

## Developing land within Derbyshire

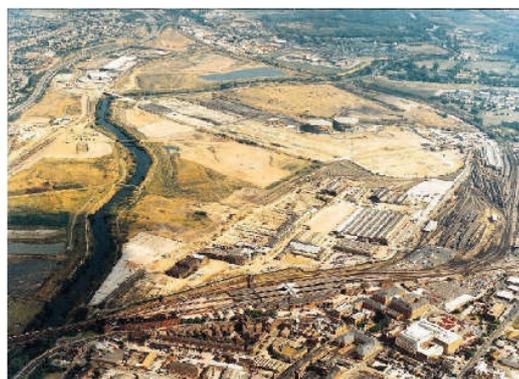
### A guide to submitting applications for land that may be contaminated



**Essential reading for landowners,  
consultants and applicants**

**Version 4 – March 2010**

**Produced by the Derbyshire  
Contaminated Land Sub-Group**





## 1.0 Introduction

For many years, government has recognised the need to reclaim and develop areas of land, which is a legacy of our industrial past. In 2000, the Government set a target that 60% of new housing should be built on previously developed land, with the aim of reducing the pressures on the development of green belt land.

Due to this Government initiative, local authorities in Derbyshire are dealing with an increasing number of planning applications for developments on previously used land. Many of these sites are affected by the presence of contamination due to previous industrial uses. Examples of industry types that are common throughout Derbyshire include tanneries, coal mining, former town gas sites, foundries, quarries and cottage industries such as textiles.

### 1.1 What is this document for?

The purpose of this guidance is to make developers aware of what information the Council will require in order to assess an application for planning permission on land which may be affected by the presence of contamination. This guide is not an exhaustive list of requirements, although it includes minimum requirements for investigations, reports etc, and developers are encouraged to speak with the contaminated land officer in the Council's environment health department.

## 2.0 The Council's approach

Under both environmental and planning legislation, landowners and developers have the responsibility for establishing the extent of any potentially harmful contaminants on their sites. All councils have a duty to ensure that landowners and developers carry out the necessary site investigations and, where applicable, ensure that landowners and developers devise suitable remediation strategies so that any contamination is dealt with in a responsible and effective manner. It is the responsibility of the developer to ensure that the site is suitable for its proposed use.

### 2.1 Liaison with the Council

When a developer is proposing to develop on land that may potentially be contaminated, it is advisable to contact the Council's contaminated land officer to discuss any land contamination issues prior to submitting a planning application. Advice will be given on the type of information that should be submitted with a planning application. Hopefully, this liaison should prevent any time delays or misunderstandings at a later stage in the development.

### 2.2 Definition of 'suitable for use'

Clean-up or remediation of contaminated sites must be carried out with due consideration to the risk posed by the site. UK policy is that sites should be remediated based on the suitable for use principle. This principle allows a decision to be made as to whether there are unacceptable risks to people or to specific parts of the wider environment, including property, from the actual or intended use of the site. Each case will be assessed on a site-specific basis. This risk assessment can then be used to determine the extent of the remedial works needed.

Within the suitable for use approach, the option is always open to the person responsible for a site to do more than would be enforced through regulatory action. Redevelopment of previously contaminated sites is encouraged since this lessens the need for development on greenfield or previously undeveloped land and improves the environment as a whole. Developers should not be put off remediation for fear that they will be required to do more

work that is required under current legislation – clean-up to residential development standards would not be required is an industrial development was proposed.

In the event that a more sensitive end use would be required in the future, more stringent controls would be applied at the time of the application and further remedial works may be required. Therefore some developers may choose to carry out further work at the start of a project as this may prove the most cost-effective long-term solution for the site. However, this is a judgement that only the person responsible for the site can make.

### 3.0 The site investigation procedure

The site investigation procedure will identify potential contamination and possible areas that may require remedial works in order to make a site suitable for its proposed end use. The site investigation can be split into three phases. The phases may be submitted individually as separate reports, or as one combined report. A checklist has been included in the centre of this document for your information and use. Reference should be made to CLR 11 – Model Procedures for the Management of Land Contamination before carrying out any phase of the site investigation procedure.

