

# A UNIQUE CONSTRUCTION METHODOLOGY

The \$35M LUXE Apartments redefines penthouse living. Featuring bespoke touches and superbly detailed interiors, each Luxe Signature Series residence is unparalleled and comprises 77 prestige apartments with an average price of \$1.5 million.

**MAIN CONSTRUCTION COMPANY :** FKP Constructions Pty Ltd  
**PROJECT END VALUE :** \$35 million  
**COMPLETION :** March 2014  
**ARCHITECTS :** Krikis Taylor Architects

Boasting a prominent Sydney CBD location in Woolloomooloo, the \$35 million LUXE Apartment development features a total of 77 apartments spanning connecting twin nine-story low-rise buildings. LUXE offers stunning uninterrupted views across the city skyline and Domain parklands, and at only 400m from the CBD centre, many of Sydney's attractions are a mere walk away.

With a range of 1, 2 and 3 bedroom apartments and penthouses, LUXE apartments feature generously proportioned living spaces with private balconies, bespoke interiors with sophisticated contemporary finishes of stone and timber, and Miele appliances and Roger Seller fittings in kitchens and bathrooms. Video intercom, secure parking, individual storage and concierge facilities are also included.

FKP is a prominent Australian property and investment group, with a comprehensive property portfolio that emphasises their proven experience across many facets of the industry. Spanning over 30 years, their portfolio has grown to include mixed-use, land, retail, residential, retirement, industrial and commercial assets.

The LUXE development is FKP's most recent major project. Over 50 consultants and subcontractors worked on the development,



and the project faced many challenges from the onset. The site itself is adjacent to heritage-listed buildings on the north and south boundaries, and these buildings were found to be at least partly supported by high-level footings, indicating they were susceptible to damage from ground related movement. Also of concern was the Cross-City Tunnel to the west of the site.

A palaeo channel, in filled with alluvial sand and clay deposits, also underlies the site with rock levels ranging from 8–18 metres along the site boundaries.

This, together with the high groundwater level, creates an area susceptible to consolidation settlement due to dewatering.

The LUXE development included a split-level three basement, and the site conditions created major concerns in term of excavation support. There were also difficulties in negotiating access with the southern neighbouring owners for the installation of the tie back ground anchor needed to support the proposed secant pile wall shoring system.

An assessment of the risks of excavation-induced movements was undertaken and various retention options were devised to reduce risks and communicate the results to the developer. Analyses were performed, including assessing the horizontal strain and deflection ratios for two excavation support options. These included an internal bracing system provided by a large steel grillage, running around the perimeter of the site, with rock anchors installed in the southern and eastern boundaries, and top-down construction allowing the internal bracing to be provided by permanent floor slabs—this involved a staged excavation under each slab, then the installation of the next slab until B3 was completed. Strutting down to a dead man piles was eliminated as a possible shoring system due to the depth of the rock and the soft ground conditions.

The results of the assessments were plotted on 'potential damage category charts' and allowed the developer to make informed decisions in selecting the appropriate excavation support methodology based not only on the cost of the system, but also on risks, the potential cost of repairs, and to avoid the potential for litigation.

The top-down construction method was adopted for the project and to further reduce the risk of excavation-induced settlement to the building on the northern boundary, which has high footing loads, compaction grouting was carried out. An instrumentation program, comprising several inclinometers inside the shoring piles and survey markers, were implemented. Very little movement has been recorded and the top-down shoring system has enabled the two buildings, each including nine levels, to be constructed above, at the same time as the excavation below.

The site had been previously built on and as a result, there were already deep foundations on the site that were impossible to safely remove. The top-down sequent and installation of the precast columns was made harder by existing obstructions in the ground. However, this method of installing the precast columns from L1 height down to B3 and then forming the slabs as the excavation was completed, made this project truly unique.

*For more information contact FKP Property Group, Level 5, 99 Macquarie Street, Sydney NSW 2000, phone 02 9270 6100, website [www.fkp.com.au](http://www.fkp.com.au)*





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**For outstanding quality, prices, passion and integrity, you cannot surpass market leaders, Absolute Tiling Solutions.** Their reputation is solidified by their 'One Contract, One Contact' approach—a fix and supply method, where clients receive a single and efficient tiling solution, with an assigned project manager.

