



IPSWICH
BOROUGH COUNCIL

Contaminated Land Strategy 2019-2024

Grafton House, 15-17 Russell Road, Ipswich, Suffolk, IP1 2DE
www.ipswich.gov.uk

EXECUTIVE SUMMARY

There is a substantial legacy of contaminated land in the United Kingdom, due to its long industrial heritage and previous waste disposal practices. There are now various regimes in place to prevent new contamination however the historic contamination remains and still has the potential to adversely affect people's health, as well as damage water quality, ecological systems and property.

The Environmental Protection Act 1990, Part 2A requires all local authorities to inspect its area for the purpose of identifying contaminated land. Each local authority must develop and publish a strategic approach to identifying and securing the remediation of contaminated land in its area. Ipswich Borough Council first published its strategy in January 2002, followed by revisions in 2006, 2010 and 2013. This document is the 4rd update of the Strategy.

The Strategy sets out how Ipswich Borough Council will identify and deal with contaminated land. The programme of inspection and intervention will be based on identifying risk and those of high risk given priority.

CONTENTS

1.0 Introduction

- 1.1 Aims and objectives
- 1.2 Government Policy
- 1.3 Definition of Contaminated Land
- 1.4 Strategy Review & Progress
- 1.5 Corporate Priorities
- 1.6 Consultation

2.0 Characteristics of Ipswich Borough

- 2.1 Profile
- 2.2 Land Use
- 2.3 Geology, Hydrogeology and Hydrology

3.0 The Contaminated Lane Regime

- 3.1 Government Guidance & Regulation
- 3.2 Roles & Responsibilities
- 3.3 Principles of Contaminated Lane Regime
 - 3.3.1 Pollutant linkages
 - 3.3.2 Suitable for use
 - 3.3.3 Risk Assessment
 - 3.3.4 Generic Assessment Criteria
 - 3.3.5 Background Contamination
 - 3.3.6 The 'Polluter pays' Principle
 - 3.3.7 Pollution of Controller Waters
 - 3.3.8 Radioactivity
- 3.4 Interaction with other Regulatory Regime

4.0 Identification & Priorisation of Contaminated Land Sites

- 4.1 Identification
- 4.2 Priorisation
- 4.3 Information & Complaints
- 4.4 Changes in land Use
- 4.5 Council Owned Property

5.0 Detailed Inspection of Contaminated Land

- 5.1 Detailed Site Inspection
- 5.2 Powers of Entry
- 5.3 Review of Inspection Plan
- 5.4 Timescales

6.0 Determination & Remediation of Contaminated Land

- 6.1 Determination & Remediation

- 6.2 Special Sites
- 6.3 Categorisation of Contaminated Land (Human Health)
- 6.4 Deciding Land is not Contaminated
- 6.5 Risk Summaries
- 6.6 Review of Inspection Decision
- 6.7 Determining Liability
- 6.8 Adjacent Land
- 6.9 Remediation Land
- 6.10 Cost Recovery

7.0 Access to Information & Confidentiality

- 7.1 Public Register
- 7.2 Request for Information
- 7.3 Confidentiality

Glossary of terms

Appendix 1 – Significant Harm & Significant Pollution

Appendix 2 – Special Sites

Appendix 3 – Radioactivity

Appendix 4 – Possible Sources of Contamination

Appendix 5 – Part2A Receptors

1.0 INTRODUCTION

1.1 AIMS AND OBJECTIVES

The aim of this strategy is to set out how the council intends to implement its responsibilities under Part 2A of the Environmental Protection Act 1990 (Part 2A), taking account of statutory guidance. The statutory guidance states that local authorities should take a strategic approach for carrying out its duties under Part 2A and should adopt a written strategy for inspecting their area.

The principal objectives of the strategy are:

- a) to meet the statutory obligation placed on the council to produce a written strategy under Part 2A,
- b) to provide a strategic framework which the council will use to identify, inspect and determine contaminated land and describe the measures that may be taken to remediate such land,
- c) to describe how the council will prioritise and categorise sites,
- d) to inform the public and improve communication with stakeholders of the councils intention in relation to contaminated land, and
- e) to ensure that the councils corporate priorities will be achieved.

In developing and implementing the strategic approach the Council will:

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

1.2 GOVERNMENT POLICY

Land should be considered not contaminated unless there is reason to consider otherwise. Part 2A is intended to deal with the highest risk sites where no appropriate alternative solution is available. The Council must always consider the benefits and costs of taking action under Part 2A to ensure intervention is both precautionary and proportionate.

The Government main policy objectives with respect to contaminated land are

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

1.3 DEFINITION OF CONTAMINATED LAND

The contaminated land regime is set out in Part 2A of the Environmental Protection Act 1990. It was introduced in April 2000 and gives specific legal powers to local authorities to identify and deal with contaminated land. The regulations were widened in 2006 to include land contaminated by radioactivity.

The legal definition of contaminated land is:

“ 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, or is likely to be caused”

The above definition reflects the role of the regime which is to enable the identification and remediation of land where contamination is causing unacceptable risks to human health or the environment. It does not necessarily include all land where contamination is present. Further guidance on the definition of significant harm and significant pollution is provided in Appendix 1.

The extension of the regime to radioactivity allows radioactive contaminated land to be identified and remediated. This is land that is causing harm or posing a significant possibility of harm to human health as a result of radioactivity. It only applies in circumstances where radioactivity is the result of a past practice or work activity, or the after-effects of a radiological emergency. This includes substances containing artificial radionuclides or processed natural radionuclides. The presence of radionuclides on land doesn't automatically mean that it is radioactive contaminated land under the extended Part 2A regime. For land to be determined as radioactive contaminated land a significant pollutant linkage must be present, the statutory guidance sets out levels of radioactivity that should be considered as causing harm:

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

For certain categories of sites which have been determined as contaminated land the Environment agency is the enforcing authority. These are known as special sites and further details are provided in Appendix 2.

1.4 STRATEGY REVIEW AND PROGRESS

The council's original contaminated land strategy was published in January 2002 followed by revisions in 2006, 2010 and 2013. It is the intention to review the strategy at least every 5 years.

Currently there are no sites registered as contaminated land defined by Part 2A, however approx. 275 sites have been identified as potentially being contaminated and require further investigation. The Council have investigated a number of sites and have achieved significant clean up of land contamination via the Planning process.

1.5 CORPORATE PRIORITIES

The contaminated land strategy has been prepared in the context of the council's vision and corporate priorities.

1.6 CONSULTATION

The Strategy has not changed significantly since the 2013-2018 version. It is therefore proposed not to undertake a full consultation process. Once the Strategy is published will we inform relevant organisations.

2.0 CHARACTERISTICS OF IPSWICH BOROUGH

2.1 PROFILE

Ipswich is the County Town of Suffolk and situated in the heart of East Anglia on the River Orwell. The Borough covers an area of 3981 hectares, it is predominantly urban area but about 10% of the borough is countryside in which there are areas of outstanding natural beauty, wildlife sites and nature reserves.

Ipswich has a current population of approximately 130,000, with an immediate catchment area of over 300,000. It is strategically located on the main trunk road and rail network which enables excellent communication links with London, the South East, the Midlands and Europe.

Ipswich is an attractive historic town containing a wealth of listed buildings and conservation areas. The town has a prosperous broad based economy and is a regional centre for administration, financial services, hi-tech industries and a hub for transport and distribution. Its thriving sub regional shopping centre serves a wide catchment area.

Ipswich provides a high quality range of housing and a vibrant mix of leisure, sports and social facilities with a host of restaurants, clubs, cafes, cinemas, sports centres, theatres, a marina and over 320 hectares of parkland. The regeneration of Ipswich waterfront, formerly a Victorian Wet Dock, provides a quality environment for housing, business, leisure and education.

2.2 LAND USE

A considerable number of land uses have the potential to contaminate land and these are identified in Appendix 3. Some of these land uses have been identified in Ipswich already and others will be identified as the strategy is implemented. Previous land use activities in Ipswich have included gas works, ship repair, landfill, foundries and railway land, all of which have the potential to contaminate land.

Ipswich Borough Council has procedures in place to deal with contaminated land issues which have arisen through the course of other duties. The most frequent example is through Planning and a significant amount of land has been remediated via the Planning process.

