

# The Royal Borough of Kensington and Chelsea



**Contaminated Land  
Inspection Strategy  
2002**



## PREFACE

The Contaminated Land Inspection Strategy has been drafted by the Council's Contaminated Land Working Group, consisting of officers drawn from Planning Services, Building Control, Economic Development, Legal Services, and Environmental Health.

This final version has not changed significantly from the *provisional* version published in June 2001. The only changes made in the strategy are minor alterations acknowledging developments since the publication of the *provisional* strategy and where text has been added to reflect suggestions made by consultees. The table of tasks and timescales has also been amended to bring it into line with the year of publication of this document.

The Environmental Health Directorate currently chairs the Working Group, which will continue to develop the Council's Contaminated Land Strategy, and the officers responsible can be contacted by referring to the contact details given at the end of the document.

**July 2002**

The pictures on the front cover show:

**Top left** – the installation of a monitoring borehole at depth on land which is contaminated.

**Middle** – a historic map of previous land use at Council Offices in Pembroke Road.

*(This potential source of contamination was identified by the Landmark Information group. Crown Copyright and Landmark Information Group Ltd. This map must not be reproduced in any way.)*

**Bottom right** – taking a sample of soil from a window sampler for laboratory analysis.

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## Chapter 1 INTRODUCTION

- 1.0 This document sets out the Royal Borough's Contaminated Land Inspection Strategy which is the first part of a two part overall Contaminated Land Strategy. The second part, the Contaminated Land Remediation Strategy will be produced as a draft document in December 2002, for adoption at the end of 2003.
- 1.1 The Inspection Strategy is intended to give the Council a systematic plan for discovering contaminated sites in the Borough, carrying out an initial risk assessment and prioritising them, so that the highest priority sites can be properly investigated. As is concluded in chapter three (paragraph 3.25) in the main, the Borough neither has extensive tracts of derelict land, nor is it likely that the inspection programme will reveal a serious amount of contamination that is not already known about, or suspected. Indeed the majority of known large sites with some contamination, have either been redeveloped recently, or are currently undergoing redevelopment. Nevertheless the Government's statutory contaminated land regime requires all local authorities to publish an Inspection Strategy and it has (in statutory guidance<sup>1</sup>) prescribed the matters that must be covered in each strategy.
- 1.2 From a national perspective the United Kingdom has a legacy of land contamination caused by past industrial activity. Much of this contamination has been present for long periods of time, in some cases since the eighteenth century, or even before. However, not all of it poses immediate problems, and some may only be of concern if the land is used for a particular purpose. In the past there was very little control or legislation, which governed issues surrounding contaminated land. But in 2000, the UK government put into place policies and legislation, both to prevent future contamination from occurring, and to ensure that appropriate action is taken to deal with existing contamination, where it poses unacceptable risks to human health, or to the environment.
- 1.3 The new regulations for dealing with contaminated land came into force in April 2000, bringing into operation the provisions of Part IIA of the Environmental Protection Act 1990. These regulations were accompanied by statutory guidance including advice on the definition, identification, and remediation of contaminated land, and the question of liabilities and recovery of costs. Collectively, the new measures are known as the Contaminated Land Regime.
- 1.4 The Government is intent on not causing unnecessary blight, and so the Regime emphasises achieving remediation through consultation and agreement. Designation of areas of contaminated land, when it becomes the only appropriate course of action, occurs at a later stage in the process, and is then followed by consultation and negotiation to try to achieve a voluntary agreement on remediation. However, whether remediation is enforced or

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<sup>1</sup> DETR Circular 02/200 Environmental Protection Act 1990: Part IIA Contaminated Land.

voluntary this would not preclude the Council from determining a site as contaminated land.<sup>ψ</sup>

- 1.5 The new statutory framework (or Regime) for contaminated land is intended to provide an improved system for the identification and remediation of land, **where contamination is causing unacceptable risks to human health or the wider environment.** It is hoped that the legislation will prevent the creation of new contamination, and will facilitate the redevelopment of previously contaminated land. The Government has set a national target for 60% of new homes to be built on previously developed land (and otherwise through the conversion of existing buildings) by 2008.<sup>2</sup> These are known as ‘brownfield sites’.
- 1.6 The thrust of the Regime follows two statutory routes. The first is through planning legislation and covers redevelopment of contaminated sites giving rise to different exposure risks, and the second is through environmental legislation, where sites in their current state represent a proven risk. The new enforcement system has parallels with the statutory nuisance provisions, but there are a number of ‘preliminaries’, or obligations to satisfy, before enforcement can be implemented. The Government’s overall objectives for introducing the new regulations 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.*
- 1.7 Fortunately, the Royal Borough has inherited comparatively few areas of contaminated land. However it is to be expected, that as well as the more obvious redundant ex-industrial sites, most of which have been, or are being redeveloped, there will be a number of situations where past contamination is being obscured by current uses, and also where certain types of current activity may themselves be causing contamination. The Council must ensure that new contamination is prevented, and this responsibility will be discharged through another Government regime: Integrated Pollution Prevention and Control (IPPC). But the main impact of the new contaminated land regime will be on land, which has been contaminated in the past. The Council will also have a duty to identify potentially contaminated land, for which it may have direct responsibilities by virtue of its current, or former ownership, or occupation.
- 1.8 The Council already has existing policies relating to land contamination in its fifth Environmental Policy Statement 2000-2003 and the Unitary Development Plan (UDP) adopted on the 25<sup>th</sup> May 2002. The Environmental Policy Statement 2000-2003 details the Council’s environmental priorities and shows how the environmental objectives will be turned into practical action.

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<sup>ψ</sup> This last sentence is a consultation alteration as suggested by the Environment Agency.

<sup>2</sup> . Paragraph 23, Planning Policy Guidance Note 3 Housing, March 2000.

One of the six high priority objectives adopted in the policy is to “*reduce air and noise pollution, and to encourage developers to make ‘brownfield’ land safe for new building.*” In order to achieve this objective, there is a specific action plan to “*build up a Borough-wide contaminated land database to assist officers with enquiries from developers, residents and professionals.*”

- 1.9 In addition, the UDP has two policies in relation to planning and contaminated land. The first is to ‘*require developers to submit information in association with development proposals on land that is, or might be, contaminated. This information must include a full assessment of the condition of the land and specify adequate measure to negate, or minimise, the effects of the contamination on the proposed development and adjacent land.*’ And the second is ‘*a requirement that developments of contaminated land include appropriate measures to protect future users, or occupiers of the land, the public, new structures and services, wildlife, vegetation, groundwater and surface water.*’
- 1.10 The Council’s management of contaminated land within the borough will inevitably be a continual process, as the risk status of particular sites change with new uses, and potential contamination becomes exposed on existing sites, and also in the light of increased understanding of the risks involved. However there will be two significant stages in developing a strategy. Stage one will be to identify the Borough’s contaminated land sites and decide the priority order in which they should be dealt with, and stage two will be to ensure that appropriate actions are taken to minimise the risks associated with those sites. Each stage will have its own strategy, the first of which (the subject of this document) is the ‘Inspection Strategy’ and the second to be finalised next year will be the ‘Remediation Strategy’. Together they will constitute the Council’s Contaminated Land Strategy, which will be periodically reviewed to update its policies.
- 1.11 This document (stage one), the ‘Contaminated Land Inspection Strategy’ sets out aims and objectives, and describes how the Council will identify contaminated land sites, paying due regard to the policies contained in the UDP and the Environmental Policy Statement. A *provisional* Inspection Strategy was published last year and functioned as a working document for a period of twelve months prior to publishing this final inspection strategy. By having a provisional document to work to, officers were able to identify any problems with the procedures in the inspection strategy, and clarify some of the uncertainty that surrounds the relationship between the Contaminated Land Regime and other relevant legislation e.g. the Human Rights Act.
- 1.12 During the twelve months that the document had provisional status, there was a focussed public consultation exercise concentrating on organisations with a practical interest in the application of the Inspection Strategy. Organisations consulted included the Environment Agency, the Health & Safety Executive, English Nature, English Heritage, and neighbouring local authorities. Large landowners and residents’ organisations were also contacted.

