London Borough of Richmond upon Thames

Environment Directorate

Supplementary Planning Guidance

on redevelopment of potentially contaminated sites.

2003

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1. Introduction

1.1 This guidance is to outline the approach the Council expects developers to take in relation to contaminated land issues for ensuring compliance with the requirements of the Town and Country Planning Act 1990 and Planning Policy Guidance Note (PPG) 23: Planning and Pollution Control, 1994 to bring the land into a 'suitable-for-use' state as well as to address possible future liabilities under Part ll A of the Environmental Protection Act 1990. In addition to these the Building Regulations 1991 under the Building Act 1984 must be observed to protect the fabric of new buildings and their occupants.

1.2 Although the Borough is primarily residential in character, historically there has been a range of industrial activities including engineering, chemical, transport, sewage, gravel pitting, military and many more potentially polluting processes. The planning regime has a responsibility to ensure that any issues related to potential contamination are appropriately addressed prior to redevelopment of any site.

1.3 Department of the Environment (1994) PPG 23 recognises that ground contamination is a material planning consideration and that the development phase is the most cost-effective process to deal with problems associated with the previous industrial usage. The "suitable for use" approach is required, which means dealing with any unacceptable risk to health or the environment within the actual or intended land use. The onus is placed on the developer/landowner to disclose all relevant information and to undertake a thorough remedial action in order to bring the land back into beneficial use.

2. Site History

2.1 It is highly advisable to consider a possibility of land contamination in advance of the preparation of detailed plans and initiate preliminary consultations with the Local Planning Authority (LPA) at the earliest stage of the project. The most important information, which might reveal the details of concern, is the site history. Places most likely to hold the data of interest are the local studies sections of reference libraries in Richmond, Kingston, Hounslow, as well as local history museums and the Public Record Office. These data are usually kept within street and trade directories, historical maps and period photographs.

2.2 The property deeds will often provide valuable details on the trades and previous owners. You may find other documents, which could indicate the location/conditions of used fuel tanks, pits, fuel or chemical storage areas. The related industrial profiles, which can potentially lead to contamination of ground and/or groundwater are described in the Department of the Environment (DoE) now the Department for the Environment, Food and Rural Affairs (DEFRA), Industrial Profiles (DoE) series, 1995. These publications provide details of industrial processes and potentially related contaminants. Relevant information on polluting incidents and breaches of consents can be obtained from environmental databases of the Council and the Environment Agency. Some environmental and historical data can be found within various web-based information providers.

3. Desk Study

3.1 Based on the history of the site, if the land is being considered to be potentially contaminated, it is recommended to submit a comprehensive desk study report. This is expected formally to comply with the Department of the Environment, Transport and the Regions (DETR) guidelines: Contaminated Land Research "Reports 2 and 3" and with BS10175: 2001. The report should demonstrate a thorough search of period OS maps, site maps, trade directories, deeds, street directories and any other relevant sources. Copies of all relevant documents need to be enclosed along with the full site history particularly identifying locations of existing/former pits, tanks, fuel/chemical storage, waste disposal facilities and any polluting incidents, which have taken place on/near the site.

3.2 In addition a walkover survey would be highly advisable to be carried out at the site. The findings of observations could be supplemented by colour photographs, descriptions etc and to be included within the desk study report giving particular details on the physical state of the site and acknowledging any visible or olfactory evidence of possible contamination or unusual appearance. This as well might be further accompanied by the results of interviewing local residents over the historical land use and any past polluting accidents taken place. Thus collected information would enable the applicant in discussion with the LPA to determine the need or otherwise for an intrusive site investigation.

