

Rookery South Energy Recovery Facility will generate enough electricity for 65,000 homes

Covanta, one of the world's leading environmental management companies, is applying for an environmental permit to operate a state-of-the-art energy recovery facility (ERF) at Rookery South that will convert waste that cannot be recycled into 50 megawatts of low carbon electricity - enough to meet the needs of 65,000 homes.



Artist's rendering of the Rookery South Energy Recovery Facility.

The Energy Recovery Facility (ERF), to be built at Rookery South Pit near Stewartby in Bedfordshire will be capable of using municipal, commercial and non-hazardous industrial residual waste, left after recycling and composting, as fuel to generate electricity as well as steam to potentially support local heat customers.

In addition, it will recover valuable metals for recycling and materials called secondary aggregate which can be used in the construction industry. Overall, this ERF will recover value from about 96% of the waste it treats, thereby helping to achieve national recovery, recycling and renewable energy targets.

Covanta is a world leader in providing sustainable waste and energy solutions, and its 42 Energy- from-Waste (EfW) facilities safely convert approximately 18 million tonnes of waste from households and businesses into clean, renewable electricity to power one million homes, and recycle approximately 450,000 tonnes of metal.

Energy-from-Waste is a well tried and tested technology and is the most sustainable alternative to landfilling residual waste. There are some 780 EfW plants around the world and Covanta is a market leader in the Energy-from-Waste industry with the expertise to enable the safe operation of Rookery South.

The Rookery South ERF project is expected to create more than 300 jobs during construction, with 40-50 permanent jobs once operational. The development will also bring a range of local community, employment, infrastructure and environmental benefits as part of the planning consent for the site.

It is expected that construction work will start later this year and that the facility will become operational in late 2020.

COVANTA
Powering Today. Protecting Tomorrow.

The consultation process on the facility's environmental permit began in early March and closes on 18 April 2017. The environmental permit will ensure the safe and environmentally sound operation of the facility. To submit comments or review the permit documents, please visit: <https://consult.environment-agency.gov.uk/psc/mk43-9ly-covanta-energy-limited/>.

Engaging with the local community

We recognise the importance of being part of the wider community, and being good neighbours.

At Rookery South, the sponsor companies, Covanta and Veolia UK, have agreed to establish a number of community benefits. Through a consultation process, several ways were identified to contribute to the local community. These included the development of a Community Trust Fund and a dedicated Forest of Marston Vale Trust Fund. The reconnection of rights of way within Rookery South Pit was also identified as a way in which to enhance the area.

As part of the consultation process, Covanta was asked to work on a wide variety of community gain activities from the reduction of household bills to the improvement of village halls. As a result, we will:

- ▶ Introduce a discount scheme to reduce household energy bills;
- ▶ Provide a Community Trust Fund;
- ▶ Provide education and community facilities;
- ▶ Enhance footpaths in the area;
- ▶ Enhance the Forest of Marston Vale through a separate Forest of Marston Vale Trust Fund.

The sponsors have also re-engaged the Rookery South Community Liaison Panel (CLP) which was originally established in 2008. The CLP plays a key role in the communications arrangements for the project, which have been put in place in order to ensure effective dialogue between the team at Rookery South and the local community. We value the views and opinions of our neighbours, and look forward to building open and transparent relationships.

Rookery South ERF Community Liaison Panel Representation

CLP REPRESENTATIVES	
Houghton Conquest Parish Council	Central Bedfordshire Council
Marston Morteyne Parish Council	Bedfordshire Chamber of Commerce
Millbrook Parish Council	Stewartby Water Sports Club
Stewartby Parish Council	Forest of Marston Vale Trust
Brogborough Parish Council	Marston Morteyne Action Group
Lidlington Parish Council	Environment Agency
Bedford Borough Council	Principal Minerals and Waste Planning Officer, Central Bedfordshire Council
Independent Chair	

The Community Liaison Panel was set up voluntarily by Covanta in response to interest expressed by the local community. It is a key part of the communications arrangements, which have been put into place in order to ensure two-way communications about the Rookery South Energy Recovery Facility (ERF). Rookery South has committed in the S106 planning agreement to continue the panel during the construction and operation of the ERF. Membership of the CLP does not imply either support for or objection to the ERF development. Rather it is an opportunity to facilitate the flow of information between Rookery South and the local community in the following areas:

