

BOLTON COUNCIL

CONTAMINATED LAND STRATEGY

--- July 2015 ---

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## 1.0 INTRODUCTION

The UK has an industrial legacy, which was historically unregulated and potentially left land contaminated. In extreme cases land that is contaminated may be a threat to health or the wider environment. The presence of contamination can make it difficult to recycle sites that have previously been used for industrial purposes, leading to increased pressures to build on greenbelt land.

Part 2A of the Environmental Protection Act 1990 (referred to as Part 2A) came into force on the 1<sup>st</sup> April 2000 and established the statutory regime for the identification and remediation of Contaminated Land.

Part 2A is intended to help local authorities deal with the most serious threats posed by polluted land in their areas. It complements existing controls over contaminated land that are available through the planning process and pollution prevention legislation.

Part 2A has its own particular definition of Contaminated Land. By definition, not all land that has been polluted will become Contaminated Land under this legislation unless it poses a significant threat to health or the environment.

Statutory Guidance published in April 2012 requires local authorities to update or replace their Contaminated Land Inspection Strategies to reflect current Guidance.

### 1.1 The Contaminated Land Regime

**Reviews and Replaces** - This document reviews and replaces Bolton Council's original Contaminated Land Strategy which was published in 2001.

**Details Progress** - It details Bolton Council's progress to date in tackling contaminated land prioritised for further assessment in 2006.

**Informs Intended Approach** - It also informs of Bolton Council's intended approach to the fulfilment of its statutory duties going forward. It takes into account important changes in Statutory Guidance, National Policy, Council Policy and Structure and in the science and policy issues that lie behind the risk assessment of potentially contaminated land

### 1.2 Objectives of the Contaminated Land Strategy

The main objectives of the Contaminated Land Strategy are as follows:

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

#### 1.2.1 Land Contamination - General

The extent of the problem of land contamination in the UK is not known although various estimates have been made. The Environment Agency in 2009 estimated that there may be some 300,000 hectares of land in England and Wales that are affected to some extent by industrial or natural contamination. The report stated that around half of local authorities in England and Wales estimate that less than 10% of these areas might be

contaminated.

Not all of this contamination poses problems and some may only be of concern if the land is used for a particular purpose.

### **1.2.2 Sustainable Development**

Contamination of land is an example of past failure to move towards sustainable development. The contaminated land regime seeks to address that failure by removing unacceptable risks to human health and the wider environment from land that is already contaminated.

The existence of contaminated land presents its own threats to sustainable development:

- It impedes social progress depriving local people of a clean and healthy environment;
- it threatens wider damage to the environment and wildlife;
- it inhibits the prudent use of our land and soil resources, particularly by obstructing the recycling of previously developed land and increasing development pressures on greenfield areas; and
- the cost of remediation represents a high burden on individual companies, home and landowners, and the local economy as a whole.

### **1.2.3 The Suitable for Use Approach**

The 'suitable for use' approach focuses on the risks caused by Contaminated Land. The risks presented by any given level of contamination will vary according to the use of the land and a range of other factors such as the type of pollutant or the underlying geology. Risks will therefore need to be assessed and addressed on a site by site basis.

The 'suitable for use approach' consists of three elements:

- a) Ensuring that land is suitable for its current use; this is the purpose of the Contaminated Land Strategy;
- b) ensuring that land is made suitable for any new use; this is the role of the planning and building control processes; and
- c) limiting requirements for remediation to the work necessary to prevent unacceptable risks to human health or the environment in relation to the current use or planned future use of the land. In other words, this is recognition that risks from Contaminated Land can be assessed only in the context of a specific use of the land. In this way excessive, premature or unnecessary remediation work may be avoided.

### **1.2.4 Enforcement**

An enforcement procedure for the contaminated land process is set out in Appendix 1.

## **1.3 Review of the Contaminated Land Strategy**

### **1.3.1 Overall Approach**

A strategic approach has been adopted to ensure that the process of identifying land in need of detailed inspection is rational, ordered and efficient. The rating of land has been carried out.

This was based on the examination of historical mapping layers for the borough which

then highlighted areas where industrial activities occurred. The land highlighted was then given a rating based on the type of contaminative use that had occurred over the years. This was then cross referenced with the existing use of the land which was also given a rating based on the sensitivity of use. Utilising the two rating levels a “risk rating level” was produced to create a prioritised list of sites that required further assessment.

The whole of the land within the borough was examined and the prioritisation does not distinguish between private and council land.

The requirements of the contaminated land regime are integrated into existing functional areas of the Council. The primary responsibility for progressing the Contaminated Land Strategy has been delegated to the Director (Environmental Services).

### **1.3.2 *Internal Team Responsible***

The Council recognises that implementation of the Contaminated Land Strategy is a corporate issue that has implications for a wide range of Services within the authority. While contributors to the internal team may vary from time to time a core of key stakeholders can be identified and these will include representatives from:

- Environmental Services,
- Planning Control,
- Building Control,
- Planning Strategy Team,
- Highways and Engineering Division,
- Regeneration and Economic Development Division,
- Legal Services,
- Risk Management Team,
- Corporate Property Service and,
- Insurance Team.

### **1.3.3 *Consultation - Statutory***

In order to promote consistency of both knowledge and enforcement, the legislation directs the Council to consult with certain regulatory bodies. Such consultation will help to ensure that the Council benefits from a wider experience and expertise when making decisions on contaminated land.

For instance, if considering whether land might be contaminated land due to an ecological system effect, the Council will consult with Natural England.

Similarly, where land may be contaminated land due to pollution of controlled waters the Council will consult with the Environment Agency.

The Environment Agency will also be consulted where land is covered by, for instance, a waste management license or is a site prescribed for Environment Agency enforcement under Part 1 of the Environmental Protection Act 1990.

### **1.3.4 *Objectives of the Contaminated Land Strategy Document - Summary***

In summary the document is designed to provide the framework by which the Council will ensure the adoption of a strategic, risk based approach to contaminated land identification, assessment and remediation.

The objectives of producing a strategy document may be summarised as follows:

- To ensure that the inspection of land is carried out in a rational, ordered and efficient manner;
- to make any actions proportionate to the seriousness of any actual or potential

risk;

- to ensure that the most serious problems are dealt with first;
- to target resources on areas where it is most likely that contaminated land will be found;
- to identify efficiently requirements for the detailed inspection of particular areas of land;
- to inform all stakeholders of the authority's intentions;
- to provide information to the Environment Agency for their report on Contaminated Land; and
- to meet the legal requirement to review the existing Contaminated Land Strategy.

## 2.0 REGULATORY CONTEXT

### 2.1 The Contaminated Land Regime

Part 2A of the Environmental Protection Act 1990 came into force on the 1<sup>st</sup> April 2000.

Since the primary legislation was published, various changes have been made to the statutory guidance and regulations. For non-radioactive contamination, the advice to regulators is contained within the Contaminated Land (England) Regulations 2006 and DEFRA's 'Contaminated Land Statutory Guidance' dated April 2012.

A legal framework for dealing with radioactive Contaminated Land in England was established through the Radioactive Contaminated Land (Enabling Powers) (England) Regulations 2006 and the Radioactive Contaminated Land (Modification of Enactments) (England) Regulations 2006. The advice to regulators is contained within the Department of Energy and Climate Change's 'Radioactive Contaminated Land Statutory Guidance' dated April 2012.

### 2.2 Government Objectives

The overarching objectives of the Government's policy on contaminated land and the Part 2A regime are:-

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

### 2.3 Role of the Local Authority

The local authorities are the primary regulators under Part 2A. The Environment Agency has mainly a supporting role, providing assistance to the local authorities.

Part 2A of the Environmental Protection Act 1990 places duties on the local authority to:

- a) Cause their areas to be inspected to identify contaminated land (Strategic Inspection);
- b) determine whether any particular site is contaminated land; and
- c) act as the enforcing authority for all contaminated land which is not designated as a '**special site**' (the Environment Agency will be the enforcing authority for 'special sites').

In carrying out these functions the local authority must act in accordance with any guidance issued by the Secretary of State. The duties involve four main tasks:

- a) To establish who should bear responsibility for the remediation of the land (the '**appropriate person**' or '**persons**');
- b) to decide, after consultation, what remediation is required in any individual case and to ensure that the remediation takes place. Remediation can be by agreement with the 'appropriate person(s)', by serving a remediation notice on the 'appropriate person(s)', or, in certain circumstances, by the local authority doing the work themselves;
- c) where a remediation notice is served, or the authority itself carries out the work, to

- determine who should bear what proportion of the liability for meeting the costs of the work; and
- d) to record certain prescribed information about their regulatory actions on a public register.

The above is based on a 'polluter pays' principal, where the onus is put on the original polluter (if they still exist) or to the current owner / occupier if the original polluter does not exist. This only relates to human health and Class A persons in respect of controlled waters.

## 2.4 Role of the Environment Agency

The Environment Agency has four principle roles with respect to contaminated land under Part 2A, it will:

- a) Assist local authorities in identifying contaminated land, particularly in cases where water pollution is involved;
- b) provide site-specific guidance to local authorities on contaminated land;
- c) act as the '**enforcing authority**' for any land designated as a 'special site' ('special sites' are defined in Regulations 2 and 3 of the Contaminated Land (England) Regulations 2006, based on the type of polluting process or the nature of the environmental risk involved); and
- d) to publish periodic reports on contaminated land and to maintain a register of 'special site' remediation.

'Special sites' may include certain water pollution comprising industrial and nuclear sites, all Ministry of Defence land and all radioactive 'contaminated land.

If the Local Authority identifies land which it considers (if the land were to be determined as contaminated land) would be likely to meet one or more of the descriptions of a special site set out in the Contaminated Land (England) Regulations 2006, it should consult the Environment Agency and subject to the Agency's advice and agreement, arrange for the Agency to carry out any intrusive inspection of the land on behalf of the authority. If the Agency is to carry out such an inspection, the authority should where necessary authorise a person nominated by the Agency to exercise the powers of entry conferred by section 108 of the Environment Act 1995

The initial point of contact with the Agency, for consultation, is shown in Table 5-1.

In addition the Environment Agency will continue the contaminated land research programme previously run by the Department of the Environment. In conjunction with the Department of the Environment, Food and Rural Affairs (DEFRA), the Agency will publish scientific and technical advice.

## 2.5 Interaction with Other Regimes

In addition to Part 2A, there are other regulatory regimes which will continue to address and deal with land contamination issues.

Land contamination is a material planning consideration and development or redevelopment during the Planning (through the National Planning Policy Framework (NPPF) or Building Control (Approved Document Part C) processes with reference to the Planning Practice Guidance – Land Affected by Contamination Reference ID 33-001-20140306 which is available at:-

<http://planningguidance.communities.gov.uk/blog/guidance/land-affected-by-contamination/land-affected-by-contamination-guidance/>



will continue to be the **primary** mechanism for ensuring remediation of contaminated sites. The responsibility for the remediation of any site will be with the developer.

Through the provisions of the Environmental Damage (Prevention and Remediation) Regulations and the Environmental Permitting Regulations 2010 there are powers to deal with land contamination resulting from breaches of permits, authorisations and licenses.