### 3.1 Minimum requirements for SDDC

In keeping with the guidelines for site investigations in CLR 11, South Derbyshire District Council's environmental health department has set minimum requirements for site investigation scheme, including procedures and reports. Boxes 1 to 4 below give these requirements, which form the detail to the standard planning condition attached to the grant of outline planning permission for developments on land that is potentially affected by contamination. Please note that schemes that do not fulfil each relevant requirement (i.e. as specified by the planning condition) without written dispensation from the LPA will not be considered sufficient to allow discharge of the planning condition to which they apply.

#### Box 1

The scheme shall include all of the following measures (phases I to III), unless the LPA dispenses with any such requirement specifically and in writing:

#### i) Desk study / phase I

A desk study shall be carried out to identify and evaluate all potential sources of contamination and the impacts on land and / or controlled waters, relevant to the site. The desktop study shall establish a 'conceptual site model' and identify all plausible pollutant linkages. Furthermore, the assessment shall set objectives for intrusive site investigation works / quantitative risk assessment (or state if none required). Two full copies of the desktop study and a non-technical summary shall be submitted to the LPA without delay upon completion.<sup>1</sup>

PLEASE NOTE: - SITECHECK REPORTS AND SIMILAR (SUCH AS HOMECHECK AND GROUNDSURE RESIDENTIAL SEARCHES), DO NOT SATISFY THE NEEDS OF CLR 11, MODEL PROCEDURES FOR THE MANAGEMENT OF LAND CONTAMINATION FOR THE PRODUCTION OF A PHASE I REPORT. THESE ARE CONVEYANCING REPORTS FOR PURCHASING PROPERTY AND ARE NOT DESIGNED FOR USE AS PART OF THE PROCESS OF DEVELOPING A SITE UNDER THE NEEDS OF PPS23. THE USE OF SUCH REPORTS WILL BE DISMISSED BY THE LPA AS BEING UNSUITABLE AND WILL NOT ALLOW DISCHARGE OF LAND CONTAMINATION CONDITIONS WITHOUT FURTHER WORKS BEING UNDERTAKEN. IF IN YOU ARE IN ANY DOUBT ABOUT THE WORK NEEDED OR ARE UNSURE PLEASE ASK THE LPA WHAT IS NEEDED BEFORE PURCHASING YOUR REPORT.

<sup>1</sup> Further detailed guidance on the information needs for preliminary risk assessment is given in CLR 11, Model Procedures for the Management of Land Contamination, pp.54-55.

## ii) Intrusive Site Investigation / phase II

If identified as being required following the completion of the desk study, an intrusive site investigation shall be carried out to fully and effectively characterise the nature and extent of any land contamination and / or pollution of controlled waters. It shall specifically include a risk assessment that adopts the contaminant-pathway-receptor principle, in order that any potential risks are adequately assessed taking into account the site's existing status and proposed new use. Where samples are taken they shall be analysed in a laboratory that is accredited under the MCERTS Chemical testing of Soil Scheme for all parameters requested (where this is available). Two full copies of the site investigation and findings shall be forwarded to the LPA without delay upon completion.<sup>2</sup>

## iii) Remediation method statement / phase III

A written method statement detailing the remediation requirements for land contamination and / or pollution of controlled waters affecting the site shall be submitted and approved by the LPA, and all requirements shall be implemented and completed to the satisfaction of the LPA. No deviation shall be made from this scheme without the express written agreement of the LPA.<sup>3</sup>

If during the development any contamination is identified that has not been considered in the remediation method statement, then additional remediation proposals for this material shall be submitted to the LPA for written approval. Any approved proposals shall thereafter form part of the remediation method statement.

