



**London Borough  
of Hounslow**

# **Contaminated Land Strategy**

Required under the provisions of the  
Environmental Protection Act 1990 Section 78B

1<sup>st</sup> Revision

January 2008



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## Executive Summary:

Like most urban areas the London Borough of Hounslow (“The Council”) has a rich industrial history. This includes old landfill sites, factories, gas works and military land. All of these have the potential to cause land contamination, which, if not adequately dealt with, can pose serious threats to human health and/or the environment.

Legislation came into force in 2000 requiring Local Authorities in England and Wales to investigate land in their areas to identify sites that are significantly affected by contamination, and to take appropriate action to ensure such sites are cleaned up and made safe.

This legislation, Part 2A of the Environmental Protection Act 1990 (“*Part 2A*”), introduced a legal definition of ‘Contaminated Land’, and required local authorities to produce a Contaminated Land Strategy. Hounslow’s strategy was published in June 2001 and detailed how the Council intended to respond to its new statutory duties.

This is the first formal revision of the 2001 strategy and replaces that document. This revised document sets out:

- A summary of the requirements of Part 2A,
- The progress made by the Council from 2001 to 2008,
- How the Council will build on current strengths and continue to implement Part 2A,
- How the Council will accommodate changes in legislation and associated guidance; for example the 2006 extension of Part 2A to include Radioactivity,
- How the Council will continue to pursue voluntary solutions to contamination problems where possible,
- How the Council will take enforcement action under the Act where required,
- How the Council will store and handle data relating to potentially contaminated land, and how this information will be made available to third parties,
- How and when the Council will communicate with relevant stakeholder groups in relation to contamination issues,
- A timetable for the implementation of Part 2A over the next five years.

Part 2A is aimed at dealing with the historic contamination, whilst current and future land pollution issues are generally tackled by other legislation, (for example Pollution Control, Planning and Waste Disposal regimes).

Many of the borough’s major new developments have been subject to planning conditions requiring the investigation and remediation of contamination. These include, Brentford Gasworks & Docks, GSK Headquarters, The Paragon Development, Chiswick Business Park, Ashford Road/Bedfont Lane Housing Estate and Feltham Town Centre.

In addition, considerable resources have already been allocated to the investigation and remediation of potentially contaminated land in the Council’s ownership. Over £1 million has been spent since the early 1990s on making former landfill sites safe, with priority being given to sensitive current land uses such as housing, schools and recreational areas.

The Land Quality Team is responsible for the implementation of Part 2A in Hounslow, and for leading on all associated land contamination issues. The team have made good progress to date, but it is noted that Part 2A is extremely complex. A continued and significant commitment of resources will be required for the statutory duties to be implemented fully.

The duties under Part 2A and the Planning Regime link into the Council’s Executive Priority

to “Safeguard and Enhance the Environment”

This document draws on UK contaminated land legislation and guidance documents. A list of these documents is provided in section i.12.

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# INTRODUCTION & OVERVIEW

## ***i.1* Background to the legislation**

Industrial change during the 20th century resulted in many industries moving out of city centres, leaving large Brownfield gaps in our urban landscape. At the same time changes in heating methods, and the advent of the consumer society, had a significant effect on the type and volume of refuse sent to landfill. These changes left behind a legacy of contaminated land, which in some cases may be harmful.

The Government first formally recognised a need for local authorities to hold information relating to Contaminated Land in the mid 1980's. However, concerns over issues such as blight and the definition of 'Contaminated Land' delayed the introduction of formal legislation.

Section 57 of the Environment Act (1995) amended the Environmental Protection Act (1990) by inserting a new "Part 2A". This provides the legislative framework for the Contaminated Land Regime (in sections 78A to 78YC). These provisions came into force in April 2000.

A summary of the key events that preceded the introduction of Part 2A is provided in Appendix 1.

## ***i.2* Explanation of terms**

The legislation and associated guidance uses complex and unusual terms. To assist in the interpretation of these a glossary of terms is provided in Annex 6 of the DEFRA Circular 01/2006<sup>1</sup>. The glossary is reproduced in Appendix 9 of this strategy.

## ***i.3* National objectives of Part 2a**

The Government believes contaminated land to be "an archetypal example of our failure in the past to move towards sustainable development". The main objective of Part 2A is therefore to provide a framework for the identification and remediation of such land where contamination is causing unacceptable risks to human health or the wider environment.

The Government's stated objectives with respect to contaminated land are:

- ***To identify and remove unacceptable risks to human health and the environment;***
- ***To seek to bring damaged land back into beneficial use; and***
- ***To seek to ensure that the cost burdens faced by individuals, companies and society as a whole are proportionate, manageable and economically sustainable.***

Part 2A is based on the "suitable for use" approach. This recognises that risks from contamination must be assessed in the context of a specific land use.

The Government considers that Part 2A is likely to encourage voluntary remediation. It is intended that companies responsible for contamination should assess the likely requirements of regulators and plan remediation in advance of regulatory action.

The Government's policy relating to Contaminated Land is explained in the DEFRA Circular 01/2006,

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<sup>1</sup> DEFRA Circular 01/2006, *Environmental Protection Act 1990: Part 2A - Contaminated Land*. September 2006

which can be downloaded from DEFRA's website.

#### **i.4 Local objectives & links to other council documents**

Part 2A compliments Hounslow Council's own corporate objectives for the environment.

The Hounslow Plan identifies a number of priority areas for the Council until 2010. The Contaminated Land Strategy supports the Hounslow Plan's objective to "safeguard and enhance the environment".

The Council's Community Plan aims to promote and develop the social, economic and environmental well being of Hounslow's communities. This includes planning policies relating to the sustainable development of Brownfield land (i.e. previously developed). This serves to protect the borough's green spaces and to return derelict land to beneficial uses.

Hounslow's Unitary Development Plan (adopted 2003) includes environmental protection policies relating to; 'Developments on or near contaminated land' (Policy ENV-P.1.8), and 'Remediation of contaminated and potentially unstable land' (Policy ENV-P.1.9). The Council is currently in the process of producing its Local Development Framework (LDF), which will eventually replace the policies and proposals in the Council's Unitary Development Plan.

#### **i.5 About this strategy**

Section 78B (1) of Part 2A states:

***"Every local authority shall cause its area to be inspected from time to time for the purpose -***

***(a) of identifying contaminated land; and***

***(b) of enabling the authority to decide whether any such land is land which is required to be a special site."***

Section 78B (2) states that local authorities must act in accordance with statutory guidance issued by the Secretary of State. The current statutory guidance is published within DEFRA Circular 01/2006 (issued September 2006). This replaces the previous guidance document (DETR Circular 02/2000, dated March 2000).

The statutory guidance requires Authorities to produce a formal contaminated land strategy document which clearly sets out how land which merits detailed individual inspection will be identified in an ordered, rational and efficient manner, and in what time scale. Subsequently the strategy must be kept under periodic review.

Hounslow's first strategy was published in June 2001, and set out how the Council would respond to all aspects of the new legislation. The current document provides the first formal revision of the 2001 Strategy.

It is noted that there is no formal mechanism for the approval of revisions of local authority strategies. However, the Environment Agency has been consulted on this revision.

#### **i.6 Roles and responsibilities**

Local Authorities are the primary regulators for Part 2A. At Hounslow Council the strategy is under



the control of the Head of Pollution Control, within the Regulatory and Development Services Division of the Environment Department.

The Land Quality Team implements the Contaminated Land Strategy. This includes a complex enforcement role which will be carried out, as required, in accordance with the Council's Enforcement Policy Statement and the Cabinet Office Enforcement Concordat March 1998.

This responsibility reflects existing local authority duties under the Statutory Nuisance regime and Town & Country Planning and development control. The role includes:

- To cause the area to be inspected to identify potentially contaminated sites
- To determine whether any particular site is contaminated (by definition)
- To determine whether any such land should be designated a 'special site'
- To act as enforcing authority for contaminated land not designated as a 'special site'

Where the presence of contaminated land is confirmed the enforcing authority must:

- Establish who should bear responsibility for remediation
- Decide after consultation what must be done in the form of remediation and ensure it is effectively carried out
- Determine liability for the costs of the remedial works
- Maintain a public register of regulatory action in relation to Contaminated Land

The Environment Agency has the following roles:

- To assist in identifying contaminated land where water pollution is involved
- To provide site specific guidance to local authorities where requested
- To act as enforcing authority for contaminated land designated a 'special site'
- To undertake intrusive investigations for radioactive contamination on behalf of local authorities, where the initial non-intrusive surveys indicate these to be necessary
- To publish periodic reports on contaminated land

### ***i.7 Outline of the statutory procedure***

Contaminated Land is defined as:

***“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 -***

- ***Significant harm is being caused or there is a significant possibility of such harm being caused; or***
- ***Significant pollution of controlled waters is being, or is likely to be caused”***

Where harm is attributable to radioactivity, the definition of Contaminated Land has been modified to:

***“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 -***

- ***Harm is being caused, or***

- ***There is a significant possibility of such harm being caused***

The definitions of 'harm' are explained in the statutory guidance.

Local authorities must search their area to identify potential sources of contamination, and potential receptors that might be affected. Where there is good reason to believe these both exist, authorities must undertake a formal risk assessment to establish whether any plausible pathways exist that would enable the source to adversely affect the receptor. In cases where all three elements are present (i.e. a source, pathway and receptor), a pollutant linkage is identified.

If one or more pollutant linkages are identified on a piece of land the local authority must determine whether any of these linkages are causing, or could cause, significant harm, harm or pollution as defined.

Where the local authority is satisfied that significant harm is occurring, or there is a significant possibility of such harm occurring, or pollution of controlled waters, or harm attributable to radioactivity, they must declare that a significant pollutant linkage exists and that the land is therefore Contaminated Land by definition.

The local authority must commence regulatory action on all determined land, with the exception of land falling into the category of a Special Site. In such cases the Environment Agency becomes the primary regulator once the site has been formally determined as contaminated by the local authority. A list of categories of Special Sites is provided in Appendix 2.

The regulatory action required of the local authority must include:

- A formal written record of the determination,
- Formal notification of all interested parties,
- Determination of the physical extent of the land,
- The extent and seriousness of the risks (i.e. is urgent action required?),
- The number and type of pollutant linkages identified,
- The effect each significant pollutant may have on controlled waters,
- The most appropriate and cost effective remedial scheme for each significant pollutant linkage,
- Identification of liability groups and, appropriate persons, for each pollutant linkage. Assessment of hardship in the case of each, appropriate person,
- Effective remediation of the site and recovery of costs where appropriate.

NB: Feedback from local authorities who have made formal determinations has emphasised the complex and time-consuming nature of this process. For this reason Hounslow Council, like many other local authorities, will attempt to pursue voluntary solutions to contamination problems wherever possible.

Enforcement action will be taken in cases where voluntary agreements cannot be reached within a reasonable time frame.

In certain circumstances, the local authority may carry out the remedial works themselves. This may apply where:

- Urgent action is necessary (see Part 5 and Appendix 6)
- No Appropriate Persons are identified
- The authority is precluded from taking enforcement action (specified reasons)
- The authority agrees to carry out the works on behalf of an appropriate person

- A remediation notice has not been complied with

In non urgent cases where a remediation notice is necessary and all the required consultations have been completed, the notice must be served on the appropriate person(s) no sooner than three months after the contaminated land has been determined or declared a special site. The notice itself may require further investigation of the site and as a result more pollutant linkages may be identified. Where that is the case the enforcing authority must go through the same processes again to identify appropriate persons and remedial actions.

The enforcing authority must at all times consider the potential for hardship and undertake cost-benefit analysis in respect of all remedial actions. Where remedial actions are undertaken in default of a notice the enforcing authority has the power to recover costs in certain circumstances.

### ***i.8 Situations where this regime does not apply***

Pollution Control legislation exists to prevent new contamination occurring. A number of these legislative tools may apply to the control of land contamination before Part 2A; these are summarised in Appendix 4.

There are several other situations where the relationship between Part 2A and other legislation requires careful consideration. These are also summarised in Appendix 4.

### ***i.9 Land under ownership of an enforcing authority***

Hounslow Council owns a significant amount of land in the borough. In cases involving contamination on Council owned land a distinction is made between the regulating department and the land owning department. Working groups will be established to ensure Council owned land is dealt with as rigorously as land in external ownership. These groups will be formed on a case-by-case basis, but are likely to include officers from the Land Quality team, the land owning department, the Strategic Property team, Borough Solicitor's Department, and Corporate Communications.

Where land owned by a local authority is found to be Contaminated Land (as defined), unless a special site, there will be no enforcing authority. However, the Council must carry out its duties as though they were the enforcing authority; the authority must undertake the same consultations, assessments and seek appropriate remedial works as necessary.

### ***i.10 Inter-departmental working***

The implementation of this strategy involves cross working with many other Council departments. Some examples are presented in Appendix 5.

### ***i.11 Financial implications***

As part of the Government spending review in July 1998 a sum of £50M was made available to local authorities from 1999-2002 to develop inspection strategies, carry out site investigations and take forward enforcement action. Since 2002 there has been no further direct financial allocation from the Government for local authorities to implement their Part 2A duties. However, authorities may bid for capital funding via the Contaminated Land Capital Projects Program (CLCPP). The potential costs of implementing this strategy are considered in Part 8.

