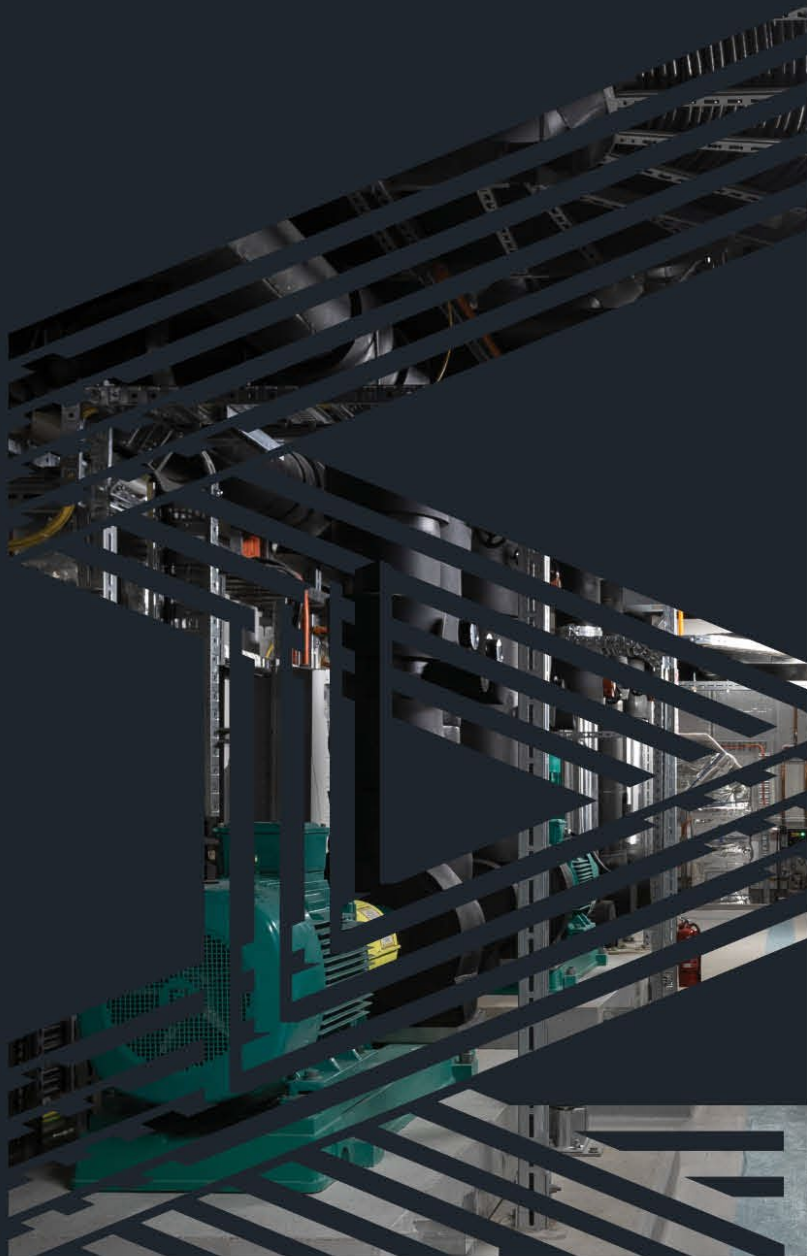




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# RESIDENTIAL CAPABILITY

**VAE Group Capability**  
Hotel & Residential Highrise

June 2025

## RESIDENTIAL HIGHRISE EXPERTISE

VAE Group have undertaken a variety of residential high-rise projects throughout Queensland and New South Wales. We understand some of the unique challenges associated with these projects including:

- The requirement for close coordination with other trades to ensure productivity during construction, particularly with the finishing trades
- The essential requirement for a high quality, highly repeatable solution that is robust and easily maintained and operated.
- We understand that the build-to-own residential projects involve multiple stakeholders particularly following completion during the defect liability period. This involves proactive communication with the building management team and end users

With a team of engineers who have extensive experience with multiple high-rise residential projects including some very high end projects, VAE provides the link between detailed design, installation, commissioning, fine tuning, and servicing of HVAC systems and this in turn provides consistent, cost effective and reliable mechanical solutions.



VAE are leaders in safety across our industry. We take every measure to ensure our employees and subcontractors are never exposed to unnecessary risk. This is managed via our three-cornered approach to safety – **Safe at Work** | **Safe at Home** | **Mental Health**.

VAE employees are well trained, well equipped, and competent. We ensure our staff can identify and treat risk before it happens. It's critical and a fundamental requirement that our employees get to their workplace, and back home safely.

