

EXPERIENCE MASTERY

DEVELOPER : Beulah
AWARDED HEAD CONTRACTOR : Multiplex
ARCHITECT : Fender Katsalidis Architects
STRUCTURAL ENGINEER : Robert Bird Group
CONSTRUCTION VALUE : \$100 million

Paragon is a lifestyle masterpiece comprising of 227 exquisite one, two, and three-bedroom residences over 48-levels with only six apartments per floor and includes a crafted artisan façade, exclusive entertainer's club, shared library, private theatre, wellness zone, gym, pool, sauna, and Australia's first elevated indoor forest.

A prominent corner of Melbourne's CBD has been cleverly transformed with the completion of Paragon, an outstanding boutique residential development by developer Beulah. The mixed-use, 48-level residential tower at 318 Queen Street accommodates 227-apartments and features the restored façade of the iconic Melbourne Celtic Club.

Paragon is home to Australia's first elevated indoor forest, pioneering the concept of promoting greenery and nature in high rise developments to provide a place for residents in the busy CBD to escape and unwind. The project also consists of premium residential amenities on par with a luxury hotel experience, including a concierge, indoor pool, state-of-the-art gym, spa and sauna, private dining lounge, library and theatre/yoga/family room.

Beulah is pioneering a refreshingly progressive approach to Melbourne's property and lifestyle landscape and is committed to bringing about positive change for cities, communities and individuals.

Luke Thornton, Beulah Senior Development Manager, described Paragon as a people-centric project that will enhance the human experience of residents. "Paragon firstly pays homage to Australia's oldest surviving Irish Club, the former Celtic Club, which was located on the site for 57 years. Paragon's façade has a striking geometric, Celtic inspired diamond pattern across curtains of glass, while the heritage façade on street level has been meticulously restored."

"The second outstanding feature is the urban forest 3-levels high, designed by the award-winning landscaper, Paul Bangay. The tall, dense trees that are incorporated in the design help to enhance urban forestation, attract native birds, sequester CO₂ and produce oxygen, filter and store rain water, enhance energy efficiency, promote biophilia, educate families and

allow for a quiet escape with seating zones and a masonry wall covered in pockets of greenery."

Beulah purchased the Celtic Club in 2016 through a vote from club members, then commissioned Fender Katsalidis to amend the existing permit and design. The number of apartments per floor was reduced providing greater light penetration through wider fronted dwellings, maximising corner apartments and improving amenity for residents.

The restoration of the Celtic Club façade involved a detailed heritage assessment report which identified the historic relevance of each area and directed the procedure for its restoration. The façade was secured to structural support which incorporated a public protection gantry located on the footpath. It was found that the façade was actually in extremely good condition and only minimal work was required to restore it. The window frames were also restored using traditional workmanship and updated with modern, higher performance glass.

Paragon's placement within the central city grid provided unique construction obstacles the project team needed to troubleshoot. The site's location placed it close to the main underground train loop and analysis identified that a traditional retaining wall design would

cause a deflection of the train tunnel, which would compromise its structural integrity. To overcome this, the builder used huge hydraulic struts to internally brace the retaining walls and allow excavation of the basement until floor slabs could be poured to take up the bracing.

Above ground, a 100+ tonne steel catch-fan was designed to be cantilevered from within Paragon during construction, as a preventative measure to protect people using a neighbouring rooftop garden.

Beulah managed all stages of the development process inhouse, with an average of 15 to 20 team members involved in the project at any one time. This allows a holistic approach to all aspects of project delivery, from design and customer relations through to sales, ensuring consistent and high-quality outcomes are achieved.

The company is about to commence the development of Southbank by Beulah, The Wilds at Northcote, with construction of Provenance at Camberwell also underway.

For more information contact Beulah, 379 Collins Street, Melbourne VIC 3000, phone 03 9629 3988 email melbourne@beulahinternational.com, website www.beulahinternational.com



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*In comparison to the previous YLM models.
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Mitsubishi Electric has made a significant contribution to the year round comfort of residents and visitors to Paragon, an outstanding boutique residential development located at 318 Queen Street Melbourne. Developed by Beulah International, the mixed use, 48-level residential tower accommodates 227 apartments.

