# Contaminated Land Planning Guidance

## A technical guidance note for applicants, developers, land owners and consultants involved with land contamination in Oldham.

### OVERVIEW

Oldham Metropolitan Borough Council (Oldham MBC) has a long history of industrial development. Parts of the area have been occupied by, for example, textile mills, engineering works, paper manufacturing works and gas works. Generally, early industrialists had little or no knowledge of the environmental effects of their manufacturing processes or operating practices. Consequently contamination of the ground on which these early industries were built, and the neighbouring land, often occurred.

Over a period of time, a particular site may have been home to a variety of industries, each of which may have left substances which either individually or in combination are now known to be harmful.

As the Government urges more redevelopment on previously used land in order to protect Greenfield areas and promote sustainable development, developers are having to take into account the possibility of land contamination as they seek to make use of our Brownfield resource.

The purpose of this Guide is to make applicants, developers and their advisors aware of the information that this Authority requires in order to assess an application for planning consent on land which may be affected by the presence of contamination or land used for sensitive end uses such as schools and residential housing.

### CONTENTS

## IMPORTANT

**This Guidance Note is written to serve as an informative and helpful source of advice. Readers must note that legislation; guidance and practical methods may be subject to change. Oldham Metropolitan Borough Council (OMBC) has taken all reasonable precautions to ensure that the information contained within this guidance document is accurate at the time of publication. However, OMBC, its officers, its servants or its agents cannot assume legal responsibility for any loss or damage caused to person, land or property for persons relying on this information.**

**The responsibility to properly address land contamination issues, including safe development and secure occupancy, and irrespective of any involvement by this Authority, rests with the owner/developer of the site.**

## WHAT IS CONTAMINATED LAND?

The legal definition of contaminated land (from Section 78A(2) of Part IIA of the Environmental Protection Act 1990) is:

' *…any land which appears to the local authority in whose area it is situated to be in such a condition, by reason of substances in, on or under the land, that:*

*(a) significant harm is being caused or there is the significant possibility of such harm being caused; or*
*(b) pollution of controlled waters is being, or is likely to be, caused…*[11],

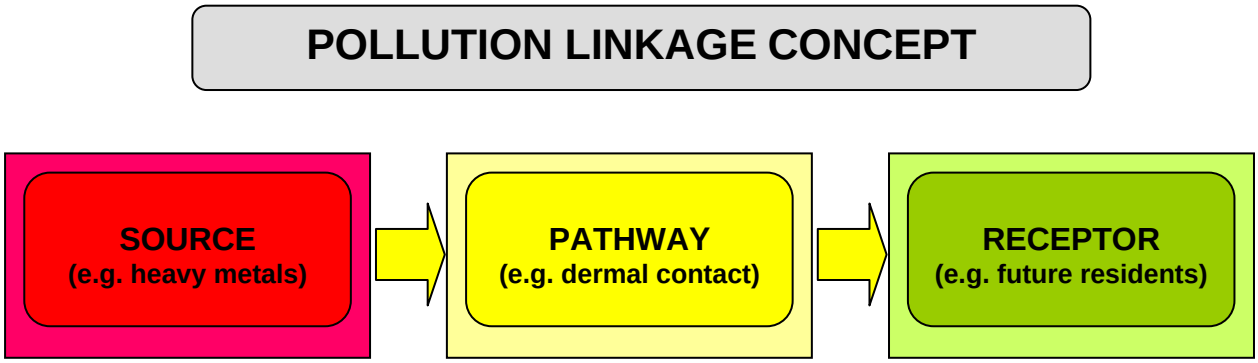
With respect to controlled waters, the Water Act 2003 (Chapter 37, Section 86) will amend the second limb of the definition when it is enacted so that it applies only where:

*"**significant** pollution of controlled waters is being caused, or there is a **significant possibility** of such pollution being caused "*

Controlled waters include all surface watercourses or bodies, including those, which are man made, and also groundwater.

"Part IIA" of the Environmental Protection Act 1990, as inserted by Section 57 of the Environment Act 1995, was brought into force on the 1st April 2000. It requires all Local Authorities to identify contaminated land in its area and secure its remediation to a condition suitable for use. Part IIA provides the first statutory definition of contaminated land. To fall within this definition, the land when assessed in the context of its current or proposed use must be capable of causing significant harm to human health or other specified receptors and/or pollution of controlled waters. Development of land will have to take into account Part IIA as to alter the use of the land may bring the development inside the statutory definition of contaminated land.

A key element of the Part IIA regime is the pollution linkage concept as follows:




- the source is the contamination in, on or under the land;
- the pathway is the route by which the contamination reaches the receptor; and
- the receptor is defined as living organisms, ecological systems or property which may be harmed

Without the clear identification of all three elements of the pollutant linkage, land cannot be identified as contaminated land under the regime.

Contaminating substances may include:

- metals and their compounds e.g. cadmium, arsenic, lead, iron, nickel, tin, brass
- organic and non-organic compounds e.g. oils, petrol, solvents, fatty acids, phosphorous
- gases e.g. methane, carbon dioxide, hydrogen sulphide, chloroethane

There are several publications available which outline the types of contamination that may be present based on the usage of a site. These include CLR8 and the DoE series of Industrial Profiles. See Appendix A for full references and other useful documents.

Typical causes of land contamination include previous industrial or commercial usage, mining, and the land filling of wastes. Land can also become contaminated due to its proximity to contaminated areas. Contamination does not occur solely as a result of human activities and land can be contaminated as a result of its natural state. For example, marsh gas can be a source of contamination.

The planning system uses a slightly different definition for contaminated land that is not based solely on the legal definition set out above. Within planning guidance the term **'*land affected by contamination*'** is used, which covers cases where '*the actual or suspected presence of substances in, on or under the land may cause risks to people, properties, human activities or the environment, regardless of whether or not the land meets the statutory definition in Part IIA'*. The principal difference is that under the planning system risks have to be assessed based upon the new or intended use of the land, rather than the existing use, upon which risks are based in the Part IIA regime. However, the principles underlying both regimes are fundamentally the same – the identification and remediation of land, which may pose a risk to human health and/or the wider environment.

## THE PLANNING PROCEDURE

Government guidance for contaminated land and the planning process is currently provided within Annex 2 of Planning Policy Statement 23: Planning and Pollution Control published in 2004. A copy can be obtained from The Stationary Office or downloaded from the ODPM website at www.odpm.gov.uk.

The actual or possible presence of contamination is a material planning consideration. It is necessary to determine whether there are likely to be any contamination issues on site prior to submitting an application for planning consent.

The Policy Statement states that where development is proposed, the developer is responsible for ensuring that development is safe and suitable for use for the purpose for which it is intended. The developer is thus responsible for determining whether land is suitable for a particular development or can be made so by remedial action. In particular, the developer should carry out an adequate investigation to inform a risk assessment to determine:

- Whether the land in question is already affected by contamination through source-pathway-receptor pollution linkages and how those linkages are represented in a conceptual model;

- Whether the development proposed will create new linkages, e.g. new pathways by which existing contaminants might reach existing or proposed receptors (e.g. drilling, piling, services) and whether it will introduce new vulnerable receptors (e.g. residents); and