VAE emphasises vehicle maintenance, proper licenses and ensures that our staff are fit and capable no matter where they are. We encourage that safety skills learned on the job are also life skills used both at work and at home.

We are committed to this safety philosophy and have implemented an accredited OHS Management System that complies with ISO 45001. This system is audited by SAI Global and is integrated with our Quality Management System (ISO 9001 compliant) to ensure policy consistency.



## Engineering, Design & Delivery Capabilities

VAE utilise in-house resources to perform the Engineering, Design, Construction and Defects Liability Period management of the mechanical services installation for projects. In addition, all commissioning services are carried out by VAE staff.

VAE are able to provide all facets of mechanical services installation including pipework and ductwork installation, mechanical electrical and Building Management Systems (BMS).





## Relevant Projects

### The Landmark Sydney, St Leonards

Client: Hutchinson Builders

Contract Value \$10.7m

Completion: 2022

Working with Hutchinson Builders, VAE Group completed the mechanical services on The Landmark in St Leonards.

At 43-storeys, The Landmark is an iconic residential high-rise defining Sydney's North Shore Skyline and is currently the tallest tower in St Leonards.

The Landmark offers several wow factors that VAE are thrilled to be a part of constructing, including an indoor virtual golf driving range, gym, swimming pool, several children's play areas, a library and much more.

The residents of The Landmark also benefit from the state-of-the-art technology inclusions such as car share services, vehicle charging bays, sustainability features including rooftop solar panels, harvested rainwater for irrigation, and smart home automation as part of the project.



The project includes 495 residential dwellings, 528 car parks, and upgrade works to Friedlander Place – a 1600m<sup>2</sup> public space below The Landmark tower.



## Destination Gold Coast, Tower 1

Client: Hutchinson Builders

Contract Value: \$14.1m

Completion: 2022

The \$400 million hotel and residential tower, forms part of The Star Gold Coast. The Star Gold Coast entertainment and leisure destination, the new development will be the first Dorsett Hotel in Australia.

Stage 1, Tower 1 is the first of five luxury towers planned for the island. Tower 1 is a 53-storey building comprising a new podium and connections to the existing casino facility. The tower includes a 4.5 star luxury hotel facility from level 5 to 26, with 316 rooms and 423 high-end residential apartments from level 21 to 53.

VAE were awarded the Mechanical Services by Hutchinson Builders, these services include:

- New booster pumps for Tower 1 to existing Star Mechanical Energy Plant
- Extension and connection to the existing Chilled Water and Condenser water pipework system to service the Hotel Mechanical Services for Tower 1
- All Air Handling Units (AHUs), Fan Coil Units (FCUs), fans, attenuators, ductwork, sub-ducts, electrical heaters, filters, grilles and diffusers insulation and fittings for both the Residential and Hotel apartments, lobbies, and common areas.
- Split system Air Conditioning (AC) units on level one offices, data room and residents' lobby.
- One AHU and associated services for the lift motor room on level 54
- 100% outside air pre-conditioning units complete with ductwork, filters, insulated chilled water pipework to supply fresh air to each level of the hotel corridor ceiling voids. These two pre-conditioning units will be installed in the level 19 plantroom, feeding all levels down to, and including level 7.
- Ventilation systems for the carparks, stair pressurisation, smoke exhaust, amenities exhaust, kitchen exhaust and substation ventilation and associated ductwork, sub-duct and VSDs
- Building Management System (BMS)
- The works were undertaken in an operational environment, with The Star Gold Coast remaining fully operational during construction.





## Brisbane 1 South Brisbane

Client: Hutchinson Builders

Contract Value \$10.5m

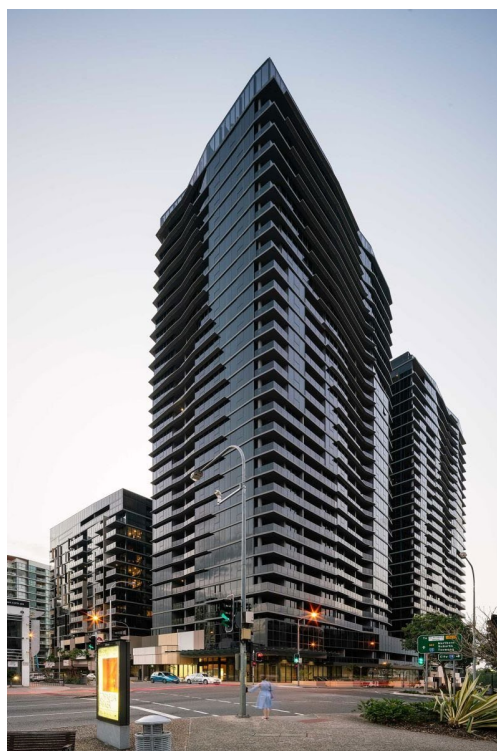
Completion: July 2020

Brisbane ONE is a three tower, \$218M high-rise apartment complex located in South Brisbane, consisting of 744 apartments constructed over 126 weeks by Hutchinson Builders. The complex consists of Two (2) x 30 storey residential towers and One (1) x 10 story residential tower.