### ***i.12 Further reading***

The following documents should be read in conjunction with this strategy:

- “Environmental Protection Act (1990), Part 2A”: *Primary Legislation*
- DEFRA Circular 01/2006, “Contaminated Land”: *Statutory Guidance*
- “The Contaminated Land (England) Regulations 2000”: *Statutory Regulations*
- DEFRA / Environment Agency Contaminated Land Reports (CLR series): *Further guidance and model procedures for assessing risks from contamination*
- “Local Authority Guide to the Application of Part 2A” (2001): *Non-statutory guidance and procedural notes covering the main features of the regime*
- DEFRA Contaminated Land Advice Note (CLAN series). *Updates and guidance on policy changes. Available from DEFRA website.*

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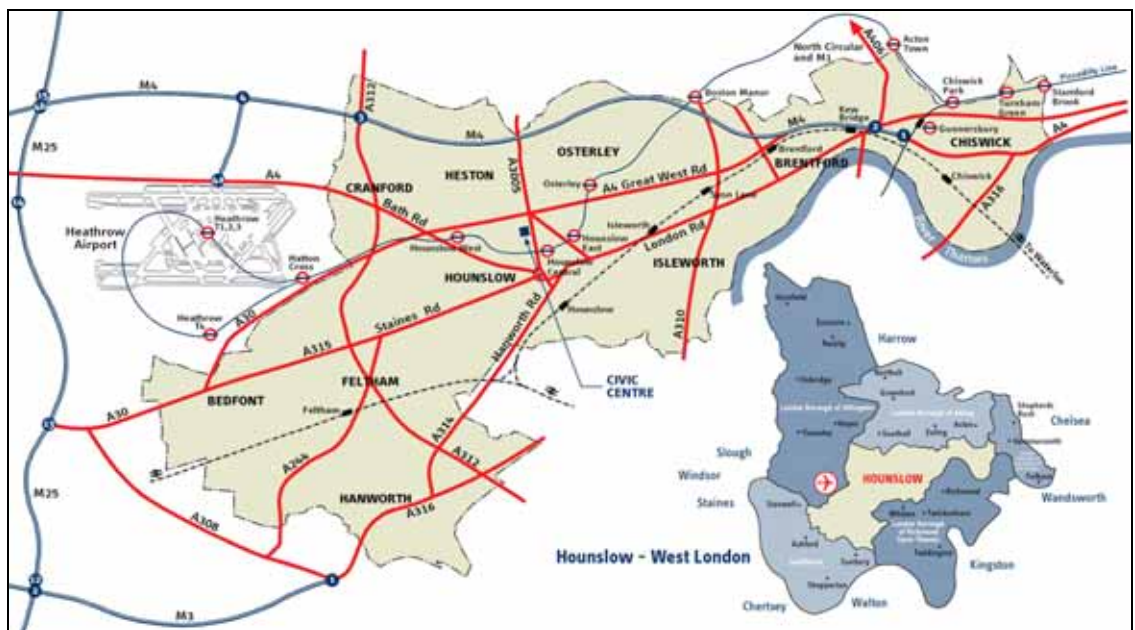
# THE STRATEGY

## PART 1

### 1.0 CHARACTERISTICS OF THE LONDON BOROUGH OF HOUNSLOW AREA

- 1.1 The London Borough of Hounslow occupies approximately 22 square miles of West London, from Chiswick at the eastern end of the borough, to Bedfont and the boundary of Heathrow Airport in the west. The River Thames forms much of the southern boundary, and the M4 motorway runs close to the northern boundary.

The borough is predominantly urban in nature, comprising a mixture of residential, commercial and some industrial development interlaced with several waterways and areas of open land.



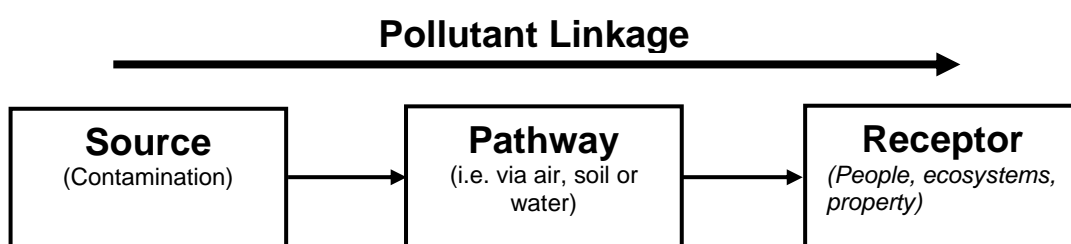
- 1.2 Hounslow borough is home to a diverse population of over 216,000 people living in c.90000 households. More than 140 languages are spoken and 36% of the population are from minority ethnic communities.
- 1.3 The land is mainly flat and low lying with a highest point at 30 metres above sea level and a lowest of 5m (the average level of the Thames). The only significant natural slopes are the River Brent valley and a bluff that runs between the Great West Road and London Road in Isleworth, and then continues through the north of Brentford and Gunnersbury Park. Other than the Thames, the main rivers in the borough are the Crane and the Brent, which join the Thames at Isleworth and Brentford respectively.
- 1.4 The geology of the Borough is dominated by terraced sands and gravels up to 8 metres in thickness, over London Clay. The River Terrace Gravels are classed as a major aquifer in the majority of the borough area. Deposits of sandy loam called “brickearth” occur above the gravel in some parts of the borough.

Hounslow’s natural sand and gravel resources were extensively excavated in the past, leaving a legacy of closed landfill sites, particularly in the west of the borough.

## PART 2

### 2.0 REVIEW OF PROGRESS: 2001-2008

- 2.1 Prior to Part 2A Hounslow Council had already allocated considerable resources to the investigation of potentially contaminated land in its ownership. Since the early 1990s over £1 million had been spent on the investigation and remediation of former landfill sites, with priority being given to sensitive land uses such as housing, schools and recreational areas.
- 2.2 Hounslow Council began preparing specifically for Part 2A in 2000. Early work comprised the development of the first Contaminated Land Strategy, published in June 2001.
- 2.3 As discussed, Part 2A is based on the principals of identifying “Pollutant Linkages”, which must comprise Source, Pathway and Receptor elements as shown below:



The aim of the first phase of the 2001 strategy was therefore to:

- 1) *Identify the history, scale and nature of industrial or other potentially contaminative uses (i.e. identify potential Sources), and;*
- 2) *Identify the extent to which any specified Receptors are likely to be found in the borough,*

### **Collecting information on potential sources**

- 2.4 During 2001 and 2002 the Council's Geographic Information Systems (GIS) Team undertook a major project to digitise former land uses that were considered a potential source of contamination.
- 2.5 The Land Quality Team defined a list of potentially contaminative land uses. The GIS team then digitised the outer boundary of every occurrence of these land uses from eight series (epochs) of historic maps and land use surveys; these covered the period 1865 to 1971 as follows:
- Ordnance Survey County Sheets editions 1 - 4 (dated 1865, 1894, 1913 & 1934),
  - Council held Land Use Surveys (1947 & 1957),
  - Greater London Council Land Use Surveys (1966 & 1971).

This project collected over 9,500 discreet areas (polygons) of former land use information from the eight map epochs.

- 2.6 Additional information was also obtained from the 2001 Yellow Pages database and the Council's Environmental Health records. Further details of the potential source information

are presented in Appendix 3.

- 2.7 Appendix 8 provides a list of land uses considered to be potentially contaminative. All sites with the potential to cause contamination were captured at this preliminary stage.

**Collecting information on potential receptors**

- 2.8 Part 2A identifies the following receptors:

<b>Receptor Type</b>	<b>Includes</b>
Humans	Residents, Site Occupiers, Officer Workers etc
Eco systems	Areas of special scientific interest (Wildlife & Countryside Act 1981 section 28) National / local nature reserves (Wildlife & Countryside Act 1981 section 35 National Parks & Access to the Countryside Act 1949 section 21) Marine nature reserves (Wildlife & Countryside Act 1981 section 36) Areas for the special protection of birds (Wildlife & Countryside Act 1981 section 3) Special areas of conservation & special protection areas (Conservation (Natural Habitats etc) Regulations 1994 reg. 10) Any candidate special areas of conservation or potential special protection areas Any habitat or site afforded planning policy protection (Planning Policy Guidance Note 9 - Nature Conservation, para 13)
Property	Buildings (including below ground); Ancient monuments including SAM's as defined. All crops including timber; Produce grown domestically or on allotments for consumption; Livestock; Other owned or domesticated animals; Wild game subject to shooting or fishing rights.
Controlled Waters	Territorial seawater (to three miles); Coastal waters; Inland fresh waters (rivers, streams, lakes, including the bottom / bed if dry); Groundwater (Major/Minor and Non-aquifers); Water Resources Act 1991 s104 (see also appendix 3).

- 2.9 In 2002 the Land Quality Team collated initial information about current land uses across the borough. A detailed survey of current land use did not exist at the time, therefore a GIS layer was created which drew from a number of resources including Ordnance Survey mapping and existing Council-held map layers. Further details of how this receptor layer was created are presented in Appendix 3.

This information was merged to form a single GIS layer showing the assumed current land use across the borough as of 2002.

**Initial Prioritisation Of Potentially Contaminated Sites**

- 2.10 Part 2A review work has been, and will continue to be undertaken in an ordered and rational manner, with the highest priority being given to “significant and imminent risk to human health”.

- 2.11 Following initial data capture the next stage involved a broad screening exercise to identify areas where potential sources coincided with potential receptors. This work began in 2002 and involved a GIS overlay exercise as follows:

- 1) Potential Sources were given a preliminary risk ranking of High, Medium or Low. Risk values were based on professional experience and existing published information (for example, DoE Industry Profiles).
- 2) Potential Receptors were also each assigned a risk ranking of High, Medium or Low.

These rankings reflected the three priority groups described in DoE's CLR6 report (1995) as follows:

- **Group A** (Residential, Schools, Allotments) -**High Risk**
- **Group B** (Industrial or Commercial Development) -**Low Risk**
- **Group C** (Agricultural Uses, Parks, Open Space) -**Medium Risk**

- 3) Receptors were overlaid against the source information to generate new polygons where the two coincided. This exercise created approximately **1800 polygons** (or "sites"), which represented all areas requiring some form of further investigation. This equated to approximately 38% of the total land area of the borough.
- 4) Each polygon was assigned to a priority group based on the source and receptor risk (e.g. **HH** for high source & high receptor, **LM** for low source and medium receptor etc).
- 5) The top priority group comprised all **HH** sites (for example, housing on a former landfill). Due to the number of sites in this group further subdivision was deemed necessary.

### **Further Prioritisation Of Potentially Contaminated Sites**

2.12 Source polygons were assigned a numeric risk score ranging from 10 to 1 (where the higher number represents the higher level of risk). The numeric risk scores were assigned as follows, based on professional experience:

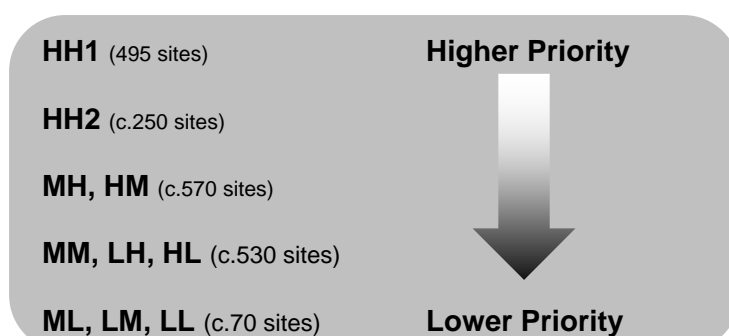
- High-risk sources were scored 10, 9 or 8
- Medium risk sources were scored 7, 6, 5 or 4.
- Low risk sources were scored 3, 2 or 1.

GIS queries were run again to subdivide the 'HH' layer into the two new layers:

- **HH1** – sites with a source risk of 10 and a high-risk receptor.
- **HH2** – sites with a source risk of 9 or 8 and a high-risk receptor.

### **Priority Categories**

2.13 The HH1 group comprised **495** sites and formed the top priority for further assessment. The full list of priority groups, and the order in which they will be assessed, is as follows:



NB: This phase of work represents a preliminary assessment only. Priority risk rankings are based on a limited amount of desk-based information. The identification of a site through this process does not confirm whether or not the site is contaminated, but simply that some form of further assessment is required. This may comprise office-based research only and does not necessarily imply intrusive site investigations.



- 2.14 The initial prioritisation work was completed by 2003 and was based on the best available information at the time. It should be noted, however that sites may move from one priority group to another as additional information is reviewed.
- 2.15 Sites with a history of different uses attracting different source risk scores were prioritised based on the highest identified risk.

***Reviewing HH1 sites***

- 2.16 Between 2003 and 2008 the Land Quality Team have been reviewing HH1 sites in a rational and prioritised manner. At the time of writing some 309 HH1 sites had been reviewed and either discharged or reprioritised (equating to approximately 13% of the borough land area). This rolling program of work is ongoing and is described in Part 3 of this strategy. Between 2000 and 2008, the Land Quality Team has successfully regulated (under the Town and Country Planning Act 1990) 95 major developments in the borough requiring assessment and/or remediation of contamination. The Team are currently regulating a further 60 developments in the borough where contamination assessment and/or remediation is necessary.

## **PART 3**

### **3.0 THE RISK ASSESSMENT PROCESS AND SITE REVIEWS**

- 3.1 The Council has the sole responsibility for determining whether land is Contaminated Land (as defined); it cannot delegate this responsibility. This applies even where the Environment Agency has carried out an investigation on behalf of the Council (see below).
- 3.2 Once the Council becomes aware of the (possible) existence of a pollutant linkage they must commence the risk assessment process, in accordance with their prioritisation procedure.