## CHAPTER 2 BACKGROUND

### 2.0 The National Framework

Under Part IIA of the Environment Protection Act 1990, the Royal Borough of Kensington and Chelsea is required to “*cause its areas to be inspected from time to time for the purpose of identifying contaminated land*”. To do this, the Council must produce a detailed methodology setting out how it intends to carry out the inspections. This is known as the ‘Inspection Strategy’. By “inspecting” the Council will be able to determine whether any land within its boundary falls under the statutory definition of ‘contaminated land’. By the time the Council is in a position to confirm its ‘contaminated land’ sites, it will be essential to have procedures in place, to deal with the contamination.

### 2.1 What is contaminated land?

Contaminated land is legally defined, under Part IIA of the Environmental Protection Act 1990, as:

*‘Land which appears to the local authority 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 significant possibility of such harm being caused; or*

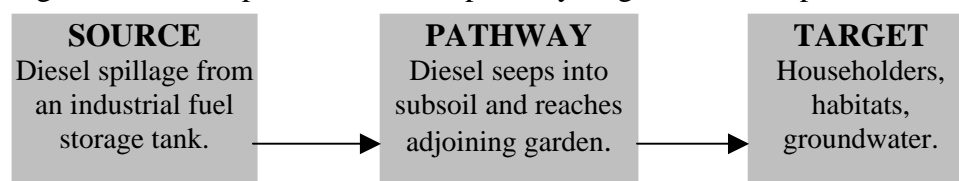
*b) pollution of controlled waters is being, or is likely to be caused.’*

2.2 Essentially, contaminated land is land that has become polluted as a result of a present or previous use, particularly industrial activity. To be considered a risk, there must be a source<sup>ψ</sup> of contamination, which must be affecting the underlying ground or watercourses and/or must be causing harm to people, building materials, watercourses or the natural environment.

### 2.3 Risk assessment

The contaminated land regime concentrates on current use (except in the case of a planning application) and contrary to previous assumptions, uses a risk-based approach, which involves looking at the relationship between the cause and the effect. The relationship between the cause and the effect is technically referred to as the ‘source-pathway-target’ relationship. For land to be officially deemed ‘contaminated land’, a linkage between the source, pathway and target has to exist. If any one of these is absent, the land cannot be legally classed as contaminated land. Unfortunately, the regime does not consider all possible future uses, and therefore is not entirely consistent with sustainability principles.

Figure.1 An example of the source-pathway-target relationship



<sup>ψ</sup> The word ‘source’ is a consultation alteration as suggested by the Environment Agency.



2.4 The advantages of using this risk-based approach are that it is a systematic and objective way of assessing actual risks rather than analysing theoretical problems. The approach involves the following:

- *Risk assessment* - whereby risks are identified, estimated and evaluated, through carrying out desk studies, site investigation and interpretation of data to reach decisions on any unacceptable risks.
- *Risk management* - which involves evaluating and selecting suitable remedial measures to reduce, or control, the risks identified as unacceptable, and then implementation on site of the selected remedial action.

#### 2.5 **Regulatory role of the Environment Agency**

Although the Council will be the primary regulator for contaminated land, the Environment Agency will have a key role to play by:

- acting as the enforcing authority for any land designated by the local authority as a Special site<sup>3</sup>;
- assisting council officers in identifying contaminated land, particularly in cases involving the pollution of controlled waters;
- providing site-specific advice to council officers on contaminated land;
- publishing periodic reports on contaminated land at a national level.

## **Chapter 3 CHARACTERISTICS OF THE ROYAL BOROUGH OF KENSINGTON AND CHELSEA**

3.0 As part of the process of identifying contaminated land sites within the Borough, it is important to determine what historical land uses could have caused land contamination. This chapter describes the land use history of the Borough, together with other important inter-related factors, which will need to be taken into consideration during the inspection programme.

### 3.1 **Geographical location**

The Royal Borough of Kensington and Chelsea is one of the smallest London Boroughs in terms of area and population. The Borough covers an area of five square miles and extends from Chelsea Embankment on the Thames in the south, through Kensington, Notting Hill and Ladbroke Grove up to Kensal Green in the north. Its most easterly point is Chelsea Bridge over the Thames and to the west is bounded by the West London Railway Line.

### 3.2 **Population**

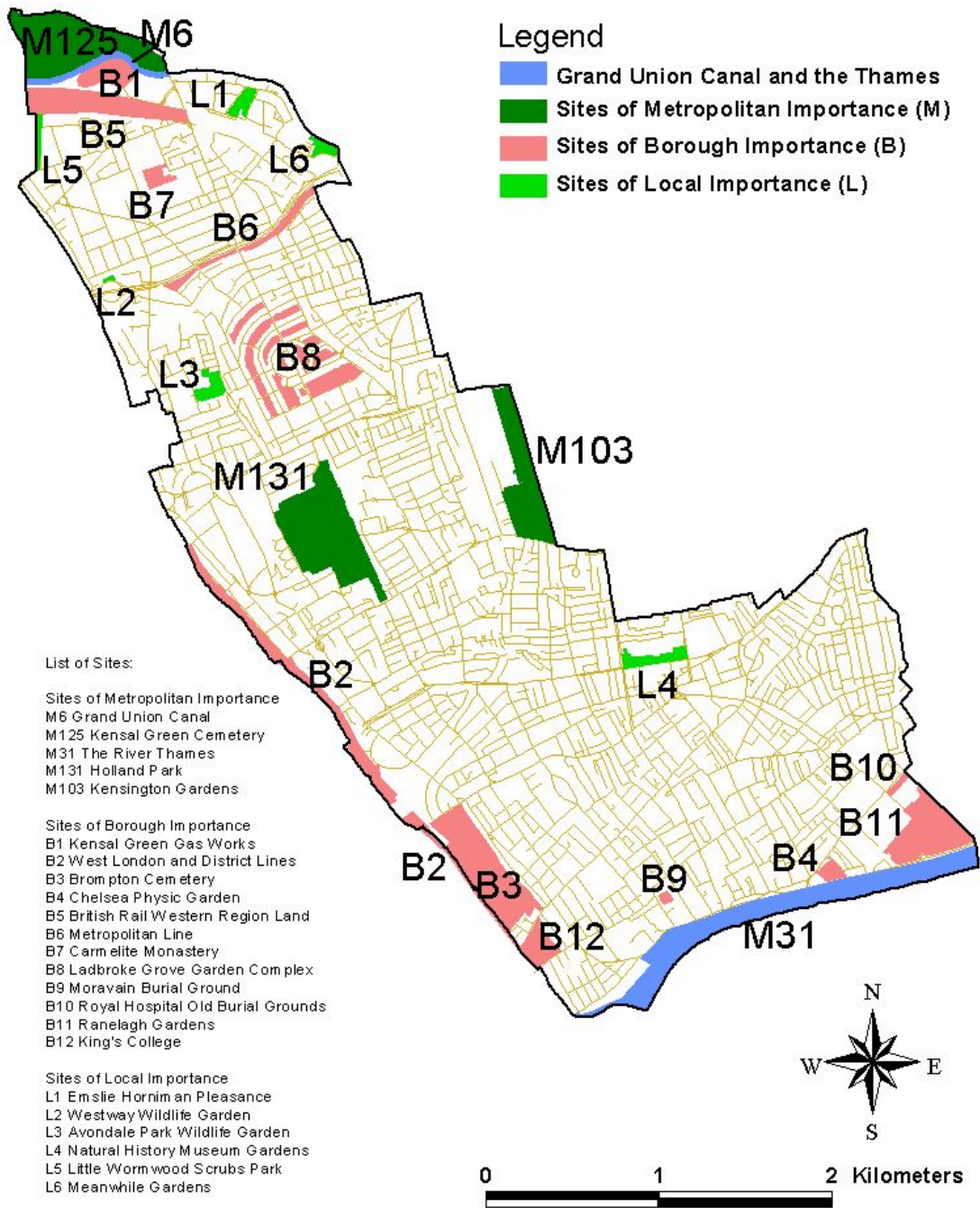
The Borough is primarily a densely developed residential area. It also has several nationally renowned commercial and retail centres. It is home to a resident community of some 180,000 people, but it also attracts more than

