



**CHEL TENHAM**  
BOROUGH COUNCIL



**Contaminated Land Inspection Strategy**

**1<sup>st</sup> Review - September 2008**



# **Strategy for Contaminated Land Inspection – April 2008**

<b>CONTENTS</b>	<b>Page No.</b>
<b>Introduction</b>	6
<b>Chapter 1 – National and Local Policy context</b>	
1.1 Background to the legislation	10
1.2 National objectives of the contaminated land regime	10
1.3 Local objectives	11
<b>Chapter 2 – Aims and objectives of the Strategy</b>	
2.1 Strategy statement	13
2.2 About this strategy	13
2.3 Roles and responsibility	14
2.4 Aims	16
2.5 Regulatory and Enforcement Priorities	16
2.6 Other regulatory controls	17
2.7 Land ownership of an enforcing authority	18
2.8 Team Working	19
<b>Chapter 3 – Contaminated Land</b>	
3.1 Definitions	20
3.2 Outline of the statutory procedure	21
<b>Chapter 4 – Characteristics of Cheltenham</b>	
4.1 Geographical location and size	23
4.2 Brief description and history	23
4.3 Land Use characteristics	23
4.4 Potential sources of contamination	25
4.5 Potential Specified Receptors	27
4.6 The geological and hydro-geological characteristics	30
4.7 Regional Hydrology	32
4.8 Radioactive Contamination and Radon	33
4.9 Specific Local Features	34
<b>Chapter 5 – The Inspection Procedure</b>	
5.1 Site identification	35
5.2 Site prioritisation process	35
5.3 Limitations	36
5.4 The Risk Assessment Process	37
5.5 Investigation and determination of Contaminated Land	38
5.6 Record of Determination	40
5.7 Special Site designation	40
5.8 Contaminated Land and the Planning Process	41

<b>Chapter 6 – Liability and Remediation</b>		<b>Page No.</b>
6.1	Identifying liability	42
6.2	Apportionment of Costs	42
6.3	The Council’s Hardship Provisions	43
6.4	Remediation Notices	44
6.5	Remediation	44
6.6	Orphan Sites	45
6.7	Urgent Action	45
<b>Chapter 7 – Liaison and communication</b>		
7.1	Internal communication	46
7.2	Communication with other statutory bodies	46
7.3	Communication with Stakeholders	47
7.4	Risk Communication	47
7.5	Consultation on the Inspection Strategy	48
<b>Chapter 8 – Data and Information Management</b>		
8.1	Obtaining desktop information	49
8.2	Public Register of Contaminated Land	50
8.3	Requests for information	50
8.4	Complaints and confidentiality	51
<b>Chapter 9 – Contaminated Land Activity in Cheltenham</b>		
9.1	Roles and responsibilities	52
9.2	Progress to date	53
9.3	Current Action Plan	54
9.4	Performance indicators and future progress	54
<b>Chapter 10 – Projected Costs and Resourcing</b>		
10.1	DEFRA funding	56
10.2	Council funding	56

## **APPENDICES**

	<b>Page No.</b>
Appendix 1 - Special sites	58
Appendix 2 - List of consultees and contact points	59
Appendix 3 - Pollution of controlled waters	63
Appendix 4 - List of potentially contaminative land uses	65
Appendix 5 - Powers of entry and the appointment of suitable persons	67
Appendix 6 - Examples of preliminary risk assessments	71
Appendix 7 – Selected key guidance documents	73
Appendix 8 – Planning policy and guidance	75
Appendix 9 - Contaminated land investigation and development control	77
Appendix 10 – Glossary of terms	80



## **INTRODUCTION**

### **The Inspection Strategy**

Part 2a of the Environmental Protection Act 1990 came into force on 1<sup>st</sup> April 2000 and introduced a regulatory framework for contaminated land identification and remediation in England. The purpose was to create a regulatory mechanism for contaminated land consistent across the country, to encourage a strategic approach and to allow issues associated with contaminated land to be dealt with using a single regulatory process. The Act was amended in 2006 to include land contaminated by radioactivity.

The legislation places a duty on local authorities to identify 'contaminated land' within the borough boundary according to a published inspection strategy which will be kept under review. In accordance with these requirements, Cheltenham Borough Council published its first 'Strategy for Contaminated Land Inspection' in 2001. This first review builds on the initial strategy, records progress and sets future objectives.

The council is the primary regulator of the above Act within the borough and the council's Environmental Health department will be responsible for its implementation.

This strategy for Cheltenham contains background information on the legislation, some details of how the borough is affected and procedures for undertaking statutory duties.

### **Contaminated Land**

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 a significant possibility of such harm being caused; or
- b) pollution of controlled waters is being, or is likely to be, caused

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

Any land which appears to the local authority in whose area it is situated to be in such a condition, by reasons of substances in, on or under the land, that –

- a) harm is being caused, or
- b) there is a significant possibility of such harm being caused.

What may and may not constitute the various categories of harm is described in the statutory guidance.

## **Inspection Process**

Local authorities must search their districts for land that has both sensitive receptors and sources of potential contamination. Where they have good reason to believe these both exist, they must undertake a formal risk assessment in accordance with established scientific principles in order to establish whether there is the potential for them coming together and causing harm or pollution.

Where they are satisfied that significant harm is occurring, or there is a significant possibility of such harm, or pollution of controlled waters, they must declare that a significant pollutant linkage exists and that the land is therefore contaminated land by definition. In every case where the land does not fall within the category of a special site, they must begin regulatory action. Special sites are specified in regulations and include those sites where there is serious river pollution and are particularly dangerous.

Regulatory action takes the form of formal notification, consultation, agreements on voluntary remediation and remediation notices. The overall aim is the prevention of harm or pollution. The Act also contains sections on assigning liability where the 'polluter pays' principle normally applies.

Information from historical maps and land use indicates the presence of around 600 potentially contaminated sites in the borough. The approach to inspection will be source led due to the relatively even spread of population across the borough. Therefore potentially contaminated sites will be identified first, then the site and surrounding area surveyed for contamination receptors. Those sites which are known to be contaminated will be the first to undergo preliminary investigation.

The protection of human health is the main priority of the strategy. Therefore where the potential for contamination exists, areas such as residential property and children's play areas will be given a higher priority for more detailed investigation.

A contaminated land officer has been appointed to implement the requirements of Part 2a of the Environmental Protection Act(1990). An effective Geographical Information System and linked database system is utilised to carry out map based surveys and manage site information.

## **Regulation**

Where necessary, the local authority must use its regulatory powers to enforce remediation by the liable party; typically the original polluter or the current landowner. Such enforcement can be complex and resource intensive. Where possible however, it is preferable to secure voluntary remediation through constructive dialogue with the relevant stakeholders. The Council's policy for inspecting and remediating sites is detailed in Chapter 5.

In certain case, where a site fulfils certain criteria, it can be designated as a 'special site' and the responsibility for regulation and potential enforcement action is transferred to the Environment Agency. Details of communication and liaison with the Environment Agency and other stakeholders are contained within Chapters 5 and 6.



## Progress to date

Details of progress in implementing the objectives of the council's contaminated land inspection strategy are contained in Chapter 9.

## Information

A specific requirement of Part 2a is the creation and maintenance of a Public Register of land that has formally been determined to be contaminated land. Cheltenham Borough Council has such a register which can be viewed on line at [www.cheltenham.gov.uk](http://www.cheltenham.gov.uk) listed under 'contaminated land'.

At the time of publication of this strategy, there is currently only one site which has been determined as contaminated land in the borough.

## Amended timetable for the implementation of Part 2a of the Environmental Protection Act 1990 to identify and remediate contaminated land

Duty	Year
Production and publication of statutory contaminated land strategy	2001
Review of Strategy and publication	2008
Inspection of the district, identification of potentially contaminated sites and prioritisation for further investigation	2008
Detailed inspection and assessment of priority category 1 sites	2012
Detailed inspection and assessment of remaining potentially Contaminated sites	estimate 2025

## Enquiries

Please address any enquiries to:

The Contaminated Land Officer  
Pollution Control  
Environmental Health  
Cheltenham Borough Council  
PO Box 12  
Municipal Offices  
The Promenade  
Cheltenham  
GL50 1PP

## **Explanation of terms**

The legislation and guidance is very heavily punctuated with many complex and often unusual terms. To help in the interpretation of these, an extensive glossary has been included in Appendix 10.

# **1. NATIONAL AND LOCAL POLICY CONTEXT**

## **1.1 Background to the legislation**

Industrial change and demographic shift during the 20th century resulted in the need for large scale re-organisation of our towns and cities. Industries moved out or disappeared leaving brownfield sites in our urban landscape. At the same time, changes in heating methods, and the advent of the consumer society, has had a significant effect on the type and volume of refuse it has been necessary to landfill. Inevitably, these changes have left behind a legacy of contaminated or polluted land which, in some cases, may be harmful.

Previous governments found it difficult to implement a suitable regulatory regime for contaminated land due to concerns that land would be unfairly blighted because of public perception. However it was clear a regime was required to ensure sustainable development and provide confidence in brownfield regeneration whilst securing environmental and public health benefits.

In 1994, the Department of the Environment consulted on a white paper, *Paying for our past* and the outcome of this was the policy document, *Framework for contaminated land*, published in November 1994. This useful review emphasised a number of key points:

- the government was committed to the polluter pays principle, and suitable for use approach
- concern related to past pollution only (there were effective regimes in place to control future sources of land pollution)
- action should only be taken where the contamination posed actual or potential risks to health or the environment and there are affordable ways of doing so
- the long standing statutory nuisance powers had provided an essentially sound basis for dealing with contaminated land

The proposed new legislation was first published in June 1995 in the form of section 57 of the Environment Act which amended the Environmental Protection Act 1990 by introducing a new Part 2a. After lengthy consultation on statutory guidance this came into force in April 2000. In August 2006, the regime was extended by new regulations to include land that is contaminated by virtue of radioactivity.

## **1.2 National objectives of the contaminated land regime**

The overall priority of the regime has been specified as the prevention of new contamination via the pollution control regimes and to encourage sustainable development whilst securing brownfield regeneration.

The government has embraced sustainable development as a cornerstone of its environmental policy and has introduced a number of controls to secure its implementation. However it is recognized that contaminated land presents potential threats to sustainable development

The government's stated objectives in introducing Part 2a were;

- To ensure that risks associated with land contamination are reduced to an acceptable level
- To bring contaminated land back into beneficial use
- To make sure that the cost burdens of doing so are proportionate, manageable and economically sustainable

These objectives underlay the 'suitable for use' approach for the sustainable development of contaminated land. The aim is to maintain an acceptable level of risk at minimum cost, thereby not disturbing social, economic and environmental priorities.

By requiring land to be suitable for use, rather than requiring its clean-up to some arbitrary standard, remediation of contaminated land is therefore limited only to that which is necessary to prevent unacceptable risk and not necessarily free from all contamination.

In addition to providing a more secure basis for direct regulatory action, the government considers that the improved clarity and consistency of the new regime should encourage voluntary remediation. It is intended that companies responsible for contamination should assess the likely requirements of regulators and plan remediation in advance of regulatory action.

It is considered that development activity regulated through the planning process has provided a greater incentive for voluntary remediation than Landfill Tax exemption and Corporation Tax Relief will play an increasing role in encouraging involuntary action.

### **1.3 Local objectives**

Cheltenham Borough Council welcomes the introduction of Part 2a of the Environmental Protection Act 1990 which compliments the council's own corporate aims and objectives.

**Cheltenham's sustainable community strategy** was launched on 29th October 2007 setting out a 20 year vision for Cheltenham. The practice of building on brownfield sites was encouraged to continue by making the most efficient and appropriate use of land. The implementation of a contaminated land strategy to identify and then categorise the degree of land remediation required will aid this initiative.

**The Cheltenham Borough Local Plan Second Review (2006)** also includes policies relevant to contaminated Land. The plan is intended to perform four functions: to develop the policies and proposals of the structure plan; to provide a detailed basis for development control; to provide a basis for co-ordinating development and other use of land; and to bring local and detailed planning issues before the public.

One of the core policies, CP1: Sustainable development, states that development will be permitted only where it takes adequate account of the principles of sustainable development. In particular, development should: b) give priority to the use of previously developed land with one of the key principles behind this being the use of brownfield land before greenfield.

The plan also states that the council will collect and maintain information on sites within the borough which have been identified as contaminated, and will encourage their rehabilitation. It will also seek to ensure that their development does not give rise to future environmental or public safety problems. In particular, that it does not cause or increase pollution of the water environment. In this context the advice of the Environment Agency will be sought.

Policy NE4 states that “Development will only be permitted on a site subject to contamination where the site is remediated, either before development or as part of that development, to a level suitable for the intended use.”

Prior to granting planning permission for a development, the council is also required to assess and recommend precautions if a development is within 250 metres of land which is, or has been during the past 30 years, used for waste disposal.

The contaminated land strategy will help to obtain and maintain information on potentially contaminated land. It will enable decisions concerning the rehabilitation of that land to be based on sound scientific judgement and good information.

The Council’s Community Services Division has a number of key objectives. Securing identification and remediation of contaminated land supports the objective;

“To protect and improve the health, safety and environment of all the people who live, visit or work in Cheltenham”

**Gloucestershire Structure Plan Second Review (1999)** contains policies relevant to sustainable development and maximising the use of brownfield sites. These policies remain material considerations until the Regional Spatial Strategy is published in early 2008.

**National Planning Policy Guidance (PPS23)** Planning and pollution control sets standards and objectives for the redevelopment of land that may be subject to contamination. Specifically it states that land should be incapable of being determined as contaminated land following re-development.

See APPENDIX 8 for further information.

## **2. AIMS AND OBJECTIVES OF THE STRATEGY**

### **2.1 Strategy Statement**

Cheltenham Borough Council will use the necessary resources within all relevant departments to identify areas of land that may be contaminated by previous land use. These areas will be investigated to determine whether significant contamination exists and if significant harm or pollution may result to recognised receptors. Where contaminated land, is identified, measures to remediate such land will be put in place to satisfy the requirements of Part 2a of the Environmental Protection Act 1990. The overall aims of the strategy will be to protect human health, protect aspects of the environment and bring polluted land back into beneficial use.

### **2.2 About this strategy**

Section 78B (1) of the Environmental Protection Act 1990 (EPA 1990) states that: every local authority shall cause its area to be inspected from time to time for the purpose of:

- identifying contaminated land
- enabling the authority to decide whether any such land is land which is required to be a special site (see appendix 1)

Section 78B (2) states that the authorities must act in accordance with guidance issued by the secretary of state in this respect. Statutory guidance from the Department of the Environment Transport & Regions (Circular 02/2000) states that all authorities must produce a formal contaminated land strategy. It must clearly set out how land which merits detailed individual inspection will be identified in an ordered, rational and efficient manner, and in what timescale. The strategy must be completed, formally adopted by the council, and published within a period of fifteen months from the publication of the guidance. Copies of the final document must also be forwarded to the Environment Agency. Subsequently the strategy must be kept under periodic review.

Cheltenham Borough Council produced its first strategy for contaminated land inspection in 2001. This is the first review of the strategy.

The strategy must:

- Be rational, ordered and efficient
- Be proportionate to the seriousness of any actual or potential risk
- Ensure that the most pressing and serious problems are identified and addressed first
- Concentrate resources on investigating areas where the authority is most likely to identify contaminated land
- Efficiently identify requirements for detailed inspection of particular areas of land

The strategy is also required to reflect local circumstances including:

- Available evidence of significant harm or pollution of controlled waters and any available information on land contamination.
- The prevalence of each defined receptor in the Borough
- The extent to which these receptors are likely to be exposed to defined contaminants
- The history, scale and nature of industrial or other activities which may have contaminated the land in the Borough
- The nature and timing of past redevelopment within the Borough
- The extent to which remedial action has already been taken to deal with land contamination or is likely to be taken as part of impending redevelopment
- The extent to which other regulatory authorities might consider harm is being or may be caused to particular receptors, or pollution of controlled waters is being or may be caused, within the Borough

This revision of the Council's strategy has been undertaken to satisfy these requirements. Consultation with a number of other departments and functions within the Council has also been undertaken, including Development Control, Building Control, Legal Services, Engineering Services and the Directorate.

It should be noted that there is no formal mechanism in place for approval of local authority strategies, although the Environment Agency, Gloucestershire County Council, Natural England, English Heritage, DEFRA and any statutory regeneration bodies, should be consulted (see appendix 2 for details of consultees). As part of the formal consultation process the Environment Agency will assess compliance with statutory guidance and provide appropriate comments.

## **2.3 Roles and responsibilities**

The primary regulator in respect of these powers are the local authorities. In Cheltenham Borough Council the strategy will be under the control of the Pollution Control section within the Community Services Division. It should be noted that this is a complex and demanding enforcement role which will be carried out in accordance with the council's corporate enforcement policy and the Cabinet Office enforcement concordat March 1998.

The statutory guidance states: 'The local authority has the sole responsibility for determining whether any land appears to be contaminated land.'

This is a significant responsibility which reflects existing local authority duties under the statutory nuisance regime and Town & Country Planning, development control.

