Yagoona Apartments

Precast Revitalises Yagoona

Construction of a 360-metre jetty and marine offloading facility was a crucial part of developing the new Gladstone Liquid Natural Gas (GLNG) plant and the success of one of Queensland's major mining projects.

Kane Developments, a locally based developer, were cemented to the use of precast through their experience on other projects in the financially stringent development context of Sydney's west. They knew that two of precast's inherent advantages over alternate systems - speed of construction together with an integral external finish - could substantially reduce the construction time and costs, which is important to the financial success of any project.

The marriage between precast walls and floors permitted a six day turnaround from floor to floor during construction.

Form liners for fluted texture

The building's architectural expression embraces precast concrete's rich possibility of integral detail and texture. Structural precast wall panels feature a vertically fluted texture, using Reckli

Project Owner
Developer: Kane Developments

Architect and Project Superintendent
Redshift Architecture & Art
Head Contractor: JSN Hanna

Service Engineer
Central Engineering

Precast Manufacturer
Ultrafloor (Aust)

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form liners. The form liners were limited to two widths to achieve a level of economy and efficiency (each liner able to be used up to 100 times), but texture was notionally stretched across larger widths with vertical reglets to achieve a broader and more animated composition. Further enlivening the building's elevation,

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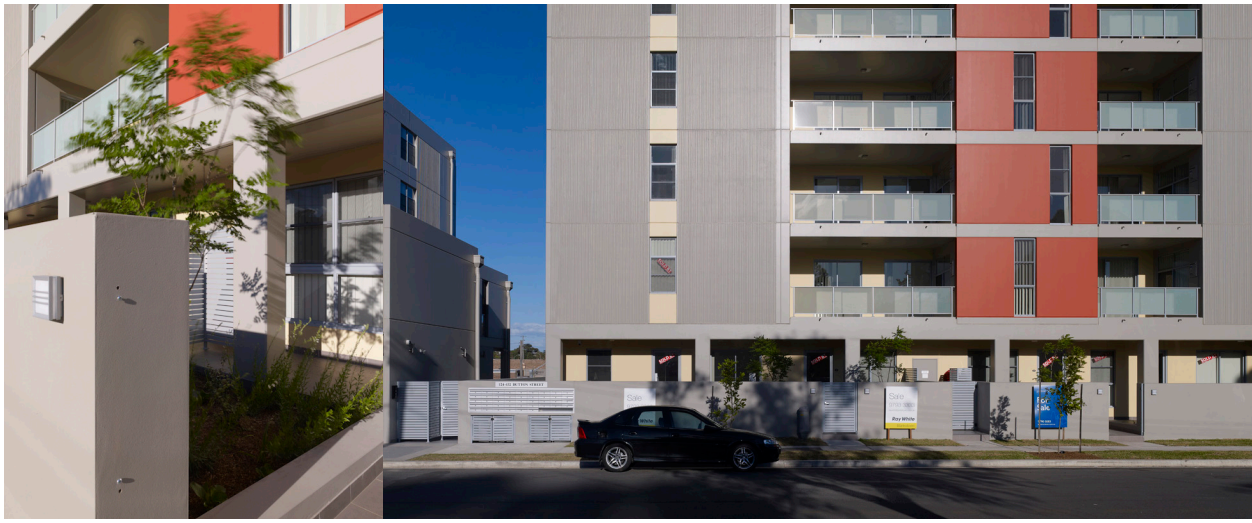

horizontal reglets define each storey and rich red panels are separated by a neutral band at each floor. All this was achieved through careful coordination and communication between architects, precast manufacturers and builders during construction, expediting and streamlining construction, whilst maintaining the integrity of the design intent.

Precast floors for long spans

The Ultrafloor system was selected as the floor structure, with simply supported 250C beams spanning up to 11.6m. Such large spans offered significant savings by deleting a line of internal load-bearing precast walls. The overall slab depth for these spans was 400mm and they only required a single row of midspan propping frames. An interesting innovation was the adoption of Ultrafloor's new permanent angle detail at all precast wall to floor connections, which is fire engineered so as not to require any traditional fire rating treatment.

The completed Dutton Street Apartments are testament to precast concrete's ability to achieve a high quality of finish, detail and construction, with economy and practicality.

Design considerations

Redshift Architecture & Art developed a strategy whereby the majority of window and door openings were consolidated around generous recessed balconies. Redshift Director Angelo Korsanos says: "A diverse range of window sizes are

consolidated around these balconies and other recesses to create an urban scale for the building. This strategy emphasises the surface of the building which was designed with broad areas of textured 'Reckli' panels interwoven with plain and boldly coloured flat-faced panels. The urban scale of the building is reinforced by the structured pattern of deep recesses, with textured and vibrant coloured panels which are animated by the movement of the sun and the pattern of light and shade."