

DEVELOPMENT ON POTENTIALLY CONTAMINATED LAND



E N V I R O N M E N T A L S E R V I C E S

Aim

This guidance note is to assist developers, agents and consultants involved in developments where planning permission is required and contaminated land a consideration.

Contaminated land assessments may be required at the application stage, perhaps after pre-application discussions, or in response to a planning condition, once permission has been granted. This guidance is to help ensure the assessment and subsequent reports cover all the essential points and reduce the need for additional site investigation, other site work or correspondence.

It is important that confidence can be assigned to site assessments and remediation schemes. A documented assessment of land contamination and all actions taken will assist regulators and ensure that any future enquiries regarding the site can be answered effectively. This will maintain public confidence when redeveloped brownfield sites are marketed. The guide does not form part of any planning permission or application and is for information purposes only.

Introduction

Local Planning Authorities routinely receive planning applications for developments on previously used, or brownfield, sites where the potential for land contamination exists. This leaflet is designed to assist developers, agents and consultants deal with the planning issues associated with re-development of such sites. It is not intended to provide comprehensive guidance to dealing with all contaminated land issues and consideration should be given to the references enclosed.

Land may be affected by contamination as a result of historical land use, principally from industrial processes, waste disposal and accidental spillages. Land contamination may also be arising from natural processes, such as where local geologic structures contain naturally high levels of metals, or an increased potential for ground gas due to the presence of peat. If land contamination is not dealt with adequately it can pose risks to human health, the environment and sustainable economic development.

The National Planning Policy Framework (CLG, 2012) recognises land contamination as a material planning consideration, with the planning system required to prevent both new and existing development from contributing to unacceptable risks posed from contamination. While the development phase is the most cost effective time to deal with the problem it remains the developer's responsibility to ensure that the development is safe and suitable for its intended use.

Where a proposed site is potentially impacted by suspected contamination Local Planning Authorities (LPA) will require information about land contamination, to support the application. In such cases you are advised to contact your LPA in advance to ascertain their information requirements in this regard.

Planning approvals given to sensitive developments on brownfield sites normally have conditions attached requiring an assessment of land contamination and in some instances conditions may be applied where there are a large number of sensitive developments proposed, regardless of whether there is any known or suspected contamination. In all cases, adequate site investigation information is required by the LPA, to be completed by a competent person.

It is the LPA duty to ensure that the developer undertakes this assessment and implements any remedial requirements in a responsible and effective manner. After remediation, as a minimum, land should not be capable of being determined as contaminated land under Part 2A of the Environmental Protection Act 1990. Failure by the developer to appropriately address risks from land affected by contamination at the time of development may result in later action being taken by the Council against the developer under Part 2A of the Environmental Protection Act 1990.

Developers are reminded that impacts of land contamination on controlled waters, ecosystems, property, and human health, are required to be considered as part of the development control process. Therefore, submissions of information should include assessment of impacts of land contamination on these receptors where necessary.

The Building Regulations 2010 Approved Document C gives Building Control Officers the authority to address contamination and land gas / vapour issues within the curtilage of the property. The developer must demonstrate when requesting Building Control approval that hazards from contaminants or elevated ground gases have been properly assessed and measures have been put in place to address all identified risks.

In addition to the above legislation developers will also need to consider the welfare of construction workers operating in potentially contaminated sites and the management of potentially contaminated waste spoil.

Pre-application consultation or advice

When considering development on land that may be affected by land contamination we recommend that applicants speak to the local EH team at the soonest opportunity. In most cases applicants will have initially spoken to the council's development control team about their application. Applicants may then be referred to the EH/EP environmental protection team for a more detailed pre-application discussion about the potential for contaminated land.

If you think your proposal is particularly sensitive to contamination or there is evidence of contamination on the site you should contact the environmental health team. This is an opportunity to outline the proposed development and any contaminated land concerns that you or the council can identify.

Experience has shown that when site investigation/assessments are not carried out in a timely manner during the project design process, problems can often occur. For example the conclusions of the land contamination assessment may require specific foundation and floor designs to be implemented to mitigate land contamination, if detailed building designs have already been drawn up these can be difficult to alter or amend cost effectively to mitigate contamination. Alternatively, the opportunity to minimise on remediation costs can be missed, for example, land contamination assessment may indicate the best layout options to reduce remedial costs, or to maximise the opportunity for a sustainable development.

Environmental Impact Assessments

An Environmental Impact Assessment (EIA) is required for application for developments which are large, complex, and potentially intrusive and are likely to have significant environmental effects. An EIA ensures that the likely environmental effects (including contaminated land) of a new development are understood and taken into account before the development goes ahead.

The requirement for EIAs is set out in Town and Country Planning (Environmental Impact Assessment (England and Wales) Regulations) 1999, as amended. In the regulations two schedules set out the types of development for which an EIA is required:

Schedule 1 proposals, which must always have an EIA, include developments such as power stations, industrial developments, airports, long distance railway lines, major roads, waste disposal incinerators.

Schedule 2 projects of a certain scale, or in sensitive areas, include developments such as agricultural, industrial and other production and processing industries; extractive, mineral, chemical, food and energy industries and infrastructure. Proposals of this type which meet the threshold criteria must also be accompanied by an EIA.

