



Precast integral to student's community atmosphere

Completed in June 2009, the new University of Canberra Student Residences includes 507 bedrooms throughout 18 buildings and a common facility building.

In collaboration with the University of Canberra, May & Russell Architects aimed to develop a distinctive architectural design that enhances and extends links between the new and existing residences and to the campus itself. The design strongly focuses on the qualities of "neighbourhood" and "community" leading to the creation of a village atmosphere. This design intent is enhanced by the selection of precast concrete for the external walls of all buildings that comprise the residences, with the precast walls providing an appropriate solid masonry feel to the development. The external finishes to the panels were carefully selected to achieve this aim, using an interesting application of both formliners and staining to selected areas of the external wall faces.

Formliners for textural difference

The use of synthetic rubber formliners supplied by Reckli provided textured surfaces to the precast and helped to provide an interesting texture to the end wall elevations of the various residential buildings. Due to the recurring form of the buildings, the use of formliners enabled the different buildings to be distinguished from each other as it was possible to easily vary where and how much

Precast manufacturer

Austral Precast
Nawkaw Australia
Reckli Form-Liners & Moulds

Suppliers

Builder/head contractor

Architect

May & Russell Architects

Engineer

AWT

www.nationalprecast.com.au





formliner was used on each elevation. The infinite possibilities and detail that can be achieved with formliners made it possible to create a great façade that was both dynamic and different. Semi-translucent colour with outstanding durability A critical client requirement stated that if precast concrete construction was utilised, it was not to require painted finishes that would entail future maintenance at some point. Precast concrete with a stained finish satisfied the client's brief for a robust and durable material requiring minimal maintenance. Concrete staining as provided by Nawkaw was the solution as it offers a choice in colours, is guaranteed for 30 years and is UV resistant.

Colour was a major aspect of the design and staining enabled key elements of the buildings such as the balconies, blade walls and stairs to be highlighted with feature colours, enhancing the individuality of the various residential buildings. The specifications required a soft neutral semitranslucent finish for grey precast elements, to provide colour whilst maintaining the smooth grainy texture of the concrete. A natural, durable colour in warm off-white was applied.

Precast perfect for unique design

The low rise profile of the buildings suited the use of precast concrete panels. A unique design result was possible through a combination of similar structural forms in slightly different configurations, mirroring and rotations, whilst still ensuring panel repetition during manufacture.

Due to the significant height variations across the site, the topography of the site also suited precast panels, as panels were able to be craned into position without disrupting the progress of civil works. Manufactured by Girotto Precast (Austral Precast), the precast panels were used in a vertical format. This enabled the external envelope of the buildings to be erected in a matter of hours, fast tracking the building process, thereby reducing the construction programme and ultimately

enabling an earlier practical completion date to that previously proposed under the original construction technique.

Key environmentally sustainable design initiatives include:

- Solar photovoltaic cells
- Grey water treatment and re-use to laundry
- Double glazing
- A well insulated building envelope (R2.5 walls, R4 roof)
- Cross ventilation including fanlights to bedroom doors and corridor ventilation
- Hydronic in-slab heating
- Building orientation: solar heating of all living and kitchen spaces
- External sun shading screens.