

# Energy efficiency upgrade to achieve NABERS rating

## CASE STUDY

**CLIENT:** Eagle Property Group

**PROJECT:** Air Conditioning and Water Condenser Systems Upgrade to achieve a minimum 4.5 star NABERS rating for 55 Bolton Street

### KEY CHALLENGES:

- Working within a specified budget
- Heat-pump technology availability was limited
- Limited installation window
- Building occupied with tenants – therefore we had to ensure limited disruption to tenants during business hours

### OUTCOMES:

- ✓ New energy efficient air conditioning plant
- ✓ Building is performing at a 4.5 NABERS rating or better
- ✓ Staging of works delivered on promised target dates
- ✓ Building attractive to government tenants
- ✓ Calculated savings on power consumption – 15% per annum minimum

## The Client

Eagle Property Group is a privately owned Sydney based investment company that sources, acquires and manages (primarily) commercial property assets on behalf of wholesale investors.

Established in 2012 and originally intended as an investment vehicle for its founders and their close associates, the company now has an investor base that includes private individuals, family trusts, family offices, self-managed super funds and institutions.

The founders of Eagle Property Group remain as directors of the company and invest, either individually or collectively in each and every deal.

55 Bolton Street is a three-storey commercial dwelling. To enable Eagle Property Group to sell to and attract government tenants, the energy efficiency of the building had to be improved.



Grosvenor provided a turn-key solution for the air conditioning upgrade at 55 Bolton St Newcastle. They carried out the upgrade in two stages which assisted in managing funds for the project. The project was delivered on time and within budget. They were professional in the service and expertise in delivering this project, which has enhanced asset value and occupant comfort.

**Lawrence Kopping**  
Managing Director, Eagle Property Group



## [ What We Did

This project was carried out in two stages – the first stage comprised air conditioning systems being replaced and the second stage was the replacement of the condenser water system.



New cooling tower and WC package unit

### **Air Conditioning System upgrade (Stage 1)**

Design of the new system involved collaboration between Grosvenor's sustainability, HVAC design and construction teams. It included:

- Decommissioning and removal of the existing water-cooled package units and associated condenser water systems.
- The supply and installation of the new water-cooled package unit (reverse cycle type).
- Modification of existing condenser water system, comprising pipework and installation of new strainers, isolation, balancing and modulating valves.
- Modifications and additions of electrical works including new submains to units from existing mechanical switchboards in each plantroom.
- Modifications were made to the existing digital control system to suit all new equipment.
- Supply and installation of new variable speed drives to both condenser water pump and cooling tower motors.
- Air / water balancing and commissioning of new air conditioning and control systems.

### **Condenser Water System upgrade (Stage 2)**

- Supply and installation of the new equipment comprising of a cooling tower, air-cooled heat pump (to facilitate reverse cycle operation), buffer tank, pumps, VSDs and other ancillary equipment including a chemical dosing pot and pressurisation unit.
- Completion of changeover to the new condenser water system, disconnection and removal of two existing cooling towers, pumps and associated redundant pipework and fittings.
- Complete commissioning of all new equipment installed.

### **Acknowledgements**

Grosvenor would like to acknowledge the following main suppliers and subcontractors for their assistance on this project:

- Air Conditioning Units: Diamond Air Conditioning
- Cooling Tower: Evapco
- Pumps: Masterflow
- Air Cooled Heat Pump: Mitsubishi Electric Australia
- Electrical/Control Works: Control and Electric
- Pipework: Power Plumbing
- BMS Works: Carrier