



Marshland School

Renewable heating
renovations at Marshland
Primary Academy

18No Boreholes

2No Plantrooms

6No GSHP Heat
Pumps

Full Repipe

13 Fan Coils, 70
Radiators & DHW
Installation

37.5kWp Solar
PVT Installation

The Project:

Marshland Academy is preparing for the future by decarbonising the school's heating and hot water system.

Part-funded by the Government's Condition Improvement Fund, the project focuses on enhancing energy efficiency and ensuring long-term energy security. The installation of ground source heat pumps (GSHPs), combined with solar photovoltaic-thermal (PVT) panels, aligns with the Department for Education's preferred method for decarbonising heat in schools.





In partnership with Kensa Contracting, Ebtech was engaged to design and deliver a low-carbon heating solution.

The scope of the project included the installation of six ground source heat pumps (GSHPs) to provide energy-efficient heating across the school. A new heat distribution system and a domestic hot water (DHW) system were also installed to enable the system to operate effectively at lower flow temperatures.

To further enhance the system's energy efficiency, Ebtech integrated solar photovoltaic-thermal (PVT) panels. Solar PVT panels are a hybrid renewable energy technology that combines photovoltaic (PV) and solar thermal systems into a single unit, maximizing energy generation.

The 37.5 kWp PVT system enhances the efficiency of the GSHP in several ways:

- Pre-heating the ground loop to improve system performance and efficiency.
- Storing excess heat in the ground, reducing the number of boreholes required.
- Generating electricity to decrease the school's reliance on grid power.