The Water Resource Act 1991 can also be applied to deal with certain cases of water pollution not covered by Part 2A.

If a potential significant risk to ecological receptors is identified then consultation with Natural England will be required.

Part 2A is complementary to these existing regulatory regimes. Remediation of contaminated land should be carried out **preferentially** through these means, with enforcement through Part 2A **only, where no appropriate alternative solution exists.**

## 2.6 The Definition of Contaminated Land and Risk

Part 2A defines non-radioactive Contaminated Land 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) significant pollution of controlled waters is being caused, or there is a significant possibility of such pollution being caused.”

Part 2A defines radioactive Contaminated Land 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) Harm is being caused; or
- b) there is a significant possibility of such harm being caused.”

The meanings of ‘harm’, ‘significant harm’ and ‘significant possibility of significant harm’ (SPOSH) are set out in Appendix 3, Appendix 4 and Appendix 5. These terms are defined in the 2012 Statutory Guidance for non-radioactive Contaminated Land and Defra Circular 01/2006 for radioactive Contaminated Land.

The above definition reflects the ‘suitable for use’ approach and is underpinned by the principles of risk assessment.

Contamination must be having, or be very likely to have, a detrimental impact on humans or the environment before a site can be classed as Contaminated Land. The site will **not** be defined as Contaminated Land just because contamination is present.

## 2.7 Identifying Contaminated Land

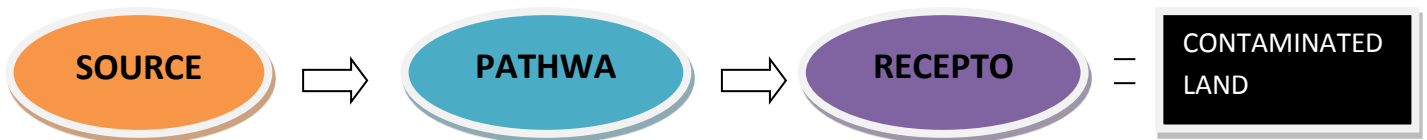
### 2.7.1 Contaminant Linkages

A contaminant linkage consists of three main elements:

- a) A “contaminant / source”: A substance which is in, on or under the land and

which has the potential to cause significant harm to a relevant receptor, or to cause significant pollution of controlled waters.

- b) A “receptor”: Something that could be adversely affected by a contaminant, for example a person, an organism, an ecosystem, property, or controlled waters. With regards to the radioactive contaminated land regime, a receptor is limited to human being only.
- c) A “pathway”: A route by which a receptor is or might be affected by a contaminant, such as direct contact of soil, inhalation of vapours etc.



For any land to be identified as Contaminated Land all three contaminant linkages need to be present and must be a significant contaminant linkage to allow **potential** determination under Part 2A.

## 2.8 Risk Assessment and Categorising the Risk from an Individual Site

### 2.8.1 Risk Assessment

The ‘suitable for use’ approach is underpinned by the principles of risk assessment. ‘Risk’, in this context, is defined as the combination of:

- The likelihood that harm, or pollution of water, will occur as a result of contaminants in, on or under the land; and
- the scale and seriousness of such harm or pollution if it did occur.

Risk assessments should be based on information which is:

- Scientifically based;
- authoritative;
- relevant to the assessment of risks arising from the presence of contaminants in soil; and
- appropriate to inform regulatory decisions in accordance with Part 2A

Identification of the contaminant linkage and whether it is significant is ascertained by following a staged process of risk assessment to gain an understanding of the risks presented by the land and any associated uncertainties.

- Preliminary Risk Assessment
- Site Investigation
- Generic Quantitative Risk Assessment
- Detailed Quantitative Risk Assessment

This information is utilised to support a decision as to whether or not a site meets the definition of contaminated land under Part 2A.

## 2.8.2 Risk Assessment for Controlled Water

In establishing whether significant pollution of controlled waters is being caused, or whether there is a significant possibility of such pollution being caused, the local authority should have regard for any technical guidance issued by the Environment Agency to support the Contaminated Land Statutory Guidance 2012. If the authority considers it likely that land might be contaminated land on such grounds it should consult with the Agency and have strong regard to the Agency's advice

The local authority should seek to focus on pollution:-

- (i) May be harmful to human health or the quality of aquatic ecosystems or terrestrial ecosystems directly depending on aquatic ecosystems;
- (ii) Which may result in damage to material property; or
- (iii) Which may impair or interfere with amenities and other legitimate uses of the environment

The following types of pollution should be considered to constitute significant pollution of controlled waters:-

- (a) Pollution equivalent to environmental damage to surface water or groundwater as defined by The Environmental Damage (Prevention and Remediation ) Regulations 2009, but which cannot be dealt with under those Regulations
- (b) Inputs resulting in deterioration of the quality of water abstracted, or intended to be used in the future, for human consumption such that additional treatment would be required to enable that use
- (c) A breach of statutory surface water Environment Quality Standard, either directly or via a groundwater pathway
- (d) Input of a substance to groundwater resulting in significant and sustained upward trend in concentration of contaminants (as defined in Article 2(3) of the Groundwater Directive (2006/118/EC)

In some circumstances, the local authority may consider that the following types of pollution may constitute significant pollution:-

- (a) Significant concentrations of hazardous substances or non-hazardous pollutants in groundwater; or
- (b) Significant concentrations of priority hazardous substances, priority substances or other specific polluting substances in surface water; at an appropriate, risk-based compliance point.

The local authority should only conclude that pollution is significant if it considers that treating the land as contaminated land would be in accordance with the broad objectives of the regime. This would normally mean that the authority should conclude that less serious forms of pollution are not significant. In such cases the authority should consult the Environment Agency

The following types of circumstances should not be considered to be contaminated land on water pollution grounds:-

- (a) The fact that substances are merely entering water and none of the conditions for considering that significant pollution is being caused as set out above are being met.
- (b) The fact that land is causing a discharge that is not discernible at a location immediately downstream or downgradient of the land (when compared to upstream or up-gradient concentrations).
- (c) Substances entering the water in compliance with a discharge authorised under the Environmental Permitting Regulations.

In deciding whether significant pollution of controlled waters is being caused, the local authority should consider that this test is only met where it is satisfied that the substances in question are continuing to enter controlled waters; or that they have already entered the waters and are likely to do so again in such a manner that past and future entry in fact constitutes ongoing pollution. For these purposes, the local authority should:-

- (a) Regard substances as having entered controlled waters where they are dissolved or suspended in those waters, or (if they are immiscible with water) they have direct contact with those waters on or beneath the surface of the water
- (b) Take the term “continuing to enter” to mean any measurable entry of the substance(s) into the controlled waters additional to any which has already occurred.
- (c) Take the term “likely to do so again” to mean more likely than not to occur again.

Land should not be determined as contaminated land on grounds that significant pollution of controlled waters is being caused where:-

- a. the relevant substance(s) are already present in controlled waters;
- b. entry into controlled waters of the substance (s) from the land has ceased; and
- c. it is not likely that future entry will take place

If pollution of controlled waters is already being caused having regard to section 4.34-4.42 of the Contaminated Land Statutory Guidance then land being assessed will not need to be assigned into one of the four categories discussed below

### **2.8.3 Risk Categories**

Sites were initially prioritised in 2006 from historical mapping using GIS from the Bolton Council database in line with guidance produced at that time.

The revised Statutory Guidance (2012) has introduced four categories for sites investigated and risk assessed under Part 2A for human health and controlled waters. These are presented in Appendix 2. When assessing land the site will need to be assigned into these categories.

With regards to deciding if land is contaminated on the grounds of SPOSH the most recent Defra guidance (2012) states the Local Authority should use the categorisation system for human health. Category 1-2 would encompass land which is capable of being determined as contaminated land on the grounds of SPOSH; whereas Category 3-4 would encompass land which is not capable of being determined on such grounds (paragraphs 4.19-4.30).

#### **2.8.4 'Normal' Levels of Contaminants**

The Statutory Guidance states that the Part 2A regime should not apply to land with levels of contaminants in soil that are common place and widespread throughout England and for which, in the majority of cases, there is no reason to consider that there is an unacceptable risk.

'Normal' levels of contaminants should not be considered to cause land to qualify as Contaminated Land, unless there is a particular reason to consider otherwise. 'Normal' levels of contaminants in soil may be the result of the natural presence of contaminants or the presence of contaminants caused by low level diffuse pollution and common human activities, other than past industrial uses.

#### **2.8.5 Generic Quantitative Risk Assessment (GQRA)**

Generic assessment criteria are based on scientific assumptions made about the characteristics and behaviour of contaminants, pathways and receptors. These assumptions are conservative in assessing the contaminants impact on the receptor involved.

Generic assessment criteria and other technical tools are used as screening tools to help assessors decide when land can be excluded from the need for further detailed inspection and assessment, or when further work may be warranted.

#### **2.8.6 Detailed Quantitative Risk Assessment (DQRA)**

Once potential contaminants of concern have been identified from the GQRA a detailed risk assessment will be required to ascertain if 'significant harm' is being caused. DQRA will form part of a 'lines of evidence' approach to ascertain if 'significant harm' is being caused.

The DQRA will use site specific physical, chemical and toxicological parameters, where possible and be used with a UK compliant model.

For example, specific assessment using statistics, bio accessibility, assessment of toxicology, vapour monitoring and measuring uptake by flora could be used to provide Site Specific Assessment Criteria (SSACs) for specific contaminants of concern that will aid in assessing where risk is 'significant'.

## 3.0 CORPORATE OBJECTIVES AND POLICIES

### 3.1 Introduction

The Contaminated Land Strategy will operate within the context of Bolton's Core Strategy 2011- 2026 as well as alongside other strategic plans such as the Local Plan, Bolton Vision 2007 – 2017

### 3.2 Local Plan

The documents that provide local planning policy are referred to as the 'Local Plan'. These documents describe the spatial strategy for Bolton. These are used to help plan for the long term growth of the borough and as the basis to determine planning applications.

The Core Strategy is the key document which sets out the spatial vision and strategy for the district. It was adopted by the council in March 2011.

The Allocations Plan allocates specific sites for specific land uses, such as housing or jobs, in line with the objectives of the Core Strategy. It was adopted by the council in December 2014.

The GM Waste Plan was adopted on 1 April 2012 and provides a planning policy framework for sustainable waste management across Greater Manchester, and is an adopted part of Bolton's Local Plan. The Waste Plan identifies sites and preferred areas for a range of waste management facilities required up until 2027.

The GM Minerals Plan came into force on 26 April 2013. It provides a clear guide to minerals operators and the public about locations where mineral extraction may take place; the safeguarding of sensitive environmental features and of mineral resources with potential for future extraction; and all aspects of environmental and resource protection including the sustainable transportation of minerals.

### 3.3 Bolton's Core Strategy

Bolton's Core Strategy is the strategic development plan within the Local Development Framework and sets out Bolton Council's spatial vision and strategic objectives and contains the spatial strategy for the borough, core policies and a monitoring and implementation framework with clear objectives for achieving delivery (Available at [www.bolton.gov.uk](http://www.bolton.gov.uk))

### 3.4 Bolton Council Risk Management Strategy March 2013

Effective Risk Management is a fundamental principle of Corporate Governance. The purpose of the strategy is to explain how the Council will implement sound management of risks and opportunities and is based on BSI 31100:2008. The management of risk is central to the achievement of Bolton Council's main aims; *Economic Prosperity and Narrowing the Gap*.

