

CASE STUDY

The Leeds Recycling & Energy Recovery Facility, England



The Leeds Recycling and Energy Recovery Facility opened in 2016. The centre removes recyclable waste from general rubbish bins and recovers energy from what is left over.

Leeds City Council worked with an internationally renowned architect to deliver a modern timber framed building with sustainable features that enhance the biodiversity on site. The site is a positive landmark for the Industrial Estate, and the Aire Valley region of Leeds.

How does the community benefit?

This facility works with its local council - Leeds City - to provide educational tours. It has a visitors centre onsite and provides schools and higher education students a waste education program focusing on waste minimisation and recycling activities. They examine how to reduce, reuse and recycle school waste, waste at home or in an office environment.

The Leeds Community Benefit Fund helps to support local initiatives and has provided grants to the local community each year since 2016.

What sort of waste is managed?

The facility uses state-of-the-art technology to remove and sort recyclables before combustion. This process extracts plastics, paper and cardboard, ferrous and non-ferrous metals.

The facility converts thousands of tonnes of household waste into energy, which otherwise would have gone to landfill.

What happens on site?

Household waste is delivered to the facility, shredded and sorted to extract up to 20% of recyclable material from the waste. This includes all recyclable metals.

The combustion process of the residual waste produces steam to create electricity using a turbine generator on site.

Ash and metal products remain at the end of the combustion process. The ash is recycled into construction aggregate, replacing quarried materials used to produce cement and asphalt.

Key Statistics:

Material to be processed

Household post-recycling waste that cannot be reused or recycled.

Waste management capacity

164,000
tonnes per year



Energy produced

The facility produces some 13MW of electricity, directly exported to the English National Grid

Electricity:

22,000 homes in the region

Heat: Has capacity to generate heat for local buildings.

Reporting of emissions data

Emissions are measured and recorded daily, with the results posted monthly to the website.

Meeting European standards

The facility operates safely 24/7, well within both UK and EU standards for emissions to the atmosphere. An environmental permit to operate was received as per The Environmental Permitting (England & Wales) Regulations 2010 in 2013.



The site is located on Newmarket Approach, in the Cross Green Industrial Estate in Leeds. It is 2.4 kilometres away from the St James University Hospital.



Proximity to residential areas

The nearest home is approximately 250 metres from Wykebeck's outer boundary, with about 150 residential properties in this area.