



**WOKINGHAM
BOROUGH COUNCIL**

CONTAMINATED LAND STRATEGY

(4th REVISION)

October 2015

Table of Contents

1	Introduction	4
1.1	Progress from the Previous Strategy	4
1.2	New Action Plan	4
1.3	Measuring Progress.....	5
2	Background	6
2.1	Introduction	6
2.2	Characteristics of Wokingham Borough	6
2.2.1	Geography.....	6
2.2.2	Past Industrial Land Uses	8
2.2.3	Current Land Uses	8
2.2.4	Geology	9
2.2.5	Hydrogeology.....	9
2.2.6	Protected Ecological Areas and Buildings.....	9
3	Regulatory Context.....	11
3.1	Part IIA Legislation	11
3.1.1	Statutory Guidance	11
3.1.2	Definition of Contaminated Land.....	13
3.1.3	Principles of Contaminant Linkages.....	13
3.1.4	Principles of Risk Assessment.....	Error! Bookmark not defined.
3.2	National Planning Policy Framework.....	Error! Bookmark not defined.
3.3	Role of the Environment Agency	Error! Bookmark not defined.
4	Aims and Objectives of the Revised Strategy	15
4.1	Overall Approach.....	15
4.2	Government Policy	15
4.3	Key achievements	15
4.4	Aims and Objectives	16
4.5	Targets for the Revised Strategy	17
4.6	Measuring Progress.....	19
5	Strategy Implementation	20
5.1	Investigation of Potential Contaminated Land Sites.....	20
5.1.1	Identification of Potential Sources	20
5.1.2	Identification of Potential Receptors	22
5.1.3	Prioritisation of Potential Contaminated Land Sites	22
5.1.4	Further Site Investigation	23

5.2	Determination of Contaminated Land	25
5.2.1	Determining that Land is Contaminated Land.....	25
5.2.2	Informing Interested Parties.....	25
5.2.3	Land Which May be a ‘Special Site’	25
5.2.4	Written Record of Determination and Formal Notification.....	26
5.2.5	Apportioning Liability.....	27
5.2.6	Apportionment of Costs.....	27
5.2.7	Deciding that Land is not Contaminated Land.....	27
5.2.8	Triggers for Reviewing Decision Making	28
5.3	Dealing with Contaminated Land under the Planning regime.....	28
5.4	Information Management	28
5.4.1	Contaminated Land Register	28
5.4.2	Data Management.....	29
5.4.3	Dealing with Requests for Information	29
5.4.4	Provision of Information to the Environment Agency	30
6	Liaison and Consultation.....	31
6.1	Statutory Consultees.....	31
7	Strategy Review Mechanisms	32
7.1	Review of Strategy Document	32
7.2	Triggers for Early Review.....	32
8	Appendices	33
8.1	Appendix 1 - Requirements for a Contaminated Land Strategy	34
8.2	Appendix 2 – STM Environmental Site Prioritisation System.....	35

Tables

Table 1:	ODPM 2001 Wokingham Land Use Categories	8
Table 2:	Numbers of Protected Ecological Areas and Buildings	10
Table 3:	Key Achievements to Date.....	15
Table 4:	Targets Set by the Revised Strategy.....	18
Table 5:	Breakdown of sites by Potential Human Health Risk Category	22

Figures

Figure 1:	Map of the Borough.....	7
Figure 2:	Map of Potentially Contaminated Land.....	21
Figure 3:	The Process of Managing Land Contamination	24

1 Introduction

This document forms a revision of the Wokingham Borough Council (“the Council”) Contaminated Land Strategy which was originally developed in July 2001. It reviews the Council’s aims and objectives, as well as progress made in implementing its strategy so far. It also updates the relevant action plans and procedures taking into account the Council’s current priorities and recent changes to the contaminated land statutory guidance.

The strategy revision was undertaken by Council staff with support from STM Environmental Consultants Ltd.

1.1 Progress from the Previous Strategy

In general, the Council has been successful in meeting the aims of the previous strategy. It is complying with its legal obligations and now has a risk based framework for undertaking inspections. It also has a system for managing potential sites undergoing redevelopment under the planning regime and for communicating information on contaminated land to relevant stakeholders.

Progress has been made against the specific targets set by the previous Strategy. Desk based inspections have taken place on seven high risk sites and the process identified one high risk site that required further intrusive investigation. This site has been subject to a full and detailed investigation but was found not to be contaminated according to the definition provided by the legislation.

Progress has been made in terms of information collection and management. A database of approximately 840 potentially contaminated sites has been built up and prioritised in terms of the risk posed to human health and the wider environment. The information contained in the database is now being refined in order to properly allow for detailed inspections of the higher risk sites to get underway.

In addition to work carried out under the part IIA regime significant progress has been made in addressing contamination under the planning regime. No site to be developed should be capable of being determined as contaminated under Part IIA of the Environmental Protection Act 1990 so we have liaised closely with the local planning authority to ensure that appropriate investigation and remediation takes place before sites are developed. As this is the most effective way of dealing with potentially contaminated sites, we have concentrated resources in this area of work.

1.2 New Action Plan

Building on the progress achieved to date a new action plan has been developed that provides updated targets for the next five years (See Table 4 in the main strategy). The targets have been grouped under the following headings in order of priority and will ensure a transparent and consistent approach. In summary, these targets focus on :-

- Activity under part IIA of the Environmental Protection Act 1990 where necessary.

- Undertaking site walkovers to gather data prior to determining the need for further investigations to take place

- Activity associated with Development of Land
 - Responding to Development Management within agreed timescales
 - Following agreed planning policy including National Planning Policy Framework

- Management and Provision of Information under the Environmental Information regulations 2004
 - Maintain a contaminated land database, using the data to inform the Public Register and Environmental Information requests

There are also targets in relation to Maintaining Competency and Quality Control. Where appropriate the targets have timescales and volume outlined.

1.3 Measuring Progress

Progress in meeting the targets set by the strategy will be reviewed on an annual basis and the strategy itself will be reviewed again after five years.

2 Background

2.1 Introduction

Contaminated land in the UK is a legacy of our industrial past. Industrial processes such as gas works, chemical works and waste disposal have resulted in sites which are contaminated with a wide range of hazardous chemicals. These contaminants can be present in groundwater, surface waters, soils and eco-systems.

