

# CONTAMINATED LAND



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Land that is contaminated contains substances in or under the land that are actually or potentially hazardous to health or the environment. Britain has a long history of industrial production and throughout the UK there are numerous sites where land has become contaminated by human activities such as mining, industry, chemical and oil spills and waste disposal. Contamination can also occur naturally as a result of the geology of the area, or through agricultural use.

## What is Contaminated Land?

The presence of contamination in the ground does not necessarily mean that there is a problem. In many cases there will be minimal risk from living or working on contaminated ground. Indeed, many contaminated sites have been successfully and safely redeveloped to provide high quality housing and working environments.

There is a legal definition of contaminated land – that which presents an unacceptable risk to human health or the environment – and it is the responsibility of the relevant local authority to assess and determine whether a particular site in their area is ‘contaminated’.

Part 2A of the Environmental Protection Act 1990 was introduced in England and Scotland in 2000 (2001 in Wales), placing duties on local authorities to identify potentially contaminated sites in their area and ensure that they are cleaned up. When new houses are built, the planning process also ensures that the risk of contaminated land is assessed and dealt with by developers appropriately.

## What are the Risks?

In a few cases some sites are so contaminated that they present an unacceptable risk to human health or the environment. Human exposure to contaminants can be through inhalation of dust or gases, contact with soil, or through food grown on the land. Leachates (pollutants draining from the site in liquid form) can pollute groundwater and rivers or ponds.

The effects on human health and on the environment will depend on the type and amount of contaminant involved.

## How Long Does Contamination last?

This is very specific to the contaminant and the local circumstances of the site.

Once a contaminant has reached the soil it may break down or be neutralised; be washed out by rain; evaporate or remain in the soil

building up to high concentrations. What happens will depend on the balance between the rate of input and the rate of removal of the contaminant, the properties of the contaminant and the soil, the rate of rainfall and the activity of the soil organisms. The build-up of contaminants may not be permanent. However, soil can sometimes remain polluted indefinitely.

## Brownfield Development

There are areas in towns and cities that have fallen into disuse. Some have been left as unsightly wasteland or derelict buildings and are known as “Brownfield” land. These sites can have a detrimental effect on the environment and social quality of the area and it is therefore beneficial to redevelop these sites.

Much of this Brownfield land is contaminated and in past years has often been considered unattractive to clean up and bring back into use, especially where there have been alternative “Greenfield” sites available. However, modern technologies and approaches have enabled this kind of land to be brought back into beneficial uses.

The UK Government now wants to bring as much Brownfield land as possible back into use and is encouraging the regeneration of previously developed land to limit unnecessary development of Greenfield sites and preserve the countryside. Strict targets have been set to encourage building of the majority of new houses on Brownfield land.

## Cleaning Up Contaminated Land

Until recently, contamination usually became an issue only where there was a pollution incident, or where the site was selected for redevelopment through the planning process. Now, under the requirements of Part 2A of the Environmental Protection Act (EPA) 1990, local authorities are required to make assessments of land in their areas to decide which sites are or could be causing harm or pollution and to take action to ensure that they are made safe. This might result in the original polluters, landowners, and other responsible persons (including domestic property owners) becoming responsible for cleaning up a site. If land is found to be contaminated, it must be restored to a state in which it is “suitable for use”. The local authority will agree with the responsible persons the degree to which the land should be cleaned up, in relation to the risk that the land is posing to health or the environment and pollution of watercourses and groundwater.

In the case of redevelopment, the developer will be responsible for ensuring that the site is suitable for its intended use, and in most cases the enforcement of any remediation requirements will be made via formal agreements such as planning conditions and building control.

## What Solutions are Available?

A site affected by contamination may need remedial treatment before it can be used or redeveloped, and “Remediation Notices” can be issued under the EPA to ensure treatment of land in existing use. There are many ways in which this may be achieved, ranging from “dig and dump” (taking contaminated soils away to licensed landfill sites) to the application of techniques that treat soil and water either in-situ or at the site of origin to remove, destroy or reduce the amount or potency of the contamination. The choice of approach is very site specific and depends on various factors such as the type of contamination, the physical circumstances of the site, ongoing site use and the regulatory requirements.

## Who’s Responsible?

### Local Authorities

As described above, the local authority is under an obligation to find any sites within their area presenting a risk because of contamination and regulate remediation of these sites. They must also determine the need for sufficient investigation and remediation for sites that are to be redeveloped via the planning process.

Environmental health officers may also investigate sites causing a statutory nuisance (as defined under the Environmental Protection Act (EPA) 1990), although most of the situations where this would occur have been replaced by EPA Part 2A.

### Environment Agency and SEPA

The Environment Agency addresses pollution incidents in England and Wales, and the Scottish Environment Protection Agency (SEPA) addresses them in Scotland. Both have powers to enforce clean up of environmental damage.

Under Part 2A of the Environmental Protection Act 1990, the local authority may refer sites considered ‘Special Sites’ to the Environment Agency or SEPA for assessment, who may then take over responsibility for regulating the clean up. Each Agency is usually consulted by the local authority under the planning process.

The Agencies can issue “Works Notices” (under the Water Resources Act 1991) where pollution of “Controlled Waters” (such as groundwater, coastal water and water in surface water courses, rivers, lakes etc.) is occurring. In Scotland, the Contaminated Land (Scotland) Regulations 2005 amended Part 2A to substitute references to ‘controlled water’ to ‘the water environment’.

## How Do I Find Out More?

If you are concerned that you might live on a contaminated site, contact your local authority to find out if they have any information. The planning, environmental health (or equivalent) and building control departments may hold this, as well as the Environment Agency (or SEPA). In some cases a charge may be payable for the supply of data.

Information may also be available from commercial suppliers of environmental data. Land Condition Reports may be available for recently built properties, which will provide information about the site in a standardised format and is usually kept by the landowner.

## Further Information

### **Environment Agency (Head Office)**

Tel: 01454 624400

Email: [enquiries@environment-agency.gov.uk](mailto:enquiries@environment-agency.gov.uk)

[www.environment-agency.gov.uk](http://www.environment-agency.gov.uk)

[www.environment-agency.wales.gov.uk](http://www.environment-agency.wales.gov.uk)

### **Scottish Environment Protection Agency**

Tel: 01786 457700

Email: [info@sepa.org.uk](mailto:info@sepa.org.uk)

[www.sepa.org.uk](http://www.sepa.org.uk)

### **For specific Environment Agency information on land:**

<http://www.environment-agency.gov.uk/subjects/landquality>



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- Contaminated Land and Your Home
- Air Pollution
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- Garden Bonfires
- Small Scale Wind Turbines

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