Hounslow commenced this process in 2003 and the work continues on a rolling program based on the priority groups explained in Part 2.

#### ***Stage 1 - Part 2A Initial Review***

- 3.3 For each site identified through the initial screening exercise (see Part 2) the Council must consider whether any Pollutant Linkages exist. This involves collating further information about the source and receptor, and assessing whether any plausible pathways exist. To do this the Council will seek to obtain as much information as possible without causing unnecessary alarm. Sources of further information might include:
- Existing site investigation & environmental monitoring reports,
  - Council Planning / Development Control records,
  - Council Building Control records,
  - Historic air photos,
  - Trade directories and other historical documents,
  - Site walkover inspection & photographic evidence,
  - Local knowledge and anecdotal evidence
- 3.4 The Council will also consult with other organisations as required to request information that they may hold. These organisations might include:
- The Environment Agency,
  - Department of Environmental, Food and the Rural Affairs (DEFRA),
  - The Health Protection Agency,
  - Developers,
  - Previous site occupiers,
  - Landowners / site operators.
- 3.5 For the purposes of this strategy, this stage is termed a Part 2A Initial Review. The Council must develop a Conceptual Model for the site, and must satisfy itself that at least one pollutant linkage is plausible before moving to the next stage.
- 3.6 If sufficient information is obtained to indicate that no pollutant linkages exist, or, if a linkage does exist, it is not significant, then the investigation will cease and no further action will be taken. The site will be recorded as “discharged” based on the information currently available. It is noted that some sites may require ongoing review where there is the potential for a significant pollutant linkage to occur at some time in the future.
- 3.7 If, after the initial review, a plausible pollutant linkage is identified, or is deemed likely, then the site will move to the next stage of assessment; a Part 2A Detailed Investigation.

## ***Stage 2 - Part 2A Detailed Investigation***

- 3.8 The Council must ensure that sufficient investigation is undertaken to determine whether contaminant sources have the potential to cause a defined detrimental impact on the receptor(s), and that the pathway is plausible. If this cannot be determined after the Initial Review then more detailed investigation will be required.
- 3.9 The detailed investigation of potentially contaminated land can be a time consuming and expensive process, therefore it must be emphasised that all investigations will be carried out on an incremental basis and terminated when it is clear that no significant pollutant linkage exists.

### ***Intrusive Investigations***

- 3.10 It is recognised that sampling work may be required on sites that are currently used for residential or other sensitive purposes. The utmost consideration will be taken at all times to minimise the effect on occupiers and users of the land. In every case a suitably qualified person will undertake the work.
- 3.11 Intrusive investigations will be carried out in accordance with appropriate technical procedures to ensure:
- a) they are effective;
  - b) do not cause any unnecessary damage or harm; and
  - c) do not cause pollution of controlled waters.
- 3.12 To ensure the most appropriate technical procedures are employed, the Council will have regard to the most up to date guidance available.
- 3.13 Where detailed investigations are required they must seek to confirm whether identified potential pollutant linkages are resulting in:
- significant harm (or the significant possibility of such harm) being caused to the receptor(s), or
  - the pollution of (or likely pollution of) controlled waters, or
  - harm attributable to radioactivity (or the significant possibility of such harm being caused)
- If any of these are confirmed then the pollutant linkage becomes 'significant' and the land should be determined Contaminated Land by definition
- 3.14 In cases where imminent risk of serious harm or serious pollution of controlled waters has been confirmed, the Council will authorise urgent action (see sections 5.25, 5.26, 5.27 and 5.28 for details)

## **PART 4**

### **4.0 DETERMINATION OF CONTAMINATED LAND**

#### ***Determining Land As Contaminated***

4.1 There are six possible grounds for determining land as Contaminated:

- ***Significant harm is being caused,***
- ***There is a significant possibility of significant harm being caused,***
- ***Pollution of controlled waters is being caused,***
- ***Pollution of controlled waters is likely to be caused,***
- ***Harm so far as attributable to radioactivity is being caused,***
- ***There is a significant possibility of harm so far as attributable to radioactivity being caused.***

4.2 In making any determination the Council will take all relevant information into account, carry out appropriate scientific assessments, and act in accordance with the statutory guidance. The determination will identify all three elements of the pollutant linkage and explain their significance.

4.3 In an attempt to ensure the situation can be understood as widely as possible, a site conceptual model (initially in diagrammatic form) will be produced for all relevant pollutant linkages, and multi-stage assessment forms completed, which clearly demonstrates the decision making process.

4.4 Should a site meet one or more of the six possible grounds for determination (section 4.1) the council will make all reasonable attempts to seek a voluntary solution prior to making a formal determination.

#### ***Land That May Be A Special Site*** (also see Appendix 2)

4.5 Where the Council is aware that land would, if determined as Contaminated Land, be a Special Site, it will notify the Environment Agency in writing requesting any information it may have about the land and the likelihood of pollutant linkages. According to the wishes of the Environment Agency a joint investigation may be undertaken.

4.6 Where the Environment Agency (or their agents) wish to carry out formal investigation on behalf of the Council their officers will need to be appointed as "suitable persons", in accordance with Appendix 6.

4.7 The Environment Agency does not have the power, under Part 2A, to investigate land that may be contaminated without the authorisation of the Council.

#### ***Powers Of Entry***

4.8 Statutory powers of entry are conferred on the Council to enable it to carry out its functions under Part 2A. These are also considered in Appendix 6. The Council may not use these powers to obtain information about the condition of land, in circumstances where:

- It can obtain the information from third parties without the need for entering the site; or,
- A person offers to provide the information within a reasonable and specified time, and does so.

***Where The Significance Of A Pollutant Linkage Can Not Be Adequately Determined***

- 4.9 Situations may arise where the available information does not make it possible to determine whether or not a pollutant linkage is ‘significant’. In such cases the Council will determine that, on the balance of probabilities, the land does not appear to fall within the statutory definition of Contaminated Land, but the situation will be kept under review and reopened at any time should new information become available.
- 4.10 Similarly, inspection may identify contamination that would form a significant pollutant linkage should new receptors be introduced. In such circumstances this information will be carefully recorded and the site monitored where the introduction of relevant new receptors seems likely. Should such a site be identified for future development the information obtained during the investigation will be made available to the planning officer and the developer.

***Complaints From The Public***

- 4.11 Complaints will continue to be received about fly tipping, accumulations, and the potential for contaminated land. These will be investigated in accordance with existing protocols and enforcement policy to establish whether the complaint is justified. If so, the particular circumstances will be evaluated to establish which enforcement process would be most appropriate. See Appendix 4 for examples of circumstances where Part 2A does not apply.
- 4.12 Complaints and queries may also be received when a particular site has been identified for further investigation, especially where a potential property sale has failed as a direct result of the suggestion that the land may be contaminated. Those so affected may seek an early investigation to clarify their position, which may contradict the Council’s prioritisation process. In such cases the Council will provide, upon request, as much factual information as is available at the time, but will not provide officer opinions or amend its priority structure in order to facilitate any private sale of land or property.

## **PART 5**

### **5.0 THE FORMAL DETERMINATION PROCESS**

#### ***Written Record of Determination***

- 5.1 Once an area of land has been determined Contaminated by statutory definition; the Council will prepare a written record to include:
- a) a description of the particular significant pollutant linkage(s), identifying the source, pathway and receptor for each linkage - to include a conceptual model,
  - b) a summary of the evidence upon which the determination is based,
  - c) a summary of the relevant assessment(s) of this evidence,
  - d) a summary of the way in which the Council considers that the requirements of the statutory guidance were satisfied.

#### ***Formal Notification***

- 5.2 The Council will then formally notify in writing all relevant parties that the land has been declared contaminated, these to include:
- a) the owner(s)
  - b) the occupier(s)
  - c) those liable for remediation ('appropriate persons' in the guidance)
  - d) the Environment Agency
- 5.3 At the notification stage it may not be possible to identify all the relevant parties, particularly the appropriate persons. The Council will, however, act on the best information available to it at this time and keep the situation continually under review as more information comes to light.
- 5.4 If the Council believes that the Contaminated Land is a special site (see Appendix 2) it will inform the Environment Agency of that decision. The Agency will then consider whether it agrees that the land should form a special site. If it does not agree it will notify the Council and the Secretary of State within 21 days with a comprehensive statement explaining its reasons. The Council will then refer the decision to the Secretary of State.
- 5.5 If the Environment Agency agrees with the Council, or it fails to notify the Council it disagrees within 21 days, the land will be designated a Special Site. The responsibility for securing remediation then passes to the Environment Agency, though the Council must complete the formal notification process.

#### ***Voluntary Remediation***

- 5.6 Part 2A has been designed to encourage voluntary remediation (without the need for enforcement action). The formal notification procedure commences the process of consultation on what remediation might be most appropriate. To aid this process the Council will therefore provide as much information to the relevant parties as possible, including where available:
- a) a copy of the written record of determination;
  - b) copies of site investigation reports (or details of their availability)
  - c) an explanation of why the appropriate persons have been chosen as such
  - d) details of all other parties notified

- 5.7 The appropriate persons will also be provided with written explanations of the tests for exclusion and apportionment.
- 5.8 It may be at this stage that the Council will need further information on the condition of the site to characterise any significant pollutant linkages identified. If that is the case an informal attempt will be made to obtain this information from the appropriate persons already identified.

### ***Apportionment of Liability***

- 5.9 Land may be declared contaminated upon the identification of only one significant pollutant linkage. Full liability cannot therefore be determined until all significant pollutant linkages on the site have been identified (see also Part 3). Once this is achieved the procedure relating to the apportionment of liability must commence. This has five distinct stages:
- i) Identifying potential appropriate persons and liability groups
  - ii) Characterising remediation actions
  - iii) Attributing responsibility to liability groups
  - iv) Excluding members of liability groups
  - v) Apportioning liability between members of a liability group
- 5.10 The process commences with the establishment of liability groups. All appropriate persons for any one linkage are a, 'liability group'. These may be class 'A' or class 'B' persons.
- **Class 'A' Appropriate Persons:** These are, generally speaking the polluters, but also included are persons who, "knowingly permit". This includes developers who leave contamination on a site, which subsequently results in the land being declared contaminated.
  - **Class 'B' Appropriate Persons:** Where no class 'A' persons can be found liability reverts to the owner or the occupier. These are known as class 'B' persons.
- 5.11 The Council will make all reasonable enquiries to identify class 'A' persons before liability reverts to innocent owner-occupiers.
- 5.12 The matter of appropriate persons must be considered for each significant pollutant linkage. Therefore where a site has had a series of contaminative uses over the years, each significant pollutant linkage will be identified separately and liability considered for each.
- 5.13 It is noted that the apportionment of liability is a highly complex and time-consuming process. In the period 2001 to 2006 there were no Part 2A cases in England that successfully reached this stage. This gives strength to the Council's policy of pursuing voluntary remediation of contaminated land over enforcement action wherever possible. However, the process described above will be followed if voluntary agreements cannot be reached within an appropriate time frame.

### ***Apportionment Of Costs***

- 5.14 In most cases the total costs of remediating an area of Contaminated Land will be apportioned between the members of a liability group. In some cases it may also be necessary to apportion costs between liability groups. There are three basic principles that apply to exclusion and apportionment tests. These are:

- a) The Council must have regard to any hardship which may be caused to any person(s) in question,
- b) The Council must consult persons affected to obtain information they may hold. If someone is seeking an exclusion or to influence an apportionment to their benefit then they are responsible for providing the Council with supporting information.
- c) Where there are agreements between appropriate persons the local authority has to give effect to these agreements.

### ***Limitation On Costs To Be Born By Appropriate Persons***

- 5.15 Part 2A sets out six Exclusion Tests. These are applied to all members Class 'A' groups to determine if any should be excluded from liability. The tests are applied in sequence and separately for each pollutant linkage. Application of these tests cannot exclude all members of a Class 'A' group.
- 5.16 For Class 'B' Persons there is a single test to exclude those who do not have an interest in the capital value of the land. Tenants therefore are excluded.
- 5.17 When the Council has apportioned the costs of each remediation action and before serving remediation notices, it will consider whether any of the liable parties may experience hardship as a result of a notice. All decisions regarding hardship will be determined on a case-by-case basis in accordance with all relevant legislation, statutory guidance and best practice. The Council will inform all relevant parties of its decision.

### ***The Enforcement Process***

- 5.18 Before remediation notices are served the extensive consultation process will be completed and ample encouragement given to arrive at an informal solution. The Council will do all in its power to consult the appropriate person(s), owners, occupiers etc about their views on the state of the land. This is likely to be a difficult and time-consuming process. For example, if a housing estate is affected, it is likely that house owners, land owners, developers, lenders, insurers, surveyors, geotechnical engineers, residents groups, etc would all have differing views according to their position.
- 5.19 Notwithstanding urgent cases, remediation notices will only be served in cases where it has not been possible to reach a voluntary solution after a reasonable period of negotiation and consultation.
- 5.20 The Council cannot serve a remediation notice less than three months after formal notification that the land is contaminated unless the urgent action is deemed necessary (where there is imminent risk of serious harm).

### ***Specifying Remediation***

- 5.21 The remediation notice will specify what "reasonable" remediation measures are to be carried out. These will be both appropriate and cost effective and will be based on the 'best practicable techniques'. The aim of the remediation notice will be to ensure that the land no longer meets the definition of Contaminated Land, whilst also taking account of cost/benefit issues.