<sup>3</sup> A Special site is contaminated land that poses particular threat to the water environment (including major public water supplies, surface waters and aquifers); land used for specific purposes (e.g. acid waste tar lagoons, oil refining and explosives manufacture); and land owned by the Ministry of Defence.

120,000 thousand workers and visitors every day, and of those, 30,000 stay each night. This tightly packed population puts pressure on all land including marginal areas, formerly used for industrial purposes, and gives rise to some of the highest land values in the country.

- 3.3 **Details of land owned by the Royal Borough of Kensington and Chelsea**  
It will be important for the Council, as a significant landowner, to identify whether any of its own land is contaminated, so as to assess the extent of its own possible liabilities. The Council owns around 9,501 residential units (7,278 rented units and 2,223 long leasehold units). It also owns around 400 other properties – 120 of which are “operational” and used by the Council for the provision of services to the Borough. Included within the 120 operational properties are the Town Hall and other administrative offices, 18 schools, six libraries, six depots, two sports centres, two museums, two cemeteries and a theatre.
- 3.4 The Council also owns around 280 other “non-operational” properties, including shop premises, artists’ studios, doctors’ and dentists’ surgeries and premises occupied by voluntary organisations. A small number of the operational properties owned by the Council are located outside the Borough, including the cemeteries.
- 3.5 **Sites of Nature Conservation Importance**  
As natural habitats are sensitive to land contamination and plant growth can be affected, sites of nature conservation importance need to be mapped. The Borough has a number of sites of Nature Conservation Importance, which have been identified by a field survey undertaken by the London Ecology Unit. Even though these sites are small in area they play an important role in preserving existing species and are, in many cases, a resource for leisure and education.
- 3.6 Sites of Nature Conservation Importance are shown in Figure 2, ranging from designated ‘metropolitan sites’ (marked ‘M’) containing the best examples of London’s habitats and are of the highest priority for protection against loss and damage, to sites of ‘local importance’ (marked ‘L’).
- 3.7 **Conservation Areas and Listed Buildings**  
There are currently 35 conservation areas in the Borough, covering about 70% of its area. There are also over 3,700 buildings, widely dispersed within the Royal Borough, which are included in the Statutory List of Buildings of Special Architectural, or Historic Interest. The Council considers that their preservation and protection are of great importance.
- 3.8 **Archaeology and ancient monuments**  
The Borough has four sites of Archaeological Importance and these are identified in the Council Unitary Development Plan.
- 3.9 The Borough also contains two Scheduled Ancient Monuments: the Brick Kiln in Walmer Road and Kensington Palace.

**Figure 2 Sites of Nature Conservation Importance within the Royal Borough of Kensington and Chelsea**



**3.10 Land use history**

Until the end of the 18<sup>th</sup> century, the area now covered by Kensington and Chelsea was primarily a rural location. Meadows and pastures were located in the north, and market gardening and orchards were found in the south. The river Thames was used as a means of transporting the perishable foods, grown in the Borough, to the City of London.

- 3.11 As London dramatically expanded and industrialised during the 19<sup>th</sup> century, the demand for residential property increased. In turn this resulted in the creation of sand and gravel extraction, and brick making activities in the Borough. At the same time rapid conveyance available on the spreading railway network, reduced the need to grow produce locally in Kensington and Chelsea and the open fields became more valuable as residential development land.
- 3.12 Railway development also spread through the growing metropolis to serve the demands of the increasing population. The West London Railway built a line along the Borough's western boundaries and the Great Western Railway developed suburban services based on the mainline across the north of the Borough into Paddington. The District and Metropolitan lines were built between the 1860s and 1880s. The railways provided industrial opportunities, and as early as 1845, a gasworks was established beside the Great Western Railway. Large quantities of coal for domestic heating began to be imported and stockpiled in yards adjacent to stations.
- 3.13 The twentieth century saw a continuation of building, through infill and redevelopment. This resulted in Kensington Gardens, and Holland Park being the only substantial open spaces left in the Borough, with private garden squares for groups of individual properties.
- 3.14 A more detailed account of the land use history in the Borough can be found in Annex 2. Sources of local history that refer to local manufacturing and other industry have so far proved difficult to trace, and so research is continuing on this subject.
- 3.15 **Catchment drainage**  
The entire Borough is within the catchment of the Thames. Historically the river used to be shallower and wider than today, with two tributaries flowing south through the Borough. The present width dates from the construction of embankments at the end of the nineteenth century. The two tributaries are the "lost rivers" of Counters Creek and the Westbourne.
- 3.16 Counter's Creek rose to the north of Kensal Green Cemetery and loosely followed the boundary with Hammersmith and Fulham, with tributaries rising in North Kensington. The southern length of the Creek was canalised in the 1840's with a basin to the north of Pembroke Road, but was soon replaced by the construction of the West London railway line and was carried underground, surfacing briefly at Chelsea creek.
- 3.17 The Westbourne is a longer river, which flowed through Hyde Park and entered the Borough as a floodplain marsh across what is now Ranelagh Gardens. The marsh was lost when Ranelagh Gardens were landscaped later that century. The Westbourne is now called Ranelagh Sewer and is carried underground to empty into the Thames below the Royal Hospital Grounds.