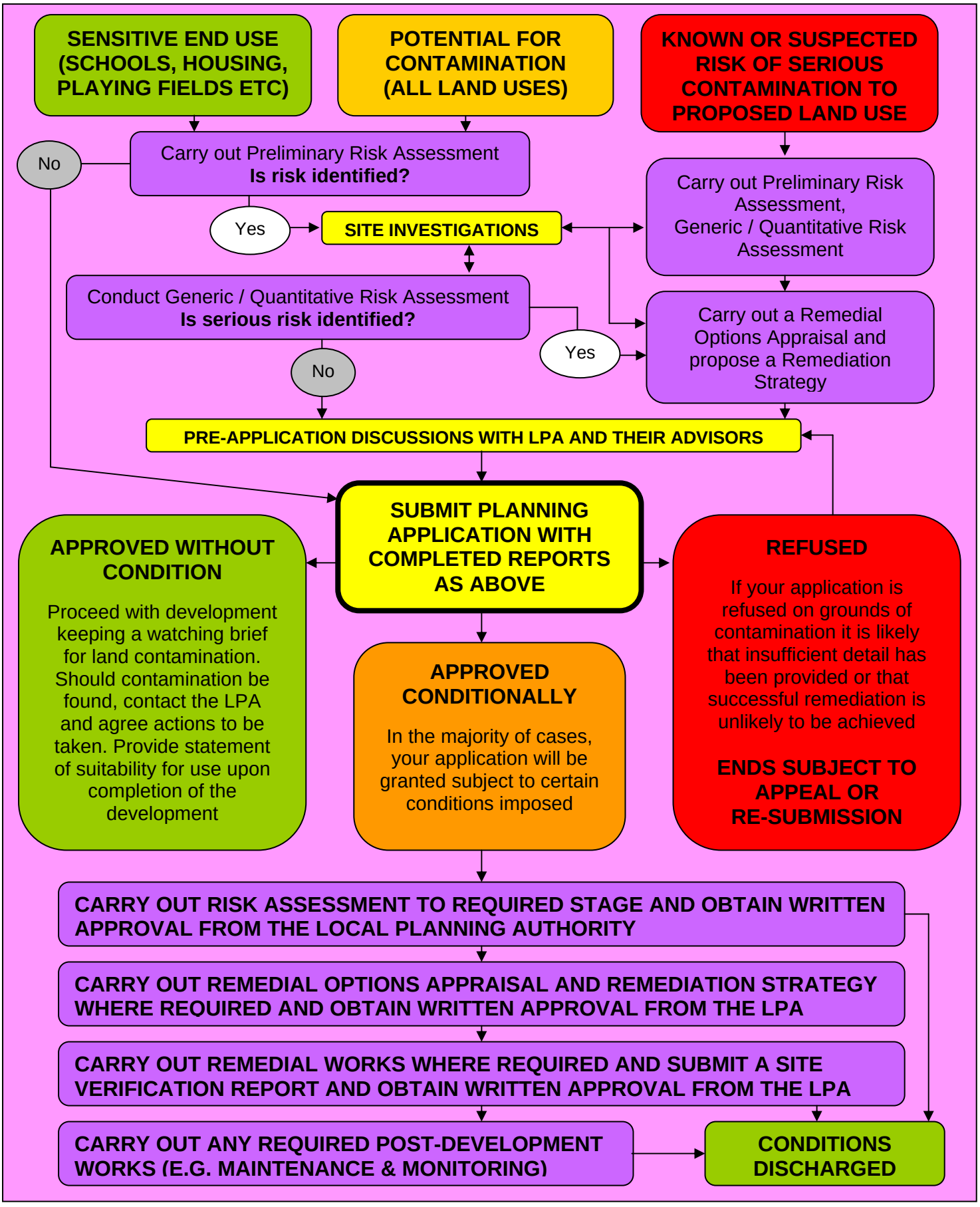
- What action is needed to break those existing linkages and avoid creating new ones, deal with any unacceptable risks and enable safe development and future occupancy of the site and neighbouring land?

The developer should be aware that failure or omissions on his part could lead to liability under Part IIA or, when implemented, the Environmental Liability Directive (2004/35/EC) in addition to planning enforcement.

On any site where there is the potential for contamination to influence the site or the development is sensitive, the Planning Officer will consult with the Environmental Services Division regarding contaminated land issues. They will assess the application and may recommend that certain actions or conditions be imposed upon the development to ensure that the site is made suitable for its proposed end use and the safety of site workers, future site users and the environment amongst others.

In general, if the proposed use is sensitive (e.g. allotments, residential use, schools) or there is a potential for contamination to effect the proposals, then at least a Preliminary Risk Assessment (see below) should be submitted to the Local Planning Authority (LPA) with your application. From the findings of that initial assessment the LPA may be satisfied with the findings or may impose conditions on any grant of permission to ensure appropriate works are carried out. Below is a generalised flowchart showing the basic planning procedure for dealing with land contamination and likely requirements of the LPA:

# GENERAL PLANNING PROCEDURE AND LIKELY REQUIREMENTS



In certain circumstances, the LPA may request that site investigations, risk assessments and remediation be carried out prior to determining an application. This is likely to be requested for developments on sites where significant contamination is known or is likely to be present. It is strongly recommended that you undertake a pre-application consultation with the LPA in these instances. Where significant contamination is present, the LPA may refuse particular types of development. It may therefore save both time and money if a thorough pre-application consultation takes place prior to submission of a full planning application.

It is essential that the developer and their agents provide as much information to the LPA as possible at every stage of the planning process. Withholding information, however trivial, may cause a delay to the application. The onus is on the applicant to keep the LPA well informed about the development at all times so that decisions can be made swiftly and the application process completed as quickly as possible.

If your investigations prove to the Council's satisfaction that there is no contamination problem then generally no further action will be necessary. Once this has been confirmed by the Council in writing you will then be able to proceed with your development. Should unexpected contamination be found then the LPA should be informed immediately and remedial action agreed?

**Planning Conditions**

Once your application has been approved it is likely that planning conditions will have been made in relation to contamination. The conditions include site investigation, risk assessment, remediation strategy, unforeseen contamination, imported materials, gas monitoring and verification reporting. Some or all of these conditions may be imposed depending on the specific application circumstances and the amount of information available to the LPA.

Appendix B contains examples conditions set by Oldham MBC for your information.

**If your approved application does contain contaminated land conditions, please read them very carefully as they are likely to require actions and approvals prior to commencement of any development works.**

Contaminated land is a serious planning issue. Legal action can be taken by this Authority (and other regulatory bodies) in cases of non-compliance. Actions which can be taken by the Council to enforce a contaminated land condition include:

- Power to enter and investigate
- Power to stop the development if it is already in progress
- Requirement for post development remediation works prior to the site being put into use or occupied
- Ability to demand the information requested by the condition

The Council may also ask for planning obligations to be placed upon a development. Planning obligations are one of the tools used by councils to achieve suitable development.

## Reports in support of planning applications

Due to the Industrial past of Oldham, many areas of land may be potentially contaminated. When submitting planning applications, it is the applicant's responsibility to provide information on contamination. To aid the swift processing of planning applications for potentially contaminated sites, guidance on the content of supporting reports is provided within this document and as a checklist in Appendix C. The checklist is a guide to the matters to be addressed, depending on previous site uses and the extent of potential or actual contamination. The scope of submitted reports must reflect the size and complexity of the site, the necessary level of investigation, as well as likely contamination risks.

**The listed requirements will enable the relevant officers to make informed decisions on the suitability of the proposed development and remediation schemes. Failure to include information may result in requests for further information and hence significant delays in processing your application.**

A list of key reference documents has also been prepared in Appendix A. This list is not exhaustive or exclusive, but includes some of the more relevant guidance and information available.

## Submission of Reports

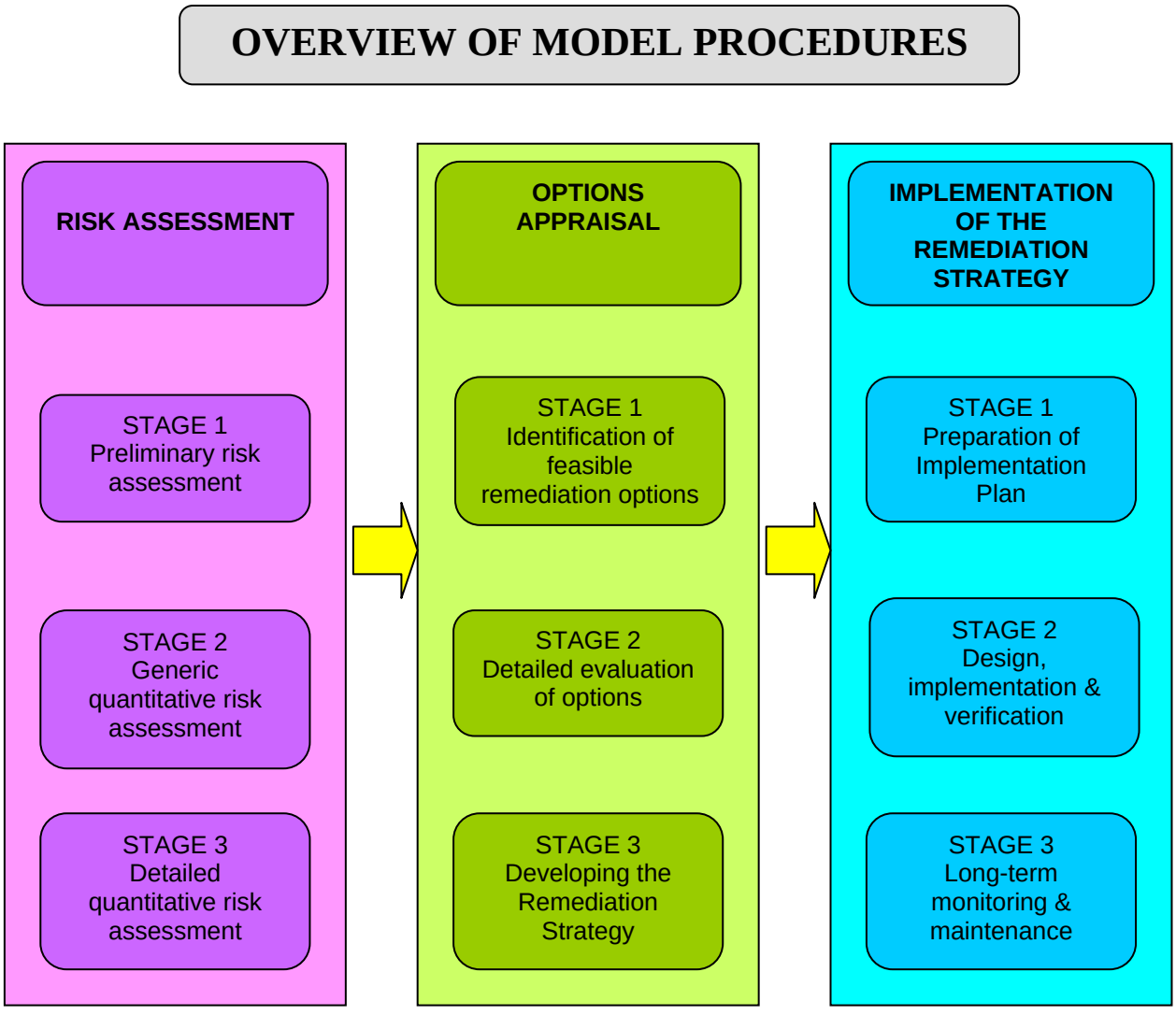
Supporting reports should be prepared by appropriately qualified professionals. All reports should be sent directly to the Planning Division. The case officer will forward reports to the appropriate consultees for comment. Applicants are advised against entering into direct negotiation with either the Environment Agency or any other departmental consultee without prior notification of the case officer. Two copies of each report should be submitted in hard copy format per application. If possible, an electronic copy containing complete reports should also be included.