2.3 GEOLOGY, HYDROGEOLOGY AND HYDROLOGY

The geology of Ipswich comprise of Alluvium overlying River Terrace deposits which are underlain by the Upper Chalk. There is evidence of the existence of a buried river channel deposit beneath the line of the existing River Orwell which is shown to be filled with Glacial Sand and Gravel deposits. There is also evidence of Thanet Sand which is shown to sit above the chalk along part of the river channels. Glacial Sand, Kesgrave Sands and Gravel sit above London Clay over a large part of the Borough. Small pockets of Brick earth are shown to the east of Ipswich.

The Environment Agency Groundwater Vulnerability maps provide information on the vulnerability of groundwater to contamination in and surrounding Ipswich. Groundwater is contained in

underground strata providing aquifers which provide water for public supply and as a base flow for rivers and watercourses.

The strata is divided into five types of aquifer (Principal aquifers, Secondary aquifers (secondary A and B), secondary undifferentiated and unproductive strata) based on their geology and the amount and ease with which water can be taken from them and the degree to which they support river flows and habitats.

In Ipswich parts of the area are designated principal aquifers. These are either Chalk underlying the course of the river which has eroded overlying deposits or away from the river is Crag. Part of the Borough is designated Secondary A bedrock aquifer and is the Thanet Sands and Lambeth Group. These deposits overlay the Chalk and can be of a sandy nature which can supply water but are generally in continuity with Chalk groundwater. The rest of the Borough is unproductive strata on the bedrock map and is London Clay.

Of the superficial deposits much of Ipswich is a Secondary A aquifer and consists of river terrace sands and gravels, glacial sands and gravels, and some of the more silty alluvium along the course of the river. The rest is unproductive strata and is predominantly glacial diamict which is a heterogeneous mix of silty clay rich material which is generally low in permeability. There are some unproductive strata along the course of the Orwell, which are identified as inter tidal silty clays of low permeability.

Anglian Water Services provide the majority of the water in the area with a small number of private water supplies.

3.0 THE CONTAMINATED LAND REGIME

3.1 GOVERNMENT GUIDANCE AND REGULATION

Part 2A of the Environmental Protection Act 1990 is supported by statutory guidance. The most recent contaminated land statutory guidance was issued by the Department for Environment, Food and Rural Affairs (DEFRA) in April 2012. The statutory guidance sets out the Government's policy and provides guidance to local authorities which must be followed when implementing Part 2A. The regime was expanded in 2006 to include radioactive contaminated land and updated statutory guidance on this was also published in April 2012 by the Department of Energy and Climate Change (DECC).

There are a number of non statutory technical guidance documents relevant to Part 2A which are available from the DEFRA and Environment Agency web sites.

3.2 ROLES AND RESPONSIBILITIES

Local authorities are the lead regulator for Part 2A but there is a category of special sites for which the Environment Agency is the regulator (see Appendix 2). The Environment Agency is the Government's national advisor on contaminated land.

The key responsibilities of Ipswich Borough Council under Part 2A are

- To prepare an inspection strategy setting out how the council intends to inspect its area for the purpose of identifying contaminated land,
- Determine whether particular areas of land are contaminated in accordance with statutory guidance,
- Decide whether any contaminated land should be designated a special site,
- Identify and notify owners and occupiers of contaminated land and those who may be liable,
- Undertake urgent remediation where there is imminent danger of serious harm,
- Determine who may be liable for remediation and apportion costs,
- Ensure that appropriate remediation takes place, and
- Maintain a public register under Part 2A.

3.3 PRINCIPLES OF CONTAMINATED LAND REGIME

3.3.1 POLLUTANT LINKAGES

The definition of contaminated land includes the notion of 'significant harm' and the 'significant possibility' of such harm occurring. In determining what is significant, the council will have regard to the statutory guidance. The statutory guidance uses the concept of a 'pollutant linkage', or contaminant linkage, i.e. a linkage between a source of contamination and a receptor by means of a pathway. Prior to determining that any land appears to be contaminated land on the basis that significant harm is being caused, or that there is a significant possibility of such harm being caused, the council will identify a significant pollutant linkage comprising each of the following:

- a contaminant,

- a relevant receptor, and
- a pathway by means of which either the contaminant is causing significant harm to the receptor or there is a significant possibility of such harm being caused.

Further guidance on sources and receptor is included as Appendix 4 and Appendix 5 respectively.

Pollutant linkages should be represented by a conceptual model for the site, which can either be a diagram or in written form, and shows the possible relationships between contaminants, pathways and receptors. The conceptual model is important throughout the whole process of risk assessment, and should be refined as more information is gathered about a site.

When determining whether significant pollution of controlled waters is being, or likely to be, caused, the council will act in accordance with the statutory guidance and any technical guidance issued by the Environment Agency. Prior to determining that any land appears to be contaminated on the basis that significant pollution of controlled waters is being, or likely to be, caused, the council will have identified a significant pollutant linkage where controlled waters form the receptor and will consult with the Environment Agency.

3.3.2 SUITABLE FOR USE

The Government's objectives with respect to contaminated land underline the 'suitable for use' approach to the assessment and management of risk. This approach comprises three elements:

- ensuring that, in terms of risk to human health, land is suitable for its current use
- ensuring that land is made suitable for any new use as planning permission is given for that new use
- limiting requirements for remediation to the work necessary to prevent unacceptable risks to human health or the environment.

The 'current use' is any use which is currently being made or likely to be made of the land, including likely informal use such as children playing on the land, and any use which has planning permission or is otherwise lawful under the planning regime. The 'suitable for use' approach balances the various environmental, social, and economic factors in relation to contaminated land.

3.3.3 RISK ASSESSMENT

Risk assessment involves understanding the risks from contamination, and the associated uncertainties. Under Part 2A, risks should be considered only in relation to the current use of the land, or any likely future use which would not require new planning approval, and this should be demonstrated in the conceptual site model.

When identifying significant pollutant linkages, the council will carry out an appropriate technical assessment, following the Model Procedures for the Management of Land Contamination (CLRII), produced by the Environment Agency and DEFRA, as well as the statutory guidance. CLRII is a technical framework for structured decision-making, and reflects the Government's policy on how risks from land contamination should be managed. The basic approach to risk assessment involves

identifying the hazards (i.e. contaminant sources), assessing these in terms of pollutant linkages and the likely consequences, and then estimating the risk (i.e. predicting the magnitude and probability of those possible consequences). This requires a phased approach to the risk assessment process:

1. Preliminary risk assessment (*desk study, site history, conceptual site model, qualitative risk assessment*)
2. Generic quantitative risk assessment (*intrusive investigation, compare site data to generic assessment criteria, refine risk assessment*)
3. Detailed quantitative risk assessment (*derive site specific assessment criteria for key pollutant linkages. Refine risk assessment further to determine remedial measures*)

3.3.4 GENERIC ASSESSMENT CRITERIA

The Environment Agency has developed a Government supported methodology for estimating long-term risks to people from contaminants in soil, known as the Contaminated Land Exposure Assessment tool (CLEA). This software has been used to derive Soil Guideline Values (SGV's), which can be used as minimal risk screening values to compare with concentrations of contaminants in soil. They can be used to indicate when land is very unlikely to pose a significant possibility of significant harm to human health. They are accompanied by a number of technical guidance documents, which form part of the CLEA package. Other generic assessment criteria (GAC), derived by reputable organisations and competent practitioners in the land contamination sector, are available for most of the commonly occurring contaminants in soil. As with any generic assessment tool, the limitations and assumptions must be clearly understood before they are used in the risk assessment process.

3.3.5 BACKGROUND CONTAMINATION

Many contaminants are naturally occurring and are commonly found in soils, due to soil forming processes and the nature of the underlying geology. Other substances are also widespread in the environment due to low level diffuse pollution and common human activities, such as the historic use of leaded petrol and the spreading of ash in domestic gardens.

The Part 2A regime was introduced to help deal with land which poses unacceptable levels of risk. For the large majority of sites where there are naturally occurring contaminants, or levels of contamination which might be considered 'normal' in a particular area, there is usually no reason to consider this land as contaminated land. The statutory guidance makes it clear therefore, that where land is at close to 'normal' levels of contamination, it should usually not be considered further under Part 2A, unless there is a particular reason to do so. In such cases the council would need to carefully explain the reasons for taking that decision based on robust scientific evidence.

