CASE STUDY

The Project

As the principal contractor, our task was to replace four existing gas heating systems with five 100kW Panasonic U100CNNB Air Source Heat Pumps. The project marked the beginning of the colleges' site wide decarbonisation strategy following a successful PSDS bid and was developed based on their heat decarbonisation plan.

The scope of the project included the replacement of existing heating pipework and nearly 200 radiators, ensuring efficient heating for both the main building and student accommodation. We provided a turnkey solution including all plant room ancillaries (pumps, low loss headers, pressurisation units, buffer vessel) electrical requirements, insulation, flushing, water treatment, builders works, controls and commissioning.

Date: July to November 2024

Value: £450,000

Customer Testimonial...

"It has been noted from the many staff who have interacted with your team, how impressed we all are with their professionalism, work ethic and attention to detail. The whole team are so helpful and respectful.

We have always known this project was going to be a difficult undertaking, but Kevin and Mike are always available to answer queries and have clearly communicated the plan every step of the way. This level of service has meant that the process has been smooth and as stress-free as possible.

The college is so impressed with your company that I felt it necessary to send this feedback"

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CASE STUDY

Through use of our in-house design team, we carried out a thorough design verification process and identified a number of challenges and enhancements. We worked with the original designer and college to collaborate on developing the existing design to maximise achieving the objectives of the college.

This included increasing the minimum system volume with the addition of a buffer vessel, adjusting dosage of the system to enhance protection and verifying the specific requirements for the radiators.

We also assisted the college to prepare a design and variation proposal to include a new and sustainable solution for the hot water requirements that had not been included within the scope of the original PSDS bid.

The existing hot water system had been in place for 45 years, was inefficient and costly to maintain, making an upgrade essential for both improving performance and enhancing sustainability. In response, we sized and selected a Mitsubishi Q-Ton C02 Heat Pump which uses natural C02 as a refrigerant, offering a highly energy-efficient and environmentally friendly alternative to traditional systems.

This independent heat pump guarantees consistent hot water delivery while significantly reducing carbon emissions and operational costs. By replacing the outdated system with the Q-Ton, the facility not only modernised its hot water supply but also achieved long-term energy savings and a reduced environmental footprint.

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