***It is strongly recommended that you submit a Stage 1 Preliminary Risk Assessment as a minimum with your planning application should the land be known or suspected of being contaminated and/or if the proposed end use of the development is considered sensitive to contamination (e.g. allotments, residential use, schools). If your site poses a potential significant risk to the proposed use, then further reporting should also be submitted. Failure to do so may lead to the application being refused. Please bear in mind that if ground gas is suspected, a minimum period of 3 months monitoring will generally be required and possibly could extend beyond this (e.g. 12 months).***

## MODEL PROCEDURES FOR LAND CONTAMINATION

Paragraph 2.42 of the new Planning Policy Statement 23 - Annex 2 states that a phased or tiered approach is recommended in the Defra/Environment Agency's Model Procedures for the Management of Land Contamination (CLR11). This document was published in September 2004 and can be downloaded free of charge from the Environment Agency website at: www.environment-agency.gov.uk. It is strongly recommended that you obtain a copy for your reference.

This guidance provides a technical framework for structured decision-making about land contamination. An overview of the framework is shown below:




The procedures are made up of three processes each containing three main stages. The key elements are briefly explained below and a copy of the CLR11 process flowchart is included in Appendix D for your information.

## PROCESS 1: Risk Assessment

The first process concerns risk assessment and for development it involves the characterisation of the site in the context of the proposed use and its potential impacts upon the environment and surrounding uses. Risk assessment is an iterative process, which should be carried out within a tiered framework. As more information becomes available, the site tends to be better understood and hence it may become necessary to revise assumptions made in the early stages of the risk assessment process. The more information we have, generally the better we can understand a site and give greater confidence in decisions made should contamination be identified. The findings of this process are very important and the utmost care and consideration should be given to getting this right.

### Process 1, Stage 1: Preliminary Risk Assessment

The first stage of this process is the preliminary risk assessment. The focus of this is to develop an outline conceptual model and establish whether or not there are any potentially unacceptable risks arising from contamination at or around the site to the proposed development.

The main activity at this stage is the collection of information required to identify all possible pollutant linkages at the site and prepare the outline conceptual model. This stage is often referred to as the 'desk study', although a site walkover or reconnaissance survey should also be undertaken to verify data and obtain additional information such as anecdotal evidence from employees.

The desk study involves searching maps and records for information such as the geology, historical uses, mining and land filling activities of the site and surrounding areas. Most local and government authorities and agencies along with environmental information companies can provide basic factual information for a reasonable fee. Other bodies such as local history groups or archaeologists may be able to find useful information. Landowners may also have information such as type and extent of made ground on site or possibly even details of any previous site investigations.

What happens next at the site will depend on the outcome of the preliminary risk assessment. Further action will be required if there are any gaps in information or potentially unacceptable risks are identified at the site. In some cases there may be sufficient information to be able to move straight to an appraisal of remediation options. Alternatively, the LPA may accept that no further action is required if the applicant is able to demonstrate that the site does not present an unacceptable risk to its intended use or surrounding land.

### Process 1, Stage 2 & 3: Generic and Detailed Quantitative Risk Assessment

These stages should be undertaken when the preliminary risk assessment identifies potentially unacceptable risks at the site. The purpose of the quantitative risk assessment is to establish whether generic assessment criteria and assumptions are appropriate for assessing the risks at the site and to apply them to establish whether there are actual or potential unacceptable risks. Where generic values do not apply, then detailed quantitative risk assessment may be required.

In order to carry out these assessments, site-specific data (e.g. chemical sample results) will be required from the site. This is generally obtained from intrusive site investigation works where representative sampling and data is obtained to further characterise the site. There are several methods, which are commonly used including trial pitting, trial holes, boreholes and window sampling. Each method has its pros and cons and should be employed depending on the site-specific requirements of a project.

For intrusive investigations please refer to British Standards BS10175:2001 'Investigation of potentially contaminated sites - Code of practice' and BS5930:1999 'Code of practice for site investigations'. It is important that the activities of the site investigation do not cause any further pollution linkages. For example, by drilling a borehole through contaminated ground and into an aquifer creating a direct pathway for contamination to travel.

When commissioning laboratories and reporting on the results of chemical analyses, soils testing should be undertaken in accordance with the Environment Agency's MCERTS performance standard.

Using the site investigation information, the outline conceptual model should be refined and pollutant linkages confirmed as a result of the site investigations. The risks associated with those linkages should then be evaluated using either generic or site-specific assessment criteria, or a combination of both.

The first stage is to assess site findings with appropriate Soil Guideline Values (SGVs) for the proposed land-use. Currently in the UK, there is only a limited number of SGVs available to use. These include the following heavy metals: arsenic, cadmium, chromium, mercury, nickel, selenium and lead; and the following organic contaminants: toluene and ethyl benzene.

Where no SGV is available, it is likely that some form of detailed quantitative risk assessment (DQRA) will be required for the contaminants of concern, which have been identified in the preliminary risk assessment, and this should feature in the design of the site investigation and subsequent sampling and analysis.

DQRA is in simple terms a model that predicts the risk or concentration of contamination at a site and whether further action is required. There are several DQRA models or tools available for use. The UK derived models include CLEA (currently being updated and unavailable at present) and SNIFFER for human health with the Environment Agency's P20 for groundwater and surface water assessment. Other commonly used international models available for use include RBCA, BPRISC and CSOIL, however, it should be noted that these models, although similar to the UK approach, contain fundamental differences in how they work. They can be used in the UK so long as the limitations and differences in data used, assumptions made and underlying concepts can be appropriately shown to fit with the site conditions and have been adjusted to comply with UK policy. The Environment Agency has produced a fact sheet on some of the available models outlining the key issues and watch points. These fact sheets are available from their website.

In the absence of DEFRA/EA UK guidance or toxicological data for some contaminants, it may be acceptable to use peer reviewed data from other countries where a similar risk based approach has been adopted. When selecting input data and model type the following hierarchy should be adopted in line with CLR 9:

1. Those produced from authoritative bodies in the UK (DEFRA/EA)
2. Those produced by European Commission's committees or international authoritative organisations (WHO)
3. Those prepared by other national organisations (USEPA, Dutch)
4. In the absence of the above, those produced by authoritative organisations, but for different purposes

All risk assessments used should be fully compatible with UK policy, and if not, their use fully justified. All calculation sheets and input data should be provided within the risk assessment report. Statistical analysis should also be conducted on the results in line with CLR7 to give statistical confidence and check for outliers which require separate treatment. Once the risk assessments have been completed, the following outputs should be clearly identified:

- A refined and updated conceptual model
- Confirmation of existing or future pollutant linkages
- Incomplete pollution linkages and justification for their removal
- Evaluation of potentially unacceptable risks
- Information required to undertake the Options Appraisal when unacceptable risks are identified at the site.

**PROCESS 2: Options Appraisal**

The aim of the Options Appraisal process is to establish which remediation option, or combination of options, provides the best approach to remediating all pollutant linkages that present an unacceptable risk at the site. The main concerns at this stage will be to ensure that:

- Remediation criteria selected for the site are protective of the existing or future critical receptors at the site and those within influencing distance
- Appropriate remediation options have been selected for each relevant pollutant linkage
- The Remediation Strategy addresses all relevant pollutant linkages
- The requirement for waste management licences, environmental permits, discharge consents etc. is taken into account at an early stage when deciding how to remediate the site. The majority will require permission from the Environment Agency and/or service provider such as United Utilities

**Process 2, Stage 1: Identification of Feasible Remediation Options**

Site-specific remediation objectives should be identified and remediation criteria for measuring compliance against these objectives should be derived at this stage. A short-list of feasible remediation options, i.e. options that are capable of achieving the remediation criteria derived for the site given site-specific constraints, should then be identified and be taken forward for detailed evaluation.