This strategy needs to be balanced with the strategic medium to long term goals and objectives of the Council.

- **Political**

Those associated with failure to deliver either local or central government policy, or meet the local administration's manifesto commitments.

- **Economical**

Those affecting the ability of the Council to meet its financial commitments. These include internal budgetary pressures, the failure to purchase adequate insurance cover, external macro level economic changes, or the consequences of proposed investment decisions.

- **Social**

Those relating to the effects of changes in demographic, residential or socio-economic trends on the Council's ability to deliver its objectives.

- **Technological**

Those associated with the capacity of the Council to deal with the pace/scale of technological change, or its ability to use technology to address changing demands. They may also include the consequences of internal technological failures on the Council's ability to deliver its objectives.

- **Legislative**

Those associated with current or potential changes in national or European Law (e.g. the appliance of TUPE Regulations).

- **Environmental**

Those relating to the environmental consequences of progressing the Council's strategic objectives (e.g. in terms of energy efficiency, pollution, recycling, landfill requirements, emissions, etc.).

- **Competitive**

Those associated with current or potential changes in national or European Law (e.g. the appliance of TUPE Regulations).

Those affecting the competitiveness of the service (in terms of cost or quality) and/or its ability to deliver Best Value.

- **Customer/Citizen**

Those associated with failure to meet the current and changing needs and expectations of customers and citizens.

Two criteria can be used to determine the scale of risk associated with each hazard:

- The likelihood of the risk even occurring;
- The impact of the consequences should it occur.

### 3.5 Bolton's Vision 2007 – 2017

Bolton's Vision sets out 2 main aims of the Council as:

- to narrow the gap, and
- economic prosperity

It encompasses 6 priority themes:

- Health
- Achieving
- Prosperous
- Safe
- Cleaner, Greener
- Strong and Confident

It has a clear vision and ambitious high level targets designed to make a lasting difference to Bolton. It has been influenced by national and regional plans and it sets out the outcomes and differences that Bolton wants to achieve by 2017.



## 4.0 CHARACTERISTICS OF THE BOLTON AREA

### 4.1 Geographical Location

The Borough of Bolton is one of ten metropolitan districts in Greater Manchester. Lying at the edge of the West Pennine moors, the Borough is bounded to the north by Lancashire and, on the remaining edges, by the districts of Wigan, Salford and Bury.



Figure 4-1: Bolton District Boundary and Surrounding Boroughs.

### 4.2 Brief Description

Bolton is an area with a proud heritage of more than 800 years and a rich inheritance from the industrial revolution. More than half of the land in the Borough is rural and includes areas of open moor and agriculture.

### 4.3 Historical Industrial Land Use

The textile industry was important to the Borough, from its beginnings in the 13th Century. However, Bolton is also characterised by the diversity of industries that developed through the 18th to 20th Centuries. Beside textile mills, the industrial heritage of the borough includes coal extraction and processing, while the intensive use of coal as a fuel has itself left a widespread legacy of contamination from ash disposal. Clay, shale and other mineral extraction have been undertaken at various locations. In addition metal works and foundries, chemical works (including gas works), railway works and locomotive building, power generation, bleach and dye works, tanneries and, engineering are some of the industries that have been represented.

The Borough continues to be a successful centre for manufacturing, but it is also an important location for service and leisure industries.

### 4.4 Main Characteristics of Bolton's Geology and Hydrogeology

#### 4.4.1 Geology

Geological characteristics have an important bearing on the fate of contaminants that are in the ground. For example, sub-soils may provide natural barriers to the transport

of a pollutant while at the other extreme, certain geological features may result in a site being declared a *special site* under the legislation.

Geological features may also give rise to natural contamination, the remedy which is beyond the scope of the Contaminated Land Strategy, but which may need to be taken into account when identifying or making decisions on the contamination status of land. In the case of the Bolton area an instance of this natural contamination would be the presence of ground gases from peat bogs or coal measures.

Bolton's landscape has developed from the differential erosion of soft and hard rocks. The processes occurring in the last Ice Age as well as earth movements in subsequent folding and faulting have also modified the underlying solid geology. An important characteristic is that the borough lies at the centre of the Lancashire coalfield.

The main solid rocks in the area belong to the Upper Carboniferous age and may be divided into the following Series:

- The Namurian Series (Millstone Grits).
- The Westphalian Series (Coal Measures).

Permian and Triassic rocks overlies those of the Carboniferous age. These rocks are exposed, in the main, outside the borough although local outcropping may be found around Kearsley. The main rock unit is the Bunter (Sherwood) Sandstone.

Glaciation has also modified the landscape and superficial geology (drift). Glacial deposits, from as far afield as Scotland, are common across the area. As a result a layer of drift covers most of the solid rocks. These glacial superficial deposits mainly comprise Till (boulder clays) and Sands and Gravel. Post glacial superficial deposits of river Alluvium and Peat are also present in the borough.

Geologically, the borough may be divided into three zones:

- A **northern zone** underlain by Millstone Grit, rising into high terraced hills and moorlands separated by valleys and gullies. The Millstone Grit consists of hard, coarse-grained sandstone layers of variable thickness, which are generally resistant to erosion. North of Horwich the thickness of the Millstone Grits is not less than 60 metres, while two miles eastward it is less than 15 metres.
- An **intermediate zone** that separates the high moorlands of the Millstone Grits and undulating lowlands of the coal measures. This zone is more fertile and less elevated than the Millstone Grit. Narrow, deep watercourses lined by woods, such as the cloughs south of Smithills Moor, are typical of these areas.
- A **low-lying zone** to the south of the borough, underlain by softer shales and siltstones of the coal measures. This zone has less prominent features than the other two. However, harder bands of sandstone occur, that have resisted erosion, to form ridges. Blackrod is built on an example of this type of feature, rising to an elevation of 168m. Smaller escarpments may be found to the west of Kearsley.

## 4.4.2 Local Hydrogeology

### Principal Aquifers - Bedrock

The single principal aquifer beneath the area is the Permo-Triassic Sandstone (including the Sherwood Sandstone group). This is part of the Principal Aquifer unit that extends throughout the Mersey Basin from Liverpool to Manchester. Within the Bolton boundary the presence of the unit is limited to a very small strip in the extreme south-east near Kearsley. The aquifer unit as a whole is heavily exploited for both public and industrial supply. Additionally the aquifer provides baseflow to watercourses.

### Secondary A and B Aquifers - Bedrock

Secondary A aquifers within the bedrock underlying the borough are dominated by rocks of Carboniferous age, comprising Coal Measures and Millstone Grit series, which underlie the vast majority of the area. The Secondary B aquifers occur within the Kearsley area adjacent to the Primary aquifer.

Groundwater use in the secondary A and B aquifers is relatively undeveloped and therefore represents an important potential resource.

The Coal Measures outcrop under most of the borough. The Millstone Grit occurs in three small areas in the north and north eastern part of the borough. The majority of the groundwater flow in the solid rock will be concentrated as fissure flow within the sandstone units of the Coal Measures, gritstone and flag units of the Millstone Grit. These units can be considered as individual secondary aquifers separated by low permeability shale/mudstone units. However, a major influence on groundwater movement is likely to be the presence of old coal workings within the Coal Measures. Old workings can give rise to complex and rapid groundwater flow. Groundwater levels in the higher permeability units will be variable and may reach ground level giving rise to springs.

The bedrock designation is presented in Figure 4-4.

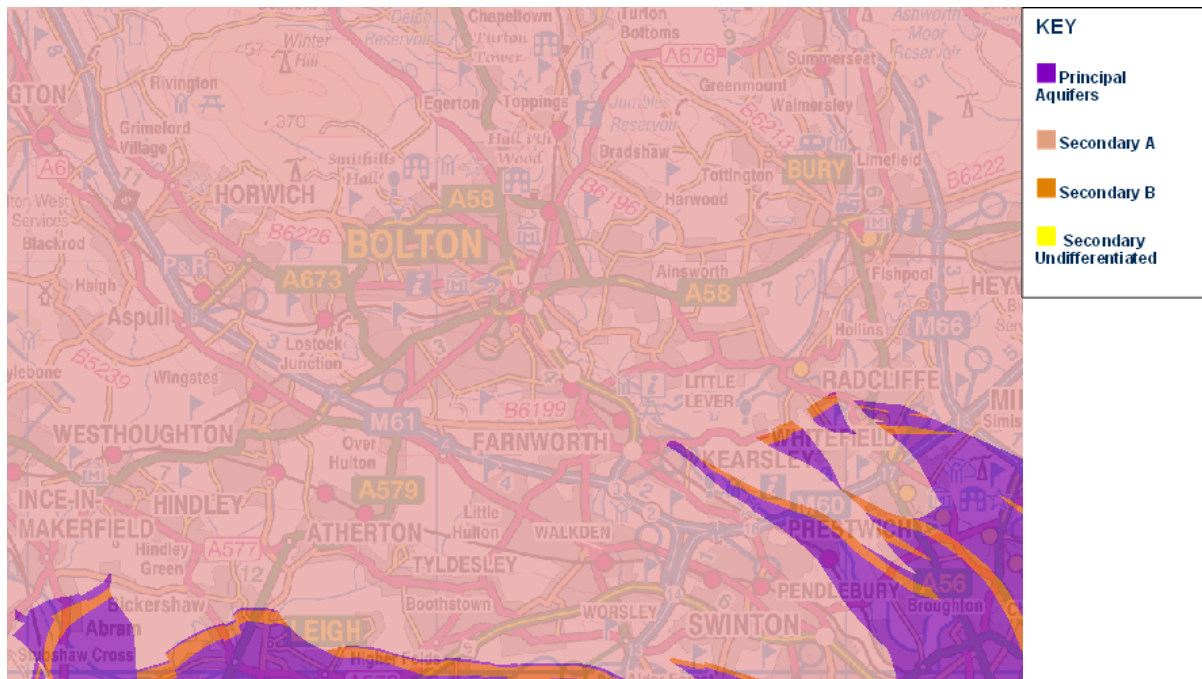


Figure 4-4: Aquifer Maps – Bedrock Designation.

## **Aquifer Designation – Superficial Deposits**

Superficial deposits are found throughout the area overlying the solid rocks beneath. Much of the area is covered with relatively impermeable boulder clay. More permeable deposits that can be classified as Secondary A aquifers in their own right, with some potential for small-scale exploitation, are locally developed. These include extensive deposits of glacial sands and gravels, particularly in Bolton, and glacial flood gravels in the far north west of the borough. Terrace deposits can be found to the north of Bolton and along the River Irwell in the south east. Alluvium can be found along a number of watercourses. These deposits often occur as complex or mixed drift sequences. Although these deposits may reduce the vulnerability of the underlying aquifer, where present, they should be considered to be capable of transmitting water to it. Groundwater also supports wetlands within the borough such as the peat mosses near and to the north west of Horwich, on Red Moss, to the south of Kearsley and on Smithills Moor to the north. Groundwater levels in superficial deposits will generally be close to ground level with flow ultimately towards surface waters. Groundwater quality in the drift deposits is variable and highly susceptible to surface pollution.