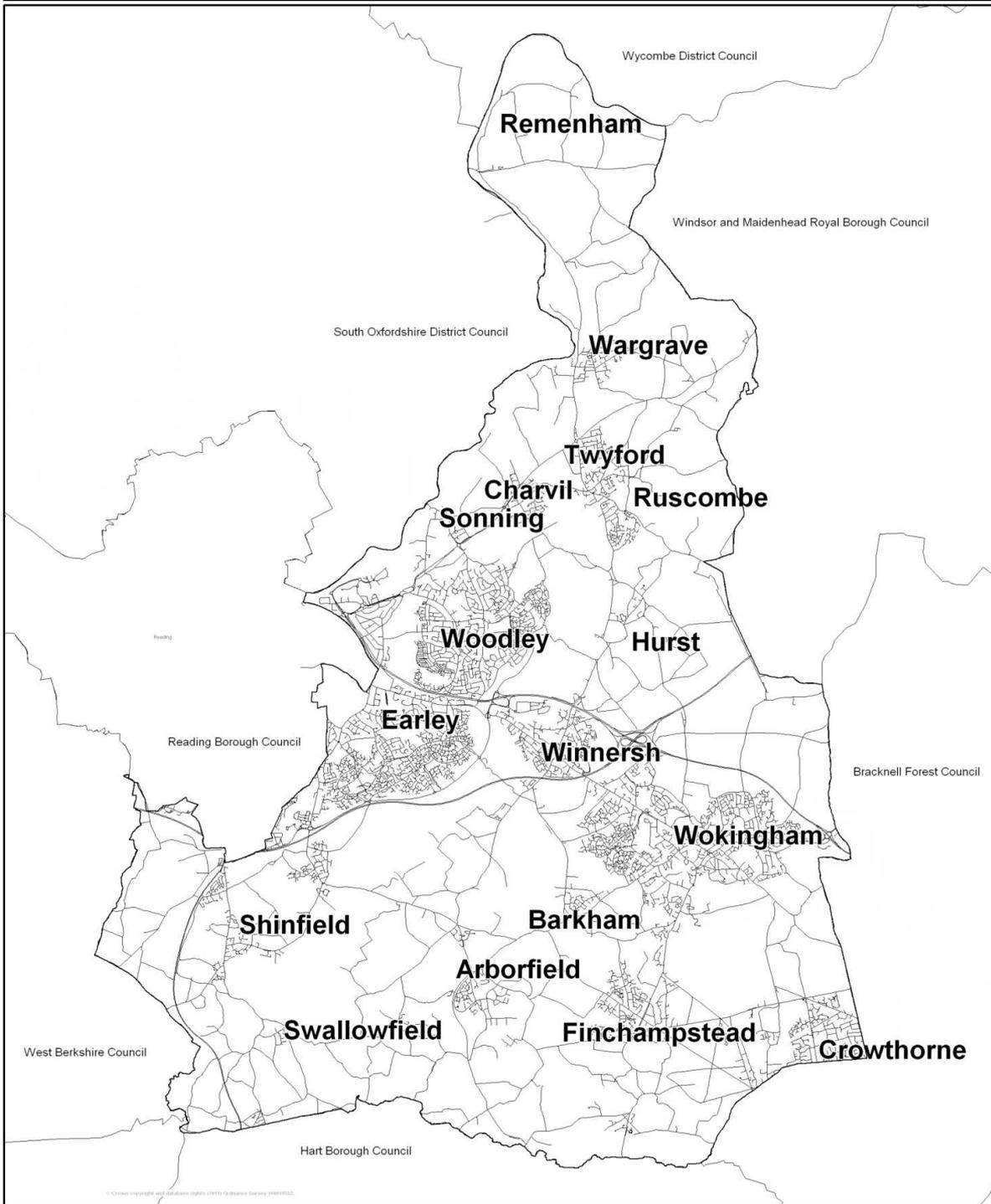
Although Wokingham has never been a heavily industrialised area, the Borough does have its own legacy of potentially contaminated land that needs to be dealt with. To date, approximately 840 potentially contaminated land sites have been identified within the Borough. This document provides an updated roadmap for how the Council intends to continue to deal with these sites and the potential risks arising in order to protect the health of those living and working in the borough.

2.2 Characteristics of Wokingham Borough

2.2.1 Geography

Wokingham Borough is located in the Royal County of Berkshire and covers an area of 17,892 hectares. It is made up of seventeen parishes and towns, connected together by a vast network of transport links, including the M4, A329(M) and railways. Bordering authorities include Oxfordshire to the north-west and Hampshire to the south, with the River Thames forming a natural boundary to the north of the Borough. See Figure 1 overleaf:

Wokingham Borough



(c) Crown Copyright and database rights 2011 Ordnance Survey 100019592

Date 14/6/2013

Scale 1/105263



Figure 1: Map of the Borough

2.2.2 Past Industrial Land Uses

The inspection process will begin with a consideration of the historical land uses within the borough that have the potential to generate contamination.

Until the 20th Century most people in Wokingham Borough earned their living either directly or indirectly from agriculture. There are still significant areas of agriculture in the north and south of the Borough.

As a result of certain geological deposits in the Borough there has been significant quarrying of gravel, sand and clay. Many of the resulting excavations have subsequently been used for the disposal of waste materials.

Other notable historical land uses include; bell making, silk manufacturing, leather working, wool dealing, brick making, brewing, charcoal burning and coach building.

2.2.3 Current Land Uses

Current land uses within the Borough have impacts on the type and sensitivity of receptors present on sites, as well as contaminants that may have been, or are being, released into the environment.

Table 2 below shows the land use distribution statistics from 2001 which was published by the Office of the Deputy Prime Minister in 2005¹.

Table 1: ODPM 2001 Wokingham Land Use Categories

Land Use	Area (ha)	Area (%)
Domestic Buildings	454	3
Gardens	2,390	13
Non-Domestic Buildings	182	1
Road	798	4
Rail	34	0
Path	29	0
Greenspace (i.e. agriculture, open space)	13,294	74
Water	407	2
Other	399	2

Agriculture has diminished in the Borough over the last century and employment is primarily based in the service industry with only 15% in manufacturing. There is no heavy industry within the Borough.

The Borough lies at the centre of a strong regional economy dominated by the IT, communications and pharmaceutical sectors. Major international companies such as Oracle, Microsoft and BG Group are located within the borough, many situated in the five main business parks.

¹ Table 8a Mid-2011 Population Estimates: Selected age groups for Local Authorities in England and Wales; estimated resident population. Office for National Statistics, Census based, 2011.

2.2.4 Geology

As contaminants can move under the ground knowledge of the geology of an area is important in determining whether sites are potentially contaminated and whether there may be an impact on the surrounding area. Some geological deposits are also known to cause 'natural contamination' such as, for example, elevated levels of arsenic in soils and the presence of radioactive radon. The majority of the Borough is underlain with chalk; however this outcrops only in the north of the Borough. In the rest of the Borough it dips beneath the Reading Beds and London Clay. In the south east of the Borough these beds are overlain with the sands and clays of the Bagshot Beds.

2.2.5 Hydrogeology

Details of the locations of major aquifers (used for abstraction of water for public supplies) and minor aquifers (important for local water supplies) are important for an understanding of potential receptors to generate the risk assessment. Information on groundwater vulnerability is also important to quantify the sensitivity of the groundwater receptors.

Source Protection Zones (SPZs) define areas which are considered to form the catchments to public water supplies and private supplies. There are a total of ten SPZs either fully or partially contained within the borough. These consist of five 'inner and four 'outer SPZs and one Total Catchment Zone.

Where the chalk geology is exposed in the north west of the borough along the River Thames, the Environment Agency has designated the bedrock as a 'Principal Aquifer', with areas of 'Secondary Aquifers' bordering this. The Environment Agency's groundwater vulnerability maps previously designated these area as a Major Aquifer with 'high' vulnerability and a Major Aquifer' with intermediate vulnerability respectively. The area to the southeast of Wokingham is classified as a Secondary A aquifer with previous designation as a Minor Aquifer with areas of high and intermediate vulnerability.