**3.18 Geological characteristics**

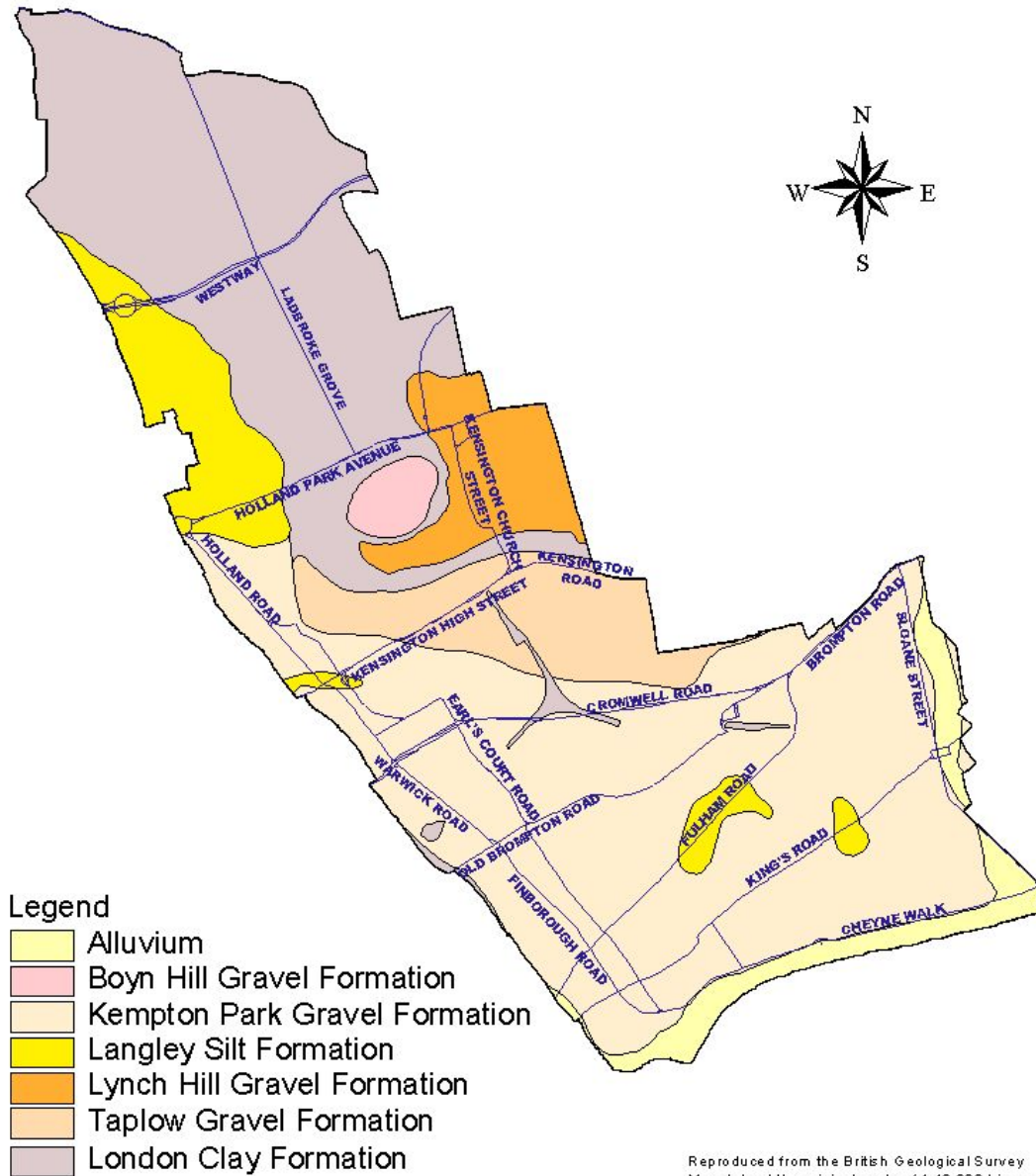
It is important to understand the surface geology within London to predict how land contamination could migrate, given the right ground water and soil conditions. Figure 3 shows the digital map of the geological conditions within the Borough, reproduced by the British Geological Survey at the original scale of 1:10,000. The Borough exhibits a mixture of less permeable clays, and more permeable grits and gravels.

3.19 The Borough's geology and topography can be broadly divided between the low-lying areas to the south, which were submerged by the shifting course of the Thames during the Quaternary era, and the higher ground to the north, which is less influenced by the river. To the south of Cromwell Road the land is less than ten metres above sea level and the underlying geology is Kempton Park Gravel. Lower land also extends up the western boundary into North Kensington, where it is covered by fine Brickearth, which also occurs in small pockets over South Kensington.

3.20 The land gradually rises to the north, with a ridge running from Holland Park through Campden Hill to Kensington Place, and then undulates gently, with two troughs separated by a lower peak at Lansdowne Crescent and a final rise to the Borough's highest point of 42 metres at Kensal Green Cemetery.

3.21 Between Cromwell Road and the south of Holland Park and extending into Kensington Gardens further gravel deposits (Taplow, Lynch Hill and Boyn Hill Gravels) underlie the soil. However most of Holland Park lies on London Clay, which surfaces here and underlies the Borough to the north. Recent deposits of alluvium occur to the South of Cheyne Walk, up Chelsea Creek and under Ranelagh Gardens.

Figure 3 The geological conditions within the Royal Borough of Kensington and Chelsea



### 3.22 **Hydrogeological characteristics**

Hydrology must also be considered when investigating land contamination. A source of pollution can travel through the soil to the underlying groundwater, or can be washed into surface rivers or canals from rainfall. Figure 4 illustrates the digital map of the hydrogeological features within the Borough, reproduced from the Environment Agency's Groundwater Vulnerability CD 1:100,000 map series.

3.23 The Borough has a minor aquifer that covers over 90% of the southern part of the Borough, from Kensington High Street to the Thames, and an area around Kensington Gardens and Kensington Church Street. There is a small exception to this: an area around the Brompton Hospital, Fulham Road, and the King's Road (between Radnor Walk and Smith Street) that overlies a non-aquifer. The north of the Borough from Notting Hill Gate is overlain by London Clay and is defined as a non-aquifer. A non-aquifer contains insignificant quantities of groundwater, although it may allow some slight flow, and if it is breached then quantities of groundwater may travel through it to an aquifer.

3.24 A minor aquifer is variably permeable and seldom produces large quantities of water, however, it may be an important local water source. Groundwater is abstracted at Harrods, Knightsbridge and the water quality is safeguarded by a 'Source Protection Zone' drawn around the abstraction point. More information regarding source protection zones and groundwater can be found at the Environment Agency's website: [www.environment-agency.gov.uk](http://www.environment-agency.gov.uk)

