

Waste Recycling

The definition of recycling is to pass a substance through a system that enables that substance to be reused. Waste recycling involves the collection of waste materials and the separation and clean-up of those materials. Recycling waste means that fewer new products and consumables need to be produced, saving raw materials and reducing energy consumption.

In the UK, the household and commercial sectors have relatively low recycling rates. This is in comparison to some other wastes, such as construction and demolition waste and sewage sludge. The Government is hoping to increase the amount of household waste that we recycle to 33% by 2015. Some of the materials that we can recycle include paper, plastics, metals (such as aluminium cans) and tyres.

The paper industry generates vast quantities of waste in the form of paper off-cuttings and damaged paper rolls. This paper can be put back into the pulping process and recycled. Paper recycling in the UK became popular during the 1990s. Nearly a million tonnes of paper from household waste is now recycled each year. Although paper makes up over one third of all household waste recycled, this is still no more than about 10% of the total paper consumed. In contrast, over 50% of paper waste paper produced by the newspaper industry is currently being recycled. To encourage the public to recycle waste paper, many council have arranged house to house collection schemes. Separate bins and containers are provided specifically for paper. They are collected at regular intervals and taken to be recycled. Other recycling depots for paper can be found at municipal centres and supermarkets.

Approximately 6 to 8% of UK household waste comprises of glass jars and bottles. However, the largest producers of waste glass bottles are hotels and pubs, as the vast majority of drinks are bottled. A large proportion of glass is collected in bottle banks and taken to be recycled. There are over 20,000 bottle banks in the UK, and they are mainly found in car parks and at supermarkets. There are usually three bottle banks, one for each colour of glass: clear, green and brown. The UK currently recycles about one third of its glass. This is far behind glass recycling rates in other European countries. Switzerland and the Netherlands for example have recycling rates as high as 80%.

Plastics make up a large amount of waste, since they are available in numerous forms. There are two main types of plastic: thermoplastics, which are the most common; and thermosets. Thermoplastics melt when heated and can therefore be remoulded. This enables thermoplastics to be recycled relatively easily. In Western Europe the largest amounts of plastic occur in the form of packaging. Plastic waste tends to be sorted by hand, either at a materials recycling facility or the householder can separate it. This may then be taken to a plastic recycling point or collected by the council. The UK produces approximately about 4.5 million tonnes of plastic waste each year. Most of this waste arises from packaging. The UK has a plastics recycling rate of only 3%. In Germany the recycling rate for plastic is 70%.

The UK has a recycling rate of approximately 60% for iron and steel. Most of this waste comes from scrap vehicles, cooker, fridges and other kitchen appliances. It is estimated that the metal content of household waste is between 5 and 10%. It is mainly made up of aluminium drinks cans and tin-plated steel food cans. Aluminium recycling is widely established in the UK. It is an expensive metal and can therefore produce high incomes for recycling schemes. Copper, zinc and lead are also recycled in the UK. At present, over a third of aluminium drinks cans are recycled. Some other countries have very high recycling figures for aluminium drinks cans. The USA and Australia for example, recycle nearly two thirds.

Every year in the UK between 25 and 30 million scrap tyres are generated. Approximately 21% of these tyres are retreaded and reused. The old tread is ground off the tyre and replaced with a new tread. However, about half of all used tyres are dumped in landfill sites throughout the country. Other tyres may be incinerated.