

CASE STUDY *Lakeside Energy from Waste Centre, London*

This is one of many case studies similar to the Western Sydney Energy and Resource Recovery Centre proposal.



The Lakeside Energy from Waste centre opened in 2010 at Colnbrook approximately 26 kilometres from the London CBD.

Lakeside Energy from Waste Ltd operates the plant as a joint venture between Grundon Waste Management and Viridor. The plant converts over 410,000 tonnes of residual waste each year into electricity.

How does the community benefit?

The Lakeside Energy from Waste facility helps its customers to meet their own landfill diversion targets, and avoid the rising costs of Landfill Tax.

There is an education center adjacent to the Lakeside Energy from Waste center, where schools and other groups can learn about sustainable waste management and energy from waste.

What sort of waste is managed?

Lakeside processes 410,000 tonnes of municipal and non-hazardous business waste each year.

Lakeside has been sending its Incinerator Bottom Ash (IBA) for reprocessing since 2010, where metals are segregated for recycling and the remaining material is recycled for use in roadbuilding and construction projects.

Since 1st Sep 2015, Lakeside has been sending the Air Pollution Control residue (a by-product of the flue gas treatment) to process into a high quality, lightweight aggregate.

What happens on site?

The Lakeside centre operates two mass burn combustion lines treating municipal and non-hazardous business waste.

The site burns waste at a very high temperature to heat water. This creates steam, which turns a turbine, and the turbine generates green electricity, which is distributed to the National Grid.

Main residues comprise incinerator bottom ash (IBA) and air pollution control residue (APCR). Viridor Energy has contracted Day Aggregates to recycle the incinerator bottom ash and Carbon8 to recycle air pollution control residue for the Lakeside centre.

Proximity to residential areas

Lakeside is approximately 400 metres from the nearest home in the Village of Colnbrook, Berkshire, UK.



The site is located in the village of Colnbrook, 1 kilometre from London's Heathrow Airport, and is approximately 26 kilometres from the London CBD.

Key Statistics:

Material to be processed

Municipal and non-hazardous business waste.

Waste management capacity
410,000
tonnes per year



Energy produced

The Lakeside centre produces 37MWe gross of renewable electricity of which, approximately 26MWe (estimated by Arup) is distributed to the National Grid.

Electricity to
56,000 homes



Reporting of emissions data

Air emission data obtained for continuous monitoring as well as stack test emissions reported for regulatory compliance.

Meeting European standards



All exhaust gases are filtered and cleaned before they leave the stack, ensuring that all emissions comply with all UK and European pollution control standards and the site is safe.