VAE provided Design & Construction (D&C) of the mechanical services based on a central chilled water plant located on Tower 3 serving all three towers in the complex. Airconditioning is provided to single and double room apartments by a single fancoil unit (FCU) and by two (2) FCU's for 3-bedroom apartments. All apartments include chilled water energy metering connected to a standalone EMS.

The central chilled water plant consists of air-cooled chillers (3 off) with associated chilled water infrastructure and a chiller energy optimisation via the Building Management System (BMS). The chilled water energy meters are connected to a dedicated energy management system for tenant billing.

The carpark levels were CFD modelled by VAE and are provided with a combination of exhaust and make up air systems to meet the CFD validate performance criteria of AS1668 -2 (2012). All carpark ventilated areas include CO detection to control the respective exhaust and fresh air fans via VSD's.



Photos courtesy of Hutchinson Builders



## Opera Apartments

Client: Hutchinson Builders

Contract Value \$2.9m

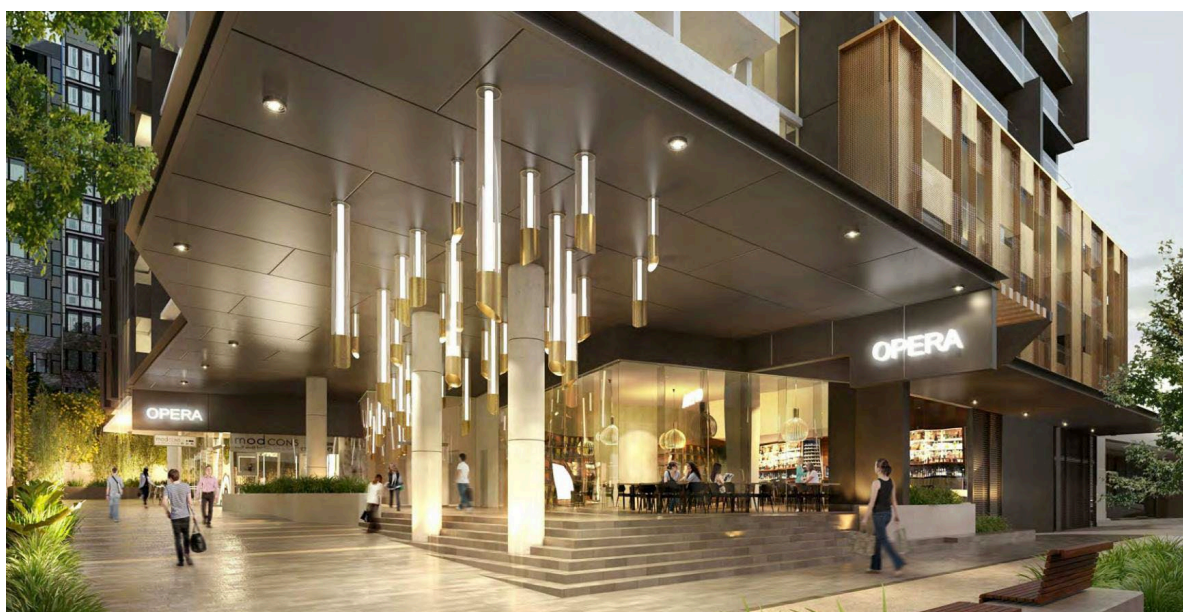
Completion: June 2018

Opera Apartments, located in South Brisbane, is a 16-level high-rise apartment building with 180 apartments constructed over 100 weeks by Hutchinson Builders.

VAE provided Design & Construction (D&C) of the mechanical services based on a central chilled water design serving 190 fan coil units across the apartments, with individual apartment chilled water energy metering.

The central chilled water plant consisted of air-cooled chillers (2 off) located on level 17 complete with associated chilled water infrastructure and a chiller energy optimisation via the Building Management System (BMS). The chilled water energy meters are connected to a dedicated WIN energy management system for tenant billing.