The River Loddon is the main river that flows through the Borough, before flowing into the River Thames near Wargrave, Several smaller rivers and brooks flow into the River Loddon within the borough. The River Loddon and all its tributaries except Ashridge Brook are classified by the Environment Agency as 'Good' in their Chemical General Quality Assessment (GQA). In their Biological GQA the River Loddon is classified as Very Good and Good, with its tributaries as Good except for Barkham Brook (fairly good) and Ashridge Brook (poor).

2.2.6 Protected Ecological Areas and Buildings

Wokingham Borough contains a diverse range of environments and key property types, including areas or features protected by EU and national regulations. These are listed in Table 3 overleaf:

Table 2: Numbers of Protected Ecological Areas and Buildings

Type	Number	Comments
Sites of Special Scientific Interest (SSSIs)	4	Longmoor bog, Heath Lake, Lodge Wood and Sandford Mill
Local Nature Reserves (LNRs)	4	Heath Lake, Aldermoor, Highwood and Lavells Lake
Scheduled Ancient Monuments	18	
Listed Buildings	632	
Historic Parks and Gardens	6	
Conservation areas	11	
National Trust Owned Sites	3	

3 Regulatory Context (page numbers, para number and index not consistent)

3.1.1 Part IIA Legislation

Legislation under Part IIA of Environmental Protection Act 1990 (Part IIA) was introduced in 1995 and provides a legal framework for dealing with contaminated land².

Under the legislation, each Local Authority has a duty to “cause its area to be inspected from time to time for the purpose of identifying contaminated land”. Where sites that may be contaminated are identified, the guidance instructs Local Authorities to assess the risks they may pose to human health and the wider environment.

Where the risks associated with a site are considered to pose an unacceptable risk, the legislation gives powers to Local Authorities to take legal action to ensure that they are remediated (i.e. reduced to acceptable levels). Where possible the Authority can require the persons directly responsible for the pollution to undertake the remediation. If those persons cannot be found, the responsibility may fall upon the current owners and/or occupiers of the land.

3.1.2 Statutory Guidance

Part IIA officially came into force in April 2000. The official guidance³, which was revised and updated in 2012, requires each Local Authority to publish and keep updated a written strategy explaining how it intends to fulfil its duties under the legislation. Details of the requirements for such a strategy are given in Appendix 1. This Contaminated Land Strategy is the written strategy for Wokingham Borough Council.

The revised 2012 guidance encourages Local Authorities to be more decisive in terms of whether or not land should be considered to be contaminated land. There should be an initial assumption that the land is not contaminated. The guidance states that enforcing authorities ‘*should seek to use Part IIA only where no appropriate alternative solution exists*’

The 2012 guidance also introduced a system which categorises potentially contaminated land depending on the level of risk following an inspection by a Local Authority. These categories are summarised below:

- Category 1 – Sites where there is an unacceptably high probability of significant harm, or significant pollution of controlled waters, occurring if no action is taken to stop it.
- Category 2 – Sites where the land is capable of being determined as contaminated land on grounds of significant possibility of significant harm.
- Category 3 – Sites where the land is not capable of being determined as contaminated land on grounds of significant possibility of significant harm.

² The legislation, which consists of sections 78A to 78YC of the Environmental Protection Act 1990, was inserted by section 57 of the Environment Act 1995. In 2006, the legislation was extended to cover radioactivity.

³ Environmental Protection Act 1990: Part IIA, Contaminated Land Statutory Guidance. Department for Environment, Food and Rural Affairs (DEFRA), 2012.

- **Category 4** – Sites where there is no risk of significant harm or significant pollution of controlled waters, or the level of risk is low.

3.1.3 Definition of Contaminated Land

Before a Local Authority can require remediation to be undertaken on a site, it has to officially “determine” (or declare) the site to be ‘contaminated land’⁴. The term ‘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:-

- a) Significant harm is being caused or there is significant possibility of such harm being caused: or*
- b) Significant pollution of controlled waters is being caused, or there is a significant possibility of pollution to be caused."*

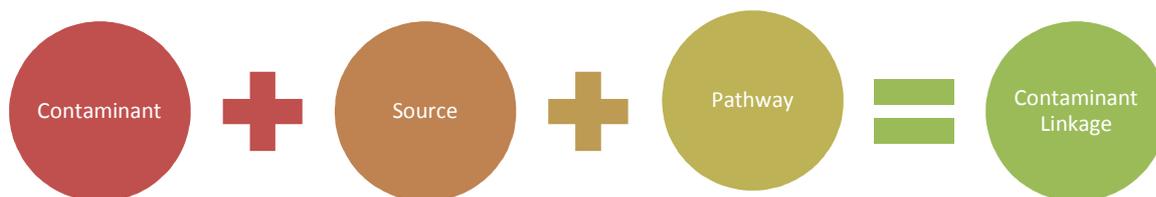
3.1.4 Principles of Contaminant Linkages

In order for land to be considered “contaminated land”, there must be a pathway to link the source of contamination to a receptor.



- A **Contaminant** is a substance situated in, on or under the land that is present at such concentrations that it has the potential to cause harm to a receptor.
- A **Receptor** is a body that may be harmed by the contaminant. A receptor may be a human being, controlled waters (i.e. groundwater or surface water), designated ecosystem (i.e. Site of Special Scientific Interest) or a property (i.e. housing, cattle).
- A **Pathway** is a route, or means, by which the receptor may become exposed to (i.e. come into contact with), or affected by the contaminant.

When all three of the above components are present at a site, a *Contaminant Linkage* is said to exist.



In order for a Local Authority to make a decision that a site is contaminated land, it must be satisfied that the Contaminant Linkage is “*Significant*” (i.e. that the land identified is causing or is likely to cause significant harm to receptors if remedial action is not undertaken).

3.1.5 Principles of Risk Assessment

Part IIA requires Local Authorities to take a risk based approach to the identification and remediation of contaminated land. The guidance defines “risk” as a combination of:

- a) the likelihood that harm (i.e. to humans), or pollution of water, will occur as a result of contaminants in, on or under the land; and
- b) the scale and seriousness of such harm or pollution if it did occur.
- c) Where contamination is identified, the guidance instructs that any requirements for remedial action should be based on the ‘suitable for use’ approach⁵.

3.2 National Planning Policy Framework

In addition to a revision of the Part IIA Statutory Guidance, the National Planning Policy Framework (NPPF)⁶ was introduced in March 2012. This framework replaced previous national Planning Policy Guidance (PPG) documents including Planning Policy Statement 23: Planning and Pollution Control (PPS23).

3.3 Role of the Environment Agency

Once a Local Authority determines a site as contaminated land, it should act as the enforcing authority and require remediation. In specific instances where the Local Authority believes that the site is a ‘special site’⁷, responsibility for enforcement will pass to the Environment Agency. Special sites’ include, land contaminated by radioactivity, land owned by the Ministry of Defence and sites where controlled waters may be affected.

The Environment Agency will also provide advice to local authorities upon request.

4 The term ‘contaminated land’ was originally defined in Section 78A of the Part IIA legislation. It was subsequently amended by section 86 of the Water Act 2003 which came into force in April 2012.

