

Cleveland Waste to Energy Plant Sir Robert McAlpine



*Detailed civil,
structural and building
services designs*

Cleveland Waste Management wished to develop a waste to energy plant which would convert waste from the region to power.

Following a rigorous tender process, the consortium of Sir Robert McAlpine and Volund, a Danish contractor specialising in incineration and power generation, was selected to construct the plant. Entec was a leading member of the design team supporting the consortium.

The plant burns 220,000 tonnes of municipal waste per annum and heat from the incinerator produces steam which drives a turbine capable of generating 30MW of electricity that can be fed into the National Grid.

This impressive plant incorporates a turbine hall, incinerator hall, waste handling pit and a cooling system which includes a river water extraction plant and an outfall located on the River Tees, as well as pumping mains.

Entec provided detailed civil, structural and building services designs for the entire plant, working very closely with the consortium to achieve a tight 25 month design and construction programme.

Our broad range of skills enabled us to tackle complex problems involved in the extraction of raw water from the river, its supply to and removal from the plant. This involved crossing neighbouring live chemical process plants through areas of contaminated ground.

Facts and Figures

Project

Cleveland Waste to Energy Plant

Client

Sir Robert McAlpine

Location

Billingham, Teesside, UK

Capital Project Value

£44m

Entec Services

- Civil engineering design of infrastructure, including highways, bridge, access roads and site drainage
- Scoping and management of geotechnical site investigation
- Geotechnical design
- Mechanical and electrical building services design
- Mechanical, electrical and hydraulic design of cooling water system incorporating river intake and outfall
- Structural engineering design of incinerator buildings and office accommodation