- ▶ To provide a channel where local concerns can be articulated
- ▶ To better understand local concerns
- ▶ To respond constructively to local concerns and take action to address them
- ▶ To help inform local opinion formers
- ▶ To provide a structured arena for constructive debate
- ▶ To hear how best to communicate with the local community
- ▶ To update the local community on the progress of the development
- ▶ To resolve issues that may result from the construction and operation of the ERF

Project Milestones	
Restoration works	April 2017
Construction	Late 2017
Commissioning	Spring 2020
Fully Operational	Late 2020



Awards and Recognition for Environmental Excellence

As world leaders in sustainable waste management, Covanta is often recognised for their successful operations. Here are some awards won in recent years:

Covanta Named One of Top 200 Clean Energy Companies Worldwide.




CLEAN200

Covanta received the 2014 Clean Air Excellence Award in the Clean Air Technology category from the U.S. EPA



Covanta and its partners in the Fishing for Energy program received the Coastal America Partnership Award.





Covanta has over 40 sites participating in the U.S. Occupational Safety and Health Administration's (OSHA) Voluntary Protection Program (VPP).

Location and Design

Over 340 sites were evaluated in the region when planning to develop this Energy Recovery Facility, and the Rookery South location emerged as the most suitable site.

The Rookery South pit site, located within the Northern Marston Vale Growth area, has a number of important characteristics which make it the preferred location:

- ▶ avoiding Greenbelt and other sensitive environmental considerations;
- ▶ accessibility via a suitable road network;
- ▶ capability of providing enough space to avoid local adverse environmental impacts.
- ▶ centrally located enabling the required waste management and energy supply capacity to be provided in a strategically optimum way.



The ERF will occupy roughly 10 per cent of the Rookery South pit site. Covanta considered a range of design options through studying a building code established in conjunction with the Commission for the Built Environment (CABE), English Heritage, as well as the Central Bedfordshire and Bedford Borough Councils.

Therefore, the ERF location and orientation is designed to keep the visual impact on the surrounding area to a minimum, and to also reduce potential noise.

The building design of 'interlocking boxes' was selected as it allows the height of the building to be reduced and addresses the dominance of the roof profile in medium and long distance views.

The height of the ERF is also at the lower end of the range when compared with other UK EfW plants.



Rookery South site and region guide



- 1 Stewartby
- 2 Level crossing
- 3 Bedford-Bletchley rail line
- 4 New site access road
- 5 Country Park
- 6 Rookery South site (former clay pit)
- 7 Energy Recovery Facility
- 8 Bottom ash treatment
- 9 Main railway line (St Pancras - E Midlands)



Energy-from-Waste technology proven safe and reliable

EfW is a proven waste management solution that is now used extensively worldwide.

There are now over 780 facilities around the world safely converting more than 140 million tonnes of waste each year into electricity. Countries that extensively utilise EfW include; Sweden, Germany, Denmark, Netherlands, Switzerland, France, United States, Singapore and Japan.

Across the UK, there are currently 38 operational EfW facilities, with many other proposed facilities under construction or going through the planning process.

Worldwide, Covanta operates 42 EfW facilities, is about to commission a 600,000 tonne per year facility in Dublin, and many other new facilities are being planned across Europe, Asia and North America.

EfW is a sustainable solution, whereas the traditional method of disposing of domestic waste (burying it in landfills) is not. When waste is buried in landfills it decomposes and generates methane. Methane is a very potent greenhouse gas, over 30 times more potent than CO₂.

That is why a European Union Directive limits the landfilling of biodegradable municipal solid waste to 35% of the quantity landfilled in 1995. EfW facilities make an important contribution to reducing greenhouse gases and help to increase landfill diversion as part of an integrated waste management strategy.

Safe Operations

It is understandable for local communities to be concerned about proposals for new facilities near them, and so the team at Rookery South is committed to openness and transparency.

The Rookery South ERF has been designed in a way that emissions released from the stack are well within the strict requirements of British and EU legislation. Modeling has been carried out of the dispersion of potential emissions, which shows that they will not have adverse effects on local air quality, health or nature conservation sites.

