

Whinney Hill landfill

Whinney Hill landfill site has been in operation since the 1970's. It has been operated by SUEZ recycling and recovery UK since 2001. Twelve local staff manage the daily activities on site, alongside gas and engineering contractors.

The site provides an essential service, managing primarily household waste from across Lancashire.

The site also accepts pre-authorized household and commercial waste from elsewhere, but does not accept hazardous waste or certain types of waste seen at other landfill sites such as 'trommel fines' which often contain material such as plasterboard, which is known to produce odour as well as gases such as Hydrogen Sulphide H₂S.

Only permitted and pre-authorized waste can be delivered to the facility. All waste must be pre-sorted, have an approved European Waste Code in accordance with our Environmental Permit and in a registered vehicle approved for moving waste. All waste is logged and weighed when it enters and leaves the site, and waste acceptance checks are carried out on every load to ensure that incoming waste meets the required specification. SUEZ have procedures in place to ensure that if waste is received that cannot be accepted by the site, it can be quarantined and removed from the site safely.

As a company, SUEZ encourages everybody to reduce their consumption and recycling and reuse more, to reduce waste.

Until alternative infrastructure is in place, Whinney Hill will continue to provide a disposal option for waste.



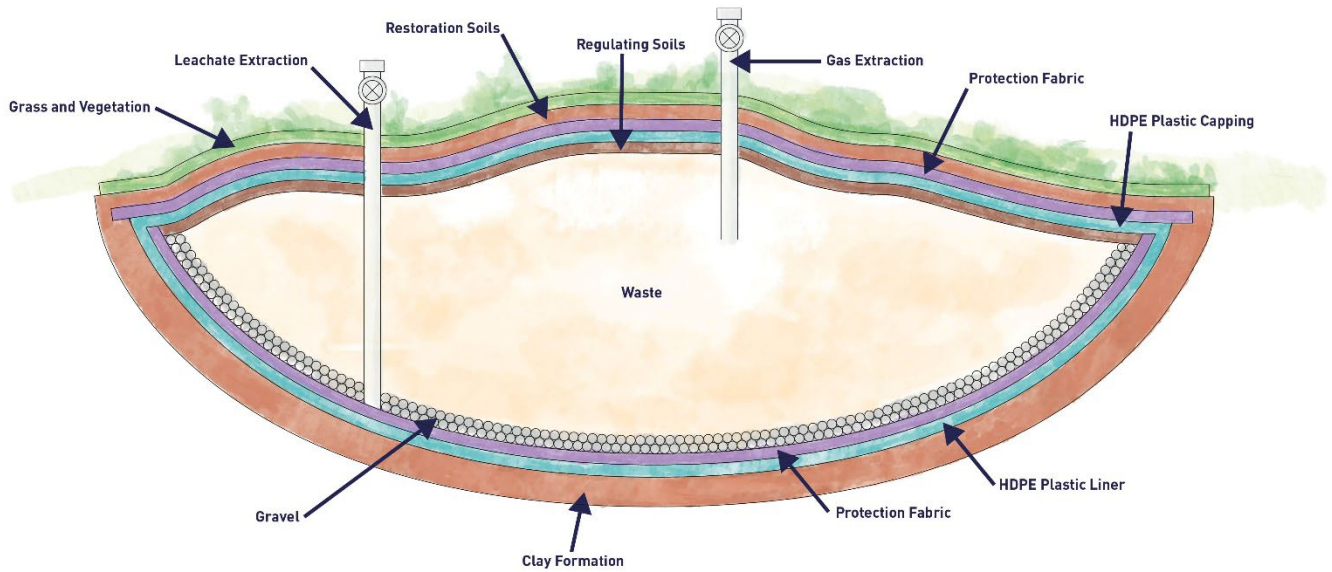
Whinney Hill landfill in 2024

About SUEZ

SUEZ employs over 6,200 people, operating across hundreds of sites, and handles approximately 11 million tonnes of waste materials every year – a significant proportion of the UK's total waste. Through collection, treatment, recycling and logistics operations, it serves more than 30,000 business customers and millions of householders throughout the country.

We take our environmental and social responsibility very seriously. We operate differently to other operators within the landfill space, as we have a full team of experts specifically focused on landfill and alternative energies for the treatment of waste. This includes the operation of open and closed landfill sites, sampling technicians, engineers, and technical experts. As such, we also provide these services on behalf of, and offer guidance to, other landfill operators across the UK.

Overview of a landfill



Landfill void is generally developed out of quarries where waste is encapsulated within sealed plastic and clay in stages called phases or cells.

When the waste is 'tipped off' in the designated tipping area, it is checked to ensure that it meets the waste acceptance criteria for the site and then compacted using 45 tonne machines with spiky wheels and put into the area for that day's tipping.

At the end of the day, the waste is covered with approved control measures such as soil and a fabric called Raytex to help reduce potential odours and vermin feeding off the tipping face.

Whinney Hill has 8 phases, the sequence and volume capacity of each phase is detailed within the approved Planning Permission. In late 2023, the tipping area moved to an area of the site known as 'Enfield Quarry', which is one of the final areas of the site for tipping.

Once a landfill is 'capped' whereby no more waste is accepted and it is covered with soil and impermeable material, we continue to have environmental responsibility for the facility for a minimum of 60 years and can begin its full restoration to return it to nature.

SUEZ operate many restored landfills across the country, some of which now have nature trails. We take our environmental responsibility very seriously in the way that we manage the site both when it is operational, and when it is closed and in restoration.

The site is regulated by the Environment Agency who provide us with a permit to operate. The environmental permit has conditions that we are required to follow to minimise the impact to people and the environment, and they monitor us against this permit.

We also have a set of management plans for each of our sites approved by the Environment Agency, which detail the control measures that we implement to minimise as far as possible any impacts, including odour and pests, which we keep under constant review.

Landfill gases

As waste decomposes and mixes with rainfall and other moisture within the waste itself, it produces a gas which is a mixture of primarily methane and carbon dioxide.

We capture this gas through a purpose designed collection system which pulls it into combustion engines and turns it into electricity, which goes to the national grid.

These systems are designed to efficiently collect and manage the gases produced by decomposing waste.

The gas is a valuable resource to us, and we have a dedicated manager to look after the daily management and balancing of the gas fields and infrastructure. We install this infrastructure into the site throughout each cell as it is in operation, as opposed to at the end, as we believe that it is the most effective way of ensuring that the gas is captured as soon as possible and for the longer term.

The electricity generated from Whinney Hill is 6.3MW, which has the potential to power around 30,000 local homes and businesses. The majority of the site's infrastructure, offices and leachate treatment plant are also powered from the energy produced onsite, reducing our reliance on fossil fuel.

Leachate

As the waste breaks down over many years, a liquid called leachate is created.

We collect the liquid and treat it through a biological treatment plant with nutrients, oxygen, and chemicals, in order to ensure it is at the right pH level. The process is complex and involves lots of testing (SUEZ has state of the art labs and sampling technicians). As part of this, we regularly monitor and test water courses and boreholes. Once it has been treated, the liquid is safely discharged into the main foul sewer under strict quality control measures for its final treatment.

The level of the liquid allowed to remain in each cell area of the landfill is detailed within the site's Environmental Permit.