Selecting a consultant

It is important to engage an appropriately qualified consultant to undertake a desk-top study or site investigation, as the council may not accept reports if produced incorrectly. There are a growing number of consultants registered as Specialists in Contaminated Land (SiLC). A SiLC registration is not compulsory, but the person or organisation carrying out site investigations must have experience, qualifications and skills relevant to the site under investigation and, as a minimum, meet the following criteria:

- Be considered a 'competent person' – such as an environmental scientist, chemist or hydrogeologist
- Belong to an accredited body or be able to demonstrate that they operate within a quality assurance system
- Must use an MCERTS (where possible) accredited and quality assured laboratory to analyse samples and prepare conclusive reports
- Be aware of current legislative requirements including health and safety and the relevant codes of practice
- Be able to carry out risk management assessments and produce clear reports on the findings
- Must have, and maintain appropriate, professional indemnity insurance

Where contaminated land issues are considered particularly complex, involving many different contaminant linkages, the developer is advised to employ a SiLC registered consultant to ensure risks to receptors are appropriately removed.

The 'phased' approach to investigation

A phased investigation allows the results of each stage to be scrutinised and used to devise the next phase of work. **The developer is strongly encouraged to submit each phase of the investigation separately to the LPA for approval and at the earliest opportunity.** This helps prevent avoidable delays and may indicate a full intrusive investigation is not required, thus avoiding unnecessary works and costs. However, where there is clear evidence that contamination is likely to be impacting the site the developer may choose to begin the phased approach with an intrusive site investigation.

All works must be undertaken by a suitably qualified person who can demonstrate that they possess the knowledge, skills and experience necessary to undertake all parts of a contaminated land investigation. All investigations, as part of a phased approach to dealing with potential contaminated land, should follow:-

- the risk management framework outlined in 'CLR 11 - Model procedures for the Management of Land Contamination' (2004), and
- the latest best practice for site investigations, as outlined in 'BS10175:2011 Investigation of potentially contaminated sites – Code of practice' (2011)
- the NHBC, EA and CIEH publication 'Guidance for the Safe Development of Housing on Land affected by Contamination' (2008)

Where ground gas has been identified as a potential concern, the following guidance should also be referenced:-

- CIRIA C665 'Assessing risks posed by hazardous ground gases to buildings' (2007)
- BS8576:2013 Guidance on investigations for ground gases – Permanent gases and Volatile Organic Compounds (VOCs) (2013)

It should be noted that even where an appropriate site investigation has been undertaken, there remains the possibility of discrete pockets of contamination remaining undiscovered throughout the investigation & assessment process.

Should unsuspected contamination be discovered at any stage during development developers are strongly encouraged to consult with the LPA (and the Environment Agency where appropriate). Given the possibility of unsuspected contamination being discovered the LPA may take the decision to condition for this potential outcome. If applied, this condition will outline the measures required to be undertaken in the event of discovery of previously unidentified contamination.

Underpinning any phase of investigation is the Conceptual Site Model (CSM). For an example see Appendix I. **The CSM is to be included as part of any submitted report outlining each separate phase of investigation.** As well as listing all suspected sources of contamination, receptors and the pathways linking contaminants to receptors, it should also describe any uncertainties.

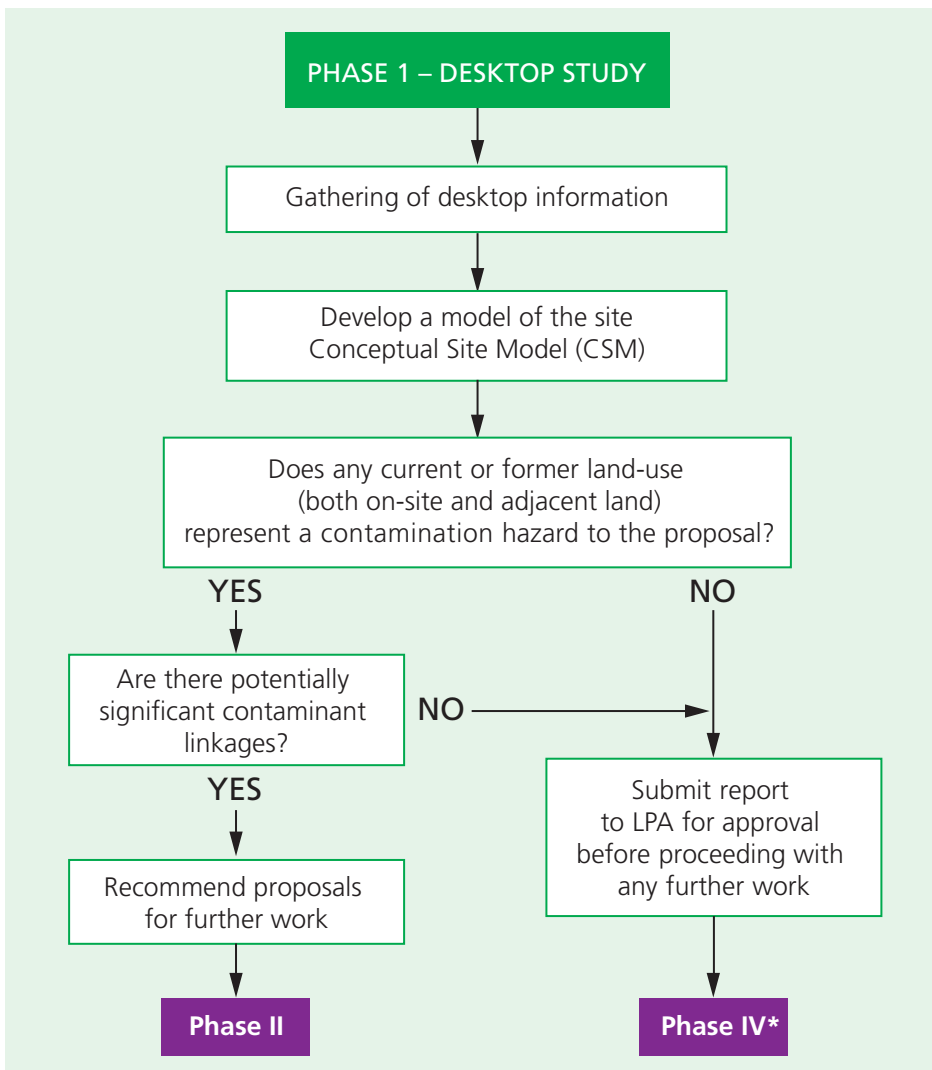
Where a submitted report is considered out of date by the Environmental Health department, the developer will be asked to submit additional information which describes land use from the date of the report to the present.