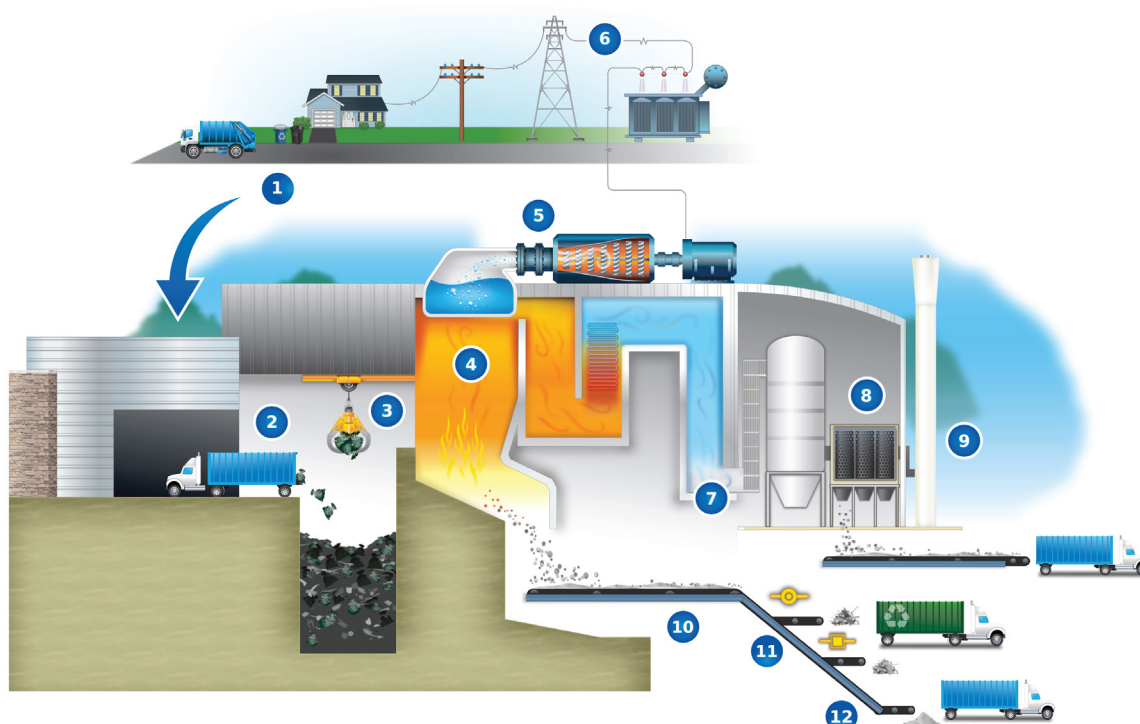
All EfW facilities in the UK are tightly regulated, and have to operate within the EU's requirements as set out in the Industrial Emissions Directive. The Environment Agency also carries out spot-checks to ensure that the monitoring equipment is operating correctly.

For more information on these topics please visit <http://www.hpa.org.uk> or <http://www.environment-agency.gov.uk>.

During the consultation process with local communities, a full Health Impact Assessment was performed. To view the assessment and the Environment Statement for the Rookery South ERF please visit - <http://infrastructure.independent.gov.uk/projects/eastern/rookery-south-energy-from-waste-generating-station/>.

Rookery South ERF: How it works

With the plant operating on a 24/7 basis, the facility will generate 50 MW of electricity which will be exported into the Nation Grid - enough to power 65,000 homes. The facility will also generate 40-50 jobs.



Energy - from - Waste process

- 1 Post-recycled municipal solid waste is picked up at your home or business.
- 2 Waste is delivered and temporarily stored in a bunker. We maintain the building around the tipping and bunker area under negative pressure and use this air in the combustion process to control odour.
- 3 The waste is fed into a combustion chamber and burned at extremely high temperatures in a self-sustaining process.
- 4 Heat from combustion boils water to create steam.
- 5 The steam turns a turbine-driven generator to produce electricity, or may sometimes be used directly for heating or industrial processes.
- 6 Electricity is distributed to the Grid and used to power homes and businesses.
- 7 State-of-the-art air pollution control equipment is used to cool, collect, and clean combustion gases. This equipment operates under stringent air quality standards.
- 8 We control emissions of particulate matter primarily through a baghouse (fabric filter).
- 9 Emissions and other operating criteria are continuously monitored to ensure compliance with air quality standards.
- 10 Residual material from the combustion process is collected for processing and metals extraction.
- 11 Ferrous and non-ferrous metals are extracted for recycling.
- 12 Remaining residual materials are beneficially reused or disposed of in a landfill.



Covanta's Dublin EfW plant.

For further information or to contact us, visit: rookerysouth.co.uk