

The Green Fox



A tight site, complex, multi-dimensional plan and strict environmental requirements were just three of the challenges overcome in the construction of this dynamically different Queensland office building.

The building is the Queensland headquarters of Kane Constructions, known affectionately as 'The Green Fox'. A three-storey building, it combines striking elevations with strong environmental specifications including reduced water and electricity use, extensive use of recycled materials and passive design.

At a mere 10 metres by 40 metres, built to the side boundaries and with a council-required setback of 3 metres to front and back, the tight site posed a key challenge and was a key driver for the choice of precast as the predominant form. Aesthetics was another major drawcard for both client and architect.

Even with the benefits of precast, installation of the panels – supplied by Austral Precast – required significant planning, ingenuity and engineering know-how.

The external walls weighed up to 18 tonnes each and required extremely accurate set out, as they sat on the site boundaries. This was achieved with use of a 200 tonne crane – a tight fit on the site and calling for extensive traffic management.

The height of panels and multi-levels of the building required complex engineering:

Project Owner

Kane Constructions

Architect and Project Superintendent

MARC & Co

Service Engineer

Meinhardt

Builders

Kane Constructions

Precast Manufacturer

Austral Precast

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panels had to be braced off each other then to the ground, to ensure braces from two-storey panels were not penetrating through a visible part of the off-form concrete ceiling.

The building's northern facade comprises precast concrete columns over two levels in random arrangement, separated by an in-situ concrete beam on a different plane. Challenges arose because the columns could not be propped traditionally, due to both aesthetics and formwork clashes. The solution entailed two parts: the first row of columns was held between the level one slab and the beam formwork, while the second row was constructed later between the then-poured beam and the roof slab formwork.

Despite the site challenges and the complex slab rebates and penetrations, the end result was a smooth installation with no errors – and a very happy client.

“It is only through pushing the boundaries of good design and application of technology, together with use of offsite manufactured materials, that innovation becomes mainstream practice”, said David Rutter, Director of Kane Constructions. “It is this aspect of the project we are most proud of.”