5 Land contamination is treated to deal with unacceptable actual or perceived threats to health, safety or the environment, taking account of the actual or intended use of the site.

6 National Planning Policy Framework. Department for Communities and Local Government, 2012.

7 Special sites’ are defined by Section 78A (3) of the Environmental Protection Act. ISBN 0105443905

4 Aims and Objectives of the Revised Strategy

4.1 Overall Approach

The Wokingham Borough Council Contaminated Land Strategy was originally produced in 1998 then further updated in 2001. This document constitutes a further revision. It is based on the previous editions and takes into account progress that has been made in the interim as well changes in the Council's visions, policies, other strategies and corporate plans.

4.2 Government Policy

The overarching objectives of the Government's policy on contaminated land and the Part IIA regime are:

- To identify and remove unacceptable risks to human health and the environment.
- To seek to ensure that contaminated land is made suitable for its current use.
- To seek to ensure that the burdens faced by individuals, companies and society as a whole are proportionate, manageable and compatible with the principles of sustainable development.

These key objectives are reflected in this Contaminated Land Inspection Strategy.

4.3 Key achievements

As outlined in the Executive Summary the Council has, in general, been successful in meeting the aim of the previous strategy. Table 3 below summarises the key achievements to date in more detail.

Table 3: Key Achievements to Date

Year	Achievement
1990 - 2000	Establishment of Geographical Information System (GIS) database of potentially contaminated land in the borough e.g. landfills, permitted processes, parish history.
1998-1999	Remedial works undertaken on several existing residential properties in Earley found to be contaminated with cyanide from an adjacent metal plating works.
1999	Initial risk assessments commissioned on 15 high-risk closed landfill sites.
2001	Wokingham District Council's Contaminated Land Strategy published.
2003	Consultation process devised and implemented with the Local Planning Authority to address potentially contaminated land during the development.
2003-2007	Several significantly contaminated sites with historic industrial land uses remediated through the development process.

Year	Achievement
2008	<p>Desk studies and first stage risk assessments commissioned on 7 “high risk” closed landfill sites.</p> <p>GeoEnviron Contaminated Land Information Management System purchased and installed.</p> <p>GeoEnviron combines information on GIS with factual information on sites and assists Officers in prioritising sites for further action.</p>
2010	<p>GIS database updated following a full review of historic mapping records from 1872 to present day. Historic and current petroleum storage records, permitted sites and licensed sites also reviewed and digitised. 840 potentially contaminated sites identified in the borough (at the current time this number does not take into account different contaminative land uses on the same plot of land).</p>
2011	<p>840 potentially contaminated land sites were transferred from GIS database to the GeoEnviron Contaminated Land Data Management System. The system included an initial prioritisation of sites based on potential risks to human health, controlled waters ecology and buildings.</p> <p>All sites in GeoEnviron checked for correct historic and current land use. The initial prioritisation of sites that was undertaken does not take into account that some high to medium risk sites have been investigated and remediated through the development process.</p>
2012	<p>Archived contaminated land reports and development files reviewed and prepared for scanning to allow uploading onto GeoEnviron and reassessment of sites. More than 50 new sites identified for adding to the database.</p> <p>Fee proposal requested for preliminary intrusive investigation works at Strathmore Drive Filled Ground in Charvil which has an existing residential use.</p> <p>Commencement of long term remediation project (c. 3 years) at Sandford Farm Filled Ground in Woodley. Planning permission was granted on the site in January 2012 to build 468 residential units and associated facilities. As part of the application remediation works to remove contaminated material from the former landfill are to be undertaken to allow development on a phased basis. All submissions are being reviewed by both Environmental Health as well as the planner’s consultants WSP.</p> <p>West Berkshire Council and Wokingham Borough Council’s Environmental Health Teams signed up to Joint Service Delivery. This partnership will enable staff to make savings and share information and resources, which could include joint database.</p>
2013	<p>Intrusive investigation works were carried out in September/October 2013 at residential properties sited on top of Strathmore Drive Filled Ground in Charvil.</p>

4.4 Aims and Objectives

The aim of this strategy is to set out in writing how the Council intends to implement its responsibilities under Part IIA, in accordance with statutory guidance, and how it fits in with other regulatory systems. The statutory guidance states that local authorities should take a strategic

approach towards carrying out its duties under Part 2A, and should adopt a written strategy for inspecting their areas.

The strategic approach should aim to:

- a) Be rational, ordered and efficient;
- b) Be proportionate to the seriousness of any actual or potential risk;
- c) Seek to ensure that the most pressing and serious problems are located first;
- d) Ensure that resources are concentrated on investigating in areas where the authority is most likely to identify contaminated land; and
- e) Ensure that the Council efficiently identifies requirements for the detailed inspection of particular areas of land.

The principal objectives of the inspection strategy are:

1. To meet the statutory obligation placed on the Council to produce a written strategy under Part 2A;
2. To provide a strategic framework which the Council will use to identify, inspect and determine contaminated land, and describe the measures that may be taken to remediate such land;
3. To describe how the council will prioritise and categorise sites;
4. To inform the public, and improve communication with stakeholders, of the Council's
5. intentions in relation to contaminated land;
6. To ensure that the Council's vision, corporate priorities and ambitions will be achieved by adopting this strategy and by removing unacceptable risks to human health and the environment.

4.5 Targets for the Revised Strategy

The Council will work towards the new set of targets set out in this strategy that take into account changes to the Statutory Guidance and changing Council and Central Government priorities. In setting the revised targets the Council has been mindful of the significant cuts in central government funding for this area of work and this has resulted in more emphasis being placed on seeking remediation of potentially contaminated sites through the planning process.

The targets set by this revised strategy with timescales and volumes (when applicable) are set out in Table 4 overleaf.

Table 4: Targets Set by the Revised Strategy

1.	Regularly maintain and update the GeoEnviron contaminated land database and ensure that the most up-to-date software, as provided by the software company, is installed.	On-going
2.	Respond within agreed timescales to all formal requests for Environmental Information relating to potential contamination in accordance with the Environmental Information Regulations 2004.	Within 10 working days of receipt of formal request (for non complex cases)
3.	Provide and regularly maintain the Contaminated Land Web Site articles on the Council's web site. Ensure that links to external web sites are maintained and that the pages are reviewed regularly within agreed timescales.	Web site articles will be reviewed and updated annually or sooner if required
4.	Set up and maintain a public register of declared contaminated sites on the Council's website.	Register will be updated as and when declaration are made
5.	On an annual basis a review of contaminated land activity will be carried out by the Environmental Quality Team in accordance with this Strategy and a summary report will be provided to the Joint Services Review Panel.	The review will take place annually
6.	Provide on-going support and advice to the Planning Authority upon request regarding the future development of potentially contaminated sites.	Upon Request
7.	Respond to all formal planning consultations for proposed development on potentially contaminated land sites within five weeks of receipt .	Within 5 weeks of receipt of consultation
8.	On behalf of the Planning Authority, review contaminated land reports submitted to discharge planning conditions and make appropriate recommendations within timescales agreed with the planning case officer.	Within 10 working days of receipt
9.	All site specific contaminated land reports submitted to the Planning Authority will be entered onto the contaminated land database and the risk score updated within 10 working days of receipt.	Within 10 working days of receipt
10.	Encourage and support the development of local planning policy on the development of potentially contaminated sites in accordance with the National Planning Policy Framework (to replace PPS23: Planning and Pollution Control.	On-going
11.	Within year one develop and publish on the Council's web site a local guidance document for developers on the development of potentially contaminated sites.	By December 2015