4. Planning conditions

4.1 If the site history indicates that there is a potential for the site to have been contaminated planning consent will only be granted subject to conditions, the wording of which will be similar to the following:
No work pursuant to the consent shall commence until there has been submitted to and approved in writing by the LPA:

a) Desk Study Report documenting all the previous and existing land uses at the site and adjacent land in accordance with national guidance as set out in Contaminated Land Research "Reports 2 and 3" and BS 10175:2001;

- and unless otherwise agreed in writing by the LPA,

b) Site Investigation and Risk Assessment Report giving details on:

- topography, geology, hydrogeology and hydrology
- chemical and gas analysis of compounds/possible contaminants identified as appropriate by the desk study and supplemented by the description of employed methods and QA procedures
- risk assessment to human health, the wider environment, controlled waters and buildings accompanied by details of conceptual models, risk assessment/modelling packages employed and any justifications/derivations made in accord with BS10175:2001, Investigation of Potentially Contaminated Sites, Code of Practice;
- and unless otherwise agreed in writing by the LPA,

c) Detailed Scheme for Remedial Works and Measures to be undertaken to mitigate the risk from contaminants and/or gases when the site is developed and proposals for future maintenance and monitoring. Such scheme shall include nomination of a competent person to oversee the implementation of works.

- The development hereby permitted shall not be occupied/brought into use until there has been submitted to the LPA verification by the competent

person approved under the provisions of condition **(c)** that any remediation scheme required and approved has been implemented fully (unless varied with the written agreement of the LPA in advance of implementation).

- Unless otherwise agreed in writing by the LPA such verification shall comprise:
  - as-built drawings of the implemented scheme
  - colour photographs of the key stages of remedial work
  - certificates demonstrating that imported and/or material left in-situ complies with the approved remedial target concentrations of contaminants
  - special waste transfer notes.

  Thereafter the scheme shall be monitored and maintained in accord with the approved plan.

5. Intrusive site investigation

5.1 Applicants may choose to conduct the investigation work before receiving planning consent. This is to be encouraged as it may demonstrate that further work and hence a planning condition is not required. However, any such work must be targeted to investigate potential 'hot spots' (problem areas) identified by the desk study research. The extent and details should be agreed in advance with the Council.

5.2 In cases when pollution of controlled waters can be envisaged or the application is within a flood-plane area or is within 250m of a closed/active landfill site the Environment Agency should be also involved in the design of site investigation and risk assessment, discussions of the results and reasonable further steps.

5.3 English Nature (EN) is another statutory consultee where the development may affect National Nature Reserves (NNR), Sites of Special Scientific Interest (SSSI) or local nature reserves.

5.4 English Heritage (EH) should be consulted when the development might affect an archaeological site, ancient monuments, listed buildings, historical landscapes etc.

5.5 Health and Safety Executives (HSE) have to be approached if the area of development has been identified by HSE as being in the vicinity of toxic, highly reactive, explosive or inflammable substances and which involves the provision of residential accommodation, more than 250m2 of retail floor space, more than 500m2 of office floor space or more than 750m2 of floor space for an industrial use.

5.6 It is important that investigation works are undertaken at the earliest opportunity as the findings of the investigation can have material cost and time implications to the project.

5.7 A schedule and programme of the work must be provided to the LPA as soon as practical after conditional planning approval is granted.

5.8 This is especially important in areas where landfilling has taken place and the generation or migration of ground gases is/or may be a problem. Where historical maps or existing investigation data indicates such a problem you

should appoint a competent consultant to investigate in order to determine with confidence the extent to which gas is an issue. The LPA will expect to receive gas monitoring data collected from appropriate locations on at least six separate occasions collected over a minimum period of three months. Monitoring should be targeted to days when the atmospheric pressure is low and falling, as these are the optimal conditions for gas migration. Further guidance on site investigation can be obtained from the documents listed at the end of this leaflet.

6. Remedial measures

6.1 If the site investigation/risk assessment agreed by the LPA confirms there is no significant pollutant linkage in relation to the current use and circumstances of the land and its proposed use, the developer will not be required to undertake remedial works.

6.2 However, the developer will need to have a contingency plan should the construction phase reveal any contamination, which must be immediately reported to the Council.

6.3 Where the site investigation reveals contamination and /or gas posing unacceptable risk meaning presence of significant “source-pathway-receptor” linkages, the developer must produce a detailed Scheme of Remedial Works to be taken to avoid any risk arising when the site is developed or occupied.