The role in broad terms includes:

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

Special sites where the Environment Agency is the enforcing authority are described in Appendix 1. The Environment Agency also has four main roles:

- to assist local authorities in identifying contaminated land (particularly where water pollution is involved)
- to provide site specific guidance to local authorities on contaminated land where requested
- to act as enforcing authority for contaminated land designated a special site
- to publish periodic reports on contaminated land

Where the presence of contaminated land has been confirmed, the enforcing authority must:

- establish who should bear responsibility for remediation
- decide, after consultation, what must be done in the form of remediation and ensure it is effectively carried out
- determine liability for the costs of the remedial works
- consult with the relevant parties regarding the remediation actions
- serve remediation notices where necessary
- monitor the effectiveness of remediation carried out
- maintain a public register of regulatory action in relation to contaminated land
- Report progress made under Part 2a to the Environment Agency



## **2.4 Aims**

In fulfilling its duties under Part 2a, the aims of the Borough Council are;

- To identify actual and potentially contaminated land sites within the Borough by a rational, ordered and efficient investigation
- To secure the remediation of all identified contaminated land in accordance with the liability regime introduced under Part 2a of the Environmental Protection Act (1990)
- To prevent the creation of new contaminated land through the planning process by identifying sites which, even though they are not considered to be contaminated land in their present state, might become so through inappropriate development on site or nearby.
- Support a suitable for use approach in designing and implementing appropriate, cost-effective and wherever possible sustainable remediation schemes to bring contaminated sites back into beneficial use.
- Record, collate and make available information on land quality throughout the Borough in a transparent and accessible way whilst minimising the risk of undue public concern.
- To engage effectively with all interested parties and stakeholders including; the public, owners of potentially contaminated land, buyers and sellers of property, Non Government Organisations or charitable organisations, professional advisors and other regulatory or statutory bodies.
- To undertake its duties in accordance with the requirements of legislation and the procedures set out in this strategy.

## **2.5 Regulatory and Enforcement Priorities**

The Council's priorities when dealing with contaminated land and potentially contaminated land will be;

- To protect human health
- To protect Controlled Waters
- To protect designated ecosystems and other sites of wildlife importance.
- To prevent damage to property and designated historical sites and ancient monuments

## **2.6 Other regulatory Controls**

As stated in 1.2 above, the primary aim of the government is to prevent new contamination occurring. There are several situations where existing pollution control legislation could also apply to control the effects of land contamination:

### **Planning and development Control**

Part 2a does not normally apply where land is within the normal cycle of redevelopment and regeneration. Planning law, in essence, deals with proposed land use, while Part 2a is about current land use. Potential contamination of any site proposed for redevelopment is a considered a material planning consideration and would normally require investigation, and if necessary, remediation as part of the development control process. Under planning, it is the developer who is ultimately responsible for securing the safe development of the site. The framework governing the interaction of planning and contaminated land is set out in Planning Policy Statement 23 (2004).

### **The Building Regulations**

Approved Document C of the Building Regulations (published 2006) introduces a requirement on builders to ensure that the ground covered by a development is reasonably free of materials that might affect its stability and to take reasonable precautions to avoid health and safety dangers resulting from contamination.

### **Integrated Pollution Control and Pollution Prevention and Control**

There are certain processes prescribed under the above regulations, for a pollution control regime. This is enforced by the Environment Agency and includes prevention of pollution to land. Section 27 of the act gives the Environment Agency power to take action to remedy harm caused by a breach of IPC controls, including land contamination.

Under the PPC regime, a baseline site report must be produced as part of a permit application and on revocation or surrender of a permit, operators will be required to return the site to a satisfactory state. During site characterisation, a situation on part of the site may be identified that initiates the Part 2a process.

### **Waste Management Licensing (Part II EPA 1990)**

All waste disposal and processing sites should be subject to waste management licensing. Contamination causing harm or pollution of controlled waters should be dealt with as a breach of the conditions of the licence. In exceptional circumstances, where the problem arises from an unlicensed activity, it is possible that Part 2a could apply. An example of this would be a leak from an oil tank outside the tipping area.

Where there has been an illegal tipping of controlled waste (fly tipping) this should also be dealt with under the Environmental Protection Act 1990 Part II (section 59). The Environment Agency has powers to remove waste and deal with the consequences of its presence in these circumstances.

It is important to note that remediation activities on a contaminated site are likely to require authorisation and permitting under waste management legislation by the Environment Agency.

### **Pollution of controlled waters not arising from land (Water Resources Act 1991)**

Where a pollution incident has occurred and the pollutant is discharged directly into the body of water, or it has left land and it is entirely in the body of water (the land is no longer causing pollution), the Water Resources Act 1991 will apply. The Act gives the Environment Agency powers to prevent or remedy pollution of controlled waters by using Works Notices.

### **Change of land use**

Where land becomes a risk to potential new receptors as a result of a change of use, the Town & Country Planning Development Control regime will continue to apply as before. This enables planning conditions to be applied to any consent which require the assessment and if necessary the remediation of potentially contaminated land.

### **Risk of harm to employees**

Where there is a risk of harm to persons at work from land contamination, this should be dealt with under the Health and Safety at Work etc Act 1974. The enforcing authority will be either the Health & Safety Executive or this council depending on the work activity.

### **Risk of Harm Following an Incident at a COMAH Site (Control of Major Accident Hazard Regulations 1999)**

Where there has been a release, explosion or other major incident, which has caused land contamination, the restoration should be carried out as part of the COMAH on site/off site emergency restoration plan.

### **Statutory Nuisance (Part III of the EPA 1990)**

Statutory nuisance no longer applies as the main regulatory control for contaminated land, however it may still apply where land is causing nuisance as a result of other concerns e.g. odour. The legislation has been amended to provide that no land in a *contaminated state* can be a statutory nuisance. Potential nuisance impacts of remediation activity e.g. noise, dust etc. may still be considered a statutory nuisance.

## **2.7 Land under the ownership of an enforcing authority**

Where land owned by a local authority is found to be contaminated land, unless a special site, there will be no separate enforcing authority. Local councils must, however, carry out their duties as though they were the enforcing authority, undertake the same consultations, assessments and seek appropriate remedial works as necessary.

To this end a formal relationship should be maintained between the department responsible for enforcement of the new regime and that responsible for council owned land. All information relating to the identification, assessment and remediation of council owned land must be fully reported to satisfy the needs for transparency.

## **2.8 Team Working**

This strategy impacts on potentially all departments within the Council, in particular;

### **Planning and development control**

The inspection of the district will identify areas of potentially contaminated land which may be developed, awaiting development, derelict, protected or green belt. This may result in the need to re-examine past development control files or identify development routes for contaminated sites which may subsequently impact on the structure and local plans. To carry out this work it will be necessary to search sites contained on the NLUD. Equally the policies adopted in the local development plan and work undertaken to fulfil the planning functions of the council can aid the implementation of the strategy.

### **Building control**

Building control has the duty to enforce protection measures in new build projects to mitigate the impact of contamination on property. Additionally information they hold will be essential to quantify risks.

### **Legal**

This is a highly complex piece of legislation which could have significant implications for the council, land owners and occupiers. Legal advice may be required on many aspects, including those relating to enforcement, liability, powers of entry, data protection and access to information.

### **Engineers and highways**

Land under highways, pavements, verges and common areas may be contaminated and present a risk to potential receptors. Highways authorities must maintain registers under Part III of the New Roads and Street Works Act 1991 regarding, amongst other things, streets with special engineering difficulties. This includes risks from contamination. Engineering expertise will also be required for the specification and inspection of remediation schemes.

### **Information technology**

Significant volumes of data will need to be held both on data base and geographical information systems. Support will be required on the use of these systems and data protection.

### **Leisure and housing**

Land in use and controlled by these departments may be contaminated and require remediation. The arboricultural officer may need to be consulted on remediation and tree growth and the conservation officer on impacts to eco-receptors.

### **Property**

The head of property services will need to lead the council on the remediation of any contaminated sites it is found to be responsible for.

### **Finance**

This legislation can have significant resource implications for the council, both as an enforcing authority and land owner.

### **3. CONTAMINATED LAND**

#### **3.1 Definitions**

Contaminated land is defined by Section 78A(2) of the Environmental Protection Act 1990 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, where:

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

#### **Significant Harm**

Harm is defined in Section 78(4) as:

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

What may or may not constitute significant harm is defined in Table A, Appendix A of the Statutory Guidance (see Appendix ? of this strategy).

#### **Significant possibility of Significant Harm**

In deciding whether the possibility of significant harm being caused is significant, Cheltenham Borough Council must take into account the following factors;

- the nature and degree of harm
- the susceptibility of the receptors
- the timescale in which the harm might occur

The conditions under which significant possibility of significant harm may occur are detailed in Table B, Appendix A of the Statutory Guidance (see Appendix of this strategy)

#### **Pollution of Controlled Waters**

Controlled Waters are defined by Section 104 of the Water Resources Act 1991 as;

- The sea, extending 3 miles from the mean low water spring tide;
- Inland waters which are defined as the waters of any relevant loch, pond, relevant river or watercourse above the freshwater limit;
- Coastal waters extending from mean low water spring mark to the highest tide or to the freshwater limit of the river or watercourse;
- Groundwater contained in underground strata in the saturated zone, including water in wells, boreholes and excavations into underground strata.

Pollution of controlled water is defined by Section 78A(9) of the Water Resources Act 1991 as;

- the entry into controlled water of any poisonous, noxious or polluting matter or any solid waste matter

Cheltenham Borough Council will need to be satisfied that pollution of controlled water is being, or is likely to be caused and that a substance is continuing to enter controlled waters in order to make a determination of contaminated land.

Cheltenham Borough Council will seek the advice from the Environment Agency when considering whether pollution of controlled waters is occurring, or is likely to occur.

### **3.2 Outline of the statutory procedure**

Local authorities must search their districts for land which has both sensitive receptors and sources of potential contamination. When deciding whether land is contaminated, they must identify a significant *pollution linkage*. A pollution linkage means a relationship exists between a *source* of contamination, a *pathway* and a *receptor*.

#### **Source**

The source is defined as a substance which is in, on or under land and which has the potential to cause harm or to cause pollution of surface water or groundwater.

#### **Receptor**

The receptor is either;

- People, a group of living organisms, an ecological system or property as listed in Table A of the Statutory Guidance and which is being (or could be) harmed by a contaminant; or
- Controlled waters which are being (or could be) polluted by a contaminant

#### **Pathway**

The pathway is one or more routes by which a receptor is being (or could be ) exposed to the source.

Where they are satisfied that significant harm is occurring, or there is a significant possibility of such harm, or pollution of controlled waters, it must declare that a significant pollutant linkage exists and that the land is therefore contaminated land by definition. In every case where the land does not fall within the category of a 'special site' they must commence regulatory action.

This involves a series of complex procedures which must include:

- a formal written record of the determination
- formal notification of all interested parties
- determination of the physical extent of the land

- the extent and seriousness of the risks (the need for urgent action)
- the number and type of pollutant linkages
- the effect each significant pollutant linkage may have on controlled waters (if any)
- the most appropriate and cost effective remedial scheme for each significant pollutant linkage
- identification of liability groups and appropriate persons for each pollutant linkage
- assessment of hardship in the case of each appropriate person
- effective remediation of the site and recovery of costs where appropriate

A series of consultations must also be carried out at each stage with the ultimate aim of securing voluntary remediation (without the need for enforcement action). Where the land does fall within the definition of a special site the Environment Agency becomes the enforcing authority. In these cases, however, the local authority must still make the determination and formally notify the interested parties.

In certain circumstances the local authority may carry out the remedial works. In general terms it has this power where:

- urgent action is necessary (see appendix 5)
- there is no appropriate person
- the authority is precluded from taking enforcement action
- the authority agrees to carry out the works on behalf of an appropriate person
- a remediation notice has not been complied with

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

The enforcing authority will have regard to the statutory guidance in relation to cost benefit analysis and hardship in respect of all remedial actions. Where remedial actions are undertaken in default of a notice the enforcing authority has the power to recover costs in certain circumstances.

## **4. CHARACTERISTICS OF CHELTENHAM**

### **4.1 Geographical location and size**

Cheltenham borough is located in Gloucestershire in southern England, it lies on the margin of the River Severn flood plain at the foot of the Cotswold escarpment. This escarpment is a dominant feature to the east and south, upon which a small area of the borough lies. The town itself is relatively flat with gentle slopes running down to the River Chelt which runs through the town centre. Wyman's Brook to the north and Hatherley Brook to the south are also natural watercourses within the borough. The Chelt is currently of sufficient quality to support Brown Trout, the Wyman's and Hatherley Brooks are subject to local land pollution sources which are being investigated. The geographical extent is essentially the town of Cheltenham, several adjacent villages and a rural fringe. The area of the Cheltenham borough is 4680 hectares. The overall geographical context is shown in Plan 2 (Cheltenham - The Context; Local Plan 1997).

### **4.2 Brief description and history**

Cheltenham is likely to have been settled in the prehistoric period, and recent excavations have identified evidence of Iron Age settlement. Excavations have also identified some activity in the Roman period. Cheltenham has existed as a small town since Saxon times, centred on the present High Street. A Medieval settlement centred around the church of St. Mary (founded 1011 AD) and the town's urban status was recognised in 1226 AD when permission for a weekly market was given.

The discovery of mineral waters in 1718 and the start of their exploitation in the 1740's resulted in the expansion of the town. Large scale growth after the French Wars in 1815 gave rise to large areas of Regency architecture including Pittville, Montpellier and Lansdown.

The present town is an important employment centre with a strong emphasis on office work, accommodating the national and regional administrative headquarters of major firms and a government department. There is also some manufacturing industry particularly light engineering. Recreation and tourism are very important and the town has museums, parks, gardens, sporting facilities and a racecourse.

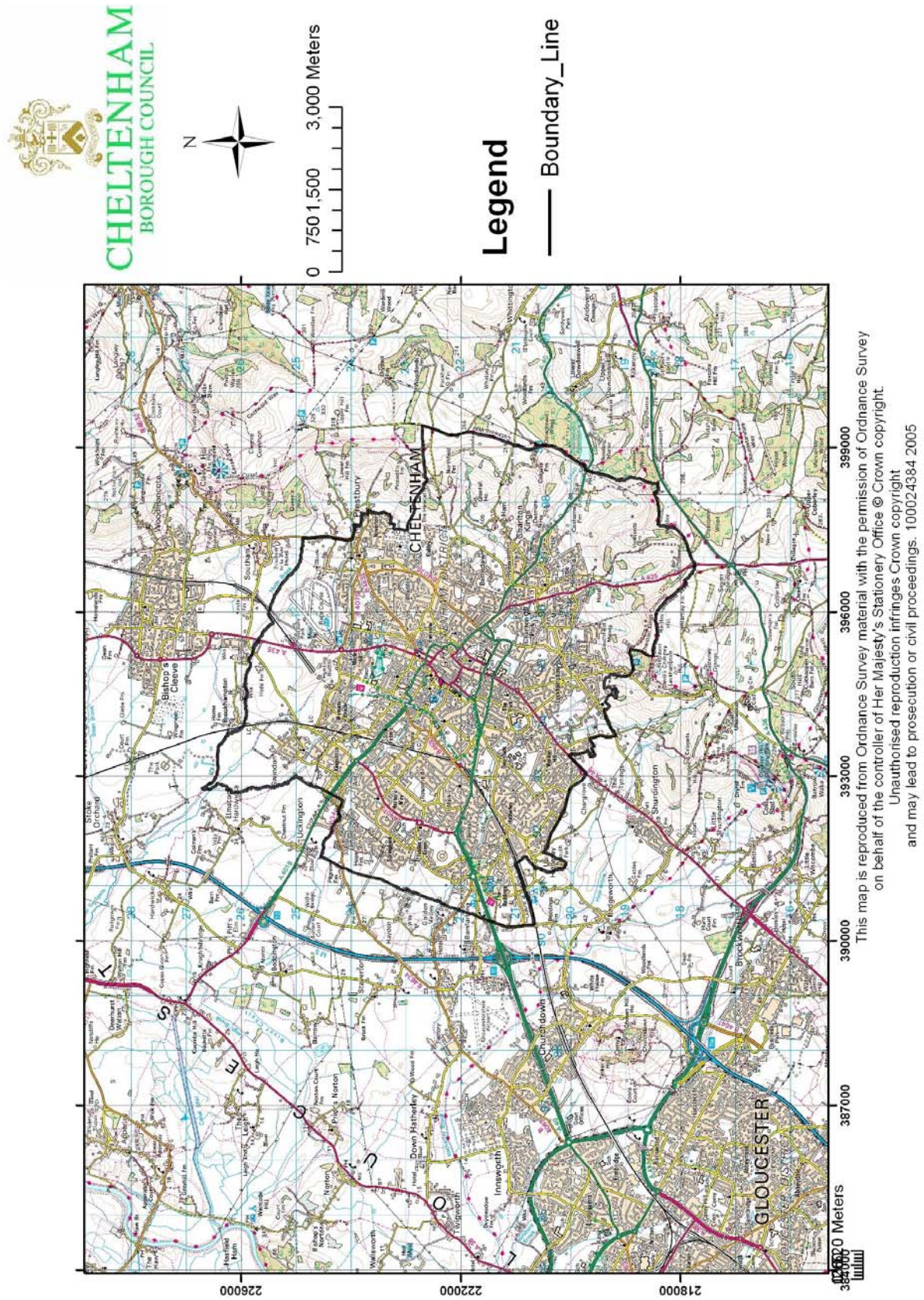
### **4.3 Land use characteristics**

Cheltenham is one of Gloucestershire's two sub-regional employment centres. Over 62,000 people work in the borough, 84 per cent work in service related industries such as finance, business and the public sector, with 12.5 per cent in manufacturing industries. GCHQ telecommunications centre has two large sites in the borough and Dowty and Smiths Industries have manufacturing complexes on the edge of town. There are large areas of retail floor space in the centre of town, and several industrial estates across the borough including a large industrial area at Kingsditch Lane.