Should soils require removal off site, as part of the on site remediation, appropriate methods of disposal must be undertaken and considered in the Remediation Method Statement. From 16<sup>th</sup> July 2005 Waste Acceptance Criteria (WAC) applies to all hazardous waste going to landfill. Where samples are taken for WAC analysis they shall be analysed in a lab that is accredited under the MCERTS chemical testing of soils scheme. Results of the WAC testing shall be forwarded into the LPA.

## Box 2

Prior to occupation of the development (or parts thereof) an independent verification report must be submitted demonstrating that the works have been carried out satisfactorily, and remediation targets have been achieved (pursuant to Box 1 parts ii and iii above only). This report shall be produced by a suitably qualified and accredited independent body (independent of the developer).

The report shall provide verification that the remediation works have been carried out in accordance with the approved method statement(s). Post remediation sampling and monitoring results shall be included in the report to demonstrate that the required remediation has been fully met.<sup>4</sup>

<sup>2</sup> Further guidance on preparation of site investigation reports for generic risk assessments is given in CLR 11, pp.71-72

<sup>3</sup> Further guidance on preparation of remediation strategy reports is given in CLR 11, p.120

<sup>4</sup> **A full checklist of items to include (as applicable) in the verification report can be found in CLR 11, pp 144-147. Additional detailed guidance on verification procedures and reports is provided by the Environment Agency in their draft [Verification for Remediation of Land Contamination](#).**

Box 3

In the event that it is proposed to import soil onto site in connection with the development, the proposed soil should be verified at source to establish suitability as clean cover. However, the soil must be tested for contamination in situ, after it has been imported and analysed in a laboratory that is accredited under the MCERTS Chemical testing of Soil Scheme, for all parameters requested (where this is available under MCERTS), the results of which shall be submitted to the LPA for consideration. As a minimum, the following determinands and parameters should be tested:

arsenic, boron, cadmium, chromium, copper, lead, mercury, nickel, selenium, zinc, cyanide, phenol, sulphate, sulphide, pH, speciated PAHs and carbon-banded TPHs.

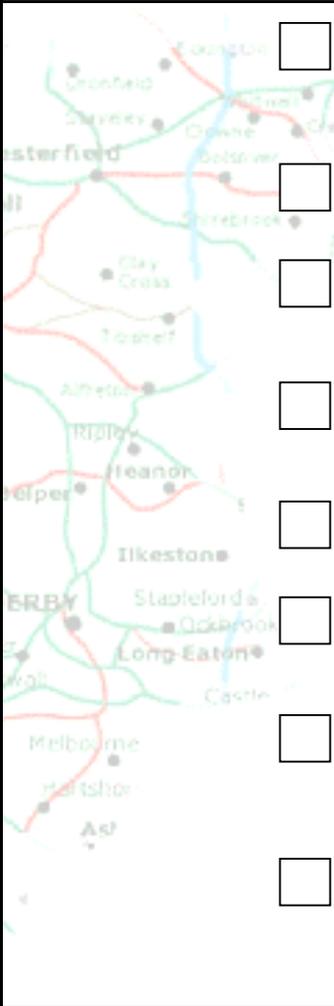
Please note that vendor certificates of the physical and nutrient properties of the matrix are not accepted in place of actual in situ sampling of the soil for the appropriate physico-chemical properties.

Box 4

Monitoring at the site for the presence of ground or landfill gas (as appropriate) and a subsequent risk assessment must be carried out in accordance with a scheme to be agreed with the LPA. All gas monitoring must comply with best practice as described in CIRIA C665, Assessing risks posed by hazardous gases to buildings. The results of the monitoring shall be submitted to the LPA as soon as they are available.

If the presence of ground / landfill gas is confirmed, or there is evidence that migration of ground / landfill gas is likely to occur, development shall not commence until satisfactory remedial measures have been taken to control and manage the gas and to monitor the effectiveness of these measures. All such measures shall be agreed in writing by the LPA before development.

