

Brogborough Landfill

20 years after Powersystems had installed the original engines at Brogborough Power Station the generation capacity was to be increased by the installation of more efficient modern gas engines.

Powersystems were awarded the turnkey design and build contract for the new generation station for 30 reciprocating gas engines with an export capacity of 30MW.

Powersystems took the lead design role for the project co-ordinating the civil, mechanical and electrical installations to meet the design and performance brief of the client.

Major design considerations included:

- ▶ Integration of gas delivery system to new and existing engines
- ▶ Design of exhaust flues to meet stringent emission levels
- ▶ New EDF energy supply substation and interface with EDF

For the construction phase of the project Powersystems took the role of principle contractor managing the works over the 50 week construction programme.

During this period the following works were carried out by Powersystems.

- ▶ Levelling of the generation compound area.
- ▶ Construction of 33kV substation
- ▶ Construction of concrete plinths for 24 containerised generators and 24 generator transformers.
- ▶ New compound access road
- ▶ Supply and installation of 2 x 25MVA 33/11kV primary and 24 x 1500kVA generator transformers
- ▶ 34 panel 11kV switchboard
- ▶ Site wide 33kV, 11kV and LV cabling and terminations.
- ▶ SCADA control system for high voltage system.
- ▶ Supply and erection of 6No 20m exhaust stacks
- ▶ Mechanical installation of gas and oil pipe work
- ▶ Mechanical installation of exhaust interface
- ▶ Test and commissioning of all electrical and mechanical equipment.

The project was completed on time and within budget and is a flagship generation site for the client, representing one of the largest landfill generation compounds ever constructed in the UK.

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