

## Our Location

Ridham Dock is a port location in Kent in south-eastern England. Located 60 kilometres south-east of London, it is close to what are the UK's largest stocks of waste timber while offering space for a power plant of this size.

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We inspire  
with energy.



# Biomass – sustainable energy

Our biomass power plant at Ridham Dock



MVV

# Renewable energies and energy efficiency



Ridham Dock Biomass Power Plant

# Energy from regional waste timber and non-recyclable timber

Since 2015, our biomass power plant at Ridham Dock, located south-east of London in Kent, has incinerated waste timber and non-recyclable timber with medium-level contamination corresponding to British categories B and C. The fuel is sourced from the region and delivered ready for use or treated at our own plant.

**25 Megawatt electrical power**  
This plant incinerates around 180,000 tonnes of waste timber and non-recyclable timber a year. It makes use of grate firing with a forward feed grate, a technology which has proven its worth at our company. We use the energy thereby released to generate steam. This in turn drives a turbine which powers a generator with electrical capacity of 25 megawatts. That is enough to cover the electricity needs of around 50,000 households. Working with combined heat and power generation, we also offer an inexpensive and sustainable supply of heating energy to local industry.

cyclones. In the next stage, harmful acidic gases, heavy metals, dioxins and furans are bound by adding lime hydrates and activated coke in an entrained-flow reactor and then removed together with the remaining dust in a fabric filter. Non-recyclable residues from flue gas cleaning and the burnt-out grate ash from the firing chamber are disposed of in an environmentally appropriate manner.

## Facts and Figures

### Launch of operations

2015

### Timber types

Categories B-C

### Firing

Forward feed grate with plunger

### Storage capacity

Approx. 5,000 Mg

### Annual throughput

180,000 Mg/a

### Design calorific value

14,000 kJ/kg

### Electricity production

184,000 MWh/a

### Power plant staff

18 employees

### Timber treatment

11 employees

### Administration

1 employee

Our future energy supply will be renewable. With more than 50 years of experience in generating energy from waste timber, non-recyclable timber and from household and commercial waste, we are one of the technology leaders in these areas. Our plants in Germany and the UK incinerate more than 2 million tonnes of waste a year and turn this into valuable energy in the form of electricity and heating. In this, we consistently rely on combined heat and power generation to make the most efficient use of the energy contained in the fuel.

### End-to-end resource management

As well as planning, building and operating power plants, we also implement end-to-end resource management for our customers. We develop individual strategies for public sector disposal companies and our industrial and commercial partners and take due account of the various kinds of waste and recycling

options. We also plan and build waste treatment and power plant facilities using state-of-the-art technology.

### Biomass stands for environmental and climate protection

Generating energy from waste timber and non-recyclable timber is particularly beneficial in terms of climate protection and the energy system. After all, timber is a natural product and, when incinerated, only releases that volume of CO<sub>2</sub> which the tree previously absorbed during its growth stage. Electricity from biomass is therefore climate-neutral. Unlike wind and solar power, the power plants are also not dependent on weather conditions. This means they have a particularly important role to play in building a reliable energy supply from renewable sources.

**State-of-the-art flue gas cleaning**  
We work with cutting-edge technology to clean waste gases. This way, we ensure that we fall short of the strict legal threshold values. Nitric oxides (NO<sub>x</sub>) are broken down using the SNCR (selective non-catalytic reduction) process. The waste gas is de-dusted in two parallel