The British Geological Survey (BGS) has developed technical guidance on behalf of Defra, to help clarify what constitutes Normal Background Concentrations (NBC's) for certain contaminants in soil, in accordance with the statutory guidance.

3.3.6 THE 'POLLUTER PAYS' PRINCIPLE

An important task of the enforcing authority under the Part 2A regime is to establish who should bear responsibility for remediating a site where there are unacceptable risks from land contamination. In general, this will follow the 'polluter pays' principle, where the person who caused

or knowingly permitted the contamination will be the appropriate person to cover the cost of remediation. However, if it is not possible to find such a person, it will fall to the owner or occupier of the land. The council will then decide what remediation is necessary, either through voluntary agreement or by serving a remediation notice. More detail on determination and remediation is provided in section 6 of the strategy. In most cases, contaminated land will be voluntarily remediated through the planning process, by developers and landowners looking to bring a contaminated site back into beneficial use.

3.3.7 POLLUTION OF CONTROLLED WATERS

Section 78A (9) of the 1990 Act defines the pollution of controlled waters as:

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

‘Controlled waters’ are defined within Part III of the Water Resources Act 1991, and include coastal waters, inland freshwaters, and ground waters.

Section 86 of the Water Act 2003 came into force on 6th April 2012 and amended the definition of contaminated land in relation to controlled waters, so that *significant* pollution of controlled waters needs to be occurring, or there is a *significant possibility* of such pollution occurring in order to meet the definition of contaminated land under Part 2A. Further details are provided in Appendix I.

When investigating whether there is significant pollution of controlled waters, the council will therefore focus on water pollution which:

1. may be harmful to human health or the quality of the aquatic ecosystem;
2. which may result in damage to material property; or
3. which may interfere with amenities or other uses of the environment.

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

1. the substance is already present in controlled waters,
2. entry into controlled waters of that substance from land has ceased, and
3. it is not likely that further entry will take place.

3.3.8 RADIOACTIVITY

The historical use of radioactive materials in a wide variety of industries has led to a legacy of contamination by radioactive substances, primarily due to a lack of effective regulation or understanding of the hazards. The Part 2A regime was therefore extended in 2006 to include contamination of land by radioactivity, in respect of harm to human health only.

The definition of contaminated land was amended where radioactive contamination is concerned, so that ‘harm’ to human health does not need to be significant, but only that it is *‘being caused or there*

is a significant possibility of such harm being caused'. In this context, 'harm' is defined as 'lasting exposure to any person from substances containing radionuclides resulting from the after-effects of a radiological emergency, past practice or past work activity'. Further guidance on what constitutes 'harm' is provided in Appendix 3.

Such sites fall under definition of a 'special site' (see Appendix 2), therefore the Environment Agency is the enforcing authority. Where the council considers there are reasonable grounds for believing that land may be contaminated by virtue of radioactivity, it will consult the Environment Agency for detailed advice and guidance. In some cases the council may ask the Environment Agency to carry out the intrusive inspection on its behalf, subject to their advice and agreement. The council has the sole responsibility for determining whether any land appears to be radioactive contaminated land. As with non-radioactive contaminated land, a significant contaminant linkage must be identified to consider determining the land under Part 2A. At all times, the council will act in accordance with the statutory guidance on radioactive contaminated land, produced by the Department of Energy and Climate Change.

3.4 INTERACTION WITH OTHER REGULATORY REGIMES

The contaminated land regime has links to other regulatory regimes these include: –

- **Planning and development control**

Government policy recognises that voluntary remediation will often be funded by redevelopment and Part 2A was designed and intended to work with the planning process in those cases where the land is suitable for or scheduled redevelopment.

With regard to land contamination the Planning regulations make it clear that developers and landowners are responsible for ensuring that land is suitable for its proposed use. Adequate site investigation is required to show that the effects of pollution on health, the natural environment and the general amenity have been taken into account. As a minimum, the land should not be capable of being determined as contaminated under Part 2A, after it has been remediated through the planning process.

- **Environmental Permitting**

The Environmental Permitting Regulations are designed to minimise the impact from potential polluting activities. Many industrial installations and landfill sites fall under the environmental permitting regime. Regulation is split between the Environment Agency and local authorities.

- **Waste Management**

The Environment Agency has direct regulatory authority for current waste management activities under the Environmental Permitting Regulations. It issues and maintains registers of waste management licenses and certificate of exemptions as well as enforcing conditions of licenses. Other activities which potentially fall within the scope of the waste management licensing regime, include the redevelopment and reclamation of certain brownfield sites, which may involve the treatment or removal of contaminated soils and groundwater.

- **Water resources**

The Environment Agency is responsible for implementing a range of measures for preventing or remedying pollution of controlled waters.

- **The Environmental Damage (Prevention and Remediation) Regulations 2009**

The Environmental Liabilities Directive is implemented in the UK by the Environmental Damage (Prevention and Remediation) Regulations 2009. They are intended to deal with the most serious cases of environmental damage caused by economic activities and like Part 2A they are based on the polluter pays principle. However the emphasis is on, preventing and remedying environmental damage and not enforcement. They only apply to damage caused after the regulations came into force in March 2009. Environmental damage as defined by the regulations includes contamination of land that results in significant risk of adverse effects on human health, as well as damage to species and habitats and damage to water. Local authorities are the enforcing authority for damage to land.

4.0 IDENTIFICATION AND PRIORISATION OF CONTAMINATED LAND SITES

4.1 IDENTIFICATION

In order to identify potentially contaminated land it is necessary to identify those land uses past and present which have the potential to give rise to contamination. It is also necessary to identify relevant receptors, so that pollutant linkages can be assessed taking account of the current use of the site. The Council have so far identified approx. 275 sites where there is a potential for contamination to exist based on current and / or historical land use. It is likely the final number will be considerably higher. The sites are currently being risk assessed and the highest priority sites will be investigated first.

4.2 PRIORISATION

The potential contaminated sites have been identified from historical and current maps and recorded on a GIS system with a data base that assists with the risk assessment.

4.3 INFORMATION AND COMPLAINTS

Any information or reports on sites produced for the purposes of Part 2A will be treated in accordance with the Environmental Information Regulations 2004 and The Data Protection Act 2018. Before any information is released to third parties it will be assessed against Part 3 of the Environmental Information Regulations 2004 to determine whether it meets the criteria for an exception to the duty to disclose environmental information.

Any person wishing to volunteer information on contaminated land can contact Environmental Health. All information will be assessed on individual merit.

4.4 CHANGES IN LAND USE

The council's planning section deal with applications for development on or adjacent to contaminated and potentially contaminated land. The presence of contamination is a material planning consideration. It is expedient to address contaminated land issues at the development stage irrespective of the planned inspection process.

The Environmental Protection Team act as consultees on planning applications and will ensure that a suitable risk assessment is carried out and that any remediation proposals will ensure the site cannot be determined as contaminated land at a later stage based on the proposed future use. Once remediation is complete the council will require a verification report confirming that the agreed works have been carried out.

A contaminated land risk assessment should be submitted with any application for a sensitive end use such as residential, schools, play areas etc. regardless of the previous uses of the site. As a minimum this will include a desk study and site walkover. More detailed site investigation reports will be required in all cases where contamination is known or suspected.

4.5 COUNCIL OWNED PROPERTY

The Council own a number of sites across the Borough. Any potentially contaminated land currently or formerly owned or occupied by the council will be identified and prioritised in accordance with this inspection strategy. The investigation of council owned land will follow the same approach as any other land. An assessment of potential pollutants linkages will be carried out including whether the council is liable for contamination which has spread to adjacent land. Where council owned land is determined to be contaminated land, the council will nominate a person to deal with the matter from the service area responsible for the land. The Environmental Health service will liaise with the nominated person to secure the voluntary clean up of the land.

5.0 DETAILED INSPECTION OF CONTAMINATED LAND

5.1 DETAILED SITE INSPECTION

The council has a statutory duty to inspect its area in a rational, ordered and efficient manner when looking to identify contaminated land. This begins with the strategic inspection process to identify the most serious and high risk sites and to concentrate resources on areas where contaminated land is most likely to be found.

