



Case Study – In Vessel Composting

Waste Planning Practice Guide – Case Study Supplement

In-Vessel Composting

Wrexham Recycling Park, Wrexham

General

Operated by the Waste Recycling Group, the IVC facility on land at Wrexham Industrial Estate processes organic waste. The site also includes a Materials Recycling Facility (MRF) which sorts incoming, mixed dry recyclable materials, a Household Waste Recycling Centre (HWRC), a waste transfer station and an education centre.

Wrexham Council identified in 2001/02 the need to divert waste to landfill.

Details

Information	Data
Fully operational	2009
Site (hectares)	6.4
Location	Wrexham Industrial Estate
Maximum capacity (tonnes): IVC	25,000
Current Processing capacity: IVC	12,000
Site	Built on vacant land, 5 miles Estate of Wrexham town centre
Further Information	Tallest building is 12 metres high

WRG signed a Private Finance Initiative (PFI) contract with Wrexham Council in May 2007 to develop an IVC and MRF. Construction began in April 2008, was commissioned in March 2009 and was fully operation by July 2009.

Community benefits

Educational facility – used by local children to learn about waste prevention and management

Temporary jobs created by the construction

16 permanent employees

Free compost for local residents

Increased recycling and composting rate

Operator supports and contributes to community projects and charitable organisations

Input to the IVC

Organic waste such as corrugated cardboard, food and garden waste collected from 59,000 homes, 3 HWRCs and parks and gardens within the borough.

Process

Organic wastes are deposited on an impermeable surface, where they are mixed and then shredded. The shredded material is placed in one of the three concrete tunnels where the composting process starts. Air is forced under pressure through the waste material until the temperature of the material increases to more than 60°C as a result of the biological activity. The material is kept at 60°C for two days before being removed from the first tunnel and transferred to the second tunnel where the process is repeated.

Output

Compost is transported to Gowy near Chester for further treatment to meet the recognised standard - PAS100. The end product is used as a soil improver and as material for land restoration.

Consultation Methods

- Media campaign
- Series of public exhibitions for local residents
- Leaflet delivered to all households in the area
- Website
- Newsletters
- Regular meetings with Local Community Councils, Community Forums and commercial organisations and local businesses
- Regular reports to the Council members Executive Board
- Educational activities
- Council's lead portfolio Member visited other waste management facilities across the UK and Europe

Main public concerns and mitigation measures

	Concern	Mitigation
1	Traffic	Restrict the hours of vehicle movements (between 7.30am and 6pm on weekdays and shorter hours on weekends and bank holidays)
		Limit on number of vehicle movements in to the site (96 lorries per day)
2	Odour and dust	Design of IVC building to operate under negative pressure and the use of biofilters
		Confine operations to buildings limits odour and dust escape
3	Noise	Site operating hours (7.30am – 6pm) applies to mechanical operations such as shredding and mixing

Further Information¹

FCC Environment: <http://www.fccenvironment.co.uk/wrexham-composting.html>
<http://www.fccenvironment.co.uk/wrexham-mrf.html>
<http://www.fccenvironment.co.uk/transfer-station.html>

Welsh Local Government Association:

<http://www.wlga.gov.uk/english/environment-case-studies/delivering-a-waste-management-infrastructure-for-the-future/>

¹ The Welsh Government is not responsible for the contents of these websites.