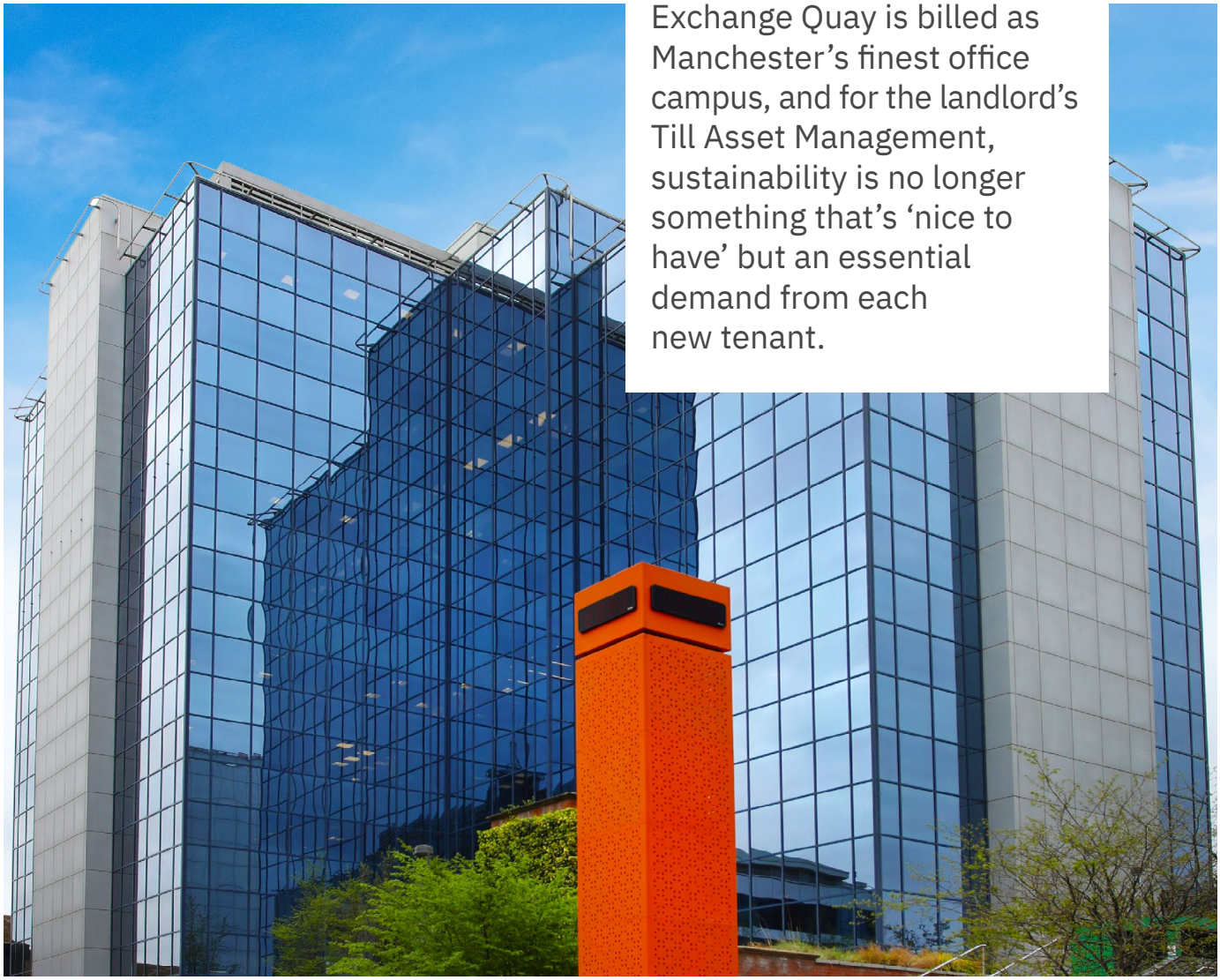
MITSUBISHI ELECTRIC

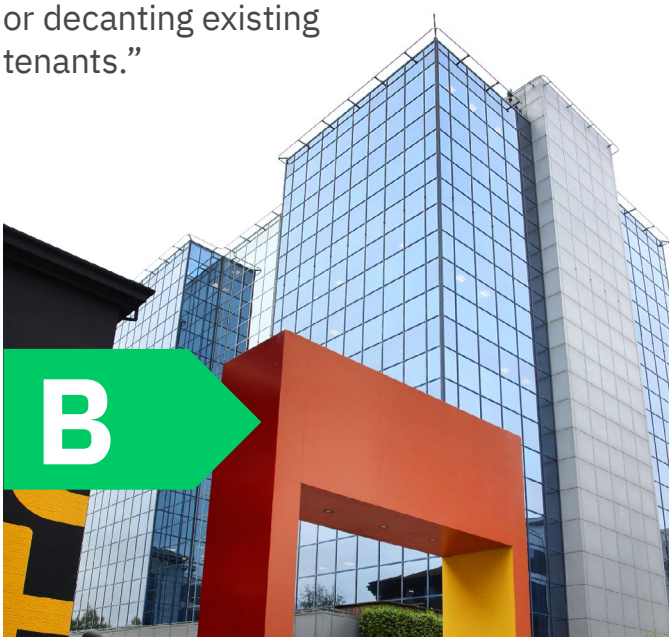
Case Study

Upgrading heating helps 10-storey office block achieve EPC B



Exchange Quay is billed as Manchester's finest office campus, and for the landlord's Till Asset Management, sustainability is no longer something that's 'nice to have' but an essential demand from each new tenant.