The only non-aquifer in the borough is the Manchester Marl of Permian age, which lies between the Sherwood Sandstone Group above and the Collyhurst Sandstone below. The presence of this unit is very limited, confined to a small outcrop close to the Permo-Triassic sandstone in the extreme south east of the borough.

The superficial designation is presented in Figure 4-5.

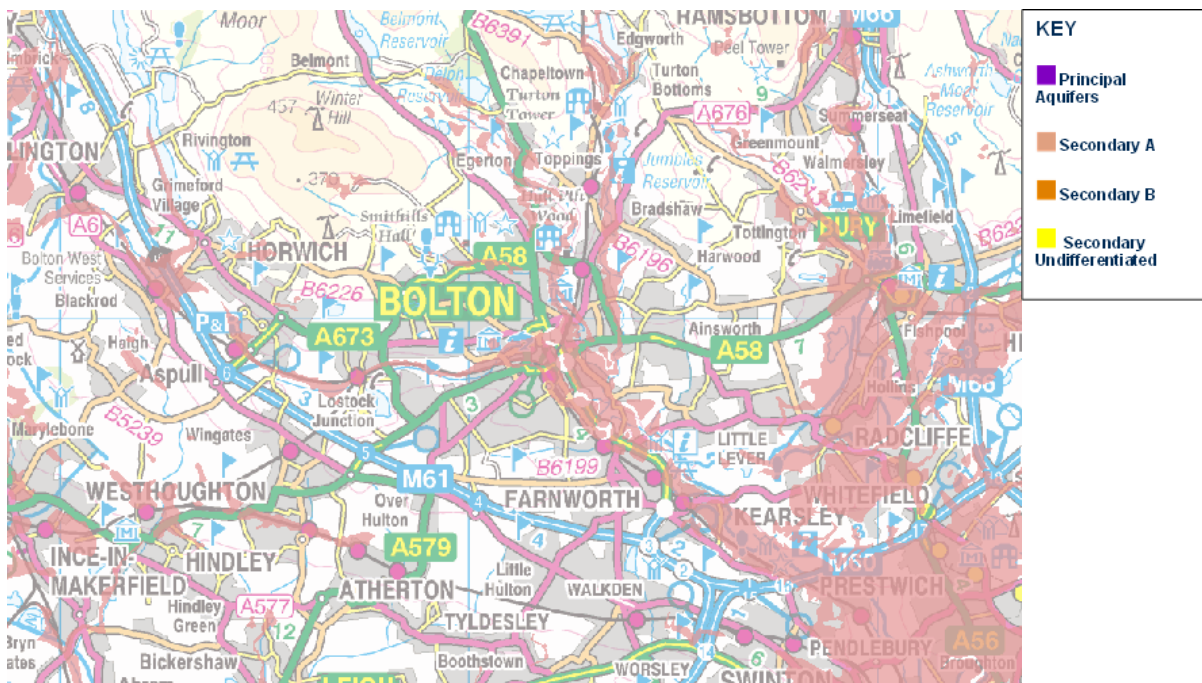


Figure 4-5: Aquifer Maps – Superficial Designation.

### **4.4.3 Key Water Resources and Water Protection Issues**

Water has played an important role in the growth of cities and manufacturing industries that have shaped history. The rich industrial past has left a legacy of poor water quality.

The Environment Agency is responsible for producing 'River Basin Management Plans' (RBMP) – the documents can be found here:-

<https://www.gov.uk/government/collections/river-basin-management-plans>

The River Basin Management Plan North West River Basin District covers the Bolton area.

Significant progress has been made over the last 20 years in protecting the natural assets of the North West River Basin District and cleaning up many of the problems for the water environment.

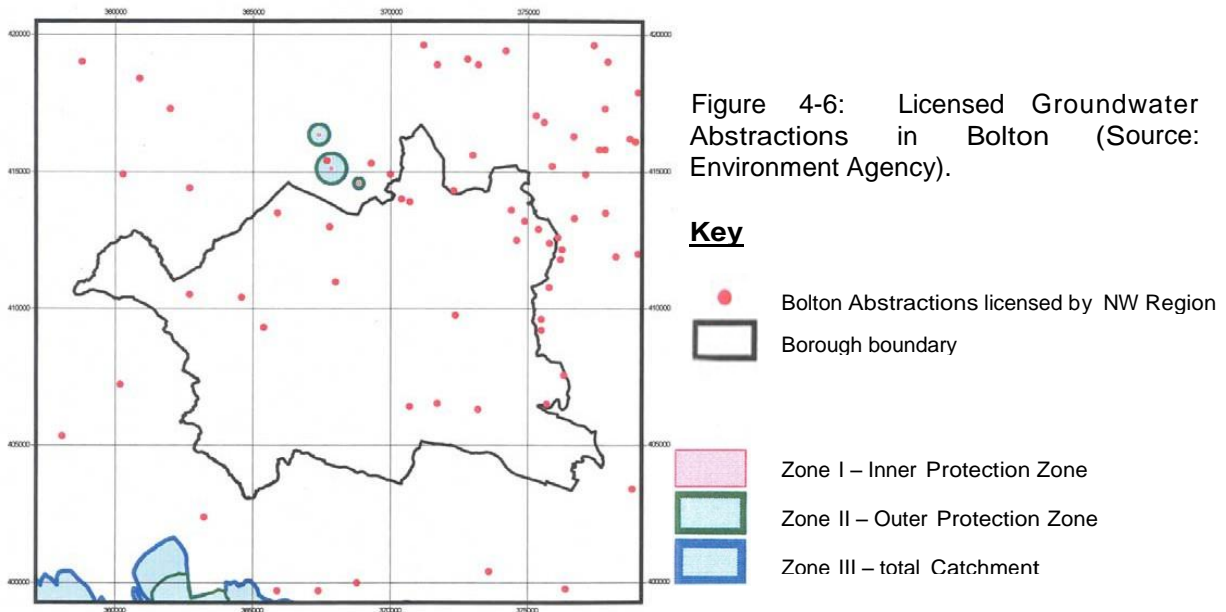
The River Basin Plans focus on the protection, improvement and sustainable use of the water environment and are prepared under the Water Framework Directive, which requires all countries throughout the European Union to manage the water environment to consistent standards. Each country has to:-

- Prevent deterioration in the status of aquatic ecosystems, protect them and improve the ecological conditions of waters;
- Aim to achieve at least good status for all water bodies by 2015. Where this is not possible and subject to the criteria set out in the Directive, aim to achieve good status by 2021 or 2027;
- Meet the requirements of Water Framework Directive Protected Areas;
- Promote sustainable use of water as a natural resource;
- Conserve habitats and species that depend directly on water;
- Progressively reduce or phase out the release of individual pollutants or groups of pollutants that present a significant threat to the aquatic environment;
- Progressively reduce the pollution of groundwater and prevent or limit the entry of pollutants;
- Contribute to mitigating the effects of floods and droughts.

Local and regional government have a major role in implementing this plan. They have a far reaching influence on businesses, local communities and leisure and the tourism sectors. There are 21 unitary authorities, two county councils and 17 district, borough or city councils within the North West River Basin District. The Environment Agency and others will work with Local Authorities to ensure that all relevant actions are identified, prioritised, resourced and implemented to achieve the predicted improvements for the plan

#### 4.4.4 Licensed Groundwater Abstractions

Groundwater abstractions and private water supplies are potential receptors of contamination. There are 33 private water supplies in the borough, recorded on a register maintained by the Council. In addition, the Environment Agency licenses groundwater abstractions and the general location of these are shown in Figure 4-6.



#### 4.5 Protected Locations

##### 4.5.1 Sites of Specific Scientific Interests (SSSI)

Natural England is the agency in England responsible for advising central and local government on nature conservation. Natural England also notifies and protects SSSI's under the provisions of the Wildlife and Countryside Act 1981. These sites may be designated due to the presence of certain flora, fauna, geographical, or geological features.

Land contamination affecting ecological systems in a designated SSSI may lead to that land being identified as contaminated land under the new law.

There are three sites in the borough identified by Natural England as Sites of Special Scientific Interest (SSSI) due to their ecological value, and one for its geological importance (Table 4-7).

Other sites in the borough are the subjects of specific designations due to their ecological importance. While the legislation does not mention these sites, the Council needs to be aware of their importance, as the Contaminated Land Strategy is implemented, as they may have significance to decisions on future remedial actions.

Site Name	Reason	Area (Ha)
Gale Clough and Shooterslee Wood	Biological	5.73 (8.57 total)
Nob End	Biological	8.8
Red Moss	Biological	47.22
Tonge River Section	Geology	0.7

Table 4-7: SSSI in the Bolton Borough Area.

##### 4.5.2 Local Nature Reserves (LNR)

LNR sites are managed by local authorities. These sites must offer special opportunities for study and research or be of special interest to the area in terms of flora, fauna, and

geological or geographical features. Declaration and management of LNR sites is a duty of the local authority, rather than Natural England, although they must be consulted in the process of selection.

LNR Sites that have been declared by September 2015 within the Bolton Metropolitan area and boundary changes are presented in Table 4-8.

LNR Site	Date Declared	Area (Ha)
Borsdane Wood	By Wigan MBC	-11.00
Bridge Street, Horwich	19 <sup>th</sup> October 2011	2.40
Brownstones Quarry	23 <sup>rd</sup> November 2012	2.78
Captain's Clough	14 <sup>th</sup> January 2015	6.14
Cunningham Clough	15 <sup>th</sup> September 2004	2.86
Doffcocker Lodge	11 <sup>th</sup> December 1991	16.44
Eagley Valley	11 <sup>th</sup> September 2013	11.62
Eatock Lodge	15 <sup>th</sup> September 2004	5.80
Hall Lee Bank Park	12 <sup>th</sup> March 2004	5.25
Hall Lee Brook	29 <sup>th</sup> February 2012	7.47
Haslam Park	22 <sup>nd</sup> May 2013	10.04
Leverhulme	19 <sup>th</sup> April 2013	48.19
Lostock Hall	12 <sup>th</sup> August 2015	9.59
Moses Gate	11 <sup>th</sup> February 2009	107.22
Nob End	19 <sup>th</sup> April 2000	8.80
Ousel Nest Quarry	22 <sup>nd</sup> November 2013	5.13
Pretoria Pit	25 <sup>th</sup> March 2015	9.73
Seven Acres	25 <sup>th</sup> April 2004	13.00
Upper Bradshaw Valley	25 <sup>th</sup> June 2012	34.19
<b>TOTAL</b>		<b>317.65</b>

Table 4-8: Declared LNR Sites in the Bolton Borough Area (September 2015).

Proposed shortlist for LNR sites in the Bolton Metropolitan area are presented in Table 4-9. It should be noted that the areas on the list may change as the declaration process is undertaken.

