Bob Hawke Centre

A precast icon of character, innovation and leadership

The new five-storey Hawke Building is a public portal to the University of South Australia and a focus for engagement with the community. Its design serves to support UniSA's commitment to its place in South Australia as the people's university now and in the future.

Precast concrete in this stunning public building demonstrates the clarity, consistency and completeness of the design resolution, as well as being a lasting contribution to the urban design. The fastidiously detailed faceting of the white precast concrete façade plays with light and shadow so as to alter the appearance of the facade as the sunlight changes over the day.

Designed by architects John Wardle in association with Hassell, the new $35 million Hawke building (named after former Prime Minister Bob Hawke) brings a striking modern presence to the historic North Terrace precinct. With over 6500 square metres of floor space, the building includes a Civic Gallery, a 400-seat auditorium, a 150-seat forum space, and the second largest public art gallery in the state, with state-of-the-art facilities and services throughout.

Precast manufacturer
SA Precast

Architects
John Wardle Architects and Hassell

Structural & Civil Engineer
Wallbridge and Gilbert

Facade Engineering
Arup

Contractor
Built Environs

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Using precast resulted in several months of time savings over an equivalent in-situ concrete façade. Builder, Built Environs, prides itself in its ability to build on confined sites having constrained access. Central to their rationale was the choice of precast concrete for its value in reducing site storage requirements and site overheads in terms of virtually eliminating scaffolding and formwork – all important for a narrow site such as this. Using elements of the final structure as construction areas saved time and money, as did pulling forward the

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delivery and installation of key services. Despite requiring four months of soil remediation prior to construction, the project was delivered on time - a testament to precast construction and all involved.

Unique precast panels

The design of Hawke Building introduced a number of innovative materials, including high performance glazing, profiled copper insert panels, rendered sheeting, and zinc plate cladding – all to be co-ordinated with the precast elements.

The complex precast concrete and glass façade was modelled in 3D by a specialist façade engineer. The design of the façade introduced challenges for the precaster, particularly by ensuring that the geometry of the features was accurate and in accordance with the architectural intent. All precast panels were different, with each one being unique. Due to the faceting of the façade the panels had varying thicknesses up to 250mm. Fluted copper flashings between the precast concrete panels add to the feeling of permanence as they reflect the lasting qualities that we admire in buildings of a former era. Colour consistency had to be perfect for all 68 panels that comprise the façade, particularly as the new building would inevitably be compared with the other fine buildings on North Terrace that represent the pride of Adelaide over the past 100 years. An in-situ solution could not have delivered the quality of finish required.

Panels were cast in the factory face down on complex moulds of concrete, steel and timber. An off-form white finish was required using 45 MPa concrete comprised of Salisbury aggregate, white sand, Brighton Lite Cement with white titanium oxide to produce a lustrous finish. Face areas were applied with a Hydron anti- graffiti and anti-pollution treatment to ensure that the façade will look as good in the future as it does now. Joints between panels were stepped and sealed front and back to ensure permanent weather tightness.

Important in this age of energy conservation, the fully-sealed precast façade ensures that air leakages causing heating and cooling losses are eliminated – this is in contrast to some lightweight façade systems comprising many parts that have the potential to leak conditioned air through their many joints.

The compressed site proportion has been enhanced to express the functions of the building by a pair of concrete columns on opposing slants that support the black zinc enclosure of the auditorium space. The slim atrium space rises the full height of the building, with a pair of black-and-white scissor stairs slicing through the space. The soaring sky bridges within define not only the space but offer intriguing possibilities of direction.

Installation challenges

Typically the precast elements were supported on steel corbels and fixed to steel plates which were cast into the insitu concrete floor. The challenge was to ensure that the precast connections allowed for movement due to temperature and shrinkage variations.

Top architectural honour for Hawke Building

The University of South Australia's Hawke Building has been honoured with the top prize for public architecture at this year's Royal Australian Institute of Architects (RAIA) South Australia Architecture Awards.