### Process 2, Stage 2: Evaluation of Options

A review of the short-listed remediation options should be undertaken to determine which are the most appropriate for addressing each relevant pollutant linkage. Detailed information on the technical attributes of each option will be required for the review and evaluation criteria will need to be developed for assessing the relative merits of each option. Proposals for combining options should be included where more than one option is required.

An assessment of likely regulatory requirements and timescales for obtaining the appropriate environmental licences, permits etc. should form part of the evaluation. The evaluation should also take account of Best Practicable Environmental Option, cost benefit, environmental outcomes and appropriate timescales for remediation.

### Process 2, Stage 3: Developing the Remediation Strategy

The Remediation Strategy sets out how the remediation options selected for each relevant pollutant linkage, or combination of options, will be put into place at the site. It should provide a clear picture of how relevant pollutant linkages will be remediated and how these remedial and/or protective works will be verified. Practical issues such as zoning and phasing of remediation and proposals for obtaining the appropriate environmental licences, permits etc. should be addressed within the Remediation Strategy.

## PROCESS 3: Implementation of the Remediation Strategy

The main aims of the implementation process are to ensure that the remedial works deliver the site remediation criteria without causing harm to the environment and that there is an accurate and permanent record of the works.

### Process 3, Stage 1: Preparation of the Implementation Plan

The Implementation Plan translates the Remediation Strategy into a clear set of remediation activities for the site. It should set out all aspects of the design, preparation, implementation, verification and long-term monitoring and maintenance of remediation. The Implementation Plan should be capable of demonstrating to the LPA that:

- Site remediation criteria derived for relevant pollutant linkages will be achieved
- Appropriate environmental permits, licences etc. will be obtained
- The remediation activities will be protective of the existing or future critical receptors at the site and those within influencing distance
- Measures will be taken to mitigate potential impacts on critical receptors that may arise if there are significant variations from the Remediation Strategy

**Process 3, Stage 2: Design, Implementation and Verification**

Once the Remediation Strategy and Implementation Plan have been approved by the LPA, you may begin site remediation works. During this process, the activities set out within the implementation plan should be carried out and evidence and data carefully gathered. This evidence and data could include site photographs, site surveys, plans showing areas where contaminated materials have been excavated, treated or left in-situ, validatory sample locations and laboratory analysis certificates, waste transfer notes, technical specification and performance sheets.

There are many ways in which to collect this information and you should decide what evidence would be required to satisfy the remediation strategy to prove that all pollution linkages have been broken. A watching brief should also be conducted during the works to ensure any missed contamination is identified and appropriately dealt with.

Once the site remediation is complete, a **Site Verification Report** will be required to demonstrate that the agreed site remediation criteria have been achieved. This report should provide a full record of all remediation activities carried out at the site and contain accurate substantiating documentary evidence and data collected in accordance with the requirements of the Remediation Strategy and Implementation Plan. Some suggested elements of the Site Verification Report include: details of the validation testing, certificates of the suitability of the imported cover materials, fate of any excavated material and details of any installed post-completion monitoring devices including measures to be undertaken should action limits be exceeded. Additionally, it should also contain any other information pertinent to the remediation works including remediation of any unexpected contamination not addressed in the Remediation Strategy, any details of contaminated materials that have been left in-situ, and details of any barrier systems or protection measures.

**This report forms the most important documentary evidence that the site has been remediated to a 'suitable for use' standard, and should be conducted by a suitably qualified professional.**

In some cases, it may benefit the developer to phase verification works in order to enable completed structures to be released for sale or occupation. This would be an additional reporting requirement and would not replace the need for a final completed version of the report.

**Process 3, Stage 3: Long-term Monitoring and Maintenance**

A **Monitoring and Maintenance Plan** will also be required if the remediation is to include permanent structures that require maintenance or if there is will be a need for monitoring to demonstrate the continuing effectiveness of the site remediation following substantial completion of the site works. You may be required to enter into a Section 106 agreement with the LPA in order to secure this plan. Details of all

monitoring undertaken prior to, during and post-completion of the site works should be submitted to the LPA at appropriate stages within the reporting process.

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**KEY POINTS OF THE CONTAMINATED LAND PLANNING GUIDANCE**

- **If you suspect the site may have contamination issues, the Environmental Services Division would be happy to informally discuss matters with you prior to the submission of your planning application**

- **It is important to identify actual and potential pollutant linkages at an early stage. This should be considered right from the start, prior to the purchase of any land, in order to avoid unexpected costs and delays during or after development**

- **Suitably qualified professionals should be used to address contaminated land issues**

- **Provide clear and concise data and interpretation when submitting reports and make sure they comply with relevant UK policy and guidance**

- **It is strongly recommended that you submit a Preliminary Risk Assessment (Desk Study and Site Reconnaissance Report, etc) as a minimum with your planning application should the land be suspected of being contaminated and/or if the proposed end use of the development is considered sensitive to contamination**

- **The Preliminary Risk Assessment (Desk Study, etc) should contain an outline conceptual model that characterises all actual or potential pollutant linkages. This will form the basis of any subsequent work undertaken such intrusive investigation, risk assessment, etc. The findings of the investigations will form the basis of any necessary remediation works**

- **All reports and proposed actions will require written agreement from the Council. All site works should be fully documented and summarised as part of a Site Verification Report submitted on completion of the development works. The Site Verification Report should detail all of the remediation/protection measures put in place, and justify them where necessary. This report, where required, must be submitted to the Council and written confirmation of its acceptance received prior to first use or occupation of the site**

- **Maintaining a close and effective dialogue with the Council at all stages of the process is essential to prevent circumstances that lead to delay, expense and/or the service of legal notices. The Council has a great deal of expertise and information and is happy to assist.**

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## FURTHER INFORMATION

### Oldham Metropolitan Borough Council Contaminated Land Strategy

Oldham MBC have adopted and published a Contaminated Land Strategy which is part of the requirements of Part IIA of the Environmental Protection Act 1990. To obtain a copy of the Contaminated Land Strategy, please contact the Environmental Services Division or visit the Council's web site on www.oldham.gov.uk

### Safe Development - Suitable For Use

The UK government has adopted a policy that land should be suitable for use. For example, land which has historically been used for industrial purposes and is the subject of a new development proposal for industrial units may require the same levels of investigation but not the same remediation targets as a similar site where the proposed end use is residential housing with gardens.

### Sustainable Development

A widely accepted definition of sustainable development is 'development which meets the needs of the present without compromising the ability of future generations to meet their own needs'. In the context of land contamination, this mainly involves bringing Brownfield land back into use and also extends to the way in which this is achieved. Simply deciding to 'dig and dump' or select a more sustainable approach such are in-situ remediation can have long term benefits for current and future generations within the UK and may also be cost effective. All stakeholders are strongly encouraged to promote and create sustainable development throughout the development process.

### Auditing Of Reports

When commenting on contaminated land reports and proposed remediation strategies, Oldham MBC cannot accept responsibility for the thoroughness of reports or investigations nor the effectiveness of the design and completion of remediation measures. Reports will be considered by the Council or by a suitably qualified professional working on behalf of the Council. It is important that appropriate and up-to-date methods are used. Developers and their consultants must consult all relevant published guidance and employ best practice at all times. Failure to do so may lead to further expense and delays.

### Access to Environmental Information

The Council is responsible for dealing with requests for environmental information. Access to environmental information is primarily regulated by the new Environmental Information Regulations 2004 and to a lesser extent, the Freedom of Information Act 2004. These regulations set out certain conditions and requirements for both the applicant and supplier of information.

The new Environmental Information Regulations came into force on 1st January 2005. These regulations enable individuals and organisations to request environmental

information held by public bodies. In the majority of cases, we will endeavour to respond to your request within 20 working days, extended to a maximum of 40 working days should the request be complex or voluminous. Public Bodies are allowed to make a reasonable charge for supplying the information requested, and we will contact you if a charge is applicable.

You are welcome to have access to any public registers or to examine the information free of charge. If you wish to do so, please contact the Authority to arrange viewing.

When requesting environmental information from the Council, the following will help to save time:

1. Telephone the division you are requesting information from and discuss your requirements and likely costs. For simple searches a charge of around £45 will be made. For more complex searches or multiple sites, additional charges will likely be made and you are advised to contact the division of a cost estimate
2. Make the request in writing (or by fax) clearly stating the address of the site in question and enclose payment if agreed
3. Enclose a clearly marked up-to-date map showing the site, its boundaries and at least an 8 figure grid reference
4. Ask specific factual questions rather than just a general request for information, for example:
   *'Are there any past industrial uses of the site?'* or '*Is the site within 250m of a known landfill?'*

For further advice on making requests for information, please contact the Environmental Services Division (contact details can be found on the back page of this guidance note).

