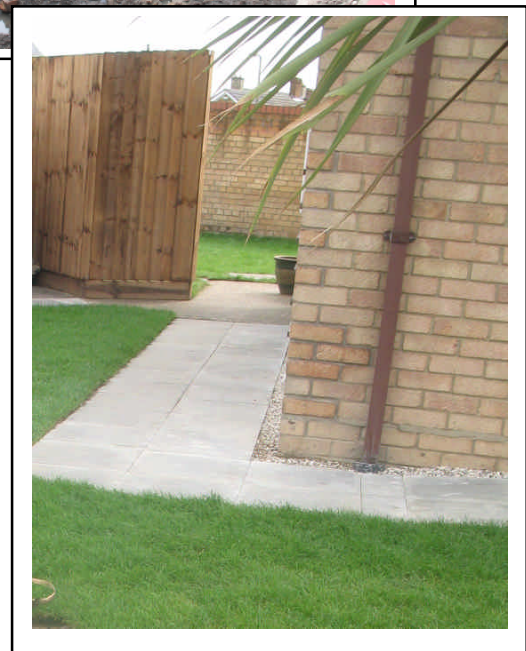


East Cambridgeshire District Council:  
Contaminated Land Inspection Strategy  
Part IIa Environmental Protection Act 1990



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## **SUMMARY**

Under The Environmental Protection Act 1990, East Cambridgeshire District Council (“the Council”) is required to inspect the area within its boundaries for the purpose of identifying contaminated land.

Part IIa of the Environmental Protection Act 1990 (‘Part IIa’) was inserted by Section 57 of the Environment Act 1995 and came into force in England on 1<sup>st</sup> April 2000. This created a statutory regime for the identification and remediation of land where contamination is causing unacceptable risks to human health or to the wider environment. This regime is considered in detail in DEFRA Circular 01/2006 (to be updated in 2011) and includes a statement of government policy, a description of the regime, the statutory guidance and a guide to the supporting regulations. The Contaminated Land (England) Regulations 2000 deal with particular aspects of the regime including Special Sites, remediation notices, appeals and registers.

Many land contamination problems are dealt with through development and planning controls, outlined in the Councils Supplementary Planning Document ‘Guidance on submitting planning applications on land that may be contaminated (2010)’ and the national guidance is outlined in Planning Policy Statement 23 (‘PPS 23’) ‘Planning and Pollution Control’ (2004), this process will continue.

The Part IIa legislation provides a means to require the remediation of land where this is not taking place voluntarily. Local authorities are the primary enforcers and the Council is required to prepare and publish an Inspection Strategy for the identification of contaminated land within its district.

This strategy explains how the Council prioritises its inspection procedures whilst developing and maintaining an overall approach that is rational, ordered and efficient. The key elements of the strategy are:

- 1) To comply with the legal requirements placed on the Council by Part IIa;
- 2) To maintain a Register of all the land in the District that falls within the description of “contaminated land” as defined in Part IIa;
- 3) To ensure that land identified as contaminated land is remediated and keep records of the remediation in the Contaminated Land Register;
- 4) To encourage owners of contaminated land that is due to be redeveloped to carry out voluntary remediation through the planning process;
- 5) To encourage the re-use of brownfield sites in order to maximise the use of previously developed land, to reduce the pressure on greenfield sites and to preserve the Green Belt in general; and,
- 6) The most serious problems are addressed first, concentrating resources on areas where contaminated land is most likely to be found. The risk assessment assigns priorities in order to:

- a) Protect human health;
- b) Protect controlled waters that are used for the supply of drinking water;
- c) Protect designated ecosystems;
- d) Protect buildings and monuments;
- e) Protect land from any further contamination;
- f) Inspect land owned by the Council;
- g) Encourage voluntary remediation; and,
- h) Encourage the re-use of brownfield sites.

This strategy is a live document and can be updated or amended as necessary.

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## 1 Introduction

The Council's main objectives under the contaminated land regime are:

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

These three objectives underlie the "suitable for use" approach to the remediation of contaminated land as detailed in the legislation.

Some land contamination may have been present for a long period of time but not all of it will be regarded as posing a threat to human health or to the wider environment. It may, therefore, only be necessary to remediate a site when a change of use of the land is proposed.

The Council's original Contaminated Land Inspection Strategy was issued in 2001, this updated version wholly updates the original and encompasses all aspects of the regime, the original strategy is now obsolete.

On a national scale the Environment Agency estimates there could be some 300,000 hectares of land in the UK affected to some extent by industrial or natural contamination. Some of which will be in the District of East Cambridgeshire, examples of which have already been encountered in the development of new homes in the District as well as through the Part IIA process and without doubt will continue to be encountered. Thus this document would hope to foresee some of the potential problems associated with contaminated land before they arise.

The Council also has its local aims and objectives in relation to contamination and general pollution. As set out in its Core Strategy Development Plan

Document (2009, part of the Councils Local Development Framework). On adoption of the Core Strategy, Policies 43 and 44 of the former Local Plan (2005) were replaced by Policy CS6 – Environment, and Policy – EN8 Pollution, which are as follows;

### Policy CS 6

#### Environment

All new development should contribute to the delivery of sustainable development, by being designed and located to minimise carbon emissions and the use of non-renewable resources, mitigate/adapt to future climate change, provide attractive and safe places for people, and protect and enhance the quality of the natural and built environment.

Opportunities to minimise air, land and water pollution and improve water quality should be taken wherever possible, and development will be encouraged to make maximum use of renewable energy sources. New development will also be expected to minimise the exposure of people and property to flooding.