The housing stock in 1997 was about 48,000 dwellings spread across the majority of the mainly urban borough.



Fig 1. Cheltenham Borough Local Context Map



Allocated play space occupies about 110 hectares. There are also various footpaths and common areas including Leckhampton Hill and Charlton Kings Common which is also a Site of Special Scientific Interest as designated by Natural England.

Agricultural land in the borough is limited. Land to the north, west and Southwest of Cheltenham varies in quality between MAFF grades very good and moderate. To the east, the Cotswold escarpment is of poor quality grade four, and is limited in its agricultural usage due to steep gradients and poor soil conditions.

#### **4.4 Potential sources of contamination**

Preliminary checks of historical maps and land use indicate the presence of around 600 potentially contaminated sites in the borough. These will include the land uses described below:

##### **a) Industrial history**

A comprehensive list of potentially contaminative uses can be found in Appendix 4 and can also be found in the industry profiles produced by the Department of the Environment. The first step in the process of identifying potentially contaminated sites has been to closely examine historical data in the form of old ordnance survey plans and photographs from the early part of the century to the present day. These were obtained from this council's archives and the county records office. To aid this process the area organisations and parish council's were consulted.

##### **b) Current industry**

The present industrial areas of the borough are potential sources of contamination. These will be inspected in accordance with the statutory guidance to establish whether there is a potential for contamination to exist and, if there is, whether it is controlled by another agency through alternative legislation.

##### **c) Current industry regulated under the Environmental Protection Act 1990 – Part I**

Part B processes are authorised for air pollution control by this council. There are currently 27 processes authorised by the council under Part I of the Act. These range from service stations to the crematorium. Many of these processes have the potential to pollute the land. There are currently no Part A processes authorised by the Environment Agency under Part I of the act.

##### **d) Hazardous substances**

This council is a hazardous substances authority for the purposes of the Planning (Hazardous Substances) Act 1990 and the Planning (Hazardous Substances) Regulations 1992. This legislation requires consent to allow the presence on land of hazardous substances above a specified quantity. These regulations were amended by the Planning (Control of Major Accident Hazards) Regulations 1999 (SI 981) to take account of the new COMAH Regulations (see below). There is currently one authorised site in the district. A register is maintained for this purpose by the planning officer. It should be noted that all sites notified to the HSE under the Notification of Installations Handling Hazardous Substances Regulations 1982 (NIHHS sites) and COMAH sites, will be held on the hazardous substances register.

**e) COMAH sites**

The Control of Major Accident Hazards Regulations 1999 (SI 743) are enforced by the Environment Agency and Health & Safety Executive (joint competent authority) to control both on and off site risks from industries with a high potential for disaster from dangerous substances (flammable, toxic or explosive). There is currently one site within the district. The Control of Major Accident Hazards Regulations 1999 (SI743) are enforced by the Environment Agency and Health & Safety Executive (joint competent authority) to control both on and off site risks from industries with a high potential for disaster from dangerous substances (flammable, toxic or explosive). There is currently one site within the district.

**f) Explosives**

They are not directly covered by the hazardous substances regulations but are controlled by the Health & Safety Executive licences issued under the Explosives Act 1875. Any licensed sites will be identified.

**g) Current landfill and waste processing sites**

These are licensed by the Environment Agency under the provisions of Part 2 of the Environmental Protection Act 1990. Details of all these sites have already been provided by the agency for this purpose.

**h) Closed landfill sites**

The geology of the area has resulted in some areas being used for the extraction of minerals, particularly sand and limestone. Many of the resulting pits and quarries have then been filled with refuse or other materials. These are a potentially significant source of risk, especially those which operated before the licensing requirements of the Control of Pollution Act 1974. All closed landfills in the borough will be identified and their association with any specified receptors considered in detail.

**i) Sewage works and land used for the disposal of sewage sludge**

Land dedicated for the disposal of sewage sludge is notified to the Environment Agency under the Sludge (Use in Agriculture) Regulations 1989. This land, together with all operating and redundant sewage works, will be identified and assessed.

**j) Waste or derelict land**

Often owned by the utilities, railways or local authorities, it is left seemingly abandoned because it has no particular use or is difficult to access. These areas can accumulate unwanted materials and can be used to dispose of wastes and effluents illegally.

**k) Ministry of defence land**

There are two areas occupied by defence agencies. Their potential for contamination could be significant. Therefore, they will be investigated in association with the Environment Agency as required, in accordance with the statutory guidance.

**l) Previously developed contaminated sites**

The inspection of the district will identify many potentially contaminated sites which have been developed over the years. In some cases the methods and extent of remediation may be unknown or it may be known but the remediation is suspected of being inadequate. This is probably more likely with older developments than more recent development schemes where planning and building control functions have been more robust and contamination risks are more likely to have been addressed.

## 4.5 Potential Specified Receptors

Land can only be considered contaminated if it impacts in a certain way on specified receptors. These are:

### HUMAN

The present population of the borough is 111,000 distributed amongst the town and surrounding villages. Human receptors may therefore be present to some degree at almost any location within the borough. The potential for persons either living on or frequenting a potentially contaminated site will be considered in every case, but priority will be given to sites with infants. The land use types associated with human receptors include:

- residential property with gardens
- children's play areas
- residential property without gardens
- schools or nurseries
- parks, playing fields and recreational open space
- commercial and industrial property

The ingestion of food that may have been affected by contaminated land is one possible pathway for a human health effect. This includes food produced in domestic gardens and allotments and food collected from the wild as well as commercially produced food. The effects of contaminated land on food safety may be direct and include contaminating crops grown, or animals raised, on the land. There may also be indirect effects including the transport of contaminants to other locations, the pollution of water used to irrigate crops or water animals, or from which fish or shellfish may be consumed. Areas of food production may be relatively sparsely populated, but the food produced may potentially reach a large number of consumers.

Where food safety aspects of contaminated land cases are identified the Food Standards Agency should be consulted.

Other examples of how human health may be affected by contact with contaminated land are:

- through the ingestion of contaminated soil by young children
- skin contact with corrosive substances
- the inhalation of contaminated dusts

### WATER

Where there is pollution or likely pollution of controlled water. Controlled waters in this context are:

- territorial sea water (to three miles)
- coastal waters
- inland fresh waters (rivers, streams, lakes, including the bottom/bed if dry)
- ground waters
- Water Resources Act 1991 s104 (see also appendix 3)

For contaminated land purposes some controlled water pollution is dealt with by the local authority and some, in the case of special sites, by the Environment Agency (see appendices 1 and 3).

Generally speaking the land will constitute a special site where:

- a) the wholesomeness of water used for potable supply has been affected;
- b) where waters do not meet or are not likely to meet relevant surface water criteria;
- c) where specific pollutants are affecting certain types of aquifer.

The land containing groundwater is sometimes termed an aquifer. Geological strata that contain groundwater in exploitable quantities are termed aquifers, whereas strata which are largely impermeable and do not readily transmit water are termed non-aquifers.

**a) Aquifers** - The majority of the Cheltenham area is located on a minor aquifer (the Cheltenham Sand and Gravel). The Cotswold escarpment (Jurassic Limestone) is classified as a major aquifer, and parts of the borough include this. Pathways exist in the limestone via cracks and fissures and these result in discharges (natural springs) along the escarpment. These crack and fissure pathways make the risk of contamination greater than on the sandy deposits around the centre of the town where there may be some natural attenuation of contaminants. There are also areas of Cheltenham on the Lower Lias Clay known as Charmouth mudstone which is considered to be a non-aquifer.

Cheltenham contains a groundwater source protection zone, to protect a licensed borehole, and a Nitrate Vulnerable Zone, which protects a water company public water supply spring source. All aquifers will need to be further investigated as to their location, depth and vulnerability. The vulnerability is often based on surface conditions. Potential risks from identified sources of contamination will be considered carefully with the Environment Agency.

**b) Public water supplies** - Cheltenham is mostly supplied from the Mythe Water Treatment Works in Tewkesbury. There are also spring fed reservoirs along the Cotswold Escarpment that can link into the network.

**c) Private water supplies** - Including the spa at Pittville, there are 31 private water supplies in the district which are often drawn from shallow sources. The protection of these is particularly important due to the heavy reliance paid on them by local communities. This council already monitors these as part of its duties under the Water Industry Act 1991 Part 2 and Private Water Supplies Regulations 1991.

**d) Other authorised abstraction points** - All authorised abstraction points will be identified such as those used for agricultural or recreational use.

**e) Other specified** - All other water receptors such as rivers, streams, tributaries, reservoirs and lakes will be identified as part of the inspection strategy.

## **PROPERTY**

The specified receptors are:

- buildings (including below ground)
- ancient monuments
- all crops including timber
- produce grown domestically or on allotments for consumption
- livestock
- other owned or domesticated animals
- wild game subject to shooting or fishing rights

**a) Buildings** - All buildings and underground services within the area underneath the building (within the footprint) are potential receptors and will be considered in every case where contamination and buildings exist.

**b) Ancient monuments** - As listed by English Heritage, and contained within the area sites and monuments record, will be specifically identified as part of the strategy and the potential impact of contaminants considered. Some sites of former industrial activities are scheduled ancient monuments and the contaminants present may be of archaeological interest. The council will liaise with the county archaeologist and English Heritage in these cases. A full list of scheduled ancient monuments is provided in section 4.10 of the Statutory Local Plan and a record is held by the county archaeology section.

**c) Agricultural and horticultural crops** - Where contamination is known or suspected, associations with poor yield and crop failure will be investigated. The MAFF *Soil Code of Good Agricultural Practice* and the revised codes from DEFRA provide guidance.

**d) Home grown produce** - There are many acres of allotments within the borough and these will all be identified and their potential for contamination considered as a result of previous uses or activities. Similarly any domestic gardens likely to be contaminated will be identified and assessed.

**e) Agricultural livestock, game and other owned animals** - The presence of livestock in an area will not be specifically identified but taken into consideration as necessary.

## **ECO-SYSTEMS AND PROTECTED LOCATIONS**

There are several categories of sites in Cheltenham which are protected for their nature, geological or landform conservation interest including;

- Sites of Special Scientific Interest (SSSI)  
Designated by Natural England as being of national or international importance for their flora, fauna, geology or landforms under the Wildlife & Countryside Act
- National Nature Reserves (NNRs)  
Designated by Natural England under the Wildlife & Countryside Act 1981
- Local nature reserves (LNRs)  
Designated under the National Parks and Access to the Countryside Act 1949
- Areas for the special protection of birds  
Wildlife & Countryside Act 1981
- Special areas of conservation (SAC's)  
Strictly protected locations under the EC Habitats Directive.
- Key wildlife sites as identified by Gloucestershire Wildlife Trust.
- Sites supporting populations of legally protected species (PPS 9 paragraph 15)
- Sites supporting habitats or species of principal importance for the conservation of biodiversity in England (PPS9 paragraph 16)

There are several specified sites including SSSIs and other areas of ecological importance. These include Leckhampton Hill and Charlton Kings Common. Significant impact of contamination is unlikely but all areas will be identified, examined and any risks carefully quantified with Natural England and the Environment Agency. Should intrusive investigations be required, the council will consult Natural England.

#### **4.6 The geological and hydro-geological characteristics of Cheltenham**

The geology of the land is important to contaminated land management because it may allow the movement of pollution (or contamination) from one area to another and because it may result in the presence of valuable underground water. Geology maps, handbooks on regional geology, borehole records and information held by the British Geological Survey are used to identify geological details where required.

Over most of the Cheltenham area, Lower Lias clay outcrops at the surface. In the east and south, limestones are present at the surface forming the high ground areas of the Cotswolds. There are also numerous areas of drift deposits across much of the borough composed of Landslip, Cheltenham Sand, Alluvium and Fan Gravel. Landslip is present along the margin of the Oolite Limestone and Lias Clay forming the Cotswolds escarpment. There are extensive areas of Cheltenham Sand and Gravel overlying Lower Lias Clay and Alluvial deposits are present along the valley of the River Chelt.

The sequence of solid geology locally, from the surface down is commonly as follows; Upper Inferior Oolite, Middle Inferior Oolite, Lower Inferior Oolite, Upper Lias Clay, Marlstone Rock Bed, Dyrham Silts and Lower Lias Clay. Lower Lias Clay forms the solid geology of the majority of the Cheltenham area and is now referred to as Charmouth Mudstone. The stratigraphic column indicates the depths of the individual strata to be approximately:

Upper Inferior Oolite	- up to 7m
Middle Inferior Oolite	- 15m
Lower Inferior Oolite	- 50m
Upper Lias Clay	- 75m
Marlstone Rock bed	- 1 to 5 m
Dyrham Silts	- 30 to 50m
Lower Lias Clay	- up to at least 160 m

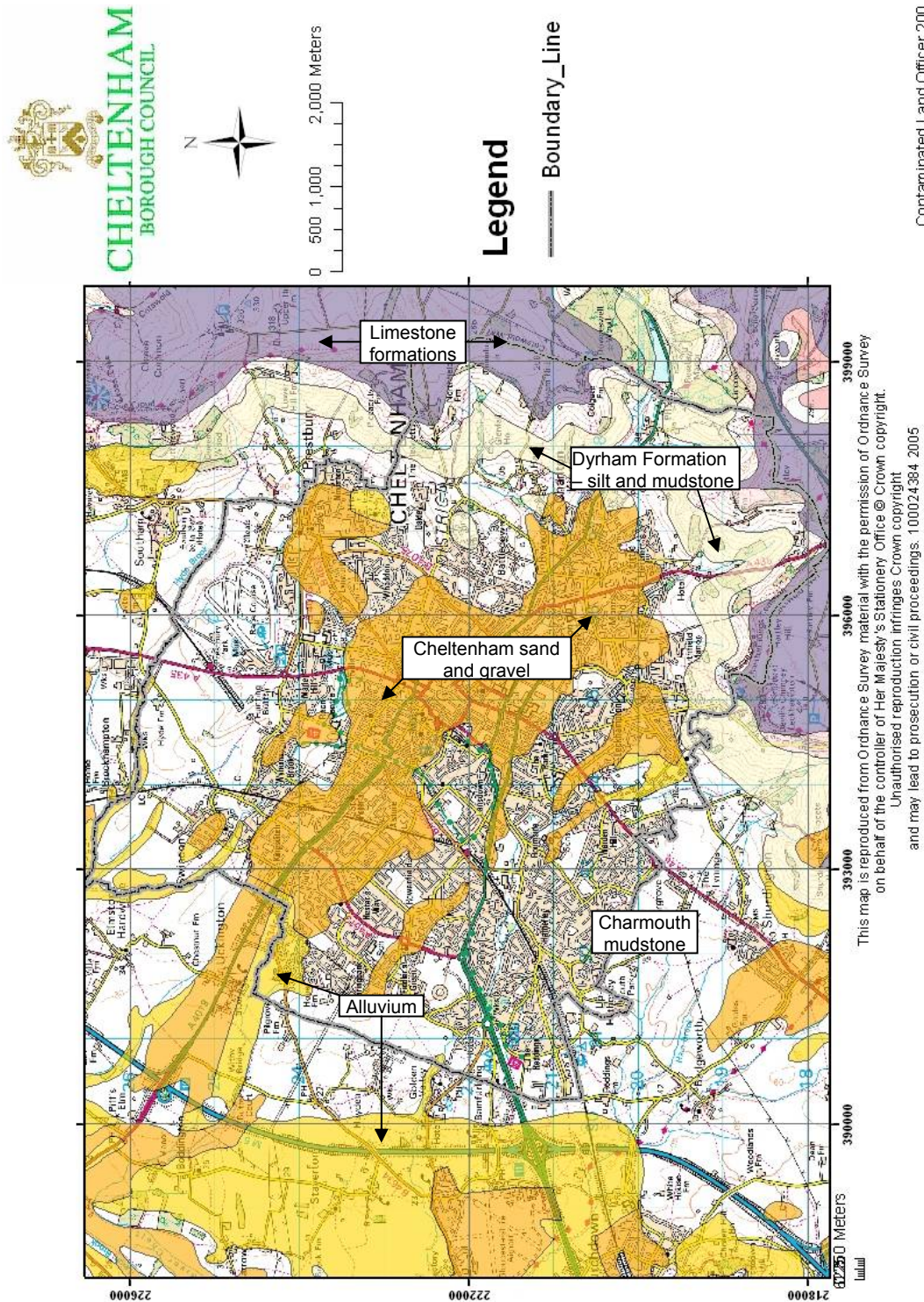
The presence and depths of strata is variable across the borough and site specific research will be required to determine the precise geology.

