

Historic landfill sites in England

In England, Local Planning Authorities have to consult with the Environment Agency (EA) about all applications they receive to develop land within 250 metres of landfill sites. This includes any land used as a landfill site within the past 30 years (or is likely to be used as one in the near future). Landfill can be for various substances and result from many activities. The waste includes bi-products from industrial, commercial, household, and construction processes. This waste will vary in form and might be inert, putrescible, solid, liquid, hazardous, non-hazardous in the way it is described, categorised and treated.

Poorly designed and managed landfills may become nuisances because of vectors such as rats and flies which can carry infectious diseases. Other potential issues include wildlife disruption, dust, odour, noise pollution, and reduced local property values. Pollution of the local environment, such as contamination of groundwater or aquifers or soil can occur.

Importantly, rotting food and other decaying organic waste allows methane and carbon dioxide to seep out of the ground and up into the air. Methane is a potent greenhouse gas, and can itself be a danger because it is flammable and potentially explosive.

The EA has collated data providing the most comprehensive and consistent national historic landfill dataset and defines the location of, and provides specific attributes for, known historic (closed) landfill sites. The map shows the extent of recorded landfill sites; these cover an estimated 830 sq.km, which is just over half the size of the London region (1). This comparison ignores any consideration of volume: landfill sites can have immense depth and capacity.

Most landfill takes place in proximity to major towns or cities. Landfill generally makes use of holes that were created as a result of other human activity, and especially in relation to extraction of materials for the construction industry. The London Borough of Hounslow has an estimated 16-17% of its land taken up by landfill (2). The working of rock, and other substances for the construction industry can leave enormous voids that are subsequently used as waste disposal sites: examples include former brickworks (3), and stone/rock quarries.

Up until the turn of the century most waste in England was disposed to landfill. Improvements in recycling technology mean that less waste is now being sent to landfill. Most landfill sites control and collect the gas that is released by the decomposing waste, using it to generate electricity through turbines (4).

Strict regulation means that the environmental impact of landfill sites is now very carefully managed and monitored, with the types of material that can be sent to landfill defined by law. Landfill sites are now carefully designed and planned, with waste only being tipped into certain 'active' areas of the site at one time. This helps control the way the waste breaks down, making it easier to manage the gas and leachate produced and also helps manage the contours and restoration of the site. Once a landfill site has reached its capacity, operators are legally obliged to ensure that site is properly restored so it can be used in the future for agriculture, amenities or nature conservation.

The science and technology behind landfill has progressed hugely since the times of the industrial revolution, when regulation covering disposal was scant. The consequences of this are still evident today in many former industrialised parts of England, although remedial projects have greatly improved the situation (5).

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European Region
Historic landfill sites

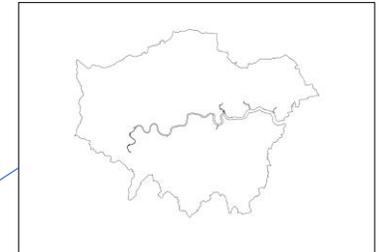
5. Landfill arising from the industrialisation of northern England is being tackled



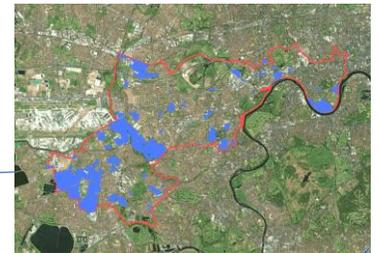
3. The former brickworks at Stewartby have now been subject to major landfill



1. The London region is around 1,600 sq. km. England's historic landfill areas would extend over half of this area



2. The London Borough of Hounslow has around 16% of its area used for landfill



4. Methane gases generated as a result of some landfill are now often used to generate electricity

