

The Alex



STRIKING BOUTIQUE INNER CITY LIVING

Stylish. Edgy. Unique. That's how The Alex residential apartments are being described. The premium development offers boutique living over five levels in the inner Sydney suburb of Alexandria. With its striking geometric façade design, the building's street view is bold and contemporary - and constructed using precast concrete.

3D PRECAST SOLUTION

With the architect intent on using precast concrete, Sydney-based precast manufacturer and National Precast member Hanson Precast was approached at the outset by the architect to explore what could be achieved using precast.

According to Hanson's Project Engineer Robert Aldrich, while the geometry of the design was complex, the precaster identified a relatively simple solution and was awarded the contract to manufacture 240 panels, each of which had a 3D panel profile.

Senior Drafter with Hanson, Ben Peers, played a critical role in designing the panels. His team used 3D software and models to develop the precast solution. "The 3D drafting process is critical for a project of this nature. Being able to model a structure in three dimensions allows us to almost 'pre-build' the building, iron out any problems at the outset, and from that, identify the optimal mould design," said Mr Peers.

The design of the three-dimensional panels that make up the building's geometrical façade posed a challenge in that three of the four panel corners are not at right angles.

Precaster

Hanson Precast

Builder

Newtown Constructions

Architect

Project Services

Engineer

LMW Design Group

www.nationalprecast.com.au



CLEVER PLANNING MINIMISES MOULD COSTS

Mr Aldrich explains that while the geometry of The Alex looks complicated, in fact it was quite simple. "The secret was in developing the façade layout so identical panels could be placed at various locations on each elevation thus reducing the number of panel types required". The company's in-house mould-makers were then able to design three versatile moulds to manufacture all the panels. "Shutters were designed to enable the myriad of different combinations of sloped and straight edges, toothed panels and different panel sizes to be accommodated. Smart planning and our mould fabrication skills allowed us to minimise the mould costs for the project," he says.

PAINTED OFF-FORM PANELS FORM WINDOW OPENINGS

Each of the 240 panels had a Class 2 off form finish that was painted with a low-build white paint to achieve a crisp aesthetic. Another aspect was the load bearing design of the panels with each having a positive connection with the suspended concrete floor at each level. When installed, the panels stack on top of one another in a clever design that forms the window openings.

INSTALLATION WAS ALSO CHALLENGING

A tower crane was selected because of the construction restriction of the tight inner city site. Special transport frames were designed to accommodate all of the unusual shapes so the panels were delivered in their as-installed orientation. This saved significant time on site as the panels didn't require offloading or turning during the erection process.

EARLY ENGAGEMENT DELIVERS OUTSTANDING RESULT

According to Mr Aldrich, The Alex demonstrates how smoothly a project can run when a team approach is taken. "This project is a great example of when the architect and precaster work together from early on, to plan and innovate for an excellent result. What we've ended up with is a very impressive building".

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