### ***Remediation By The Local Authority***

- 5.22 Before the Council can serve a remediation notice it will first determine whether it has the power to carry out any of the remediation actions itself. There are five specified



circumstances where this may be the case:

- Where urgent action is required (see below)
- Where no appropriate person can be found
- Where one or more appropriate persons are excluded (on grounds of hardship)
- Where the local authority has made an agreement with the appropriate person(s) that it should carry out the remediation
- In default of a remediation notice

### ***Orphan Sites***

- 5.23 Orphan sites are those where it is not possible, after ‘reasonable’ enquiries, to find anyone responsible for them (Class A or B Persons), or, where persons can be found but they are exempted from liability for specified reasons. These are described in the statutory guidance as ‘Orphan Sites’ or ‘Orphan Linkages’.
- 5.24 In such cases the enforcing authority should bear the cost of the remediation in accordance with the Secretary of State’s guidance. The Council will look to DEFRA’s Contaminated Land Capital Projects Program (CLCPP) to fund these costs in the first instance.

### ***Urgent Action***

- 5.25 Urgent action will be authorised if the Council is satisfied that an area of Contaminated Land that presents an imminent danger of serious harm (from radioactivity or any other contaminant), or serious pollution of controlled waters. In such circumstances the procedures identified in the statutory guidance will be followed which may involve the forced entry into the premises (see also appendix 6).
- 5.26 The terms “imminent” and “serious” are not defined; local authorities are advised to use the normal meaning of the words. There is, however, guidance on what may constitute “seriousness” when assessing the reasonableness of remediation.
- 5.27 The Council will undertake the remediation in urgent cases where it is the enforcing authority if it is of the opinion that the risk would not be mitigated by enforcement action. In the case of a special site the Council will determine the land as ‘Contaminated Land’ in accordance with the statutory procedure, and then notify the Environment Agency who will become responsible for the remediation.
- 5.28 In appropriate cases the Council will seek to recover costs of remediation works it has completed.

## **PART 6**

### **6.0 DATA HANDLING, COMMUNICATION AND ACCESS TO INFORMATION**

- 6.1 The Council is required by statute to maintain a register of regulatory action taken under Part 2A, which must be made available for public inspection at all reasonable times.
- 6.2 Part 2A also sets out formal requirements to notify all relevant parties once land has been declared as Contaminated. This duty is described in Part 4 of this strategy.
- 6.3 Part 2A does not set out any specific requirements to disseminate information about the general progress of site inspections, prioritisation lists or survey work. Further information is given in sections 6.8 and 6.9 below.
- 6.4 The Council is not obliged to alter its prioritisation of Part 2A site reviews at the request of a third party.
- 6.5 The council will comply with the Data Protection Act 1998 where it applies to give some protection to persons with respect to their personal information.

#### ***Data Handling***

- 6.6 Experience has shown that the implementation of Part 2A generates significant volumes of data. This data is stored on a computer database and geographical information system, as well as in paper form.
- 6.7 The Council will continue to develop the database system, with a view to making more information available in digital form as the work progresses. Care will be taken to ensure that future development of the system is in line with the requirements of E-Government guidance.

#### ***Communication of Risk***

- 6.8 As stated, Part 2A does not set out any specific requirements to disseminate information about the general progress of site inspections, prioritisation lists or survey work. However, there may be occasions where the Council feels that early communication with relevant parties would be appropriate for example where intrusive sampling investigations are considered necessary. The timing and method of communication will be judged on a site-by-site basis
- 6.9 Where communication is deemed necessary the Council will seek to advise all stakeholders including
- Site occupants
  - Site owners
  - Local Ward Councillors
  - The Council's Corporate Communications department

### ***The Environmental Information Regulations 2004***

- 6.10 Individuals and organisations have the right to request information about a given piece of land at any time. The Council will deal with all such requests in strict accordance with the requirements of the Environmental information Regulations (2004).
- 6.11 These Regulations require local authorities to make any environmental information they hold available upon request, subject to certain exemptions. Please refer to the “Environmental Information Regulations” (2004) documentation for further details about the definitions of “environmental information”, the cases for exemption, charges for information and timescales for reporting.
- 6.12 The Council receives a growing number of such requests each year, and has developed a standardised report, which forms the basis of the response in most cases. A report will include comments relating to the current priority group allocated to a given site under the Part 2A inspection process. The report will also confirm any formal decisions made, or action taken by the Council in accordance with Part 2A if appropriate.
- 6.13 The report does not provide speculative comments or opinions about the likelihood of a site being determined Contaminated Land in the future.

#### ***Contents Of Formal Contaminated Land Registers***

- 6.14 The only information required to be stored on a formal register is that relating to regulatory action and remediation. The contents are specified at length in schedule 3 of the Contaminated Land (England) Regulations 2000. This formal contaminated land register will be maintained at the Civic Centre. Members of the public will be able to view the register free of charge during normal office hours. Copies of documents may be subject to charge.

A summary of sites appearing on the register will be provided via the Council website.

## **PART 7**

### **7.0 QUALITY CONTROL, PERFORMANCE INDICATORS AND ARRANGEMENTS FOR REVIEW**

- 7.1 In April 2005 the Office of the Deputy Prime Minister (ODPM, now Department for Communities and Local Government DCLG) introduced two statutory Best Value Performance Indicators (BVPIs) for Contaminated Land. These are BV216A and BV216B. They monitor progress on information gathering and decision making in relation to potentially contaminated sites. As of April 2008, BV216A and BV216B are to be removed as local government performance indicators and therefore not be reported however internal performance will continue to be monitored to ensure progression of this work.
- 7.2 The indicators are a snapshot of current progress in decision-making and are reported to the DCLG on an annual basis. They are not cumulative or intended for comparison between boroughs and there are currently no plans by Government to introduce targets for progress.
- 7.3 For further details on best value indicators please refer to ODPM (now DCLG) document: Best Value Performance Indicators 2005/6 available to download from [www.communities.gov.uk](http://www.communities.gov.uk)
- 7.4 Complaints and information from members of the public are considered in paragraphs 4.11 and 4.12. Procedures are in place to:
- Record that information or a complaint has been received.
  - Demonstrate an appropriate officer has been designated to deal with the request.
  - Record the request and response; and
  - Ensure appropriate records are maintained.

Further information on making a formal complaint to the Council can be found at: <http://www.hounslow.gov.uk>

### ***Review***

- 7.5 Whilst the Council has a duty to inspect the Borough, 'from time to time', to identify contaminated land, the frequency of inspection is not prescribed. In practice inspection may be a continuum, balancing a systematic approach with the availability of resources. The Council has a duty to review its inspection strategy on a regular basis and to meet its statutory responsibilities two main aspects of review need to be built into this strategy:
- Triggers for reviewing inspection decisions, and
  - Review of the inspection strategy
- 7.6 In addition to the routine review of inspection findings (see sections 3.10, 3.11, 3.23, 5.3) situations will arise where the consequences cannot be totally anticipated. Such situations will trigger re-assessment of the initial inspection findings; examples of these include:
- Change of use of surrounding land (introduction of new receptors)
  - The potential for pollutant linkages to become significant or urgent as a result of unplanned events (e.g. flooding, subsidence, spillages etc), or a change in circumstances
  - Identification of a localised effect which could be associated with the land
  - Responding to new information
- 7.7 The Land Quality Team will review this strategy at least every 5 years and incorporate any regime changes as necessary. Any significant changes to the direction of the strategy will be

reported to the Sustainable Development Committee. Particular matters kept under review will include:

- The content of the strategy generally
- Priorities for further investigation of potentially contaminated sites
- The potential for the introduction of new receptors
- The potential for new contamination
- Progress on voluntary remediation
- The enforcement process generally and the identification of appropriate persons particularly
- Identification of special sites
- Progress with the implementation

7.8 The Environment Agency will be formally consulted on any reviews of the Contaminated Land Strategy. A copy of the finalised strategy will be forwarded to the Environmental Agency to be held on their file.

## PART 8

### 8.0 PROJECTED COSTS AND TIMETABLE

- 8.1 It is noted that Part 2A provides a highly complex and technical statutory duty for local authorities to perform. Officers must possess a detailed knowledge of the scientific, engineering, legal, political and public-facing aspects of the work. This is paramount to identify potentially contaminated sites, and then prioritise them for further more detailed inspection
- 8.2 Subsequently, potentially significant sums may be required to make more detailed investigation of sites and, possibly take enforcement action and carry out remediation action. It is difficult to estimate what additional financing will be required. Should a significant investigation and / or remediation be identified, it is anticipated that an application to the Contaminated Land Capital Projects Programme (CLCPP) would be made specifically relating to that site.
- 8.3 It should be noted that these arrangements relate specifically to the Council's enforcement role and not that as landowner. Should land in possession of the Council, be identified as contaminated land then funding of remediation will be considered on a case-by-case basis. In the event of significant costs being involved it is likely that officers in the Land Quality team will also make an application to the CLCPP.

#### ***Proposed timetable for the implementation of Part 2a***

- 8.4 Review of timetable (2001-2008):

<b>Duty</b>	<b>Target Date/Year</b>	<b>Actual Date/Year</b>
Production and publication of Contaminated Land Strategy	July 2001	June 2001
Inspection of the Borough, identification of potentially contaminated sites and prioritisation for further investigation	2001 – 2003	Historic data capture completed Nov. 2002  Potentially contamination sites identified, imported into database and given initial prioritisation category by end 2003
Detailed inspection and assessment of priority category 1 sites (HH1 sites)	As soon as possible after they become known to the Council	c.450 HH sites identified. Work began on further investigation in 2004.  Capital funding obtained for investigations on 9 sites by end 2005 – all subsequently discharged.
Detailed inspection and assessment of remaining potentially contaminated sites	2003 – 2008	309 HH sites discharged or reprioritised by end 2007.

- 8.5 The early phases of this timetable were completed as planned. However, it is noted that detailed investigations of potentially contaminated sites are taking considerably longer than originally anticipated. This is common across the country and is the result of the complexities

of the legislation, changes and uncertainties in Government guidance (particularly soil screening values), and the sensitivity of some sites that give rise to associated issues.

8.6 Proposed five-year timetable (2008-2012)\*:

Duty	Target Date/Year
Continue initial investigation of all remaining HH sites (combined HH1 and HH2 sites). Highlight those requiring detailed investigations.	Jan 2008
Commence detailed investigations on HH sites as required (subject to available funding)	Dec 2009
Complete HH reviews. Continue detailed investigations as required. Begin initial reviews of MH, HM and MM sites	Dec 2011
Complete MH, HM, MM initial reviews. Commence detailed investigations as required. Begin initial reviews of all remaining sites	Dec 2012

\*This timetable is based on staffing levels as of Sept 2006 (i.e. Principal Officer, Senior Officer, Assistant and part time administrative support). The timetable also assumes that cases in the lower priority groups are likely to be resolved more quickly.

\* \* \*

## APPENDIX 1

### Summary of the development of Part 2A legislation

The following table provides a summary of the key stages in the development of UK contaminated land legislation:

Year	Development
1985	Government formally recognise the need for local authorities to hold lists of potentially contaminated land. A draft circular <sup>2</sup> on planning and contaminated land highlights the benefits of early discussions about contamination between potential developers and local authorities.
1988	Town & Country Planning (General Development) Order requires local planning authorities to consult with waste disposal authorities on potential developments falling within 250m of land that had been used to deposit refuse within the last 30 years.
Jan 1990	House of Commons Environment Committee published its first report on contaminated land. The document expresses concerns that the 'suitable for use' approach may misdirect effort and resources.  The Environmental Protection Act (1990) is then given a requirement for local authorities to compile 'Public registers of land which may be contaminated'. (Section 143)
1992	March: Concern about the blighting effect of public registers results in the Secretary of State delaying the introduction of Section 143.  July: Proposals to reduce the number categories of potentially contaminative uses are discussed. It is estimated that land covered by the revised categories would be only equate to 10-15% of the area previously envisaged.
1993	The new Secretary of State (Michael Howard) announces that proposals for contaminated land registers are to be withdrawn and a complete review of land pollution responsibilities is undertaken.
1994	The Department of the Environment produce the ' <i>Paying For our Past</i> ' consultation paper <sup>3</sup> , which receives c.350 responses. The consultation leads to the ' <i>Framework for Contaminated Land</i> ' policy document <sup>4</sup> . Key points include: <ul style="list-style-type: none"> <li>• A commitment to the Polluter Pays, and Suitable for Use principals</li> <li>• A focus on past pollution only; legislation already exists to control new pollution</li> <li>• Action should only be taken in cases where actual or potential risks to health or the environment exist and remediation is financially viable.</li> </ul>
1995	The Environment Act (1995) is published and includes, in Section 57, amendments to the Environmental Protection Act (1990) by inserting a new Part 2A to deal with Contaminated Land.
2000	After lengthy consultation on statutory guidance Part 2A of the Environmental Protection Act comes into force in April 2000.
2001	London Borough of Hounslow publishes its first Statutory Contaminated Land Strategy.

<sup>2</sup> The 11th report of the Royal Commission on Environmental Pollution, 1985

<sup>3</sup> "Paying for our Past", Arrangements for Controlling Contaminated Land and Meeting the Costs of Remedying the Damage to the Environment, Department of the Environment, London, 1994

<sup>4</sup> Framework for Contaminated Land, Outcome of the Government's Policy Review and Conclusions from the Consultation Paper "Paying for Our Past", Department of the Environment, London, 1994



## APPENDIX 2

### List of categories of Special Site

1. Once a local authority has identified land as contaminated land by definition, it must also consider whether it falls into the category of a special site. Special sites are sites where, more often than not, the Environment Agency have had, or still have, an enforcement role.