Mitsubishi Electric was involved in the Paragon project from the design stage through to the final commissioning along with Ellis Air Conditioning, one of Mitsubishi Electric's Australia Diamond Dealers. The design team selected Mitsubishi Electric's 2-pipe heat recovery Variable Refrigerant Flow (VRF) system based on its performance and high energy efficiency level.

Wall mounted indoor units were chosen for the low rise apartments, while the high rise apartments were equipped with ceiling concealed bulkhead ducted units. With over 19 indoor unit models over varying capacities, Mitsubishi Electric's VRF system was the proven solution, providing versatility and flexibility in design and installation. The unique 2-pipe heat recovery VRF system is a patented technology which provides simultaneous heating and cooling to all indoor units while maintaining the highest efficiency level using inverter technology, resulting in reduced operating costs for owners and the body corporate.

Refrigerant standard AS5149 restricts the use of refrigerants in occupied spaces and Ellis Air Conditioning designed the system with the minimum amount of refrigerant to comply with the standard.

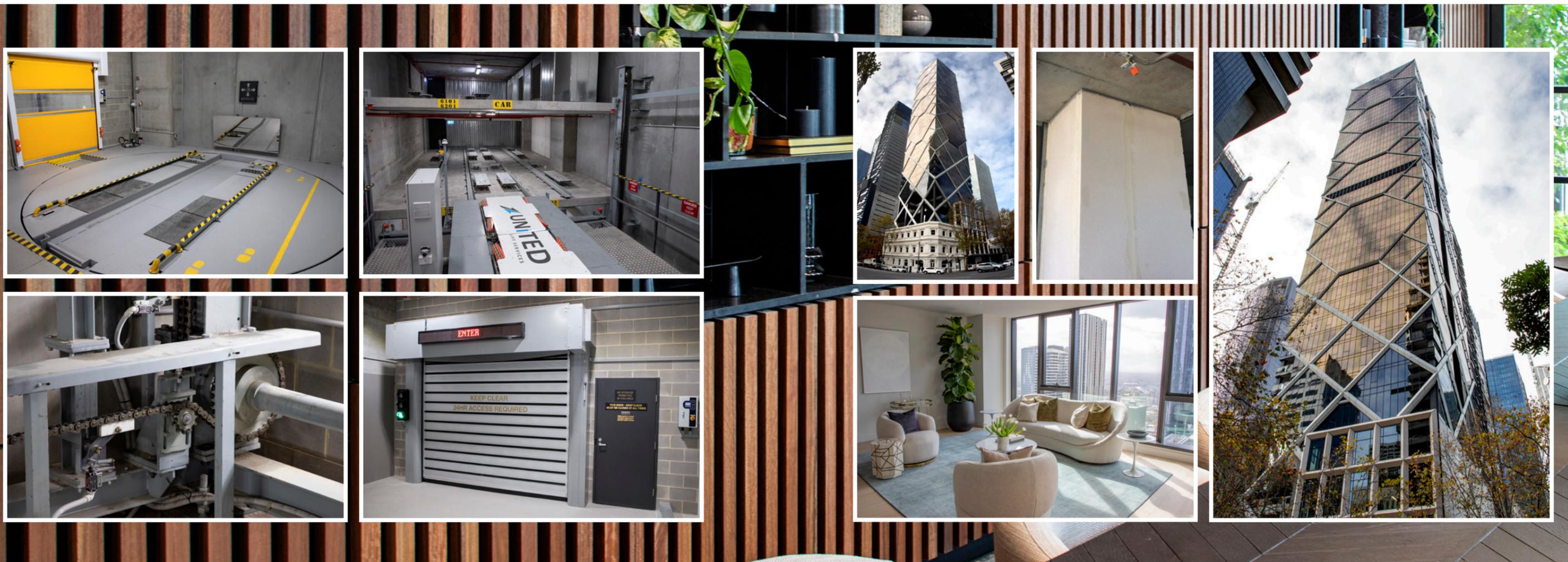
For other projects that have challenges to comply with AS5149 due to small room volumes, Mitsubishi Electric provides an alternative solution with Hybrid VRF that uses water-based indoor units to eliminate refrigerant in occupied spaces, removing the need for refrigerant leak detection systems.