The Environmental Information Regulations 2004 also impose a requirement to make information available to the public unless it is covered by an exemption and is not in the public interest to release it. As a result, you should be aware that information supplied in support of a planning application will normally be made available to the public if requested.

**The Environment Agency**

The Environment Agency is a statutory consultee in England and Wales under the planning process on the matters for which it has regulatory responsibility. The Council will consult with the Environment Agency on a range of issues under current planning guidance. These issues include applications where pollution of surface water or groundwater is possible, or where the development has waste management issues or IPPC license requirements. There is specific guidance for 'third party guidance for understanding controlled waters'.

**Monitoring Data and the Analysis of Samples**

It is important for monitoring data and the analysis of samples to be valid, reliable, accurate and appropriate. Good quality monitoring data and sample analysis depends on using:

- The correct methods
- Approved standards
- Trained and competent personnel
- Accredited organisations
- Effective planning
- Clear and accurate reporting
- Equipment which is suitable

Please ensure that any monitoring data and sample analysis is conducted with the above in mind. Requests for further sampling and monitoring can be made which are likely to cause delays in processing applications and discharging conditions. The Environment Agency has now introduced the MCERTS Certification Scheme. Since 1st March 2005, full compliance with the MCERTS performance standard will be required for all reports submitted to the Environment Agency. After this date, analytical results submitted without MCERTS accreditation will not be accepted by the Environment Agency. Further details are available on the Environment Agency's website at www.environment-agency.gov.uk

**Environmental Impact Assessment**

Environmental Impact Assessments (EIA) relate solely to the requirements of the Environmental Impact Assessment Regulations 1999, and information is provided only on the extent of the environmental impact of the development rather than the current state of the site. Therefore, it is unlikely that an EIA will provide sufficient information to be able to determine the effects of development on a contaminated site. If the Council requests an EIA, the applicant will be required to submit an Environmental Statement in support of the planning application.

## FREQUENTLY ASKED QUESTIONS

**What is a Conceptual Model?**
A conceptual model forms part of risk assessments detailed above. It describes the possible pollution linkages in a simple graphical of tabular form. As more information is gathered, the model is refined to form a more accurate picture of the site and forms an essential part of the risk assessment process.

**Can I get any help with funding for land contamination works?**
Whilst the Council wishes to see Brownfield sites remediated when necessary and returned to beneficial use, the costs will normally be borne by land-owners and developers. If land contamination features fully in the valuation of the land prior to its sale, then the costs of investigation and remediation could be offset from the purchase price of the land. Land that is potentially contaminated will be subject to inspection under the Contaminated Land Regime. This may force substantial expenditure at short notice, restrict the options available for remediation, block access to any subsidies, and leave a permanent record of formal action on public registers despite subsequent remediation. Re-development, which positively addresses land contamination, should be both profitable and beneficial.

**What does the Council mean by land contamination?**
Land contamination refers to 'substances in, on or under land with potential to cause harm, or water pollution, and it is a material consideration when determining planning applications. Using this definition, simply the fact that contamination may exist is sufficient to justify planning requirements for investigation. It is not necessary for harm or pollution to be visually evident. By contrast, contaminated land now has a precise legal meaning conferred by Part IIA of the Environmental Protection Act 1990, and is triggered only by formal determinations covering individual sites.

**When is the Council likely to impose special requirements?**
Applicants should be mindful that land contamination is a material planning consideration that is relevant to all development proposals. For example, sites may have histories of potentially contaminating uses or could lie within 250 metres of current or former landfill sites. In such cases any planning permission might not be granted until detailed investigations are carried out, or it may be subject to special requirements. Where there is evidence of serious contamination, land may be unsuitable for a particular development and applications may be refused. Conditions preventing new pollution linkages may need to be imposed on particularly vulnerable sites. Potential applicants in any doubt are advised to contact the Environmental Services Division for specific advice.

**How can I anticipate likely requirements without making a planning application?**
The generalised technical advice in this Note is intended to outline the Council's requirements. Applicants in any doubt are recommended to:

- obtain environmental information about a site, for example by contacting the Environmental Services Division and the Environment Agency
- make pre-planning enquiries – contact Planning & Building Control Division for more information (contact details can be found in Appendix E of this guidance note)

**How much of the work can I do without employing a consultant?**
Simply determining whether land contamination is likely to be an issue is relatively straightforward. Researching the history and uses of a site and making enquiries of the Council and other agencies are recommended. Once the need for detailed investigation is established, however, even desk studies can soon become complex and require specialist expertise. In addition to the advice contained in this Note, it may be helpful to consult the documents listed in Appendix A before deciding how to proceed.

**Can the Council advise on employing a consultant or contractor?**
The Council cannot recommend any consultant or contractor. Lists can be found in telephone and trade directories. There are websites that may help to identify consultants and contractors with suitable experience. Applicants are warned that failure to satisfy the Council's requirements will be treated seriously regardless of the cause. For further advice contact the relevant officer dealing with contaminated land issues (contact details can be found in Appendix E of this guidance note).

## APPENDIX A - KEY REFERENCE DOCUMENTS


1. British Standards Institution, 1999, **Code of Practice for Site Investigations**, BS5930

2. British Standards Institution, 2001, **Investigation of Potentially Contaminated Sites – Code of Practice and its Investigation**, BS10175

3. Building Research Establishment, 1994, **Performance of Building Materials in Contaminated Land**, BRE Report 255

4. Building Research Establishment, 2001, **Protective measures for housing on gas contaminated land**, BRE Report 414

5. Chartered Institution of Environmental Health, 2001, **Local Authority Guide to the Application of Part IIA of the Environmental Protection Act 1990**, (Available on-line at: http://www.cieh.org/research/environment/epalaguide.htm )

6. Construction Industry Research and Information Association, 1995-1998, **Remedial Treatment for Contaminated Land, 12 Volumes**, CIRIA Special Publications 101-112

7. Construction Industry Research and Information Association, 1995, **Protecting development from methane**, CIRIA Report 149

8. Construction Industry Research and Information Association, 1996, **Barriers liners and cover systems**, CIRIA Special Publication 124

9. Construction Industry Research and Information Association, 1996, **A Guide for Safe Working on Contaminated Sites**, CIRIA Report 132

10. Construction Industry Research and Information Association, 2001, **Remedial Processes for Contaminated Land – principles and Practice**, CIRIA C549

11. Department of Environment, 1995, **Industry Profiles (various titles)**

12. Department of Environment, Transport and Regions, 2000, **Guidelines for Environmental Risk Assessment & Management**, Revised Departmental Guidance

13. Department of Environment, Transport and Regions, 2000, **Contaminated Land: Implementation of the Part IIA of the Environmental Protection Act 1990**, Circular 02/2000 (Available on-line at: http://www.defra.gov.uk/environment/landliability/pubs.htm )

14. Environment Agency, 1998, **Policy and Practice for the Protection of Groundwater (Second Edition)**

15. Environment Agency, 1999, **Methodology for the Derivation of Remedial Targets for Soil and Groundwater to Protect Water Resources**, R&D Publication 20

16. Environment Agency & NHBC, 2000, **Guidance for the Safe Development of Housing on Land Affected by Contamination**, R&D Publication 66

17. Environment Agency, 2000, **Risks of Contaminated Land to Buildings, Building Materials and Services – A Literature Review**, Technical Report P331

18. Environment Agency, 2000, **Cost-Benefit Analysis for Remediation of Land**

**Contamination**, R&D Technical Report P316

19. Environment Agency, 2001, **Guide to Good Practice for the Development of Conceptual Models and the Selection and Application of Mathematical Models of Contaminant Transport Processes in the Subsurface**, NC/99/38/2

20. Environment Agency, 2002, **Toxicological Data and Soil Guideline Values Reports**, CLR Report Numbers 7 to 10 (Available for free download on-line at: http://www.environment-agency.gov.uk/subjects/landquality/113813/672771/675330/?lang=_e or http://www.defra.gov.uk/environment/land/contaminated/pubs.htm )

21. Environment Agency, 2004, **Model Procedures for the Management of Land Contamination**, CLR Report 11 (Available for free download on-line at: http://www.environment-agency.gov.uk/subjects/landquality/113813/672771/675330/?lang=_e )

22. Environment Agency, 2005, **The UK Approach for Evaluating Human Health Risks from Petroleum Hydrocarbons in Soils**, Science Report P5-080/TR3

23. Environment Agency, 2005, **Environment Agency Guidance on Requirements for Land Contamination Reports**

24. Health & Safety Executive, 1991, **Protection of Workers and the General Public during the Development of Contaminated Land**