	Site	Area (Ha)
5	Red Moss, Horwich	54.97
10	Raveden Woods, Smithills	40.66
13	Firwood Fold	11.23
16	Blackshaw Brook, Bradley Fold	11.47
17	Clifton Moss, Kearsley	20.13
20	Ladyshore, Little Lever	12.80
21	Queens Park	3.93
	<b>Boundary Changes</b>	
22	Cunningham Clough	3.86
25	Seven Acres	16.28
<b>Total Area (Ha)</b>		<b>175.33</b>

Table 4-9: Shortlist of LNR Sites in the Bolton Borough Area (September 2015).

### 4.5.3 Sites of Biological Importance (SBI)

SBI sites of ecological importance identified by the Greater Manchester Ecology Unit. SBIs are non-statutory designations that offer some protection to land designated through local planning policies. Sites are graded into three classes (A-C), with class A being the most important.

In 2015 there were 68 SBI sites with a total area of 1237.2ha. The areas and grading are presented in Table 4-10.

Grading	No.	SBI Area (Ha)
A	19	777.9
B	29	352.8
C	21	106.5
<b>Total</b>	<b>68</b>	<b>1237.2</b>

Table 4-10: Area of SBI Sites in the Bolton Borough Area (September 2015).

## 4.6 Historic Environment

Protection of the historic environment is well established through the listing of buildings, designation of conservation areas, scheduling of ancient monuments and planning control procedures. In general, Scheduled Ancient Monuments are protected by Historic England while the Council has responsibilities towards the other aspects of the historic environment. The strategy for contaminated land compliments and refers to these existing systems.

### 4.6.1 Scheduled Ancient Monuments

Scheduled Ancient Monuments are identified as one of the receptors that could be subject to harm within the categories of significant harm set out in Part 2A. In the case of Scheduled Ancient Monuments, harm is regarded as any damage that significantly impairs the historic, architectural, traditional, artistic, or archaeological interest for which the monument was originally scheduled. Three Scheduled Ancient Monuments are identified within the borough and are presented in Table 4-11.

Monument No.	Site	Grid Reference
27588	Moated site at Arley Hall, Haigh near Wigan	SD5889 1069
18	Ringley Old Bridge	SD 763 053
23710	Round cairn (280m W of Old Harpers Farm)	SD 6630 1238

Table 4-11: Scheduled Ancient Monuments in the Bolton Borough Area (2009).

In addition to the Scheduled Ancient Monuments, there are approximately 700 listed buildings and 26 conservation areas in the Bolton area.

There are also five parks included in the National Register of Parks and Gardens of Special Historic Interest:-

- Queens Park,
- Smithills Hall,
- Farnworth Park,
- Hulton Park and
- Tonge Cemetery

There are a number of other parks, gardens and cemeteries within Bolton, which are of historic interest, but have not yet been surveyed by Historic England.

While Part 2A does not specifically mention sites of historic interest, the Council needs to be aware of their importance, as the Contaminated Land Strategy is implemented, as they may have significance to decisions on future remedial actions.

Further information regarding the historic environment is held by the Greater Manchester Archaeological Advisory Service that is funded by The Association of Greater Manchester Authorities and The University of Manchester who maintain The Historic Environment Record on behalf of the ten Greater Manchester Authorities

<http://www.gmau.manchester.ac.uk>

The Council will consult this source with regard to any proposals that may affect the



historic environment.

#### **4.6.2 Environment Agency Information**

The Environment Agency has provided details of sites and controlled waters, where they have an enforcement role, that lie within the Bolton borough boundary. This information includes, for example; sites registered under the Alkali Works Act Regulations 1906, potentially contaminated sites where the Agency has had previous involvement, surface water classification data (including compliance and failures), industrial processes authorised by the Agency under Part 1 of the Environmental Protection Act 1990 and sites registered under radio-active substances legislation.

#### **4.7 Specific Local Features**

The presence of coal measures (Westphalian) underlying a significant portion of the borough and peat deposits of Kearsley Moss and Red Moss may produce ground gas.

The strategy for contaminated land cannot address the risks posed by naturally occurring 'contamination'. It is important though, to site investigations, to be aware of the potential for these hazards to be present.

#### **4.8 Redevelopment History and Controls**

The decline in the traditional manufacturing industries in Bolton and changes in the activities undertaken has resulted in redevelopment of extensive areas of land that previously had been subject to potentially contaminative uses. The National Planning Policy Framework (NPPF), with reference to the Planning Practice Guidance – Land Affected by Contamination Reference ID 33-001-20140306, requires the Council to be satisfied that where development is proposed in areas that may have been contaminated by previous industrial or other uses and:

- i) That appropriate investigations have been carried out to establish the nature of the contamination and its potential impact on the development and the local environment; and
- ii) where necessary, that suitable measures will be taken to remove or treat the contamination or to protect the development from its effects.

## **5.0 PROGRAMME FOR ASSESSMENT OF PRIORITISED SITES**

### **5.1 Prioritisation and Categorisation of Land**

Sites were initially prioritised in 2006 from historical mapping using GIS from the Bolton Council database.

Bolton Council intend to review a selection of sites every year to ensure information provided is accurate, utilising the most current statutory and scientific guidance.

If potentially contaminated land is identified (primarily Category 2/3 sites) intrusive investigation may be required, but is dependent upon availability of funding.

Contaminated land assessments carried out under the planning regime or from voluntary action are utilised to review the information on the prioritised sites.

Further development and maintenance of an electronic database will continue.

### **5.2 Investigating Individual Sites (if required)**

In exercising their duties the aim of the Council will be to obtain sufficiently robust scientific data to permit an informed decision on the contamination status of the site.

To ensure good practice in this work the Council will adhere to the principles and methodologies set out in the British Standard Code of Practice, BS10175:2011 (Investigation of potentially contaminated sites). The Code of Practice addresses the following aspects of an investigation:

- Setting the objectives of an investigation;
- setting a strategy for the investigation;
- designing the different phases of the investigation;
- sampling and on-site testing;
- laboratory analysis; and
- reporting.

A similar requirement for good practice will be included in the contractual arrangements with any consultant, employed by the Council, to assist in the exercise of its statutory duties.

In conducting any intrusive site investigations the Council will take reasonable precautions to avoid harm, water pollution or damage to natural resources or features of historical or archaeological interest that might be caused by the investigation. In order to achieve this end the Council will consult with appropriate agencies or regulators (Appendix 6)

In particular, in the case of any intrusive investigation on a Site of Special Scientific Interest (SSSI), the Council will consult with Natural England.

Part 2A provides the Environment Agency with a power to give site-specific advice to Local Authorities on any of their powers or duties on any non-Special Site contaminated land. The Council will take into account advice received from the Agency when carrying out its powers and duties. The circumstances under which the Agency is expected to use its power to issue site-specific guidance are as follows:

- the Agency has particular technical expertise from regulation under its other environmental protection responsibilities which are relevant to the site;
- where the manner in which remediation might be carried out could affect the Agency's responsibilities for protecting the water environment;

- where the land is within the Council's ownership; and
- where liaison between the Council and the Agency has agreed that, because of the particular circumstances of the site, the Agency's involvement would be beneficial.

### 5.3 Urgent Action

Urgent action must be authorised where Bolton 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.

Bolton Council will initiate 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 potential special site Bolton Council will notify and consult with the Environment Agency. In appropriate cases Bolton Council will seek to recover costs of the remediation works carried out.

### 5.4 Written Statement

The revised Statutory Guidance has introduced Written Statements for that land which requires assessment by local authorities and is then considered not to be contaminated under Part 2A on the grounds that there is little or no evidence to suggest that it is contaminated land. In such cases, the Council will issue a Written Statement to that effect (rather than coming to no formal conclusion) to minimise unwarranted blight. The Written Statement will make clear that on the basis of the assessment, the Council has concluded that the land does not meet the definition of Contaminated Land under Part 2A. The land will be placed in Category 3 or Category 4.

Bolton Council will inform the owners of the land of its conclusion and give them a copy of the Written Statement and keep a record of all Written Statements itself. The Council will consider making Written Statements available to other interested parties proactively and will always provide Written Statements on request.

### 5.5 Risk Summaries

The revised Statutory Guidance has introduced Risk Summaries for any land where, on the basis of its assessment, the Local Authority considers it is likely that the land in question may be determined as Contaminated Land.

Bolton Council will produce a Risk Summary for any land within the borough which it considers likely to be determined as contaminated land under Part 2A of the Environmental Protection Act 1990.

The Risk Summaries will explain Bolton Council's understanding of the risks and any other relevant factors. They will be prepared in advance of any formal determinations of land as contaminated land under Part 2A. The risk summaries shall be targeted towards the land owners and members of the public who may be affected by the decision.

Risk summaries are **not required** for:

- a) Land which will not be determined as contaminated land (Category 3 and Category 4 land);
- b) land which has been prioritised for detailed inspection but which has not yet been subject to risk assessment;
- c) land determined as contaminated land before the revised Statutory Guidance (April 2012) came into force, and;
- d) land where there are only normal levels of contaminants in soil.

## 5.6 Part 2A Determination

Based upon the findings of a detailed assessment the Local Authority should, according to Defra guidance, be able to appropriately categorise the site. In deciding if land falls into Category 2 (likely SPOSH) or 3 (not likely SPOSH) judgements on the estimated likelihood for harm should be made based on estimated impact, timescales and certainty attached to these estimates (paragraph 4.26). If the Local Authority cannot make a decision in line with paragraph 4.26 then consideration of *“health benefits and impacts of regulatory intervention”* and *“whether benefits would outweigh the financial and economic costs....and any impacts on local society or the environment...”* should be considered. Bolton Council will follow this guidance.

The Statutory Guidance states that where all factors are taken into account, if the Local Authority cannot decide whether or not SPOSH exists, it should conclude that the legal test has not been met and the land shall be placed in Category 3.

Where one or more significant contaminant linkages exist between any sources of contamination and relevant receptors under Part 2A, the Council will follow the procedure for determining that land as contaminated land, as set out in Section 78A(2) of the Environmental Protection Act 1990 and the revised Statutory Guidance and the land will be placed in either Category 1 or Category 2.

Bolton Council may decide to defer the determination of contaminated land after informing interested parties because the **landowner or other interested person may choose to undertake the remediation on a voluntary basis**, and to an appropriate standard and timescale, agreed with the Council.

Bolton Council may reconsider a determination, if, new information comes to light, which is significant enough to alter the original decision. In such cases, Bolton Council will decide whether to retain, vary or revoke the determination.

If the site is to be determined under Part 2A then the information will be placed on the Public Record (see Appendix 7).

## 5.7 Statutory Powers of Entry

Part 2A of the Environmental Protection Act provides the Council with certain powers of entry, on to land, for the purpose of carrying out site investigations. The Council will only use the statutory powers of entry if it is satisfied on the basis of information already obtained that:

- There is a reasonable possibility that a pollutant linkage exists on the land; and
- in cases involving intrusive site investigations, that it is likely that the contaminant is present and, given the current use of the land, that the receptor is present or likely to be present.

The Council will not use the power of entry to land to perform an intrusive investigation if:

- detailed information on the condition of the land has already been received from the Environment Agency or some other person that would allow the Council to determine the contamination status of the land; or
- a person offers to provide such information within a reasonable and specified time, and then provides that information within the time.

## 5.8 Liability and Costs

Land may be declared contaminated land with the identification of only one significant contaminant linkage. Full liability cannot be determined until all the significant contaminant linkages on the site have been identified.