Once sites have been risk assessed based on the likely risk of harm, detailed inspection is then required to establish the presence or otherwise of a pollutant linkage. The aim of the detailed inspection is to gather information on ground conditions and carry out a risk assessment to determine whether there is significant harm or a significant possibility of significant harm occurring, or significant pollution of controlled waters.

The detailed inspection will include the following

- A review of all documentation relevant to the site held by the Council, Environment Agency and other organisations.
- Investigation of any past pollution incidents.
- A site visit or walkover to assess any visual problems on site and identify the proximity of sources and receptors.
- Development of a preliminary risk assessment to determine what further investigations are necessary
- Collection of soil, water and ground gas samples as required
- Where necessary conduct a more detailed risk assessment to determine if a significant pollutant linkage is present.
- Produce a report to summarise the findings of the desk study and preliminary site investigation recommending further actions.
- Where land is not considered to be contaminated land a written statement to that effect will be issued to the owners of the land
- Where the land is likely to be determined contaminated land a risk summary will be produced explaining the reasons for the decision.

Intrusive investigations will only be carried out where there is a reasonable possibility of significant pollutant linkage. The council will liaise with the effected persons and all relevant stakeholders throughout the investigation. The Council will aim to conduct its investigation as quickly as is reasonably practical without compromising the robustness of the assessment.

The council will seek to minimise property blight as far as is possible and will consider requests by landowners or other interested parties to take their own steps to resolve the status of the land which has been identified as potentially contaminated.

Where contaminated land is identified it will be determined in accordance with the statutory guidance. The status of the land will be regularly reviewed in light of any new evidence to ensure that the correct action is being taken. Although the council will carry out the initial inspection of the

sites there may be a need to carry out more specialised investigations and assessments. The Council have allocated a small budget for such investigations. Should funding be provided via DEFRA consideration will be given at the time whether to apply.

5.2 POWERS OF ENTRY

For the purposes of identifying contaminated land the council is granted powers of entry for the purpose of inspection by Section 108 of the Environment Act 1995. The council does not intend to use these powers unless necessary and will liaise with owners / occupiers where possible to seek agreement regarding entry to the site.

5.3 REVIEW OF INSPECTION PLAN

The inspection plan will be reviewed on a regular basis to ensure any new information is taken into account. The following are likely to prompt the review process

- Proposed changes in the use of the land or surrounding land,
- Unplanned changes in the use of the land,
- Reports of localised health effects which appear to relate to a particular area of land,
- Reports from third parties including the public, and
- Changes in knowledge or guidance in relation to a particular contaminant, pathways or receptors.

5.4 TIMESCALES

The strategy does not lend itself to setting fixed timescales as to progress of individual sites cannot be accurately predicted. However considerable progress is currently being made in logging sites onto the GIS system, undertaking preliminary risk assessment and progressing high risk sites as budgets allow.

A considerable amount of progress has been made in addressing contamination via planning applications received by the Town Planning Service, this will continue as sites are developed.

6.0 DETERMINATION AND REMEDIATION OF CONTAMINATED LAND

6.1 DETERMINATION OF CONTAMINATED LAND

Where as a result of a detailed site investigation the council identifies a contaminant, a pathway and a receptor with respect to the current use of the land within its area and is satisfied that as a result of that pollutant linkage either

- Significant harm is being caused to that receptor, or
- There is a significant possibility of significant harm being caused to that receptor, or
- Significant pollution of controlled waters is being caused, or
- There is a significant possibility of significant pollution of controlled waters.

then it will determine that the land is contaminated land for the purpose of Section 78A (2) of the Environmental Protection Act 1990 and will make a written record of that determination.

In determining whether there is significant pollution of controlled waters , or a significant possibility of significant pollution the council will have regard to the view of the Environment Agency.

Further details of what constitutes significant harm can be found in Appendix 1.

Having determined the land is contaminated land the council will given written notice of that determination to the following

- The owner of the land,
- Any person(s) appearing to the council to be in occupation of the land,
- Any person(s) appearing to the council to be an appropriate person, and
- The Environment Agency.

6.2 SPECIAL SITES

The legislation creates a category of contaminated land called special sites. The description of the types of land which are required to be designated as special sites are set out in the Regulations these are detailed in Appendix 2. The designation of a special site cannot take place until the Council has formally identified the land as Contaminated Land. Once designated, the Environment Agency is the enforcing authority for the purposes of Part 2A. Ipswich Borough Council will consider the potential for designation of a special site status for all contaminated land identified in the Borough.

6.3 CATEGORISATION OF CONTAMINATED LAND (HUMAN HEALTH)

To help the council decide whether or not land is contaminated land on the grounds of a significant possibility of significant harm to human health, it will use the system of categorisation set out in the statutory guidance. This describes 4 categories of land, with Categories 1 and 2 being land which is capable of being determined as contaminated land, and Categories 3 and 4 which is not capable of being determined on such grounds. A similar system can be used to help determine whether or not a significant possibility of significant pollution exists for controlled waters, and is described in detail in the statutory guidance.

- **Category 1:** Land which is clearly contaminated land. These are the worst case sites, where there is a very strong argument that significant harm would occur if no action is taken to stop it, for example, due to similar land or situations having caused such harm before, or because significant harm has already been caused due to exposure to contaminants, and is likely to continue to do so. Any decision will still need to be supported by robust evidence.
- **Category 2:** This would include land where there is little or no direct evidence that similar land, situations or levels of exposure have caused harm before, but the council still feels that there is a strong case for taking action under Part 2A on a precautionary basis, having regard to the statutory guidance.
- **Category 3:** This would include land where there may still be risks posed by contaminants, but strong case described above does not exist, and so the positive legal test cannot be met. In such cases, regulatory intervention would be unjustified. In deciding whether land falls into Category 2 or Category 3, the council will first consider its risk assessment, including the estimated likelihood and impact of such harm and the timescale over which it might occur. If the council still cannot make a decision whether or not there is a strong case based on this assessment alone, then the statutory guidance expects other factors to be taken into account, such as likely direct and indirect health benefits and impacts of regulatory action, including the stress caused by disruption, and the potential for mobilising contaminants during any remediation work. If the health benefits of remediation do not outweigh the health impacts the land should be placed in Category 3. The council will also have to consider whether the benefits would outweigh the financial and economic costs.
- **Category 4:** land which is clearly not contaminated land. This would include land where no relevant contaminant linkage has been established; or where there are only normal levels of contaminants in soil; or where contaminant levels do not exceed relevant generic assessment criteria (GACs), or other relevant technical tools; or land where levels of exposure to contaminants in soil only form a small proportion of what a receptor might be exposed to from other sources.

The Government is currently developing Category 4 screening levels (C4SLs), which will help decide when land is suitable for use and definitely not contaminated land. Current soil guidance values and other GACs represent minimal risk and are well within Category 4. The proposed C4SLs will be set towards the top-end of Category 4, and although they would still be precautionary, they will hopefully speed up the decision making process for regulators. They may also act as a suitable remediation standard for development of brownfield land.

6.4 DECIDING LAND IS NOT CONTAMINATED

The statutory guidance makes it clear that the starting point should be that land is not contaminated unless there is reason to consider otherwise. Where it is clear following an inspection that land does

not meet the legal definition of contaminated land the council will issue a written statement to that effect to the owners of the property and other interested parties. The statement will be qualified, for example that the risk assessment is only relevant to the current land use. A copy of the statement will be kept on file along with the reasons for the decision. The Council will not formally publish the information but will keep a record of it in the event of receiving enquiries or requests for information.

6.5 RISK SUMMARIES

For sites which are likely to be determined following a through risk assessment the council will produce a risk summary, in a simple and easy to understand format which will form part of the record of determination. This will include:

- A summary of our understanding of the risks including the identified contaminant linkages and potential impacts.
- A description of the uncertainties behind the risk assessment.
- A description of the local or national context of the risk assessment findings.
- Initial thoughts on possible remediation options and what impact this is likely to have.
- Any other factors which may be relevant and support the council's decision making process.

6.6 REVIEW OF INSPECTION DECISION

Occasions may arise where the criteria on which a decision is made to determine or not to determine land as contaminated or to designate or not designate as a special site may subsequently change. Examples include occasions when new information comes to light, significant changes in legislation, establishment of case law or precedent or revision of the guideline values for contaminants.

