

# 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 our customers to meet their own landfill diversion targets, 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 municipal and non-hazardous business waste at 410,000 tonnes per annum capacity.

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 Carbon8 Aggregates to recycle IBA and APCr for the Lakeside center. This process allows the Lakeside centre to achieve a 'zero waste to landfill' target.

## *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.