When all significant contaminant linkages on the site have been identified liability must be apportioned. This has five distinct stages as follows:-

- Identifying potential appropriate persons and liability groups
- Characterising remediation actions
- Attributing responsibility to liability groups
- Excluding members of liability groups
- Apportioning liability between members of a liability group

The process starts with establishing liability groups. All appropriate persons for any one linkage are a “liability group”. These may be Class “A” or Class “B” persons.

APPROPRIATE PERSON – Class “A”: These are, generally the polluters, but can also include those who “knowingly permit”

APPROPRIATE PERSON – Class “B”: Where no Class “A” persons can be found liability reverts to the owner or occupier of the land.

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

The cost of each remediation action will normally be apportioned between those who remain liable after any exclusions.

Section 78F(6) of the Act provides that:

Where two or more persons would, apart from this sub-section, be appropriate persons in relation to any particular thing which is to be done by way of remediation, the enforcing authority shall determine in accordance with guidance issued for the purpose by the Secretary of State whether any, and if so which, of them is to be treated as not being an appropriate person in relation to that thing.

Section 78F(7) of the Act provides that:

Where two or more persons are appropriate persons in relation to any particular thing which is to be done by way of remediation, they shall be liable to bear the cost of doing that thing in proportions determined by the enforcing authority in accordance with guidance issued by the Secretary of State.

## **6.0 PROGRESS TO DATE**

### **5.1 Land requiring assessment**

The creation of the GIS map layer located 2,388 sites where historic information indicated a potential for contamination to exist that required assessment. Sites are being continually added and removed via quality assurance of the mapping layer and by remediation of the sites. In total there are now 2,171 sites of potential contamination still requiring assessment, some of which have had some level of investigation through the planning process.

The amount of land that was originally mapped as being within sites of potential contamination was 1,982.21ha within the Bolton district.

Currently 1,884.74ha the total area within the district of Bolton, is categorised as sites of contamination

There continues to be a need to collate all the contaminated land reports held by the varying departments within the Authority and extend the database.

### **5.2 Staffing levels**

Bolton Council has 6 officers who are able to review more complex contaminated land reports to varying degrees of complexity. Also a competent consultancy is utilised to review reports where it is felt necessary by the Principal Environmental Health Officer. One officer also has responsibility for editing the mapping layers.

### **5.3 Progress on assessment and removal of sites from the Prioritisation List**

At the time of the report 46 sites of potential contamination have been removed from the Part 2A regime via voluntary actions (equating to 40.86ha).

Partial remediation of some sites equates to a further 49.99ha removed from the Part 2A regime.

In addition to this 70 prioritised sites have been investigated and remediation options have been produced for developers/land owners to adopt and complete. This equates to 138.4ha of land. Once the remediation of these sites has been completed they will be removed from the Part 2A regime.

Partial investigation of some of the prioritised sites equates to 97.18ha. These partial areas once validated will be deducted from the acreage of land still requiring remediation.

A further 51 prioritised sites have had Preliminary Risk Assessments carried out equating to 91.45ha. Partial PRAs carried out equates to 70.09ha.

The review and remediation of 90.44ha of land not within the Part 2A regime has also been carried out due to planning requirement placed on developers in relation to new build.

The majority of the above works to deal with land contamination has been secured through the planning regime. Any new development requires a contaminated land assessment to be carried out to ensure the proposals will achieve a safe development and prevent any future potential Part 2A sites being created through the planning process.

## 7.0 GENERAL LIAISON AND COMMUNICATION

### 7.1 Liaison with Statutory Bodies

A number of external organisations have been identified as being potentially involved in the practical implementation of the inspection arrangements. Defined links have been established with these organisations to ensure efficient consultation, sharing of information, or where appropriate the transfer of regulatory control.

A list of external organisations is presented in Table 6-1.

Consultee	Area of interest	Address
Historic England	Historic Environment (Scheduled Ancient Monuments)	3 <sup>rd</sup> Floor Canada House 3 Chepstow Street Manchester M1 5FW
Natural England (North West)	Sites of Special Scientific Interest (SSSI)	2 <sup>nd</sup> Floor Arndale House Manchester M4 3AQ
Homes and Communities Agency (HCA). This was formerly English Partnerships	HCA is the national force for regeneration and development. (HCA have advised that they have no land holdings in the Bolton Metropolitan area)	Arpley House 110 Birchwood Boulevard Birchwood Warrington WA3 7QH
Environment Agency	Shared NW South & Central catchment areas.	Richard Fairclough House Knutsford Road Warrington WA4 1HG
Food Standards Agency	Contaminants Division	7th Floor Aviation House 125 Kingsway London WC2B 6NH
Greater Manchester County Fire Service	Petroleum Sites	Headquarters 146 Bolton Road Swinton Manchester M27 8US
Ministry of Agriculture, Fisheries and Food (MAFF)  Rural Development Service – Technical Advice Unit	Agricultural Land Classification and agricultural activity. MAFF to advise of local contacts to deal with technical enquiries at later date	Nobel House 17 Smith Square London SW1P 3JR

Table 6-1: List of External Organisations.

### 7.2 Liaison with the Environment Agency

Under Part 2A local authorities and the Environment Agency share the task of regulating Contaminated Land.

In particular, responsibilities that are shared or on which close co-operation and mutual reliance are required include:

- inspection of land which would be classified as a Special Site if found to be contaminated land;
- identification of contaminated land by virtue of pollution of controlled waters;
- designation of Special Sites; and
- deciding on appropriate remediation for sites that are contaminated (but not Special Sites) by virtue of pollution of controlled waters.

In order to promote co-operation between local authorities and the Environment Agency, with regard to contaminated land, the Agency and the Local Government Association have produced a 'Land Contamination Protocol'. The protocol sets out the roles and

responsibilities of the two parties and principles for the sharing of information. The Council will observe the arrangements set out in the protocol.

### **7.3 Liaison with Neighbouring Authorities**

Potentially, pollutant linkages could cross borough boundaries (this is sometimes referred to as 'trans-boundary pollution'). There is therefore a need for co-operation and liaison between neighbouring Local Authorities.

Bolton Council is a member of Association of Greater Manchester Authorities (AGMA) which provides an effective link between officers dealing with contaminated land, in authorities in the Manchester area. Similar links are in place with the Lancashire neighbouring authorities.

### **7.4 Communicating with Owners of Land and other Interested Parties**

It is the Government's intention that, wherever practicable, remediation of Contaminated Land should proceed by agreement rather than by formal action. The Council will adopt an approach to its regulatory duties that will seek to encourage voluntary action in preference to taking enforcement action. By this approach, the Council recognises that in many cases as much or more effective remediation may be achieved through agreement and collaboration as may be by regulation. This commitment is in line with the Council's objective to seek to ensure that the cost burdens faced by individuals, companies and society as a whole are proportionate, manageable and economically sustainable

### **7.5 Involvement of Community Groups and Businesses**

The Council recognises that land contamination issues, particularly those that have implications for human health, have a potential to cause public concern. Contamination may also affect people's perception of their local environment ('blight') and it may affect their use of land. It is important that those concerns are taken into account in implementing the strategy for Contaminated Land.

### **7.6 Risk Communication**

The Council recognises that land contamination issues, particularly those that have implications for human health, have a potential to cause public concern. The Council will treat any concerns raised by members of the public with respect, recognising the importance of the issue to the individual.

Risk communication is a two-way process and the Council's objective in its communicating on contaminated land issues is to be open, accessible, listening and responsive.

The Council also recognises the important role that can be played by those involved in direct health care provision in assessing and communicating the potential health risks posed by land contamination and will involve Public Health (England).

The Communication Strategy will aim to: -

- a) Address the site investigation works;
- b) inform and update key milestones to all interested parties on a regular basis throughout the site investigation process;
- c) provide information packs for residents, including historical information on previous land use, details of the site investigation works, frequently asked questions and contact details;



- d) provide an opportunity for interested parties to communicate directly with a designated officer;
- e) reassure interested parties for all aspects of the site investigation works;
- f) gain the support of residents, landowners, land users, the wider public and other interested parties for the site investigation works;
- g) manage the perceived risk to all interested parties, and;
- h) anticipate and manage any potential crisis situations that may generate negative publicity for the site investigation works or Bolton Council.

## **7.7 Public Register Content**

The Council will keep a public register of information relating to land determined to be contaminated land, details of the information to be kept on the public register can be found in Appendix 7.

The public register will be available for inspection online at <http://www.bolton.gov.uk/website/pages/Contaminatedland.aspx#>

As part of the Contaminated Land Strategy the Council is obtaining a great deal of information from a variety of different sources, mainly via the planning regime, and will continue to work to collate this information for both the Council's and the public's use.

Where land is identified as Contaminated Land under Part 2A, details relating to the condition of the land and the remediation actions to be taken will be placed on a Register of Information. The register will be available for public inspection. This complies with the requirements of the Contaminated Land (England) Regulations 2006.

Information held on the public register will also be relevant to Land Charges queries and is the subject of specific questions on the Enquiries of Local Authority Search Form, CON 29.

In addition, information is held regarding land that has not been identified as Contaminated Land. Where such records are in the public domain Regulatory Services already operates a system for responding to requests for environmental information. In responding to requests for information the Council will observe the requirements of the Environmental Information Regulations 2004.

## **7.8 Confidentiality of Information.**

Much of the information held regarding land contamination will be available to the public either through the public register of information or under the provisions of the Environmental Information Regulations 2004 (as amended). The Act, however, makes certain specific exclusions to this rule and the following types of information must remain confidential:

- Information affecting National Security – as directed by the Secretary of State; and
- information affecting the Commercial Confidentiality of the affairs of any individual or business.

## **8.0 REVIEW MECHANISM**

### **8.1 Review of the Strategy Document**

The Contaminated Land Strategy will be reviewed every five years, or less where necessary. This will ensure existing procedures represent an efficient use of resources and are effective in meeting both the Council's objectives and the requirements of the legislation.

The review will be carried out by those implementing the Strategy, who will also consult with other Service's across Bolton Council, as considered necessary. Consultation with external organisations will also be carried out as deemed necessary.

The Environment Agency as part of its statutory duty under Part 2A, has to assess each local authority Contaminated Land Strategy and its effectiveness in its report on the state of Contaminated Land. Any suggested changes to the Strategy will be incorporated in the final document for approval by the Council.

### **8.2 Review of Site Specific Decisions**

Decisions will need to be regularly reviewed in order that new information can be taken into account and so that the risk factor associated with a site can be amended accordingly. Specific circumstances that would prompt a review would include:

- Proposed changes in the use of the land itself, or surrounding land;
- unplanned changes in the use of the land, particularly where this increases the risk to human receptors;
- unplanned events that cannot be addressed through other environmental legislation;
- reports of localised health effects that appear to be related to a particular area of land;
- reports from other organisations or members of the public; and
- changes in knowledge or guidance in relation to a particular contaminant, pathway or receptor.

In addition to responding to change in the circumstances, the Council will also instigate a rolling programme of review based on the receipt of new information and updated statutory and scientific guidance.

## 9.0 RELEVANT DOCUMENTS

The Environmental Protection Act 1990, HMSO

The Environment Act 1995, HMSO.

