

Eastergate C. E. School



- 🏠 A containerised biomass installation
- 🏠 80kW Herz FireMatic
- 🏠 Twin, 1000 litre buffer tanks
- 🏠 Wood pellet fuel, stored in a 12m³ hopper built into the container



Douch Biomass Ltd

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Eastergate C.E. Primary School



Container, housing the new biomass system



Container delivery to Eastergate

Project background

Situated near Chichester, West Sussex, Eastergate C. E. School neighbours an Area of Outstanding Natural Beauty and environmentally friendly practice is an important part of the School's ethos. As such, in partnership with West Sussex council, Eastergate wanted to explore the potential for a greener heating and hot water system to replace their previous oil fired system

Douch Biomass installation

Douch Biomass was requested to supply and install a biomass boiler heating system to meet the school's heat requirements. After an initial feasibility study, an 80kW HERZ boiler fuelled by wood pellets was recommended.

As there were no suitable buildings on site to house the new boiler, it was fitted into a purpose built 20ft shipping container. The container was timber clad and installed on the edge of the car park to allow access for pellet deliveries and minimise visual impact to surrounding areas. The container houses the biomass boiler, twin 1000litre buffer tanks and a 12m³ storage hopper to store the wood pellets. The annual fuel requirement of Eastergate School was calculated to be 14tonnes of pellet.

A heat main was installed to transport heat from the boiler to the heat exchangers within the school buildings. The heat from the biomass boiler is transported to the school via an underground heat main; the original school oil boiler is used as a backup.

Result

In switching to biomass, Eastergate School gained a far more efficient heating and hot water system and an educational resource for the pupils to understand the principals of renewable energy. In addition to this, the new biomass system provides a Co₂ emission reduction of 309 tonnes over 20 years. Through the Renewable Heat Incentive, Eastergate School also saves money on their heating bill and collects quarterly payments applicable for their tariff

The timber clad container is sensitive to the surrounding conservation area, and occupies only a relatively small area; equivalent to two parking spaces. The use of a containerised system reduced costs and saved space; ideal for a smaller installation.

The wood pellet is sourced locally, further lowering the School's carbon footprint as well as reducing transportation costs.

The project was completed in November of 2012.

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