The process to assess and manage ground conditions can be divided into four key steps (or phases), each step is outlined in the following pages with a procedural flowchart summarising the key elements and decision points within each stage.

Desktop Study - Phase I Assessment

Desktop study, site walkover and qualitative risk assessment

Phase 1a is a desktop study which is used to identify the potential risks to receptors that may affect a development and must recognise the influence of surrounding land and historic land-use. Phase 1b includes limited soil sampling to further inform the Conceptual Site Model on the likelihood of unacceptable risks existing on the site.



*While no contaminants have been identified, should there be a requirement for importation of soil, validation of the imported soil will be required.

It is strongly recommended that a Desktop Study Report is submitted as a minimum with your planning application should the land be suspected of being contaminated and/or if the proposed land use is considered sensitive to contamination.

Land uses considered sensitive to contamination include:

- Residential
- Schools
- Nurseries
- allotments

The minimum requirements to be included in a **signed and dated** desktop study are:

- Site description, including information on location and site plan;
- Land use history, including planning history and inspection of historical maps identifying former industrial/commercial uses and other potential contaminating features;
- Environmental information, including details of hydrology, geology, hydrogeology and any soil classifications and any water abstraction points and areas of ecological interest;
- Details of any previous site investigations;
- A site reconnaissance survey including details of services on site and photographs (date stamped) – see checklist in Appendix II;
- Identification of potential contaminants of concern and source areas;
- Identification of any man made pollution pathways e.g. underground services;
- Consultations with the EA, LA or other appropriate bodies;
- Preliminary CSM, including details of any receptors, pathways and likely contamination, potential contaminant linkages and any uncertainties regarding potential contamination issues on site;
- Preliminary risk assessment, based on the conceptual site model, identifying any unacceptable risks;
- Recommendations for any future site works required for improving the condition of the land.

Land contamination is not exclusively associated with major industrial processes or waste disposal. Careful consideration must be given to a site's potential to be contaminated. Naturally occurring substances, informal uses and minor ancillary activities may all impact on soil quality.

Preliminary Conceptual Site Model

Where contaminants are known, or suspected to exist, the potential/actual risks need to be identified by means of a preliminary CSM. This can be provided in a written format, but for more complex sites it is recommended that the CSM is presented additionally in a diagrammatic or cross sectional format. This should identify all the likely 'source pathway receptor' routes applicable to the proposal, as well as any potential contaminant linkages, their level of significance, as well as a list all unknowns and assumptions which have been made. This should then act as the basis for the formulation of a sampling strategy in the site investigation.

Developers should be aware that this approach is in accordance with Statutory Guidance on Contaminated Land (DEFRA, 2012).