2. What exactly constitutes a special site is specified in the Contaminated Land (England) Regulations 2000. For a legal definition the Regulations must always be consulted. In simple terms, however, they include land:-

- Polluting controlled waters (in certain circumstances - see appendix 7);
- On sites subject to Integrated Pollution Control (see Environmental Protection Act 1990 Part I - Prescribed Processes and Substances Regulations 1991 schedule 1 part A);
- With waste sulphuric acid tar lagoons (on sites used for refining benzole, used lubricants or petroleum);
- Used as an oil refinery;
- Used to manufacture or process explosives;
- Used to manufacture or dispose of atomic, chemical or biological weapons\*;
- Used for other nuclear purposes\*;
- Owned or occupied by a defence organisation for naval, military or air force purposes\* (not off base housing / NAFFI);
- Held for the benefit of Greenwich Hospital\*;
- Land that is determined Contaminated due to the presence of radioactivity.

\*Non-biological and non-radioactive contamination only.

3. Contaminated land beyond the boundary of these premises (but contaminated by them) also forms part of the special site.

4. Procedure in relation to the investigation and declaration of special sites is covered in sections 4.5 and 4.6.

5. It should be noted that a new Memorandum of Understanding was agreed between the Environment Agency and the Local Government Association in June 2001 relating to special site designation. This will be followed where practicable.

## APPENDIX 3

### Summary of Source and Receptor data collection phase

#### Collection of Source data:

The table below show the requirement for the collection of source data (as identified in the 2001 strategy), along with a summary the actual activities undertaken by the Land Quality Team between 2001 and 2006:

<b>Data Type</b>	<b>Summary of 2001 Requirement</b>	<b>Actual Activity (2001-2006)</b>
<b>Industrial history</b>	Examine historical Ordnance Survey maps and Land Use Surveys from the 19 <sup>th</sup> century to the present day; held in the Council's archives. Draw on local knowledge where possible. NB: Appendix 4 contains a comprehensive list of potentially contaminative uses.	Information was captured from eight epochs of historical maps. These were: <ul style="list-style-type: none"> <li>• Ordnance Survey County Sheets Eds. 1 - 4 (1865, 1894, 1913 &amp; 1934)</li> <li>• Council Land Use Surveys (1947, 1957)</li> <li>• Greater London Council Land Use Surveys (1966 &amp; 1971). A survey from 1976 could not be found.</li> </ul> <p>A list of potentially contaminative land uses was established. The outer extents of these uses were digitised whenever they appeared on any of the epochs.</p>
<b>Current industry</b>	Consider present industrial areas of the Borough as potential sources of contamination. Inspect these to establish the potential for contamination to exist, and, if there is, whether it is controlled by another agency?	This information was obtained from the Yellow Pages business database, 2000 edition. The Contaminated Land team selected all 'business type' categories that had the potential to cause contamination. These uses were extracted from the database using a Microsoft Access query. The data was then imported into GIS to create a map layer. Many grid references from the database were found to be inaccurate.
<b>Environmental Protection Act 1990 Part 1</b>	'Part B' processes authorised for air pollution control by this Council. There were currently 67 processes authorised by the Council under Part I of the Act. These range from filling stations to paint shops. Many of these processes have the potential to pollute the land, but there are no other statutory methods of control.	The Council's Senior Environmental Health Officer provided a list of authorised Part B processes in March 2001. These were plotted as a GIS map layer.
<b>Environmental Protection Act 1990 part 1</b>	'Part A' processes authorised for integrated pollution control (IPC) by the Environment Agency. There is currently only one process authorised by the Environment Agency under Part I of the Act. The IPC regime should control unauthorised discharges to land but their presence will need to be noted and the potential for long-term pollution assessed, particularly post closure.	This information was provided by the Environment Agency, in the form of a GIS layer, in December 2000. It indicates that there is one active license in the borough.
<b>Hazardous substances</b>	This Council is a Hazardous Substances Authority for the purposes of the Planning (Hazardous Substances) Act 1990 and the Planning (Hazardous Substances) Regulations 1992. This legislation requires consent to allow the presence on land of hazardous substances above a specified	The Pollution Control Team provided a list of licensed users of hazardous substances in March 2001. Contaminated Land Staff (as was) plotted the information as a GIS layer.

	<p>quantity. These regulations were recently amended by the Planning (Control of Major Accident Hazards) Regulations 1999 (SI 981) to take account of the new COMAH Regulations (see f below). There are currently two authorised sites in the Borough. The Planning Officer maintains a register for this purpose.</p>	
<b>COMAH sites</b>	<p>The Control of Major Accident Hazards Regulations 1999 (SI 743) are enforced by the Environment Agency and Health &amp; Safety Executive (joint competent authority) to control both on and off site risks from industries with a high potential for disaster from dangerous substances (flammable, toxic or explosive).</p>	<p>According to the Council's Environmental Health department, sites listed under the COMAH regulations will have been included in the hazardous substances register. See 'Hazardous substances' section above.</p>
<b>NIHHS sites</b>	<p>It should be noted that all sites notified to the HSE under the Notification of Installations Handling Hazardous Substances Regulations 1982, as well as COMAH sites, will be held on the hazardous substances register, so there should be no need to consult with the HSE on their location.</p>	<p>According to the Council's Environmental Health department, sites listed under the NIHHS regulations will have been included in the hazardous substances register. See 'Hazardous substances' section above.</p>
<b>Explosives</b>	<p>These are not directly covered by the hazardous substances regulations but are controlled by the Health &amp; Safety Executive under licences issued under the Explosives Act 1875. Any licensed sites will be identified.</p>	<p>According to the Council's Environmental Health department, sites listed as storing or using explosives will have been included in the hazardous substances register. See 'Hazardous substances' section above.</p>
<b>Current landfill and waste processing sites</b>	<p>These are licensed by the Environment Agency under the provisions of Part 2 of the Environmental Protection Act 1990. Details of all these sites have already been provided by the Agency for this purpose.</p>	<p>This information was provided by the Environment Agency, in the form of a GIS layer, in December 2000. It indicates that there are twelve active licenses in the borough.</p>
<b>Closed landfill sites</b>	<p>Are a potentially significant source of risk, especially those which operated before the licensing requirements of the Control of Pollution Act 1974. All closed landfills in the borough have been identified and their association with any specified receptors will be considered in detail.</p>	<p>Hounslow Council has undertaken substantial work in the past to identify closed landfill sites. In the early 1990s a Landfill Public Register was produced by the then Landfill Team. The Council therefore already held a GIS layer of closed former landfill sites. Substantial supporting information is also held both in paper format and on the in-house C.L.A.M.S. database (Contaminated Land Administration and Monitoring System).</p>
<b>Sewage works and land used for the disposal of sewage sludge</b>	<p>Land dedicated for the disposal of sewage sludge is notified to the Environment Agency under the, Sludge (Use in Agriculture) Regulations 1989. This land, together with all operating and redundant sewage works will be identified and assessed.</p>	<p>Historic sewage works and sludge disposal were incorporated in the historic map searches (see 'Industrial history section above). Currently active sewage processes are incorporated in the Hazardous Substances register. See 'Hazardous substances' section above.</p>

<p><b>Minerals extraction</b></p>	<p>The geology of the area has resulted in large areas used for the extraction of minerals, particularly sand, gravels and brickearths. Most of the resulting pits have been filled with waste.</p>	<p>Most areas that were historically subjected to minerals extraction were subsequently infilled with waste. Extraction areas were incorporated in the land use survey data capture and will also be cross-referenced with the Council's existing landfill research and public register. At the time of writing there were no active mineral extraction sites within the Borough. Any new extraction sites in the future are likely to be regulated under other legislation.</p>
<p><b>Waste or derelict land</b></p>	<p>Land often owned by the utilities, railways or other major landowners is left seemingly abandoned because it has no particular use or is difficult to access. These areas can accumulate unwanted materials and can be used to dispose of wastes and effluents illegally.</p>	<p>This was covered in two ways:</p> <ul style="list-style-type: none"> <li>• Historic vacant/derelict land was incorporated in the land use survey data capture (see 'Industrial history' section above). This included land cleared as a result of war time bomb damage.</li> </ul> <p>The Community Environmental Health Team provided a list of current derelict sites known to attract problems such as fly tipping and car dumping/burning. The Contaminated Land Team (as known) visited each of these sites and created a GIS map layer showing those where contamination issues were deemed a potential problem.</p>
<p><b>Ministry of defence land</b></p>	<p>There is a history of Defence related activities in the borough and areas occupied by Defence Agencies. Their potential for contamination could be significant therefore they will be investigated, in association with the Environment Agency as required, in accordance with the statutory guidance.</p>	<p>MOD land that is contaminated will be considered as a Special Site under Part 2A. This means that the primary regulators will be the Environment Agency. However it is still the Local Authority who makes the initial determination.</p> <p>Historic MOD land was incorporated in the land use survey data capture.</p> <p>It was not possible to obtain a complete list or map of current MOD owned land within the borough. However, contact was made with the Defence Estates who are able to advise on a site-by-site basis. The Land Quality Team will check with Defence Estates on any site where there is believed to have been any MOD history.</p>
<p><b>Previously developed contaminated sites</b></p>	<p>The inspection of the Borough will identify many potentially contaminated sites, which have been developed over the years. In some cases the methods and extent of remediation may be unknown, in others it may be known but the remediation suspected of being inadequate.</p>	<p>Many sites, which have been developed in recent years, will have required site investigations and remediation works as a condition of the planning permission.</p> <p>The Land Quality Team holds over 1000 Site Investigation and Monitoring reports for borough. The areas covered by these reports were digitised onto a GIS layer. This can be overlaid with the potentially contaminated sites layer enabling the Contaminated Land team to cross reference current sites with any works previously carried out.</p>

### Collection of Receptor data:

The table below show the requirement for the collection of receptor data (as identified in the 2001 strategy), along with a summary the actual activities undertaken by the Land Quality Team between 2001 and 2006:

<b>Data Type</b>	<b>Summary of Requirement</b>	<b>Actual Activity</b>
<b>Humans</b>	The present population of the Borough is over 200,000 distributed amongst the main population centres of Bedfont, Feltham, Hanworth, Cranford, Heston, Hounslow, Osterley, Isleworth, Brentford and Chiswick. Human receptors may therefore be present to some degree at almost any location within the Borough. The potential for persons either living on or frequenting a potentially contaminated site will be considered in every case, but priority will be given to sites with infants	It was not deemed possible to use a single determinant to represent the spatial location of human receptors. This is because humans' interaction with different receptors can influence the overall risk associated with that use.  A series of GIS layers were therefore used to represent the spatial location of receptors where humans were likely to be present. These were: Residential Areas, Schools, Public Open Spaces, Commercial Areas, Institutional Buildings and Industrial Areas. Each land use was ranked according to receptor risk – the highest risk code being Residential Areas and Schools.
<b>Property: Buildings</b>	All buildings and underground services are potential receptors and will be considered in every case where contamination and buildings exist.	It was considered that the use of a building would be the main determinant of risk. However, some contaminants can also pose a risk to the buildings themselves (i.e. concrete degradation etc.)  The Contaminated Land team (as known) decided that the presence of a building on a site would be identified through the Humans layer (for example, School buildings, residential buildings, factory buildings etc).  As a back up, the Ordnance Survey Master Map includes each building as a separate GIS polygon. This will enable us to identify the actual footprints of building on a given site during later stages of investigation.
<b>Property: Ancient monuments</b>	As listed by English Heritage will be specifically identified as part of the strategy and the potential impact of contaminants considered. A full list of scheduled Ancient Monuments is provided in the Unitary Development Plan.	This information was taken from Map ENV-B3 in the Council's Unitary Development Plan (1999). The Contaminated Land Team (as known) reproduced the data as a GIS layer in 2001.
<b>Property: Agricultural and horticultural crops</b>	There is agricultural land in the Borough, which will be identified and taken into consideration as necessary. Where contamination is known or suspected associations with poor yield and crop failure will be investigated.	The Council's Unitary Development Plan includes an address list of farms in the borough (there are 4). The Contaminated Land Team created a GIS layer based on this list, using digital aerial photographs from 1999 to estimate the extents of each farm.
<b>Home grown Produce</b>	There are many allotments within the Borough and these will all be identified and their potential for contamination considered as a result of previous uses or activities. Similarly any domestic gardens likely to be contaminated will be identified and assessed.	Produce could be home-grown in residential gardens or on allotment sites. There is a risk of contaminant ingestion if produce is grown in contaminated soil. The Council's Drawing Office (now GIS and Design Centre) provided a GIS layer of Allotments in the borough.  The Land Quality Team will also refer to the Residential Areas layer (see 'Humans' section above), in conjunction with digital aerial photographs (taken in 1999) and site visits, to establish whether houses have gardens or not. This will be done on a site-by-site basis.

