

## Case Study

# Sports Village reduces carbon footprint with renewable heat pumps



Salford City Council has recently upgraded the heating system in a major sports centre to reduce carbon emissions. Salford Sports Village is a multi-sports centre offering AstroTurf pitches, grass pitches, fitness suites and studios - and is home to the Lower Kersal Library and a conference room, café and meeting rooms.

As part of Salford City Council's wider scheme to upgrade more than 30 public buildings to make them greener, the Sports Village's existing gas-fired heating plant has been replaced with advanced air source heat pump technology from four **Ecodan CAHV-P500 heat pumps**

The scheme was funded through the government's **Public Sector Decarbonisation Scheme (PSDS1)**, after Greater Manchester Combined Authority secured funds from public funding body Salix Finance, which sees councils and other public bodies bid on an annual basis for money that must be used to reduce carbon in the built environment.

Overall, the Council expects to save 584 tonnes of carbon produced in Salford annually. The Sports Village has received the most upgrades of any site in the programme and is expected to save 46 tonnes of carbon annually.

Rothwell Plumbing Services Group (RPS Group) was commissioned to remove the existing plant and design and install Mitsubishi Electric's renewable heat pump system.

Headquartered in Manchester, RPS Group provides a range of specialist heating, renewable & M&E services to public sector clients. They are a specialist installer of heating solutions and one of the few who can provide a full 360-approach across projects.



Councillor Mike McCusker, Salford City Council’s Lead Member for Planning, Transport and Sustainable Development, said: “We are on a mission to make all of Salford's public buildings more sustainable, as we aim to be carbon neutral as a city by 2038. Our latest project at Salford Sports Village is the next step on this journey, and removing gas heating in favour of heat pump technology was a key part of decarbonising the Council estate.”

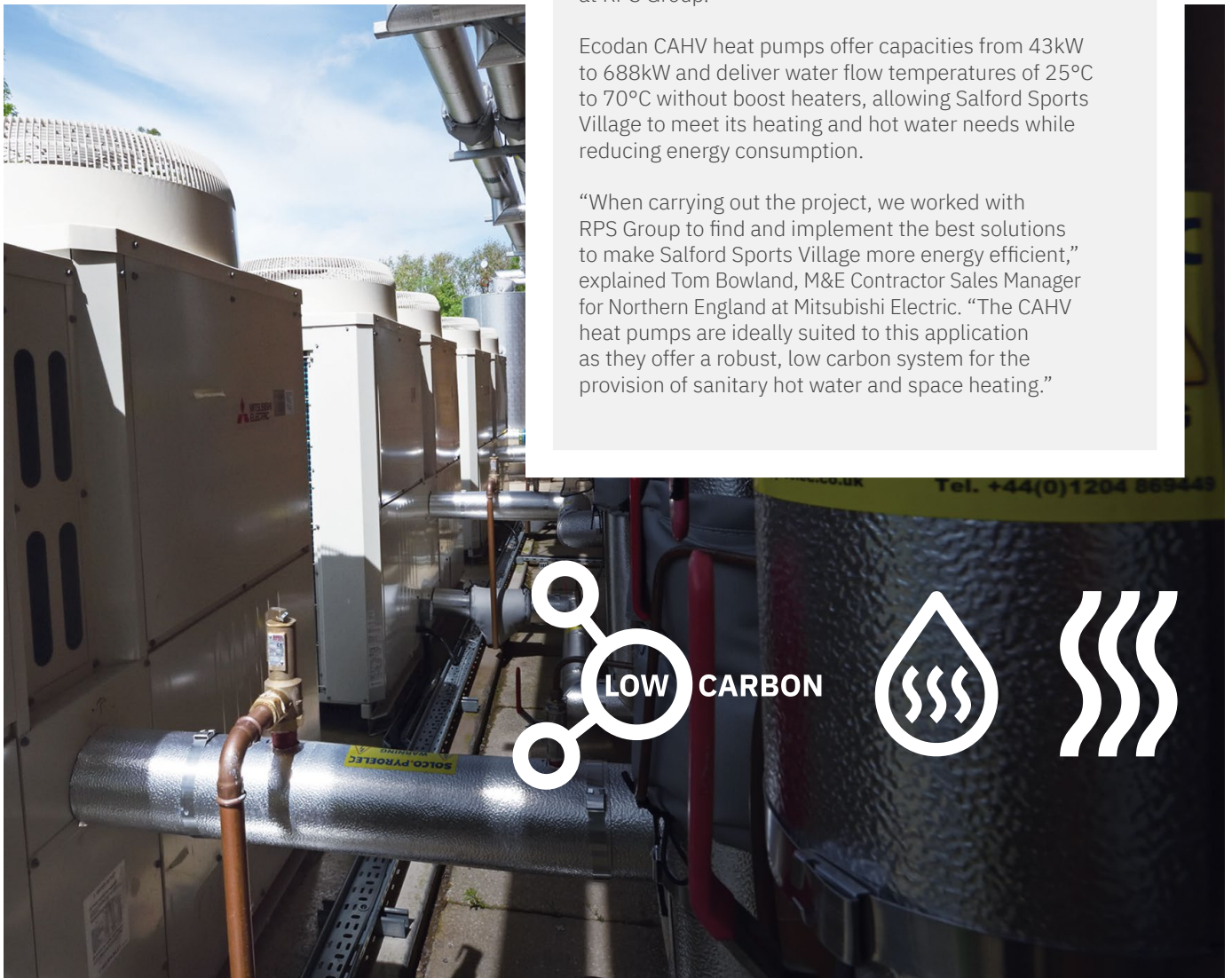
RPS Group installed four Ecodan CAHV-P500 heat pumps at the rear of the building. These extract heat from the outside air and upgrade it to deliver heating around the building.

The beauty of the Ecodan CAHV system is that it can operate singularly or as part of a multiple-unit system. This gives the system the ability to cascade power in half-kilowatt increments to exactly meet the load of the building. This way, it only consumes the energy needed to maintain the right temperature inside buildings and maximise individuals' comfort at any given time.

“This project with Salford Sports Village is the latest we have worked on with Salford City Council, and we are proud to support the city in combating the impacts of climate change. The Sports Village now has a completely new heating system which is helping Salford towards its net zero goal,” explained Sarah Rothwell, Bid Manager at RPS Group.

Ecodan CAHV heat pumps offer capacities from 43kW to 688kW and deliver water flow temperatures of 25°C to 70°C without boost heaters, allowing Salford Sports Village to meet its heating and hot water needs while reducing energy consumption.

“When carrying out the project, we worked with RPS Group to find and implement the best solutions to make Salford Sports Village more energy efficient,” explained Tom Bowland, M&E Contractor Sales Manager for Northern England at Mitsubishi Electric. “The CAHV heat pumps are ideally suited to this application as they offer a robust, low carbon system for the provision of sanitary hot water and space heating.”



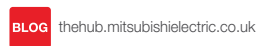
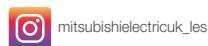
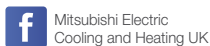
# Installation Summary

## Outdoor Units:

4 x Ecodan CAHV-P500 air source heat pumps



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**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), R290 (GWP:3), R32 (GWP:675), R407C (GWP:1774), R134a (GWP:1430), R513A (GWP:631), R454B (GWP:466), 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. In case of Regulation (EU) No.626/2011 from IPCC 3rd edition, these are as follows. R410A (GWP:1975), R32 (GWP:550), R407C (GWP:1650) or R134a (GWP:1300).

Effective as of February 2024