1. <u>Phase I Reports &amp; Desktop Study</u> (submit for approval prior to development works)	Included?
<ul style="list-style-type: none"> <li>• Purpose and aims of study</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Site location and layout plans (appropriately scaled and annotated)</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Appraisal of site history</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Appraisal of site walkover survey</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Assessment of environmental setting, to include:</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>❖ Geology, hydrogeology, hydrology</li> </ul> </li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>❖ Information on coal workings &amp; other mining or quarrying activity (if appropriate)</li> </ul> </li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>❖ Information from Environment Agency on abstractions, pollution incidents, water quality classification, landfill sites within 250m etc</li> </ul> </li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Assessment of current / proposed site use and surrounding land uses</li> </ul>	<input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Review of any previous site contamination studies (desk based or intrusive) or remediation works</li> </ul>	<input type="checkbox"/>

<ul style="list-style-type: none"> <li>• Preliminary risk assessment, based on proposed development, to include: <ul style="list-style-type: none"> <li>❖ Appraisal of potential and actual contaminant sources, pathways, and receptors (pollutant linkages)</li> <li>❖ Conceptual site model (diagrammatic &amp; written)</li> </ul> </li> <li>• Recommendations for intrusive contamination investigation (if necessary) to include: <ul style="list-style-type: none"> <li>❖ Identification of target areas for more detailed investigation</li> <li>❖ Rationale behind design of detailed investigation</li> </ul> </li> </ul>	<input type="checkbox"/>  <input type="checkbox"/>  <input type="checkbox"/>  <input type="checkbox"/>
<p>2. <u>Phase II Reports - Detailed Investigation Reports</u> (submit for approval prior to development works)</p>	<p>Included?</p>
<ul style="list-style-type: none"> <li>• Review of any previous site investigation contamination studies (desk-based or intrusive) or remediation works</li> <li>• Site investigation methodology, to include: <ul style="list-style-type: none"> <li>❖ justification of exploration sampling and analytical strategies</li> <li>❖ Plan showing exploration locations, on site structures, above/below ground storage tanks etc, and to be appropriately scaled and annotated</li> <li>❖ Borehole / trial pit logs locations</li> </ul> </li> <li>• Results and findings of site investigation, to include: <ul style="list-style-type: none"> <li>❖ Ground conditions (soil, gas and water regimes, including made ground)</li> <li>❖ Discussion of soil/gas/surface water contamination (visual, olfactory, analytical &amp; monitoring data)</li> </ul> </li> <li>• Conceptual site model (diagrammatic &amp; written) including any changes from Phase I</li> <li>• Risk assessment based on contaminant source-pathway-receptor model (to assess the consequences and likelihood of occurrence).</li> </ul>	 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<ul style="list-style-type: none"> <li>• Details of the site specific risk assessment model used and the justification in its selection and use should be stated</li> <li>• Recommendations for remediation should follow the "suitable for use" approach - based both on the current use, circumstances of the land and the proposed site end use.</li> <li>• Recommendations for further investigation if necessary</li> </ul>	<input type="checkbox"/>  <input type="checkbox"/>  <input type="checkbox"/>
<p>3. <u>Phase III Reports - Remediation</u></p>	<p>Included?</p>