<b>Ecological Receptors</b>	There are several designated sites of Metropolitan and Borough importance including a SSSI at Syon Park. All areas will be identified, examined and any risks carefully quantified with English Nature and the Environment Agency.	This information was compiled from Nationally and Locally designated sites.  Nationally designated sites were downloaded as a series of GIS layers from the English Nature web site. These included National Nature Reserves, Sites of Special Scientific Interest and Ancient Woodlands.  Locally designated sites were obtained from the Council's Unitary Development Plan (1999), Map ENV-N3 and were plotted as a GIS layer.
<b>Water: Aquifers</b>	All aquifers will be specifically identified with their location, depth and vulnerability according to cover. Potential risks from identified sources of contamination will be considered carefully with the Environment Agency.	The geology underlying the London Borough of Hounslow is fairly uniform. This generally comprises a layer of river terrace gravels over London Clay above Chalk. The Regional Contaminated Land Officer at the Environment Agency advised Hounslow Officers that groundwater in the terrace gravels (shallow aquifers) would not generally be considered as Controlled Waters by the EA.  In order to establish the presence of deep aquifers (in the Chalk Beds beneath London Clay) a GIS version of the EA's Groundwater Vulnerability Map was purchased. It is likely however that the layer of London Clay will act as an Aquiclude, hence blocking the pathway for downwards migration of contaminants. Impacts on shallow aquifers will still be considered on a site-by-site basis during later stages of investigation.
<b>Water: Public water supplies</b>	All public water supply abstraction points will be identified with their location, depth, strata / surface water supply they draw from and volume of supply. Potential risks from identified sources of contamination will be considered carefully with the Environment Agency and Thames Water.	The Council's Senior Environmental Health Officer confirmed that there are no Public Water Supply abstraction points within the London Borough of Hounslow. A GIS layer was therefore not required.
<b>Water: Private water supplies</b>	All private water supplies in the Borough will be identified with their location, depth, strata / surface water supply they draw from and volume of supply. Potential risks from identified sources of contamination will be considered carefully with the Environment Agency.	The Council's Senior Environmental Health Officer confirmed that there are no Private Water Supply abstraction points within the London Borough of Hounslow. A GIS layer was therefore not required.
<b>Water: Other Authorised Abstraction Points</b>	All authorised abstraction points will be identified such as those used for agricultural or recreational use. Potential risks from identified sources of contamination will be considered carefully with the Environment Agency	This information was provided by the Environment Agency, in the form of a GIS layer, created in December 2000. The information was taken from the Agency's National Abstraction License Database. It indicates that there are 25 current or former licenses in the Borough. These abstractions are for industrial or agricultural purposes.
<b>Water: Other Specified Receptors</b>	All other water receptors such as rivers, streams, tributaries, reservoirs, lakes etc will be identified as part of the inspection strategy. Potential risks from identified sources of contamination will be considered carefully with the Environment Agency.	This section covers surface water and incorporates rivers, streams, ponds, ditches and lakes. This information was extracted from the Ordnance Survey Master Map of the borough. A GIS layer was then created showing all permanent surface water in the borough.

## APPENDIX 4

### Situations where Part 2A does not apply or requires clarification

Situations where other legislation may take priority over Part 2A:

Legislation & Regulations	Summary
<p><b>Integrated Pollution Control</b></p> <p><i>Part 1 of EPA 1990, Prescribed Processes and Substances Regulations 1991 Schedule 1 Part A</i></p>	<p>Certain processes are prescribed under this regime (known as IPC). Enforced by the Environment Agency and includes prevention of pollution to land. Section 27 gives the agency power to take action to remedy harm caused by a breach of IPC controls, including land contamination. Also applies to the Pollution Prevention &amp; Control regime (PPC).</p>
<p><b>Waste Management Licensing</b></p> <p><i>Environmental Protection Act (1990) Part 2</i></p>	<p>All waste disposal and processing sites (including scrap yards) should be licensed. Contamination causing harm, or pollution of controlled waters, from such sites should be dealt with under Part II. In exceptional circumstances, where the problem arises from an unlicensed activity, it is possible that Part 2A could apply.</p> <p>Illegal tipping of controlled waste (fly tipping) is also dealt with under the Environmental Protection Act 1990 Part 2 (section 59).</p>
<p><b>Pollution of Controlled Waters not arising from land</b></p> <p><i>Water Resources Act 1991 section 161</i></p>	<p>This will apply if a pollutant is accidentally and directly discharged into a body of water, or it has left land and it is entirely in a body of water (i.e. the land is no longer causing pollution). Also of relevance are the Groundwater Regulations 1998 (Statutory Instrument 2000, No.2746), which concerns pollution of groundwater.</p>
<p><b>Discharge Consents</b></p> <p><i>Water Resources Act 1991</i></p>	<p>No remediation notice served under Part 2A can require action to be taken which would affect a discharge authorised by consent.</p>
<p><b>Change of Land Use</b></p> <p><i>Town &amp; Country Planning Act (1990), Planning Policy Statement 23</i></p>	<p>Where land becomes a risk to potential new receptors as a result of a change of use, the Town &amp; Country Planning Development Control regime will continue to apply as before. Annex 2 of Planning Policy Statement 23 covers 'Development on land affected by contamination'.</p>
<p><b>Harm to Employees</b></p> <p><i>Health and Safety at Work Act 1974</i></p>	<p>Where there is a risk of harm to persons at work from land contamination, this should be dealt with under the Health and Safety at Work etc Act 1974. The enforcing authority will be either the Health &amp; Safety Executive or this Council depending on the work activity.</p>
<p><b>Harm Following an Incident at a COMAH Site</b></p> <p><i>Control of Major Accident Hazard Regulations 1999</i></p>	<p>Where there has been a release, explosion or other major incident, which has caused land contamination, the restoration should be carried out as part of the COMAH on site / off site emergency restoration plan.</p>

Situations where the relationship between Part 2A and other legislation may require clarification:

<p><b>Contaminated Food</b></p> <p><i>Food Standards Act (1999)</i></p>	<p>Where the Council suspects crops may be affected by contaminated land to such an extent they may be unfit to eat, they will consult the Food Standards Agency (FSA), the Health Protection Agency (HPA) and the Department of Environment, Food and Rural Affairs (DEFRA) to establish whether emergency actions are necessary. It is noted however that, whilst these organisation may provide advice, remediation of such sites would be carried out under Part 2A powers.</p>
<p><b>Radioactivity</b></p>	<p>Part 2A was extended in August 2006 to include radioactive contamination where it poses a risk of harm to human health only. The extension of Part 2A does not consider risks posed by radioactive contamination to other receptors or pollution of controlled waters.</p>
<p><b>Organisms</b></p>	<p>Part 2A does not apply to contamination caused by organisms such as bacteria, viruses or protozoa. This could affect land contaminated with Anthrax spores, E-coli, etc. The Council will seek expert advice from the Environment Agency, DEFRA and the HPA on all such sites.</p>
<p><b>Statutory Nuisance</b></p> <p><i>Environmental Protection Act (1990), Part 3</i></p>	<p>The relationship between Part 2A and statutory nuisance is complex. If land is declared contaminated land by definition, it cannot be considered a statutory nuisance. This ensures there is no duplication or confusion between the two regimes. If however the land is investigated and found not to be contaminated land but, "land in a contaminated state" (defined as land where there are substances in, on or under the land which are causing harm, or there is a possibility of harm being caused), it also can not be considered a statutory nuisance for the purposes of Part III of the Act. Precisely in what circumstances might land be declared, "in a contaminated state", remains to be seen. Where land is not contaminated land or in a, contaminated state, but is causing a nuisance from smell, it could be considered a statutory nuisance as before.</p>



## APPENDIX 5

### Examples of Inter-departmental work requirements

<b>Planning and Development Control</b>	Areas of potentially contaminated land may be developed, awaiting development, derelict, protected or green belt. Past development control files will be examined to determine if previous works, relating to contamination, have ever been undertaken.
<b>Building Control</b>	This team enforce protection measures in new buildings to mitigate the impact of contamination on property. Their records may be used to assess quantify risks on a site.
<b>Borough Solicitors</b>	It is accepted that Part 2A is a highly complex piece of legislation. The Land Quality Team will seek expert advice, as required, from Solicitor's relating to enforcement actions, liability issues, powers of entry, data protection and access to information.
<b>Engineers and Highways</b>	Land under highways, pavements, verges and common areas may be affected by contamination. Highways Authorities must maintain registers under Part III of the New Roads and Street Works Act 1991 regarding, amongst other things, streets with "special engineering difficulties". This includes risks from contamination.
<b>Information Technology</b>	Part 2A work generates significant volumes of digital data. Hounslow uses a client/server database (GeoEnviron) and geographical information systems (MapInfo) to store and manage this data. Continued ICT support is required to perform system updates, and advise on data protection and backup issues.
<b>Hounslow Homes (Housing)</b>	Land controlled by the Housing Department may be identified as being contaminated and require remediation. Extensive contamination testing and remediation has taken place on Council owned housing land in the past, further work may be required on some sites.
<b>Community Initiatives Partnerships (CIP)</b>	CIP manages the borough's open space and leisure facilities on behalf of the Council. Many Council-owned open spaces are former landfill sites and significant contamination testing has already been carried out, with remedial works being undertaken where necessary. These works will be reviewed to ensure they reflect modern standards.
<b>Children's Services &amp; Life Long Learning</b>	As with housing and leisure sites, land used for educational purposes is highly sensitive and a high priority has been given to any such site that have an industrial past. Previous remedial works have been undertaken on some sites and these are being reviewed to ensure they meet current standards.
<b>Strategic Property Section</b>	This is the team responsible for land in Council ownership. They are responsible for investigation and remediation of contaminated land in the Council's ownership. In such cases the Land Quality team's role is to provide regulatory and technical advice.
<b>Finance</b>	The legislation has significant resource implications for the Council, both as an enforcing authority and landowner. The Council can apply to DEFRA for capital funding for investigation and remediation of contaminated land in some circumstances. Advice and support from the finance department is required during this process (see below).

## APPENDIX 6

### **Powers of entry and the appointment of “suitable persons”**

1. Section 108 of the Environment Act 1995 gives the local authority power to authorise, in writing, “suitable persons”, to investigate potentially contaminated land. These powers are extensive and will be considered in detail with the Council’s Solicitor prior to any resisted entry being attempted. It should be noted that these powers are not available to the Environment Agency. The powers which a person may be authorised to exercise include:
  - To enter at any reasonable time (or in urgent cases, at any time, if need be by force) any premises / land to make such examination and investigations necessary.
  - To take samples, photographs, carry out tests, install monitoring equipment etc.
2. At least seven days notice must be given to residential occupiers and to occupiers of land where heavy plant is to be used. Consent must be obtained to enter from the occupier, or failing that, a warrant obtained under Schedule 18 of the Act.
3. It should be noted that there are no circumstances in which the Council will use these powers to obtain information about the condition of land, where:
  - It can obtain the information from third parties without the need for entering the site; or
  - A person offers to provide the information within a reasonable and specified time, and does so.

### **Intrusive Investigations**

4. All intrusive investigations will be carried out in accordance with appropriate technical procedures to ensure:
  - a) They are effective
  - b) They do not cause any unnecessary damage or harm
  - c) They do not cause pollution of controlled waters

### **Compensation**

5. Schedule 18 of the Environment Act 1995 makes clear the circumstances when a local authority must pay compensation for loss or damage as a result of the use of these powers. The relevant officer will therefore ensure that only appropriate technical procedures are deployed, the utmost care is taken at all times, and the conditions carefully recorded before, during and after completion of the necessary works.

### **“Suitable persons”**

6. The science and associated technical procedures relating to the investigation and assessment of contaminated land are extremely complex. Knowledge of several specialised disciplines is required together with an ability to interpret significant volumes of data and make a reasoned judgement, often in difficult circumstances.
7. The consequences of, ‘getting it wrong’, could, in many cases, have a major impact on the Borough and on people’s lives. On the one hand, an entire area could be unnecessarily blighted and homes rendered worthless over night, whilst on the other, a generation of children could be left at risk from an unidentified pathogen.
8. Neither the Act nor the guidance considers what may constitute a, “suitable person”, for the

purposes of the investigation and assessment of contaminated land. There is no list of approved consultants or any professional organisation that oversees the training of contaminated land specialists. There is no minimum qualification and no recognised qualification. Consultants come from a range of backgrounds including:

- Environmental health
- Other environmental science disciplines (several)
- Surveyors
- Engineers
- Geologists
- Hydrologists
- Soil scientists
- Chemists, etc

9. Ultimately, the responsibility for determining what land may and may not be declared contaminated, by definition, lies with the local authority. The lead officer for Hounslow Council is the Head of Pollution Control and may need to rely on the advice of appointed, "suitable persons". Under these circumstances criteria have been developed to assist in their selection.

#### **Guidance for the appointment of "suitable persons" for the purposes of part 2A**

10. There are two prerequisites to commencing the process of appointing suitable external consultant / contractors, firstly:

- Adequate funding to support the process; and secondly
- A well qualified person, 'in house', to act in the Client role

11. Ongoing additional training will be carried out to provide an adequate foundation of knowledge upon which to carry out the role.

12. The Client officer will produce a comprehensive, unambiguous but succinct draft specification for each contract which clearly identifies the work to be carried out, its purpose, timetable and Client / Contractor responsibilities. They will produce a list of appropriate companies, taking care to seek out those most prominent and successful in the field, rather than only those who promote themselves to the Council. Each of these will then be contacted in turn for an informal discussion as to their capability, expertise and experience. Prior to commencing this process the Client officer will produce a selection of questions relevant to the contract to ask each company. This should then hopefully result in a short list of six companies who will be asked to quote / tender for the work based on a final specification.