After building a solid rapport and displaying their sound skill sets, as well as exceeding all certification standards set by FKP Property Group, Absolute Tiling won the tender for the Luxe Apartments. A team of 45 ensured the highest standards and finishes were achieved, with superior resources sourced direct from overseas suppliers, providing a cost- and time-effective solution.

In order to meet the brief to install first-class precise soundproofing systems to each apartment, Absolute Tiling developed a method to address the concerns of all key stakeholders regarding the acoustics of the apartments.

In 2012, Absolute Tiling were honoured to win three awards in the Western Sydney Awards for Business Excellence—Best Retail, Best Business, Young Entrepreneur of the Year, for Managing Director Marco Fahd. In 2013 Marco repeated his win for Young Entrepreneur of the Year. Further prestige projects Absolute Tiling are involved with include Boheme, Bondi Beach; Christian Dior, Sydney; Virgin VIP Lounge, Canberra; and Louis Vuitton, Sydney.

The managing director, Marco Fahd, and the general manager, John Kiprovski, welcome the opportunity to demonstrate Absolute Tilings core values and discuss your project's needs.

**For more information contact Absolute Tiling Solutions,** 2-3/23 Rowood Rd, Prospect NSW 2148, phone 02 9896 7727, fax 02 9636 7729, email [admin@absolutetiling.com.au](mailto:admin@absolutetiling.com.au), website [www.absolutetiling.com.au](http://www.absolutetiling.com.au)



## THE REINFORCEMENT SPECIALIST

**Specialising in reinforcement fixing, Quickfix Concrete and Steel Reinforcing have been in business for 7 years.** Consisting of a team of twelve, all of which worked on the Luxe Apartments development, Quickfix provided all areas of reinforcement fixing to the job. Director, Tony Lombardo, has 18 years experience within the reinforcement fixing industry and he's been site foreman for the past 15 years. With his extensive experience in residential, commercial and industrial projects, he states that Quickfix is reliable and always complete projects on time and to schedule.

Other projects that Quickfix Concrete and Steel have been, or are currently involved in, include the Johnson & Johnson Car Park;

Collage of Fine Arts, Paddington; Bupa Age Care, Baulkham Hills; Audi Lighthouse; and the Miranda Office Blocks, Mosman.

**QUICKFIX**  
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**For more information contact Quickfix Concrete & Steel Reinforcing,** 26 Michelago CCT, Prestons NSW 2170, phone/fax 02 9826 6975, mobile 0419 299 773, email [tonylombardo@bigpond.com](mailto:tonylombardo@bigpond.com)

## THE ONLY FLEET FOR THE JOB

**With over 60 years of experience, Botany Cranes & Forklift Services are Sydney's number one crane company.** Servicing the Botany area, Eastern suburbs, CBD and the outer areas of Sydney, Botany Cranes provide mobile crane hire, with a large varying fleet of cranes allowing them to accomplish any job's requirements.

Due to the small site size and location of the Luxe Apartments development, Botany Cranes were the only crane company able to supply a unique crane to suit the job from its fruition. After assessing the requirements on the job site and its limited access, Botany were able to select the right crane for the job—a telescopic 100 tonne crawler crane. This particular crane is rare in Sydney, and because of its design, the crane was able to lift and move supplies on site that wouldn't have been possible otherwise.

With approximately six employees working on site, the Luxe Apartments development proved demanding on a daily basis, due to the site location and size. However, with the Botany team's extensive experience and determination, they managed to accomplish the

seemingly impossible task in a safe and efficient manner, without a thought of defeat.

Botany Cranes have also been awarded the Caltex fuel refinery project, and are the sole crane company to be working on the job. Further developments they are involved in include the new Port Botany expansion and the Ausgrid electricity upgrade. With major clients such as these, through to smaller projects, Botany Cranes is proud to be able to service any job requirements, utilising their extensive fleet, from lifting in spas through to maintenance support for all of the port services in Port Botany.

As Sydney's premier crane company, Botany Cranes pride themselves on their outstanding safe-work practices and their superior service, which ensure they satisfy all customers across a broad field of crane lift requirements.