12.	Depending on resources available and the estimated level of risk to human health and complexity of the site, aim to carry out one desk top study, and if appropriate, progress to a full site investigation on an annual basis to determine whether or not the land is contaminated	1 site each year
13.	Carry out an agreed number of site walk-over and desk top surveys of potentially contaminated sites during 2016/17. The number of surveys will depend on the resources available but will be established at the beginning of each financial year.	20 during 2015/16
14.	As part of the externally accredited quality management system (QMS) establish the procedures that will be required to help officers carry out their contaminated land functions effectively. Ensure that the procedures are reviewed and updated on an annual basis or sooner if there are changes to the legislation or official guidance	Procedures reviewed annually
15.	Carry out regular audits of contaminated land procedures in accordance with the agreed QMS audit plan. Participate in external audits carried out by the accrediting body	In accordance with Audit Plan
16.	Ensure that all staff involved with contaminated land activity are appropriately trained and that they maintain their competency by regularly assessing their training needs and carrying out regular reviews at monthly supervisory, 1 to 1 and appraisal meetings..	On-going review or training at monthly supervisory meetings
17.	Ensure staff to keep up to date with the latest research into land contamination and with any relevant changes to legislation and standards by providing access to relevant journals , web sites and guidance documents.	On-going

4.6 Measuring Progress

Progress towards meeting the targets above will be reviewed on an annual basis by a review panel consisting of contaminated land officers and senior management. The review will be used to assess progress and identify where additional support and resources may be required to maintain the momentum towards meeting the various target.

5 Strategy Implementation

This section describes the process for implementing the revised strategy taking into account the revised aims, objectives and targets.

5.1 Investigation of Potential Contaminated Land Sites

Local Authorities have a continuing duty to inspect their areas for the purpose of identifying land that may be contaminated and to take action where necessary.

The Environmental Quality Team within the Environmental Health and Licensing Service will implement the Council's responsibilities under Part IIA. Desk top studies and preliminary site investigations will be carried out by officers under the supervision of the Senior Scientific Officer and the team's Principal Officer. More complex intrusive site investigations and analysis will be carried out by specialist contractors if a site is determined as contaminated a 'remediation notice' will be served by an appropriately authorised officer.

The following section describes how the Council will identify and prioritise potential contaminated land sites for further action.

5.1.1 Identification of Potential Sources

Potential sources of contamination have been collated by systematically examining the available historic map records from 1872 to present day. Data obtained from the Environment Agency has also been used to identify the locations of current and former landfill sites, pollution incidents and permitted installations.

To date, approximately 840 potentially contaminated sites have been identified. Figure 2 overleaf shows the general location of these sites (in pink). The Council will continue to review available information sources for the purposes of identifying new potential contaminated land sites.

Potentially Contaminated Land

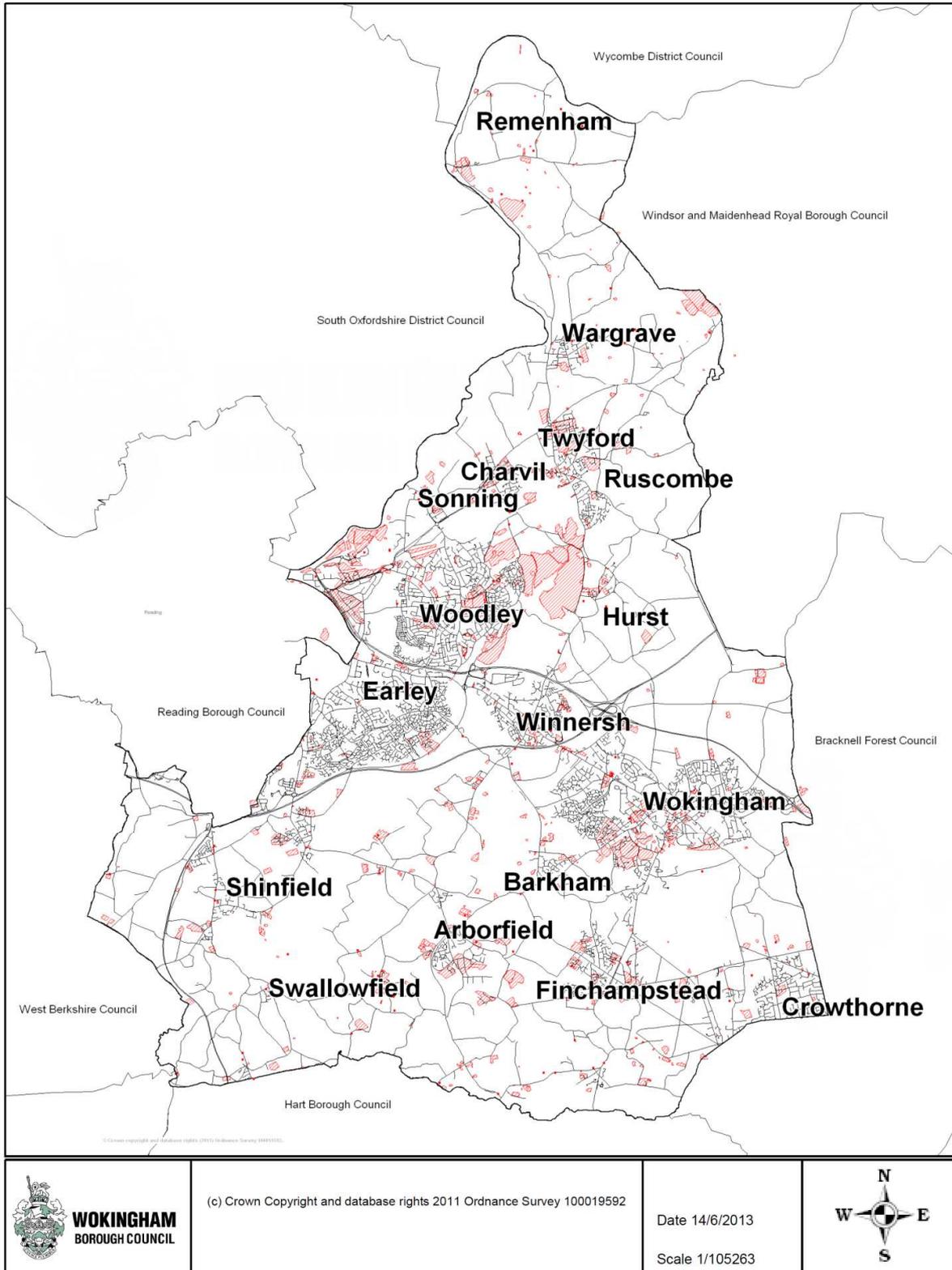


Figure 2: Map of Potentially Contaminated Land

5.1.2 Identification of Potential Receptors

The locations of potential receptors⁸ within the Borough have been identified using local knowledge combined with the systematic examination of Ordnance Survey mapping, aerial photography and map databases provided by English Nature and the British Geological Survey.

