ZERO WASTE SCOTLAND

Down in the dumps

Landfill

Freephone Helpline
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zerowastescotland.org.uk

Overview

Landfill sites, sometimes called rubbish dumps, are engineered holes in the ground or old quarries, that we use to bury our waste. If something goes into landfill, we cannot get it back out again to be re-used or recycled.

As recycling has increased, we are using less landfill space and they are filling up more slowly than in the past. We still need landfills to dispose of waste which we cannot re-use or recycle but it is important to make sure materials like paper, cardboard, food, glass, plastic bottles and metals do not go to landfill. These are valuable and can be used to make new products.

Modern landfill sites are designed to reduce the potential for pollution and include features such as liners, nets and capture mechanisms for liquid run-off (known as leachate) and gas. Capturing gas helps to reduce greenhouse gas emissions. The gas can also be used to generate electricity.

What goes in?

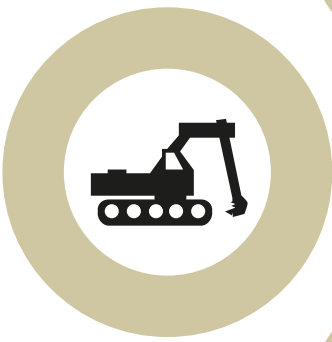
Non-recyclable waste (general waste) from households and businesses.

Some materials are banned from landfill, such as car tyres, because they can be harmful to the environment. On 1st January 2021, a new ban on landfilling biodegradable waste will come into force. This will help to reduce greenhouse gas emissions and increase recycling.

What happens?

Vehicles arrive on site and are weighed.

The vehicle tips the waste and then leaves the site.



Special vehicles then spread out and flatten the waste which has just been tipped.

At the end of every day the landfill is covered by a layer of inert material.

Once a landfill site is full, it is capped and monitored for many years.

What comes out?

Energy: Landfill sites produce a mix of gasses which is sometimes referred to as landfill gas. One of the main components of landfill gas is methane.

Landfills have methane capture equipment installed to reduce the amount of gas released into the atmosphere.

A landfill will produce varying quantities of methane over its life time. When the production is most active, the captured gas can be put through an engine to produce electricity. This energy is then fed into the national grid, providing power for homes and businesses.

Mined materials?: There are many thousands of tonnes of materials in landfill sites in Scotland and there is increasing interest in landfill mining. Although current research suggests that landfill mining may not be a practical option just now, this may change in the future.

Glossary

Hazardous material

Some materials are designated as hazardous or special waste because of their properties (e.g. poisonous, harmful to the environment, etc.). Not all facilities can accept hazardous materials/ special waste. For more information, please see SEPA's website.

Landfill capping (or capping)

Once full, landfill sites are covered with a series of different layers of material to contain the waste and protect the environment. This is known as landfill capping.

Landfill gas

A gas produced by waste breaking down in landfill sites. Some of the gas can be captured and used to generate electricity.

Landfill mining

The process of excavating old landfill sites to remove recyclable material which has not broken down.

Leachate

A liquid run-off from landfill sites. It is created by material breaking down inside the landfill site and by rainwater.

Non-recyclable waste (general waste)

Often known as black bag waste or mixed waste, it is a mixture of discarded materials (rubbish) collected within the same bag or container and which is not recycled.

Further information

Zero Waste Scotland (ZWS)

For more information on Zero Waste Scotland, its work and research, please visit: **www.zerowastescotland.org.uk**

For more information on waste facilities and how they are developed, please visit: **www.zerowastescotland.org.uk/infrastructure**

Scottish Environment Protection Agency (SEPA)

For information on waste regulation, licencing, data and more detailed technical information on facility types and the standards they are required to achieve, please visit: **www.sepa.org.uk**

Recycle for Scotland

For more information on how to reduce, re-use and recycle, please visit: **www.recycleforscotland.com**

Videos

To watch videos explaining what different facilities do, please visit: **www.recycleforscotland.com/facts-figures/facts-figures**

Chartered Institution of Wastes Management (CIWM)

For more detailed and technical information on different facilities and on waste management issues in general, please visit: **www.ciwm.co.uk**

Renewable Energy Association

For more information on thermal and biological treatment facilities which create energy from waste, please visit: **www.r-e-a.net/renewable-technologies**

Environmental Services Association

For more information on waste management and the different types of facilities, please visit: **www.esauk.org/**

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