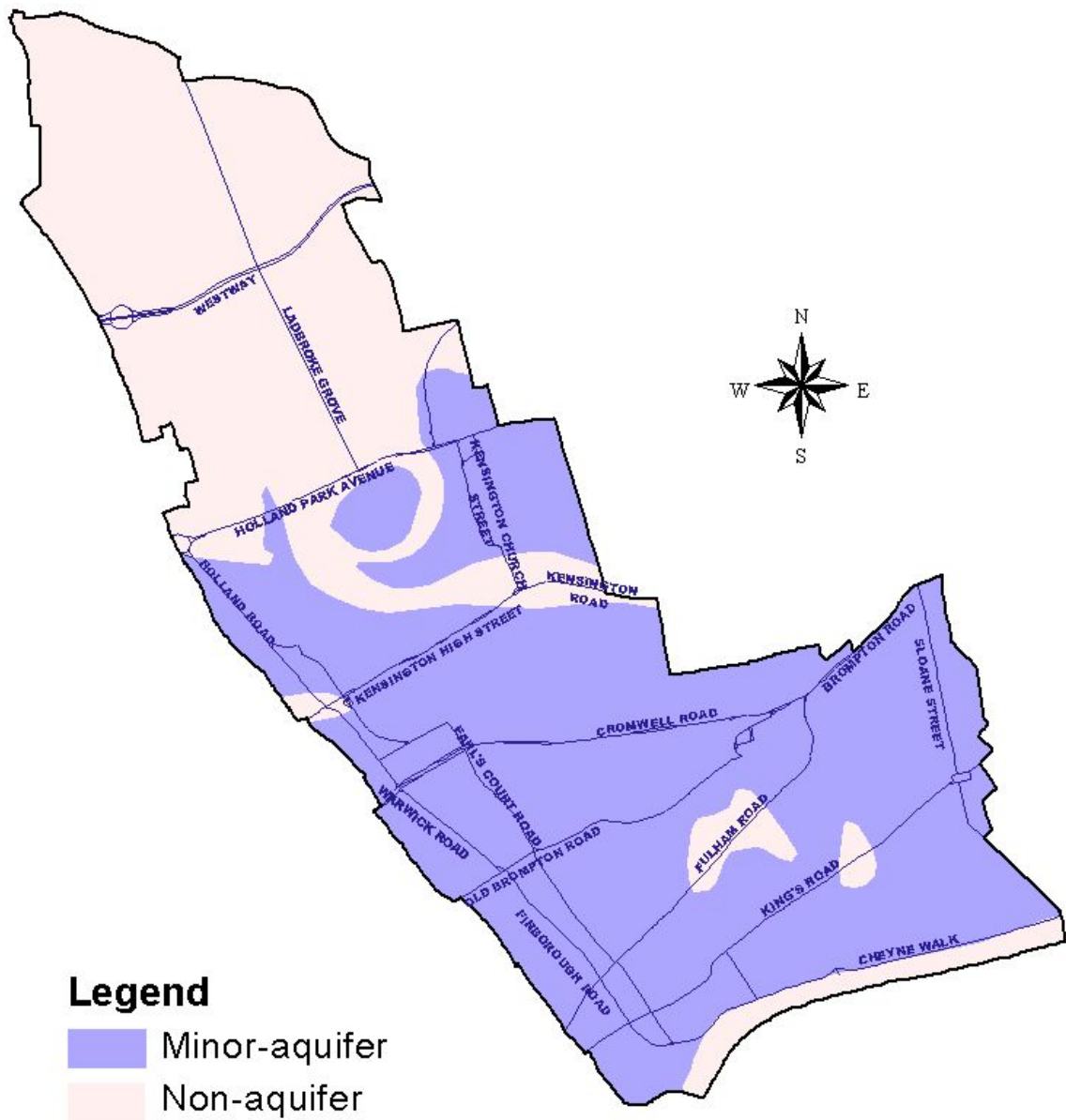
### 3.25 **Known information on contamination in the Borough**

Unlike other parts of London, the Royal Borough does not have extensive areas of heavily polluted ex-industrial land, although there are significant areas on the northern, western and south-western margins associated with the production of gas, the railways and river wharfage, which have supported past industrial activity. There is also a scattering of smaller sites for example old breaker's yards, timber preservation works, former petrol filling stations and laboratories, where it is reasonable to assume that limited contamination has occurred.

3.26 Officers have previously sought to advise developers on their risk assessments for dealing with contamination, on various small sites within the Borough, and have been closely involved in remediation plans for several larger sites, such as the former Rootes factory site. A major programme of decontamination works (controlled through the planning process) is currently being undertaken for the Kensal Green Gas Works site in the north of the Borough, in preparation for its redevelopment. London Underground Limited has a power station on a riverside site on Lots Road and ongoing discussions have been held on the issues to be included in the Environment Statement, which accompanied the planning application for the redevelopment of the site.



# Figure 4 Hydrogeology map for the Royal Borough of Kensington and Chelsea



Source: Environment Agency, Groundwater Vulnerability Map (1:100,000), West London.



## **Chapter 4 THE OVERALL AIM OF THE BOROUGH'S CONTAMINATED LAND STRATEGY**

### **4.0 The overall aim**

The overall aim of the Royal Borough's Contaminated Land Strategy (incorporating the inspection and remediation strategies) will be:

- **To establish, refine and administer a procedure within the Council, which identifies and deals with contaminated land in order to eliminate, or substantially reduce, any risks to residents, or to others, who work in, or visit the Royal Borough. The responsibility to seek to control risk also extends to controlled waters, and the natural and built environment.**

### **4.1 The objectives of the strategy**

The objectives of the strategy, in order to achieve the overall aim, will be:

- **to identify potentially contaminated land sites;**
- **to prioritise those potential sites identified;**
- **to inform the Environment Agency about any 'special sites';**
- **to establish and implement an inspection programme;**
- **to confirm the Council's 'contaminated land' sites;**
- **to produce a remediation strategy, confirming the actions to be taken by the Council to minimise the risks associated with the contaminated land sites.**
- **to provide information for the benefit of any public enquiries about potentially contaminated sites and to respond to complaints;**
- **and to establish and maintain a database to manage information obtained and held in the course of carrying out our inspection duties.**

### **4.2 Priorities**

The Council will identify the land, which merits detailed individual inspection, selecting the potentially most pressing and serious problems first (for example, public exposure to asbestos) and concentrating resources on the areas where contaminated land is most likely to be found. Top priority will be given to sites where human health, or controlled waters, could be affected by contamination. Impacts on habitats, buildings and other property will be dealt with as the next order of priority.

### **4.3 The order of priority will be as follows, with number one being the highest.**

- 1 - Risk to human safety or health, including risks from rising gas.
- 2 - Risk to groundwater.
- 3 - Risk to surface water.
- 4 - Risk to natural habitats.
- 5 - Risk of degradation of building fabric, or other forms of property damage.

4.4 Potentially contaminated land owned by the Council will be treated to the same order of priority, and included in the work programme (Annex 3 refers).

#### 4.5 **Timescales**

The following tasks will be undertaken by the completion date specified, in order that officers of the Council may identify contaminated land sites in the borough.

<b>Tasks</b>	<b>Start and completion date</b>
Obtain data internal and external to the Council to identify potential contaminated land sites, which require further investigation. (Stage One)	June 2001 – Dec. 2002
Undertake ‘site walkover investigations’ on those areas highlighted in stage one and identify sites requiring more detailed intrusive site investigation. (Stage Two)	Dec 2002 – Dec 2003
Link the contaminated land database to the Land and Property Gazetteer and the Environmental Health Information System to enable officers to carry out address based searches for planning applications, or land use enquiries from solicitors or residents. Officers will also enhance the capabilities of the database with more detailed data sets, for example trade directories.	April 2002 – March 2003
Produce, publish and adopt the Council’s contaminated land remediation strategy.	Dec 2002 – Dec 2003
Complete remaining intrusive site investigations. (Stage Three)	June 2003 – June 2004
Designate all remaining ‘contaminated land’ sites. (Stage Four)	June 2004 – June 2005
Reorganise and input further information already held on files within the Council (on contaminated land sites and the remediation carried out) onto the database. Officers will finally carry out an evaluation of the system against the original objectives and review in the light of future strategic demands.	April 2003 – June 2006

Tasks	Start and completion date
Review the contaminated land inspection strategy and incorporate it with the remediation strategy to create an overall Royal Borough Contaminated Land Strategy.	December 2004 – June 2005
Reorganise and input further information already held on files within the Council (on contaminated land sites and the remediation carried out) onto the database. Officers will finally carry out an evaluation of the system against the original objectives and review in the light of future strategic demands.	April 2003 – June 2006

## Chapter 5 THE PROCEDURES

- 5.0 There are various tasks officers will have to undertake, in order to identify contaminated land sites. These will include collecting information about potential sources, pathways and receptors. It will also involve collating and evaluating the information collected, and producing and implementing an inspection programme to confirm the presence, or absence, of land contamination. The programme of work effectively will constitute a screening process, which has been diagrammatically set out - see annex 3. This chapter describes the procedures to be used by officers in undertaking these tasks.
- 5.1 **Information collection**  
In order to identify potential contaminated land sites in the Borough, the contaminated land working group will carry out an internal audit of all information currently held within the Council. This will establish what information is held by departments that may assist in identifying potential sources of contamination. It will also indicate the pathways, by which the contamination can travel, and the potential receptors of that contamination.
- 5.2 Where the internal audit shows that the Council has insufficient information, external organisations will be contacted in order to obtain data. The list below is not exhaustive and other organisations may be contacted.

