



TRANSLATIONS & ACCESSIBLE FORMATS:

ترجمے کی مفت سہولت | भाषांतरनी भइत सेवा

अनुवाद की मुफ्त सेवा | उरजभे दी भुइत सेवा

020 8583 2298

THE SMALL DEVELOPMENTS LANDFILL CONDITION

A GUIDE FOR DEVELOPERS

WHAT IS THE PURPOSE OF THIS LEAFLET?

The leaflet is intended as a guide for residents undertaking small extensions to existing homes subject to planning permission where the development is on, or near areas of former landfill. It will provide information on how to comply with the condition and give useful links for further information and contact details for relevant council departments.

This leaflet has been produced by the London Borough of Hounslow Land Quality Team who are the primary regulator for land contamination issues within the borough.

THE CONDITION WILL LOOK SOMETHING LIKE THIS:

Before the development hereby permitted commences the applicant must either:

a. *Investigate the site for landfill gas to the satisfaction of the LPA, to ascertain whether gas protection measures are required. Where measures are required the details shall be submitted to, and approved by, the LPA.*

Or;

b. *The applicant shall install gas protection measures as a precautionary measure without first investigating the site. The details of these measures shall be submitted to, and approved by, the LPA.*

c. *For a. and b. all required measures shall be installed before the development is first occupied.*

Please Note:

If the landfill condition on your consent differs from the one given above, further investigation and assessment works will be required. Please refer to the explanatory notes with the condition or contact the Land Quality Team for details.

THE CONDITION EXPLAINED

- The condition is a precautionary step to ensure that consideration is given to all **new buildings** where there is a potential risk from ground gas contamination.
- The condition is designed to address any potential ground gas risks and ensure that the appropriate steps are taken to ensure the long-term safety of the development and its users.

WHY COULD FORMER LANDFILL BE AN ISSUE?

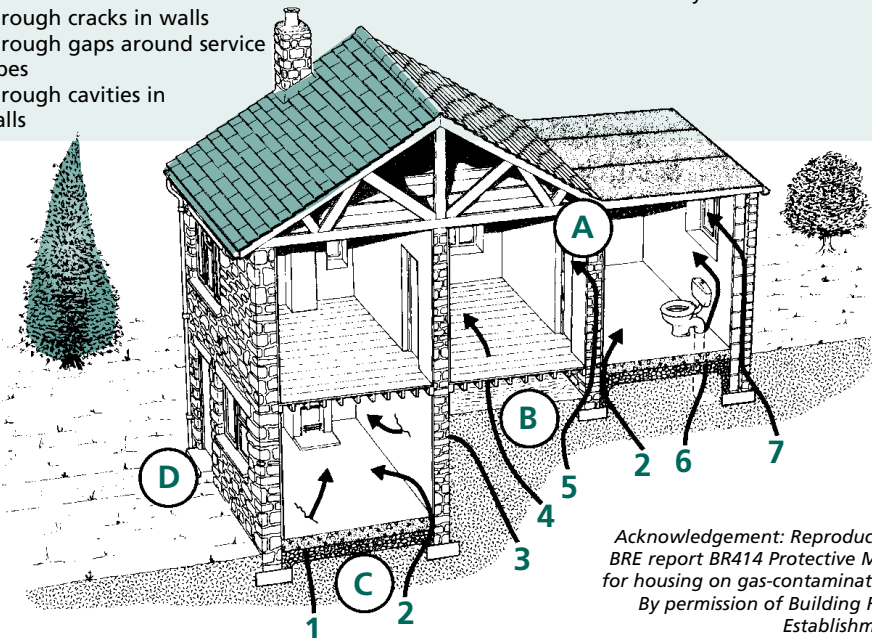
- Prior to 1974 there were no regulations for disposal of waste. Much of this waste was landfilled without the safeguards modern landfill sites have to protect public health and the environment.
- Over time, gases including methane and carbon dioxide can be generated as wastes breakdown in the ground. Problems can occur if these gases accumulate within buildings to dangerous concentrations. Methane can be explosive and carbon dioxide is an asphyxiant at high concentrations. Below are a few ways that ground gases may enter buildings.

Key to ingress routes;

- 1 Through cracks in solid floors
- 2 Through construction joints
- 3 Through cracks in walls below ground level
- 4 Through gaps in suspended floors
- 5 Through cracks in walls
- 6 Through gaps around service pipes
- 7 Through cavities in walls

Possible locations for gas accumulation:

- A Wall cavities and roof voids
- B Beneath suspended floors
- C Within voids caused by settlement or subsidence
- D Drains and soakaways



Acknowledgement: Reproduced from BRE report BR414 Protective Measures for housing on gas-contaminated land. By permission of Building Research Establishment Ltd.

WHAT IS THE 'ZONE OF CONCERN'?