The 3 levels of basement car park and loading dock are provided with a combination of exhaust and make up air systems to meet the performance criteria of AS1668 -2 (2012), with each car park level including CO detection to control the respective exhaust and fresh air fans via VSD's.



Photo's courtesy of Hutchinson Builders





## Spire (550 Queen St Apartments)

Client: Hutchinson Builders

Contract Value \$5.06m

Completion: February 2018

Spire Apartments is located in the Brisbane CBD at 550 Queen Street. This \$91M, 40 storey high-rise apartment building includes 340 apartments constructed over 125 weeks by Hutchinson Builders.

Bordered by Queen and Adelaide Streets, Spire was the first major residential building at the entrance to the CBD from Fortitude Valley and Spring Hill with construction completion in 2017.

VAE provided Design & Construction (D&C) of the mechanical services based on a central chilled water design serving 344 fan coil units across the apartments and retail tenancies with individual apartment chilled water energy metering.



Photo's courtesy of Hutchinson Builders



The central chilled water plant consisted of air-cooled chillers (2 off) located on level 35 complete with associated chilled water infrastructure and a chiller energy optimisation via the Building Management System (BMS). The chilled water energy meters are connected to a dedicated WIN energy management system for tenant billing.

The three levels of basement car park are provided with a combination of exhaust and make up air systems to meet the performance criteria of AS1668 -2 (2012), with each car park level including CO detection to control the respective exhaust and fresh air fans via VSD's.



## Walan Apartments

Client: Hutchinson Builders

Contract Value \$729K

Completion: April 2018

From the finest of bespoke details to the dramatic sculptural form, Walan is a high-end residential apartment project located in Kangaroo Point, Brisbane.

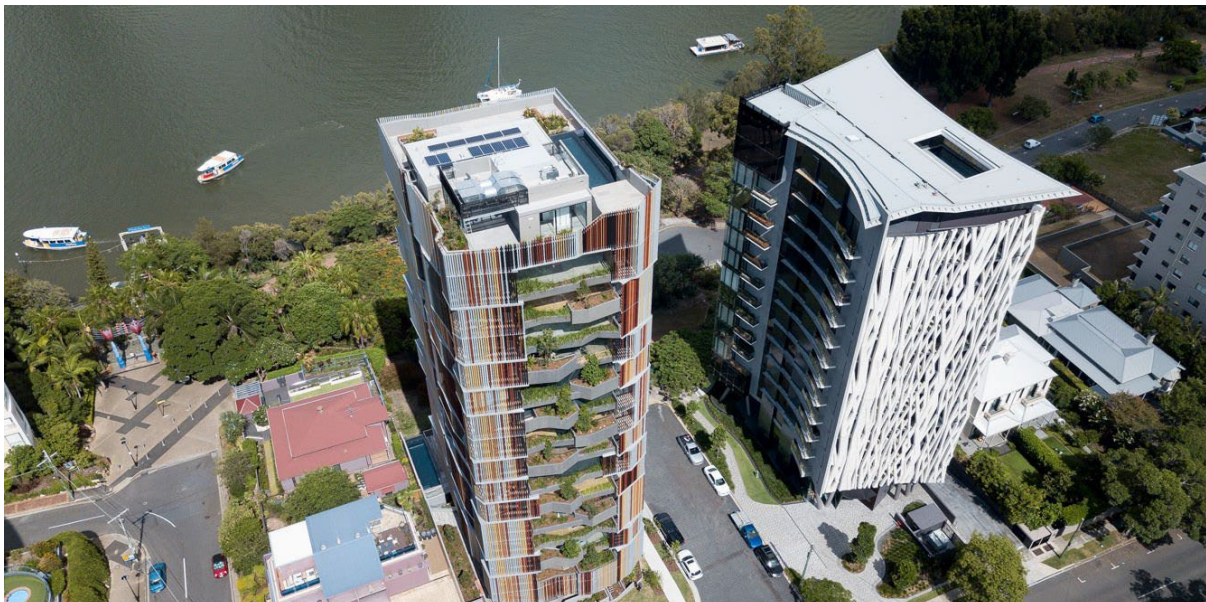
The building includes four bedroom, full-floor residences with each apartment capturing panoramic views of the Brisbane River and city skyline.

Hutchinson Builders constructed the \$30M, 14 floor residential apartment building with

- 14 x 4-bedroom, 3-bathroom (whole of floor) luxury apartments each served with standalone air cooled VRF units
- Level 14 penthouse and rooftop terrace served by air cooled VRF units
- Three levels basement parking for 35 vehicles
- Swimming pool and Gymnasium.