In such cases the council may choose to revoke or vary its determination. The council will record its reasons for doing so alongside the original determination. The council will also issue a written statement if remediation action has taken place which ceases the land being contaminated land and a copy of this will be kept on the public register.

The council may decide to postpone determination if the land owner or some other person proposes to take their own action to deal with the problem and the council is satisfied with the measures proposed. The council may decide to keep the status of any land under review in the event of a change of circumstances in the future may cause the land to be determined as contaminated land.

6.7 DETERMINING LIABILITY

For any land determined as contaminated land, the council will need to establish all owners and occupiers of that land, and who appears to be the appropriate persons to bear responsibility for any remediation action necessary. It is the intention of Part 2A that the appropriate person, ideally the 'polluter' pays for the cost of remediation, as a result of voluntary or formal action.

As part of the process of determining that land is contaminated land the council will have identified at least one significant pollutant linkage resulting from the presence of at least one significant pollutant.

In cases where there is a single pollutant linkage the process of determining liability will, normally, consist of identifying an individual or a corporation who has caused or knowingly permitted the pollutant to be present. The succession of different occupiers or industries may have contributed to the contamination of the site, either contributing to a single pollutant linkage or resulting in multiple pollutant linkages being identified. In such cases the council will, in accordance with statutory guidance, approach the apportionment of liabilities as follows.

The council will make reasonable enquiries in order to identify all of the appropriate persons to pay for any remediation action with respect to each pollutant linkage. These persons constitute the liability group for that linkage. Thus for each linkage there may be identified either a Class A liability group comprising persons who caused or knowingly permitted the pollutant to be present, or a Class B liability group comprising persons who are the current owners or occupiers of the land.

If the council are unable to identify any Class A or Class B persons in respect of a pollutant linkage it will be treated as an orphan linkage.

The council may exclude from liability any Class A person for one of the following reasons:

- The person has been identified as having caused or knowingly permitted the land to be contaminated solely by reason of having carried out certain activities which carry limited responsibility;
- The person has made certain kinds of payment to another member of the liability group to pay for adequate remediation;
- The person disposed of the land to another member of the liability group with information regarding contamination;
- The person caused or knowingly permitted the presence of a substance which has only led to the creation of a pollutant linkage because of its interaction with another substance which was later introduced by another person;
- The land has become contaminated due to the escape of substances from other land and another member of the liability group was responsible for that escape;
- The land has become contaminated land due to the subsequent introduction by others of pathways and receptors.

The council may exclude from liability any Class B person who either:

- Occupies the land under license which has no marketable value or which he is not legally able to assign or transfer; or
- Is liable to pay rent which is equivalent to the rack rent for the land.

Each remediation action will be characterised as either:

- A single-linkage action which refers solely to a single pollutant linkage; or

- A common action which refers to more than one pollutant linkage and which would have been a part of the remediation action for every one of those linkages if each had been addressed separately; or
- A collective action which refers to more than one pollutant linkage but would not have been a part of the remediation action for every one of those linkages if each had been addressed separately.

In the case of a single-linkage action the full cost of remediation will be attributed to the liability group for that pollutant linkage.

In the case of a common remediation action the council will attribute liability for the cost of remediation as follows:

- For a single group the full cost will be attributed;
- For two or more Class A liability groups the cost will be attributed in equal shares;
- For two or more Class B liability groups, where there is no Class A Liability group, the full cost will be attributed to the combined groups as if they were a single group.

In the case of a collective remediation action the council will attribute costs as for a common action except that where costs are divided between several Class A liability groups, instead of being divided equally they will be apportioned as follows:

- The council will estimate the cost of addressing each pollutant linkage. Costs will then be attributed on the proportions which the estimates bear to the aggregate of the estimates.

The council will apportion costs between members of a Class A liability group to reflect the relative responsibility of each member. In doing so the council will follow the approach set out below:

- If the circumstances outlined above for exclusion from a liability group partially apply, the council may assess a person's degree of responsibility as being reduced;
- The relative responsibility of a person who caused or knowingly permitted the entry of a pollutant may be assessed against that of a second person who permitted the continued presence of the pollutant;
- Where different people were in control of different areas of the land and there is no interrelationship between those areas the council will regard these people as being separately responsible for remediation actions arising from events on those separate areas of land;
- Where the quantity of a pollutant present is a major influence on the cost of remediation the council may regard the relative amounts of the pollutant which are attributed to different people as a basis for apportioning responsibility;
- The council may apportion responsibility in proportion to the periods of time over different people were in control of equivalent activities on the land.

The council will apportion costs amongst members of a Class B liability group in proportion to the capital values of their interest in the land.

Orphan linkages may arise for which no responsible Class A or Class B persons can be found. In such cases the council will take the following approach in apportioning remediation costs:

- For remediation action which refers only to an orphan linkage the council should bear the cost;
- For common or collective actions which refer to both an orphan linkage and to one or more pollutant linkages for which there is a Class A liability group all of the cost will be attributed to those groups;
- For common or collective actions which refer to both an orphan linkage and to one or more pollutant linkages for which there is a Class B liability group the council should estimate a hypothetical cost of the action which would be needed to separately remediate each linkage and apportion the costs between itself and the liability group accordingly.

At all times when determining liability and apportioning costs, the council will act fairly and be transparent, and have regard to the statutory guidance and the particular circumstances of each individual cases. The council will consider the degree of responsibility of the appropriate person for the creation, or continued existence of the contamination.

6.8 ADJACENT LAND

Cases may arise where substances migrate from on area of land to adjacent areas of land causing them to be contaminated land. In such cases the person who originally caused or knowingly permitted the first area of land to be contaminated (The class A person) will be also be liable for the remediation of the adjacent land. Where no class A person can be identified the owners or occupiers of the adjacent areas of land will be separately liable for the remediation of their own land.

Subsequent owners or occupiers of land from which substances have migrated (the class B person) will not be liable for remediation of adjacent land.

In assessing whether the adjacent land is contaminated land the council will only consider the current use of the site. A person will not be liable for the remediation of adjacent land which would only become contaminated land as the result of a change of use for which planning permission would be required.

6.9 REMEDIATION

Once the relevant people have been informed that the land has been identified as contaminated land the process of consultation on what remediation is required begins. In most cases a scheme of voluntary remediation by the appropriate persons will be agreed with the enforcing authority (The Council or Environment Agency). In such cases a remediation statement will be agreed with the enforcing authority, this will detail the remediation to be undertaken, following remediation

verification of the works will take place.

The broad aim of remediation should be to

- a) remove identified significant contaminant linkages or permanently disrupt them to reduce risks below an unacceptable level and / or
- b) to take reasonable steps to remedy harm or pollution caused by the significant contaminant linkage.

This can involve a range of treatment, assessment and monitoring actions.

After reasonable consultation if appropriate remediation cannot be secured by informal agreement the council has powers to serve a remediation notice on appropriate persons. The notice will state the measures that need to be carried out to remediate the contaminated land and the timescales for the work to be done. For multiple appropriate persons the notice shall state what proportion of costs each one is to bear. The council will only require actions in a remediation notice which is reasonable with regard to the cost and the seriousness of the pollution or harm. In deciding what is reasonable the council will have regard to the practicability, effectiveness and durability of the remediation, the health and environmental impacts of the chosen remedial options, the financial cost which is likely to be involved, and the benefits with regards to the seriousness of the harm and pollution of controlled waters.

In some cases the council may carry out the remediation itself, for example where urgent action is required due to the imminent danger of serious harm or if there is no appropriate person to bear responsibility.

6.10 COST RECOVERY

There are a number of situations where an appropriate person is exempt from paying the full costs of remediation for example when hardship would be caused by meeting the costs. The council may decide in such cases to waive or reduce the recovery of its costs. There is also provision to place a charge on the land, to secure payment at a later date or in instalments.

Some specific considerations would include where the costs of remediation are greater than the value of the remediated land. Also if the appropriate person is a business and the costs of remediation would force closure of the business the impact on the local economy needs to be considered.