13. A checklist of information requirements is included at the end of this section.

14. Once appointed the Client officer will be responsible for monitoring the contract to ensure:

- The contractors are kept fully aware of their responsibilities at all times
- Quality control requirements are met
- Amendments are quickly agreed and documented
- The timetable is strictly adhered to
- The aim of the contract is achieved

## APPENDIX 7

### Pollution of controlled waters

1. Controlled waters are defined for the purposes of Part 2A as:

- \* Coastal waters including docks
- \* Relevant territorial waters (usually to three miles)
- \* Inland fresh waters (relevant rivers, watercourses, lakes, ponds, reservoirs - including bottom / channel / bed, even if dry)
- \* Groundwater  
(Section 104 of the Water Resources Act 1991)

2. The pollution of controlled waters is simply defined as:

*The entry into controlled waters of any poisonous, noxious or polluting matter or any solid waste matter*

3. There is no power in the Act to enable the Secretary of State to issue guidance on what degree of pollution may constitute pollution of controlled waters. This has been accepted as a potential area of conflict. When, however, considering cases where it is thought very small quantities of a contaminant are causing pollution, enforcing authorities must consider what remediation it may be reasonable to require. This should act as a limiting factor thereby ensuring unrealistic demands are not made in relation to cases of very minor pollution.

4. Pollution of controlled waters will rarely be dealt with by the local authorities. Below is a summary of the issues relating to controlled waters.

5. Where pollution of groundwater has occurred and the source can not be identified, or the polluting substances are contained entirely within the body of water (and not in or on the land), then Part 2A does not apply and the matter would be dealt with by the Environment Agency under section Part III of the Water Resources Act 1991 (see also paragraph i.8 (c) above).

6. Where pollution has occurred from land which subsequently affects the wholesomeness of drinking water within the meaning of section 67 of the Water Industry Act 1991 (Water Supply [Water Quality] Regulations 1989 / Private Water Supplies Regulations 1991), then the land becomes a special site.

7. Where pollution has occurred from land which results in surface water failing to meet the criteria in Regulations made under section 82 of the Water Resources Act 1991, then the land becomes a special site:

The Surface Water (Dangerous Substances) (Classification) Regulations 1989  
The Bathing Waters (Classification) Regulations 1991  
The Surface Water (Dangerous Substances) (Classification) Regulations 1992  
The Surface Water (River Eco System) (Classification) Regulations 1994  
The Surface Water (Abstraction for Drinking Water) (Classification) Regulations 1996  
The Surface Water (Fish life) (Classification) Regulations 1997  
The Surface Water (Shellfish) (Classification) Regulations 1997  
The Surface Water (Dangerous Substances) (Classification) Regulations 1997  
The Surface Water (Dangerous Substances) (Classification) Regulations 1998

8. Where the pollution of a specified aquifer\* is caused by any of the following contaminants the land becomes a special site:

Organohalogen compounds and substances, which may form such compounds in the aquatic environment;  
Organophosphorus compounds;  
Organotin compounds;  
Substances, which possess carcinogenic, mutagenic or teratogenic properties in or via the aquatic environment;  
Mercury and its compounds;  
Cadmium and its compounds;  
Mineral oil and other hydrocarbons;  
Cyanides.

\*Specified aquifers are those contained in the following rocks:

Pleistocene Norwich Crag;  
Upper Cretaceous Chalk;  
Lower Cretaceous Sandstones;  
Upper Jurassic Corallian;  
Middle Jurassic Limestones;  
Lower Jurassic Cotteswold Sands;  
Permo-Triassic Sherwood Sandstone Group;  
Upper Permian Magnesian Limestone;  
Lower Permian Penrith Sandstone;  
Lower Permian Collyhurst Sandstone;  
Lower Permian Basal Breccias, Conglomerates and Sandstones;  
Lower Carboniferous Limestones.

9. This, in effect, leaves local authorities with the potential responsibility for the pollution of controlled waters where:

- a) Surface or coastal waters are affected but not breaching the Regulations in paragraph 7 above.
- b) Groundwater (other than a principal aquifer specified as in 8 above) is contaminated and the water is not used for drinking.

10. The Environment Agency have commented that in order to designate a site as a special site, the pollution of controlled waters from a source within/on/under the land must be confirmed as continuing to pollute (or have the potential to pollute) the controlled waters. Where there is no clear evidence that there is a continuing source of historical contamination within the land (even though contamination maybe/is present within groundwaters/surface waters) then the site will not be considered a special site and may not even fall in to the Part 2A definition of 'Contaminated Land'.

## APPENDIX 8

### List of potentially contaminative land uses

This list has been drawn up to provide a broad indication of the type of sites that are known to use, or to have used in the past, materials that could pollute the soil. It must be understood that the list is not exhaustive, also that inclusion on this list does not necessarily infer the existence of a pollutant linkage.

Abattoirs	Fuel storage
Adhesives manufacture	Garages and depots
Agriculture	Gas mantle manufacture
Aircraft manufacture	Gas works
Airports	Glass works
Animal burial	Glue manufacture
Animal by-product processing	Gum and resin manufacture
Anodisers	Hatters
Anti-corrosion treatment	Hide and skin processors
Asbestos products	Ink manufacture
Asphalt works	Iron foundry
Automotive engineering	Iron works
Battery manufacture	Knacker's yards
Bearings manufacture	Lacquer manufacture
Blacksmiths	Laundries
Boilermakers	Leather manufacture
Bookbinding	Metal coating
Brass and copper tube manufacture	Metal manufacture
Brass foundries	Metal sprayers and finishers
Brewing	Mining
Car manufacture	Mirror manufacture
Carbon products manufacture	Motor vehicle manufacture
Cement works	Oil fuel distributors and suppliers
Chemical manufacture and storage	Oil merchants
Chrome plating	Oil refineries
Ceramics manufacture	Oil storage
Coal carbonisation	Paint and varnish manufacture
Coal merchant	Paper works
Concrete batching	Pesticides manufacture
Coppersmiths	Petrol stations
Descaling contractors (chemical)	Photographic film works
Detergent manufacture	Photographic processing
Distilleries	Paper manufacture
Dockyards	Plastics works
Drum cleaning	Plating works
Dry cleaners	Power stations
Dye works	Print works
Dyers and finishers	Printed circuit board manufacture
Electricity generation	Radioactive materials processing
Electrical engineers	Railway land
Electro platers	Railway locomotive manufacture
Engineering works	Refiners of nickel and antimony
Explosives manufacture (including fireworks)	Resin manufacture
Farms	Rubber manufacture
Fertiliser manufacture	Scrap metal dealers
Fellmongers	Sealing compound manufacture
Fibre glass works	Sewage works
Food processing	Sewage sludge disposal areas
Foundries	Sheet metal merchants and works
Fuel manufacture	Ship breakers

Ship builders  
Shooting grounds  
Skein silk dyers  
Small arms manufacture  
Smokeless fuel manufacture  
Soap manufacture  
Solvent manufacture  
Solvent recovery  
Steel manufacture  
Stove enamellers  
Synthetic fibre manufacture  
Tank cleaning  
Tanneries  
Tar and pitch distillers  
Textile manufacture

Thermometer makers  
Timber treatment  
Timber preservatives manufacture  
Tin plate works  
Transport depots  
Tyre manufacture and re-treading  
Vehicle manufacture  
Vulcanite manufacture  
Vulcanisers  
Waste disposal  
Waste recycling  
Waste treatment  
Zinc works

## APPENDIX 9

### Glossary of terms

As reproduced from DEFRA Circular 01/2006, ANNEX 6

The statutory guidance (and other parts of this Circular) uses a number of terms which are defined in Part 2A of the 1990 Act, associated Regulations, other Acts and Regulations, or in the guidance itself. The meanings of the most important of these terms are set out below, along with a reference to the section in the Act, Regulations, or the Statutory Guidance paragraph in which the relevant term is defined.

Terms which are defined in statutes are shown with underlining.

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**Animal or crop effect:** significant harm of a type listed in box 3 of Table A of Chapter A.

**Apportionment:** any determination by the enforcing authority under section 78F(7) (that is, a division of the costs of carrying out any remediation action between two or more appropriate persons).  
*Paragraph D.5(e)*

**Appropriate person:** defined in section 78A(9) as:

"any person who is an appropriate person, determined in accordance with section 78F..., to bear responsibility for any thing which is to be done by way of remediation in any particular case."

**Assessment action:** a remediation action falling within the definition of remediation in section 78A(7)(a), that is the doing of anything for the purpose of assessing the condition of the contaminated land in question, or any controlled waters affected by that land or any land adjoining or adjacent to that land. *Paragraph C.8(e)*

**Attribution:** the process of apportionment between liability groups. *Paragraph D.5(e)*

**Building:** any structure or erection, and any part of a building including any part below ground, but not including plant or machinery comprised in a building. *Table A*

**Building effect:** significant harm of a type listed in box 4 of Table A of Chapter A.

**Caused or knowingly permitted:** test for establishing responsibility for remediation, under section 78F(2); see paragraphs 9.8 to 9.15 of Annex 2 for a discussion of the interpretation of this term.

**Changes to Substances:** an exclusion test for Class A persons set out in Part 5 of Chapter D.  
*Paragraphs D.62 to D.64*

**Charging notice:** a notice placing a legal charge on land served under section 78P(3)(b) by an enforcing authority to enable the authority to recover from the appropriate person any reasonable cost incurred by the authority in carrying out remediation.

**Class A liability group:** a liability group consisting of one or more Class A persons. *Paragraph D.5(c)*

**Class A person:** a person who is an appropriate person by virtue of section 78F(2) (that is, because he has caused or knowingly permitted a pollutant to be in, on or under the land). *Paragraph D.5(a)*

**Class B liability group:** a liability group consisting of one or more Class B persons. *Paragraph D.5(c)*

**Class B person:** a person who is an appropriate person by virtue of section 78F(4) or (5) (that is,



because he is the owner or occupier of the land in circumstances where no Class A person can be found with respect to a particular remediation action). *Paragraph D.5(b)*

**Collective action:** a remediation action which addresses together all of the significant pollution linkages to which it is referable, but which would not have been part of the remediation package for every one of those linkages if each of them had been addressed separately. *Paragraph D.22(b)*

**Common action:** a remediation action which addresses together all of the significant pollution linkages to which it is referable, and which would have been part of the remediation package for each of those linkages if each of them had been addresses separately. *Paragraph D.22(a)*

**Contaminant:** a substance which is in, on or under the land and which has the potential to cause harm or to cause pollution of controlled waters. *Paragraph A12*

**Contaminated land:** defined in Section 78A(2) as

"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 a significant possibility of such harm being caused, or:

"(b) pollution of controlled waters is being, or is likely to be, caused."

OR with respect to radioactive contamination defined in section 78A(2)(as modified) as "any land which appears to the local authority in whose area it is situated to be in such a condition, by reasons of substances in, on or under the ground that:

(a) harm is being caused, or

(b) there is significant possibility of such harm being caused."

**Contaminated Land (England) Regulations 2006:** regulations (S.1.2006/1380) made under Part 2A – described in Annex 4.

**Controlled waters:** defined in section 78A(9) by reference to Part 3 (section 104) of the Water Resources Act 1991; this embraces territorial and coastal waters, inland fresh waters, and ground waters. Section 78A(9) was amended by section 86 of the Water Act 2003 so that for Part 2A purposes "ground waters" does not include waters contained in underground strata but above the saturation zone as described in paragraph 2.9 of Annex 2.

**Cost recovery decision:** any decision by the enforcing authority whether:

(a) to recover from the appropriate person all the reasonable costs incurred by the authority in carrying out remediation, or

(b) not to recover those costs or to recover only part of those costs. *Paragraph E.8*

**Current use:** any use which is currently being made, or is likely to be made, of the land a which is consistent with any existing planning permission (or is otherwise lawful under town and country planning legislation). This definition is subject to the following qualifications:

(a) the current use should be taken to include any temporary use, permitted under town and country planning legislation, to which the land is, or is likely to be, put from time to time;

(b) the current use includes future uses or developments which do not require a new, or amended, grant of planning permission;

(c) the current use should, nevertheless, be taken to include any likely informal recreational use of the land, whether authorised by the owners or occupiers or not, (for example, children

playing on the land); however, in assessing the likelihood of any such informal use, the local authority should give due attention to measures taken to prevent or restrict access to the land; and

- (d) in the case of agricultural land, however, the current agricultural use should not be taken to extend beyond the growing or rearing of the crops or animals which are habitually grown or reared on the land. *Paragraph A.26*

**Deterministic effect:** type of health effect which occurs following a dose of radiation above a certain Level (a 'threshold' level) with the severity of the health effect dependent on the level of the dose. *Paragraph A.47 (c)*

**Detriment:** principally means a health detriment, but may also include other detriments, for example, a detriment associated with blight, *Paragraph C.8(j)*.

**Ecological system effect:** significant harm of a type listed in box 2 of Table A of Chapter A.

**Enforcing authority:** defined in section 78A(9) as:

- (a) in relation to a special site, the Environment Agency;
- (b) in relation to contaminated land other than a special site, the local authority in whose area the land is situated.

**Escaped Substances:** an exclusion test for Class A persons set out in Part 5 of Chapter D. *Paragraphs D.65 to D.67*

**Excluded Activities:** an exclusion test for Class A persons set out in Part 5 of Chapter D. *Paragraphs D.47 to D.50*

**Exclusion:** any determination by the enforcing authority under section 78F(6) (that is, that a person is to be treated as not being an appropriate person). *Paragraph D.5(d)*

**Favourable conservation status:** defined in Article 1 of Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora.

**Hardship:** a factor underlying any cost recovery decision made by an enforcing authority under section 78P(2). See paragraphs 10.8 to 10.10 of Annex 2 for a discussion of the interpretation of this term.

