



## **Contaminated Land and Planning Process**

### **Phase I (Desk Study)**

A Phase I investigation, also known as a desk study, is required when there is the possibility for contamination to exist. This could be due to some previous use of the site for an industrial purpose, e.g. steel manufacturing, petrol station, or the presence of elevated levels of a naturally occurring contaminant, e.g. arsenic, land gas such as methane. The potential for contamination to be present may not always come from the site itself. There may have been an industry on the adjacent land or in the vicinity, which may have possibly impacted the site. There is also the potential for contamination from a greater distance to impact a site, for example, a former landfill site or area of infilled ground may produce landfill gases, which can travel through the ground for hundreds of metres.

A Phase I investigation should identify all the potential sources of contamination that could impact the site as well as a number of other factors which are listed below. A conceptual model is created which is modified throughout the stages of investigation as more information is found. The Phase I report will include a preliminary risk assessment of the site and decide whether further investigation is required.

This leaflet outlines what should be included as a minimum when compiling a Phase I report whilst also giving guidance on possible sources of information. Although this leaflet provides information of what is expected, it is not the intention of the Council to provide a prescriptive methodology for any part of a site investigation undertaken within the planning process. The Council does welcome the opportunity to provide any comments on site investigation proposals prior to work commencing.

Developers need to research the history of their site to ascertain whether there have been any previous uses of their site or the surrounding area, which could give rise to contamination. If such uses have been present then a Phase I report is required to be submitted with the planning application.

As a minimum the Phase I should include the following:

1. The objectives of the investigation – what the investigation intends to address.
2. Site history, historical and present uses of the site and the surrounding area including analysis of historical and present day maps. Historical maps can be accessed through local libraries and the local archivist.
3. Waste disposal activities, details of any landfill sites whether licensed or otherwise within the vicinity of the site. Information can be obtained from your local Council and the Environment Agency regarding landfill sites.

4. Geological information to identify the solid and drift geology of the site and surrounding area.
5. Hydrogeological information including the groundwater vulnerability and depth/direction if known.
6. Conceptual Model detailing the potential sources, pathways and receptors, i.e. the potential pollutant linkages. A conceptual model can either be a textual or diagrammatic format or a combination of both. The conceptual model is updated throughout the phases of the investigation.
  - a) Sources – Potential sources can be identified through analysis of maps and trade records, etc, and the potential contaminants of concern can be found by consulting Department of Environment (DoE) Industry Profiles, etc. The DoE profiles detail the most likely contaminants to be associated with various industries.
  - b) Pathways – Pathways are the routes by which a contaminant can reach a receptor, e.g. contaminants in the soil can be up-taken by plants that can then be consumed by humans. Potential pathways are outlined in CLR 10 and an assessment of the ground and the surrounding area should identify which pathways are potentially available.
  - c) Receptors – Consideration is required for all statutory receptors, namely human beings, controlled waters, ecological systems, property in the form of crops and livestock and property in the form of buildings.
7. Any pertinent information from local authority records, information on licences from the Environment Agency, etc. This could include, for example, any discharge consents, waste disposal activities etc.
8. Anecdotal information including the information obtained from the site history. Information from previous residents, workers, etc.
9. Information on any previous investigations. Details of the purpose of any investigations undertaken and the conclusions and recommendations.
10. Information from the site walkover. This should be undertaken after the rest of the information has been collated so that it can be used to confirm the findings of the research. Also the site walkover enables any additional information about the site, such as features not shown on Ordnance Survey maps, to be identified. A check can be made for any visual or olfactory signs of contamination, e.g. staining of the ground, disturbed areas, vegetation dieback, unusual odours etc. There may also be aspects concerning the site that were not obvious from the research but visible when on site, photographs of the site are often useful too. It is helpful, where possible, to have someone who is familiar with the site present. The walkover can also aid in designing the Phase II investigation, e.g. identify any access constraints, overhead power cables etc.
11. Information on any previous investigations. Details of the purpose of any investigations undertaken and the conclusions and recommendations.
12. Information from the site walkover. This should be undertaken after the rest of the information has been collated so that it can be used to confirm the findings of the research. Also the site walkover enables any additional information about the site, such as features not shown on Ordnance Survey maps, to be identified. A check can be made for any visual or olfactory signs of contamination, e.g. staining of the ground, disturbed areas, vegetation dieback, unusual odours etc.

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The report should include the conclusions and recommendations from the investigation. It should clearly state whether any further investigation is required and may include the proposals for the next stage of the investigation. Where further investigation is required a Phase II study is required. All contaminated land site investigations must adhere to BS 10175:2001 and the relevant CLR guidance

### **Discharge of Conditions**

Where contaminated land conditions are applied to a planning consent they will be specific to each phase of an investigation. This then allows the relevant conditions to be discharged as the phases of investigation are satisfactorily completed. The condition relating to remediation and validation will not be discharged until all satisfactory information has been received by the Council including any long term monitoring reports required.

Further useful information regarding contaminated land can be found on the following websites:

[www.defra.gov.uk/environment/land/contaminated/index.htm](http://www.defra.gov.uk/environment/land/contaminated/index.htm)

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

The Council's Contaminated Land Team can be contacted at:  
Regulatory Services Tedder Hall Manby Louth LN11 8UP

Tel: 01507601111 Fax: 01507328412

E-mail: [Environmental.Protection@e-lindsey.gov.uk](mailto:Environmental.Protection@e-lindsey.gov.uk)