6.4 The scheme must be agreed with the LPA in writing before works commence. If ground gases are an issue the scheme must detail the precise methods proposed to prevent the build up gaseous substances within the proposed buildings and under car park areas, arising from the site or adjacent land.

6.5 The development shall only be constructed in accordance with the agreed scheme. Any remedial measures e.g. equipment for the prevention or monitoring the build up of gaseous substances, engineered capping system, disposal of contaminated soil to a landfill site etc must be fully installed and operating prior to the occupation of the development, and thereafter shall be maintained and monitored.

6.6 When a formerly investigated/remediated site is under consideration for a new development involving any change of use e.g. introduction of residential units within the existing commercial setting, setting up soft landscaped areas within the existing hard standing surfacing etc, then a new risk assessment should be carried out to account for any changes within the “source – pathway – receptor” linkages. If it becomes evident that a new significant pollutant linkage exists at the site then an appropriate remedial action should be designed according to paragraph 6.3 above.

7. Validation information

7.1 On completion of the works the applicant must submit to the LPA sufficient validation information forming a factual report, which is to include: as-built drawings, quality certificates of imported materials, analytical testing of installed materials, colour photographs documenting key stages of the remediation, special waste transfer notes etc. These should be certified by a competent person approved by the LPA to demonstrate that all of the remedial works were completed fully in accord with the approved scheme. It

is to note that validation information is particularly sought after by various parties at the stage of purchasing the property for clarification whether there are liabilities attached to it.

8. Contacts:

If you have any further queries or concerns regarding the above raised matters please do not hesitate to contact:

The Contaminated Land Officer
Environment Planning & Review
Special Projects Team
Room 119A, Civic Centre
44 York Street
Twickenham TW1 3BZ

Tel.: 020 8831 6453
Fax: 020 8891 7448

E-mail: specialprojects@richmond.gov.uk

9. References

1. Department of the Environment, Industry Profiles, 1995.
2. Department of the Environment, Contaminated Land Research report:
   No.2 Guidance on Preliminary Site Inspection of Contaminated Land
   No.3 Documentary Research on Industrial sites
   No.4 Sampling Strategies for Contaminated Land
3. BS10175: 2001 Investigation of potentially contaminated sites, Code of Practice
4. Classification and selection of remedial methods, CIRIA, Volume 4, 1995 (SP 104)
5. Guidance for safe development of housing on land affected by contamination EA/NHBC R&D Publication 66
6. Site Investigation and Risk Assessment, CIRIA, Special Publication, Volume 3, 1995, (SP103).
7. Construction of new buildings on gas contaminated land, BRE, 1991.
8. Protecting environment from methane, CIRIA Report 149, 1996.
9. Remedial engineering for closed landfill sites, CIRIA, C557, 2001.
10. Protection of Workers and the General Public During the Development of Contaminated Land" HMSO 1991
11. Contaminated Land Exposure Assessment Model (CLEA), DEFRA/EA 2002
12. Contaminated Land Reports (CLR) 7-10, DEFRA/EA 2002.
13. Soil Guidelines Values (SGVs) 1-10, DEFRA/EA, 2002-3
14. R&D Publications: TOX 1-12, DEFRA/EA, 2002-3.
15. Methodology for the Derivation of Remedial Targets for Soil and Groundwater to Protect Water Resources, R&D Publication 20.

