Fife Council

Environmental Services

Advice for Developing Brownfield Sites in Fife 2008

www.fifedirect.org.uk/contaminatedland

Contents

This guide is not intended to replace statutory guidance.

Introduction

This guide aims to provide initial advice to anybody who is proposing to develop, or is involved in the development of, land that may be affected by contamination from previous industrial processes. The purpose of this guide is to make developers aware of their responsibilities and to set out the information that is required to allow decisions to be made in the planning process.

Government strategy recommends that 60% of new development should take place on brownfield land. Brownfield sites are areas that have been previously used for industrial purposes and are often vacant plots, sometimes with derelict buildings remaining on site. They can offer attractive development opportunities in prime areas. Fife Council encourages such developments, provided they are carried out with regard to statutory guidance* to ensure that the sites are suitable for their proposed end-use.

Phased Site Investigation

Where contamination is known or suspected, the following site investigation procedure should be carried out (see Figure 1 on Page 3). It should consider any risk to water resources and the wider environment as well as to human health. Normally an environmental consultant would be employed to do this. Not every site will require all remedial works to be carried-out: this phased approach allows resources to be targeted in the areas that are most likely to require them.

Phase I – Desk Study and Site Walkover
The desk study is the collection of information to enable a Conceptual Site Model to be established. The Model considers all potential sources of contamination, likely receptors and the possible pathways between them. The report should document the site's history and identify all potentially contaminative historical land uses. The conclusions of the report will recommend progression to Phase II if required.

Phase II – Intrusive Investigation
Through intrusive investigation, chemical testing and quantitative risk assessment, the Phase II report can confirm possible pollutant linkages identified in the conceptual site model and provide appropriate remedial options, if required.

Phase III – Remediation Statement
This details the objectives, methodology and procedures of the proposed remedial works and must be submitted to the Council for approval before any works commence.

Post-Remediation Validation Report
Following remedial works, a validation report must be submitted to the Council clearly demonstrating that all pollutant linkages have been broken.

A checklist for each of these stages is attached and should be included as part of the submitted report. The checklist shows the minimum that is expected. Reports that fail to meet these requirements will be returned.

* Including PAN 33, CLR 11, R&D 66 and BS 10175

The Planning Process

If previous industrial land-use has been noted, the risk of contamination cannot be ignored. It is essential that applicants and their agents provide as much information as possible to Development Services at every stage of the planning process. Withholding information may delay your application. It is *your responsibility* as a developer to ensure that the Council is well informed about progress at all times so that decisions can be made and the application processed as efficiently as possible.

Contaminated Land reports submitted in support of planning applications must be of an acceptable minimum standard in order to satisfy the requirements of the statutory guidance. If you are proposing to develop land that may be contaminated, you are advised to contact the Council at an early stage to discuss land contamination issues before submitting a planning application. Please note that a developer can be held liable if they knowingly permit residents to live on a site where there is a risk from contamination. Scottish Executive Planning Advice Note 33, Para 43, says:

"*Where planning consent is granted for a site on which the presence of contamination is known or suspected, an advisory note may be attached to the planning permission informing the applicant(s) that the responsibility for the safe development of the site rests with the developer. It may also warn the applicant that the planning authority has determined the application on the basis of the information available to it, but this does not mean that the land is free from contamination*".

Applicants need to satisfy the Council that unacceptable risk from contamination will be successfully addressed through remedial action without undue environmental impact during and following the development. Where an agreed remediation scheme includes future monitoring and maintenance schemes, arrangements will need to be made to ensure that any subsequent owner is fully aware of these requirements and assumes ongoing responsibilities that are tied to the land.

Fife Council Contaminated Land Inspection Strategy

Whilst Government guidance recognises that potential contamination is a material planning consideration—and that the development phase is the most cost-effective time to deal with it—the Council has a duty under Part IIA of the Environmental Protection Act 1990 (as amended) to inspect the Fife area for potentially contaminated land irrespective of whether it is subject to a development proposal. Where contamination is found to be significant, the Council will actively take steps to remove or reduce the risk to people and the environment. Copies of the Council's Contaminated Land Inspection Strategy are available on request, or online at: www.fifedirect.org.uk/contaminatedland.