Where a Class B person owns and occupies a dwelling on the contaminated land the council will also consider waiving or reducing its costs recovery if it is satisfied that at the time the person purchased the dwelling they did not know and could not reasonably have been expected to have known that the land was adversely affected by contamination. In such cases the council will consider whether the person took reasonable steps prior to purchasing the property to establish the potential for contamination to be present for example undertaking an environmental search. There are details in the statutory guidance on cost recovery.

7.0 ACCESS TO INFORMATION AND CONFIDENTIALITY

7.1 PUBLIC REGISTER

The Environmental Act 1995 requires the council to maintain a public register containing full particulars of the following matters:

- **Remediation notices**

In relation to a remediation notice served by the council:

- (a) the name and address of the person on whom the notice is served;
- (b) the location and extent of the contaminated land to which the notice relates sufficient to enable it to be identified whether by reference to a plan or otherwise;
- (c) the significant harm or pollution of controlled waters by reason of which the contaminated land in question is contaminated land;
- (d) the substances by reason of which the contaminated land in question is contaminated land and, if any of the substances have escaped from other land, the location of that other land;
- (e) the current use of the contaminated land in question
- (f) what each appropriate person is to do by way of remediation and the periods within which they are required to do each of the things; and
- (g) the date of the notice

- **Appeals against remediation notices**

Any appeal against a remediation notice served by the council, and any decision on such an appeal.

- **Remediation declarations**

Any remediation declaration prepared and published by the council.

In relation to such remediation declarations:

- (a) 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; and
- (b) the matters referred to in sub-paragraphs (c), (d) and (e) above.

- **Remediation statements**

Any remediation statement prepared and published by the responsible person or by the council.

In relation to any such remediation statement:

- (a) 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; and
- (b) The matters referred to in sub-paragraphs (c), (d) and (e) above, in relation to remediation notices.

- **Appeals against charging notices**

Any appeal against a charging notice served by the council, and any decision on such an appeal.

- **Designation of 'special sites'**

- (a) any notice given by the council, or by the Secretary of State, which has effect as the designation of any land as a 'special site';
- (b) the provisions of the regulations by virtue of which the land is required to be designated as a 'special site';
- (c) any notice given by Environmental Agency of its decision to adopt a remediation notice; and
- (d) any notice given by or to the council determining the designation of any land as a 'special site'.

- **Notifications of claimed remediation**

Any notification given to the council.

- **Convictions for offences under section 78M of the Environmental Protection Act 1990**

Any convictions of a person for any offence in relation to a remediation notice served by the council, including the name of the offender, the date of conviction, the penalty imposed and the name of the Court.

- **Site specific guidance issued by the Environmental Agency**

The date of any site guidance issued by the Agency to the council.

- **Other environmental controls**

Where the council is precluded from serving a remediation notice:

- (a) 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;
- (b) The matters referred to in sub-paragraph (c), (d) and (e) above, in relation to remediation notices; and
- (c) Any steps of which the council has knowledge towards remedying any significant harm or pollution or controlled land by reason of which the land in question is contaminated land.

Where the council is precluded from serving a remediation notice in respect of land which is contaminated land by reason of the deposit of controlled waste or any consequences of its deposit:

- (a) 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;
- (b) The matters referred to in sub-paragraph (c), (d) and (e) above, in relation to remediation notices; and
- (c) Any steps of which the council has knowledge in relation to that waste or the consequences of its deposit, including in a case where a waste collection authority took these steps or required the steps to be taken, the name of that authority.

Where as a result a consent given under Part III of the Waste 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 –

- (a) The consent,
- (b) The location and extent of the contaminated land in question, sufficient to enable it to be identified whether by reference to plan or otherwise; and
- (c) The matters referred to in sub-paragraphs (c), (d) and (e) above, in relation to remediation notices.

The public register may be viewed in person by prior arrangement free of charge at the council offices in Russell Road, Ipswich. Reasonable charges will be made to cover copying costs. Alternatively, all public register documents relating to the determination and remediation of properties in the council's area can be viewed online on the council's website (www.ipswich.gov.uk).

7.2 REQUESTS FOR INFORMATION

The majority of information held by the council in relation to its duties under Part 2A is in the public domain. Requests for information will be dealt with in accordance with the Environmental Information Regulations 2004 (EIR). There are certain exceptions relating to the release of the information, however all the exceptions other than those for personal data are subject to the public interest test. There is a general presumption in favour of disclosure. Any refusal to release information will be explained to the applicant and they can appeal to the Head of Legal Services.

The council can charge for the provision of the information and the charge is set yearly.

7.3 CONFIDENTIALITY

The Data Protection Act 2018 controls the way in which personal data is handled. It is likely the council will hold information with respect to contaminated land which is personal information to which the provisions of the Act apply. The council will ensure that data is stored and handled in accordance with the requirement of the above Act.

The council will not include any information on the public register which it considers to be commercially confidential unless directed to do so by the Secretary of State. If a third party

states the information it has provided to the council is commercially confidential the council will determine its confidentiality upon receipt. If the council determines the information is not commercially confidential it will notify the person concerned. The person concerned may appeal to the Secretary of State within 21 days of being notified and the information will be excluded from the public register until the appeal is determined.

The Secretary of State may give directions to the council regarding information which should not be included in the public register on grounds of national security.

GLOSSARY OF TERMS

Apportionment:	Any determination by the enforcing authority under section 78F (7) (that is, a division of the costs of carrying out any remediation action between two or more appropriate persons). Paragraph D.5(e)
Appropriate Person:	Defined in Section 78A(9) as: 'any person who is an appropriate person, determined in accordance with section 78F, to bear responsibility for anything which is to be done by way of remediation in any particular case.'
Class A person:	A person who is an appropriate person by virtue of section 78(2) (that is because he has caused or knowingly permitted a pollutant to be in, on or under the land).
Class A liability group:	A liability group consisting of one or more Class A persons. Paragraph D.5(c)
Class B person:	A person who is an appropriate person by virtue of section 78F (4) or (5) (that is, because he is the owner or occupier of the land in circumstances where no class A person can be found with respect to a particular remediation action).
Class B liability group:	A liability group consisting of one or more class B persons. Paragraph D.5(c)
Contaminant:	A substance which is in, on or under the land and which has the potential to cause significant harm or to cause pollution of controlled waters.
Contaminated Land:	Section 78A (2) defines 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; <ul style="list-style-type: none"> 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, or there is a significant possibility of such pollution being caused.' <p>OR with respect to radioactive contamination defined in section 78A(2) (as modified) as;</p>

	<p>'any land which appears to the local authority in whose area the land is situated to be in such a condition, by reason of substances in, on or under the land, that;</p> <p>a) Harm is being caused; or</p> <p>b) There is a significant possibility of harm being caused.'</p>
Controlled Waters:	Defined in section 78A (9) by reference to Part 3 (section 104) of the Water Resources Act 1991; this includes territorial and coastal waters, inland fresh waters and ground waters.
Enforcing Authority:	Defined in section 78(9) as: 'a) in relation to a 'special site', the Environment Agency; b) in relation to contaminated land other than a 'special site', the local authority in whose area the land is situated'.
Environment Agency:	An executive non-departmental public body whose principle aims are to protect and improve the environment, and to promote sustainable development.
Harm:	Defined in section 78A(4) as: 'harm to the health of living organisms or other interference with the ecological systems of which they form part and, in the case of man, includes harm to his property.'
Hydrogeology:	A subdivision of hydrology specifically relating to the study of waters beneath the earth's surface.
Hydrology:	The science concerned with the occurrence, distribution, movement and properties of all waters on the earth and in its atmosphere.
Industrial, trade or business premises:	Defined in section 78M(6), for the purpose of determining the penalty for failure to comply with a remediation notice, as; "premises used for any industrial, trade or business purposes or premises not so used on which matter is burnt in connection with any industrial, trade or business process, and premises are used for industrial purposes where they are used for the purposes of

	any treatment or process as well as where they are used for the purpose of manufacturing.”
Inspection using statutory powers of entry:	Any detailed inspection of land carried out through use of powers of entry given to an enforcing authority by section 108 of the Environmental Act 1995.
Intrusive Investigation:	An investigation of land (for example by exploratory excavations) which involves actions going beyond simple visual inspection of the land or assessment of documentary evidence. Also known as site investigation.
Local Authority:	Defined in section 78A (9) as meaning any unitary authority, district council etc.
Orphan Linkage:	A significant pollutant linkage for which no appropriate person can be found, or where those who would otherwise be liable are exempted by one of the relevant statutory provisions.
Owner:	Defined in Section 78A(9) as: ‘a person (other than the mortgagee not in possession) who, whether in his own right or as trustee for any other person, is entitled to receive the rack rent of the land, or where the land is not let at a rack rent, would be so entitled if it were so let.’
Part 2A:	Part 2A of the Environmental Protection Act 1990.
Pathway:	One or more routes or means by, or through, which a receptor: a) is being exposed to, or affected by, a contaminant, or b) could be so exposed or affected.
Public Register:	Register maintained by the enforcing authority under section 78R of particulars relating to contaminated land.
Pollutant:	A contaminant which forms part of a pollutant linkage.
Pollutant Linkage:	The relationship between a contaminant, a pathway and a receptor.
Pollution of controlled waters:	Defined in Section 78A(9) as: ‘The entry into controlled waters of any poisonous, noxious or polluting matter or any solid waste matter.’