The NRA Groundwater Protection Regional Appendix for the Severn Trent Region indicates that the Jurassic (Oolite) Limestones are Major Aquifers. It also indicates that the drift deposits of Cheltenham Sand and Gravel, the Dyrham formation and Alluvium deposits are Minor Aquifers and the Charmouth Mudstone (Lower Lias Clay) is a Non-Aquifer. The Marlstone Rock Bed situated between the Upper and Lower Lias Clays is also an aquifer. Generally speaking the majority of the borough is not located upon a major aquifer.

The extensive areas of Cheltenham Sand and Gravel in the borough are of particular importance. As a permeable minor aquifer, it can act as a pathway for pollutants from land to a watercourse or land to any water supply drawn from the aquifer. It can also exist as a potential receptor to pollution in its own right.

The Jurassic Limestone of the Cotswolds, as a major aquifer is a potential receptor as is the Marlstone Rock Bed.

**Fig. 2 – Areas of groundwater vulnerability in Cheltenham**





## 4.7 Regional Hydrology

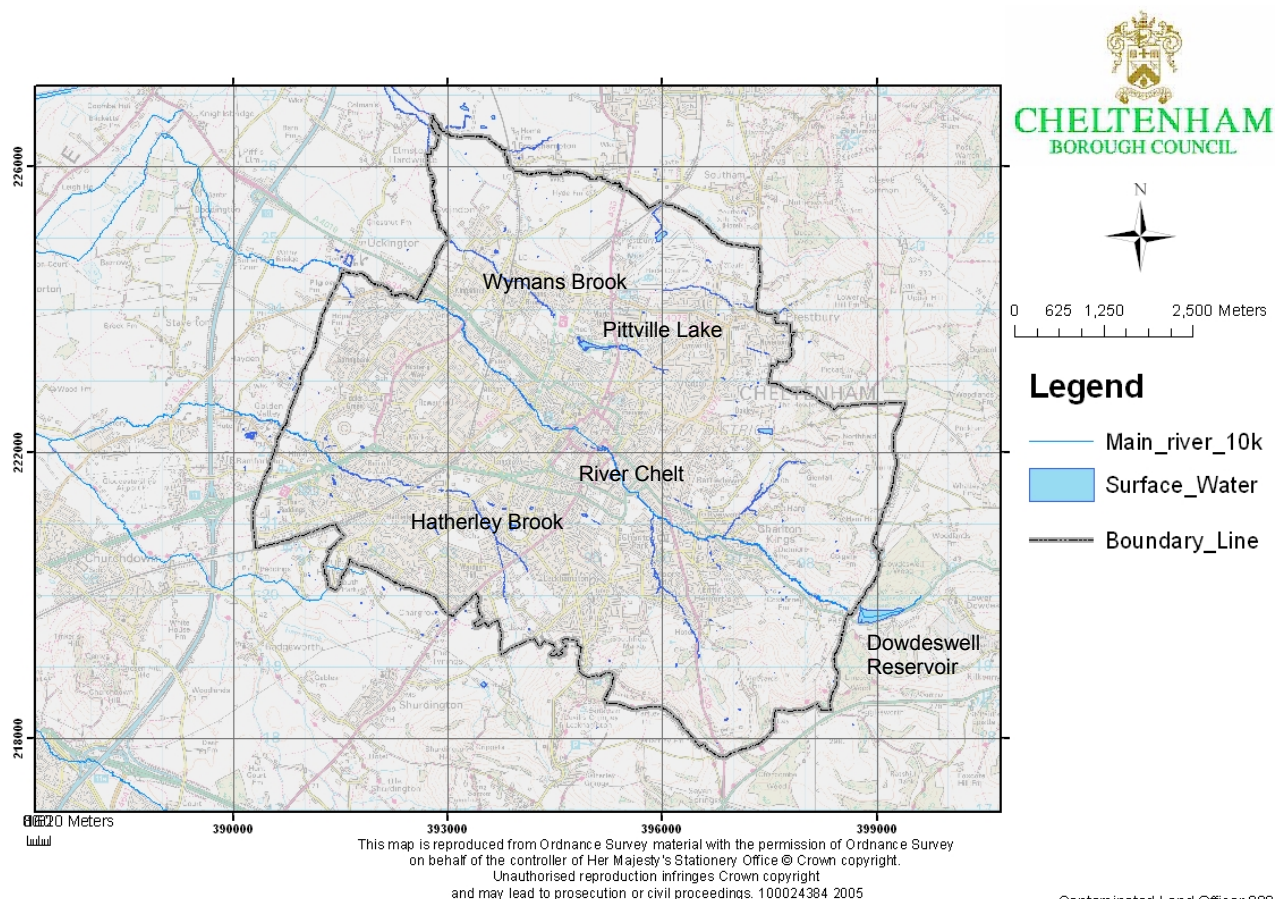
Although Cheltenham borough does not contain any major rivers or surface water bodies, there are a number of smaller surface water features which feed into the River Severn nearby and are identified as Controlled Waters by the Environment Agency.

The River Chelt is the most notable river running through the town and water quality data provided by the Environment Agency describes the water quality within the river as being mostly Grade B between

Other smaller brooks run through the town including Hatherley Brook and Wymans Brook, the latter which contains a large surface water lake feature at Pittville Park.

Serious flooding events in the town and surrounding area during 2007 have highlighted the significance of the surface water bodies in Cheltenham in providing flood relief.

**Fig. 3 Cheltenham hydrology map**



## 4.8 Radioactive Contamination and Radon

Radioactive contamination is now included within this Inspection Strategy by virtue of new regulations that have incorporated this into Part 2a of the Environmental Protection Act 1990 - the Radioactive Contaminated Land (Modifications of Enactments) (England) (Amendment) Regulations 2007.

The regulations apply to land that is causing harm or posing a significant possibility of causing harm to human health as a result of radioactivity. It only applies in circumstances where the radioactivity is the result of a past practice or work activity, or the after effects of a radiological emergency. This includes substances containing artificial radionuclides or processed natural radionuclides.

It does not apply to land where the radioactivity is causing significant harm to the wider environment, radioactivity on land within the boundary of a nuclear licensed site or radon gas. Further details on radon gas can be obtained from the following websites;

[www.defra.gov.uk/environment/radioactivity/background/radon.htm](http://www.defra.gov.uk/environment/radioactivity/background/radon.htm) or  
[www.hpa.org.uk/radiation/radon/index.htm](http://www.hpa.org.uk/radiation/radon/index.htm)

The presence of radionuclides on land does not automatically mean that the land is radioactive contaminated land under the Part 2a regime. For land to be determined as such, a significant pollutant linkage must be present in the same way as for all other contaminated land.

The statutory guidance sets out the levels of radioactivity that should be considered as causing harm:

- An effective dose of 3mSv or more, per year;
- An equivalent dose to the lens of an eye of 15 mSv or more, per year; or
- An equivalent dose to the skin of 50 mSv or more per year.

Where the current use of land contaminated with radioactivity gives rise to prolonged exposure to humans above these levels, that land may be determined as 'radioactive contaminated land' by the local authority. The 'appropriate person' is then required to undertake the necessary remediation.

Local authorities have a duty to inspect land that may be affected by radioactivity only where they have reasonable grounds for doing so.

Radioactively contaminated land is not considered to be an issue in the borough of Cheltenham. However, where evidence of radiation is suspected, then a normal investigation approach will be adopted as for all other potentially contaminated land in the borough.

Only local authorities have the power to determine land as radioactive contaminated land. However once they have determined a site as radioactive contaminated land it becomes a 'special site' and the Environment Agency takes over as regulator.

## **4.9 Specific Local Features**

### **Arsenic**

These include areas of soil and sub soil which is naturally enriched with arsenic derived from the Lower Lias clay. Where the land use is residential with gardens or agricultural there may be a need for certain areas to undergo a site specific risk assessment for arsenic where sampling indicates significant levels in surface soils.

### **Known contaminated sites**

Some land across the borough is known to be contaminated by past industrial uses including land filling. Previous uses of known contaminated sites include, closed landfill, gas works, railway depots and lines, fellmongers, metal works, chemical works and engineering works. Examples include land near the centre of Cheltenham, known as the St James' site, the Cheltenham Gas Works site and the closed landfill at Marle Hill. The Marle Hill site has been investigated and has been determined as statutory 'contaminated land'. The site is now undergoing remediation. Details of the determination are available on the council website under 'contaminated land';

<http://www.cheltenham.gov.uk/libraries/templates/ourservice.asp?URN=857&FolderID=0>

### **Cheltenham borough council owned land**

The council own land across the borough including vacant commercial land, developed property and land associated with leisure use. All council owned land will be subject to inspection and risk assessment in the same way as other areas of the borough. The council will identify its own land which is potentially contaminated and take the appropriate remediation if required. The council will seek to undertake state of the art sustainable remediation on its own land.

## 5. THE INSPECTION PROCEDURE

### 5.1 Site identification

The approach to inspection will be source led due to the relatively even spread of population across the borough. Therefore, potentially contaminated sites will be identified first, then the site and surrounding area surveyed for contamination receptors. Those sites which are known to be contaminated, or where pollution from land is affecting receptors, will be the first to undergo preliminary investigation.

The protection of human health will be the main priority of the strategy. Therefore, it is anticipated that where the potential for contamination exists, more detailed investigation of sites will take place in the following order of priority according to the current or planned land use:

- residential property with gardens
- children's play areas and schools
- allotments
- public amenity areas
- commercial premises
- public highways
- other areas

Site identification (see 4.4) will be based on a desk top survey of the borough to identify areas of land where;

- Previous use indicates contamination may exist
- There is no existing pollution control regime in place
- There are known receptors within a determined area of influence.

Previous uses considered potentially contaminative are listed in Appendix 4.

### 5.2 Site prioritisation process

Potentially contaminated land shall, prior to detailed investigation, be listed and categorised according to a preliminary assessment of risk. The method used will be based on that described in DETR Contaminated Land Research Report 6, entitled, *Prioritisation and Categorisation Procedure for sites which may be Contaminated* (CLR 6) This is to ensure all further investigative work relates directly to seriousness of the potential risk and to ensure the most pressing problems are identified and quantified first.

To assist in the prioritisation procedure, a simple scoring system has been devised as follows:

Likelihood of *contaminants* on the site:

- 1 - most unlikely
- 5 - good chance
- 10 - known to be present

Existence of *receptors* within area of influence:

- 1 - most unlikely
- 5 - good chance
- 10 - known to exist

Likelihood of impact of contaminants on receptors (*pathway*):

- 1 - most unlikely
- 5 - good chance
- 10 - certain

This preliminary process is known as a CRP (contaminant receptor pathway) assessment. Initial trawls may identify sites where either particular contaminants are likely or known to exist, or sensitive receptors are known to exist. No assessment should be undertaken unless both are suspected or confirmed. Where there is doubt the situation will be kept under review.

#### **Relationship of CRP score to Priority Category**

<b>CRP Score</b>	<b>Priority Category</b>
26-30	1
21-25	2
16-20	3
10-15	4

How this system is used can best be demonstrated by examples and several are shown in Appendix 6 using a simple multi-stage assessment form.

Priority category 1 sites are likely not to be suitable for their present use and these will be investigated as soon as possible after they are identified.

### **5.3 Limitations**

It must be understood that the assessments at this preliminary stage are made on a limited amount of incomplete basic data and information, such as old surveys, maps and geological information. As more knowledge of the site is obtained, these assessments will be revised and their priority category may change. The assessment of a site as priority category 1 does not necessarily infer the existence of a significant risk to one of the specified receptors, but it does identify the need for priority assessment of risk potential.

Where it is likely that a parcel of land requires more detailed inspection, a risk assessment will be carried out to determine what further action is required. If appropriate, the council will consider what action has already been taken to deal with the contamination, for example during previous redevelopment of the site. This will be taken into account by considering the extent to which contamination was understood and dealt with at the time of the work and assigning an appropriate degree of confidence to the remediation. Any additional evidence will be taken into account.

## 5.4 The Risk Assessment Process

The council has the sole responsibility for determining whether any land appears to be contaminated land, it cannot delegate this responsibility. This applies even where the Environment Agency has carried out an investigation on behalf of the council.

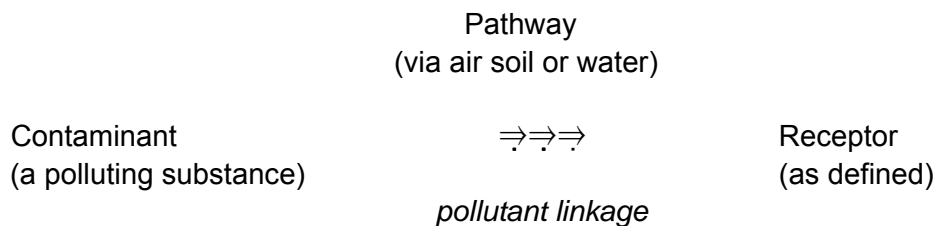
Once the council become aware of the possible existence of a pollutant linkage they must, in accordance with their prioritisation procedure, commence a risk assessment process. The definition of contaminated land is based on the principles of risk assessment. For the purposes of the guidance risk is defined as the combination of:

- the probability, or frequency, of occurrence of a defined hazard; and
- the magnitude of the consequences.

There are two steps in applying the definition of contaminated land:

### Step 1

The council must satisfy itself that at least one pollutant linkage exists:



For the purposes of this strategy, this is termed a stage 1 risk assessment.

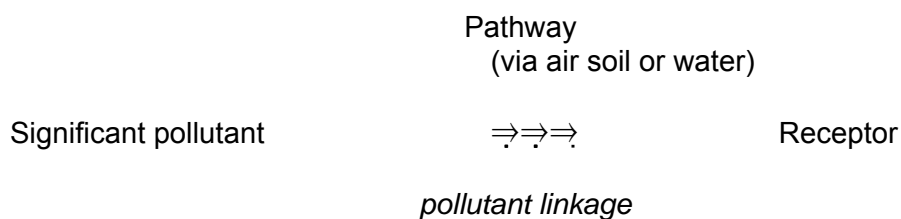
The contaminant(s) must have the potential to have a defined detrimental impact on the receptor(s) and the pathway has to be plausible. It is not necessary for direct observation of the pathway, but if a reasonable scientific assessment suggest the two could come together, then a pollutant linkage is said to exist and the authority must proceed to step two.

### Step 2

At this stage a more detailed investigation must be undertaken to confirm that the pollutant linkage identified is:

- a) resulting in significant harm (or the significant possibility of such harm) being caused to the receptor(s), or
- b) resulting in (or likely to result in) the pollution of controlled waters.

If either of these are confirmed then the land becomes contaminated land by definition and the pollutant linkage becomes, significant.



This, for the purposes of this strategy, is termed a stage 2 risk assessment.

### **Generic and Site specific human health risk assessment**

To assess whether a pollutant linkage is resulting in harm to human health the council may use authoritative and scientifically based guideline values for specific contaminants. These are concentrations of potential pollutants in or on the land, for which toxicological evidence suggests there could be a health effect. The use of guideline values simplifies the risk assessment process and they are used routinely for this purpose.

Detailed site specific risk assessment models are available for use where guideline values are not published or where values have been exceeded. These rely on inputting site specific data to obtain contaminant screening concentrations for the site and are specific to the proposed end-use.

A number of risk assessment tools are given at Appendix 7 and include the Contaminated Land Exposure Assessment tool (CLEA(UK) beta v.1) from the Environment Agency and other risk models such as SNIFFER and BP RISC.

## **5.5 Investigation and determination of Contaminated Land**

There are four possible grounds for determining land as contaminated land:

- a) Significant harm is being caused
- b) There is a significant possibility of significant harm being caused
- c) Pollution of controlled waters is being caused
- d) Pollution of controlled waters is likely to be caused

In making any determination the council will take all relevant information into account, carry out appropriate scientific assessments in accordance with BS 10175:2001.1 Code of Practice for the Investigation of Potentially Contaminated Sites and act in accordance with the statutory guidance. The determination will identify all three elements of the pollutant linkage and explain their significance.

In an attempt to ensure the situation can be understood as widely as possible, a simple conceptual model (initially in diagrammatic form) will be produced for all relevant pollutant linkages, and multi-stage assessment forms completed, which clearly demonstrates the decision making process. Examples are produced in Appendix 6.

The detailed investigation of contaminated land is invariably a very time consuming and expensive process, therefore it must be emphasised that all investigations will be carried out on an incremental basis and terminated immediately it is clear that no significant pollutant linkage exists.

Once sufficient information has been obtained which confirms a pollutant linkage does not exist, or, if it does, it is not significant, then the investigation will cease and no further action will be taken. However, it may be that circumstances will be identified whereby a significant pollutant linkage could occur at some time in the future. In these instances arrangements will be made to keep the situation under review.

The council will seek to obtain as much information as possible about a suspected site by detailed inspection of historical data in its possession, including, planning and building control records. It will also consult with others who may have relevant information about a site, such as developers, previous owners and neighbours. Where evaluation of all available data suggests a significant pollutant linkage may exist, it may be necessary to visit the site and carry out some on-site testing, or take away samples for analysis. In every case this will be carried out by a, suitable person, adequately qualified to undertake the work. The utmost discretion will be used at all times to minimise the effect on occupiers of the land.

