

LUXURY LIVING

Established in 1972, Mirvac has more than 35 years of experience within the real estate industry. It has an unmatched record for delivering quality products across all of its businesses.

As a leading integrated real estate group, listed on the ASX with approximately \$28 billion of activities under control across the Development and Real Estate funds management spectrum, Mirvac employs around 5,500 people across Australasia, the UK and the US.

Mirvac's Development division is responsible for the delivery of commercial, retail, industrial, hotel and some of Australia's best residential projects for the Mirvac Group. Mirvac currently has approximately 30,000 lots under its control which will be progressively developed over the next 8-10 years.

In late 2006, NSW Department of Planning called for Expressions of Interest for the 'Multi-unit Residential Co-generational Demonstration Project'. Mirvac's Cambridge Apartments, which was well under construction, was selected for the implementation of the co-generation pilot project in early 2007.

Cambridge Apartments located in Sydney's northern suburb of Chatswood, is a classical vertical high rise, comprising 132 luxury apartments, two retail lots, and a childcare centre over 25 levels, and represents the mainstream of future multi-unit developments. Cambridge was the fourth residential building within the Pacific Place development, located on two hectares of prime land, which now comprises over 550 residential units that have been stage delivered to the Chatswood market since 2003.

Mirvac's vertically integrated model enabled it to deliver all stages of the Cambridge project. The internal divisions were able to provide Development Management, Project Management, Construction Management, Architectural and Interior Design, as well as the Sales & Marketing and After Sales Customer Relations. Around 30 Mirvac Construction (NSW) employees worked directly on the Cambridge Apartments project.

In partnership with the NSW Department of Planning, Mirvac used the Cambridge Apartments development to install and monitor a gas fuelled cogeneration system. Installed on the roof of the apartment complex, the system produces electricity by a generator, which is driven by a small gas-fuelled

internal combustion engine. This unit is then connected to a waste heat recovery system that is the primary energy source for the domestic hot water supply to the building. The electricity generated by the cogeneration system is used on-site to offset common area electrical demands. Under normal operation, it is anticipated that the cogeneration system will meet average daily domestic hot water needs of the apartment complex and is also expected to save about 50 tonnes of carbon dioxide emissions per year.

The cogeneration system is being monitored and evaluated for its practical implications and cost effectiveness in achieving BASIX (Building Sustainability Index) compliance in future high-density, multi-unit residential developments.

Detailed planning also enabled an efficient construction method to be implemented by the site team. The structural component of the project incorporated precast façade panels and flat slabs utilising post tensioning, which enabled the use of a system formwork that reduced stripping times. Additionally the site team utilised a formwork screen system with planning initiatives that achieved a comfortable four day cycle without exception, allowing good resource continuity for all trade contractors.

The site also presented certain constraints that needed to be overcome as it was situated on the eastern side of a railway enclosure structure, which presented both construction process and access challenges for the project team, as well as the need for a level of integration with the adjoining structures.

The Cambridge Apartments project is a testament to Mirvac's continuing drive for sustainable outcomes across its activities and a willingness to develop and innovate within its traditional business activities with both new technology and practices. An undisputed leader in its field, Mirvac is committed to the provision of exceptional service, outstanding developments, and sound investment opportunities, all of which carry the highly respected Mirvac mark of Quality.

Mirvac Construction
Contact Zac Hart, Project Manager
t. 02 9080 8362
f. 02 9080 8100
e. zac_hart@mirvac.com.au

CAMBRIDGE APARTMENTS

MIRVAC
CHATSWOOD, NSW





ICONIC DESIGN

Icon Custom Projects involvement on the Cambridge Apartments project was the custom design and installation of the glazed balustrades on Levels 1 to 24 of the luxury residential building.

Established in 1994 by principal Paul Sewell, Icon Custom Projects specialises in the design, manufacture and installation of a range of architectural products, from custom stairs and balustrade systems to independent structures and building features. Typically these features are produced in steel, glass, timber, and aluminium. While initially the business focussed on design, ultimately it progressed into performing both the design and installation function, and therefore sub-contracting on numerous construction projects. Over this time the operation has grown to 11 employees in the Banksmeadow office, in Sydney's south-east.