Conclusions and Recommendations

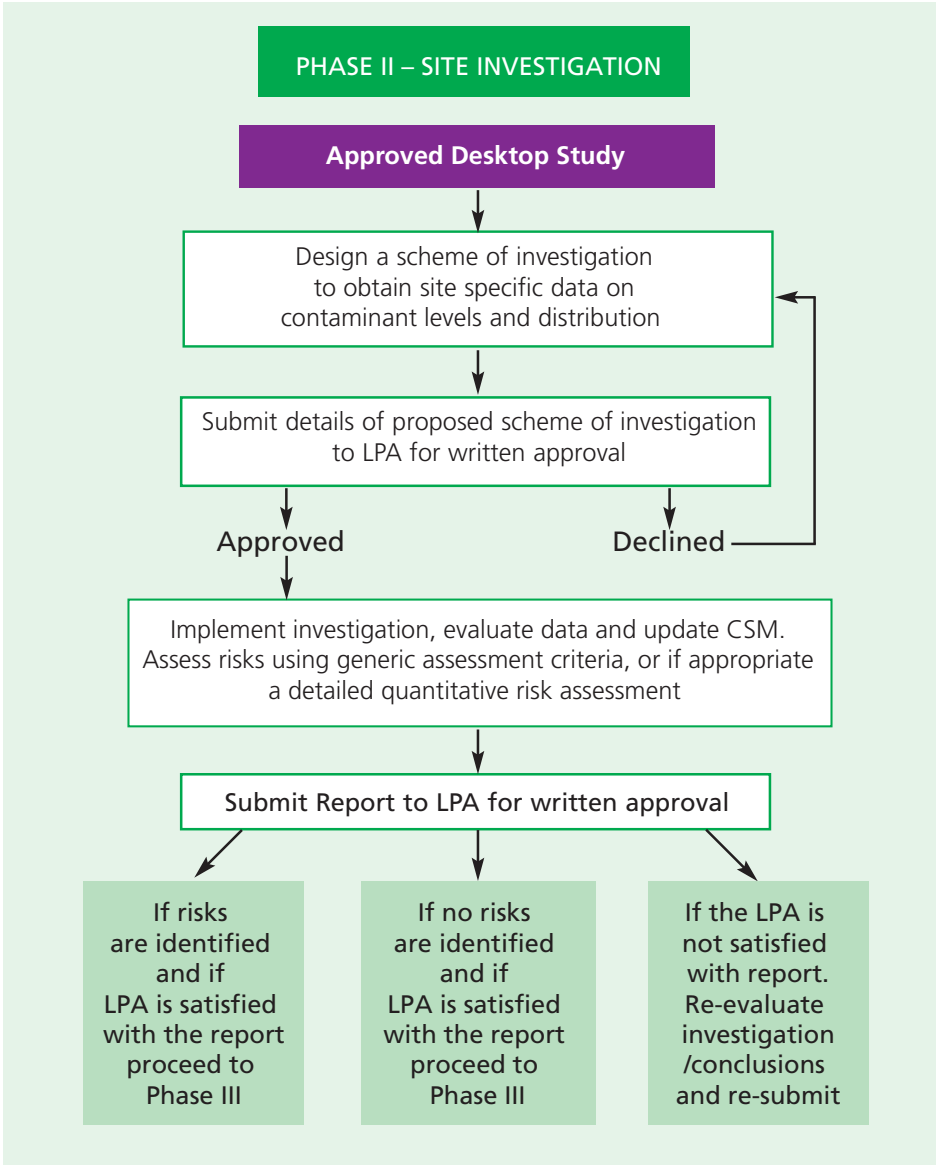
The report should conclude with a preliminary risk assessment, listing any risks identified, and recommend what further work is required to validate or quantify such risks. If additional site investigation work is recommended a sampling plan should be submitted to the LPA for approval prior to the commencement of any intrusive works.

Where it is necessary to confirm the likelihood of a contaminant linkage established during the desk top study, the investigator should consider undertaking a Phase 1b investigation involving limited sampling on site.

Site Investigation - Phase II Assessment

Detailed intrusive investigation and risk assessment

The site investigation assessment will confirm site specific conditions, such as geology, hydrology and hydrogeology, which were identified during the desktop study.



The investigation should obtain representative soil, ground gas and water samples where appropriate, for analysis, the results of which should feed into the risk assessment process.

The minimum requirements of a signed and dated site investigation report are:

- Aims and objectives;
- Reference to the desktop study and preliminary conceptual model;
- Consideration of proposed development;
- Site plan prior to development;
- Plan of proposed site layout following development;
- Details of a site sampling strategy, including details of any gas or groundwater monitoring. Justification for methods employed, linked back to the Phase I preliminary CSM;
- Details of the analytical strategy, including justification for the number of samples to be analysed and for which chemical parameters;
- Plans marking the location of sample points ;
- Details of laboratory analysis, including methodology, results, accreditation and quality control procedures adhered to;
- Methodology by which the samples are collected, stored and preserved;
- Information/logs collated from intrusive trial pits, borehole logs, etc;
- Interpretation of the site conditions and sampling results;
- Details of any further monitoring proposed;
- A discussion of the sampling results kept within the context of the CSM;
- Comparison of sample results to acceptable generic risk screening values or site specific criteria;
- Updated CSM
- Suitable Risk Assessment,
- Discussion, conclusions and recommendations for any further work

Ground Gas and Vapours

Ground gas, in particular methane and carbon dioxide, and vapours (such as on petrol filling stations) are an important consideration and monitoring must be carried out in accordance with best practice, i.e. CIRIA C665 (2007) and BS8576 (2013). Levels can vary greatly, affected by atmospheric pressure, temperature, ground water levels etc. Where gas monitoring is required results should include monitoring under worse case situations, i.e. during periods of low/falling atmospheric pressure. If the desktop study identifies a potential ground gas source, between 3 and 12 months of monitoring data may be required to confidently characterise the gas regime. Therefore, it is essential that sufficient time is made available to monitor ground gases properly and the LPA is consulted at the earliest opportunity.

Groundwater

Contaminated groundwater can both, pose a risk to the human health receptor, while also contributing to the mobilisation & migration of contamination present within the soil profile. Groundwater conditions can vary significantly in response to seasonal weather patterns. Adequate timescales should therefore be allowed to ensure risks are sufficiently well characterised.

Laboratory Analysis

Test methods should be UKAS accredited, and MCERTS accredited where possible. Results should be accompanied with the methods used with an estimate of bias and precision.

Sampling Strategy

The site investigation report should always include a written sampling strategy. It should be linked back to the uncertainties identified in the preliminary conceptual model of the desktop study.

