Developing land within Derbyshire

A guide to the content and submission of a validation or verification report

Produced by the Derbyshire Contaminated Land Working Group

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A) INTRODUCTION

If a planning condition had been applied to your development with respect to land contamination and you have prepared and submitted a site investigation and remediation scheme to your Local Authority, you will also need to submit a validation (or verification) report.

This report must be submitted following completion of the remediation scheme and prior to occupation of the development. The primary aim of the report is to document all aspects of the remedial works undertaken at a development site to demonstrate that the previously identified risks have been reduced to meet remediation criteria and objectives. The report must demonstrate the achievement and effectiveness of the remediation carried out and that the site is suitable for the intended use.

The report should include details of all the actions taken at each stage of the process, from initial investigations and assessment through to undertaking remediation and its associated validation. Planning Policy Statement 23 (Annex 2) advises that as a matter of good practice, such a validation report should be retained by the developer in an accessible form and place for a period of at least 25 years.

Until this report has been reviewed and approved by the local planning authority the relevant planning condition cannot be discharged.

B) WHO SHOULD PREPARE THE VALIDATION REPORT

As with the site investigation and remediation scheme, the validation report should be prepared by a suitably qualified and competent person in accordance with *'Model Procedures for the Management of Land Contamination, CLR 11'.* (Environment Agency 2004). It is likely this person or company with be the same as that employed to undertake the site investigation and prepare the remediation scheme. The individual or company should have suitable professional indemnity insurance and will normally be

independent of the contractor / subcontractor to ensure there is no conflict of interest.

C) DATA COLLECTION FOR THE REPORT

The remediation scheme submitted following on from the site investigation should contain details of how the effectiveness of the remediation will be demonstrated. Data collection for inclusion in the validation report will commence during the implementation of the remediation scheme and will continue throughout the duration of the remediation works.

Where a development is phased, separate validation reports may be required for each phase of the development.

D) COMMON REMEDIATION SCHEMES AND THEIR VALIDATION REQUIREMENTS

Imported topsoil

Any soil imported onto the development site from an outside source must be suitable for use. Any soil proposed to be used as part of a cover system or landscaping, which has arisen from elsewhere on the development site, should also be suitable for use and will be subject to the same requirements as imported material.

The following aspects of imported material will require validation:

- Suitability of the topsoil. A copy of the certificate of analysis, details of the source of the topsoil and an interpretation of the analytical results by a suitably qualified individual **(topsoil must be approved by the Local Authority prior to importation)**

OR

- A declaration of compliance with British Standard 3882:2007 - Specification for topsoil and requirements for use **(approved by the Local Authority prior to importation)**

PLUS

- Source of the imported material. Details of the source or supplier of the material must be documented and supported by appropriate documentation.
- Sampling at a ratio of one sample for every 100 m^3 (approximately 150 tons) of material imported from a "greenfield" source or one sample for every 50 m^3 for material from an unknown or potentially contaminated source.
- Volume of imported material. This should be supported by the appropriate documentation such as purchase records.

It is advisable to sample at the above frequency prior to importation to ensure that the material brought to site is suitable for use.

Cover systems

A cover system involves certain areas of land of being covered by layers of soil to a pre-agreed depth. The aim of a cover system is to prevent or reduce human contact with ground that may contain contamination. Cover systems may overlie existing ground or may overlie a physical barrier or marker layer (e.g. a geotextile membrane, a physical break layer such as a layer of aggregate or a capillary break layer) that has been installed as part of the remediation scheme.

If the use of a cover system has been approved by the Local Authority as part of the remediation scheme, the following areas will require validation:

- Validation of the imported material (see above)
- Location of imported material. All locations where imported material is placed on site as part of the cover system must be catalogued and detailed in a site plan.
- The thickness of the cover system and (where applicable) installation of the barrier or marker layer. Validation can take the form of a topographic survey or a visual inspection

at numerous points across the land supported by photographic evidence.
- Volume of material imported to site.

E) GAS PROTECTION MEASURES
The installation of gas protection measures (e.g. a gas membrane) as agreed in the remediation scheme will require the following validation:

- Details of the installation. The installation of gas protection membranes shall be overseen by a suitably qualified and experience individual, such as an approved building control inspector.
- Photographic evidence of the installation of a gas protection membrane is recommended. This should include evidence of the presence of the membrane, the quality of joints and the handling of wall cavities.
- Details of the specification of the membrane installed.
- Integrity testing of the membrane. This may be required to be undertaken in certain circumstances. This requirement should be discussed with the Council prior to installation of the membrane.

F) MATERIAL EXPORTED OFF-SITE
Any material that is removed from the development site, either for disposal or reuse elsewhere, should be fully documented. Exported material can be considered waste and it may be contaminated. Consequently it should be disposed of appropriately and with due regard to the contractor or developers' waste duty of care. The following aspects of exported material will require validation:

- Appropriate disposal. Supporting documentation in the form of transfer notes will be required to include details of the waste carrier and disposal (location?)
- Volume of material exported. The volume of material removed from site should be recorded and this information provided.
- Location of excavated material that has been exported. It is likely this information will have been thoroughly detailed in the remediation scheme.

G) VALIDATION OF HOT-SPOT REMOVAL
Where material is excavated and exported off site to remove a contamination hot-spot, the above conditions relating to material exported off-site apply, along with the requirement to validate the removal of the hot-spot. Validation samples should be taken to determine the nature and extent of any residual contamination. Samples should be taken at equally-spaced locations immediately around the perimeter of the excavated area, at the sides and at the base of the excavated area. A minimum of four samples covering the sides and base of the area are required.