Walan won the QMBA Award for Residential Building (high-rise over 3 storeys) over \$20M in 2019

VAE were contracted by Hutchinson to provide the mechanical services to the building.



Photo's courtesy of Hutchinson Builders



## Illumina Apartments

Client: Hutchinson Builders

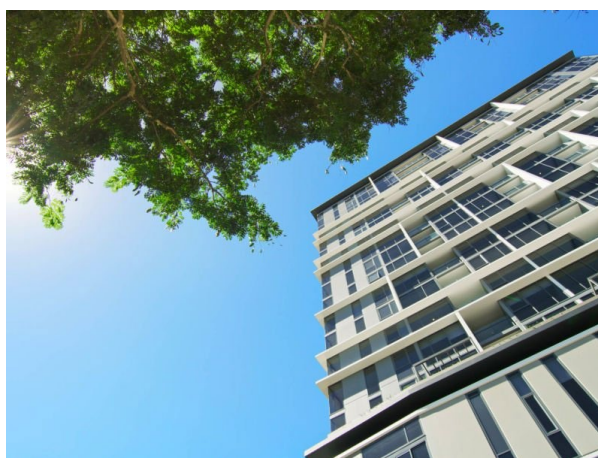
Contract Value \$3.6M

Completion: March 2018

Located in the inner-city Brisbane suburb of Toowong, Illumina includes 221 one, two and three bedroom apartments. The apartment floors are all located above level 5 to capture striking views of the Brisbane skyline, the river and the leafy surroundings of Toowong and Mount Coot-tha.

Hutchinson Builders constructed the \$67M, 21 Storey residential apartment building with construction completed in 2018.

VAE provided Design & Construction (D&C) of the mechanical services based on a central chilled water design serving individual apartment fan coil units. The central chilled water plant consisted of air-cooled chillers (2 off) located on level 21 complete with associated chilled water infrastructure and a chiller energy optimisation via the Building Management System (BMS). The chilled water energy meters are connected to a dedicated EMS energy management system for tenant billing.



Photo's courtesy of Hutchinson Builders





## 363 Adelaide Street, Brisbane – Student One

Client: Hutchinson Builders

Contract Value: \$4.7m

Completion: 2017

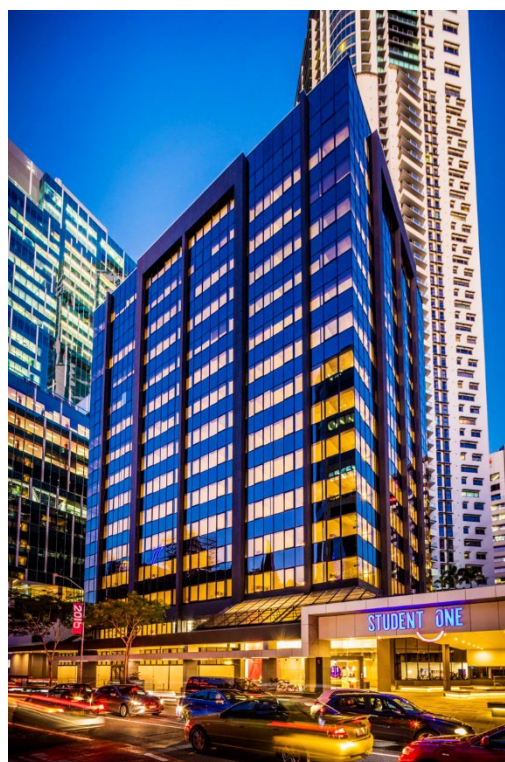
VAE Group were engaged by Hutchinson Builders to undertake the mechanical services on the Student One project at 363 Adelaide Street, Brisbane.

The 16-storey office building was converted and refurbished into a unique student accommodation experience with a range of premium living options for up to 687 occupants.

Communal areas include breakout spaces, media rooms, gym, outdoor barbeque, and kitchen facilities. There are also 160 car parks for rent.

Joint kitchen facilities provided a challenge for the design of smoke exhaust systems, as did integration with the evacuation system. The VRF based air conditioning system was designed to encourage students to save power and feel part of the community.

Each of the Student One residences is architecturally designed with special consideration made to ensure spaces to relax, study, engage, shop, connect and play are integrated throughout for all residents to take advantage of.



### Key Achievements:

- Life safety systems redesigned to accommodate residential occupation
- VRF based air conditioning to all student accommodation units, with a chilled water based preconditioner serving common areas
- Change of use, from office building to student accommodation