It should include:

- Number of sampling points, with justification.
- Sampling depths at each location to reflect receptors of concern and sources of potential contamination, e.g. underground storage tanks.

Samples should be taken throughout the soil profile and where any obvious signs of contamination are apparent. Despite being withdrawn, until an appropriate substitute document is available, continued reference should be made to CLR4 (DoE, 1994) for assessment of number of samples required for a given area of land. Further guidance on sampling generally is available from the Environment Agency (EA, 2000).

The LPA strongly recommends the developer consults with the Environmental Health department prior to implementing its sampling strategy.

Data Evaluation

It is often assumed that the results obtained from sampling are representative of the actual ground conditions. This is not always the case due to variations in the site and uncertainties in the measurement. To ensure confidence in the decisions made it is essential that the soil sampling strategy is appropriate and that the data is adequately evaluated. This may include the use of statistical tests where sampling is non-targeted. Statistical testing should be performed in accordance with best practice, i.e. Guidance on Comparing Soil Contamination Data with a Critical Concentration, CLAIRE (2008).

Risk Assessment

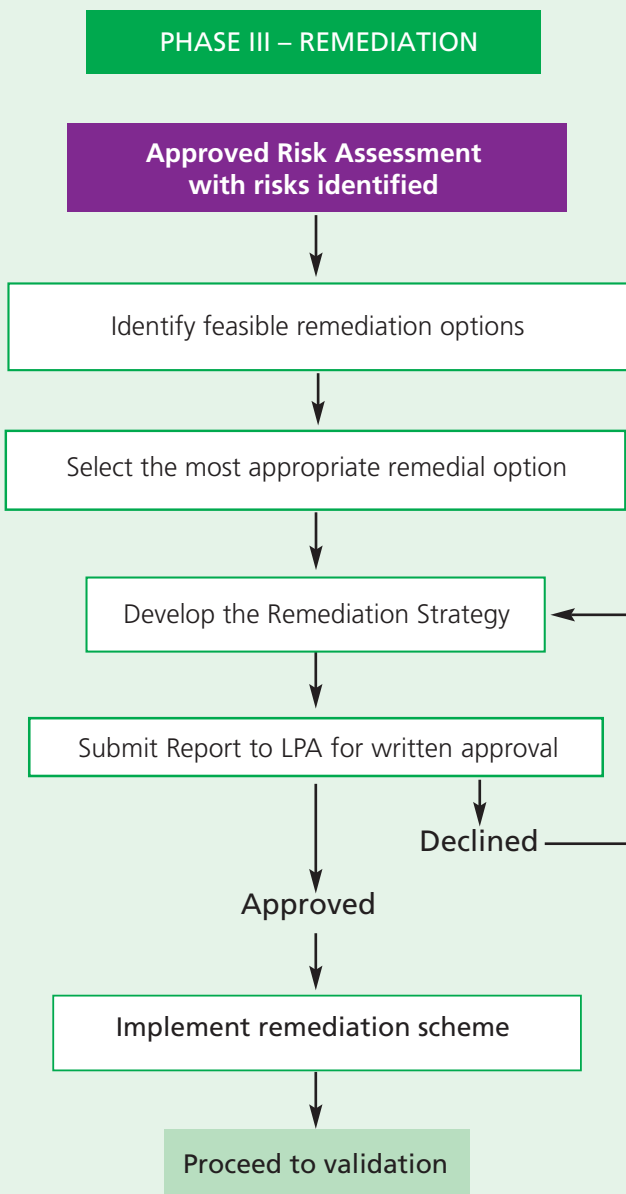
All decisions regarding land contamination are based on risk and the assessment of that risk. Where quantitative site data is available two types of risk assessment can be used:-

- Generic Assessment Criteria (GAC). These are “guidance values” determined using standardised exposure scenarios. To be appropriate GAC must reflect the “real life” on-site scenario and be developed according to UK policy decisions. The revised EA Soil Guideline Values (SGVs) have been provided specifically for the UK, but currently only include a few key contaminants. The GACs produced by LQM/CIEH provide additional guideline values for a wide range of other inorganic and organic contaminants and have been produced in same manner as the EA SGVs. Other GACs include the American USEPA Soil Screening Levels (SSL) and the Dutch Serious Risk Concentrations (SRC), but where other values are used it is important that their applicability is justified. Where possible, UK derived guideline values should be used.
- Detailed Quantitative Risk Assessment (DQRA). If generic guidelines are not available or are inappropriate it may be necessary to generate site specific criteria. Such criteria require evaluation of specific Health Criteria Values appropriate to the contaminant concerned. The Environment Agency (EA) has updated and replaced its toxicological framework document that describes how the toxicity of chemical soil contaminants are assessed (previously published in 2002 as R&D Publication CLR9) to incorporate the changes proposed by DEFRA, and to provide more detailed guidance on chemical risk assessment (EA, 2009).
- Values derived from DQRA must be able to demonstrate transparency in the procedures used, evidence of sound science and clarity in the assumptions made. Due to the complicated nature of this process it is essential that prior consultation takes place with the LPA.