5.1.3 Prioritisation of Potential Contaminated Land Sites

Wokingham Borough Council's objective is initially to deal with the most serious ground contamination problems which may pose an actual or potential risk to human health, controlled waters or the environment. The Council will prioritise this work in the following order:

1. The protection of human health
2. The protection of groundwater
3. The protection of surface water
4. The protection of designated ecosystems and other sites of ecological importance
5. The protection of damage to property and designated historical sites, including ancient monuments

Risk prioritisation of sites is carried out using the tools available in Council's GeoEnviron Contaminated Land Data Management System. Sites are prioritised by taking into account the following factors:

- Previous industrial uses
- Potential contaminants associated with previous industrial uses
- The current land use
- Proximity to receptors i.e. humans, surface waters, groundwater and ecological systems
- The presence of potential pathways that exist on the site.

Each site is then assigned a risk score which can be compared with other sites to produce a Site Prioritisation or Ranking List. The scoring system is weighted such that it reflects the Council's general priorities as outlined above. Currently all sites have been scored between 0 and 50 with regard to risks to Human Health. Below is a breakdown of the scores sites have received and their categorisation.

Table 5: Breakdown of sites by Potential Human Health Risk Category

Potential Risk Category (Human Health)	Score	No. of Sites
Very High Risk	45-50	36
High Risk	40-44	46
Medium Risk	30-39	111
Low Risk	20-29	154
Very Low Risk	0-19	493

⁸ Humans or environmental features (i.e. surface water, groundwater, ecology and property) that may be affected by contamination

Where necessary the ranking list can be further refined using the additional 'protection' factors listed in paragraph 5.1.3. above.

The prioritisation list can then be further refined by removing sites that have already have been investigated and remediated through the planning process.

A more detailed description of the prioritisation system used by the Council is available in Appendix 2.

5.1.4 Further Site Investigation

After the prioritisation process a phased approach to more detailed site investigation will take place. The process to be followed, as set out in document CLR 11, is summarised in the flow chart provided as Figure 3 overleaf:

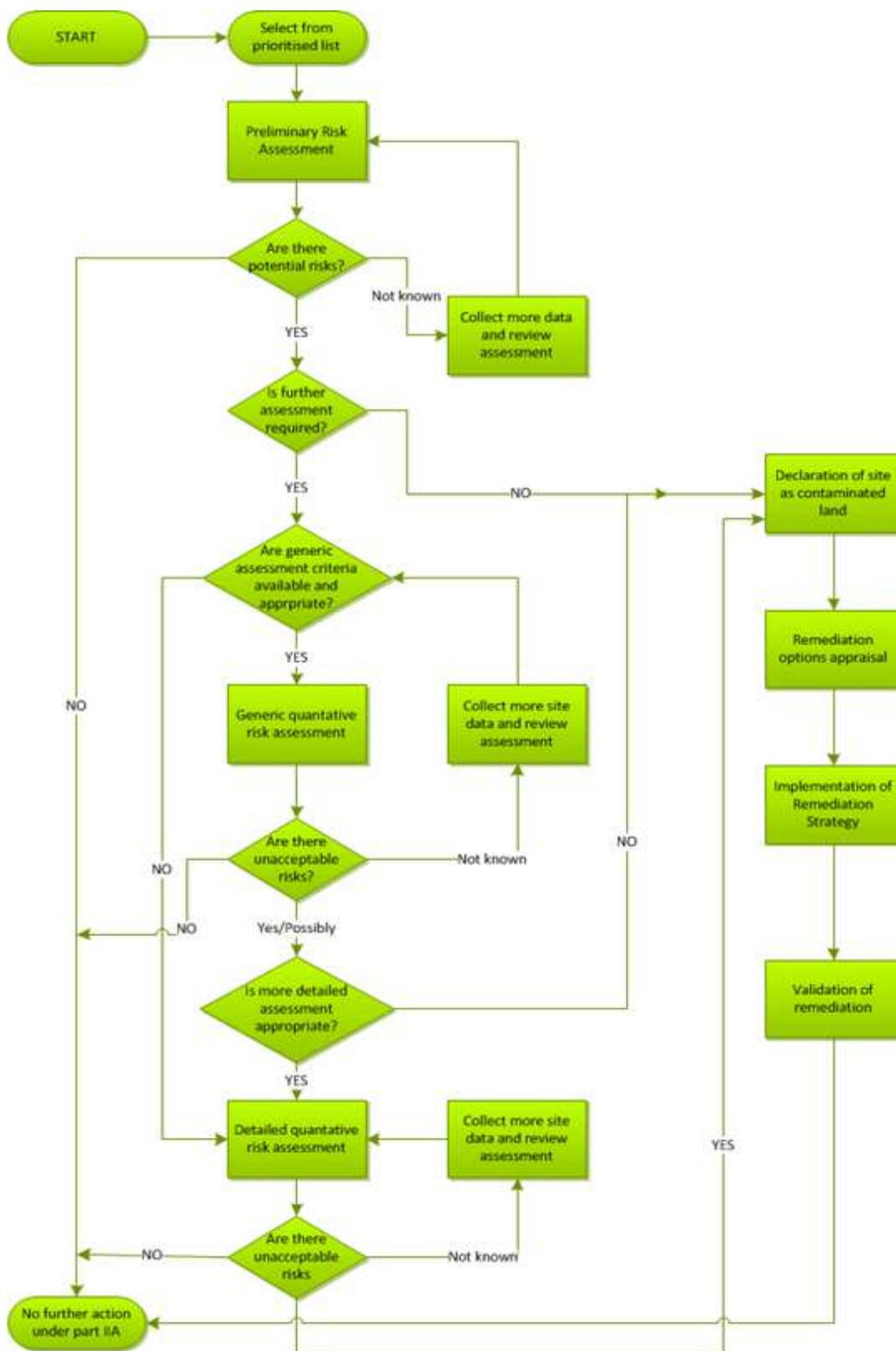


Figure 3: The Process of Managing Land Contamination

5.2 Determination of Contaminated Land

5.2.1 Determining that Land is Contaminated Land

Under the Part IIA regime there are four grounds on which land (excluding radioactively contaminated land) can be defined as contaminated:

- a) Significant harm is being caused to a human or relevant non-human, receptor.
- b) There is a significant possibility of significant harm being caused to a human, or relevant non-human, receptor.
- c) Significant pollution of controlled waters is being caused.
- d) There is a significant possibility of significant pollution of controlled waters being caused.

This risk of harm or pollution involves the consideration of the presence of contaminant linkages (as detailed above) which are identified through the examination of information gathered from detailed site inspection (i.e. intrusive investigations and quantitative risk assessments).

It is only when the risks at a site have been assessed and there is found to be “Significant Harm” or “Significant possibility of significant harm” (SPOSH), that a site will be determined as being Contaminated Land.