- The zone of concern is the area that immediately surrounds a former landfill. It usually extends 250 metres from the landfill site and ensures that consideration is given to properties within close proximity to former landfills.
- It is intended to protect buildings from any potential gases that may have migrated from the landfill through the ground.
- In some cases we have been able to reduce the extent of the zone where gas levels are low.
- Further information on the zone of concern can be found in Part C of the Building regulations 2000 (as ammended) and the latest edition of Approved Document C: Site Preparation and Resistance to Contaminants and Moisture.



WHAT AM I REQUIRED TO DO?

There are 2 options...

...Investigate the site for landfill gases to determine whether gas protection measures are required and to what level.

OR

...Install gas protection measures into the base of the building as a precautionary measure without first testing the site.

WHICH OPTION SHOULD I CHOOSE?

- For small extensions to existing buildings it is often believed to be cheaper and more cost effective to install basic gas protection as a precautionary measure instead of testing. Should testing show an issue with ground gases at the site, protection measures will be required. Testing, may however, show that protection measures are not necessary.

HOW DO I TEST FOR LANDFILL GAS?

- The most commonly used methods of testing are monitoring of ground boreholes or gas spike surveys. The ground should be monitored on at least 3 occasions for methane, carbon dioxide and oxygen with the results forwarded to the Local Planning Authority (LPA) for approval prior to works continuing.
- Where ground gas testing is to be undertaken, the full schedule of works should be agreed with the Land Quality Team prior to their beginning.
- The London Borough of Hounslow cannot offer a ground gas testing service; all testing and reporting should be undertaken by a competent environmental consultant. Please contact the Land Quality Team if you require further details on testing for landfill gases.

WHAT IS GAS PROTECTION?

- Gas protection usually consists of a combination of precautionary measures built into the ground floor fabric of buildings that significantly reduces the possibility of ground gases moving into buildings and accumulating to dangerous levels.

WHAT PROTECTION WOULD BE REQUIRED?

- A gas membrane is required as a minimum. Gas membranes are similar to the 'Damp Proof Membrane' (DPM) but thicker and have welded seams; they act as a barrier reducing the risk of gases entering buildings. In addition, passive ground ventilation measures may be required if the building is on or adjacent to the former possible landfill. The level of protection required will vary depending on the nature of the site so the specific designs should always be agreed with your Building Control Officer.



- Membranes should be of polyethylene material and at least 300 micrometers (1200 gauge) in thickness. They should be sealed across the entire floor slab and litted to the wall DPC (damp proof course) and sealed around all service entry points.
- It should be installed to correct BBA certification and in accordance with the manufacturers instructions.
- All protection measures should comply with the Building Regulations 2000 (as ammended): Approved Document C, Site Preparation and resistance to contaminants and moisture. Your architect and builder should be aware of this document.
- Under the Town and Country Planning Act 1990, it is the developers responsibility to ensure that the required actions of planning conditions are undertaken and met to the approval of the Local Planning Authority.

HOW CAN I GET FURTHER INFORMATION?

The Land Quality Team holds information about former landfilling activities across the borough. This information has been collected from various sources and summarised into a public register, which is available for public viewing at our Civic Centre Offices in Hounslow during normal office hours. Please contact the Land Quality Team if you wish to make an appointment.

USEFUL DOCUMENTS AND LEGISLATION

Links to many of the following resources can be found on our website or from your local library.

Town and Country Planning Act, 1990

Building Regulations 2000 Part C: Site Preparation and Resistance to Contaminants and Moisture

Planning Policy Statement 23 (PPS23): Planning & Pollution Control

PPS 23 Annex II, Land Affected by Contamination.

Environment Agency (EA) & Building Research Establishment (BRE) Publication 414: Protective measures for housing on gas-contaminated land.

The Environment Agency's reference number for this manual is R&D Technical Report P336.

Building Research Institute (BRE) Publication 212: Construction of new buildings on gas-contaminated land.

EA & NHBC: Guidance for the safe development of housing on land affected by contamination. EA R&D Publication 66.

**Her Majesty's Inspectorate of Pollution: Waste Management Paper 27-
The Control of Landfill Gas**

CONTACT US

Further information and links to related sites can be found on our website:
www.hounslow.gov.uk

If you have any queries or would like further information, please contact us on:

LAND QUALITY TEAM:

Tel: 020 8583 5062/4877

Fax: 020 8583 5134

Email: landquality@hounslow.gov.uk

BOROUGH PLANNING OFFICE:

Please contact your local area team:

Telephone

Feltham, Bedfont, Hanworth & Hatton

020 8583 4940

Heston, Cranford & Hounslow

020 8583 4965

Isleworth & Brentford

020 8583 4970

Chiswick, Gunnersbury & Turnham Green

020 8583 4998

Fax: 020 8583 4900

Email: planningcomments@hounslow.gov.uk

BUILDING CONTROL:

Tel: 020 8583 5403/04

Fax: 020 8583 5405

Email: buildingcontrol@hounslow.gov.uk

Please address all written correspondence to the appropriate team at the following address:

London Borough of Hounslow
The Civic Centre
Lampton Road
HounslowTW3 4DN

