

An architect's modernist approach with precast

With the construction of 25,000 homes per year required to keep up with the demand for Sydney's expanding population, the challenges faced by Modernism have resurfaced in a local context. In describing the project, architect Philip Thalís writes, "A central tenet of Modernism, beyond style, was the provision of mass economical housing, constructed of authentic techniques."

According to Michael Lewarne and Angelo Korsanos from Redshift Architecture & Art, precast concrete with its systematic approach to construction provides an efficient and cost effective solution for supplying housing to Sydney's expanding population.

"The apartment building at Jacobs Street Bankstown exemplifies many of Modernism's principles, providing 54 apartments organised in a highly efficient arrangement with one lift core and only two corridors over nine floors. Almost all units are cross ventilated with a high proportion of service areas located on perimeter walls, avoiding the necessity for mechanical ventilation.

Precast manufacturer

Hanson Precast

Builder

JSN Hanna

Engineer

Central Engineers

www.nationalprecast.com.au



The character of the building is developed from its organisation, construction, assembly and response to solar orientation", says Mr Korsanos.



The plan of the building is configured as a "T". The head of the "T" defines the street edge and faces west. It is comprised of narrow crosssection single level apartments serviced by a lobby at each level. Its stepped and modulated street facade of precast with projecting balconies angled to north and overlaid with metalwork elements regularise the facade, screen the western sun and provide privacy from adjoining balconies.

Two storey crossover units located in the downstroke of the "T" are oriented to north and are consolidated around two corridors over 6 floors. The overall composition is articulated as a series of paired balcony bays attached to a linear block with the deep slots between the bays providing light and ventilation to the depth of the plan. Built over a landscaped podium for communal use incorporating three levels of carparking, the character of this portion of the building is more directly characterised by its precast assembly.

According to Chris Parsons from Hanson Precast, the structure of the building is comprised of 1055 precast units. 376 offform precast wall panels (or 5,694m²) were used, which ranged between 150mm and 200mm thick. The floor structure included 606 precast hollowcore planks (4,865m²) which were 150, 200 and 250mm thick, together with 73 Transfloor panels (640m²) which were 65mm and 75mm thick with 150mm wide by 180mm high upstands.

Talking about the role of precast in the project, Redshift believes that the use of precast complemented the organisational efficiency of the building with a speed of erection that can only be achieved by prefabricated construction. "Precast is a natural match to the systematic approach of the building and the principles of Modernism" says Mr Korsanos.