It should be noted that DEFRA has withdrawn the ICRL Guidance Note 59/83 2nd Edition 1987; the trigger values contained within the report are no longer considered to be “appropriate, authoritative and scientifically based guidelines” and are not consistent with the new approach to risk assessment for human health. **Therefore, the LPA will not accept ICRL trigger values used for the purposes of risk screening for human health.**

Remediation Strategy - Phase III

Development and implementation of a remediation strategy



Remediation refers to any works undertaken for the purpose of reducing the concentration of contamination within soils or groundwater, reducing the mobility of contamination, or providing a barrier between contamination and a sensitive receptor (sometimes referred to as 'risk mitigation works'). A remediation strategy need only be completed where unacceptable risks have been identified as existing, or likely.

The design of the remediation strategy should consider the results from the previous two phases of investigation and consider the proposed use/layout of the development.

The purpose of this stage is to consider the risks and design measures to reduce the risks to a level appropriate for the intended development.

The minimum requirements to be included in a **signed and dated** remediation strategy are:

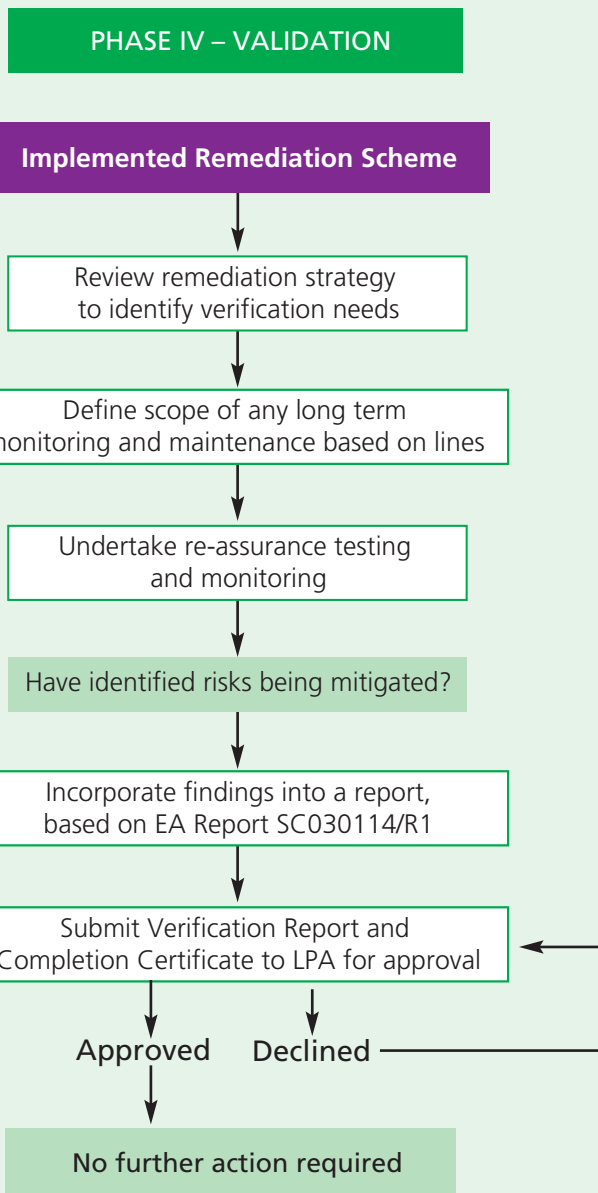
- Reference to the risks identified in the previous investigations
- Reference to the nature and layout of the proposed development
- Description of the proposed remediation and how it will remove the identified contaminant linkages identified in the CSM
- Method statements for the proposed works
- Specifications of proposed materials to be used, where required, e.g. gas membrane, imported top soil
- Calculations, where required, e.g. depth of clean cover used
- If remediation will attempt to reduce the concentration of contaminants on site then details of the intended target values must be submitted and agreed
- Identify monitoring and maintenance programmes required post completion

Required Output

Presentation of a remediation strategy should be submitted to the LPA for approval. Details presented should contain the above listed requirements and should be specific to the development. Where the remediation strategy has been reproduced as a part of a site investigation report please note that amendments maybe required should further investigative works be deemed necessary by the LPA.

Validation - Phase IV

Validation and Completion



No site investigation can guarantee to identify all contamination hazards, therefore, it is essential that other evidence acquired during the project is used to review earlier assumptions and validate the conclusions made. For example,

- Where the desktop study indicates no suspected hazards this can be substantiated with information gathered from geotechnical investigations. This exercise can be extended to include reassurance testing of imported soils on particularly sensitive developments, or where the desk study has been inconclusive.
- Throughout all ground works evidence of contamination must be recorded, monitored and appropriately managed to the satisfaction of the LPA.

Where potential risks have been identified on site it may be necessary to undertake a programme of monitoring after development. This monitoring scheme and subsequent findings must meet the LPA's satisfaction before the discharge of any related planning conditions.

Successful remediation of a site is dependant upon implementing the remediation strategy to the specified standard. A **Validation Report** (sometimes referred to as a Verification report) is used to demonstrate this providing evidence of remedial actions undertaken.

Validation is required where any specific works are proposed for the purpose of mitigating or reducing risk from ground contamination, whether or not a formal remediation strategy report has been prepared.