“One of the most important things for our tenants now is their credentials in terms of carbon emissions, energy and social governance,” explains Les Lang, Director of Till Asset Management (Tillam), the investment managers at the site. “So, our challenge is how we can upgrade our buildings to reduce their energy use and carbon footprint, without disturbing or decanting existing tenants.”



Originally developed in the 1980’s, Exchange Quay has been a busy hub of commerce for the city ever since. The campus is spread across ten buildings and sits in a prime location with excellent transport links to the rest of Manchester and the surrounding area, alongside extensive on-site facilities, including cafes, a nursery, a gym, restaurants and shops.

Les Lang challenged air conditioning contractor, Austin Broady to come up with a way of improving the Energy Performance Certificate (EPC) of Building Eight, one of the largest on the campus.

“We were asked to look at this building and see how we could achieve an EPC of B or better, but without the installation of a VRF air conditioning system,” commented Mark Broady, Managing Director of Austin Broady.

“We looked at replacing the 600-kilowatt gas fired boilers, which were installed about four years ago, with air source heat pumps, and with our understanding of the peculiarities of the weather in this part of Manchester, designed the system specifically for this building, specifically within this area.”

Exchange Quay Manchester

Following a couple of meetings with Oliver Broomfield from wholesaler, FSW and Mike Hobson from Mitsubishi Electric, Mark Broady and the project team were able to determine how many kilowatts were needed from the new heat pumps and how many units were needed.

"Looking at previous data, we saw that in the last ten years, the lowest daytime temperature was only down to around zero degrees and sometimes down to minus two at night times," explains Oliver Broomfield from wholesaler, FSW. "This meant we were able to specify fewer heat pumps than if we had just designed the system by reading off the CIBSE Guidelines."

The solution saw the installation of **12 CAHV air source heat pumps**, which has been Mitsubishi Electric's standard bearer for commercial heat pumps in the UK. Over 5,000 CAHV units have been sold since its launch with each unit capable of 40kW of heating capacity.

The CAHV provides water flow temperatures of 25°C up to 70°C without boost heaters and, as in the case of Exchange Quay, multiple units can be cascaded together to achieve up to 688kW, making the CAHV suitable for a wide range of applications.

The multi award-winning CAHV heat pumps are responsible for space heating on all ten floors of Building Eight at Exchange Quay through four-pipe fan coils which were retained from the existing installation.

“The projects been really successful, as we’ve just had a very cold winter, the coldest for ten years,” added Les Lang. “Now we’ve had that experience, and the system has worked perfectly, we are now in a position where the gas will be removed from the building.”

Tillam plans now are to maintain Exchange Quay as the best office campus in Manchester, with the next largest building, Building One being upgraded this year and the company has a business plan to do the third largest building on the site, Building Five, either at the end of this year, or the beginning of next year.

For commercial landlords across the country one of the challenges is how you can retrofit to improve heating systems without having to disturb existing tenants so the lessons learnt at Exchange Quay will now be shared with others.

“We are now looking at other buildings in other parts of the country and we are bringing landlords to this site to show them what we’ve done,” ends Mark Broady. “We’re showing them our design and how we reached the solution and they’re now sufficiently confident to roll this sort of project out in their buildings.”

Case Study

Exchange Quay Manchester

Installation Summary

R454C

- 12 x CAHV-P 40kW Commercial Air Source Heat Pumps

ecodan®

MELServe Service and Maintenance package
to optimise efficiency, extend equipment life and reduce carbon emissions.

MEL>SERVE
By Mitsubishi Electric

MITSUBISHI ELECTRIC
Changes for the Better

Telephone: **01707 282880**
email: **air.conditioning@meuk.mee.com**
les.mitsubishielectric.co.uk

@meuk_les
@green_gateway

Mitsubishi Electric Living Environmental Systems UK

Mitsubishi Electric Cooling and Heating UK

mitsubishielectricuk_les

Mitsubishi Electric Living Environmental Systems UK

BLOG thehub.mitsubishielectric.co.uk

UNITED KINGDOM Mitsubishi Electric Europe Living Environment Systems Division
Travellers Lane, Hatfield, Hertfordshire, AL10 8XB, England. Telephone: 01707 282880

IRELAND Mitsubishi Electric Europe
Plunkett House, Grange Castle Business Park, Nangor Road, Dublin 22, Ireland. Telephone: (00353) 1 4198800 Email: sales.info@meir.mee.com Web: les.mitsubishielectric.ie

Note: The fuse rating is for guidance only and please refer to the relevant databook for detailed specification. It is the responsibility of a qualified electrician/electrical engineer to select the correct cable size and fuse rating based on current regulation and site specific conditions. Mitsubishi Electric's air conditioning equipment and heat pump systems contain a fluorinated greenhouse gas, R410A (GWP:2088), R32 (GWP:675), R407C (GWP:1774), R134a (GWP:1430), R513A (GWP:631), R454B (GWP:466), R515B (GWP:292), R454C (GWP:148), R1234ze (GWP:7) or R1234yf (GWP:4). *These GWP values are based on Regulation (EU) No 517/2014 from IPCC 4th edition. Mitsubishi Electric's air conditioning equipment and heat pump systems contain a hydrocarbon, R290 (GWP:0.02). *These GWP values are based on IPCC 6th edition.

Effective as of June 2025

Green Gateway greengateway.mitsubishielectric.co.uk