- Confirmation that remediation objectives have been met



## Recommended Guidance

- Assessing risks posed by hazardous ground gases to buildings. CIRIA C665, 2007.
- BS10175: 2001 Investigation of potentially contaminated sites, Code of Practice
- Classification and selection of remedial methods, CIRIA, Volume 4, 1995 (SP104)
- Construction of new buildings on gas contaminated land, BRE, 1991.
- Contaminated Land Exposure Assessment Model (CLEA), DEFRA/EA 2009 onwards
- Human Health Toxicological Assessment of Contaminants in Soil, Science Report Final SC050021/SR2 DEFRA/EA, January 2009
- Updated Technical Background to the CLEA Model, Science Report Final SC050021/SR3 DEFRA/EA, January 2009
- CLR 11: Model Procedures for the Management of Land Contamination, DEFRA / EA, 2004
- Department of the Environment, Industry Profiles, 1995.
- Guidance for safe development of housing on land affected by contamination EA / NHBC R&D Publication 66
- Guidance on evaluation of development proposals on sites where methane and carbon dioxide are present. NHBC & RSK, March 2007.
- Methodology for the Derivation of Remedial Targets for Soil and Groundwater to Protect Water Resources, R&D Publication 20, EA 2001
- Planning Policy Statement 23, Planning and Pollution Control. Office of the Deputy Prime Minister (2004) HMSO
- Protection of Workers and the General Public During the Development of Contaminated Land HMSO 1991
- Remedial engineering for closed landfill sites, CIRIA, C557, 2001.
- R&D Publications: TOX reports, DEFRA/EA, 2009 onwards.
- Secondary Model Procedures for the development of appropriate soil sampling strategies for land contamination, R&D P5-066/TR, EA 2000
- Site Investigation and Risk Assessment, CIRIA, Special Publication, Volume 3, 1995, (SP103).
- Soil Guidelines Values (SGVs), DEFRA/EA, 2009 onwards

## Useful web sites

[www.ambervalley.gov.uk](http://www.ambervalley.gov.uk)  
[www.bolsover.gov.uk](http://www.bolsover.gov.uk)  
[www.chesterfieldbc.gov.uk](http://www.chesterfieldbc.gov.uk)

[www.environment-agency.gov.uk](http://www.environment-agency.gov.uk)  
<http://www.communities.gov.uk/>  
[www.defra.gov.uk](http://www.defra.gov.uk)

[www.derby.gov.uk](http://www.derby.gov.uk)  
[www.derbyshiredales.gov.uk](http://www.derbyshiredales.gov.uk)  
[www.erewash.gov.uk](http://www.erewash.gov.uk)  
[www.highpeak.gov.uk](http://www.highpeak.gov.uk)  
[www.ne-derbyshire.gov.uk](http://www.ne-derbyshire.gov.uk)  
[www.south-derbys.gov.uk](http://www.south-derbys.gov.uk)

[www.cieh.org](http://www.cieh.org)  
[www.lga.gov.uk](http://www.lga.gov.uk)  
[www.ciria.org.uk](http://www.ciria.org.uk)  
[www.bre.co.uk](http://www.bre.co.uk)  
[www.bsi-global.com](http://www.bsi-global.com)  
[www.english-heritage.org.uk](http://www.english-heritage.org.uk)



# Useful Contacts

 <b>AMBER VALLEY BOROUGH COUNCIL</b>	Amber Valley Borough Council	Tel 01773 570222 Fax 01773 841407	 <b>High Peak Borough Council</b>	High Peak Borough Council	Tel 0845 129 77 77 Fax 01298 27639
 <b>Bolsover District Council</b>	Bolsover District Council	Tel 01246 242424 Fax 01246 242423	 <b>North East Derbyshire District Council</b>	North East Derbyshire District Council	Tel 01246 231111 Fax 01246 217447
 <b>Chesterfield BOROUGH COUNCIL</b>	Chesterfield Borough Council	Tel 01246 345767 Fax 01246 345760	 <b>SOUTH DERBYSHIRE DISTRICT COUNCIL</b>	South Derbyshire District Council	Tel 01283 221000 Fax 01283 595855
 <b>DERBY CITY COUNCIL</b>	Derby City Council	Tel 01332 716332 Fax 01332 716330	 <b>DERBYSHIRE County Council</b>	Derbyshire County Council	Tel 0845 6058 058 Fax 01629 585279
 <b>DERBYSHIRE DALES DISTRICT COUNCIL</b>	Derbyshire Dales District Council	Tel 01629 761212 Fax 01629 761165	 <b>Environment Agency</b>	Environment Agency	Tel 0845 9333 111
 <b>EREWASH BOROUGH COUNCIL</b>	Erewash Borough Council	Tel 01159 072244 Fax 01159 316079	 <b>DEFRA – Department for the Environment, Food and Rural Affairs</b>	DEFRA – Department for the Environment, Food and Rural Affairs	Tel 0845 933 55 77