Intrusive investigations will be carried out in accordance with appropriate technical procedures to ensure they:

- a) are effective;
- b) do not cause any unnecessary damage or harm; and
- c) do not cause pollution of controlled waters.

To ensure the most appropriate technical procedures are employed the council will have regard to the most up to date government guidance available.

### **Investigating Potential Special sites**

Where the council are aware that land it intends to investigate would, if declared contaminated land, be a special site, it will notify the Environment Agency in writing requesting any information it may have on the land and the likelihood of pollutant linkages. According to the wishes of the Environment Agency, it may be that a joint investigation will be undertaken.

Where the Environment Agency (or their agents) wish to carry out formal investigation on behalf of the council their officers will need to be appointed, as suitable persons, in accordance with Appendix 5. The Environment Agency do not have the power under Part 2a to investigate land which may be contaminated land without the authorisation of the council.

### **Powers of entry**

Statutory powers of entry are conferred on the council to enable it to carry out its functions under Part 2a. The council will not use these powers to obtain information about the condition of land, where:

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



## 5.6 Record of Determination

Once an area of land has been declared contaminated land by statutory definition, the council will prepare a written record to include:

- a description of the pollutant linkage(s) confirmed, including conceptual model
- a summary of the evidence which confirms the existence of the pollutant linkage(s)
- a summary of the risk assessment(s) upon which the pollutant linkage(s) were considered to be significant
- a summary of the way the requirements of the statutory guidance were satisfied

The council will then need to 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 remediation (appropriate persons, in the guidance)
- the Environment Agency

At the notification stage it may not be possible to identify all the relevant parties, particularly the appropriate persons. The council will, however, act on the best information available to it at this time and keep the situation continually under review as more information comes to light.

The legislation and statutory guidance has been designed to try to encourage voluntary remediation (that is, without the need for enforcement action). The formal notification procedure commences the process of consultation on what remediation might be most appropriate. To aid this process the council will therefore provide as much information to the relevant parties as possible, including where available:

- a copy of the written record of determination
- copies of site investigation reports (or details of their availability)
- an explanation of why the appropriate persons have been chosen
- details of all other parties notified

The appropriate persons will also be provided with written explanations of the test for exclusion and apportionment (see Chapter 6). It may be at this stage that the council will need further information on the condition of the site to characterise any significant pollutant linkages identified. If this is the case an informal attempt will be made to obtain this information from the appropriate persons already identified.

## 5.7 Special site designation

If the council are of the opinion that the contaminated land is a special site (see Appendix 1) it will inform the Environment Agency of that decision. The Agency will then consider whether it agrees that the land should form a special site. If it does not agree it will notify the council and the secretary of state within 21 days with a comprehensive statement explaining its reasons. The council will then refer the decision to the secretary of state.

If the Environment Agency agrees with council, or it fails to notify the council it disagrees within 21 days, the land will be designated a special site. The responsibility for securing remediation then passes to the Environment Agency, although the council must complete the formal notification process.

## **5.8 Contaminated land and the planning process**

There are several large areas in Cheltenham where contamination is known to exist, that are currently the subject of development proposals or are undergoing redevelopment. Where land is being dealt with under the planning process, it does not constitute contaminated land under Part 2a of the EPA 1990. This is because another regulatory regime is being employed to ensure remediation. To avoid confusion the term 'land contamination' may be used.

Where possible, potentially contaminated land will be dealt with through the planning process or through voluntary measures. Planning conditions will be applied to sites where it is suspected that contaminated land may be present. These conditions will require detailed information to be provided to the council by the developer or their agent. As a minimum this will normally include a desk study, a detailed site investigation report and remediation recommendations where appropriate. This will be carried out in accordance with BS10175 Code of Practice for Investigation of Potentially Contaminated Sites (BSI) – 2001. The information will be assessed by the council's contaminated land officer and approved prior to discharge of the relevant planning conditions.

A number of contaminated sites in Cheltenham, such as the old Indalex site on the Tewkesbury Road, have already been remediated in this way.

Sites which are the subject of planning applications or that are currently undergoing redevelopment will be prioritised for investigation, assessment and data gathering.

The peer review of site contaminated land reports which are produced as part of the planning process will be a priority task and carried on alongside the routine district inspection, assessment and data processing. The information contained in such reports will be recorded on the data base for the site along with the source of information, information status and any other comments.

Guidance on contaminated land reports has been produced by the British Standards Institution (BSI), and the Bristol, Gloucestershire and Somerset Environmental Protection Committee (BGS) has produced a guidance note for developers, agents and consultants on the development of contaminated land and reporting requirements. Details of guidance available can be found in Appendix 7.

## 6. LIABILITY AND REMEDIATION

### 6.1 Identifying liability

The procedures relating to liability are complex and described in the *Statutory Guidance DEFRA Circular 01/2006*. Reference will be made to the statutory guidance when the council apportions liability or takes enforcement action.

Land may be declared contaminated land upon the identification of only one significant pollutant linkage. However, full liability cannot be determined until all significant pollutant linkages on the site have been identified.

When all significant pollutant linkages have been identified the procedure relating to the apportionment of liability must commence. This has five distinct stages as follows:

- i. identifying potential appropriate persons and liability groups
- ii. characterising remediation actions
- iii. attributing responsibility to liability groups
- iv. excluding members of liability groups
- v. apportioning liability between members of a liability group

These procedures are complex and cumbersome. The process commences with the establishment of liability groups. All appropriate persons for any one linkage are a liability group. These may be class A or class B persons.

**Appropriate persons - Class A** - These are, generally speaking the polluters, but also included are persons who knowingly permit. This includes developers who leave contamination on a site, which subsequently results in the land being declared contaminated.

**Appropriate persons - Class B** - Where no class A persons can be found, liability reverts to the owner or the occupier. These are known as class B persons.

The council will make all reasonable enquiries to identify class A persons before liability reverts to owner occupiers.

The matter of appropriate persons must be considered for each significant pollutant linkage. Therefore, where a site has had a series of contaminative uses over the years, each significant pollutant linkage will be identified separately and liability considered for each.

### 6.2 Apportionment of costs

Generally speaking the members of a liability group will have the total costs falling on the group as a whole apportioned between them. It may also be necessary to apportion costs between liability groups. There are three basic principles which apply to exclusion and apportionment tests:

- i. The financial circumstances of those concerned have **no** relevance.

- ii. The council must consult persons affected to obtain information (on a reasonable basis having regard to the cost). If someone is seeking to establish an exclusion or influence an apportionment to their benefit then the burden of providing the council supporting information lies with them.
- iii. Where there are agreements between appropriate persons the local authority has to give effect to these agreements.

In making cost recovery decisions, the council will have regard to the two general principles set out in the statutory guidance; that the overall result should be fair and equitable (including local and national taxpayers) and that the principle of 'polluter pays' should in general apply. In general, the Council will seek to recover its costs in full, unless circumstances of hardship or mitigation exist.

### 6.3 The Council's Hardship Provisions

The statutory guidance requires that after apportioning liability but before serving remediation notices, the council must consider whether there are any reasons why any of the liable parties should not meet in full the share of the costs apportioned to them. Although there is no statutory definition of hardship, the council must have regard to any hardship which may be caused to the person in question. The following circumstances will influence the council's consideration when assessing hardship or mitigation.

- **For commercial enterprises:** The threat of business closure or insolvency
- **For Trusts:** The extent to which costs may be recovered from the trustees
- **For Charities:** The extent to which cost recovery would jeopardise that charity's ability to continue to provide benefit or amenity in the public interest.
- **For Social Housing Landlords:** The extent to which cost recovery would lead to difficulties in provision or upkeep of social housing.
- **For all Class A Persons (polluters or knowing permitters):** The extent to which another Class A person who cannot now be found was also responsible for the contamination.
- **For all Class B Persons (current owners or occupiers):** The extent to which remediation costs might exceed land value and the extent to which reasonable steps were undertaken to establish the condition of the land prior to obtaining the freehold.
- **For all Class B Owner-Occupiers of Dwellings:** The extent to which the owner-occupier might reasonably have been expected to be aware of the potential for contamination to exist.

If, after taking into consideration the statutory guidance, the council decides that one or more of the parties could not afford the costs, it will not serve a remediation notice on any of the parties. The council will instead consider carrying out the work itself and produce and publish a remediation statement.

## **6.4 Remediation Notices**

Before remediation notices are served the extensive consultation process will be completed and ample encouragement given to agree voluntary remediation. The council will do all in its power to consult the appropriate person(s), owners, occupiers and others about their views on the state of the land. This could be a difficult and most protracted process and cause delays. Where a housing estate is affected, for example, it would be reasonable to expect house owners, land owners, developers, lenders, insurers, surveyors, geotechnical engineers, residents groups, etc all to have differing views according to their position.

Remediation notices are served only as a last resort (not withstanding urgent cases), and then only after this lengthy consultation process has been exhausted. Notices will be authorised after two tests are satisfied:

- that the remediation actions will not be carried out otherwise
- that the council has no power to carry out the work itself

If these are met the council will serve a remediation notice on each appropriate person. It cannot be served less than three months after formal notification that the land is contaminated unless the urgent action is deemed necessary (where there is imminent risk of serious harm).

The legislation contains no provision for legal appeal against determination of a site being contaminated land, although grounds of appeal do exist against the terms of a remediation notice.

Any person who receives a Remediation Notice has twenty one days within which they may appeal against the notice. This appeal is to be made to the Secretary of State and following appeal the remediation notice is to be suspended until final determination or abandonment of the appeal.

## **6.5 Remediation**

Remediation measures will be specified in the remediation notice. These will be both appropriate and cost effective, employing what the statutory guidance terms, best practicable techniques. The aim of the remediation will be to ensure that the land is no longer contaminated, taking the shortest and lowest cost route. This means in most cases attention will be focused on the pathway, rather than the contaminant or receptor. Assistance from external contractors may be required from time to time for peer review purposes.

The reasonableness of the requirements are, however, paramount, a concept which is considered at some length in the statutory guidance. It is determined in relation to the cost of carrying out the remediation against the cost of failing to (that is, the costs, or potential costs, resulting from the continuing pollution).

Before the council can serve a remediation notice, it will first determine whether it has the power to carry out any of the remediation actions itself. There are five specified circumstances where this may be the case:

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

Remediation will be undertaken by the local authority only where this is required by the statutory guidance.

## **6.6 Orphan Sites**

Orphan sites are those where it is not possible, after reasonable enquiries, to find anyone responsible for them (class A or class B persons), or where persons can be found but they are exempted from liability for specified reasons. These are described in the statutory guidance as orphan linkages. In such cases the enforcing authority should bear the cost of the remediation in accordance with the secretary of state's guidance.

The exemptions from liability apply where:

- the land is contaminated by reason of pollution of controlled waters only, and no class A persons can be found (this means class B persons cannot be held liable for pollution water from land)
- the land is contaminated by reason of the escape of a pollutant from one piece of land to another and no class A persons can be found
- the land is contaminated land by reason of pollution of controlled waters from an abandoned mine
- the person responsible was acting in a relevant capacity (for example, insolvency practitioner or official receiver)

## **6.7 Urgent action**

Urgent action must be authorised where the council is satisfied that there is imminent danger of serious harm or serious pollution of controlled waters being caused as a result of contaminated land. In such circumstances the procedures identified in the statutory guidance will be followed which may involve the forced entry into the premises. As the terms 'imminent' and 'serious' are not defined, the council will use the normal meaning of these words and the particular facts of each case when deciding whether urgent action is necessary. There is, however, guidance on what may constitute seriousness when assessing the reasonableness of remediation.

The council will undertake the remediation in urgent cases, where it is the enforcing authority, if it is of the opinion that the risk would not be mitigated by enforcement action. In the case of a special site the council will declare the land contaminated land in accordance with the statutory procedure, and then notify the Environment Agency who will then be responsible for the remediation.

In all appropriate cases the council will seek to recover costs of remediation works it has completed according to the statutory guidance.

## **7. LIAISON AND COMMUNICATION**

### **7.1 Internal communication**

Before detailed site inspection occurs on any potentially contaminated land, relevant departments within the Council will be consulted for their views and where the land is borough owned, agree terms and access arrangements. A brief will be produced to inform senior management, the communication department and the leadership board of the intended course of action. Elected councillors, in whose area the site is located, will also be informed of the planned works.

Further internal communication with the relevant groups and councillors will occur where an investigation indicates that a site could be determined as contaminated land, or where the council might be considered the appropriate person and liable for remediation costs.

### **7.2 Communication with other statutory bodies**

A Memorandum of Understanding has been drawn up between the Environment Agency and the Local Government Association to identify how information will be exchanged between the Environment Agency offices and Local Authorities. Cheltenham borough council will provide information to the Environment Agency in accordance with these agreed guidelines.

The council will also contact the Environment Agency on designation of a site as contaminated land and whenever a remediation notice, statement or declaration is issued or agreed.

The Environment Agency is also required to report annually to the Secretary of State on the state of contaminated land in England and Wales; this includes:

- A summary of local authority inspection strategies, including progress and effectiveness
- The amount of identified contaminated land and the nature of contamination
- Measures taken to remediate contaminated land

The council will provide information upon request to the Environment Agency to allow it to fulfil its reporting obligations to the Secretary of State.

When considering determination of a potentially contaminated site, the borough council will engage in consultation with any other organisations that might have an interest in the site or that might be able to provide help and assistance. Such organisations include other affected Local Authorities, The Health Protection Agency, Gloucestershire County Council, the Health & Safety Executive and the Department of Environment Food and Rural Affairs (DEFRA)

### **7.3 Communication with Stakeholders**

The Borough Council aims to proceed with the process of investigating sites in a transparent and open manner. It will act to keep interested parties informed and updated regarding progress with the site inspection, as required by the statutory guidance. This will include, landowners, occupiers, nearby residents, elected councillors and the media where appropriate.

The Council is required to follow the procedures detailed in the Statutory Guidance when considering determination of a site as contaminated land. (See section 5.5 to 5.6).

When requiring remediation of a contaminated site, the regulations provide an incentive for voluntary action. Voluntary remediation is also often more likely to achieve a higher level of improvement in comparison to the minimum that can be statutorily required.

The Borough Council will therefore seek voluntary action wherever possible, only considering subsequent enforcement action if voluntary action is refused or considered unlikely to satisfactorily remediate the site.

### **7.4 Risk communication**

Reference should be made to the publication *Communicating Understanding of Contaminated Land Risks - SNIFFER 1999*, available from the Environment Agency.

The council will be involved in the assessment of risks associated with contaminated land and ensuring that unacceptable risks from contamination are appropriately managed. There is therefore a need to carefully assess how to anticipate and respond to the concerns, anxieties and expectations that may arise in response to land contamination.

Many things in life pose risks and it is not possible or practical to eliminate each and every risk. The same is true for contamination i.e. it is not practical or financially viable to remove all risks from contamination, and in some cases it is not technically possible to do so. However, public perception and concerns are very real and should be addressed seriously and with sensitivity as part of the risk management programme.

Managing the potential conflict around the risk issues requires attention to the content of risk information, and to the appropriate procedures at relevant stages in the decision making process. The procedures should address the following:

- the need for two-way communication
- transparency to create trust in the regulatory role
- openness to enhance the legitimacy of the overall process to the stakeholder

Risk communication should include the overall rationale and methods behind the assessment and management process. Risk communication for a site should be flexible in terms of procedures and reflect the content and history around a particular contaminated site.



## **7.5 Consultation on the Inspection Strategy**

Consultation on the original 'Strategy for Contaminated Land Inspection (2001)' occurred with council members, the parish councils, other council departments, relevant organisations and the public. This revised strategy has also been circulated for consultation – although it was not considered necessary to re-consult all those who were consulted in 2001. The revised list of consultees for this strategy is listed in Appendix 2.

## **8. DATA AND INFORMATION MANAGEMENT**

### **8.1 Obtaining desktop information**

As has been explained in the introduction to this strategy, the suggestion that land may be contaminated can have a significant impact on the way others view it, and in particular, it's perceived value. The council will therefore seek to obtain as much information as possible about potentially contaminated and suspected sites without causing unnecessary alarm. This may involve detailed inspection of historical data in its possession such as historical maps, planning files, building control files and the national land use database. Also the consultation of others who may possess information such as:

- The Environment Agency
- Department for Environment, Food and Rural Affairs
- The Health & Safety Executive
- Developers
- Previous occupiers
- Others

Details of several sources of information are also listed in section 4.4.

The desktop exercise to identify potentially contaminated sites will be carried out using historical maps formatted for use on a geographic information system (GIS). This will allow the various maps to be overlaid and viewed in such a way that a picture builds up as to how particular areas of land have been used until the present day. It will also permit the identification of site boundaries within which contamination may be present, and for the land within that boundary to be matched with the current land use, which may be a sensitive receptor such as houses with gardens.