Contaminated Land (England) Regulations 2006

DEFRA: Environmental Protection Act 1990: Part 2A Contaminated Land Statutory Guidance 2012

Environmental Permitting Regulations 2010

Building Control Regulations Approved Document C

DETR (2000). 2000  
No.227. HMSO.

DCL (2012). "National Planning Policy Framework." Department of Communities and Local Government. March 2012.

Planning Practice Guidance – Land Affected by Contamination Reference ID 33-001-20140306

EA (2004). "Model Procedures for the Management of Land Contamination." R&D Publication CLR 11.

British Standard (2011). "Investigation of Potentially Contaminated Sites – Code of Practice." BS10175:2011.

British Standard (1999). "Code of Practice for Site Investigations. " BS5930:1999.

British Standards (2002) Geotechnical Investigation and Testing – Identification and Classification of Soil. Part 1: Identification and description. BS EN ISO 14688-1:2002.

CIRIA (2007). "Assessing Risks Posed by Hazardous Ground Gases to Buildings." CIRIA C665.

EA (2000). "Technical Aspects of Site Investigation. Volumes 1 & 2 Text Supplements Research and Development Technical Report." P5-065/Tr.

Defra (2014). "SP1010: Development of Category 4 Screening Levels and Assessment of Land Affected by Contamination – Policy Companion Document."

CL:AIRE (2013). "SP1010: Development of Category 4 Screening Levels and Assessment of Land Affected by Contamination – Final project Report."

EA (2008). "CLEA Software (Version 1.05) Handbook." Science Report – SC050021/SR4.

CL:AIRE (2008). "Guidance on Comparing Soil Contamination Data with a Critical Concentration."

Defra (2010) "The River Basin Districts Typology, Standards and Groundwater Threshold Values". Water Framework Directive (England and Wales) Directions 2010.

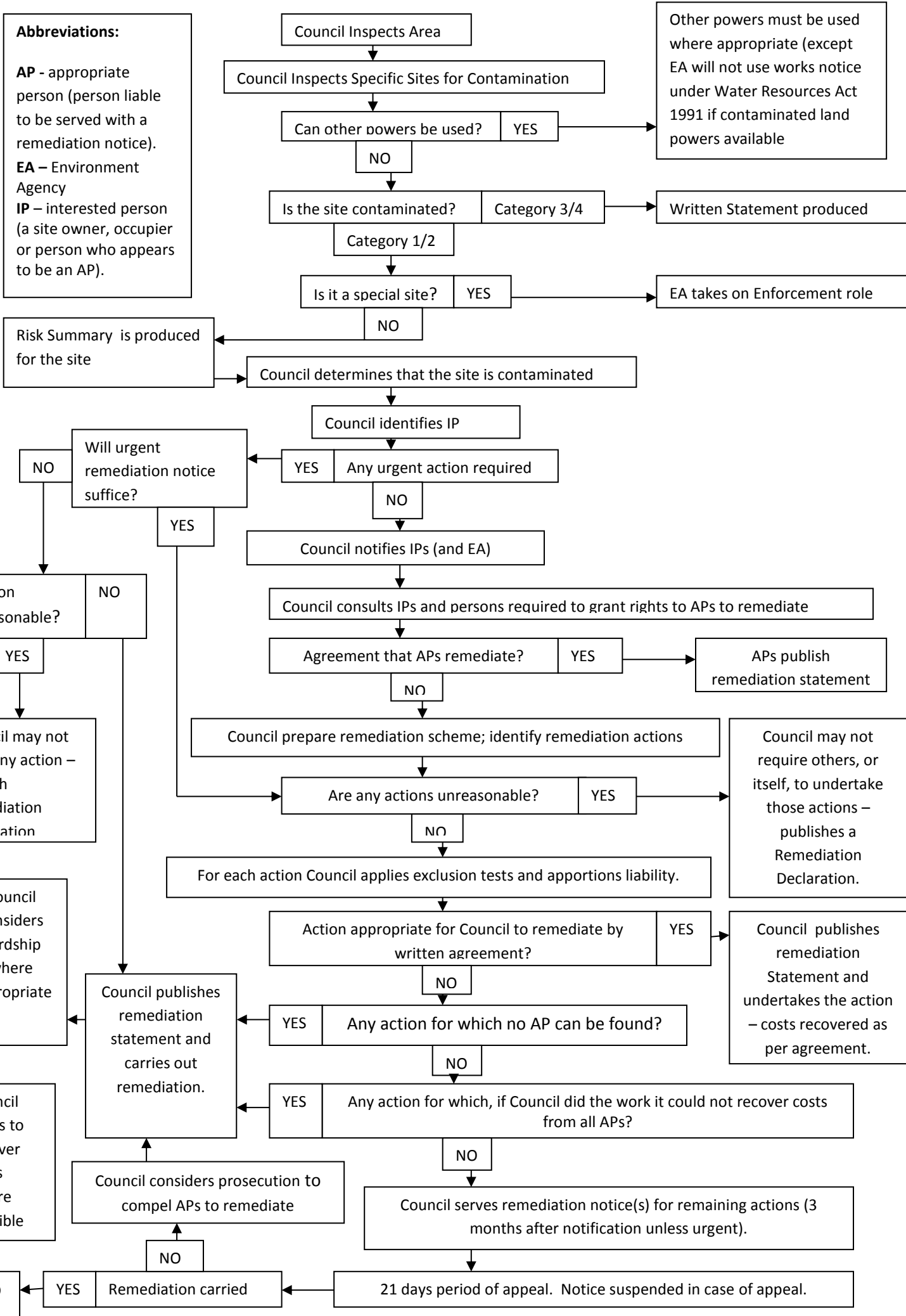
EA (2002). "Environment Agency technical advice to third parties on Pollution of Controlled Waters for Part IIA of the Environment Protection Act 1990."

## 10.0 GLOSSARY OF ABBREVIATIONS

UK	United Kingdom
The Act	Environmental Protection Act 1990
Part 2A	Part 2A of the Environmental Protection Act 1990
Statutory Guidance 2012	Environmental Protection Act 1990: Part 2A - Contaminated Land Statutory Guidance – April 2012
DEFRA	Department for Environment, Food and Rural Affairs
NPPF	National Planning Policy Framework
IPPC	Integrated Pollution Prevention and Control
SPOSH	Significant Possibility of Significant Harm
GQRA	Generic Quantitative Risk Assessment
DQRA	Detailed Quantitative Risk Assessment
SSAC	Site Specific Assessment Criteria
GIS	Geographic Information System
SSSI	Site of Special Scientific Interest
EA	Environment Agency
The Agency	Environment Agency
LNR	Local Nature Reserves
SBI	Sites of Biological Importance
HCA	Homes and Communities Agency
NW	North West
MAFF	Ministry of Agriculture, Fisheries and Food
LDF	Local Development Framework
BSI	British Standards Institute

# **APPENDICES**

# APPENDIX 1: CONTAMINATED LAND ENFORCEMENT PROCEDURE



**APPENDIX 2: RISK CATEGORIES FOR HUMAN HEALTH AND CONTROLLED WATERS**

Categories	Human Health	Controlled Waters
1	There is an unacceptably high probability supported by robust evidence of the significant possibility of significant harm occurring if no action is taken to stop it. Significant harm may have already been caused and could occur again if no action is taken to stop it.	There is a strong and compelling case that a significant possibility of significant pollution of controlled waters exists. This would include cases where there is robust science-based evidence for considering that it is likely that high impact pollution would occur if nothing were done to stop it.
2	There is a strong case for considering that the risks from the land are of sufficient concern, that the land poses a significant possibility of significant harm, however, there is little or no direct evidence that similar land, situations or levels of exposure have caused harm before, but available evidence suggests that there is a strong case for taking action under Part 2A on a precautionary basis.	The strength of evidence to put the land into Category 1 does not exist. There is however, sufficient concern that the land should be considered to pose a significant possibility of significant pollution of controlled waters on a precautionary basis. This may include land where there is a relatively low likelihood that the most serious types of significant pollution might occur.
3	There is not a strong case that land is capable of being determined as contaminated land on the grounds of significant possibility of significant harm and therefore the positive legal test cannot be met and it is not clear that net benefit is achievable. Although intervention under Part 2A is not in the opinion of the Council warranted, risks are not low and owners or occupiers of the land may take action to reduce risks outside of the Part 2A regime if they choose.	The risks are such that the tests in Categories 1 and 2 are not met and therefore regulatory intervention under Part 2A is not warranted. This includes land where it is very unlikely that serious pollution would occur; or where there is a low likelihood that less serious types of significant pollution might occur.
4	There is no risk, or the level of risk posed is low because for example, no relevant contaminant linkages have been established, there are only normal levels of contaminants in soil, there are no exceedances of generic assessment criteria or estimated levels of exposure to contaminants in soil are likely to form only a small proportion of what a receptor might be exposed to anyway through other sources of environmental exposure.	There is no risk, or the level of risk posed is low because for example, no contaminant linkage has been established, the possibility only relates to types of pollution that should not be considered to be significant, or the water pollution is similar to that which might be caused by background contamination.

Summary of the 4 Categories Described in Current Statutory Guidelines from 2012.



**APPENDIX 3 – CATEGORIES OF ‘SIGNIFICANT HARM’ or ‘SIGNIFICANT POSSIBILITY OF SIGNIFICANT HARM’ – HUMAN RECEPTOR (NON-RADIOACTIVE SOURCE)**

Relevant Types of Receptor	Significant Harm	Significant Possibility of Significant Harm
<p>Human beings.</p> <p>Human health effects arising from -the intake of a contaminant, or -other direct bodily contact with a contaminant.</p>	<p>Death, disease, serious injury, genetic mutation, birth defects or the impairment of reproductive functions.</p> <p>For these purposes, disease is to be taken to mean an unhealthy condition of the body or a part of it and can include, for example, cancer, liver dysfunction or extensive skin ailments. Mental dysfunction is included only insofar as it is attributable to the effects of a pollutant on the body of the person concerned.</p> <p>This description of ‘significant harm’ is referred to as a “human health effect”.</p>	<p>If the amount of the pollutant in the pollutant linkage in question: -which a human receptor in that linkage might take in, or -to which such a human might otherwise be exposed, as a result of the pathway in that linkage, would represent an unacceptable intake or direct bodily contact, assessed on the basis of relevant information on the toxicological properties of that pollutant.</p> <p>Such an assessment should take into account: -the likely total of intake of, or exposure to, the substance or substances which form the pollutant, from all sources including that from the pollutant linkage in question;’ -the relative contribution of the pollutant linkage in question to the likely aggregate intake of, or exposure to, the relevant substance or substances; and -the duration of intake or exposure resulting from the pollutant linkage in question.</p> <p>The question of whether an intake or exposure is unacceptable is independent of the number of people who might experience or be affected by that intake or exposure.</p> <p>Toxicological properties should be taken to include carcinogenic, mutagenic, teratogenic, endocrine-disrupting and other similar properties.</p>
<p>All other human health effects (particularly by way of explosion or fire).</p>		<p>If the probability, or frequency, of occurrence of significant harm of that description is unacceptable, assessed on the basis of relevant information concerning: -that type of pollutant linkage, or -that type of significant harm arising from other causes.</p> <p>In making such an assessment, the local authority should take into account the levels of risk which have been judged unacceptable in other similar contexts and should give particular weight to cases where the pollutant linkage might cause significant harm which: -would be irreversible or incapable of being treated; -would affect a substantial number of people; -would result from a single incident such as a fire or an explosion; or -would be likely to result from a short-term (that is, less than 24-hour) exposure to the pollutant.</p>