The content of a validation report should be proportional to the scale & type of works proposed in the remediation strategy, but as a minimum, a Validation Report should be signed & dated, and include;

- A summary of site investigation and remediation works undertaken, described in terms of source / treatment area, as a group of plots, or on a plot by plot basis - as appropriate.
- Reference to any specifically agreed concentration or reduction targets, providing adequate evidence & interpretation to demonstrate achievement of agreed quantitative goals.
- An explanation / discussion of any anomalous results, or failure to meet agreed target values, alongside details of any additional work proposed (if any)
- A final CSM confirming the post-remediation risk profile in the context of the completed development (i.e. to show that the aims and objectives of the remediation strategy have been achieved)

The provision of evidence applicable to the above will vary widely depending upon the works proposed in the Remediation Strategy, but may include:-

- Summary of site investigation and remediation works undertaken on a plot by plot basis
- Final CSM showing how all identified contaminant linkages have been severed
- Photographic evidence showing the depth of cover systems installed on individual plots
- Photographic evidence and QA/QC inspection details of installed gas membranes on individual plots
- Reassurance sampling
- Copies of laboratory certificates showing results of imported soils
- Post completion gas/water monitoring
- 'Duty of Care' waste disposal documentation
- Specification and inspection details of fitted membranes

This list is not exhaustive and may include additional items depending on the nature of the remediation required, e.g. results after use of continuous monitoring devices for soil gas. In all cases, separate evidence should be provided for each discrete installation / plot / treatment area, as applicable. Where a site is developed in phases, agreement should be reached with the LPA for the timing and submission of validation reports.

It should be considered good practice that the validation report allows a non expert reader to be able to understand the hazards that were present on site, the risks they presented and the steps needed to manage those risks to acceptable levels, and confirmation that this has been implemented successfully.

Where the Validation Report cannot demonstrate that all identified contaminant linkages have been severed, and unacceptable risk remains following the completion of the remediation works, additional works are likely to be required.

Further guidance on typical content for a Validation Report can be obtained from the science report produced by the EA (EA, 2010).

Completion Certificate

On completion of all sensitive developments the submission of a Completion Statement (see enclosed template) provides the developer with the opportunity to validate all their actions. This is to be submitted at the end of the development and will assist the Local Planning Authority in discharging relevant conditions and aid responses to any Local Land Charge Search enquiries received when properties are marketed.

Further advice and information

Should you require further information about contaminated land, please contact Environmental Health on:

Tel: 01730 234332

Fax: 01730 234330

email: ehhealth@easthants.gov.uk

or write to:

Contaminated Land Officer,

East Hampshire District Council, Penns Place, Petersfield, Hampshire GU31 4EX

If you have an enquiry relating to your planning permission, please contact Planning Services on:

Tel: 01730 234246 or 01730 234248 (Enquiry team)

Fax: 01730 234348

email: planningdev@easthants.gov.uk

If you have an enquiry relating to building control issues, please contact Building Control on:

Tel: 01730 234207

Fax: 01730 234210

email: building.control@easthants.gov.uk

If you wish to notify the Health and Safety Executive of a demolition to take place, please contact them on 01256 40 4000

References

British Standard (1999) Code of practice for site investigations. BS 5930:1999+A2:2010. BSi. ISBN 978-0-580-64609-6.

British Standard (2011) Investigation of potentially contaminated sites – Code of practice. BS10175:2011. BSi. ISBN 978-0-580-68198-1.

British Standard (2013) Guidance on investigations for ground gas – Permanent gases and Volatile Organic Compounds (VOCs). BS8576:2013. BSi. ISBN 978-0-580-75667-2

CIRIA (2001) Contaminated land risk assessment. A guide to good practice. C552. CIRIA London. ISBN 0-86017-552 9.

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Communities and Local Government (2012) National Planning Policy Framework. Department for Communities and Local Government. March 2012. Available from www.communities.gov.uk

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Environment Agency (2004) Contaminated Land Report 11. Model Procedures for the Management of Land Contamination. Environment Agency. Bristol. ISBN 1844322955. www.environment-agency.gov.uk/research/planning/33740.aspx

Environment Agency (2009) Human health toxicological assessment of contaminants in soil. Science Report SC0500221/SR2. Environment Agency. Bristol. www.environment-agency.gov.uk/static/documents/Research/TOX_guidance_report_-_final.pdf

HM Government (2010) Approved Document C – Site preparation and resistance to contaminants and moisture (2004 Edition incorporating 2010 amendments) www.planningportal.gov.uk/uploads/br/BR_PDF_AD_C_2010.pdf

