



Plymouth Marjon University

Decarbonisation of fossil fuel heating system at Plymouth Marjon university as part of their wider Marjon Zero project.



Closed loop boreholes

2 separate plantrooms

1 Containerised plant room manufactured off-site

Heat pumps in parallel to match existing flow rates

The Project:

Marjon Zero is an exciting project to make Plymouth Marjon one of the greenest universities in the country with a commitment to zero carbon by 2030. Phase one of Marjon Zero included the installation of approximately 2000 solar panels, upgrade to LED lighting and installation of electrical vehicle charging stations.





Phase Two was the installation of ground-source heat pumps to replace the university's existing fossil fuel gas heating system. This transition significantly reduces the reliance on fossil fuels and offers a reduced carbon footprint. Funding was obtained as part of the Public Sector Decarbonisation Scheme from Department for Business, Energy & Industrial Strategy.

Plymouth Marjon University was previously heated by gas boilers which provided heating through radiators, fan coil units, under-floor heating circuits & heater batteries located within a ventilation plant. A key requirement was to minimise internal disruption, so the heat pumps were designed to match the existing flow temperatures and flow rates.

The project was divided into a north and south plantroom. The north plantroom contained a WSHP cascade system providing a total of 570kW. The primary and secondary heat pumps along with ancillary equipment were within the existing plantroom, however, due to space constraints the buffer vessels were installed externally within weatherproof housing.



The south plantroom was a prefabricated plantroom, which was manufactured off-site to minimise disruptions to the campus, allowing for quicker installation and commissioning upon delivery.

This project was another successful partnership between Kensa Contracting & Ebtech.

"We engaged with Ebtech to complete a turn-key package on the project. They delivered on time and on budget and performed exceptionally throughout the project. We look forward to working with them on the next project".

**Ian Goodchild, Non-Domestic Sales Director
Kensa Contracting Ltd**