**APPENDIX 4: CATEGORIES OF 'HARM' or 'SIGNIFICANT POSSIBILITY OF HARM' – HUMAN RECEPTOR (RADIOACTIVE SOURCE)**

Relevant Types of Receptor	Harm	Significant Possibility of Harm
<p>Human beings.</p> <p>'Potential annual effective dose' or 'Potential annual equivalent dose.'</p>	<p>The Local Authority should regard harm when the following occurs:</p> <ul style="list-style-type: none"> <li>-an effective dose of 3 millisieverts per annum;</li> <li>-an equivalent dose to the lens of the eye of 15 millisieverts per annum; or</li> <li>-an equivalent dose to the skin of 50 millisieverts per annum.</li> </ul>	<p>The 'possibility of harm' should be taken into account based on the current use and measured probability or frequency of occurrences that would lead to lasting exposure, referred to as :</p> <ul style="list-style-type: none"> <li>-'potential annual effective dose'; or</li> <li>-'potential annual equivalent dose.'</li> </ul> <p>Any potential future use will be dealt with through the planning process.</p> <p>If 'harm; is not met then the Local Authority should consider the possibility of harm being caused, such as:</p> <ul style="list-style-type: none"> <li>-the potential for annual effective dose;</li> <li>-any non-linearity of the dose-effect relationship to stochastic effects;</li> <li>-the potential annual equivalent dose to the skin and to the lens of the eye;</li> <li>-the nature and degree of any deterministic effects associated with the potential annual dose;</li> <li>-the probability of the dose being received;</li> <li>-the duration of the exposure and timescales within which the harm might occur; and</li> <li>-any uncertainties associated with the above.</li> </ul>

**APPENDIX 5 – CATEGORIES OF ‘SIGNIFICANT HARM’ or ‘SIGNIFICANT POSSIBILITY OF SIGNIFICANT HARM’ – NON-HUMAN RECEPTORS**

Relevant Types of Receptor	Significant Harm	Significant Possibility of Significant Harm
Controlled Waters	“The entry into controlled waters of any poisonous, noxious or polluting matter or any solid waste matter.”	<p>Before determining if pollution of controlled waters is occurring the local authority should ensure that the substance is continuing to enter controlled waters as dissolved phased, suspended solids or as an immiscible liquid.</p> <p>Land should not be designated if the following is occurring:                      -a substance is already present in controlled waters;                      -entry into controlled waters of that substance from land has ceased; and                      -it is not likely that further entry will take place.</p>
<p>Any ecological system, or living organism forming part of such as system, within a location which is:</p> <ul style="list-style-type: none"> <li>-an area notified as an area of special scientific interest under section 28 of the Wildlife and Countryside Act 1981;</li> <li>-any land declared a national nature reserve under section 35 of that Act;</li> <li>-an area of special protection for birds, established under section 3 of that Act;</li> <li>-any European Site within the meaning of regulation 10 of the Conservation (Natural Habitats etc.) Regulations 1994 (i.e. Special Areas of Conservation and Special Protection Areas);</li> <li>-any candidate Special Areas of Conservation or potential Special Protection Areas given equivalent protection;</li> <li>-any habitat or site afforded policy protection under paragraph 13 of Planning Policy Guidance Note 9 (PPG9) on nature conservation (i.e. candidate Special Areas of Conservation, potential Special Protection Areas and listed RAMSAR sites); or</li> <li>-any nature reserve established under section 21 of the National Parks and Access to the Countryside Act 1949.</li> </ul>	<p>For <u>any</u> protected location:</p> <ul style="list-style-type: none"> <li>-harm which results in an irreversible adverse change, or in some other substantial adverse change, in the functioning of the ecological system within any substantial part of that location; or</li> <li>-harm which affects any species of special interest within that location and which endangers the long-term maintenance of the population of that species at that location.</li> </ul> <p>In addition, in the case of a protected location which is a European Site (or a candidate Special Area of Conservation or a potential Special Protection Area), harm which is incompatible with the favourable conservation status of natural habitats at that location or species typically found there.</p> <p>In determining what constitutes such harm, the local authority should have regard to the device of Natural England and to the requirements of the Conservation (Natural Habitats etc.) Regulations 1994.</p> <p>This description of significant harm is referred to as an “ecological system effect”.</p>	<p>If either:</p> <ul style="list-style-type: none"> <li>-significant harm of that description is more likely than not to result from the pollutant linkage in question; or</li> <li>-there is a reasonable possibility of significant harm of that description being caused, and if that harm were to occur, it would result in such a degree of damage to features of special interest at the location in question that they would be beyond any practicable possibility of restoration.</li> </ul> <p>Any assessment made for these purposes should take into account relevant information for that type of pollutant linkage, particularly in relation to the eco-toxicological effects of the pollutant.</p>

Relevant Types of Receptor	Significant Harm	Significant Possibility of Significant Harm
<p>Property in the form of:</p> <ul style="list-style-type: none"> <li>-crops, including timber;</li> <li>-produce grown domestically or allotments for consumption;</li> <li>-livestock; and</li> <li>-other owned or domesticated animals; wild animals which are the subject of shooting or fishing rights.</li> </ul>	<p>For crops, a substantial diminution in yield or other substantial loss in their value resulting from death, disease or other physical damage. For domestic pets, death, serious disease or serious physical damage. For other property in this category, a substantial loss in its value resulting from death, disease or other serious physical damage.</p> <p>The local authority should regard a substantial loss in value as occurring only when a substantial proportion of the animals or crops are dead or otherwise no longer fit for the intended purpose. Food should be regarded as being no longer fit for purpose when it fails to comply with the provisions of the Food Safety Act 1990. Where a diminution in yield or loss in value is caused by a pollutant linkage, a 20% diminution or loss should be regarded as a benchmark for what constitutes a substantial diminution or loss.</p> <p>This description of significant harm is referred to as an “animal or crop effect”.</p>	<p>If significant harm of that description is more likely than not to result from the pollutant linkage in question, taking into account relevant information for that type of pollutant linkage, particularly in relation to the ecotoxicological effects of the pollutant.</p>
<p>Property in the form of buildings.</p> <p>For this purpose, “building” means any structure or erection, and any part of a building including any part below ground level, but does not include plant or machinery comprised in a building.</p>	<p>Structural failure, substantial damage or substantial interference with any right or occupation.</p> <p>For this purpose, the local authority should regard substantial damage or substantial interference as occurring when any part of the building ceases to be capable of being used for the purpose for which it is or was intended.</p> <p>Additionally, in the case of a scheduled Ancient Monument, substantial damage should be regarded as occurring when the damage significantly impairs the historic, architectural, traditional, artistic or archaeological interest by reason of which the monument was scheduled.</p> <p>This description of significant harm is referred to as a “building effect”.</p>	<p>If significant harm of that description is more likely than not to result from the pollutant linkage in question during the expected economic life of the building (or, in the case of a scheduled Ancient Monument, the foreseeable future), taking into account relevant information for that type of pollutant linkage.</p>

## APPENDIX 6 – INFORMATION EVALUATION

Information	Description	Use
Historical maps	Paper or digitised Ordnance Survey maps	Identification of potential sources of contamination and changes in land use over time
Geological maps	1:50,000 solid and drift geology maps in paper or electronic format from British Geological Survey (BGS)	Identification of pathways and receptors
Groundwater Vulnerability Maps	Paper or digitised format from the Environment Agency (EA)	Identification of receptors
-Sites registered under Alkali Works Act Regulations 1906 -Surface water classifications (including compliance and failure) -Sites where the EA has had prior involvement -Sites authorised by the EA under Part 1 of the EPA (1990) -Sites registered under the Radioactive Substances Act 1993	Information supplied by the EA	Identification of receptors
Environmental Services Records	Digitised landfill records and site investigation reports (BMBC)	Identification of sources of contamination
Planning Records	Site investigation reports (BMBC)	Identification of sources and receptors. Also an indicator of areas that may already have received remediation
Building Control Records	Details of development where ground gas protection measures have been incorporated. (BMBC)	Identification of sources, receptor and previous remedial work
Allocation Plans	Existing and proposed land- use information (BMBC)	Identification of receptors and an important area of liaison for strategic planning of land-use
Integrated Pollution Control Register	Public register of information regarding processes prescribed for Protection Act 1990 (BMBC and EA)	Identification of sources. Area of interaction between the Contaminated Land Strategy and other enforcement regimes
Waste Management Licences	Public Register of sites licensed for waste management activities (EA)	Identification of sources. Area of interaction between the Contaminated Land Strategy and other enforcement regimes.
Register of closed landfill sites	Environment Agency records	Identification of sources

## **APPENDIX 7: CONTENTS OF PUBLIC REGISTER**

1. Remediation notices.
2. Appeals against remediation notices.
3. Remediation declarations.
4. Remediation Statements.
5. Appeals against charging notices and decisions on appeal.
6. Designation of special sites.
7. Notification of claimed remediation.
8. Convictions for offences in relation to a remediation notice.
9. Site specific guidance issued to the Council by the Environment Agency.
10. Where the Council is precluded from serving a remediation notice by the requirements of other environmental controls:
  - the location and extent of the contaminated land in question, sufficient to enable it to be identified whether by reference to a plan or otherwise;
  - the reason for determining the land to be contaminated land;
  - the substances by reason of which the contaminated land in question is contaminated land and, if any substances have escaped from other land, the location of that other land;
  - the current use of the contaminated land; and
  - any steps of which the Council has knowledge that have been carried out towards remedying any significant harm or pollution of controlled waters by reason of which the land in question is contaminated land.
11. Where the Council is precluded from serving a remediation notice in respect of land that is contaminated due to the deposit of controlled waste or any consequences of its deposit:
  - the location and extent of the contaminated land in question, sufficient to enable it to be identified whether by reference to a plan or otherwise;
  - the reason for determining the land to be contaminated land;
  - the substances by reason of which the contaminated land in question is contaminated land and, if any substances have escaped from other land, the location of that other land;
  - the current use of the contaminated land; and
  - any steps of which the Council has knowledge that have been carried out in relation to that waste or the consequences of its deposit, including in a case where a waste collection authority took those steps or required the steps to be taken, the name of that authority.
12. Where as a result of a consent given under Chapter II of Part III of the Water Resources Act 1991, the Council is precluded from specifying in a remediation notice any particular thing by way of remediation which it would otherwise have specified in such a notice:
  - the consent;
  - the location and extent of the contaminated land in question, sufficient to enable it to be identified whether by reference to a plan or otherwise;
  - the reason for determining the land to be contaminated land;
  - the substances by reason of which the contaminated land in question is contaminated land and, if any substances have escaped from other land, the location of that other land;
  - the current use of the contaminated land.

