

HALCYON APARTMENTS

CLIENT : Thakral Holdings Limited
DESIGN + CONSTRUCT : Probuild
PROJECT END VALUE : \$20 Million
COMPLETION : January 2012
ARCHITECTS : Spence Pearson Architects
STRUCTURAL ENGINEER : Smart Structures
SURVEYOR : Denney Linker
QUANTITY SURVEYOR : WT Partnership

TURNING CHALLENGES INTO LUXURY LIFESTYLES

Despite harsh weather and limited access challenging their works programme, Probuild successfully delivered 13 grand apartments in the boutique Halcyon building. Constructed for Thakral in Sydney's exclusive Lavender Bay, Halcyon is a luxury development on the water's edge, with two house-like apartments per floor, magnificent harbour views and high end finishes. This exceptional outcome is a tribute to Probuild's excellent project management capabilities. The project had a 60 week timeframe, which commenced with demolition of an existing commercial building on the Harbourview Crescent site. A high recycle rate was achieved with the materials, leaving a clean site for works.

The existing basement excavation had to be deepened slightly, to allow for two levels of secure residents' parking. The construction of the 13 boutique luxury apartments was mostly comprised of in-situ concrete walls and post-tensioned stressed slabs, with significant glazing on the east and west facades with of unitized performance glass in aluminium framing, whilst the perimeter has brickwork infill panels, with the internal walls made up of Hebel. Brickwork has been used throughout.

Access for deliveries and the workforce was extremely restricted due to the frontage access, Harbourview Crescent, being a cul-de-sac, and the street on the high side of the site, Cliff Street, a narrow one way road. Coordinating deliveries and undertaking traffic control when necessary required careful planning and execution.

To complicate things further, adjacent to the Halcyon project on one side of the site is the Kirribilli RSL, which does a busy lunch trade with patrons dining on a balcony, and on the other side is a high-end residential development. Noise was therefore something that had to be carefully managed between the standard hours allowed by council, meaning a veto on night-time deliveries or any after-hours works.

Just to make things even more interesting, weather challenged both the ability to complete milestones to the expected standard and to timeframes, with stormy weather since September 2011 making it difficult to get the building closed in and weather tight.

Despite all that, Probuild delivered on time, and to an extremely high standard.

There are a number of sustainable aspects to the apartments. Rainwater is being harvested to a small tank, in the basement for irrigation throughout the building and its green roofs. CBUS systems and LED light fittings have been installed throughout all the apartments for maximum energy

efficiency, as well as high-end water and energy efficiency rated appliances were used throughout the building.

Probuild had a staff of seven on site, including Project Manager, Site Manager, Contract Administrator, Document Controller, Quality Controller, OH&S Supervisor and two Leading Hands. A team of 45 subcontractors were involved, with a peak daily workforce of 170, and an average daily workforce ranging from 70-90. This number of persons on such a restricted site was another aspect of the logistics challenge, and also made focusing on coordination of tasks and ensuring a safe workplace a major priority for the project management team.

"This project is all about quality and being sympathetic to the location," said Probuild Construction Manager, Joe Lorefice.

