

Waste management options

In 2006/07 we reused or recycled (including composting) around 31 per cent of municipal waste in England and 30 per cent in Wales. In addition, approximately eleven per cent (in England) and two per cent (in Wales) municipal waste was treated, by energy from waste plants. Some waste was pre-treated using various specialist methods like mechanical biological treatment (MBT) and anaerobic digestion.

Waste treatments explained

Reuse

Using an object or material again, either for its original purpose or for a similar purpose, without significantly altering the physical form of the object or material.

Recycling

Using waste as material to manufacture a new product. Recycling involves altering the physical form of an object or material and making a new object from the altered material.

Composting

Uses naturally occurring micro-organisms to break down organic waste to produce compost. Wood chippings, grass cuttings or kitchen waste are all used in composting. The quality of the compost depends on the quality of the waste being composted. At best, the compost can be sold as a soil improver and, at worst, the material may only be suitable as a fuel or for landfill cover.

Mechanical Biological Treatment

A range of treatment activities that include sorting and separating, cutting or grinding and composting the waste. Shredded waste is subjected to aerobic digestion for 10-15 days which stabilises the waste. A combination of sieving, weight separation and metal extraction splits the waste into recyclable materials and a residue. The residue is suitable for burning and energy recovery. The residue remains classified as waste.

Anaerobic digestion

The natural decomposition of organic waste in an oxygen-free atmosphere. This produces gas, mainly methane and carbon dioxide, which is burnt to produce electricity and a residual material which can be used as a soil improver depending on the type of inputs to the process.

Gasification/pyrolysis

In gasification, part of the waste is burnt which provides the heat for the remaining organic material. Pyrolysis involves indirect heating of the waste in an oxygen-free atmosphere. The organic material is converted into gases, which can be burnt to produce heat and electricity.

Incineration

Involves burning waste at high temperatures to reduce its volume and produce heat and/or electricity.

Landfill

An area of land where waste is deposited. The biodegradable part of the waste decomposes and reduces in volume. Some of the gas produced by decomposition is increasingly used to generate electricity.