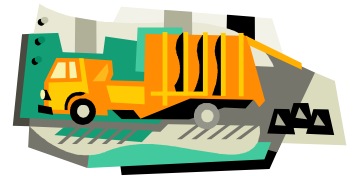


What happens to our Waste?

Environmental impact of Landfill Sites

- The rubbish rots and makes a gas called methane, which presents a hazard for the environment and can be explosive and cause fires at landfill sites. To remove the gas, a series of pipes are embedded within the landfill to collect the gas. In some landfills, this gas is vented or burned.
- When it rains, the rain soaks through all the rubbish and it can leak, it can pollute our water courses. The water picks up contaminants such as organic and inorganic chemicals, metals and biological waste products of decomposition.
- Landfill sites are filling up very quickly, and space approved for landfill is set to run out in the next five to ten years in England.
- Some of the waste will stay in the landfill site for a hundred years, some might stay forever.
- Some of the landfill gas can be collected and used as source of energy for heating homes and making electric power
- Rubbish must be put somewhere and a landfill site is a relatively cheap and easy option.
- Landfill sites are usually old quarries.
- When the landfill site is full, a thick covering of soil is spread over, and after the site has settled it can be reclaimed for agriculture, forestry or recreation. Modern landfill operations are tightly regulated.



Environmental impact of Energy Recovery

Greenpeace view; The myth that burning makes waste disappear has led to incineration emerging as a widely used method for disposing many kinds of waste, including hazardous wastes. Rather than making waste disappear, incinerators create more toxic waste that pose a significant threat to public health and the environment. People do not realise is that incinerator ashes are contaminated with heavy metals, unburned chemicals and new chemicals formed during the burning process. These ashes are then buried in landfill or dumped in the environment. Cancer, heart disease, respiratory problems, immune system defects, increased allergies and birth defects can all be caused by the chemicals that spew out of large incinerators. Incinerators release a deadly cocktail of chemicals from their chimney-stacks.

Veolia view; Sheffield has an award winning district energy network, providing more than 130 buildings of all sizes and types with a low carbon energy source generated locally. More than 43km of underground pipes deliver energy generated by recovering energy from waste to some of the city's most prestigious and landmark buildings. All Energy Recovery Facilities have to operate to strict environmental regulations. The emission limits are equal to, or better than, the limits to which power stations operate. Pollution prevention control systems are installed allowing the operators to monitor how well the facility is performing, and to ensure that emissions are kept below permitted limits. In 2005, the district energy network prevented 15,108 tonnes of CO₂ from being

released from buildings across the city. This has a significant impact on preventing climate change.

Are we wasting our planet?

What happens to our waste?

1. Starter. Statistics about the amount of waste we produce in UK and Sheffield.
2. Video Waste from Environments tape. 15 mins.
3. What happens to our waste in Sheffield; Energy recovery, Landfill, Recycling.
4. Landfill. How long does rubbish take to decompose? Plastic bag with can, carrot, glass, cardboard, paper, plastic bottle. Answer on power point.
5. Energy recovery. Discuss from power point.
6. Sheet with details on Landfill and energy regeneration.
7. Task. Divided bar chart showing where our rubbish goes in Sheffield.
8. Use information sheet to write a letter to Veolia asking them to either reduce or increase the percentage of waste that goes to landfill or energy regeneration
9. Plenary. What about the future? Reduce Reuse Recycle.