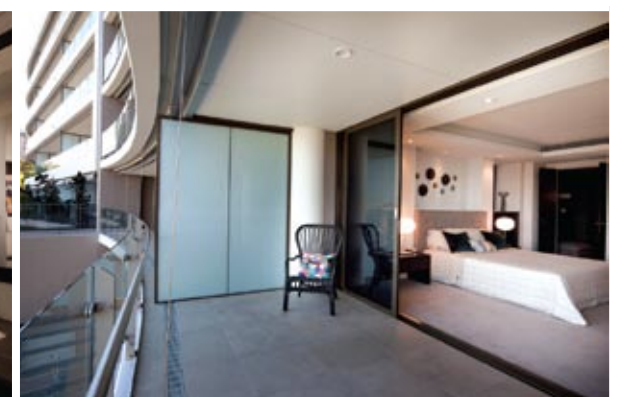
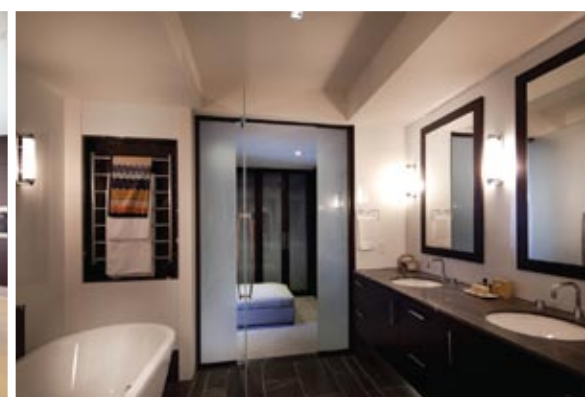
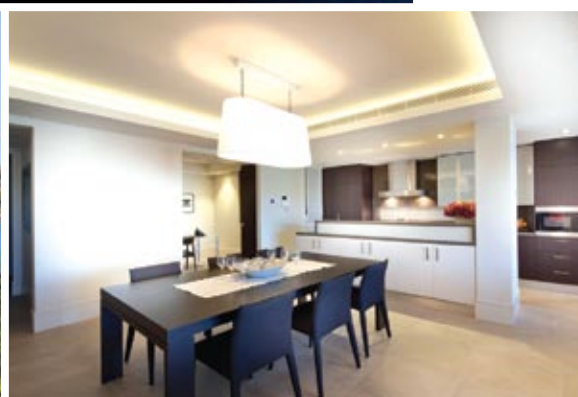
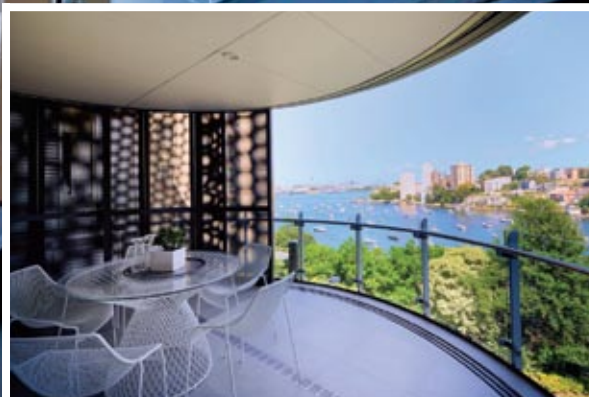
"The outcome is set to exceed the quality expectations of the client and developer, Thakral, and sets a benchmark for residential living."

Probuild now has more exciting challenges underway, including Panorama a large \$56 million residential conversion and new-build on Pacific Highway at Crows Nest for the Barana Group. The site has three existing buildings to be redeveloped, and access at this location is likely to be difficult, given the road is one of the main arterials between the North Shore suburbs and all parts north, and also the major route south to the Sydney metro area. Probuild is also working with Wu International in Chatswood on a new \$72 million mixed-use residential, retail and commercial development with a major medical centre at 38 Albert Avenue.

For 25 years Probuild has collaborated with leading developers and architects to realise iconic buildings. Although they are one of the nation's largest contractors with a project pipeline of \$1.67 billion, their people remain passionate about delivering excellence and exceptional service to clients.

Their core values of teamwork, communication, innovation and safety underpin everything they do, resulting in the highest possible standards. Projects are consistently delivered on time, within budget, and in a collaborative manner to solve problems and achieve best outcomes for all stakeholders.

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EVERYTHING YOU NEED FOR FLOOR HEATING

Comfort Heat Australia has been installing floor heating systems for over 10 years and has developed installation practices which are now being used throughout the industry as standard. Comfort Heat installed hydronic floor heating in the spacious Halcyon apartments.

In a hydronic system the heat is carried in water running in pipes laid in the floor. The water can be heated by natural gas, electric heat pumps, wood fired stoves and solar. As the water flows through the pipes it releases heat to the floor which radiates into the room. The heat is gentle, creates no dust, and has no fumes. It is silent and, in the case of under floor heating, is totally invisible.

Hydronic heating was used by the ancient Romans and has long been popular in the colder parts of the Northern hemisphere. It is cost effective and environmentally friendly. With a floor heating system the installation is totally invisible. There is no impact on the interior design, the floor coverings used, or the walls – as there would be with visible radiator panels, which need to be heated to an energy hungry 80° C to produce the same result.

With the modern trend to uncluttered spaces and floors such as polished concrete, tiles, marble, and timber, usually laid over a concrete slab, warming these spaces in winter has become an energy issue. Traditional heating systems, such as fireplaces, air conditioning or gas fires tend to send heat up to the ceiling and not the floor. They also create a dryness in the air.