10. Useful web sites:

www.richmond.gov.uk
www.environment-agency.gov.uk
www.planning.odpm.gov.uk
www.defra.gov.uk
www.cieh.org
www.lga.gov.uk
www.ciria.org.uk
www.bre.co.uk
www.bsi-global.com
www.english-nature.org.uk
www.english-heritage.org.uk

11. Appendix

Checklist for reports submitted in support of planning applications

The following list provides a guide on what documents are required in support of a planning application when soil contamination is an issue:

11.1 Desk Study

- Purpose and aims;
- Credentials of person/organisation undertaking the study;
- Site location and current layout plans scaled and annotated;
- Appraisal of site history including period maps/aerial photographs scaled and annotated;
- Appraisal of walkover survey;
- Assessment of environmental setting including interpretation and implications of:
    - Geology, hydrogeology &hydrology of the area
    - Information from the Environment agency on abstractions, pollution incidents, water quality classification and landfill sites within 250m etc
    - Any considerations concerning archaeological or ecological issues
- Assessment of current/proposed site use and surrounding areas;
- Review of any previous site studies (desk based or intrusive) or remedial works;
- Review of local authorities planning records, building control records, drainage and service plans;
- Preliminary (qualitative) risk assessment to include:
    - An initial conceptual model of the site showing the nature and extent of the potential/identified contamination;
    - An appraisal of the potential sources, pathways and receptors (pollutant linkages);
- Recommendations for intrusive investigations, if deemed, to include the identification of target areas, grid, number and depth of excavations and its rationale, list of the most probable contaminants and the sampling procedures.

11.2 Intrusive site investigation

- Review of any previous site investigations (desk based or intrusive) or remedial works.
- Site investigation methodology to include:
    - Scaled and annotated maps showing excavations, on site structures, storage facilities, power and water mains, sewage and soakways etc.
    - Justification of exploration locations/grid/depth.
    - Sampling, storage, transportation protocols and analytical procedures.
    - Excavations logs.
- Results and findings to include:
    - Analytical results from a UKEAS accredited laboratory showing the methods employed and the accuracy achieved.
    - Ground conditions.
    - Soil-Controlled waters interactions/regimes.
    - Tier 1 Risk assessment: comparison of analytical results with appropriate generic soil guidelines.
    - Consideration of ground gas and asbestos.
- Further developed conceptual model.
- Site specific risk assessment based on the contaminated source-pathway-receptor approach appropriately justified and described. The results of Risk

Assessment Criteria derivations, the input parameters' values justifications and references;
- Recommendations for further investigations and its rationale.

11.3 Remediation

- Objectives;
- Aims;
- Tentative timetable;
- Method to include:
    - Ground/controlled waters conditions, regimes;
    - Physicochemical properties of contaminants, its spatial distribution, mobility, bioavailibility, toxicity;
    - Remedial targets, its derivation and justification;
    - Site plans and cross-sections scaled and annotated;
    - Consents and licenses needed;
    - Details of environmental monitoring to be undertaken;
    - Site management measures to comply with relevant environmental and health & safety regulations;
- Details on validation procedures:
    - Sampling, storage, dispatching, analytical, protocols;
    - On site visual/olfactory observations, logging, photographing;
    - Reporting.

11.4 Validation Report

- Brief details/any changes of the remedial work undertaken;
- Details and credentials of the appropriate person certifying the report;
- Substantiating data:
    - Laboratory and in-situ test results;
    - Monitoring results
    - Summary data plots and tables relating to the remedial targets achieved/otherwise;
    - Plans, cross-sections, 2D-3D computer generated models, counter maps showing the residual distribution of the contaminants;
    - Special waste transfer notes indicating destinations, volumes and hauliers;
- Analyses of the achieved results supported by a certificate of completion;
- Recommendations on any further monitoring/remedial work needed.

11.5 Format of the reports/documents

In order to comply with the E-Government Strategy adopted by LBRUT in 2001 to reduce usage of paper-based copies, post services, storage space by increasingly converting data into digital format and to meet targets and the deadline by 2004, it is expected all the data/reports/letters to be delivered in digital format via e-mail or on CD-ROM, DVD. This will allow quicker communications between all the parties involved, easier for reviewing and checks, redrafting if necessary and storing of documents within the contaminated land database being established in LBRUT. Moreover, future retrievals of the data will be less time and resource consuming.
In terms of the technical specification for digital files, these might be of a large range which are compatible with Windows 95, 98, 2000, Net, XP operating systems and created by employing standard commercial PC packages.