25. Manchester Area Pollution Advisory Council, 2005, **Guidance for Development of Land on Gas Contaminated Ground**

26. National House Building Council (NHBC), 1999, NHBC Standards Chapter 4.1, **Land Quality – Managing Ground Conditions**

27. Office of the Deputy Prime Minister, 2004, **Planning & Pollution Control Annex 2: Development on Land Affected by Contamination**, Planning Policy Statement 23 (Available for free download on-line at: http://www.odpm.gov.uk/stellent/groups/odpm_planning/documents/downloadable/odpm_plan_032637.pdf )

28. Office of the Deputy Prime Minister, 2004, **Approved Document C – Site Preparation and Resistance to Contaminants and Moisture**

29. Partners in Technology, 1997, **Passive venting of soil gases beneath buildings – Guide for design**, Volumes 1 and 2

30. Scotland and Northern Ireland Forum for Environmental Research (SNIFFER), 2003, **Method for Deriving Site-specific Human Health Assessment Criteria for Contaminants In Soils**, LQ01

31. Wilson & Card, 1999, **Reliability and risk in gas protection design**, pp 32 to 36 Ground Engineering, February 1999 and clarification article in the News Section of Ground Engineering, March 1999

**Please note that several of the reference documents contain a comprehensive list of other useful publications associated with contaminated land, particularly CLR11 Model Procedures for the Management of Land Contamination.**

## APPENDIX B – EXAMPLE PLANNING CONDITIONS

### Contaminated Land Conditions:

Current Planning Conditions for Contaminated Land / Landfill Gas 16/03/2005 (These are currently in the process of being revised).

**9 Landfill Gas Investigation Required**

No development shall commence unless and until a site investigation and assessment in relation to the landfill gas risk has been carried out and the consultant's report and recommendations have been submitted to and approved in writing by the Local Planning Authority. Written approval from the Local Planning Authority will be required for any necessary programmed remedial measures and, on receipt of a satisfactory completion report, to discharge the condition.

Reason – In order to protect the public safety, because the site is located within 250 metres of a former landfill site.

Informative – You are advised to contact the Environmental Protection Section of the Council on 0161 911 3445 or 4465 before any landfill gas investigation takes place.

**10 Contaminated Land Investigation Required**

No development shall commence unless and until a site investigation and assessment to identify the extent of land contamination has been carried out and the consultant's report has been submitted to and approved in writing by the Local Planning Authority. Written approval from the Local Planning Authority will be required for any necessary programmed remedial measures and, on receipt of a satisfactory completion report, to discharge the condition.

Reason – In order to protect public safety and the environment.

Informative – You are advised to contact the Environmental Protection Section of the Council on 0161 911 3445 or 4465 before any contaminated land investigation takes place.

## APPENDIX C – RISK ASSESSMENT, SITE INVESTIGATION, REMEDIATION & VALIDATION CHECKLISTS

### A. PRELIMINARY RISK ASSESSMENT

| | Has the following been considered? | Provided? |
|---|---|---|
| **1** | Details of report ownership, limitations and copyright including authors name and contact details and client name and contact details | Yes □ /No □ |
| **2** | Purpose and aims of study | Yes □ /No □ |
| **3** | Site location and layout plans, National Grid Reference, site area | Yes □ /No □ |
| **4** | Assessment of current site use and surrounding land uses | Yes □ /No □ |
| **5** | Appraisal of site history and previous uses of the land surrounding the site | Yes □ /No □ |
| **6** | Details of proposed future use and proposed layout plans | Yes □ /No □ |
| **7** | Assessment of environmental setting, to include:<br>• Geology, hydrogeology, hydrology<br>• Site reconnaissance survey (walkover)<br>• Information on coal workings and other mining or quarrying activities<br>• Information from Environment Agency on water abstractions, pollution incidents, water quality classification, landfill sites, prescribed processes Part A, etc<br>• Information from Local Authority on former landfill sites, contaminated land, nuisance, hazardous substances, private water supplies, prescribed processes Part A(2) and Part B etc<br>• Information from other appropriate bodies (SSSI, SBI etc) | <br>Yes □ /No □<br>Yes □ /No □<br>Yes □ /No □<br>Yes □ /No □<br>Yes □ /No □ |
| **8** | Review of any previous contaminated land investigations (desk-based or intrusive), remediation works or any other relevant reporting. Full references supplied of used material including details of where copies can be viewed or supplied | Yes □ /No □ |
| **9** | Preliminary (qualitative) assessment of risks based on proposed site use including:<br>• Appraisal of actual and/or potential contaminant sources, pathways and receptors<br>• Conceptual Site Model and Conceptual Exposure Model (visual and written)<br>• Identification of contaminants of concern (including natural sources of contamination) and source areas<br>• Hazard Assessment | <br>Yes □ /No □<br>Yes □ /No □<br>Yes □ /No □<br>Yes □ /No □ |
| **10** | Discussion of uncertainties and gaps in information | Yes □ /No □ |
| **11** | Recommendations for next steps proposed at the site including justification (e.g. carry out site investigation and quantitative risk assessment) | Yes □ /No □ |
| **12** | Details and references of all data sources used | Yes □ /No □ |
| **13** | All relevant data sources appended where possible (e.g. search responses, historical mapping) | Yes □ /No □ |
| **Any other relevant information:** | | |

## B. SITE INVESTIGATION AND RISK ASSESSMENT

| | Has the following been considered? | Provided? |
|---|---|---|
| **1** | Details of report ownership, limitations and copyright including authors name and contact details and client name and contact details | Yes □ /No □ |
| **2** | Purpose and aims of study | Yes □ /No □ |
| **3** | Site location and layout plans, National Grid Reference, site area | Yes □ /No □ |
| **4** | Details of proposed future use and proposed layout plans | Yes □ /No □ |
| **5** | Results from the Preliminary Risk Assessment (relevant details such as the conceptual model should be copied into the main body of the report) | Yes □ /No □ |
| | **Site Investigation:** | |
| **6** | Investigation objectives | Yes □ /No □ |
| **7** | Summary of investigation work carried out | Yes □ /No □ |
| **8** | Site investigation strategy including:<br>• Rationale for investigation and justification for positioning of exploratory locations<br>• Exploratory methods used (trial pitting, boreholes, window sampling) and justification<br>• Measures undertaken to prevent the creation of pollution pathways as a consequence of site investigation methods used | <br>Yes □ /No □<br>Yes □ /No □<br>Yes □ /No □ |
| **9** | Site sampling strategy including:<br>• Rationale for strategy<br>• Details of in-situ tests and geotechnical tests required to provide data for quantitative risk assessment<br>• Details of methods used for collecting, preserving and transporting samples to the analytical laboratory<br>• Description and explanation of monitoring programmes for gas, groundwater and surface waters (upstream and downstream conditions should be represented) where relevant<br>• Details of information to be recorded such as gas types, weather conditions, depth of groundwater (metres below ground and AOD) and frequencies of sampling etc.<br>• Monitoring and sampling location plan | <br>Yes □ /No □<br>Yes □ /No □<br>Yes □ /No □<br>Yes □ /No □<br>Yes □ /No □<br>Yes □ /No □ |
| **10** | Analytical strategy including:<br>• Rationale for selection of analytical parameters (based on contaminants of concern identified in the Preliminary Risk Assessment)<br>• Justification for selection of samples to be analysed<br>• Description of methods used for collecting, preserving and transporting samples to the analytical laboratory<br>• Description of chemical analyses, in accordance with the MCERTS performance standard for soils quality assurance and quality control requirements for laboratory analyses | <br>Yes □ /No □<br>Yes □ /No □<br>Yes □ /No □ |
| **11** | Presentation and interpretation of investigation results, including (where appropriate):<br>• Description of site works and on-site observations | <br>Yes □ /No □ |