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## PROVIDING EXPERT ADVICE

**Building Certificates Australia Pty Ltd are the appointed Principal Certifying Authority (PCA) for the Luxe Apartments.** This long awaited luxury development overlooking the Domain had many design challenges facing the Luxe Team, from excavation techniques through to incorporating new mandatory disability access requirements under the Building Code of Australia, applying to all new residential developments. Fire engineering was also leveraged within the architects vision for a seamless view of the harbour and maximising a 'mixed use' concept for ground floors, incorporating flexibility for future restaurants and specialty commercial suites.

Building Certificates Australia is a team of professional development consultants consisting of unrestricted A1 Accredited Certifiers, Building Surveyors, Access Consultants, Engineers and in-house Town Planners. This broad team allows us the opportunity to provide for dynamic and exciting developments, particularly in the current building industry climate

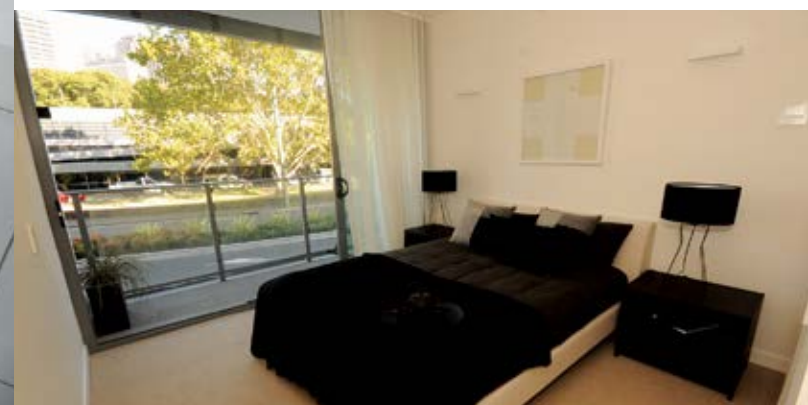
whereby the state government is pushing for Complying Development to be the primary approval pathway for future development in NSW.

The team at Building Certificates Australia can assist you with any sized project from small residential additions of your family home through to complex multi storey multi-million dollar mixed use and industrial developments throughout the state.

Feel free to contact our consulting team to see what we can do for your development.



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## AN INTEGRAL MEMBER

**Altus Page Kirkland has been an integral member of the project team for Luxe Apartments.** They provided full Cost Management and Quantity Surveying services to FKP, ensuring the best return on investment and minimising risk throughout the life of the project. Altus Page Kirkland established realistic budgets during the construction life cycle and ensured these budgets were monitored, maintained and controlled through to project completion.

As part of Altus Group, the leading multidisciplinary provider of independent, professional construction and real estate services worldwide, Altus Page Kirkland has been involved with major residential projects throughout Australia and across the globe. Their extensive cost database is a result of their work on a wide variety of residential projects ranging from low cost affordable housing to luxury apartments. Drawing upon their depth of knowledge and vast experience, Altus Page Kirkland's Cost Management services include cost planning

from feasibility through to all phases of the design and tender processes, construction and completion. Other key Cost Management services include due diligence, reviews for financiers, Environmentally Sustainable Developments (ESD) and value engineering cost studies.

As a multidisciplinary property and construction consultancy, Altus Page Kirkland provides Project Management, Asset Management, Public Private Partnership (PPP) and Property Tax Depreciation services. The Altus Page Kirkland team is hands-on and industry savvy, knowing what is happening in the marketplace right now, and understanding the complexities and special requirements of projects. They take pride in tailoring their services to meet specific client needs.

**For more information please contact Altus Page Kirkland,** The Podium Building, 1 Market Street, Sydney NSW 2000, phone - 02 9283 7311, fax - 02 9283 7322, website – [au.altusgroup.com](http://au.altusgroup.com)

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### FABRICATION

- 3-D design (CAD and CAM)
- Stainless steel fabrication
- Aluminium fabrication
- Heavy & light steel fabrication
- Precision laser cutting
- Precision punching & perforation
- High-impact bending & forming (up to 320 tonnes)

### FINISHING

- Glass bead blasting
- Garnet blasting
- Powder coating
- Metal spraying
- Wet spraying



Main Image: Street & Garden Furniture Co.