These organisations will include:

- English Nature;
- English Heritage;
- Department for Environment, Food and Rural Affairs (DEFRA);
- Environment Agency;
- British Geological Survey;
- Institute of Hydrology;
- Landmark Information Group Ltd.

- 5.3 When contact is made with an external organisation, an 'Area Contact' will be nominated, who will be the main channel of communication for the Royal Borough. The details of the 'Area Contacts' will be made widely available to the relevant departments within the Council
- 5.4 As the Borough has a fairly limited amount of contamination and is highly residential, the contaminated land working group has proposed that the risks to receptors should be considered at the time sources of potential contamination are found, rather than first carrying out a survey of potential receptors as suggested by the Government's guidance.
- 5.5 **Information evaluation**  
From the information collected, Council officers will carry out a 'desk based study' on sites where a source of land contamination has been identified. This will involve collating the information into the following categories:
- **the history of the site**, details of its owners, occupiers and uses;
  - **the processes used**, including their locations, raw materials, products, waste residues and methods of disposal;
  - **the current use of the site**; including any site layout
  - **information on geology and hydrology**, including the presence of groundwater and surface water.
- 5.6 If there is a reasonable possibility that a pollutant linkage exists from the information collated, then Council officers will visit the site, according to the priority criteria in paragraphs 4.2 and 4.3 above.
- 5.7 Written permission will be obtained from the land owner, or occupier, prior to entering the site. The site visit will allow officers to confirm the information previously obtained about the site. Any important differences between the present conditions and the information obtained from the site history, will be looked for and noted, for example, changes in the position of boundaries, buildings and roads. Particular attention will also be paid to any areas of discoloured soil, polluted water and blighted vegetation, or significant odours, and any structures above ground will be recorded.
- 5.8 A visual inspection of the site will allow officers to focus on the pollutant linkages that are most relevant. It will add to evidence about the pollutant linkages, and should enable officers to decide whether urgent action is necessary, for example if children have access to a disused site, where hazardous substances have been abandoned, or pose an immediate risk.
- 5.9 A report of the site visit, detailing findings and conclusions, will be produced and will be recorded on the contaminated land database.
- 5.10 **Inspection Programme**  
If after the visual inspection of the site, a 'pollutant linkage' is still thought to exist even if it poses no obvious risk, intrusive investigations will be carried out to confirm if the contaminant(s) suspected in the desk-based study, and possibly indicated by the field visit, are actually present. Intrusive

investigations will be carried out in accordance with ‘BS 10175: 2000 Investigation of potentially contaminated sites – Code of practice.’

- 5.11 A list of sites requiring ‘intrusive inspection’ will be produced by officers and will form the basis of the Borough’s inspection programme. This list will be structured with the highest priority first, in accordance with the criteria in paragraph 4.2 above. An intrusive investigation will also provide officers with information on pathways (e.g. permeable nature of the ground) and receptors (groundwater in contact with, or in close proximity to contaminant(s)).
- 5.12 If any of the sites on the inspection programme fall under the category of a ‘special site’, the Environment Agency will be notified in writing. The Environment Agency will be given a formal role in the inspection stage of any such land, and would be invited to carry out an inspection on behalf of the Borough. If the Environment Agency decides that the site does not warrant a site investigation, because it is thought not to be potentially ‘contaminated land’, the case will be re-evaluated by Council officers. The Environment Agency will have similar powers to refer to the Council, sites which it considers special sites. In exceptional circumstances, where there is no agreement as to whether a site is a ‘special site’, either the Council, or the Environment Agency, will refer the matter to the Secretary of State for a final determination.
- 5.13 Prior to the Council carrying out any intrusive investigations, the owner, or occupier, of the land will be contacted to determine if they hold records on the condition of the land. If not, the owner, or occupier, will be given the opportunity to provide such information to the Council within a reasonable and specific time. If, after such time no information is provided, then the Council will commission an environmental consultant to carry out the intrusive investigations under statutory powers of entry, in accordance with BS 10175: 2000 Investigation of potentially contaminated sites – Code of practice.
- 5.14 A report of the intrusive investigations detailing findings and conclusions will be produced. If on the basis of the information obtained from the intrusive investigation, there is no longer a possibility that a particular pollutant linkage exists on the land, the Council will not carry out any further intrusive investigations. All the information collected during the investigations will be recorded on the contaminated land database. This will provide a reference point in case circumstance change in the future, for example, if a planning application is received which is proposing to change the land use of the site.
- 5.15 If the intrusive investigation confirms to Council officers that a pollutant linkage does exist and that significant harm is being caused, or there is a significant possibility of such harm being caused<sup>ψ</sup> (in accordance with the definition of contaminated land in section 78A(2)) then the Council will designate the site ‘contaminated land’.

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<sup>ψ</sup> The second part of this sentence is a consultation alteration as suggested by the Environment Agency.

### 5.16 **Confirmation of ‘contaminated land’ sites**

Once the Council has designated land ‘contaminated land’, a written record will be prepared, documenting each stage of the decision making process.

The record will include:

- a description of the particular significant pollutant linkage, identifying all three components: source, pathway and receptor;
- a summary of the evidence upon which the determination was based;
- a summary of how the risk of significant harm was assessed; and
- a summary of how the end result of the assessment satisfies the definition of ‘contaminated land’.

5.17 This written record will be electronically stored on the corporate contaminated land database. If the designated site falls under the category of a ‘special site’ the site will also be entered onto the Council’s contaminated land register, as well as the Environment Agency’s database<sup>ψ</sup>. It is expected that the designation of a special site will be very rare, and therefore the number of entries on the register will be limited to a few instances where statutory action is taken. The only other records on the register will be noting statutory actions (to remediated sites) which are also likely to be few in number. This is because land owners in the borough have a powerful financial incentive to carry out remediation work voluntarily. The small number of sites with a ‘record’ will limit the potential for significant planning blight.

### 5.18 **The contaminated land register**

The contaminated land register (as distinct from the database) is a public register, which will act as a permanent record of all regulatory action taken by the Council with respect to the remediation of contaminated land. For example it will have entries on remediation notices, remediation schemes, and confirmation that action has been taken. Inevitably the information it contains will be much more limited than the contaminated land database. The register will be open for public inspection at both the Council offices in Pembroke Road and the Planning Information office in the Town Hall, Hornton Street. It will also include information about, special sites, appeals against a remediation notice, appeals against a charging notice and convictions. The register will be governed by certain restrictions on what information can be placed on the register, because of national security considerations and commercial confidentiality.

5.19 The Council will notify in writing the owner or occupier of a site, that their land has been designated contaminated land. The Council will also notify anyone it considers being the ‘appropriate person’ responsible for remediation of that land. The Environment Agency will be notified about the designation to allow them to decide whether it:

- considers that the land should be a Special Site or ;
- wishes to provide site-specific guidance to the Council or ;

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<sup>ψ</sup> The words ‘Environment Agency database’ have been added following consultation with the Environment Agency.

- requires further information about the land for its National Report.

## **Chapter 6 INFORMATION AND COMPLAINTS**

### **6.0 Enquiries, complaints and information**

All enquiries, complaints and information to the Council with regard to contaminated land will be referred to the Environmental Health department for the time being, because the appropriate resources are available, and the early version of the contaminated land database is located there.