| | | |
|---|---|---|
| | • Description of ground conditions encountered at the site, including detailed descriptions of strata encountered, visual and olfactory evidence, groundwater regime and surface water features, structures and services encountered etc | Yes □ /No □ |
| | • Summary tables of laboratory analyses, site monitoring and geotechnical test results (including visual, olfactory, analytical and monitoring data) | Yes □ /No □ |
| | • Description of type, nature and spatial distribution of contamination, with plans where appropriate | Yes □ /No □ |
| | • Evaluation and discussion of site investigation results and contamination identified | Yes □ /No □ |
| **12** | Appendices containing (where appropriate): | |
| | • Exploratory hole logs including grid co-ordinates and ground elevation (logged by suitably qualified professionals) | Yes □ /No □ |
| | • Construction details for monitoring boreholes or other type of monitoring installation e.g. response zone | Yes □ /No □ |
| | • Gas/ groundwater/ surface water/ other monitoring results | Yes □ /No □ |
| | • Groundwater levels | Yes □ /No □ |
| | • Description of samples submitted for analysis | Yes □ /No □ |
| | • Laboratory analytical reports, completed in accordance with the MCERTS performance standard for soils where appropriate | Yes □ /No □ |
| | • Chain of custody records | Yes □ /No □ |
| | • Other relevant information such as site photographic records | Yes □ /No □ |
| | • Relevant plans and maps | Yes □ /No □ |
| **Risk Assessment:** | | |
| **13** | Risk assessment objectives | Yes □ /No □ |
| **14** | Revised Conceptual Model and Conceptual Exposure Model identifying and confirmation and discussion of all relevant pollution linkages | Yes □ /No □ |
| **15** | Rationale for the chosen risk assessment approach (e.g. qualitative, generic quantitative or detailed quantitative) and explanation for why it is valid for the site | Yes □ /No □ |
| **16** | Statistical tests for contaminated soils including the mean value test and maximum value test detailed in CLR7 | Yes □ /No □ |
| **17** | Assessment criteria selected for the site, with justification for all criteria used and UK compliance | Yes □ /No □ |
| **18** | Risk Assessment Calculation worksheets provided containing full quality control, validation and justification data | Yes □ /No □ |
| **19** | Constraints and limitations relating to data quality and risk assessment method | Yes □ /No □ |
| **20** | Identification of pollutant linkages that present an unacceptable risk of harm to human health, controlled waters, buildings, property and the wider environment (current and future use) | Yes □ /No □ |
| **21** | Discussion of uncertainties and their impact on the outcome of the risk assessment | Yes □ /No □ |
| **22** | Results of risk estimation if detailed quantitative risk assessment is undertaken | Yes □ /No □ |
| **23** | Risk Evaluation of unacceptable risks to human health, controlled waters, buildings, property and the wider environment taking into | Yes □ /No □ |

| | | |
|---|---|---|
| | account both the current use of the site and details of the proposed development, e.g. foundation design, surface drainage and foul water disposal. Risk Evaluation is an assessment of the acceptability of risks and any uncertainties with the risk assessment and also considering the costs and benefits of carrying out remediation | |
| **24** | Discussion of uncertainties and gaps in information | Yes □ /No □ |
| **25** | Description and justification of next steps proposed at the site, e.g. carry out Options Appraisal for pollutant linkages that present an unacceptable risk | Yes □ /No □ |
| **26** | Details and references of all data sources used | Yes □ /No □ |
| **27** | All relevant data sources appended where possible (e.g. full statistical test results, worksheets) | Yes □ /No □ |
| **Any other relevant information:** | | |

## C. OPTIONS APPRAISAL

| Has the following been considered? | | Provided? |
|---|---|---|
| **1** | Details of report ownership, limitations and copyright including authors name and contact details and client name and contact details | Yes □ /No □ |
| **2** | Objectives of remediation or protective works | Yes □ /No □ |
| **3** | Site location and layout plans, National Grid Reference, site area | Yes □ /No □ |
| **4** | Details of proposed future use and proposed layout plans | Yes □ /No □ |
| **5** | Overview of previous reports and findings | Yes □ /No □ |
| **6** | Statement and explanation of remediation objectives, i.e. what the remediation needs to achieve or protection afforded, for each relevant pollutant linkage | Yes □ /No □ |
| **7** | Statement of remediation criteria against which compliance with remediation objectives for each relevant pollutant linkage can be measured | Yes □ /No □ |
| **8** | Statement of overall site remediation criteria (these should always be protective of human health and controlled waters) where they differ from the criteria derived for relevant pollutant linkages. | Yes □ /No □ |
| **Identification of feasible remediation options:** | | |
| **9** | Summary of feasible remediation and protective options identified for each relevant pollutant linkage, including general characteristics of those options and methods used for collecting information on them | Yes □ /No □ |
| **10** | Short-list of feasible remediation and protective options to be taken forward for more detailed consideration, including:<br>• An assessment of their suitability for use at the site<br>• Consideration give to sustainable methods<br>• Reasons for selecting options on the short-list | <br>Yes □ /No □<br>Yes □ /No □<br>Yes □ /No □ |
| **Detailed evaluation of remediation options:** | | |
| **11** | Evaluation of short-listed remediation options, including explanation of evaluation criteria used (including sustainability) | Yes □ /No □ |
| **12** | Identification of the most appropriate option for each relevant pollutant linkage and justification for its selection | Yes □ /No □ |
| **13** | Reasons for rejecting other remediation options on the short-list | Yes □ /No □ |
| **14** | Justification for any proposals to combine remediation options | Yes □ /No □ |
| **Remediation Strategy:** | | |
| **15** | Detailed outline of the works to be carried out including:<br>• Description of ground conditions (soil, gas, water)<br>• Type, form and scale of contamination to be remediated<br>• Remediation methodology, including remedial, protective or other works<br>• Technical and scientific basis of the strategy<br>• Proposed site zoning and phasing of remediation where necessary<br>• Approximate timescales to carry out remedial and protective works<br>• Expected durability of the proposed remediation<br>• Measures to prevent pollution or nuisance (e.g. odour and noise) being caused by remediation activities at the site | <br>Yes □ /No □<br>Yes □ /No □<br>Yes □ /No □<br>Yes □ /No □<br>Yes □ /No □<br>Yes □ /No □<br>Yes □ /No □<br>Yes □ /No □ |

| | | |
|---|---|---|
| | • Constraints and limitations to remediation<br>• Detailed site plans/drawings | Yes □ /No □<br>Yes □ /No □ |
| **16** | Assessment of requirements for consents, agreements, permits and licences (discharge consents, waste management licence, mobile plant, Part B authorisations, land access etc.) | Yes □ /No □ |
| **17** | Procedure for making any changes to the Remediation Strategy including notification to the relevant planning authority or officer dealing with contaminated land issues (contact details can be found on the back page of this guidance note). | Yes □ /No □ |
| **18** | Site management procedures to protect site workers, neighbours, the environment and amenity during works, including where appropriate:<br>• Health & safety procedures<br>• Dust, noise & odour controls<br>• Control of surface water run-off and dewatering<br>• Management/control systems to prevent contamination due to site activities | <br><br><br>Yes □ /No □<br>Yes □ /No □<br>Yes □ /No □<br>Yes □ /No □ |
| **19** | Details of how the works will be validated to ensure the remediation objectives have been met, including;<br>• Sampling strategy including validation testing frequencies and determinands<br>• Quality Assurance / Quality Control (QA/QC) procedures<br>• Use of on-site observations, visual/olfactory evidence<br>• Chemical analysis/monitoring data<br>• Proposed clean-up and importation criteria (i.e. acceptable contaminant concentrations) | <br><br>Yes □ /No □<br><br>Yes □ /No □<br>Yes □ /No □<br>Yes □ /No □<br>Yes □ /No □ |
| **20** | Description of how the Remediation Strategy will deliver remediation criteria derived for all relevant pollutant linkages | Yes □ /No □ |
| **21** | All relevant data sources appended where appropriate | Yes □ /No □ |
| **Other information:** | | |