In the course of undertaking the inspection work, the council will obtain a great deal of information from a wide variety of different sources. This information, which may be in the form of bound documents, reports, letters, maps or electronic records, needs to be collated and managed efficiently. Information about particular sites will also be stored using an electronic database linked to a GIS system. This will enable information to be viewed easily with reference to an accurate plan of the site and surrounding land. It will be possible to view a potentially contaminated or contaminated area, pick out sensitive receptors, possibly human, ground water or surface water, and have fast access to relevant information such as reports, photos, and other data. Such a system will make accessing and processing contaminated land information as efficient as possible.

The information will be updated and maintained by the contaminated land officer. The information will be held on the council's networked computer system as far as possible and will be accessible to other council departments such as planning, engineering and legal. Access will occur through a networked GIS system to users authorised by the contaminated land officer and project team. All such electronic site information will be secure, will be able to tag the information type (for example, commercially confidential or subject to national security constraints) and will be capable of being audited to ensure that the information held is both accurately recorded and up to date.

## 8.2 Public Register of Contaminated Land

The borough Council will prepare and maintain a Public Register of Contaminated Land. This is a written record of any determination of all land that has been determined as statutory contaminated land. The Public Register will include;

- The identity of the site owner(s) and occupier(s)
- A description of the particular significant pollutant linkage or linkages
- A summary of the particular evidence upon which the determination is based
- A summary of the relevant assessment of this evidence
- A summary of the way in which the authority considers that the requirements of Chapter A of the guidance have been met
- Any remediation statements

No other information will be included on the public register although additional information held by the council is likely to be available for inspection.

## 8.3 Requests for Information

**The release of information on potentially or actually contaminated land is a sensitive issue as it may give rise to undue anxiety and property blight if handled in an inappropriate or uncontrolled manner.**

The Borough Council is subject to the requirements of the Environmental Information Regulations 2004, the Freedom of Information Act 2000, the Data Protection Act 1998 and several other pieces of legislation governing the storing and provision of information, such as the requirements of Town and Country Planning.

Significant volumes of data are produced through implementation of the strategy which is held on computer databases, geographical information systems and in paper form. The Council is committed to transparency and openness in relation to all information held in relation to potentially contaminated land. It will make records freely available for inspection to an appropriate person for a proper purpose unless there is a legally valid reason not to do so. Such records may not be provided;

- Where held for judicial purposes
- Where disclosure would affect legal proceedings
- Where disclosure would affect international relations, national defence or public security
- Where disclosure would affect the confidentiality of deliberations by a relevant person, or the confidentiality of commercially sensitive matters
- Where it would involve the supply of a document or a record which is still in the course of completion
- Where the information is not accessible

In all circumstances where there is doubt, the council's solicitor will be consulted.

The council may impose a reasonable charge to cover its costs in providing requested information in accordance with council policy and statutory requirements.

Where specific property search requests are received from prospective purchasers, sellers, developers or their agents regarding potentially contaminated land, a standard fee is charged for the supply of requested information. Such requests are dealt with promptly and no later than ten days after receipt of the request and appropriate fee.

The Council also makes available helpful information and guidance concerning contaminated land to all interested parties and stakeholders and it is available to download from the council's website. It includes;

- The Contaminated Land Inspection Strategy
- Guidance for development of potentially contaminated land
- Information and guidance for homeowners and homebuyers affected by potential land contamination

## **8.4 Complaints and Confidentiality**

Any complaint received regarding contaminated or potentially contaminated land will be dealt with using the council's corporate complaints procedure.

This will normally include the following;

- The complaint will be logged and recorded
- The complainant will be responded to initially within 3 working days of receipt
- The complainant will be kept informed of progress towards resolution of the problem.

All such complaints will be investigated to establish whether the complaint is justified. If so, the particular circumstances will be evaluated to establish which enforcement process would be most appropriate.

Complaints may also be received about the fact that a particular site has been identified for further investigation under the Inspection Strategy. This could give rise to concern, especially where a potential sale has failed as a direct result of the suggestion that the land may be contaminated. Those so affected may seek an early investigation to clarify their position, thereby seeking to circumvent the prioritisation process. Such requests for priority inspection will, where resources allow, be dealt with as considerately as possible. However, the prioritisation and systematic investigation of potentially contaminated land must remain the focus of activity.

A computerised system will be used for recording complaints and subsequent action taken. This will be incorporated into the current Uniform system for environmental health complaints.

All complainants will be asked to supply their names and addresses although the identity of the complainant will remain confidential. The Council will not normally undertake any investigation based on anonymously supplied information.

## **9. CONTAMINATED LAND ACTIVITY IN CHELTENHAM**

### **9.1 Roles and responsibilities**

In common with most other local authorities, Cheltenham Borough Council employs a contaminated land officer based in the Pollution Control section of Environmental Health (Public Protection). This officer is the lead officer regarding any contamination issues within the Borough and compliance with the council's obligations under Part 2a of the Environmental Protection Act (1990).

The Contaminated Land Officer's responsibilities include;

- Implementation and periodic review of the Inspection Strategy
- Advising the Building Control and Planning departments regarding developments on potentially contaminated land
- Responding to enquiries and other requests for environmental information
- Responding to urgent and emergency incidents
- Advising the Council on their asset liability and management

Whilst the council has a statutory duty to inspect the district from time to time, to identify contaminated land, the frequency of inspection is not prescribed. In practice inspection may be continuous, balancing a systematic approach with the availability of resources.

The council also has a duty to review its inspection strategy on a regular basis and to meet its statutory responsibilities. Two main aspects of review need to be built into this strategy:

- i) triggers for reviewing inspection decisions
- ii) review of the inspection strategy

In addition to the routine review of inspection findings there will be situations which will trigger re-assessment including:

- change of use of surrounding land (introduction of new receptors)
- the potential for pollutant linkages to become significant or urgent as a result of unplanned events (for example, flooding, subsidence and spillages), or a change in circumstances
- identification of a localised effect which could be associated with the land
- responding to new information

The strategy as a whole will be reviewed by the council every five years and any proposed changes will be reported to the relevant service group leaders, and incorporated as necessary. Particular matters that will be kept under review include:

- the content of the strategy generally
- priorities for further investigation of potentially contaminated sites
- the potential for the introduction of new receptors
- the potential for new contamination
- progress on voluntary remediation
- the enforcement process generally and the identification of appropriate persons
- identification of special sites

## 9.2 Progress to date

There has been substantial activity regarding contaminated land in Cheltenham since the original contaminated land inspection strategy was published in 2001.

Noteworthy progress includes;

- Several large scale re-developments on former significantly contaminated brownfield sites in the Borough including; the former Indalex Chemical works on Tewkesbury Road, the former Flowers Brewery in the centre of Cheltenham and the former Abattoir and Fellmongers sites off Gloucester road. These sites have now been adequately assessed and remediated through the planning regime and are therefore no longer identified as potentially contaminated land sites for inspection under this strategy.
- Significant removal of below ground gas works waste during extension and re-development at the Tesco site on Tewkesbury road.
- Intrusive assessment of the Marle Hill former landfill site off Tommy Taylors Lane leading to determination of the site as contaminated land and designation as a special site. Remediation works are progressing in 2008.
- Identification and prioritisation, for detailed inspection, of potentially contaminated land sites identified in the Borough.
- Assessment and approval of several smaller-scale site re-developments including former petrol stations and engineering works.
- Publication of guidance documents to assist homebuyers, home purchasers and developers in understanding the contaminated land regime (see 8.3).

Numerous site investigation reports have been critically assessed by the Council in connection with development on potentially contaminated land. In addition regular land quality enquiries are received from land search consultants and conveyancing solicitors for which a fee is charged.

A close working relationship is maintained with other departments in the Council including Property Services, Building Control, Development Control, Legal Services and the Council's GIS manager in the Information Technology team.

Regular liaison also takes place with other bodies such as the Environment Agency and Health Protection Agency.

Cheltenham Borough Council is an active member of the Gloucestershire Contaminated Land Officers group which meets every two months. Successful initiatives developed by this group include a countywide benchmarking scheme and the organising of training events for solicitors and planning officers. Numerous speakers have been invited to address the Gloucestershire group including several notable consultants and technical officers from the Environment Agency.

Implementation of the Council's Inspection Strategy has proceeded broadly in line with the programme set out in the original approved version of the strategy published in September 2001. However the proposed timescales for site identification, prioritisation and investigation of potentially contaminated land sites were unrealistic.

The identification of potentially contaminated land sites has yielded a list of approximately 600 sites within the Borough boundary. The risk assessment and prioritisation of these sites for more detailed inspection is ongoing and is expected to be completed by the end of 2008/9.

No date was set for the detailed inspection and assessment of Priority Category 1 sites in the 2001 strategy. However these sites have all been identified and are now being progressively inspected in detail. No date can be given for when all the priority sites will have been inspected as it will depend on many time-limiting factors including the size of the site, the nature of contamination, the remedial requirements and the funding available for each site together with the workload and resourcing of the contaminated land officer.

Detailed inspection of remaining Category sites will occur after the completion of Category 1 site inspections. It is considered unlikely that lower Category sites, such as Category 3 and 4 sites will be pro-actively inspected in the near future. They may however be inspected through the planning process.

### **9.3 Current Action Plan**

All the projects below are subject to E.A. approval and funding from DEFRA

1. Detailed site investigation of the Queen Elizabeth Playing field, further assessment and remediation.
2. Groundwater Risk Assessment of St Peter's Playing Field
3. Phase 3 detailed landfill gas risk assessment and remediation at Marle Hill landfill
4. Options appraisal and remedial works to Wyman's Brook, Marle Hill
5. Further initial Phase 1 desk study and risk assessment works at high priority sites identified under the strategy

### **9.4 Performance measurement and future progress**

The government introduced two key performance indicators in 2005 relating to progress with contaminated land inspections;

**BV216a** : The number of sites of potential concern, with respect to land contamination

**BV216b** : The percentage of potential sites which have been assessed/inspected during the previous 12 months.

At the end of 2007/8, Cheltenham Borough Council had the highest percentage 216b rating of all authorities in Gloucestershire at just over 9.5%. However due to inconsistency in reporting and interpretation of the indicators by authorities, these performance indicators are due to be withdrawn by the Government at the end of 2007/8. To date, no replacement performance indicators have been identified specifically for the contaminated land regime.

**Amended timetable for the implementation of Part 2a of the Environmental Protection Act 1990 to identify and remediate contaminated land**

<b>Duty</b>	<b>Year</b>
Production and publication of statutory contaminated land strategy	2001
Review of Strategy and publication	2008
Inspection of the district, identification of potentially contaminated sites and prioritisation for further investigation	2008
Detailed inspection and assessment of priority category 1 sites	2012
Detailed inspection and assessment of remaining potentially Contaminated sites	estimate 2025



## **10. PROJECTED COSTS AND RESOURCING**

### **10.1 DEFRA funding**

When the contaminated land regime first came into force in 2000, the government identified that to implement this highly complex piece of legislation would involve local authorities in considerable expenditure. As a result some £95 million was made available over three years through the standard spending assessment and through a contaminated land supplementary credit approval programme(SCA). This SCA programme allowed local authorities to apply for funding from DEFRA for detailed site investigation of potentially contaminated land and remediation works at sites that had been formally assessed as contaminated land.

More recently, the credit arrangement has been replaced with a cash based grant scheme from DEFRA, although the qualifying criteria and application process has remained largely unchanged.

In 2007, this routine source of funding for such work was stalled with the consequence that local authorities could not progress with pro-active site inspection or remediation of priority sites within their areas. Some funding was made available during November 2007 and recently the Council has been successful in securing funding for further investigation works at Marle Hill and at the Queen Elizabeth playing field.

It is anticipated that during 2008, further funding opportunities will be made available from DEFRA to allow remedial works to be completed at Marle Hill and further site investigations to commence.

### **10.2 Council funding**

Currently the contaminated land function within the council is resourced with a single contaminated land officer and a budget of approximately £5000 per year for initial investigation of potentially contaminated sites. The officer also benefits from a share of the Pollution Control budget for provision of equipment, guidance and training.

The council's capital programme for 2008/9 has a budget of £186,000 earmarked for works at Marle Hill. However it is anticipated that any remediation works at Marle Hill will also qualify for DEFRA grant funding, should such funding become available.

Should land in possession of the council be identified as contaminated land, then funding of remediation will be considered on a case by case basis. In the event of significant costs being involved it is likely that an application will be made via the DEFRA contaminated land scheme as detailed above.

## **Appendices**

1. Special sites
2. List of consultees and contact points
3. Pollution of controlled waters
4. List of potentially contaminative land uses
5. Powers of entry and the appointment of 'suitable persons'
6. Examples of preliminary risk assessments
7. Selected key guidance documents
8. Planning policy and guidance
9. Contaminated land investigation and the development control process
10. Glossary of terms

## Appendix 1

### Special sites

1. Once a local authority has identified land as contaminated land by definition, it must also consider whether it falls into the category of a special site. Such sites are those where the Environment Agency is best placed to be the enforcing authority.

2. What exactly constitutes a special site is specified in the Contaminated Land (England) Regulations 2006. For a legal definition the regulations must always be consulted. In simple terms, however, they include contaminated land;

- that is polluting controlled waters (in certain circumstances - see **Appendix 3**);
- subject to Integrated Pollution Control (see Environmental Protection Act 1990 Part I - Prescribed Processes and Substances Regulations 1991 schedule 1 part A);
- regulated under the PPC (Pollution Prevention and Control Act 2000) – Part A(1) installations or mobile plant licences.
- with waste sulphuric acid tar lagoons (on sites used for refining benzole, used lubricants or petroleum);
- used as an oil refinery;
- used to manufacture or process explosives;
- used to manufacture or dispose chemical or biological weapons (non biological contamination only);
- by virtue of any radioactivity possessed by any substance.
- owned or occupied by a defence organisation for naval, military or air force purposes (not off base housing / NAAFI);

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

4. Procedure in relation to the investigation and declaration of special sites is covered in the inspection strategy.

## Appendix 2

### List of consultees and contact points

#### 1. CHELTENHAM BOROUGH COUNCIL

Council Members

Planning Officer - Robert Lindsey

Building Control Officer - Iain Houston

Legal Services

Engineer - Geoff Beer

IT support officer - Sanjay Mistry

Data Protection Administrator

Property - Tim Byng

Finance – Mark Sheldon

#### 2. GLOUCESTERSHIRE LOCAL AUTHORITIES

##### **Cotswold District Council – Environmental Health**

Kate Bishop  
Environmental Health  
Trinity House  
Cirencester  
Gloucestershire  
GL7 1PX

Tel: 01285 623000  
Fax: 01285 623926  
Email: [kate.bishop@cotswold.gov.uk](mailto:kate.bishop@cotswold.gov.uk)  
Web: [www.cotswold.gov.uk](http://www.cotswold.gov.uk)

##### **Forest of Dean Borough Council – Environmental Health**

Mr Hadyn Brookes  
Environmental Protection Team  
Council Offices  
Coleford  
Gloucestershire  
GL16 8HG

Tel: 01594 812409  
Fax: 01594 812590  
Email: [haydn.brookes@fdean.gov.uk](mailto:haydn.brookes@fdean.gov.uk)  
Web: [www.fdean.gov.uk](http://www.fdean.gov.uk)

##### **Gloucester City Council – Contaminated Land Officer**

Mr Steve Moreby  
Contaminated Land Officer  
Environmental Health  
Herbert Warehouse  
The Docks  
Gloucester  
GL1 2EQ

Tel: 01452 396312  
Fax: 01452 396340  
Email: [Stephen.moreby@gloucester.gov.uk](mailto:Stephen.moreby@gloucester.gov.uk)  
Web: [www.gloucester.gov.uk](http://www.gloucester.gov.uk)

### **South Gloucestershire Council – Environmental Health**

Ms Dinah Woolley  
Senior Environmental Health Officer  
Council Offices  
Castle Street  
Thornbury  
South Gloucestershire  
BS35 1HF

Tel: 01454 863485  
Fax: 01454 863484  
Email: [Dinah.woolley@southglos.gov.uk](mailto:Dinah.woolley@southglos.gov.uk)  
Web: [www.southglos.gov.uk](http://www.southglos.gov.uk)

### **Stroud District Council – Contaminated Land Officer**

Mrs Katie Larner  
Ebley Mill  
Westward Road  
Stroud  
Gloucestershire  
GL5 4UB

Tel: 01453 754469  
Fax: 01453  
Email: [Katie.larner@stroud.gov.uk](mailto:Katie.larner@stroud.gov.uk)  
Web: [www.stroud.gov.uk](http://www.stroud.gov.uk)

### **Tewkesbury Borough Council – Environmental Health**

Mr Gerry Davies  
Senior Environmental Health Technician  
Council Offices  
Gloucester Road  
Tewkesbury  
Gloucestershire  
GL20 5TT

Tel: 01684 272174  
Fax:  
Email: [gerry.davies@tewkesbury.gov.uk](mailto:gerry.davies@tewkesbury.gov.uk)  
Web: [www.tewkesbury.gov.uk](http://www.tewkesbury.gov.uk)

## **3. GLOUCESTERSHIRE COUNTY COUNCIL**

Environmental Planning  
Gloucestershire County Council  
Shire Hall  
Westgate Street  
Gloucester GL1 2TG

Tel: 01452 425677  
Fax: 01452 425627  
Email: [sustainability@gloucestershire.gov.uk](mailto:sustainability@gloucestershire.gov.uk)  
Web: [www.gloucestershire.gov.uk](http://www.gloucestershire.gov.uk)

## **4. ENGLISH HERITAGE**

### **Local contact:**

Duncan McCallum  
Regional Land Use Planner  
29 Queens Square  
Bristol  
BS1 4ND

Tel: 0117 975 0700  
Fax: 0117 975 0701  
Email: [southwest@english-heritage.org.uk](mailto:southwest@english-heritage.org.uk)  
Web: [www.english-heritage.org.uk](http://www.english-heritage.org.uk)

## **5. NATURAL ENGLAND**

Natural England – Gloucestershire  
John Dower House  
Crescent Place  
Cheltenham  
Gloucestershire  
GL50 3RA

Tel: 01242 521381  
Email: [Gloucestershire@naturalengland.org.uk](mailto:Gloucestershire@naturalengland.org.uk)  
Web: [www.naturalengland.org.uk](http://www.naturalengland.org.uk)

## 6. ENVIRONMENT AGENCY

The council will consult and liaise with the Environment Agency on matters relevant to the Agency's various functions. It will also seek site specific advice where necessary in accordance with the Environment Agency's formal role.