**Harm:** defined in section 78A(4) as:

"harm to the health of living organisms or other interference with the ecological systems of which they form part and, in the case of man, includes harm to his property."

OR with respect to radioactive contamination defined in section 78A(4)(as modified) as:

"lasting exposure to any person being resulting from the after effects of a radiological emergency, past practice or past work activity."

**Health detriment:** defined in the Schedule to the Radioactive Contaminated Land (Modification of Enactments) (England) Regulations 2006 as:

"an estimate of the risk in reduction in length and quality of life occurring in a population following exposure to ionising radiations. This includes loss arising from somatic effects, cancers and severe genetic disorder".

**Human health effect:** significant harm of a type listed in box 1 of Table A of Chapter A.

**Industrial, trade or business premises:** defined in section 78M(6), for the purpose of determining the penalty for failure to comply with a remediation notice, as:

"premises used for any industrial, trade or business purposes or premises not so used on which matter is burnt in connection with any industrial, trade or business process, and premises are used for industrial purposes where they are used for the purposes of any treatment or process as well as where they are used for the purpose of manufacturing."

**Inspection using statutory powers of entry:** any detailed inspection of land carried out through use of powers of entry given to an enforcing authority by section 108 of the Environment Act 1995. *Paragraph B.21*

**Intervention:** is a type of remedial action and is defined in the Schedule to the Radioactive Contaminated Land (Modification of Enactments) (England) Regulations 2006 as:

"a human activity that prevents or decreases the exposure of individuals to radiation from sources which are not part of a practice or which are out of control, by acting on sources, transmission pathways and individuals themselves."

**Introduction of Pathways or Receptors:** an exclusion test for Class A persons set out in Part 5 of Chapter D. *Paragraphs D.68 to D.72*

**Intrusive investigation:** an investigation of land (for example by exploratory excavations) which involves actions going beyond simple visual inspection of the land, limited sampling or assessment of documentary information. *Paragraph B.20(c)*

**Justification:** a radiological protection principal. In the specific case of an intervention, justification means ensuring that the reduction in detriment due to radiation is sufficient to justify any adverse effects and costs including social costs, of the intervention. *Paragraph C.8(h)*.

**Liability group:** the persons who are appropriate persons with respect to a particular significant pollutant linkage. *Paragraph D.5(c)*

**Local authority:** defined in section 78A(9) as meaning any unitary authority, district council, the Common Council of the City of London, the Sub-Treasurer of the Inner Temple and the Under-Treasurer of the Middle Temple.

**Monitoring action:** a remediation action falling within the definition in section 78A(7)(c), that is "making of subsequent inspections from time to time for the purpose of keeping under review the condition of the land or waters." *Paragraph C.8(g)*

**Optimisation:** a radiological protection principal which ensures that the form, scale and duration of the intervention maximises the benefit of reduction in health detriment less the detriment associated with the intervention. *Paragraph C.8(i)*.

**Orphan linkage:** a significant pollutant linkage for which no appropriate person can be found, or where those who would otherwise be liable are exempted by one of the relevant statutory provisions. *Paragraphs D.12, D.14 and D.17*

**Owner:** defined in section 78A(9) as:

"a person (other than a mortgagee not in possession) who, whether in his own right or a trustee for any other, is entitled to receive the rack rent of the land, or where the land is not let at a rack rent, would be so entitled of if it were so let."

**Part 2A:** Part 2A of the Environmental Protection Act 1990.

**Pathway:** one or more routes or means by, or through, which a receptor:

(a) is being exposed to, or affected by, a contaminant, or

(b) could be so exposed or affected. *Paragraph A.14*

**Payments Made for Remediation:** an exclusion test for Class A persons set out in Part 5 of Chapter D. *Paragraphs D.51 to D.56*

**Persons acting in a relevant capacity:** defined in section 78X(4), for the purposes of limiting personal liability, as any of the following:

- "(a) a person acting as an insolvency practitioner, within the meaning of section 388 of the Insolvency Act 1986 (including that section as it applies in relation to an insolvent partnership by virtue of any order made under section 421 of that Act;
- "(b) the official receiver acting in a capacity in which he would be regarded as acting as an insolvency practitioner within the meaning of section 388 of the Insolvency Act 1986 if subsection (5) of that section were disregarded.
- "(c) the official receiver acting as a receiver or manager;
- "(d) a person acting as a special manager under section 177 or 370 of the Insolvency Act 1986;...
- "(f) a person acting as a receiver or receiver or manager under or by virtue of any enactment, or by virtue of his appointment as such by an order of a court or by any other instrument."

**Pollutant:** a contaminant which forms part of a pollutant linkage. *Paragraph A.17*

**Pollutant linkage:** the relationship between a contaminant, a pathway and a receptor. *Paragraph A.17*

**Pollution of controlled waters:** defined in section 78A(9) as:

"the entry into controlled waters of any poisonous, noxious or polluting matter or any solid waste matter."

**Possibility of Harm:** relates to radioactive contamination only and is a measure of the probability, or frequency, of the occurrence of circumstances, which would lead to lasting exposure being caused. *Paragraph A.44.*

**Possibility of significant harm:** a measure of the probability, or frequency, of the occurrence of circumstances, which would lead to significant harm being caused. *Paragraph A.27*

**Practice:** is defined in the Schedule to the Radioactive Contaminated Land (Modification of Enactments) (England) Regulations 2006 as:

"a human activity that can increase the exposure of individuals to radiation from an artificial source, or from a natural radiation source where natural radionuclides are processed for their radioactive, fissile or fertile properties, except in the case of an emergency exposure."

**Radioactive Contaminated Land (Enabling Powers) (England) Regulations 2005:** Regulations (S.I. 2005/3467) made under Part 2A and describes in Annex 5.

**Radioactive Contaminated Land (Modification of Enactments) (England) Regulations 2006:** Regulations (S.I. 2006/1379) made under Part 2A and described in Annex 5.

**Reasonable grounds:** relates to radioactive contamination only and sets out the grounds required by a local authority before it can inspect land for the purpose of identifying whether it is contaminated land and whether it should be designated a special site. Grounds are: (Paragraphs B.17A and B17B):

- (a) a former historical land use, past practice, past work activity or radiological emergency, capable of causing lasting exposure giving rise to the radiation doses of the magnitudes stated;

or

- (b) levels of contamination present on the land arising from a past work practice, past work activity or radiological emergency, capable of causing lasting exposure giving rise to the radiation doses of the magnitudes stated.

**Receptor:** either:

- (a) a living organism, a group of living organisms, an ecological system or a piece of property which:
  - (i) is in a category listed in Table A in Chapter A as a type of receptor, and
  - (ii) is being, or could be, harmed, by a contaminant; or
- (b) controlled waters which are being, or could be, polluted by a contaminant. *Paragraph A.13*

or

- (c) a person subjected to lasting exposure resulting from the after-effects of a radiological emergency, past practice or past work activity *Paragraph A. 13.*

**Register:** the public register maintained by the enforcing authority under section 78R of particulars relating to contaminated land.

**Related companies:** are those which are, or were at the "relevant date", members of a group of companies consisting of a "holding company" and its "subsidiaries". The "relevant date" is that on which the enforcing authority first served on anyone a notice under section 78B(3) identifying the land as contaminated land, and the terms "holding company" and "subsidiaries" have the same meaning as in section 736 of the Companies Act 1985. *Paragraph D.46*

**Relevant information:** information relating to the assessment of whether there is a significant possibility of significant harm being caused, which is:

- (a) scientifically-based;
- (b) authoritative;
- (c) relevant to the assessment of risks arising from the presence of contaminants in soil; and
- (d) appropriate to the determination of whether any land is contaminated land for the purposes of Part 2A, in that the use of the information is consistent with providing a level of protection of risk in line with the qualitative criteria set out in Tables A and B of Chapter A. *Paragraph A.31 and A. 47.*

**Relevant Information:** (relating to reasonable grounds) information that is appropriate and authoritative. *Paragraph B.17B.*

**Relevant land or waters:** the contaminated land in question, any controlled waters affected by that land and any land adjoining or adjacent to the contaminated land on which remediation might be required as a consequence of the contaminated land being such land. *Paragraph C.8(d)*

**Remedial treatment action:** a remediation action falling within the definition in section 78A (7)(b), that is the doing of any works, the carrying out of any operations or the taking of any steps in relation to any such land or waters for the purpose:

- (a) of preventing or minimising, or remedying or mitigating the effects of any significant harm, or any pollution of controlled waters, by reason of which the contaminated land is such land, or
- (b) of restoring the land or waters to their former state. *Paragraph C.8(f)*

**Remediation:** defined in section 78A(7) as

- "(a) the doing of anything for the purpose of assessing the condition of -
  - "(i) the contaminated land in question;
  - "(ii) any controlled waters affected by that land; or
  - "(iii) any land adjoining or adjacent to that land;
- "(b) the doing of any works, the carrying out of any operations or the taking of any steps in relation to any such land or waters for the purpose –
  - "(i) of preventing or minimising, or remedying or mitigating the effects of any significant harm, or any pollution of controlled waters, by reason of which the contaminated land is such land; or
  - "(ii) of restoring the land or waters to their former state; or
- "(c) the making of subsequent inspections from time to time for the purpose of keeping under review the condition of the land or waters."

OR with respect to radioactive contamination defined in section 78A(7)(as modified) as:

- "(a) the doing of anything for the purpose of assessing the condition of –
  - "(i) the contaminated land in question; or
  - "(ii) any land adjoining or adjacent to that land;
- "(b) the doing of any works, the carrying out of any operations or the taking of any steps in relation to any such land for the purpose-
  - "(i) of preventing or minimising , or remedying or mitigating the effects of any harm by reason of which the contaminated land is such land; or
  - "(ii) of restoring the land to its former state; or
- "(c) the making of subsequent inspections from time to time for the purpose of keeping under review the condition of the land."

**Remediation action:** any individual thing which is being, or is to be, done by way of remediation.  
*Paragraph C.8(a)*

**Remediation declaration:** defined in section 78H(6). It is a document prepared and published by the enforcing authority recording remediation actions which it would have specified in a remediation notice, but which it is precluded from specifying by virtue of sections 78E(4) or (5), the reasons why it would have specified those actions and the grounds on which it is satisfied that it is precluded from specifying them in a notice.

**Remediation notice:** defined in section 78E(1) as a notice specifying what an appropriate person is to do by way of remediation and the periods within which he is required to do each of the things so specified.

**Remediation package:** the full set or sequence of remediation actions, within a remediation scheme, which are referable to a particular significant pollutant linkage. *Paragraph C.8(b)*

**Remediation scheme:** the complete set or sequence of remediation actions (referable to one or more significant pollutant linkages) to be carried out with respect to the relevant land or waters.  
*Paragraph C.8(c)*

**Remediation statement:** defined in section 78H(7). It is a statement prepared and published by the responsible person detailing the remediation actions which are being, have been, or are expected to be, done as well as the periods within which these things are being done.

**Risk:** the combination of:

- (a) the probability, or frequency, of occurrence of a defined hazard (for example, exposure to a property of a substance with the potential to cause harm); and
- (b) the magnitude (including the seriousness) of the consequences. *Paragraph A.9*

**Shared action:** a remediation action which is referable to the significant pollutant in more than one significant pollutant linkage. *Paragraph D.21(b)*

**Single-linkage action:** a remediation action which is referable solely to the significant pollutant in a single significant pollutant linkage. *Paragraph D.21(a)*

**Significant harm:** defined in section 78A(5). It means any harm which is determined to be significant in accordance with the statutory guidance in Chapter A (that is, it meets one of the descriptions of types of harm in the second column of Table A of that Chapter).

**Significant pollutant:** a pollutant which forms part of a significant pollutant linkage. *Paragraph A.20*

**Significant pollutant linkage:** a pollutant linkage which forms the basis for a determination that a piece of land is contaminated land. *Paragraph A.20*

**Significant possibility of significant harm:** a possibility of significant harm being caused which, by virtue of section 78A(5), is determined to be significant in accordance with the statutory guidance in Chapter A.

**Sold with Information:** an exclusion test for Class A persons set out in Part 5 of Chapter D. *Paragraph D.57 to D.61*

**Special site:** defined by section 78A(3) as:

"any contaminated land –

"(a) which has been designated as such a site by virtue of section 78C(7) or 78D(6)...; and

"(b) whose designation as such has not been terminated by the appropriate Agency under section 78Q(4)..."

The effect of the designation of any contaminated land as a special site is that the Environment Agency, rather than the local authority, becomes the enforcing authority for the land.

**Stochastic effect:** the likelihood of a radiation-induced health effect which may be assumed to be linearly proportional to the radiation dose over a wide range of doses and where the severity of the health effect is not dependent on the level of the dose. *Paragraph A.47.*

**Substance:** defined in section 78A(9) as:

"any natural or artificial substance, whether in solid or liquid form or in the form of a gas or vapour."

OR with respect to radioactive contamination defined in section 78A(9)(as modified) as:

"whether in solid or liquid form or in the form of a gas or vapour, any substance which contains radionuclides which have resulted from the after-effects of a radiological emergency or which are or have been processed as part of a past practice or past work activity, but shall not include radon gas or the following radionuclides: Po-218, Pb-214, At-218, Bi-214, Rn-218; Po-214 and Tl-210."