

Kings Square Renewal



Long needed upgrade to last generations

At the heart of the Freemantle lies Kings Square, WA's only formal town square. Over the past two centuries, the City of Fremantle has continuously upgraded the space to suit the needs of the local community. Undertaking the latest upgrade, the City – in partnership with Sirona Capital - is working on a \$270 million precinct-wide renewal of the city centre as it redevelops buildings and public spaces. Construction on the project commenced in August, 2017, with multiple stages of the development plan following during 2018 and 2019.

The Kings Square Renewal Project will be the largest public-private infrastructure project in Fremantle's history. The project is predicted to be extremely beneficial for the surrounding community as it injects over \$350million into the local economy. Expected to attract world-class retail, tourists and professional services to the city's centre, it is set to transform the community atmosphere.

Included in the redevelopment are a new eating and shopping precinct, office accommodation, a landscaped grass area and public space, a new children's play space, a community learning hub and a City administration building. These new facilities will be divided into multiple areas called The Daily, Street Alley, Tidal Lane, Newman Court and The Emporium.

1,400 precast elements delivered to site

Over 1,400 precast concrete elements were manufactured by National Precast member Delta Corporation for a five-level commercial building located in Adelaide Street on Newman Court. Considerate of the area's heritage, the building is set back from the original two storey façade and will provide retail, hospitality and entertainment uses at ground and lower ground levels, with office use above.

According to Delta Corporation's General Manager Jason Walsh, Delta has also been heavily involved in working with the builder and design team to ensure the buildability

Precast manufacturer

Delta Corporation

Builder

Probuild Constructions
(Aust)

Architect

HASSEL

Engineer

Prichard Francis

Client

State Government of
Western Australia

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of the project, accommodate site requirements and fast-track the project's construction programme. With construction of the building running from April 2018 to October 2018, Delta manufactured precast concrete flooring, structural columns, structural beams and fascia panels for the project.

Hollowcore flooring

Exclusive to Delta Corporation, Deltacore (hollowcore) flooring was manufactured for the project. As extruded, prestressed concrete planks, Deltacore flooring is available in various lengths and thicknesses to suit site requirements. The planks come in standard widths of 1.20 metres and are capable of spanning up to 17 metres. They provide an immediate working platform, which eliminates the need for formwork and propping. Over 10,000 square metres of Deltacore flooring was supplied for this office building in a range of lengths up to 9,650mm and thicknesses of 150, 200 and 250mm.

148 internal and external columns

A total of 148 structural columns were also manufactured for the project. This included 65 no. 600mm square columns, measuring up to 4.35 metres in height and 83 no. columns measuring 350mm by 200mm and up to 3.5 metres in height. All columns were manufactured in steel formwork using white cement in order to achieve a Class 2 smooth off-form finish.

231 beams

The project also required a total of 231 precast and prestressed beams. 70 internal prestressed beams were manufactured using grey concrete in an off-form finish. The beam sizes consisted of 1,200mm wide by 300mm high and lengths of up to 9,700mm in length. 161 external prestressed beams were manufactured using white cement to achieve a Class 2 off-form finish. Achieving the Class 2 finish required a great deal of planning and mould preparation to ensure that the surface finish of the beams was not damaged during destressing and handling. The beams were cast on a 60 metre stressing bed and measured between 3.5 and 8.9 metres long x 600 x 600 millimetres. The beams also hosted multiple connection details to accommodate the many interfacing precast units.

Spandrel wall panels

In addition, a total of 83 precast spandrel wall panels were supplied by Delta. The panels were non-loadbearing Class 2 off-form, with a white cement finish, and measured 5.8 to 8.2 metres in length, 600mm high and 150mm thick.

Success story

With this new office building located right in the heart of the new development in Kings Square, Delta have set high standards with quality, efficiency and architectural aesthetic. Construction of the master plan is due to be finished by early/mid 2020.

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