

WASTE WOOD-FIRED POWER PLANT, 40 MWe

Templeborough Rotherham, South Yorkshire



The developer Bright Partnerships secured the site and planning consent to develop the biomass facility. Following thorough market research Babcock & Wilcox Vølund working with Interserve were awarded an EPC/turnkey contract for the Templeborough facility in Rotherham. To further de-risk the project for the plant owner, Copenhagen Infrastructure Partners, who provided equity and debt finance for the scheme and purchased the project at financial close, B&W Vølund entered a 15-year contract to provide full operations and maintenance services.

The new biomass plant will be capable of processing waste wood, including contaminated wood and fuel containing metals, with no pre-treatment required.

The Templeborough plant will generate 40 MW of green electricity, which is enough to supply 78,000 homes, and provide local employment opportunities throughout the construction and operational phases.



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The solution

The key reason why B&W Vølund have been selected is based on B&W Vølund's solution-based approach which entails de-risking the project for the plant owner. The key features of the solution are:

- EPC solution
- UK construction partner
- Technology
- Funding support
- Construction programme
- Operations and maintenance (O&M)

All of the above features significantly de-risk the project for the project developers and the plant owner.

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.

B&W Vølund's solution is based on the patented DynaGrate® technology, providing excellent fuel flexibility. The key benefits for the plant owner are:

- Many good references
- Few fuel constraints
- Improved and simplified fuel handling
- Fly ash disposal costs significantly reduced
- Full recovery of ferrous metal from bottom ash

Operation and maintenance

The advantages of having the original equipment manufacturer operating and maintaining the plant are numerous. Some of them are:

- Plant performance will be optimised from day one.
- Operation and maintenance costs are minimised.
- Maintenance of the plant can be optimised in terms of scheduling.

In addition, B&W Vølund have significant experience of undertaking service and upgrade projects and the warranties and guarantees have much greater value.

UK-focused O&M structure

B&W Vølund have signed three 15-year O&M contracts in the UK, including one for the Templeborough plant in Rotherham. All of these plants and future UK plants will benefit from B&W Vølund having a UK-focused structure in place with the added benefits of prompt servicing and provision of spares.



Plant design data		
Process parameters	Values*	Units
Waste capacity	32.9	t/h
Heat value	13.7	MJ/kg
Steam output	158	t/h
Steam temperature	500	°C
Steam pressure	80	bar
Boiler outlet flue gas temp.	135	°C
Feed water temperature	150	°C

* All values refer to 11% O₂ dry gas

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