### Area Contaminated Land Officer:

Michael Hughes	Tel: 01684 864447
Riversmeet House	Fax: 01684 293599
Newtown Industrial Estate	Email: <a href="mailto:michael.hughes@environmentagency.gov.uk">michael.hughes@environmentagency.gov.uk</a>
Northway Lane	Web: <a href="http://www.environment.gov.uk">www.environment.gov.uk</a>
Tewkesbury	
Glos GL20 8JG	

### Waste regulation Section:

Ms Marie Berridge	Tel: 01684 864532
Riversmeet House	Fax: 01684 293599
Newtown Industrial Estate	Email: <a href="mailto:marie.berridge@environment-agency.gov.uk">marie.berridge@environment-agency.gov.uk</a>
Northway Lane	Web: <a href="http://www.environment-agency.gov.uk">www.environment-agency.gov.uk</a>
Tewkesbury	
Glos GL20 8JG	

### National head quarters

Land Quality	Tel: 01454 624400
Rio House Waterside Drive	Fax: 01454 624032
Aztec West	
Bristol	
BS32 4UD	

### National Centre for Groundwater and Contaminated Land

Olton Court	Tel: 0121 7112324
10 Warwick Road	Fax: 0121 7115925
Solihull	
B92 7HX	

## 7. FOOD STANDARDS AGENCY

Mr Ignacio Vazquez	Tel: 020 72768726
Room 707C	Fax: 02072768717
Aviation House	Email: <a href="mailto:ignacio.vazquez@foodstandards.gsi.gov.uk">ignacio.vazquez@foodstandards.gsi.gov.uk</a>
125 Kingsway	Web: <a href="http://www.food.gov.uk">www.food.gov.uk</a>
London	
WC2B 6NH	

## **8. HEALTH PROTECTION AGENCY**

Dr Toyin Ejidokun  
Gloucestershire Health Protection Unit  
Unit 43 Central Way  
Arle Road  
Cheltenham  
Gloucestershire  
GL51 8LX

Tel: 01242 548808  
Fax: 01242 548802  
Email: [ejidokun\\_t@yahoo.com](mailto:ejidokun_t@yahoo.com)  
[eirian.thomas@hpa.org.uk](mailto:eirian.thomas@hpa.org.uk)  
Web: [www.hpa.org.uk/avon\\_glos\\_wilt](http://www.hpa.org.uk/avon_glos_wilt)

## **9. DEPARTMENT OF ENVIRONMENT, FOOD AND RURAL AFFAIRS – DEFRA**

Steven Griffiths  
Contaminated Land Branch  
ELM, Area 3B  
Nobel House  
17 Smith Street  
London  
SW1P 3JR

Tel: 08459 335577  
Fax:  
Email: [contaminatedland.enquiries@defra.gsi.gov.uk](mailto:contaminatedland.enquiries@defra.gsi.gov.uk)  
Web: [www.defra.gov.uk](http://www.defra.gov.uk)

## **10. SOUTH WEST REGIONAL DEVELOPMENT AGENCY**

Ian Knight  
Area Director  
100 Temple Street  
Bristol  
BS1 6AE

Tel: 0117 9330200  
Fax: 0117 9276466  
Email: [enquiries@southwestrda.org.uk](mailto:enquiries@southwestrda.org.uk)  
Web: [www.southwestrda.org.uk](http://www.southwestrda.org.uk)

## **11. NATIONAL HOUSE BUILDING COUNCIL(NHBC) – Contaminated Land**

Karen Thornton  
Specialist Environmental Engineer  
NHBC Engineering  
Buildmark House  
Unit 1  
Roman Way Business Centre  
Droitwich  
WR9 9AJ

Tel: 01905 792047  
Fax: 0844 633 1024  
Email: [kthornton@nhbc.co.uk](mailto:kthornton@nhbc.co.uk)  
Web: [www.nhbc.co.uk](http://www.nhbc.co.uk)

## **12. SEVERN TRENT WATER**

Mr Chris Rowlands  
Environmental Planning  
Severn Trent Water Ltd  
2297 Coventry Road  
Birmingham B26 3PU

Tel: 0121 7224000  
Fax: 0121 7224800  
Email: [chris.rowlands@stwater.co.uk](mailto:chris.rowlands@stwater.co.uk)  
Web: [www.stwater.co.uk](http://www.stwater.co.uk)

## Appendix 3

### Pollution of controlled waters

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

- coastal waters including docks
- relevant territorial waters (usually to three miles)
- inland fresh waters (relevant rivers, watercourses, lakes, ponds, reservoirs including bottom / channel / bed, even if dry)
- ground water (section 104 of the Water Resources Act 1991)

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

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

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

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

5. Where pollution of ground water has occurred and the source can not be identified, or the polluting substances are contained entirely within the body of water (and not in or on the land), then Part IIA does not apply and the matter would be dealt with by the Environment Agency under section Part III of the Water Resources Act 1991.

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

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

The Surface Water (Dangerous Substances) (Classification) Regulations 1989

The Bathing Waters (Classification) Regulations 1991

The Surface Water (Dangerous Substances) (Classification) Regulations 1992

The Surface Water (River Eco System) (Classification) Regulations 1994

The Surface Water (Abstraction for Drinking Water) (Classification) Regulations 1996

The Surface Water (Fish life) (Classification) Regulations 1997

The Surface Water (Shellfish) (Classification) Regulations 1997

The Surface Water (Dangerous Substances) (Classification) Regulations 1997

The Surface Water (Dangerous Substances) (Classification) Regulations 1998



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

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

Specified aquifers are those contained in the following rocks:

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

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

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

## Appendix 4

### List of potentially contaminative land uses

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

Abattoirs	Electro platers
Adhesives manufacture	Engineering works
Agriculture	Explosives manufacture (including fireworks)
Aircraft manufacture	Farms
Airports	Fertiliser manufacture
Animal burial	Fellmongers
Animal by-product processing	Fibre glass works
Anodisers	Food processing
Anti-corrosion treatment	Foundries
Asbestos products	Fuel manufacture
Asphalt works	Fuel storage
Automotive engineering	Garages and depots
Battery manufacture	Gas mantle manufacture
Bearings manufacture	Gas works
Blacksmiths	Glass works
Boiler makers	Glue manufacture
Bookbinding	Gum and resin manufacture
Brass and copper tube manufacture	Hatters
Brass foundries	Hide and skin processors
Brewing	Ink manufacture
Car manufacture	Iron founder
Carbon products manufacture	Iron works
Cement works	Knackers yards
Chemical manufacture and storage	Laquer manufacture
Chrome plating	Laundries
Ceramics manufacture	Leather manufacture
Coal carbonisation	Metal coating
Coal merchant	Metal manufacture
Concrete batching	Metal sprayers and finishers
Coppersmiths	Mining
Descaling contractors (chemical)	Mirror manufacture
Detergent manufacture	Motor vehicle manufacture
Distilleries	Oil fuel distributors and suppliers
Dockyards	Oil merchants
Drum cleaning	Oil refineries
Dry cleaners	Oil storage
Dye works	Paint and varnish manufacture
Dyers and finishers	Paper works
Electricity generation	Pesticides manufacture
Electrical engineers	

Petrol stations  
Photographic film works  
Photographic processing  
Paper manufacture  
Plastics works  
Plating works  
Power stations  
Print works  
Printed circuit board manufacture  
Radioactive materials processing  
Railway land  
Railway locomotive manufacture  
Refiners of nickel and antimony  
Resin manufacture  
Rubber manufacture  
Scrap metal dealers  
Sealing compound manufacture  
Sewage works  
Sewage sludge disposal areas  
Sheet metal merchants and works  
Ship breakers  
Ship builders  
Shooting grounds  
Skein silk dyers  
Small arms manufacture  
Smokeless fuel manufacture  
Soap manufacture  
Solvent manufacture  
Solvent recovery  
Steel manufacture  
Stove enamellers  
Synthetic fibre manufacture  
Tank cleaning  
Tanneries  
Tar and pitch distillers  
Textile manufacture  
Thermometer makers  
Timber treatment  
Timber preservatives manufacture  
Tin plate works  
Transport depots  
Tyre manufacture and retreading  
Vehicle manufacture  
Vulcanite manufacture  
Vulcanisers  
Waste disposal  
Waste recycling  
Waste treatment  
Zinc works

## Appendix 5

### Powers of entry and the appointment of 'suitable persons'

#### Powers of Entry

1. Section 108 of the Environment Act 1995 gives the local authority power to authorise, in writing, "suitable persons", to investigate potentially contaminated land. These powers are extensive and will be considered in detail with the Council's Solicitor prior to any resisted entry being attempted. It should be noted that these powers are not available to the Environment Agency. The powers which a person may be authorised to exercise include:

- To enter at any reasonable time (or in urgent cases, at any time, if need be by force) any premises / land to make such examination and investigations necessary.
- To take samples, photographs, carry out tests, install monitoring equipment etc.

2. At least seven days notice must be given to residential occupiers and to occupiers of land where heavy plant is to be used. Consent must be obtained to enter from the occupier, or failing that, a warrant obtained under Schedule 18 of the Act.

3. It should be noted that there are no circumstances in which the council will use these powers to obtain information about the condition of land, where:

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

4. Urgent action must be authorised where the council is satisfied that there is imminent danger of serious harm or serious pollution of controlled waters being caused as a result of contaminated land. In such circumstances the procedures identified in the statutory guidance will be followed which may involve the forced entry into the premises.

5. The terms 'imminent' and 'serious' are unfortunately not defined, local authorities are advised to use the normal meaning of the words. There is, however, guidance on what may constitute 'seriousness' when assessing the reasonableness of remediation.

6. The council will undertake the remediation in urgent cases where it is the enforcing authority if it is of the opinion that the risk would not be mitigated by enforcement action. In the case of a special site the council will declare the land contaminated land in accordance with the statutory procedure, and then notify the Environment Agency who will then be responsible for the remediation.

7. In appropriate cases the council will seek to recover costs of remediation works it has completed.

8. All intrusive investigations will be carried out in accordance with appropriate technical procedures to ensure:

- a) they are effective
- b) they do not cause any unnecessary damage or harm
- c) they do not cause pollution of controlled waters

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

### **Appointment of suitable persons**

1. The science and associated technical procedures relating to the investigation and assessment of contaminated land are extremely complex. Knowledge of several specialised disciplines is required together with an ability to interpret significant volumes of data and make a reasoned judgement, often in difficult circumstances.

2. The consequences of getting it wrong could, in many cases, have a major impact on the district and on people's lives. On the one hand, an entire area could be unnecessarily blighted and homes rendered worthless over night, and human health could be left at risk.

3. Neither the Act nor the guidance considers what may constitute a, 'suitable person', for the purposes of the investigation and assessment of contaminated land. There is no list of approved consultants or any professional organisation which oversees the training of contaminated land specialists. There is no minimum qualification and no recognised qualification. Consultants come from a range of backgrounds including:

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

4. Ultimately, the responsibility for determining what land may and may not be declared contaminated, by definition, lies with the contaminated land officer. S/he will, however, often need to rely on the advice of appointed, 'suitable persons'. Under these circumstances criteria have been developed to assist in their selection.

### **Procedure for the appointment of 'suitable persons' for the purposes of Part 2A**

1. There are two prerequisites to commencing the process of appointing suitable external consultants and contractors. Firstly, adequate funding to support the process; and secondly, a well qualified person, 'in house', to act in the Client role.

2. Such a person, as well as having sufficient knowledge and experience to specify the contract, must have sufficient time to monitor it also.

3. Additional training will be required to provide an adequate foundation of knowledge upon which to carry out the role.

4. The client officer will produce a comprehensive, unambiguous but succinct draft specification for each contract which clearly identifies the work to be carried out, its purpose, timetable and client / contractor responsibilities. A list of appropriate companies will then be produced. Each of these will then be contacted in turn for an informal discussion as to their capability, expertise and experience. Prior to commencing this process the client officer will produce a selection of questions relevant to the contract to ask each company. This should then hopefully result in a short list of six or so companies who will be asked to quote / tender for the work based on a final specification.

5. A check list of information requirements is included at the end of this section.

6. Once a consultant (suitable person) has been appointed the client officer will be responsible for monitoring the contract to ensure:

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

### Checklist of information requirements

Clients information requirements	Requirements of the consultant
<b>1. GENERAL</b>	
1.1 Background on company capability	How long has company been operating? What kind of work were they originally set up to do - is this an add on? Who traditionally are their clients?
1.2 Numbers and qualifications of staff  1.3 CV and availability of key staff	If a large company, what are the interests and sympathies of those in control. Do they consider local authorities as a serious market? How many staff are available for this type of work, will they need to subcontract? Who will actually be doing the job, what are their qualifications and experience? Practical experience is key. Do they really understand Part 2A? Knowledge of environmental law & local government systems an important requirement.

1.4 Details of QA systems including: Allocation of responsibilities Project Management Technical Procedures Technical review Training Assessment of external suppliers	Where appropriate, need details of quality management systems indicating whether accredited by a third party. What technical procedures to be used. Who are the staff responsible for undertaking the technical review. How will quality of subcontractors be ensured.
1.5 Management of Health & Safety	Identify H&S management procedures where appropriate. Do they understand the fundamental requirements of H&S legislation?
1.6 Track record on similar projects	Ever done similar work or is this a new departure?
1.7 Client references	Need several telephone numbers to enable rapid verification of statements made at interview.
1.8 Financial status	May not always be necessary but on large contracts where considerable financial outlay required need to demonstrate solvency. Bond may be required on large remediation contracts.
1.9 Details of insurance cover	Need to demonstrate insurance available 3 <sup>rd</sup> party liability and professional indemnity. Identify limitations and exclusions
1.10 Membership of professional and trade associations	May be necessary to make checks, corporate membership of professional organisations, meeting CPD requirements?
1.11 Compliance with codes of practice	Can they demonstrate knowledge of the appropriate guidance, codes of practice etc relevant to the job?
<b>2. PROJECT SPECIFIC</b>	
2.1 Project management plan / working plan	A clear timetable must be available which states what stage will be reached by when and who will be responsible to deliver.
2.2 Details of sub contractors	Subcontractors will be necessary on large technical projects. Must state who they are, contact points and lines of responsibility.
2.3 Details of technical procedures	Again, the working plan must clarify all procedures and lines of responsibility.
2.4 Reporting	Reporting procedures must be made absolutely clear. It is essential not to have masses of reports landing on the desk of the client officer which puts the responsibility back on them. The responsibility for doing what has been agreed to the agreed standard must lie with the contractor.
2.5 Programme & Financial proposal	It may be that the contractor will want to provide a guide price or include large contingency sums. The programme of work and the quotation must not be ambiguous. A lot depends on the quality of the original specification. Stage payments and timetables must be firm and with perhaps penalty clauses if fail to deliver on time.
2.6 Conditions of engagement	Contracts need not be long and wordy, should define responsibilities of both parties, liabilities etc. succinctly.

## Appendix 6

### Examples of preliminary risk assessments

**Preliminary assessments** are those carried out at the time of the inspection of the District and are designed only to assess priorities for further investigation.

**Stage 1 risk assessments** are those which seek to confirm (or otherwise) that a suspected pollutant linkage actually does exist.

**Stage 2 risk assessments** are those which seek to confirm (or otherwise) that a confirmed pollutant linkage is significant.

**Example 1** Closed landfill with houses built on the site with no recognised capping

<i>Contaminant score</i>	10	As a landfill site contaminants are known to be present
<i>Receptor score</i>	10	As people are living on the site receptors are known to exist)
<i>Pathway score</i>	10	As people are living on the site they are potentially able to access the contamination and a pathway exists
Total	<u>30</u>	<u>Priority category 1 (PC1)</u>

This is a very simple example but it indicates why houses on a landfill site with minimal protection will always be PC1 as a *pollutant linkage* always exists.

