

ENERGY RECOVERY FACILITY, 85,000 TONNES PER ANNUM

Peterborough Cambridgeshire, England



Following a tender exercise by Viridor, B&W Vølund working with UK construction partner Interserve were awarded an EPC/turnkey contract for the 85,000-tonne energy recovery facility in Peterborough. The facility is provided by Viridor under a 30-year contract signed with Peterborough City Council on 1st February 2013.

The plant was handed over to Viridor in December 2015, on time and within budget, and it is operating ahead of expectations.

The plant processes residual household, commercial and industrial waste from the local area. It generates 7.25 MW of green energy, contributing to Peterborough Council's Blue Sky project to provide sustainable energy in a smart city environment.



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The solution

The key reason why B&W Vølund have been selected is based on the solution-based approach, which entails de-risking the project for the plant owner.

The key features of the solution are:

- Provision of the facility under a full EPC/turnkey contract.
- Working with a UK construction partner to ensure that all regulations and associated requirements are fully complied with, e.g. CDM and health and safety regulations.
- Provision of robust in-house technology and a significant number of operational references.
- Attractive warranties and guaranties, especially in respect of plant performance.
- Full compliance with the planning and environmental permit conditions.
- High electrical efficiency resulting in an R1 rating of 0.77.

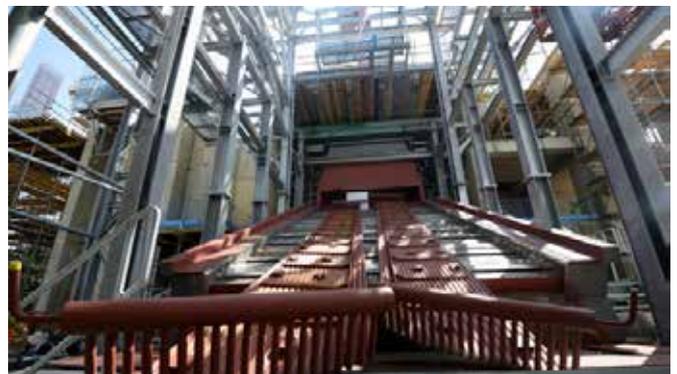
The technology

B&W Vølund's technology concept is based on in-house knowledge and many years of experience and provides high efficiency, availability and performance combined with a robust design to give an extended design life.

The solution is based on the patented DynaGrate® which underpins a number of projects being developed by B&W Vølund in the UK. It has a number of benefits for the plant owner such as:

- **Proven and bankable** – The DynaGrate® has been operating for a number of years in plants accepting a wide range of fuels. Important to both plant owners and financial institutions.
- **Excellent fuel flexibility** – No pre-treatment of the waste is required and it can process a wide range of waste streams mitigating the risk if:
 - the cost of sourcing fuel increases
 - the fuel supply changes during the life of the plant.

- **Air or water-cooled** – The DynaGrate® can be cooled by either water or air to cater for changing heating values.
- **Low operation and maintenance costs** – Operational experience has shown that O&M costs are lower than other grate designs
- **Fly ash disposal costs significantly reduced** – Compared to other grate technologies, the DynaGrate® produces significantly less fly ash reducing the associated disposal costs.



Plant design data		
Process parameters	Values*	Units
Waste capacity	11.1	t/h
Heat value	9.0	MJ/kg
Steam temperature	440	°C
Steam pressure	65	bar
Gross electric output	7.0	MW
District heating output		MJ/s

* All values refer to 11% O₂ dry gas

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