5.2.2 Informing Interested Parties

When risks at a site are considered to fulfil SPOSH, the Council will produce a “Risk Summary” which will explain its understanding of the risks and other factors the authority considers to be relevant. As required by the guidance, officers will ensure that any risk summaries produced are understandable to the layperson.

Before making a determination, the Council will inform the owners and occupiers of the land and any other person who may be liable to pay for its remediation, of its intention to determine the land unless there is an overriding reason for not doing so. This will allow for these persons to make representations to the Council that may avoid the need for a formal determination.

5.2.3 Land Which May be a ‘Special Site’

Some types of contaminated land are classed as special sites. The full legal definition can be found in the Regulations, Contaminated Land Regulations 2006, however a shortened definition is set out as follows:-

“Special Sites” include land that:

- seriously affects drinking waters, surface waters (for example lakes and rivers) and important groundwater sources
- has been, or is being, used for certain industrial activities, such as oil refining or making explosives
- is being or has been regulated using a permit issued under the integrated pollution control or pollution prevention and control regimes
- has been used to get rid of waste acid tars
- is owned or occupied by the Ministry of Defence
- is contaminated by radioactivity
- is a nuclear site

Before determination of a ‘special site’, the Council will consult the Environment Agency to establish any statutory powers and duties it maintains, such as Waste Management Licences, Water Resources Act etc.

If an area of contaminated land appears to meet the criteria for a ‘special site’, the Council must liaise with the Environment Agency (EA). If the EA agree that it is a special site then the responsibility for securing remediation of the site will pass to them.

5.2.4 Written Record of Determination and Formal Notification

If the Council decides to formally determine a site that is not a ‘special site’, then it will commence regulatory action. This will begin with the preparation of a written record that will include:

- location, boundaries and area of the land in question
- the risk summary for the site and where not already covered in the risk summary, a description of the evidence which confirms the existence and significance of the Contaminant linkage(s);
- a summary of the way the requirements of the statutory guidance were satisfied.

The Council will then formally notify in writing all relevant parties that the land has been declared contaminated. These parties will include:

- the owner(s)
- the occupier(s)
- those liable for remedial action (‘appropriate persons’ in the guidance)
- the Environment Agency

It may not be possible however to identify all of the relevant parties during the notification stage therefore the Council will act on the best information available at the time. The Council will review the situation as and when further information becomes available.

The Council is still be required to complete the formal notification process even if the site is identified as 'special site' and is referred to the EA

The legislation and guidance encourages voluntary remediation wherever possible. Remediation notices are served only as a last resort and after a detailed consultation process has taken place. Before serving a Remediation Notice the Council must be satisfied that there is no alternative approach.

5.2.5 Apportioning Liability

When all significant Contaminant linkages on the site have been identified, the process of apportioning liability will begin. For each linkage, a 'liability group' comprising 'appropriate persons' will be established.

- Class 'A' persons – These are generally speaking the polluters, but will also include persons who "knowingly permit" contamination to occur.
- Class 'B' persons – Where no Class 'A' persons can be found, liability reverts to the owner or the occupier.
- 'Orphan linkages' – These exist when it is not possible to find Class 'A' or Class 'B' persons responsible for the land, or the persons found are exempt from liability.

The Council must make reasonable attempts to identify Class 'A' persons before the liability reverts to Class 'B'.

Any specified remediation will be both appropriate and cost effective. Attention therefore will normally be focused on breaking the pathway, rather than on the removal of the contaminant. The Authority must undertake a cost-benefit analysis in respect of all proposed remedial actions. This analysis will include consideration of potential hardship and the potential for cost recovery.

5.2.6 Apportionment of Costs

When remediation is secured costs will be apportioned between members of the liability group unless agreements exist between the appropriate persons. Tests also exist to exclude groups from liability, including Class 'B' persons who do not have an interest in the capital value of the land, such as tenants.

In accordance with the Statutory Guidance Wokingham Borough Council is required not to cause hardship where one or more parties cannot afford the cost of remediation. The Council is working on establishing a Hardship and Cost Recovery Policy which sets out how this aspect will be addressed.

5.2.7 Deciding that Land is not Contaminated Land

If, following the completion of the detailed inspection and assessment of a site, there is little or no evidence to suggest that SPOSH exists at the site, then the Council will issue a written statement to this effect as required under the new revised statutory Guidance.

5.2.8 Triggers for Reviewing Decision Making

When deciding if a site is classified as contaminated, certain criteria should be met. If these criteria change, such changes in legislation, establishment of case law, revision of guidance values for exposable assessment or any additional information that becomes available, the sites should be re-assessed to ensure they follow the new criteria.

5.3 Dealing with Contaminated Land under the Planning regime

Where potential development sites are identified as lying on within a certain distance of potentially contaminated land the Development Management team will consult with the Environmental Quality team. The team will consider whether further investigation into potential contamination is required and if necessary will recommend that conditions are imposed. The conditions will ensure that an appropriate investigation takes place followed, where necessary, by remediation to ensure that the land is made suitable for its intended use. In certain circumstances the team will recommend refusal of an application if insufficient information on contamination has been provided with the application

The Council has drafted a document entitled 'A Developer's Guide to Potentially Contaminated Land' which will be made available to all developers upon request. This document, to an extent, replaces PPS23 which was withdrawn as part of the Government's review of planning guidance. It is intended to include the guide as an appendix to a supplementary planning document shortly up for review.

All specialist reports submitted to comply with contaminated land conditions will be reviewed by the Environmental Quality Team who will make recommendations as to whether the relevant conditions may be discharged

5.4 Information Management

5.4.1 Contaminated Land Register

Under Section 78R of the Environmental Protection Act 1990, information regarding declared contaminated land is to be maintained within a Register. The following must be included in the register::

- Remediation notices (and any appeals)
- Remediation declaration statements
- Any appeals against charging notices
- Designation of 'Special Sites'
- Notification of claimed remediation
- Convictions for any offences under Section 78M
- Guidance issued under Section 78V(1)

Under Sections 78S and 78T of the Environmental Protection Act 1990, the Authority must not include information relating to affairs of individuals or their businesses without permission, or commercially confidential information.

The Register will be maintained by the Environmental Health and Licensing Department of the Council Offices in Wokingham where it may be viewed by the public during normal office hours. Requests for hard copies of the document should be made to the Environmental Health and Licensing Department and a reasonable charge will be made.

5.4.2 Data Management

All the information collated in relation to potential contaminated land sites is stored in a dedicated Contaminated Land Data Management System known as GeoEnviron.

The GeoEnviron system will continue to be updated with new information relating to contaminated land as it is received. This will include for example, new sites that are identified as part of the continuing inspection process as well as information on sites that are investigated and/or remediated voluntarily or via the planning or Part IIA regimes.

5.4.3 Dealing with Requests for Information

The Council must respond to requests for environmental information made under the Environmental Information Regulations. These may include enquiries in relation to:

- An initial report provided by a private enquiry service such as Envirocheck or
- GroundSure to a Solicitor or home buyer/seller.
- A Solicitor's direct enquiry to the Environmental Quality Team in relation to the buying and selling of residential, commercial or industrial property.
- An Environmental Consultant's enquiry as part of a property transaction, development,
- or due diligence exercise, or
- Individuals interested in collecting information on their own property.