Icon Custom Projects involvement on the Cambridge Apartments was managed by Paul Sewell, with Matt Beckley acting as Project Supervisor. For the apartments the custom designed balustrade system used extruded aluminium and toughened safety glass, which complied with the Australian Standard AS2208. This material and design enabled the balustrades to seamlessly complement the exterior design of the building. In all approximately 1.5 km of balustrade was used in the Cambridge Apartments project.

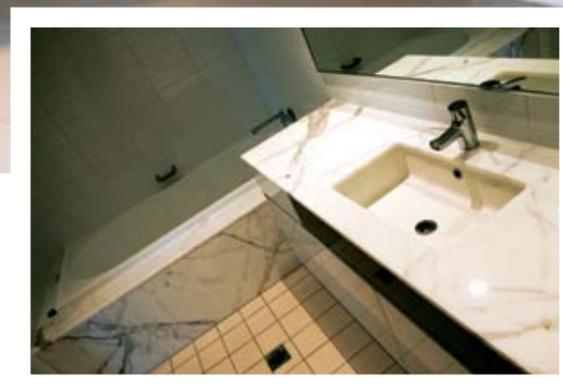
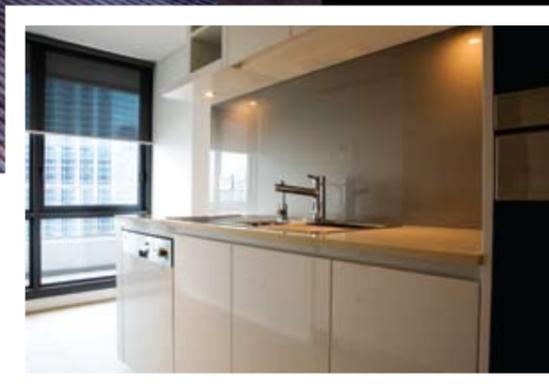
One of the more challenging demands of this particular project was the need for a quick turnaround, which meant keeping to a 4 day per floor construction cycle. Additionally, the balustrade utilised a system designed to provide edge fall protection during construction, with a decorative top rail, which clips on at the final

stage of construction, helping to avoid any damage to the balustrade.

With Icon Custom Projects possessing over 20 years experience within the Sydney construction industry, their comprehensive and project specific control systems ensure that they meet all their obligations with regard to the safety, quality and design of their architectural products.

Icon Custom Projects

Unit 10, 9 Meadow Way
Banksmeadow NSW 2019
t. 02 9316 7777
f. 02 9316 7766
e. info@iconcustomprojects.com.au
www.iconcustomprojects.com.au



INTELLIGENT INTERIOR

Some of the decorative finishing touches for the Cambridge Apartments were supplied and installed by Interior Marble Australia. These fittings included the kitchen bench tops, bath hobs, vanity tops in each of the apartments, and the marble wall for the lift lobby in the foyer. Externally their quality product can also be seen on the columns around the complex.

Established in 1992 by Maurice Gorge, Interior Marble & Projects specialises in stone fabrication for both residential and commercial fit-outs. Their work covers all facets of work in the stone industry, ranging from composite stone to marble, granite, sandstone, limestone & fixing or ceramic tiles.

The specific material used on the Cambridge Apartment project was a product from Japan called Neoparies, which was used throughout the complex in place of traditional granite or marble. Neoparies is both lighter and stronger than granite and more resistant to scratching and abrasion than marble. In addition to the interior panels, the external areas such as the white columns outside the building and flower boxes also feature these panels, all installed the traditional way with self-supporting pins.

Interior Marble Australia & Projects are currently working on a project for Mirvac at Magenta Shores on the NSW Central Coast. Having completed the 1st. stage of the Villas and Houses two years ago, in January 2008 they were also awarded the 2nd.stage of the

Magenta Villas. Interior Marble Projects are doing all the tiling installs, while Interior Marble Australia are manufacturing all the stone benchtops, as both companies work together as a team in order to achieve the utmost of quality. In this way they can ensure quality workmanship and attention to detail of all their residential and commercial work.

Interior Marble

6-8 Churchill Street
Silverwater Dc 2128 NSW
t. 02 9748 0077
f. 02 9748 0088
e. maurice.gorga@interiormarble.com.au