## D. IMPLEMENTATION OF THE REMEDIAL STRATEGY AND VERIFICATION REPORTING

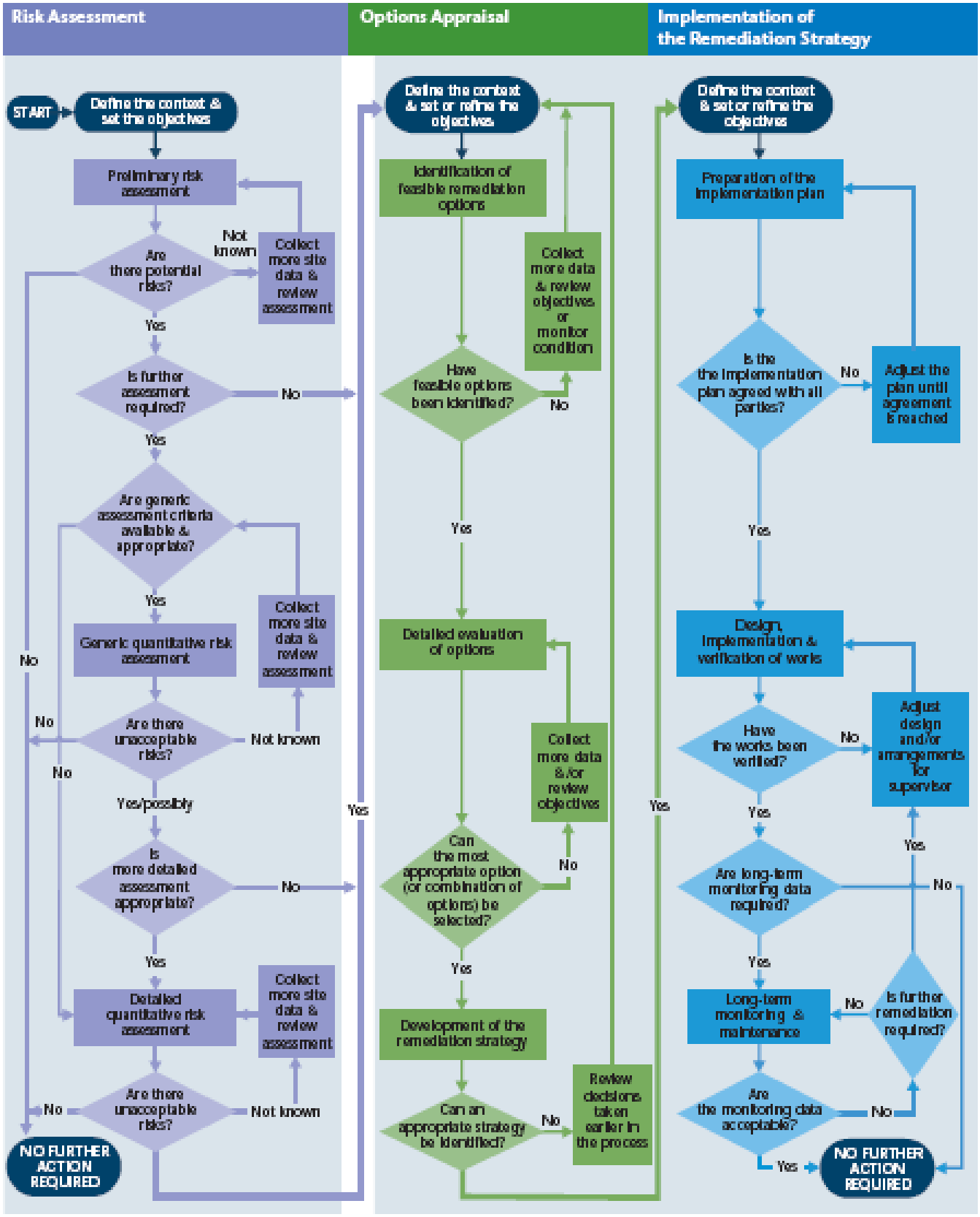
| | Has the following been considered? | Provided? |
|---|---|---|
| | **Implementation Plan:** | |
| **1** | Details of report ownership, limitations and copyright including authors name and contact details and client name and contact details | Yes □ /No □ |
| **2** | Purpose of report | Yes □ /No □ |
| **3** | Site location and layout plans, National Grid Reference, site area | Yes □ /No □ |
| **4** | Include information as per 15 to 20 of the Remediation Strategy, updated where required | Yes □ /No □ |
| **5** | Site preparation and operational constraints | Yes □ /No □ |
| **6** | Relevant consents, agreements, permits and licences in place (discharge consents, waste management licence, mobile plant, Part B authorisations, land access etc.) and evidence of compliance | Yes □ /No □ |
| **7** | Updated timescales and programme of works | Yes □ /No □ |
| **8** | Action plans for unexpected contamination and other unforeseen adverse conditions | Yes □ /No □ |
| **9** | Notification procedures | Yes □ /No □ |
| | **Verification Report:** | |
| **10** | Include information as per 1 to 3, updated where required | Yes □ /No □ |
| **11** | Overview of investigations, risk assessments and discussion on requirement of remediation/protection measures | Yes □ /No □ |
| **12** | Detailed information regarding remedial and protective measures carried out on site including construction details and location plans | Yes □ /No □ |
| **13** | Details of all contractors and work each carried out. Details of insurance, Public Liability, Public Indemnity etc | Yes □ /No □ |
| **14** | Details and justification of any changes from original Remediation Strategy | Yes □ /No □ |
| **15** | Substantiating data – should include where appropriate:<br>• Laboratory and in-situ test results (in accordance with the MCERTS performance standard where relevant)<br>• Validation testing of imported materials<br>• Materials performance and conformance testing (e.g. barriers, membranes, cover systems)<br>• Monitoring results for groundwater and gases<br>• Summary data plots and tables relating to clean-up criteria<br>• Plans showing treatment areas and<br>• Photographic and other media records<br>• Waste management details and records (e.g. details of disposal to appropriately licensed facilities) | <br>Yes □ /No □<br>Yes □ /No □<br>Yes □ /No □<br>Yes □ /No □<br>Yes □ /No □<br>Yes □ /No □<br>Yes □ /No □<br>Yes □ /No □ |
| **16** | Confirmation that remediation objectives have been met | Yes □ /No □ |
| **17** | Details of any ongoing or long-term monitoring and triggers for further action in response to exceptional monitoring results | Yes □ /No □ |
| **18** | Details of any maintenance requirements of the remedial and/or protective measures where appropriate | Yes □ /No □ |

| | | |
|---|---|---|
| **19** | Details of proposed actions in case of triggers from long-term monitoring or failure/loss of effectiveness of remedial/protective systems where appropriate | Yes □ /No □ |
| **20** | Statement to developer informing of systems put in place, details of long-term monitoring and maintenance, longevity and limitations and restrictions to activities on the site or future users (e.g. no excavation below cover system unless precautions taken) | Yes □ /No □ |
| **Long-term Monitoring & Maintenance Plan (where required):** | | |
| **21** | Report objectives | Yes □ /No □ |
| **22** | Site location map and National Grid Reference | Yes □ /No □ |
| **23** | Site layout plans and monitoring locations | Yes □ /No □ |
| **24** | Contact details of contractors carrying out monitoring and maintenance actions and emergency contact numbers | Yes □ /No □ |
| **25** | Scope and explanation of site monitoring and/ or maintenance work required following completion of site works to ensure that remediation of relevant pollutant linkages continues to be effective | Yes □ /No □ |
| **26** | Details ensuring that the required monitoring and/ or maintenance is undertaken (e.g. Section 106 Obligations, commuted sums, Health & Safety Plan tied into building) | Yes □ /No □ |
| **27** | Schedule of maintenance activities required to ensure that measures undertaken to remediate relevant pollutant linkages continue to be effective | Yes □ /No □ |
| **28** | Monitoring assessment criteria and reasons for their selection | Yes □ /No □ |
| **29** | Schedule of monitoring required | Yes □ /No □ |
| **30** | Construction details of monitoring boreholes or other type of monitoring installation | Yes □ /No □ |
| **31** | Type and suitability of monitoring equipment to be used | Yes □ /No □ |
| **32** | Scope of site monitoring and sampling activities required | Yes □ /No □ |
| **33** | Laboratory analytical reports (completed in accordance with the MCERTS performance standard for soils where appropriate) | Yes □ /No □ |
| **34** | Assessment and reporting of on-going compliance with remediation criteria | Yes □ /No □ |
| **35** | Reporting and notification on actions taken in response to exceptional monitoring results | Yes □ /No □ |
| **36** | Recommendations for future monitoring, including any variations required from the monitoring programme provided in the Monitoring and Maintenance Plan | Yes □ /No □ |
| **37** | Statement and justification of end-point for the site monitoring programme | Yes □ /No □ |
| **38** | All relevant data sources appended where appropriate | Yes □ /No □ |
| **Other information:** | | |

**The above checklists have been constructed based on likely planning requirements and best practice. Not all items within the checklists will necessarily be required, however, you are strongly advised to include all relevant information and check with the Local Authority if you are unsure of requirements.**

**In order to promote a consistent approach, large extracts and modifications to the checklist within the Environment Agency Guidance on Requirements for Land Contamination Reports published in 2005 have been used.**

## APPENDIX D – CLR11 PROCESS FLOWCHART




*Note: The process may apply to one or more pollutant linkages each of which may follow a different route. For some linkages, it may be possible to stop at an early stage – others will progress all the way through the process. The level of complexity of each stage may also vary and in some cases may be very simple.*

**Flowchart taken from Figure 1 of CLR11**

## APPENDIX E - USEFUL CONTACTS

Economy Places and Skills Directorate
Chadderton Town Hall,
Middleton Road,
Chadderton, Oldham OL9 6PP

Tel: 0161 911 4465 or 1810
Fax: 0161 911 4500

Contact: Steve Woodhouse
Othman BenGhalbon

Planning

Tel:
Fax:

www.oldham.gov.uk

Building Control

The Association of Greater Manchester Authorities
www.agma.gov.uk

British Standards Institute (BSI)
389 Chiswick High Road
London
W4 4AL
Tel: 020 8996 9001
Fax: 020 8996 7001
www.bsi-global.com

Construction Industry Research & Information Group (CIRIA)
6 Storey's Gate
Westminster
London
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www.environment-agency.gov.uk

Health & Safety Executive (HSE)
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www.hse.gov.uk

Laboratory of the Government Chemist
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www.lgc.co.uk

Land Condition Specialists
www.silc.org.uk

Manchester Area pollution Advisory Committee
www.mapac.org.uk

The National House Building Council
Buildmark House, Chiltern Avenue
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www.nhbc.org.uk

The Office of the Deputy Prime Minister (ODPM)
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