Failure to meet these requirements could result in investigation of the site by Fife Council under Part IIA of the Environmental Protection Act 1990 (as amended)

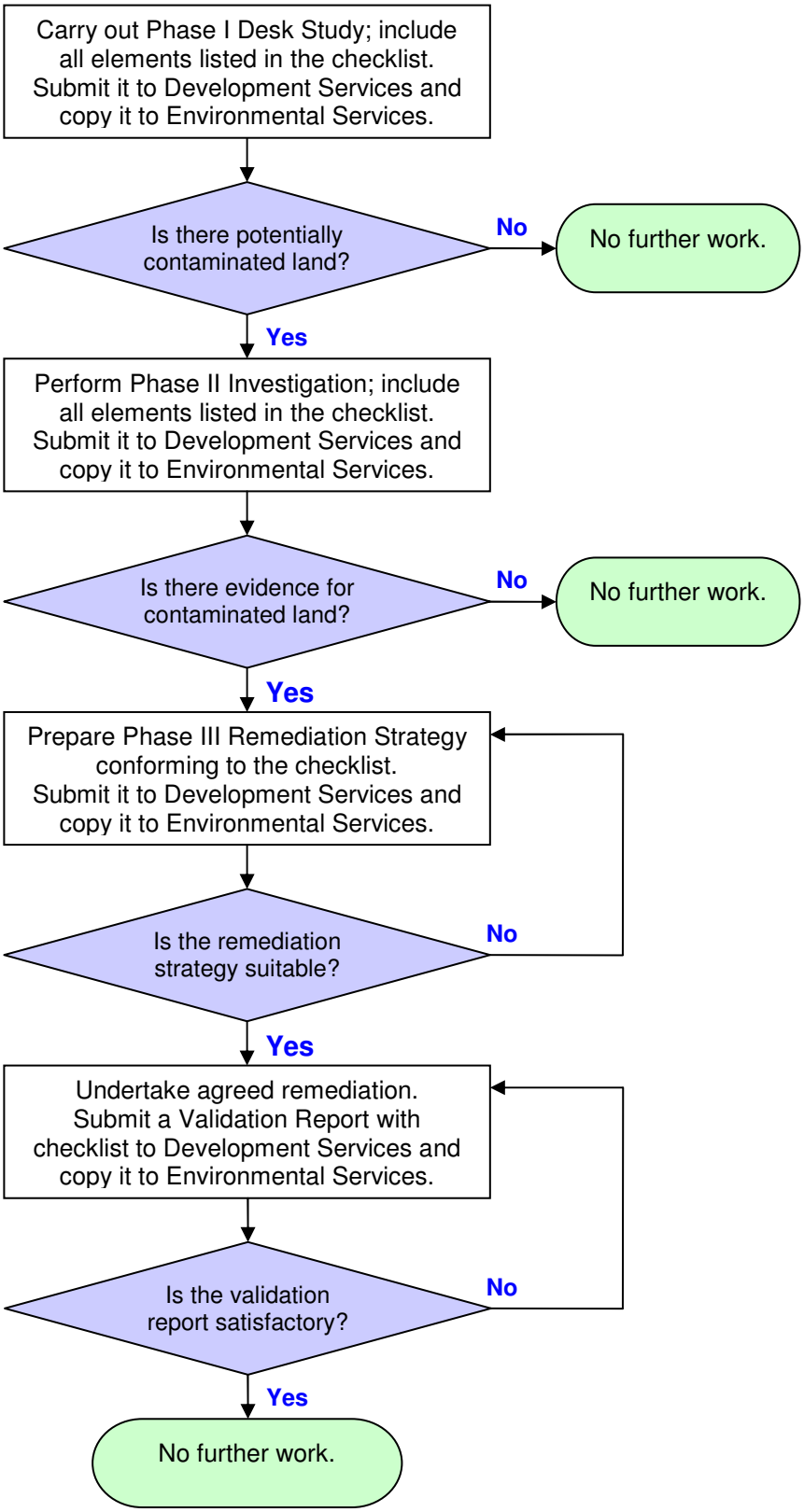

Figure 1. Procedure for assessing and addressing contaminated land concerns.

Choosing Consultants

Depending on the nature and extent of contamination, some of the processes involved in the development of the land will require the use of specialist environmental consultants or the services of a drilling crew or analytical laboratory. Care should be taken in appointing a consultant. Applicants should ensure their consultant fully understands and can meet the requirements of the attached Checklist. Fife Council cannot recommend consultants; reference may be made to trade directories or the Ends Directory www.endsdirectory.com.