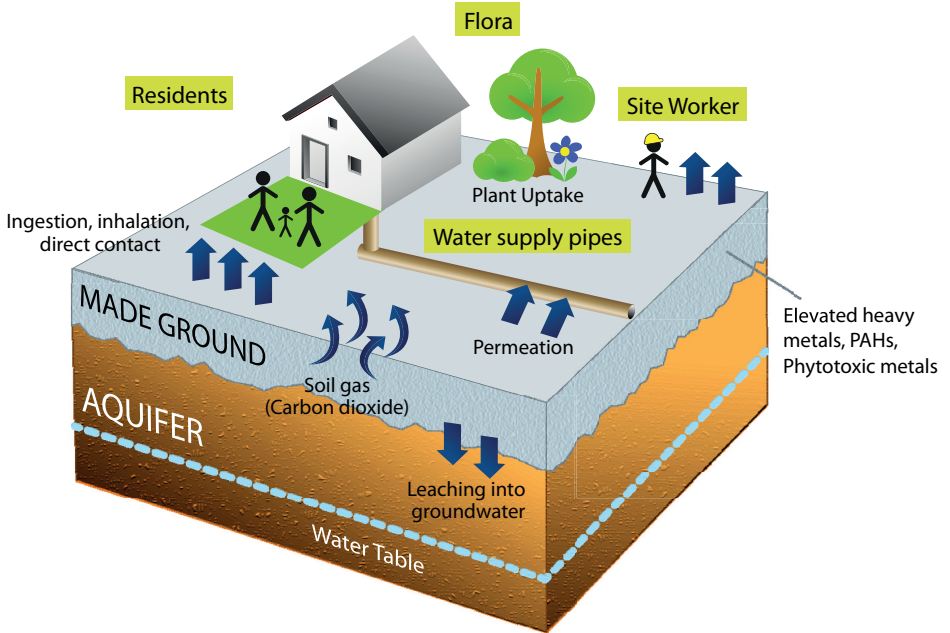
NHBC and Environment Agency (2008) Guidance for the Safe Development of Housing on Land Affected by Contamination R&D66: 2008 Volume 1. www.nhbc.co.uk/NHBCPublications/LiteratureLibrary/Technical/filedownload,33630,en.pdf

ENVIRONMENTAL SERVICES

designed and produced by EHDC Communications

Appendix I

Conceptual Site Model (R&D66 2008)



Appendix II

Site walkover checklist

The walkover should be conducted after desktop study information has been collected and before the site investigation has been undertaken. It comprises walking around the site and its vicinity recording features on and around the site based on visual observation.

Developer, Agent or Consultant

1 Site description:

- i) Type of land use/industry
- ii) Size
- iii) Topography
- iv) Main features
- v) Services
- vi) Photographs of site (date stamped)

2 Description of vicinity of site

- i) Street/ house/ locality/ pub names
- ii) Neighbouring land uses
- iii) Any signs of remedial measures
- iv) Any signs of site investigations

3 Locate and note condition of:

- i) Buildings/structures
- ii) Small buildings with hazard signs
- iii) Features suggesting current/former use
- iv) Tanks – contents/ bund/ staining
- v) Outfalls to surface water
- vi) Any hydrological features

4 Immediate hazards

- i) Public health or safety (physical hazards)
- ii) Environment
- iii) Alert appropriate bodies ASAP

5 Contamination indicators. Note any:

- i) Surface Waste deposits and made ground
- ii) Signs of subsidence, or disturbed ground
- iii) Stained ground (state colour)
- iv) Polluted water
- v) Distressed vegetation
- vi) Lack of species diversity (flora/fauna)
- vii) Presence of indicator species
- viii) Evidence of gas production
- ix) Seepages
- x) Hazardous material signs
- xi) Raw materials/ chemicals used on site and location
- xii) Waste products stored on site and location
- xiii) Odours (bad eggs, gas, rotting fish, antiseptic, ether)

Completion Statement

Proposal	
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Planning Application Number

Undertaken between the dates of and

Notes:

1. Please complete Part A in Full.
2. If no significant risks in Phase 1 and Phase 2 investigations then complete Parts E, F and G as appropriate.
3. If risks were identified in Phase 1 and Phase 2 investigations then complete ALL PARTS of the completion certificate.

Part A: Phase 1 Desk Study and Phase 2 Site Investigations

This is to confirm that the above named development was subject to an approved scheme* of investigation prior to development to assess the presence and significance of potential ground contamination as detailed in: (List all relevant documents in full)

Title:	Ref:	Author:	Date:

Part B: Phase 3 Remediation Statements and Validation Reports

To afford protection from those risks identified a scheme of remediation was implemented between the dates of [] and [] in accordance with best practice and the agreed specification* detailed in:

Title:	Ref:	Author:	Date:

*Approved In writing by the Local Planning Authority

Part C: Phase 3 Post Remediation Monitoring

Satisfactory implementation/post completion monitoring of the scheme is detailed in: (List all relevant documents in full)

Title:	Ref:	Author:	Date:

Part D: Building Material/ Design Considerations to Protect the Future Occupants from Contamination

Details of any special design consideration of the development to protect the occupants from contamination such as sulphate resistant concrete or fuel resistant water supply pipes are detailed in: (List all relevant documents in full)

Title:	Ref:	Author:	Date:

Details of the building control body that inspected and approved these works

Name of Building Control Body	Address	Name of Officer	Officers Telephone Number	Dates/ details relevant approvals and documents

Part E: Soil Materials Imported for Use in the Development

Confirmation that all imported soil materials are suitable for the proposed development are detailed in: (List all relevant documents in full)

Title:	Ref:	Author:	Date:

Part F: Unsuspected Contamination

All contractors employed by (the developer) were required to monitor for, and report, nay evidence of further unsuspected contamination found during construction (delete as appropriate)

- None was reported
- Further, unsuspected contamination was found. Actions taken are details in:

Title:	Ref:	Author:	Date:

Part G: Declaration

Appointed person that was responsible for the remediation works

Name	Position	Company	Company Address	Signed	Date

Person responsible for the development (acted on behalf of the developer)

Name	Position	Company	Company Address	Signed	Date

Local Authority Environmental Health Regulator

Name	Position	Company	Company Address	Signed	Date

I confirm that the land contamination investigation and remediation works as detailed in the above reports have ensured that the development site is suitable for its intended use. I recommend the contaminated land planning condition is discharged.