Underfloor heating brings the floor to a low heat, usually 25° C, and controls the heat by a thermostat with a floor sensor. The use of energy depends on the temperature of the floor, not the fluctuating temperatures of rooms being heated. Electric floor heating is ideal to manage energy usage in smaller floor areas such as bathrooms. Hydronic heating is ideal for larger floor areas and commercial spaces.

Underfloor heating is suitable for all traditional and modern floor treatments. It can be installed in the slab for polished concrete floors, in a screed bed under tiles

or within new flooring products which are poured over the base slab and polished as a feature. There are underfloor heating products which can be installed under timber and directly under carpet. With a comprehensive range of products and access to new products from overseas, Comfort Heat can provide floor heating solutions for any project, large or small.

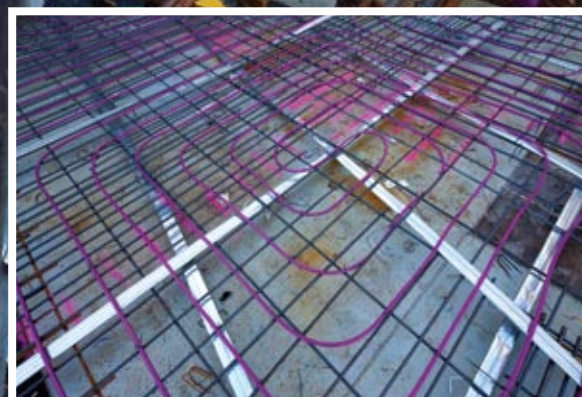
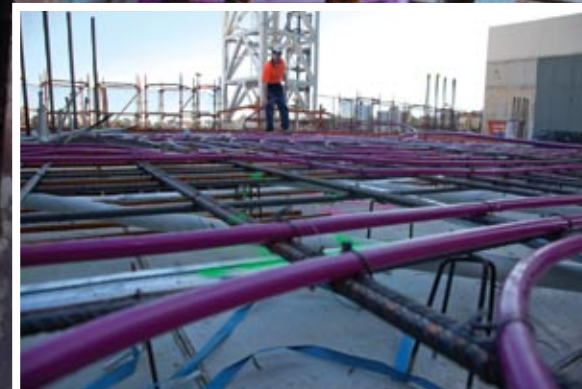
Comfort Heat is run by engineers assuring smart design and effective heating solutions for any building specification in residential, commercial and industrial applications.

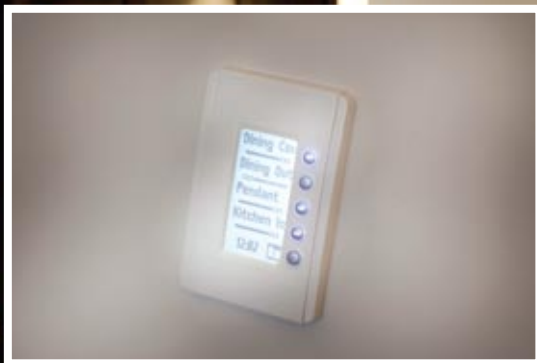
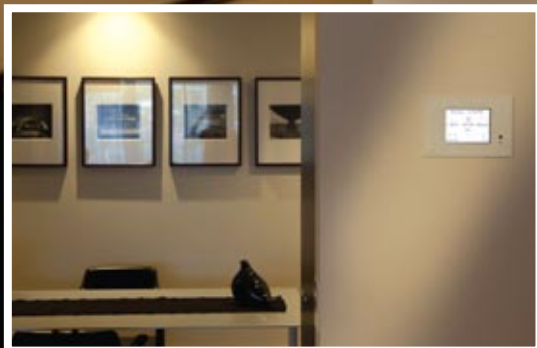
Comfort Heat provides floor heating solutions for both electric and hydronic floor heating systems. They provide designs by qualified designers and engineers and can install or provide DIY kits. All their systems are covered by a service guarantee for the life of the product with a 10 year factory guarantee on the floor heating cables and 25 year guarantee on the hydronic pipes.

Comfort Heat has two warehouses in Warriewood storing electric and hydronic heating parts. It has a dedicated team of experienced installers, a fleet of service vehicles in NSW, and a network of partners throughout Australia. Comfort Heat attends overseas trade fairs to monitor best practice in the field. Through another venture, INTAFLO, it can supply hydronic parts and pump stations from Italy and heat pump chillers from China.