In response the Council will carry out a search of the Environmental Health database and planning records for information on whether a property or site in question is at risk from potentially contaminated land. Information can be provided on the following:

- The location of historic and current landfill sites
- Known areas of contamination on or adjoining the property
- Records of pollution or contamination issues on or adjoining the property
- Nearby permitted processes controlled under the Environmental Permitting Regulations 2010
- Records of site investigations or remediation carried at the property or adjoining properties in respect of potentially contaminated land
- Complaints about environmental issues where substantiated through service of legal notice or prosecution and
- Whether the Council is considering taking any action at the property under Part IIA of the Environmental Protection Act 1990 (which relates to the designation of contaminated land).

The Council must respond to requests for information within ten working days and will charge a reasonable fee for the work based on the current published hourly rate.

5.4.4 Provision of Information to the Environment Agency

Where relevant, information on contaminated land in Wokingham Borough will be exchanged with the Environment Agency.

6 Liaison and Consultation

6.1 Statutory Consultees

Under the DEFRA circular 01/2006⁹ the Local Authority should consult the Environment Agency and other appropriate public authorities, such as the County Council, statutory regeneration bodies, English Nature and English Heritage in developing its strategic approach. With the updated Guidance, consultation is now proposed with:

- Environment Agency English Heritage Natural England
- Department for Environment, Food and Rural Affairs (DEFRA)

⁹ Circular 01/2006 Contaminated Land. DEFRA, 2006.

7 Strategy Review Mechanisms

7.1 Review of Strategy Document

In accordance with the statutory guidance, the Strategy should be reviewed, and revised every five years. During the review, much of the Strategy should be updated including; progress on implementation of the Strategy and voluntary remediation, changes to objectives and any changes in legislation or guidance. An annual review of progress should also be carried out

7.2 Triggers for Early Review

If legislation changes before the review period is due, it is likely that the Strategy will need to be updated or amended to incorporate any new requirements or new information from statutory bodies, public or other interested parties.

8 Appendices

8.1 Appendix 1 - Requirements for a Contaminated Land Strategy

The Contaminated Land Statutory Guidance 2012 states that the Local Authority should include in its strategy:

- (a) Its aims, objectives and priorities, taking into account the characteristics of its area.
- (b) A description of relevant aspects of its area.
- (c) Its approach to strategic inspection of its area or parts of it.
- (d) Its approach to the prioritisation of detailed inspection and remediation activity.
- (e) How its approach under Part IIA fits with its broader approach to dealing with land contamination. For example, its broader approach may include using the planning system to ensure land is made suitable for use when it is redeveloped; and/or encouraging polluters/owners of land affected by contamination to deal with problems without the need for Part IIA to be used directly; and/or encouraging problematic land to be dealt with as part of wider regeneration work.
- (f) Broadly, how the authority will seek to minimise unnecessary burdens on the taxpayer, businesses and individuals; for example by encouraging voluntary action to deal with land contamination issues as far as it considers reasonable and practicable.

8.2 Appendix 2 – STM Environmental Site Prioritisation System

GeoEnviron is a database management system specifically designed for Part IIA. It allows for the management of complex site related datasets and is also tightly integrated to GIS allowing for efficient data capture from maps.

The site prioritisation exercise is carried out using the GeoEnviron Contaminated Land Management System and the prioritisation methodology applied within the system. The methodology is summarized below.

Categorisation of Potentially Contaminative Sites

The first step in the prioritisation is to collate all the information on the potential contaminative uses. Where possible, each site's potentially contaminative use is 'compared' to the existing DOE (former Department of Environment) industry profiles, so that an idea of the potential contaminants likely to be associated with the site could be obtained. Based on this information, source hazard scores (ranging from 1 to 6) are assigned to each of the sites with respect their potential impact on human (HSHS), groundwater (GWSHS), surface water (SWSHS), ecological (EcoSHS) and property (PropSHS) receptors.

Human Health Risk Prioritisation

The next step is to identify potential human health receptors for each of the potential sites. This is achieved using the GIS. Each potential site is located on the GIS and its current use assessed by visually examining digital aerial photography and Ordnance Survey mastermap/ landline layers.

Each of the current uses identified is allocated a receptor sensitivity score (HHRSS) within the GeoEnviron database (see Prioritisation Spreadsheet).

The human health risk score (HHRSK) for each site is then calculated by multiplying the Human Health hazard score (HSHS) with the Human Health receptor sensitivity score (HHRSS).

Groundwater Risk Prioritisation

As described above, each site is assigned a groundwater source hazard score (GWSHS) based on the considered potential impact of the contaminative use on groundwater.

In order to be able to risk rank sites in terms of their potential risk to groundwater, it is necessary to collect information on the nature of the groundwater receptor underlying the each site. Source Protection Zone digital maps obtained from the Environment Agency are used for this purpose.

Each SPZ is given a groundwater receptor sensitivity score (GWRSS) based its importance as a potable water source. Intersect queries are then performed using GIS to obtain information on the nature of the SPZ underlying each site. Groundwater Risk Scores (GWRSK) for each site is then calculated by multiplying the GWSHS assigned to the site by GWRSS of the SPZ underlying the site.

Surface Water Risk Prioritisation

As described above, sites are assigned a surface water hazard score (SWSHS) based on the considered potential impact of the contaminative use on surface water receptors.

Potential surface water receptors are then identified by carrying out proximity queries in GIS for each of the potential sites using OS landline/mastermap water layers. The queries check for surface water features that lie on site and within 50, 100, 150 and 200 metres of the potential sites.

Surface water receptor sensitivity scores (SWRSS) are then assigned to each site based on proximity to a surface water receptor.

The surface water risk score (SWRSK) is then calculated by multiplying the SWSHS by the SWRSS.

Ecological Risk Prioritisation

As described above, sites are assigned an ecological source hazard score (EcoSHS) based on the considered potential impact of the contaminative use on ecological receptors.

Potential ecological receptors are then identified by carrying out GIS intersect queries of the potential sites and English Nature datasets. These queries check for ecological zones situated within the boundary of a potential site. Ecological receptor sensitivity scores (EcoRSS) are then assigned to each site based on the presence/absence of an ecological protection zone.

The Ecological Risk Score (EcoRSK) is then calculated by multiplying the EcoSHS with the EcoRSS.

Property Risk Prioritisation

As described above, sites are assigned a property source hazard score (PropSHS) based on the considered potential impact of the contaminative use on property receptors.

Potential property receptors are then identified by carrying out GIS intersect queries of the potential sites and English Heritage datasets. These queries check for sensitive properties situated within the boundary of a potential site. Property receptor sensitivity scores (PropRSS) are then assigned to each site based on the presence/absence of a sensitive property.

The Property Risk Score (PropRSK) is then calculated by multiplying the PropSHS with the PropRSS.

The GeoEnviron Contaminated Land Management System allows the prioritisation of potentially contaminated sites to be based on human health receptors alone, or the collation of all receptors considered (human health, groundwater, surface water, ecological and property).

When information relating to the prioritisation of a site is altered within GeoEnviron, the risk score is modified, allowing the prioritisation list of sites to be kept up to date as new information is made available.