



Grosvenor Place Sydney

Thermal Plant Upgrade Stage 1A



CHILLER



BMS



AIR HANDLING UNITS
AND FAN COIL UNITS



DUCT
WORK



MSSB

Client: Grosvenor Place

Completion: 2025



ELECTRIFICATION/ENERGY EFFICIENCY



ZERO CLIENT DISRUPTION

Project Overview

Grosvenor Place in Sydney is one of Harry Seidler's most iconic architectural achievements, blending modernist design with functionality in the heart of the city. Completed in the late 1980s, the tower remains a standout in Sydney's skyline, renowned for its sweeping views, innovative use of space, and enduring design. With its distinctive curved glass façade and premium-grade office spaces, Grosvenor Place continues to be a prestigious address for businesses seeking both style and substance. Since its inception, this uniquely designed building has met its heating and cooling demands through an innovative HVAC system that generates ice for cooling using four Stahl chillers as well as heat recovery for heating in addition to a gas fired-boiler. As the Stahl chillers approached end of life and began driving up energy consumption, Grosvenor Place management sought a more reliable and energy-efficient solution to meet the building's specific heating demands. Having recently completed works on the buildings Toilet Exhaust System and Air Handling Units, VAE had already proven to be a trusted partner for design and construct mechanical works.

Key Challenges

- Delivering a major Heating Hot Water (HHW) system upgrade during peak winter in a fully operational building.
- Overcoming significant spatial and access constraints to ensure safe project execution.
- Seamlessly integrating with existing mechanical infrastructure and BMS systems.



Key Successes

- Maintained uninterrupted operation for the building and its tenants
- Enhanced the overall efficiency and performance of the system
- Collaborated closely with the client to deliver a solution that met their expectations while staying on budget and on schedule



Scope of Works

- Demolition of two existing cooling towers on roof to make room for 15 new Heat pumps in 3 banks.
- Installing a new 200mm riser from L45 to L28 to connect with existing HHW riser.
- Design and install new platform for heat pumps on the roof.
- Supply and install 15 (200kW each) heat pumps - with associated pipework and accessories to supply HHW to the field and charging the storage tanks located at basement level.
- Modify existing BMS system and allow extension to capture new HHW plant.
- Modify house electrical boards to install new circuit breakers to supply power to 3 off new MSSBs on roof.
- Cranage and Rigging. A coordinated night lift & traffic control across 3 nights to elevate the heat pumps 45 stories from street level.

Solution Outcome

- Utilising our in-house design and engineering capabilities, VAE identified modular heat pumps as the most effective solution to meet the building's heating and cooling requirements while accommodating spatial limitations and strict time constraints. The modular approach allowed for a flexible installation that could be staged efficiently, minimising disruption to building operations and optimising available plantroom space.
- The true advantage of the modular system lies in its ability to deliver exceptional load diversity. Each module can operate independently, meaning the system can efficiently scale down to handle very low-load conditions while still being capable of meeting full building demand when required. This adaptability not only ensures consistent comfort levels for tenants but also maximises system efficiency and reduces unnecessary energy consumption.
- Additionally, the modular heat pump design provides inherent redundancy. In the event that one module requires maintenance, the remaining units can continue to operate, safeguarding the building against downtime. Combined with the improved energy efficiency and lower lifecycle costs, this solution provided Grosvenor Place with a future-ready upgrade that supports both operational performance and sustainability targets.