**Example 2** Closed landfill site with houses built on the perimeter

<i>Contaminant score</i>	10	As a landfill site contaminants are known to be present
<i>Receptor score</i>	10	As people are living very close by receptors are known to exist within an area of influence of the site
<i>Pathway score</i>	6	As people are living very close there is a significant possibility that the contamination could impact on the receptors, for example landfill gas
Total	<u>26</u>	<u>PC1</u>

In this case, if there was data to show that the pathway between the contaminant of concern (say landfill gas) and the receptors, had been effectively broken, then the pathway score may be significantly reduced or even become zero.



**Example 3** Closed land raise in the country, no houses or property receptors nearby but watercourses identified on both sides of the site with leachate staining

<i>Contaminant score</i>	10	As a landfill site contaminants are known to be present
<i>Receptor score</i>	10	The water courses are controlled waters and therefore specified receptors within an area of influence of the site
<i>Pathway score</i>	8	It is very likely that the contamination on this site will access water courses
Total	<u>28</u>	PC1

**Example 4** Old derelict gas works site, no structures, no access to the public, clay geology, no significant deep aquifer, but private water supply (PWS) nearby. Recent sample results satisfactory.

<i>Contaminant score</i>	10	As a gas works site contaminants are known to be present
<i>Receptor score</i>	5	Initial investigations suggest the existence of sensitive receptors unlikely except the PWS
<i>Pathway score</i>	3	Adverse impact on receptor unlikely but could not be ruled out in the long term - seems satisfactory at the moment from recent sample results
Total	<u>18</u>	PC3

**Example 5** Old power station site, now derelict, no structures, children play on the site, motorcyclists use it for scrambling. River adjacent and part of site a flood plain.

<i>Contaminant score</i>	8	As a power station site contaminants are very likely, including asbestos
<i>Receptor score</i>	10	People frequenting the site are receptors with direct access to any surface contamination. The river is a controlled water and could be picking up contaminants from the site during periods of flood and heavy rain
<i>Pathway score</i>	5	Chronic adverse impact on receptors possible
Total	<u>23</u>	PC2

## **Appendix 7**

### **Selected key guidance documents**

#### **Department of the Environment guidance**

Industry Profiles, Department of the Environment, 1995 and 1996.

Landfill Gas. Waste Management Paper No 27. Department of the Environment 1991.

CLR1: A framework for assessing the impact of contaminated land on groundwater and surface water.

CLR2: Guidance on preliminary site inspection of contaminated land - 1994

CLR3. Documentary research on industrial sites - 1994.

CLR4. Sampling strategies for contaminated land - 1994

CLR6. Prioritisation and categorisation procedure for sites which may be contaminated

#### **Environment Agency/DEFRA guidance**

CLR 7: Assessment of Risks to Human Health from Land Contamination – 2002

CLR 8: Potential Contaminants for the Assessment of Land - 2002

CLR 9: Contaminants in Soils: Collation of Toxicological Data and Intake Values for Humans

CLR10: The CLEA model – Technical basis and algorithms – 2002

CLR11: Model Procedures for the Management of Land Contamination - 2004

DEFRA Circular 01/2006 Contaminated Land, September 2006

R&D 20(P20): Methodology for the Derivation of Remedial Targets for Soil and Groundwater to Protect Water Resources. Environment Agency 1999.

#### **Regulations**

Part 2a of the Environment Protection Act (1990) (as amended)

The Contaminated Land (England) Regulations 2006

The Radioactive Contaminated Land (Modification of Enactments)(England) Regulations 2006

The Environment Act 1995 (Commencement No. 16 and Saving Provision) (England) Order 2000

## **Other guidance**

Investigation of potentially contaminated sites - Code of Practice. British Standard BS 10175:2001

Memorandum of Understanding: Environment Agency and Local Government Association

Guidance for the Safe Development of Housing on Land Affected by Contamination. The Environment Agency and NHBC

CIRIA Site assessment, investigation and remediation publications. SP103, V545, C549, C540. 2001

Communicating Understanding of Contaminated Land Risks. Scotland and Northern Ireland Forum for Environmental Research (SNIFFER) 1999.

MAFF Soil code of good agricultural practice.

SNIFFER (Scotland and Northern Ireland Forum for Environmental Research) Framework for Deriving Numeric Targets to Minimise the Adverse Human Health Effects of Long-term Exposure to Contaminants in Soil. April 2000

BP Risk version 4: Risk integrated Software for Cleanups - assessment package.

PPS23 – Planning Policy Statement 23 : Planning and Pollution Control : Annex 2: Development on Land Affected by Contamination. ODPM(2004)

PPS9 – Planning Policy Statement 9 : Biodiversity and Geological Conservation. ODPM(2005).

## Appendix 8

### Planning policy and guidance

#### Local Plan – Second Review: adopted July 2006

There are three main Local Plan Objectives which are relevant to this strategy, these are;

O6: to create more sustainable patterns of development, with priority use of previously developed land

O7: to make best use of development land

O16: to protect and improve the quality of land, air and water

Core Policy CP1 states that development will only be permitted where it takes adequate account of the principles of **sustainable development**. It states further that in particular development should give priority to the use of previously developed land.

Under Chapter 8 – The Natural Environment, the Local Plan makes reference to land within the borough which is known to be contaminated by virtue of past industrial uses. It also makes provision for the investigation of contaminated land under a strategy for contaminated land inspection. Where proposals for development involve the use of contaminated land, the Council will seek to ensure that the development of contaminated land does not give rise to future environmental or public safety problems; in particular, to human health and the environment, and that it does not cause or increase pollution of the water environment. In this context, the advice of the Environment Agency will be sought. In such cases, it will be necessary for the developer to undertake a site investigation survey to identify the scale of the problem and to formulate protective measures.

Policy NE4 on Contaminated Land states that :

**Development will only be permitted on a site subject to contamination where the site is remediated, either before development or as part of the development, to a level suitable for the intended use.**

Note1: A desktop study will be required on sites where contamination is suspected. Assessment should identify historical uses, and all contaminants that may be present

Note 2: A site investigation will be required on sites where contamination is known to exist.

Note 3: The Borough Council has prepared a guidance note for developers, agents and consultants: "Development of potentially contaminated land".

Note 4: The Borough Council's Contaminated Land Officer will advise developers on the appropriate level of inspection required.

## **Planning guidance – PPS23 Planning and Pollution Control, 2004**

PPS23 sets out how planning authorities should adopt a 'suitable for use' approach to the re-use of contaminated land. The objectives of this approach 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.

## **Gloucestershire Structure Plan Second Review (1999).**

Refer to chapter 5 'strategy' which identifies maximising the use of brownfield sites.

Refer to chapter 19 'pollution' paragraph 19.2.4

## **Regional Planning Guidance**

References in RPG regarding re-use of previously developed land, as set out below.

Policy SS 1 - 'seek the development of suitable previously developed urban land'.

Policy EC 3 'giving preference to land within urban areas, particularly brownfield sites'.

Policy HO 5 - for the region as a whole the aim should be to achieve at least 50% of new housing provision on previously developed land'

Chapter 9 - Infrastructure and resources. Paragraph 9.9 'Although the re-use of previously developed land in urban areas is supported by this RPG, such land may be contaminated. It is essential that remediation takes place as part of redevelopment in order to protect both the environment and the health of future users of the land.'

## Appendix 9

### Contaminated land investigation and the development control process

#### **The remediation through the planning process of land that is contaminated**

Where previous contaminating use has taken place on development land, planning conditions are regularly used to secure remediation.

The planning condition usually requires a contaminated land site investigation report and a scheme of works to make the land suitable for its intended use. These works must be agreed with the authority prior to any development. A completion or validation report is generally required to demonstrate that the work has been carried out adequately.

The conditions may vary according to the particular circumstances of the land. However Cheltenham Borough Council has developed a standard contaminated land planning condition which can be applied in most instances.

Where possible land that is contaminated will be remediated using the planning process. The contaminated land officer will work with the planning department and other departments of the Council to facilitate this remediation. It will include advising on the use of planning conditions, the peer review of contaminated land reports, and the inspection of investigation and remediation work.

#### **Standard planning condition for contaminated land investigation and remediation**

*No works of any description (save only for such works as are necessary to comply with the terms of this condition) shall be undertaken in connection with the development until such time as this condition has been satisfied in full.*

*Prior to the commencement of the development hereby permitted on the site the developer shall submit to the local planning authority (LPA) for its prior written approval the following information detailing any potential land contamination and a proposed scheme of remedial works in respect of the same if required. This information shall be provided in the three stages listed below, and at the end of each stage the developer shall submit a report to the LPA for its approval in writing prior to any works being undertaken and before progression to the next stage as listed below:*

*1.a preliminary investigation to include a desk study report detailing the history of the site and identifying risks to human health and the environment undertaken in accordance with BS 10175: 2001 Investigation of potentially contaminated sites - Code of practice. This shall include the presentation of a site conceptual model.*

*2.a main investigation to include a site investigation report documenting the ground conditions of the site, incorporating chemical and gas analysis as identified as being appropriate by the desk study, undertaken in accordance with BS 10175: 2001 Investigation of potentially contaminated sites - Code of practice.*

*3.a detailed remediation scheme for the remedial works and measures to be taken to avoid risk to human health and the environment as identified by the desk study and site investigation from contaminants/or gases when the site is developed.*

*Prior to the commencement of the development the remediation scheme shall be agreed in writing with the LPA before being undertaken. This remediation scheme shall be fully implemented and a completion report signed by the developer submitted to and approved in writing by the LPA before the development hereby permitted is first occupied or any change of use implemented. No variation to the agreed specification of the remediation scheme shall be implemented until such time as it has been agreed in writing with the LPA*

*If during remediation works, or any other works on site pursuant to this permission, any contamination is identified that has not been considered in the remediation scheme, remediation proposals for any such contamination shall be submitted to and approved in writing by the LPA and regarded as part of the scheme and be fully implemented and form part of the completion report prior to the first occupation or any change of use of the site.*

*Reason: To safeguard the health and safety of future occupants of the site and the environment. To comply with Local Plan Policy NE 64 and HS 81*

### **Guidance on what a contaminated land report should contain**

Cheltenham Borough Council in conjunction with the Bristol, Gloucestershire and Somerset Environmental Protection Committee produced a guidance note to assist developers, agents and their consultants on what a contaminated land report should include. This is available on the council website [www.cheltenham.gov.uk](http://www.cheltenham.gov.uk) listed under 'contaminated land'.

As a general guide the report should include the following:

#### **Phase 1 - desk study and walk over**

Site history  
environmental setting including groundwater  
presence of landfill  
previous reports/monitoring records  
walkover  
initial informed judgement related to site circumstances  
preliminary risk assessment and conceptual model

#### **Phase 2 - intrusive investigation (if required)**

Description of the nature, extent and severity of contamination  
refined conceptual model  
description of plausible pollutant linkages  
risk estimation and evaluation of the plausible pollutant linkages  
risk assessment details and method  
scope of remedial measures  
measures to manage risk  
site investigation data with interpretation  
laboratory quality assurance details  
sampling strategy and details  
judgement on the basis of site investigation and analysis

**Phase 3 - remediation (if required)**

Details of proposed remediation

justification in relation to conceptual model

justification in relation to phase 2 findings

Validation details.



## Appendix 10

### Glossary of Terms

#### **Appropriate Person**

Defined in section 78a(9) as; *“any person who is an appropriate person, determined in accordance with section 78F...., to bear responsibility for any thing which is to be done by way of remediation in any particular case.”*

#### **Brownfield Land**

Sites which have previously undergone development and which require a level of remediation prior to redevelopment to make them suitable for use.

#### **CLEA model**

The Environment Agency Contaminated Land Exposure Assessment model. A risk assessment model for determining the risk to human health for a range of chemicals.

#### **Conceptual Site Model (CSM)**

a written or pictorial representation of an environmental system and the biological, physical and chemical processes that determine the transport of contaminants from sources through the environmental media to receptors within a particular site or area.

#### **Contaminant**

a substance which is in, on or under the land, which has the potential to cause harm or cause pollution of controlled waters.

#### **Contaminated Land**

defined in section 78A(2)[1] as “any land which appears to the local authority in whose area it is situated to be in such a condition, by reason of substances in, on or under the land, that

*“a) significant harm is being caused or there is a significant possibility of such harm being caused; or,*

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

#### **Controlled Waters**

These include:

- a) Inland waters (river, streams, underground streams, canals, lakes and reservoirs)
- b) Groundwaters (any water contained in underground strata, wells or boreholes)
- c) Territorial waters (the sea within three miles of a baseline)
- d) Coastal waters (the sea within the baseline up to the line of highest tide, and tidal waters up to the fresh water limit.)

#### **DEFRA**

Department for Environment, Food and Rural Affairs

#### **Ecological system**

a biological system of interacting organisms and their physical environment.

#### **Enforcing authority**

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

**EPA (1990)**

The Environmental Protection Act (1990)

**GIS (Geographical Information System)**

Computer based system capable of assembling, manipulating and storing digital mapping data that provides rapid networked access to various sources of information

**Groundwater**

Any water contained in underground strata, wells or boreholes.

**Hazard Score**

A score allocated to a potentially contaminated land site by Cheltenham Borough Council, reflecting the potential for the site to be contaminated when considering the potential sources, pathways and receptors present.

**Harm**

As defined in section 78A(4) of the Act as:

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

**Made Ground**

Non-natural ground, usually resulting from infilling or landraising operations. May or may not be a potential source of contamination depending on what material was used to ‘make the ground.’

**Major aquifer**

These are highly permeable geological formations usually with a known or probable presence of significant fracturing. They may be highly productive and be able to support large abstractions of water for public water supply and other purposes. For this reason they are particularly sensitive to any potential pollution.

**Minor aquifer**

A permeable geological stratum or formation that is capable of both storing and transmitting water in significant amounts. Minor-aquifers are described as being variably permeable rocks or deposits. Although not producing large quantities of water for abstraction, they are important for local supplies and in supplying base flow to rivers.

**Non aquifer**

Negligibly permeable geological formations which are generally regarded as containing insignificant quantities of groundwater. However, groundwater flow through such rocks, although imperceptible, does take place and needs to be considered in assessing the risks from persistent pollutants.

**Part IIA**

Part IIA of the Environmental Protection Act 1990, the contaminated land

**Pathway**

One or more routes or means by which a receptor is being exposed to or affected by a contaminant.

**Pollutant Linkage**

The relationship between a contaminant, a pathway and a receptor.

**Public Register of contaminated land**

The public register maintained by the enforcing authority under the provisions of 78R of the Environmental Protection Act (1990) of particulars relating to contaminated land. The Register contains details of land that has been formally identified by the local authority that is giving rise to significant harm or pollution of controlled water.

**Receptor**

sometimes referred to as a “target” - the health of a person, waters, ecosystem or property type that could be affected by contamination. Under the contaminated land regime, receptor types are specified.

**Remediation Notice**

Defined by Section 78E(6) of the Environmental Protection Act 1990 as a notice specifying what an appropriate person is to do by way of remediation and the periods within which they are required to do each of the things so specified. It is the mechanism within Part IIA legislation by which the Local Authority or the Environment Agency can ensure that land is remediated.

**Remediation Statement**

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

**Risk Assessment**

the study of :

- a) probability, or frequency, of a hazard occurring; and
- b) the magnitude of the consequences.

**Significant Harm**

Any harm which is determined to be significant in accordance with the statutory guidance in Chapter A of DEFRA Circular 01/2006.

**Significant Pollution Linkage**

A pollutant linkage which forms the basis for a determination that a piece of land is contaminated land.

**Significant Possibility of Significant Harm**

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

**Site Investigation**

The process of carrying out investigations on land to determine whether there is contamination present. The investigation is carried out in several stages. These stage are typically a desk study to assess historical land use, intrusive investigation using trial pits and boreholes, sampling of materials, assessment of risk, and remediation.

**Soil Guideline Value (SGV)**

Published by the Environment Agency and DEFRA. Guideline values for particular contaminants in soil, considered representative of a minimal level of risk (not the same as significant possibility of significant harm). Dependant upon the current land use.

**Source**

The source of contamination. A substance in, on or under the ground, with the ability to cause harm.

**Source – Pathway – Receptor**

A linkage between a 'source' of contamination and an affected 'receptor' via a particular 'linkage'.

**Source Protection Zone**

Protection zones around certain sources of groundwater used for public water supply. Within these zones, certain activities and processes are prohibited or restricted.

**Special Site**

Is defined by Section 78A(3) of the Environmental Protection Act 1990 as:

*“Any contaminated land a) which has been designated as such by virtue of Section 78C(7) or b) whose designation as such has been terminated by the appropriate Agency under Section 78Q(4) The effect of the designation of contaminated land as a special site is that the Environment Agency, rather than the local Authority, becomes the enforcing Authority for the land.”*

**SSSI**

Site of Special Scientific Interest

**Suitable for Use**

Defined in PPS23 as a use of land which is not subject to unacceptable risk resulting from contamination.

**Sustainable Development**

Ensuring a better quality of life for everyone, now and in the future. It is development that balances economic, environmental and social considerations.

**Works Notice**

Notice issued by the Environment Agency under 161A of the Water Resources Act 1991, requiring the liable party to act to remove or reduce pollution of controlled waters.