- 6.1 When a complaint or information is received by the department, it will be logged on the computerised Environmental Health Information system (EHIS) and will be investigated. EHIS will be used to record all actions undertaken by officers during the process of the investigation, and the complaint will be recorded under a specific reference number, allowing other officers to look it up. It will also enable the Customer Services Unit, within Environmental Health, to inform residents about the steps taken to deal with their complaint.
- 6.2 Officers will initially investigate a complaint by reviewing the information currently held on the database about that site. If there is insufficient information to respond to the complaint, then a case file will be opened and officers will gather further evidence, by undertaking a desk-based study and/or a site visit. If the complaint results in the site being considered potentially contaminated then Council officers will follow the procedures outlined in chapter five in determining if the site should be designated 'contaminated land'.
- 6.3 Any requests to the Council for contaminated land information will also be logged on EHIS. The enquirer will be given the choice of either visiting the Council offices to view the public registers held within Environmental Health, or to have Council officers provide a written response. A written response direct from Environmental Health will largely consist of information found on the corporate historical ordnance survey maps, with advice that public registers can be viewed. The enquirer will be required to go through Land Charges if a written response is required from the public registers. The historical maps will show whether the site had a previous land use, which may have caused the land to be potentially contaminated. The enquirer will also be informed that additional information can be obtained from the Environment Agency. If the enquirer requests a written response from the Council, an appropriate administration fee will be charged and a response will be provided within 7 – 10 working days.

## **Chapter 7 MANAGING INFORMATION**

- 7.0 As a consequence of the Council carrying out its inspection duties under Part IIA of the Environmental Protection Act 1990, large volumes of information are likely to be collected. This information will need to be managed in order to provide a full and complete record of all action taken on a case-by-case basis. The Council proposes to do this by establishing a corporate contaminated land database.

### 7.1 **The contaminated land database**

The Council already has an early version of a contaminated land database within the Environmental Health department, which holds geographical information on the following:

- historical ordnance survey maps from 1843 – 1996;
- historical land uses identified from the OS maps which may have potentially contaminated the land;
- data supplied by the Environment Agency (EA);
- Part A processes within the Borough (larger processes, for example the power station) which come under central Government control - Environmental Protection Act 1990 (Section 2(4));
- Part B processes within the Borough (smaller processes, for example, a petrol filling station) designated for local control - Environmental Protection Act 1990 (Section 2(4));
- radioactive substances within the Borough authorised by the EA e.g. Brompton Hospital;
- locations where land contamination has been dealt with through the planning process.

### 7.2 **Enhancing the contaminated land database**

The Council is currently enhancing the contaminated land database over a three year period, which began in the summer of 2001. The development programme is as follows:

- 7.3 **Year one** to progress the database from the simple (Landmark) database currently operating within the Environmental Health department, to an interactive system, which will enable the Council to identify its contaminated land sites and prioritise them in accordance with risk. This will be the first step in meeting the Council's statutory duty for inspecting its area under the new contaminated land regime.
- 7.4 **Year two** will link the system to the Council's Corporate Land and Property Gazetteer, to enable officers to carry out address based searches for planning applications, or land use enquiries from solicitors, or residents. Officers will also enhance the capabilities of the database with more detailed data sets, for example trade directory information.
- 7.5 **Year three** will effectively centralise information already held on files within the Council, on contaminated land sites and the remediation carried out onto the database. Officers will finally carry out an evaluation of the systems performance (against the original objectives) and review it in the light of future demands.
- 7.6 In time the contaminated land database will accumulate a large amount of detail and will be more informative than the contaminated land register. However only officers within the Council have the authority to view the contaminated land database, for reasons of commercial confidentiality.
- 7.7 The Council will need to resolve this potential conflict, with regard to the



following legislation which has a bearing on what information the public are entitled to have access to:

- Environmental Information regulation 1992;
- The Data Protection Act 1998;
- The Human Rights Act 1998

This issue is being given further consideration.

## Chapter 8 MONITORING AND REVIEW

8.0 To ensure that the Council achieves the overall aim of the contaminated land inspection strategy, the contaminated land working group will monitor the progress of the objectives in the work programme.

8.1 The inspection strategy will be formally reviewed in June 2005, when the inspection programme will be complete and the remediation strategy will already have been operating for nearly two years.

8.2 In accordance with Best Value, the Council will continue to improve the information services relating to contaminated land to ensure they are efficient, helpful, and economic. These will be included in the Directorate of Environmental Health's Best Value review in 2003.

### 8.3 **Criteria for non-routine inspections**

There could be situations when inspections will be required to be undertaken outside the programmed framework of inspection. These non-routine inspections may be undertaken for the following reasons:

- **A pollution incident** - in the event of an accident when a new source of contamination is introduced and the source, pathway, target relationship needs to be newly assessed. Unless the incident is being dealt with under other legislation e.g. 1991 Water Resources Act.<sup>ψ</sup>
- **A change of land use** – when the receptor on a site is likely to change, due to a planning application and in the absence of a reliable site investigation (e.g. when information may be ambiguous).
- **Responding to information** – if reliable information is received about suspected contaminated land.

### 8.4 **Criteria for reviewing inspection decisions**

Officers of the Council will normally only review the decision to inspect, or not, when one of the following instances occurs:-

- a significant change in legislation;
- new case law, or other legal precedent;
- changes in guideline values for exposure assessment;

<sup>ψ</sup> This last sentence is a consultation alteration as suggested by the Environment Agency.

## Chapter 9 LIAISON AND COMMUNICATION

- 9.0 The Council considers that clearly and effectively communicating with those concerned with the identification and remediation of contaminated land, is an integral part of the process of bringing polluted land back into use. It recognises that decisions about contaminated land must be defensible and transparent. It will be equally important to be able to explain to non-technical audiences how risk assessments are carried out.
- 9.1 In order to achieve effective communication, the Council will ensure that the process by which contaminated land is identified within the borough is clearly documented, that communication with the relevant stakeholders is timely, and information relating to land contamination is accessible. The Council is committed to involving the public in the delivery of services, and ensuring that they are consulted with on all aspects of the Council's work.
- 9.2 A copy of the Contaminated Land Inspection Strategy should be available from the Council's Internet site, together with other general information relating to contaminated land. The Council will continue to disseminate information through the Environment Round Table meetings, other public meetings, and the 'Your Borough, Your World' publication.
- 9.3 Officers within Environmental Health will attend meetings of the Central London Cluster Group (of boroughs) and West London Cluster Group, for contaminated land. This will ensure that the performance of its duties towards contaminated land can be compared and coordinated with other local authorities across London (in accordance with best value) as well as encouraging close liaison with the Environment Agency who attend the meetings.
- 9.4 The Council will endeavour to follow the guidelines laid out in the Environment Agency (EA) document '*Information exchange with Local Authorities for the state of the contaminated land report*'. This will ensure that the following information is provided to the EA:
- a copy of the Contaminated Land Inspection Strategy;
  - information on sites determined as contaminated land using the form provided by the EA (SOCL/LA/form 1);
  - information on types of remediation, copies of notices, statements and declarations together with the completed form SOCL/LA/form2; and
  - a summary information of regulatory activity submitted on form SOCL/LA/form 3.
- 9.5 **Conclusions**
- The Contaminated Land Strategy has to embrace a wide range of aspects, for example, ranging from surface geology and local hydrology, to land ownership and past industrial activity. Some of the information needed is still incomplete, and the approach to one or two important issues, such as the Council's obligations under other legislation as it applies to contaminated land, will continue to be developed.

