city as well as in the ambience of the oak-lined singing hall. The Cadogan Song School incorporates a lyrical set of forms that are consistent with the existing heritage of the area, while providing a contemporary setting for sacred choral music.

This project posed extraordinary challenges for the project team of the construction company PACT. A rigorous planning process was required to prepare the foundations of the existing cathedral, to assist with excavation work and to reduce the risk of structural damage. Due to the difficult location of the building, all prefabricated parts had to be lifted about 60 meters from the truck into their final position. In order to meet the aesthetic and design requirements, the architects had decided that all suspensions of the precast concrete elements should remain invisible after the final assembly. As a result, the precast plant designed and constructed alternative ways to position the prefabricated panels and to ensure that they remained "invisible".

To make matters worse, the local precast concrete manufacturers were unable to supply the curved and arched panels to match the architectural design. The construction company searched the whole continent for precast concrete suppliers and finally found the suitable company in South Australia.





In order to transform the architectural vision into reality, the Adelaide company SA Precast was commissioned to produce a variety of white prefabricated concrete parts for the project. These included curved beams for the rehearsal room, two precast concrete spires, three lattice wall panels, supporting elements on the first floor to sustain the shells on the second floor and the shells for the second floor forming the colonnade. The elements were made of white cement and finished with a slightly structured surface.

Claude Pincin, President of SA Precast, explained: "In order to achieve the required results for the curved elements, such as concrete cover and to transport them across the Nullarbor Plains to Perth, the first design was changed from a thickness of 70 mm to 135 mm, connections were also modified and 10 mm reinforcement was added. For this purpose, special formwork was produced in Melbourne from computer-generated profiles. A semicircular base was required so that the towers could be erected and fixed before stripping and levelling. During the assembly planning, purpose-designed and manufactured lifting frames were used for the arch units and towers, which allowed the building components to hang vertically during assembly."

"The result of this project is simply breathtaking. The variety of white elements creates an almost ethereal landscape and demonstrates the potential of prefabricated architectural elements to achieve the grand vision of the architect," said Sarah Bachmann, National Precast's Chief Executive Officer.

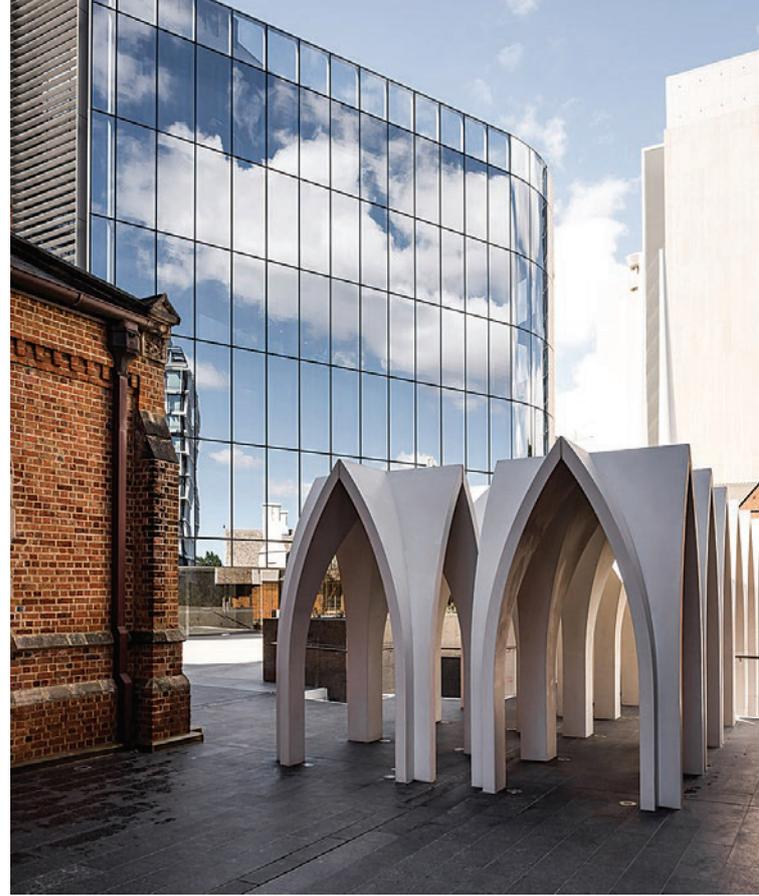
The 4 million AUD project was funded by the wealthy British aristocrat Earl Cadogan, a friend of the former Anglican Dean of Perth, John Shepherd. Charles Gerald John Cadogan is the eighth Earl Cadogan and member of one of the most famous British real estate families.

With its sculptural arches and pitchfork-like spires, the Song School has already received the National Award in the Heritage category at the National Australian Architecture Awards 2018.

Joseph Nolan, Choral Master at St. George's Cathedral, is stunned by the new Song School: "Absolutely breathtaking! It's a bespoke building, it's beautifully done, and everything about it screams quality."



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White cement
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