Prioritisation:	The process of scoring sites based on the potential contaminant sources, pathways and receptors for a site and its surroundings. This creates a prioritised list of sites, which can then be inspected in priority order.
Radionuclide:	Also known as ‘radioisotopes’, they are atoms with an unstable nucleus which can undergo radioactive decay, emitting gamma rays and/or subatomic particles, which constitutes ionising radiation.
Receptor:	<p>Either:</p> <ul style="list-style-type: none"> a) a living organism, a group of living organisms, an ecological system or a piece of property which – <ul style="list-style-type: none"> i) is in a category listed in table A in chapter A as a type of receptor, and ii) is being, or could be , harmed, by a contaminant; or b) controlled waters which are being, or could be, polluted by a contaminant; or c) a person subjected to lasting exposure resulting from the after-effects of a radiological emergency, past practice or past work activity.
Remediation:	<p>Defined in Section 78A(7) as:</p> <ul style="list-style-type: none"> a) the doing of anything for the purpose of assessing the condition of – <ul style="list-style-type: none"> i) the contaminated land in question; ii) any controlled waters affected by that land; or iii) any land adjoining or adjacent to that land; b) the doing of any works, the carrying out of any operations or the taking of any steps in relation to any such land or waters for the purposes- <ul style="list-style-type: none"> i) of preventing or minimising, or remedying or mitigating the effects of any significant harm, or any pollution of controlled waters, by reason of which the contaminated land is such land; or ii) of restoring the land or waters to their former state; or c) the making of subsequent inspections from time to time for the purpose of keeping under review the condition of the land or waters.’ <p>OR</p> <p>With respect to radioactive contamination defined in Section 78A(7) (as modified) as:</p> <ul style="list-style-type: none"> ‘a) the doing of anything for the purpose of assessing the condition of –

	<ul style="list-style-type: none"> i) the contaminated land in question; or ii) any land adjoining or adjacent to that land. <p>b) the doing of any works, the carrying out of any operations or the taking of any steps in relation to any such land for the purpose –</p> <ul style="list-style-type: none"> i) of preventing or minimising, or remedying or mitigating the effects of any harm by reason of which the contaminated land is such land’ or ii) of restoring the land to its former state; or <p>c) the making of subsequent inspections from time to time for the purpose of keeping under review the condition of the land.</p>
Remediation Notice:	Defined in Section 78E(l) as a notice specifying what an appropriate person is to do by way of remediation and the periods within which he is required to do each of the things so specified.
Remediation Statement:	Defined in Section 78H (7). It is a statement prepared and published by the responsible person detailing the remediation actions which are being, have been, or are expected to be, done as well as the periods within which these things are being done.

APPENDIX 1 – SIGNIFICANT HARM AND SIGNIFICANT POLLUTION

Table A – Categories of significant harm

Relevant types of receptor	Effects which should be considered to be significant harm
<p>Humans</p>	<p>Death; life threatening diseases (e.g. cancers); other diseases likely to have serious impacts on health; serious injury (e.g. physical injury from explosive gases, or burn injuries from chemical properties;; birth defects; and impairment or reproductive functions.</p> <p>Other health effects which may be considered could include: gastrointestinal disturbances; respiratory tract effects; cardio-vascular effects; central nervous system effects; skin ailments; and effects on organs such as the liver or kidneys. For each case the council will consider the impact on the health, and quality of life, of any person suffering the harm, and the scale of the harm, when determining whether the harm is significant.</p>
<p>Any ecological system, or living organism forming part of such a system, within a location which is:</p> <ul style="list-style-type: none"> • A site of special scientific interest (under section 28 of the Wildlife and Countryside Act 1981); • A national nature reserve (under section 35 of the 1981 Act); • A marine nature reserve (under section 36 of the 1981 Act); • An area of special protection for birds (under section 3 of the 1981 Act); • A “European Site” within the meaning of regulation 8 of the Conservation of Habitats and Species Regulations 2010; • Any habitat or site afforded policy protection in the National Planning Policy Framework (i.e. candidate Special Areas of Conservation, potential Special Protection Areas and listed Ramsar sites); <p>Or</p> <ul style="list-style-type: none"> • Any nature reserve established under section 21 of the National Parks and Access to the Countryside Act 1949. 	<ul style="list-style-type: none"> • 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 • 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. <p>In the case of European sites, harm should also be considered to be significant harm if it endangers the favourable conservation status of natural habitats at such locations or species typically found there.</p> <p>In determining what constitutes such harm, the local authority should have regard to the advice of Natural England and to the requirements of the Conservation of Habitats and Species Regulations 2010.</p>

Relevant types of receptor	Effects which should be considered to be significant harm
<p>Property in the form of:</p> <ul style="list-style-type: none"> • Crops, including timber; • Produce grown domestically, or on allotments, for consumption; • Livestock • Other owned or domesticated animals • Wild animals which are the subject of shooting or fishing rights. 	<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 on value as occurring only when a substantial proportion of the animals or crops are dead or otherwise no longer fit for their 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 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>Property in the form of buildings.</p> <p>For the 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, or buried services such as sewers, water pipes or electricity cables.</p>	<p>Structural failure, substantial damage or substantial interference with any right of occupation.</p> <p>For the 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 case of a scheduled Ancient Monument, substantial damage should be regarded as occurring when the damage significantly impairs the historic, architectural, traditional archaeological interest by reason of which the monument was scheduled.</p>

APPENDIX 2 – SPECIAL SITES

A 'special site' is a contaminated land site that is regulated by the Environment Agency instead of the local authority. The definition of a 'special site' is given in the Contaminated Land (England) Regulations 2006, and is reproduced in the extract text below for information only. For the full legal definition and further details, reference should be made to the full text of the legislation and statutory guidance.

Contaminated land of the following descriptions is prescribed for the purposes of section 78C(8) as land required to be designated as a 'special site':

- a) land affecting controlled waters in the circumstances specified in regulation 3;
- b) land which is contaminated land by reason of waste acid tars in, on or under land;
- c) land on which any of the following activities have been carried on at any time;
 - i) the purification (including refining) of crude petroleum or of oil extracted from petroleum, shale or any other bituminous substance except coal; or
 - ii) the manufacture or processing of explosives;
- d) land on which a prescribed process designated for central control has been or is being carried on under an authorisation, where the process does not solely consist of things being done which are required by way of remediation;
- e) land on which an activity has been or is being carried on in a Part A(I) installation or by means of Part A(I) mobile plant under a permit, where the activity does not solely consist of things being done which are required by way of remediation;
- f) land within a nuclear site;
- g) land owned or occupied by or on behalf of –
 - i) the Secretary of State for defence;
 - ii) the defence council,
 - iii) an international headquarters or defence organisation, or
 - iv) the service authority of a visiting force, being land used for naval, military or air force purposes;
- h) land on which the manufacture, production or disposal of –
 - i) chemical weapons
 - ii) any biological agent or toxin which falls within section 1(1)(a) of the Biological Weapons Act 1974 (restriction on development of biological agents and toxins), or

- iii) any weapon, equipment or means of delivery which falls within section 1(1)(b) of that Act (restriction of development of biological weapons) has been carried on at any time;
- i) land comprising premises which are or were designated by the Secretary of State by an order made under section 1(1) of the Atomic Weapons Establishment Act 1991 (arrangements for development etc. of nuclear devices);
- j) land to which section 30 of the Armed Forces Act 1996 (land held for the benefit of Greenwich hospital) applies;
- k) land which is contaminated land wholly or partly by virtue of any radioactivity possessed by any substance in, on or under that land; and
- L) land which –
 - i) is adjoining or adjacent to land of a description specified in any of sub-paragraphs (b) to (k); and
 - ii) is contaminated land by virtue of substances which appear to have escaped from land of such a description.