## 9.6 Consultation

The provisional strategy was finalised in June 2002, and the Council consulted relevant organisations and reviewed comments, so that the strategy could be refined. Particular organisations that were consulted included:

- Environment Agency;
- Food Standards Agency;
- English Nature;
- London Wildlife Trust;
- English Heritage;
- Health & Safety Executive;
- Kensington, Chelsea & Westminster Health Authority;
- LB Hammersmith & Fulham;
- LB Brent;
- City of Westminster;
- Greater London Authority;
- Collective residents' Associations.

Major Landowners with extensive land holdings were also contacted to find out whether they wished to view the Strategy document. The consultation exercise took place between September and December 2001.

9.7 During the consultation period an advertisement was placed in the local newspaper; 'The Kensington and Chelsea Informer' to draw residents' attention to the consultation process, and copies of the Strategy document were placed in the Borough's public libraries.

9.8 Responses were received from five different organisations; Food Standards Agency, DEFRA, English Nature, English Heritage and Environment Agency. All of these respondents welcomed the inspection strategy and supported the requirement that local authorities should follow set procedures relating to the inspection of potentially contaminated land and its determination. Suggested improvements were mainly related to including additional text to help describe procedures in more detail, especially where the procedure related to that particular consultee. Suggestions were also made about consulting with other organisations and contact details were helpfully provided.

## 9.9 Contacts for Contaminated Land

If you have any queries relating to this inspection strategy or contaminated land in general then please contact:

- Mr Guy Denington - Environmental Quality Unit, Team Manager  
Email: [guy.denington@rbkc.gov.uk](mailto:guy.denington@rbkc.gov.uk) Telephone: 020-7341-5681
- Mrs Amanda Hughes – Environmental Quality Unit, Environmental Scientist  
Email: [amanda.hughes@rbkc.gov.uk](mailto:amanda.hughes@rbkc.gov.uk) Telephone: 020-7341-5760

If you require further copies of this strategy then please visit the Council's website at [www.rbkc.gov.uk](http://www.rbkc.gov.uk)

## Annex 1: Glossary of Terms

1. **Abstraction point** – removal of water (often used for drinking water) from surface or groundwater at a specific location.
2. **Brownfield sites** – urban sites, or previous industrial sites, that have already been developed in the past. They may, or may not, be contaminated, although the inference is that they have been polluted in some way.
3. **Contaminated Land** – 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, 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.
4. **Contaminated land register** – every enforcing authority must maintain a register. This will include details of remediation notices, which have been served, and certain other documents in relation to each area of contaminated land for which the authority is responsible.
5. **Controlled waters** – defined in section 78A(9) by reference to Part III (section 104) of the Water Resources Act 1991; this is a broad term embracing territorial and coastal waters, inland fresh waters, and ground waters.
6. **Corporate land and Property Gazetteer** – this is a central database that holds address details about all the properties (residential and commercial) in the Royal Borough of Kensington and Chelsea (RBKC). Each property has an address recorded in British Standard (BS7666) format; a unique property reference number; and an accurate grid reference location.
7. **Environment Agency** – a separate non-government body established in 1995, to protect and improve the environment throughout England and Wales.
8. **Groundwater** – The mass of water in the ground below the water table, occupying the total pore space in the rock and substrata, moving slowly down the hydraulic gradient where permeability allows.
9. **London Clay** – a layer of impermeable clay that sits between the surface soils and the underlying chalk aquifer
10. **Pathway** – the means by which a hazardous substance, or agent, comes into contact with a receptor.
11. **Receptor** – A person/organism or controlled water that is being, or could be, harmed by a potential pollutant.
12. **Remediation** – action taken to reduce unacceptable risks caused by contamination.
13. **Source** – a hazardous substance, or agent (i.e. a contaminant) which is capable of causing harm.
14. **Special site** – a site designated as a ‘special site’ means that the Environment Agency, rather than the local authority, becomes the enforcing authority for the contaminated land.
15. **Surface water** – general term used to describe all the water features on the surface of the land such as rivers, streams, springs, canals and lakes.
16. **Unitary Development Plan** – the Unitary Development Plan is a statutory local authority policy statement to which all planning applications must have regard.
17. **Water table** – level below which the soil/rock is permanently saturated.

**Annex 2: Land use history provided in more detail**

Kensington and Chelsea were separate Boroughs until 1965, both originated as Saxon settlements and are mentioned in the Domesday book of 1086. Proximity to London and the importance of the Thames and other highways from the west, as a means of transport, controlled the early development of the Boroughs. In the pre-Victorian era, the main activity in the area was the supply of perishable foods and hay to the city.

Rocque's large scale map of London in the 1740's gives the earliest complete picture of the Borough. Almost all the residences lay along the few roads south of what is now Notting Hill Gate. To the north of the Gate there were just three farms. The 'Gate' is also the divide between meadows and pasture, which dominate to the north, and the market gardening and orchards to the south. The built extent of London reached the eastern edge of Hyde Park but Kensington and Chelsea remained predominately rural. At the first census of 1801 the combined population of the two Boroughs was 20,100. Kensington Gardens had been opened to the public, Holland House was now sited in grounds abundantly planted with trees, the Chelsea Physic Garden had been founded (1676) and the Royal Hospital burial grounds had begun to be used for interments (1692). In the eighteenth century Ranelagh Gardens was opened as a pleasure garden in 1742 and the exiled Moravian church opened its burial grounds in 1751.

Sand and gravel extraction for building was a minor industry wherever the River Terrace gravels were accessible and brick making occurred. Temporarily flooded gravel pits appeared on Chelsea Common and around Kensington Gardens and Notting Hill Gate. This activity expanded, with extensive brickworks to the north-west of Holland Park, as the demand for residential properties increased. London's population grew rapidly and the railways removed the need to grow produce on the immediate outskirts of the city. Fields became more valuable as development sites than for food production.

Many of the developments in Kensington took the form of estates, their design encompassing houses, gardens and street. This provided the Boroughs with their many garden squares.

Along with residential development came the extension of the transport network. The Paddington Branch of the Grand Union Canal was opened in 1814 and in the 1820s Counter's Creek was canalised. During the 1830s and 1840s the West London Railway built a line along the Borough's western boundaries and the Great Western Railway laid lines to the south of the Grand Union canal. The latter company soon built extensive sheds and sidings. A gas works opened between the Great Western Railway and Grand Union Canal and a community known as Kensal Town grew up around Kensal Road, its inhabitants working on the railways and the canal. This was the first residential development north of Notting Hill Gate, but others followed in the 1840s and 1850s with the completion of the Norland and Ladbroke Estates, which included extensive garden squares. The Metropolitan and District lines, built between the 1860s and 1880s, completed the Borough's surface rail network.

The expansion of London's population, which had by 1850 caused the loss of the most of the Borough's semi-natural habitats, paradoxically conserved what are now two of the most valuable sites; the Kensal Green Cemetery and the Brompton

Cemetery. The parish churches no longer had the space to bury London's dead, so a ring of cemeteries was created beyond the built-up area. Meadows or pasture to the north of the Grand Union Canal were purchased for Kensal Green Cemetery, which was consecrated in 1833. Brompton Cemetery was consecrated in 1840 on the site of arable land and meadow or pasture next to Counter's Creek.

The 1860s saw another housing boom, which filled in most of the remaining green field sites in North Kensington. Between 1851 and 1871 Kensington's population tripled, reaching 120,000 in 1871. The twentieth century saw a continuation of building, through infill and redevelopment, much of the latter by the London County Council in North Kensington. Before the Second World War the only substantial open spaces left were Kensington gardens, Holland Park, The River Thames, the canal, railway land, the cemeteries and burial grounds, and the many garden squares.

**Annex 3 – Programme of work**