H) LONG-TERM MONITORING AND MAINTENANCE
Long-term monitoring is not normally required where remediation has been designed to avoid such a requirement. It can be a requirement where there is a need to monitor controlled waters for a specified period after remediation has been completed to ensure contaminants are not remobilised.

If long-term monitoring is required at a site, an ongoing monitoring and/or maintenance plan and associated reporting requirements must be agreed with the regulator. Following completion of all long-term monitoring and maintenance a final report must be submitted to the local planning authority demonstrating the effectiveness of the monitoring and maintenance undertaken.

I) ADDITIONAL INFORMATION (correct at October2008)

Duty of care – Netregs
http://www.netregs.gov.uk/netregs/275207/275430/

Fact sheet on contaminated soils – Environment Agency (2008). Available from the publications catalogue:
http://publications.environment-agency.gov.uk/epages/eapublications.storefront

CLR 11 Model Procedures for the Management of Land Contamination (Environment Agency 2004)
http://www.environment-agency.gov.uk/research/planning/33740.aspx

Planning Policy Statement 23 – Planning and Pollution Control
http://www.communities.gov.uk/planningandbuilding/planning/planningpolicyguidance/planningpolicystatements/planningpolicystatements/pps23/

R&D 66 Guidance for the Safe Development of Housing on Land Affected by Contamination. Volume1 & 2. (2008)
http://www.nhbcbuilder.co.uk/NHBCpublications/LiteratureLibrary/Technical/

The definition of waste: developing Greenfield and brownfield sites. Environment Agency (2006)
http://www.environment-agency.gov.uk/business/sectors/32731.aspx

APPENDIX 1 - TYPICAL CONTENT OF A VALIDATION REPORT
Additional information on the content of a validation report can be found in R&D 66 and CLR 11. Information such as certificates of analysis, photographs, waste transfer notes and as-build drawings should be included in the appendices and referenced accordingly.

Background Information

Report objectives and statement of what constitutes completion of the remediation

Site details

- Name and address of site
- Location, including National Grid Reference
- Site plan and size
- Brief history of the site and a summary of previous investigations (e.g. desk study and site investigation)

Reasons and objectives for undertaking the remediation (e.g. development control, part IIA etc)

Details of the development project itself and of related personnel and their roles (e.g. Company names of owner, tenant, contractors, developer, consultants etc)

Remediation

Methodology and programme of implementation

- Conceptual model identifying pollutant linkages to be addressed during remediation
- General description of remediation
- Statement of remediation objectives and remediation criteria agreed with the regulators
- Clear description of the verification plan including the methodologies used for data collection and interpretation
- Health and safety issues
- Regulatory licences/permits
- Site preparation and services
- Way-leaves
- Sequence of remediation activities

Verification – the data collected during the validation of the remedial works. This will be previously unpresented information.

Chemical and physical testing regime

- Chemical testing during the remediation to demonstrate attainment of remediation objectives
- Physical testing and measurement during the remediation to demonstrate attainment of engineering objectives on backfilled and/or reused material

- Chemical testing to demonstrate the suitability of imported material (e.g. cover systems)
- Membrane performance testing if required

Ongoing monitoring (if required)

- Results of surface water, groundwater or gas monitoring to assure the effectiveness of the remediation measures after the remediation has been implemented

Final site conditions

Status at completion (i.e. description of site conditions when remediation is considered to be completed)

Description of final extent of remediation

- A map showing the extent of the remediation
- Implications of final site condition (by extent, depth, etc.) on the future use of the site
- A clear statement of the extent to which remediation objectives and criteria have been met
- Review of the site conceptual model to demonstrate that all relevant pollutant linkages have been managed

Identification of long-term or post-remediation monitoring

- Details of any ongoing monitoring programmes, their maintenance requirements, administrative controls and any constraints the monitoring may place on future activities

Third party contacts

Consultees

- Names, addresses, telephone numbers of utilities, local authority (Environmental Health Office, Planning), Environment Agency, Health and Safety Executive etc

Statutory requirements

- Planning conditions requiring discharge

Third party agreements

- Details of any covenants, way-leaves, warranties etc

Supporting information

Site plans, as-built drawings and photographs

- Location
- Areas remediated
- Areas of residual contamination
- Sampling or monitoring locations
- Depths of cover system

Test results

- Analytical test results for all materials that form part of the remediation scheme (e.g. imported material, validation of excavated hotspots)

Waste transfer notes

Other documentation

- Other documentation pertinent to the remediation (e.g. key correspondence with stakeholders, progress reports etc)

Useful contacts

AMBER VALLEY BOROUGH COUNCIL	Amber Valley Borough Council	Tel 01773 570222 Fax 01773 841407
Bolsover District Council	Bolsover District Council	Tel 01246 242424 Fax 01246 242423
Chesterfield Borough Council	Chesterfield Borough Council	Tel 01246 345767 Fax 01246 345760
DERBY CITY COUNCIL	Derby City Council	Tel 01332 716332 Fax 01332 716330
DERBYSHIRE DALES DISTRICT COUNCIL	Derbyshire Dales District Council	Tel 01629 761212 Fax 01629 761165
EREWASH BOROUGH COUNCIL	Erewash Borough Council	Tel 01159 072244 Fax 01159 316079
High Peak Borough Council	High Peak Borough Council	Tel 0845 129 77 77 Fax 01298 27639
North East Derbyshire District Council	North East Derbyshire District Council	Tel 01246 231111 Fax 01246 217447
	South Derbyshire District Council	Tel 01283 221000 Fax 01283 595855
DERBYSHIRE County Council	Derbyshire County Council	Tel 0845 6058 058 Fax 01629 585279
	Environment Agency	Tel 0845 506 506
	DEFRA – Department for the Environment, Food and Rural Affairs	Tel 0845 933 55 77