APEPNDIX 3 – RADIOACTIVITY

The definition of contaminated land where attributable to radioactivity is slightly different, and is based on the notion of ‘harm’ and the ‘significant possibility’ of such harm being caused. Harm in this context is defined in section 78A(4) (as modified) as:

“ lasting exposure to any person resulting from the after-effects of a radiological emergency, past practice or past work activity”

The extension of Part 2A to include radioactivity applies only in respect of harm to human health, and not in respect of other receptors or pollution of controlled waters.

The criteria for determining ‘harm’ in relation to radioactivity are based on levels of effective or equivalent doses of radiation, where it is appropriate to take action under Part 2A. the thresholds are any of the following:

- a) an effective dose exceeding 3 millisieverts per annum
- b) an equivalent dose to the lens of the eye exceeding 15 millisieverts per annum; or
- c) an equivalent dose to the skin exceeding 50 millisieverts per annum.

Exposures which are not certain to occur are known as potential exposures and are the situations covered by the term ‘possibility of harm’. The decision on whether the possibility of harm caused is significant will be made on a case basis, and in accordance with statutory guidance.

APPENDIX 4- POSSIBLE SOURCES OF CONTAMINATION

USES OF LAND WHERE CONTAMINATION SHOULD BE “STRONGLY SUSPECTED”

The Government considers that there is a very high probability that all land which has been subject to any of the eight uses set out below is contaminated unless previously treated.

1. Manufacture of gas, coke or bituminous material from coal.
2. Manufacture of refining of lead or steel or an alloy of lead or steel.
3. Manufacture of asbestos or asbestos products
4. Manufacture, refining or recovery of petroleum or its derivatives, other than extraction from petroleum bearing ground.
5. Manufacture, refining or recovery of other chemicals, excluding minerals.
6. Final deposits in or on land of household, commercial or industrial waste other than waste consisting of ash, slag, clinker, rock, wood, gypsum, railway ballast, peat, bricks, tiles, concrete, glass, other minerals or dredging spoil; or where waste is used as a fertiliser or in order to condition the land in some other beneficial manner.
7. Treatment at a fixed installation of household, commercial or industrial waste by chemical or thermal means.
8. Use as scrap metal store, within the meaning of section 9(2) of the Scrap metal Dealers Act 1964(a).

Source: Department of the Environment Consultation Paper Registers of Land which may be Contaminated, 1st Review May 1992.

USES OF LAND WHERE THERE IS A “SUSPICION” OF CONTAMINATION

The following list of uses offers guidance as to when there is a “suspicion” of contamination:

1. Agriculture
 - Burial of diseased livestock
 - Storage of fuels, chemicals (pesticides/herbicides)
 - Storage and maintenance of machinery and vehicles
2. Extractive Industry
 - Extracting, handling and storage of carbonaceous materials e.g. coal, lignite, petroleum, natural gas, bituminous shale
 - Extracting, handling and storage of ores and their constituents
3. Energy Industry
 - Production from coal, lignite, oil, or other carbonaceous material other than from sewage or waste

- Reforming, refining, purifying, and odourising natural gas or any other product of the processes outlined above
 - Pyrolysis, carbonisation, distillation, liquefaction, partial oxidisation, other heat treatment, conversion, purification or refining of coal, lignite, oil, other carbonaceous
 - Material or mixtures and products thereof
 - A thermal power station
 - Electricity substation
4. Production of metals
- Production, refining or recovery of metals by physical, chemical, thermal, or electronic or other extraction process
 - Heating, melting or casting metals as part of an intermediate or final manufacturing process
 - Cold forming processes e.g. pressing, rolling, extruding stamping
 - Finishing treatments, including anodising, pickling, coating and plating or similar processes
5. Production of non-metal and their products
- Production or refining of non-metals by treatment of the ore
 - Production or processing of mineral fibres by treatment of the ore
 - Cement, lime and gypsum manufacture, brickworks and associated processes
6. Glass making and ceramics
- Manufacture of glass and products based on glass
 - Manufacture of ceramics and products based on ceramics and products based on ceramics including glazes and vitreous enamel
7. Production and use of chemicals
- Production, refining, recovery or storage of petroleum or petrochemicals or their by-products, including tar and bitumen processes and manufacture of asphalt
 - Production, refining and bulk storage of organic or inorganic chemicals including fertilisers, pesticides, pharmaceuticals, soaps, detergents, cosmetics, toiletries, dyestuffs, inks, paints, fireworks, pyrotechnic materials or recovered chemicals
 - Production, refining and bulk storage of industrial gases
8. Engineering and manufacturing processes
- Manufacture of metal goods including mechanical engineering industrial plant or steel work, motor vehicles, ships, railway or tramway vehicles, aircraft, aerospace equipment or similar equipment
 - Storage, manufacture or testing of explosives, propellants, ordnance, small arms or ammunition
 - Manufacture and repair of electrical and electronic components and equipment

9. Food Processing Industry
 - Manufacture of pet foods or animal foodstuffs
 - Processing of animal by products including rendering or maggot farming, but excluding slaughterhouses and butchering
10. Paper, Pulp and Printing Industries
 - Making of paper pulp, paper or board, or paper or board products, including printing or de-inking
11. Timber and Timber Products Industry
 - Chemical treatment and coating of timber and timber products
12. Textile Industry
 - Tanning, dressing, fellmongering or other process for preparing, treating or working leather
 - Fulling, bleaching, dyeing or finishing fabrics or fibres
 - Manufacture of carpets or other textile floor coverings including linoleum works
13. Rubber Industry
 - Processing of natural or synthetic rubber including tyre manufacture or re-treading
14. Infrastructure
 - Marshalling, dismantling, repairing or maintenance of railway rolling stock
 - Dismantling, repairing or maintenance of marine vessels, including hovercraft
 - Dismantling, repairing or maintenance of air or space transport systems
15. Waste Disposal
 - Treating of sewage or other effluent
 - Storage, treatment or disposal of sludge from water treatment works
 - Treatment, keeping, depositing or disposal of waste, including scrap storage or disposal of radioactive materials
16. Miscellaneous
 - Premises housing dry cleaning operations
 - Laboratories for educational or research purposes
 - Demolition of buildings, plant or equipment used for any of the activities in this list

Source: Department of the Environment Consultation Paper, Public Registers of Land which may be Contaminated, May 1991.

RAIOACTIVE CONTAMINATION

In relation to radioactivity, any land where there are substances present which contain one or more radionuclides (see glossary of terms) which have resulted from the after-effects of a radiological emergency or which have been processed as part of a past practice or past work activity, will be considered as potentially contaminated land by virtue of radioactivity. Where there are reasonable grounds for believing that any land may be contaminated by virtue of radioactivity (i.e. that harm is being caused, or there is a significant possibility of such harm being caused), then there is a duty of the local authority to inspect that land for the purpose of identifying whether it is contaminated land. The fact that radioactive substances have been present on the land shall not itself be taken as reasonable grounds for believing the land is contaminated.

APPENDIX 5 – PART 2A RECEPTORS

Receptor	Land use Type
Humans	Allotments Residential with gardens Residential without gardens Schools or nurseries Recreation, parks, playing fields Open space Commercial/industrial
Ecological systems or living organisms	Sites of Special Scientific interest National Nature Reserves Marine Nature Reserves Area of Special protection for Birds European Sites Special Areas of Conservation Special Protection Areas Ramsar Sites Nature Reserves
Property in the form of buildings	Ancient monuments Buildings
Property in other forms (crops, livestock, home-grown produce, domesticated animals, wild animals subject to shooting or fishing rights)	Agricultural land Allotments and gardens Forestry areas Other open spaces, rivers, lakes etc.
Controlled waters	Surface waters Drinking water abstractions Source protection zones Ground waters – private abstractions Ground waters – principal aquifers