Comfort Heat leads the field in providing cost effective and technically efficient heating systems, with continuing customer service and support after installation.

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ELECTRICAL SYSTEM WIZARDS FROM START TO FINISH

Residents at Halcyon Apartments are going to be extremely energy-efficient, with leading edge Automation systems for both private and common areas part of the electrical works package installed by Nos Group. Every apartment has Clipsal C-Bus Automation System installed which controls the lighting, motorised louvers and motorised blinds. Because the system is incorporated into the lighting systems building-wide and includes movement sensors, it will not only deliver superior energy-efficiency for each resident, but will also minimise electrical consumption in common areas.

“Energy saving is now pretty much essential to any new building, and a considerable amount of work has gone into co-coordinating and re-specifying light fittings to predominately LED’s into the project,” explained Nos Group Manager, Bill Lianos.

“There were a lot of ideas thrown around between Nos Group and Probuild in services meetings to not only implement LED lighting, but also ensure we provide dimming for these which would not detract from the aesthetics and the feel of the apartments. I believe a lot of our ideas added to the warmth and comfort of the apartments. We have been mindful in programming the Clipsal C-Bus System in a simple but effective way so as to not intimidate the end user.”

The project’s challenges included tight restraints due to the site location, which limited room for storage and work space. Nos Group had an average of 12 staff working on the project in a progressive timeframe which was closely coordinated with the construction program.

“The project was certainly challenging and rewarding, as it took a lot of work and thought to keep up with the technological and environmental

changes from the time the project was originally designed in 2009. I would also like to add that the challenge was made easier dealing with a professional outfit like Probuild, who have a great attitude and outlook in the way the project was run, and in the standard of the final finishes including functionality,” said Bill Lianos.

Nos group are an adaptable electrical contractor, able to provide a one stop shop for projects like Halcyon. Their contribution starts with setting up temporary site power, and continues right through to final programming and commissioning of the Automation systems, and training for home owners in the operation of the systems following handover. The company is a Clipsal Point One Accredited Integration Professional.

Nos Group has been in business since 1991, growing from a one-man operation into a company with 35 employees. They work across the commercial, residential and industrial sectors, with other recent projects with similar scope of electrical Services and systems integration, including the mixed-use Stamford Cosmopolitan Double Bay development; Sienna Apartments on Wolsley Road Point Piper; and The Maureen Tudehope Centre Kincoppal Rose Bay School of Sacred Hearts.

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SMART STRUCTURAL ENGINEERING IDEAS

The name may have changed but the talent remains the same. PDR Smart Structures, now known as Brown Consulting, were the design structural engineers for the upmarket Halcyon Apartments project. The project team ensured an intelligent approach to the construction methodology and a structurally sound final result.

Brown Consulting’s Project Director, Raja Rajalingam undertook the concept design and delivery. Raja and his team also provided full design documentation from concept to the final design, and ongoing supervision of the structural elements during the construction phase.

The challenges were to minimise the transfer slab between the different uses of the building from basement carpark, to ground floor commercial, to residential floors above. There was also considerable thought given to the temporary support to the existing excavation during the initial demolition phase, in order to support the services in the street and the easement.

The original company, PDR Smart Structures, was founded in by Paul Davis and Raja Rajalingam in 2006. The business joined with Brown Consulting in July 2011. The combined resources of the businesses have approximately 350 staff with offices in Brisbane, Canberra, Geelong, Melbourne, Sunshine Coast, Sydney (Baulkham Hills and St Leonards) and Singapore. Part of the Calibre Group of companies, Brown Consulting provides civil, structural and environmental engineering services across Australia. The New South Wales and Victorian offices also undertake town planning and surveying assignments.

The Smart Structures team within Brown Consulting have also helped deliver major construction engineering projects such as 5 Murray Rose Avenue, Parkview Place at Olympic Park; the Audi Showroom and Office, Sydney; Cochlear’s Head Office at Macquarie Park; Woolworths Data Centre at Erskine Park; Alchemy Residential and the Kirribilli Club building at Milsons Point.

Brown Consulting’s approach to delivery is proactive and produces practical and economical solutions to meet specific client and project requirements. The company’s culture is ‘can-do’ and team-focused. The success of the business is built on the ability to offer ‘smart’ structural solutions for projects during the planning phase, and ensuring the success of the structural design elements as it moves from design concept to practical completion.

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