Paragon represents another successful project for Mitsubishi Electric partnering with the professional team at Ellis Air Conditioning. Mitsubishi Electric's proven track record and commitment to continuous innovation in the design of HVAC solutions over their 100 year history makes it the supplier of choice for any major project.

For more information contact Mitsubishi Electric Australia, 348 Victoria Road, Rydalmere NSW 2116, phone 1300 070 032, website www.mitsubishielectric.com.au

Below United Lift Services designed and installed the car stacking robot at the Paragon project.

Below CSR Hebel provided their fire rated, Hebel PowerPanel to the vertical risers for the project.



United Lift Services is a highly experienced operator in the provision of comprehensive vertical transport solutions, with expertise in the design, installation and servicing of car stacking robots, circular glass lifts, goods lifts and high rise lifts.

United Lifts was selected to design and install a car stacking robot capable of storing 20 cars at the luxury Paragon apartment development built by Multiplex in Queen Street Melbourne.

Director of United Lifts, John Hermus, explained that the car stacking robot was capable of taking cars from a turntable into the car stacking lift shaft area from which point the lift moves to the nominated floor. The platform then travels left or right and the robot takes the car from the lift shaft area into the nominated parking bay. Cars are stored over five different levels.

There were a number of complexities in the project. "The small footprint of the building required the car stacking robot to include a turntable to spin cars 90 degrees before they can enter the car stacking lift shaft. We also had to develop a basement drive system to allow for low headroom specifications. This enabled the floor space above the car stacker to be fully utilised which added value to the building."

Another complexity caused by the small building footprint was the absence of storage room for components during the build. United Lift Services and Multiplex had to work closely to ensure materials were delivered to site in a timely manner without interruption to other trades. "This was by no means easy with large steel structures and expensive robots being delivered," John said. "However our team of 15 team worked exceptionally well with Multiplex and got the job done."

United Lifts not only designs and constructs car stacking robots, they also provide outstanding maintenance and a 24/7 callout service.

The company has completed significant projects around greater Melbourne including major upgrades at Melbourne Airport.

For more information contact United Lift Services, 3/260 Hyde Street, Yarraville VIC 3013, phone 03 9687 9099, email reception@unitedlifts.com.au, website www.unitedlifts.com.au

As Australia's only manufacturer of autoclaved aerated concrete (AAC), CSR Hebel was ideally placed to meet the specification requirements for the vertical risers in Paragon. Hebel systems are compliant, easy to approve and well known for their thermal, acoustic and fire performance benefits making them the safe choice for high rise developments.

"Hebel PowerPanel is perfect for fire wall applications in high rise buildings as the systems provide solid and secure separating walls between apartments and common areas with fire ratings of up to two hours, creating simple and effective fire compliance," said Kylie Teuma, Specification Manager. "The panels can be installed both vertically and horizontally making it ideal for continuous risers or slab to slab construction as was the case with the risers at Paragon. Hebel PowerPanel was supplied to the required length making installation quick and simple and providing efficiencies onsite."

Hebel PowerPanel also has proven performance in pressurised shaft applications allowing removal of the internal duct work in the shafts and risers which is a considerable cost saving to the builder. With a standard Hebel panel width of 600mm there are typically less joins using hebel in ductless shaft applications than you would have with

other narrower panel systems, which can reduce the risk of air leaks. PowerPanel has also been specified and supplied as ductless risers for Queens Place in Melbourne.

One of the great advantages of Hebel systems is that they simplify the building process when complicated services installation is required. Hebel systems use minimal componentry, with simple penetration, fixing and junction details, the Hebel panel does most of the grunt work to achieve the required FRL performance making installation and compliance easy. "This is another reason PowerPanel is the standard for intertenancy walls in apartments in NSW, if you stay in a hotel or buy an apartment in Sydney it is highly likely that you will have a solid separating wall between you and your neighbors," Kylie said.

PowerPanel has been supplied for the intertenancy walls systems in Mirvac's Yarra Edge Development, Mirvac's Eastbourne Development, Lendlease's Collins Wharf 1 Development and the Melbourne Quarter R1 building for Lendlease.

For more information contact CSR Hebel, 7 Dalmore Drive, Scoresby VIC 3179, phone 1300 712 896, email kteuma@csr.com.au, website www.hebel.com.au