

# **PRECAST: TRANSFORMING COMMUNITIES**

With its contemporary precast concrete façade, Western Australia's first 6-Star Green Star public building is set to increase sporting, leisure and social opportunities for residents of Perth's south eastern suburb of Beckenham.

Located within the Gosnells local council area, the redeveloped Mills Park Community Facility not only brings the community together, it also showcases sustainable building practices. The development provides important community infrastructure, comprising a large community hall, a function centre, activity spaces, meeting rooms, public amenities, a kindergarten, gym and café, as well as club and change rooms.

## DELIVERING SUSTAINABILITY BENEFITS

The design of the new community hub incorporates visually appealing polished precast concrete wall panels and columns manufactured by Perth-based precast manufacturer and National Precast member, Delta Corporation. **Precaster** Delta Corporation

**Builder** Pact Construction

#### Architect

Hodge Collard Preston Architects

### Engineer

Wood & Grieve Engineering

www.nationalprecast.com.au

According to Delta's General Manager, Jason Walsh, a durable and low maintenance façade was required to help deliver the sustainability outcomes. He says precast concrete contributes to sustainability of any project for a number of reasons.

"Precast is manufactured off-site in a controlled environment, and that has several benefits in itself. As with any project we supply, we deliver the elements just in time so we often see construction times that are up to 40 percent faster than conventional construction. That translates to more efficient construction and cost savings," he explains.

"Taking the work away from the construction site, and in this case using precast, delivers benefits to







society, the economy and the environment. It's better for workers because the site instantly becomes safer, with less activity including fewer deliveries and less people on site. Plus, the fact that there's no waste and because it can include what would otherwise be waste products like slag and flyash, means it's better for the environment," he continues.

One of the other major benefits in using precast polished panels on the project - aside from the superior finish - is the ability of the panels to resist graffiti attack. Delta worked closely with architecture firm Hodge Collard Preston in the early stages of the project undertaking an extensive research, development and testing program. This led to the development of a concrete mix which was aesthetically pleasing and highly graffiti resistant and which would require virtually zero maintenance over the life of the building.

"The sustainability benefits that precast can offer are particularly important in buildings like this one that will be used by thousands of people. There are other environmental and community benefits too. The walls provide an extremely high thermal mass which performs well from an energy usage perspective and they actually absorb carbon dioxide from the atmosphere over their life" Mr Walsh comments.

## FACTORY-MADE QUALITY

The project entailed the manufacture and delivery of contrasting coloured precast panels - 10 black and 35 white polished concrete walls resulting in a wonderful aesthetic result.

The panels ranged in size from 3.5 metres high, 2.5 metres wide and 160mm thick to the largest of the panels which measured 8.4 metres high, 4.2 metres wide and 250mm thick. The size of the elements and particularly the large window and door openings presented quite a challenge in terms of both handling and finishing processes.

In addition to the wall panels, the company manufactured five impressive polished feature precast concrete columns for the project. Mr Walsh explains, "These were polished on all faces and they look outstanding from every direction."

Mr Walsh says the variety of high quality results needed for this project were achieved by Delta's highly trained team. "For the white polished panels we used a white cement along with white oxide and specially sourced Darling Scarp aggregate, while for the black panels we used a grey cement with black oxide and a Quartz aggregate. We had to be precise and consistent with the finishes and the result is a reflection of our dedication to quality." he explains.

## COMMUNITY FACILITY WITH CONTEMPORARY APPEAL

Mr Walsh declares the final result is spectacular. The local mayor agrees, describing the \$8 million redevelopment as a beautifully designed building in a stunning setting. Mr Walsh says it's satisfying to be part of a project that brings so many benefits to a local community. "The Centre means so much to local residents. It's great to be part of something that brings people together". "In this case what we have achieved is a sustainable yet highly detailed architectural outcome," he added.

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