Useful Contacts

Development Services (West Area)
New City House
1 Edgar Street
DUNFERMLINE
KY12 7EP
Tel: 01383 609120

Development Services (Central Area)
Forth House
Abbotshall Road
KIRKCALDY
KY1 1RU
Tel: 01592 583350

Development Services (East Area)
County Buildings
St Catherine Street
CUPAR
KY15 4TA
Tel: 01334 659334

Contaminated Land Team
Fife Council Environmental Services
Kingdom House
GLENROTHES
KY7 5LY
Tel: 08451 550022

SEPA (Central and East Fife)
Pentland Court
The Saltire Centre
GLENROTHES
KY6 2DA
Tel: 01592 776910

SEPA (Dunfermline and West)
Bremner House
The Castle Business Park
STIRLING
FK9 4TF
Tel: 01786 452595

References

- Department of the Environment, Food and Rural Affairs 1995 "Industry Profiles" (**Various titles**) http://www.defra.gov.uk/
- Scottish Executive 2000 "Development Of Contaminated Land" (**PAN 33**) http://www.scotland.gov.uk/
- Environment Agency and NHBC 2000 "Guidance for the Safe Development of Housing on Land Affected by Contamination" (**R&D 66**)
- British Standards Institute 2001 "Investigation of potentially contaminated sites – Code of practice" (**BS 10175**) http://www.bsonline.bsi-global.com/
- Environment Agency 2004 "Model Procedures for the Management of Land Contamination" (**CLR 11**) http://www.environment-agency.gov.uk/
- CIRIA 2007 "Assessing risks posed by hazardous ground gases to buildings" (**C 665**) http://www.ciria.org.uk/

Contaminated Land
CHECKLIST

Fife Council
Environmental Services

Planning Number: ___/_____/_____ Site Name: _____ Date: ___/___/___

Minimum Requirements — Phase I Desk Study

✓

- ❑ **Purpose & Aims.** A statement is required explaining the reason for the report.
- ❑ **Site Walkover.** This should include photography and detailed site observations.
- ❑ **Site History.** Former industrial uses on and adjacent to the site from historical maps.
- ❑ **Environmental Setting.** Details of geology, surface water and environmental receptors.
- ❑ **Site Location Plan (and Proposed Development Plan where available).**
- ❑ **Conceptual Site Model (CSM).** **This is essential**, showing all *potential* source–pathway–receptor linkages.
- ❑ **Interpretation of CSM including Qualitative Risk Assessment.**
- ❑ **Conclusions & Recommendations.**

Planning Number: ___/_____/_____ Site Name: _____ Date: ___/___/___

Minimum Requirements — Phase II Investigation

If a ground investigation report is submitted as an amalgamated Phase I / Phase II document, it will be expected to contain all Phase I elements, plus the following:

✓

- ❑ **Sampling Strategy.** Refer to BS 10175 for methodology, justification and location plan.
- ❑ **Borehole & Trial Pit Logs.**
- ❑ **Gas & Vapour Monitoring (where applicable).** Must include atmospheric conditions and flow rates.
- ❑ **Chemical Test Data with Quality Assurance procedures.** Include laboratory certification and information on the storage of samples.
- ❑ **Site Specific Risk Assessment.** Must include use of applicable guideline criteria derived from the appropriate risk assessment methodology or software.
- ❑ **Interpretation of Results.** This must show comparison with guideline criteria and any exceedances should be clearly highlighted.
- ❑ **Revised Conceptual Site Model.** **This is essential**, showing details of all *identified* source–pathway–receptor linkages.
- ❑ **Conclusions & Recommendations.** This should include remediation proposals and further monitoring when required.

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CHECKLIST

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Planning Number: ___/_____/_____ Site Name: _____ Date: ___/___/___

Minimum Requirements — Phase III Remediation Statement

✓

- ❑ **Summary of the Current Status of the Development Project.**
- ❑ **Detail of chosen Remedial Option(s).** Include justification for their choice.
- ❑ **Proposed Standard of Clean-up.** This depends on the proposed end-use of the site.
- ❑ **Revised Conceptual Site Model.** **This is essential**, showing how it is *proposed to break* all identified source–pathway–receptor linkages**.**

Planning Number: ___/_____/_____ Site Name: _____ Date: ___/___/___

Minimum Requirements — Phase III Validation Report

✓

- ❑ **Copies of Previous Correspondence with relevant authorities.**
- ❑ **Specification of Engineered Cover System where appropriate.** Include concrete class.
- ❑ **Waste Transfer documentation where appropriate.** Include the type & tonnage of material taken off-site and the disposal location.
- ❑ **Suitable Certification & Validation Testing of any Imported Materials.**
- ❑ **Validation of any Gas Preclusion Measures** *e.g.* gas-proof membranes, vent trenches.
- ❑ **Final Conceptual Site Model.** **This is essential**, showing that all identified source–pathway–receptor linkages *have been broken*.
- ❑ **Validation of Chemical Test Data and Results of Any Further Monitoring.**

❖

The purpose of this Checklist is to speed up the processing of planning applications where there are contaminated land concerns.

The appropriate checklist(s) should be included as part of any submitted report.

The Contaminated Land Team can provide information and advice on all aspects of the above requirements and recommendations.

This checklist is available for printing at www.fifedirect.org.uk/contaminatedland