Open spaces and amenity areas will be protected against loss or harm, and opportunities will be taken to enhance quality, promote access (particularly by non-car modes), and expand to contribute to green networks. New development proposals will be expected to incorporate open space and high quality landscaping to provide attractive environments for people and wildlife.

Support will be given to the protection and enhancement of biodiversity in the district, including designated sites of nature conservation importance. Priority habitats and species will be protected, and development proposals will be expected to maximise the retention of biodiversity and landscape features, and incorporate measures to enhance biodiversity and mitigate against losses.

In the identified Strategic Areas of Greenspace Enhancement, co-ordinated action will be taken with statutory and other agencies to improve their biodiversity and landscape value, and to promote schemes supporting quiet recreational activity. Development proposals in these areas will need to contribute to these objectives, and enhance the biodiversity, landscape and recreational values of these areas.

The quality and distinctiveness of East Cambridgeshire's towns and villages and landscapes will be conserved and enhanced. Historically or architecturally important buildings, areas and landscapes will be protected from loss or harm, and enhanced wherever possible. All development proposals will be encouraged to incorporate innovative and locally distinctive design, and will be expected to provide attractive and safe environments which are accessible to all.

**Policy EN 8**

**Pollution**

All development proposals should minimise, and where possible, reduce all emissions and other forms of pollution, including light and noise pollution, and ensure no deterioration in water quality. All applications for development where pollution is suspected must contain sufficient information to enable the Council to make a full assessment of potential hazards.

Proposals will only be permitted:

1. Where, individually or cumulatively, there are no unacceptable impacts on:
  - The natural environment and general amenity
  - Health and safety of the public;
  - Air quality
  - Surface and groundwater quality
  - Land quality and condition
  - The need for compliance with statutory environmental quality standards; or
2. In exceptional cases, where it can be clearly demonstrated that the environmental benefits of the development and the wider social and economic need for the development outweigh any adverse impact in terms of pollution. In such cases, where pollution is unavoidable, mitigation measures to reduce pollution levels will be required in order to meet acceptable limits.

New development will not be permitted where there is a potential to conflict with existing developments that require particular conditions for their operation, or that are authorized or licensed under pollution control or hazardous substances legislation, where it would be likely to impose significant restrictions on the activities of the existing use in the future.

Development proposals on contaminated land (or where there is reason to suspect contamination) must include an assessment of the extent of the contamination and any possible risks. Proposals will only be permitted where the land is, or is made, suitable for the proposed use.

Additionally this strategy would seek to address some of the potential liability issues associated with Council-owned land and future land acquisitions as well as to promote the accessibility of information of potential land purchasers.

### **1.1 General Policy of East Cambridgeshire District Council**

The Council will hold a Register and make it available for public scrutiny at the Council Offices in Ely. The Contaminated Land (England) Regulations 2000 (the 'Regulations') specify the nature of the information that is to be kept on the register. It must contain the location and extent of sites issued with remediation notices, the nature of the harm or pollution, the current use of the land, designation of special sites, and appeals against remediation notices and charging notices.



The public register does not contain details of work in progress or of the Council's enquiries into the historic use of the land or other information gathered during the research phases of its investigation into potentially contaminated sites.

Further details about the contents of the public register are to be found in Section 8.7 of this document. It is expected that most remediation of contaminated land will be carried out during the redevelopment of the land under the planning control regime, for which reference should be made to the Councils Supplementary Planning Document 'Guidance on submitting planning applications on land that may be contaminated' (2010).

## **1.2 Regulatory Context and Statutory Requirements**

This legislation (Part IIa) came into force on the 1<sup>st</sup> April 2000 with the Contaminated Land Regulations 2000, however this legislation is retrospective with regard to contaminated land liability and there is the potential for it to impact on all owners and occupiers of land, be they residential or commercial.

The Part IIa regime aims to ensure that potentially contaminated sites do not present an unacceptable risk to human health or to the environment.

**Contaminated Land** is defined as:

“any land which appears to the local authority in whose area it is situated to be in such a condition, by reason of substances in, on or under the land, that:

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

The pollution of controlled waters is defined by reference to section 78A(9) to Part III (section 104) of the Water Resources Act 1991; this embraces territorial and coastal waters, inland fresh waters, and ground waters. Section

78A(9) was amended by section 86 of the Water Act 2003 so that for Part IIa purposes “ground waters” do not include waters contained in underground strata but above the saturation zone (i.e perched waters above the saturated zone).

With effect from 4th August 2006, the Part IIa regime was extended to include the identification and remediation of radioactively contaminated land in addition to the contamination covered previously. Following a consultation exercise in July 2005, the Radioactive Contaminated Land (Enabling Powers) (England) Regulations 2005 were made in January 2006 to enable the regime to be extended and guidance issued. The new Statutory Instruments and revised Circular complete the process of extension.

The definition of contaminated land where attributable to radioactivity does not currently cover any pollution of controlled waters. This approach reflects the Government’s wish to assess the implications of the Water Framework Directive (2000/60/EC) before considering how a significant test for Pollution of Controlled Waters might be applied (both where attributable to radioactivity or otherwise).

### **1.2.1 Changes to Statutory Guidance**

‘DEFRA Circular 01/2006 Environmental Protection Act: Part 2A Contaminated Land’ was issued in September 2006. This Circular replaces DETR Circular 02/2000, published in March 2000 although an updated circular is expected in 2011. It has two functions: first it presents the statutory guidance as now amended, which is an essential part of the regime; secondly, it sets out the way in which the extended regime is expected to work, by providing a summary of Government policy in this field, a description of the regime, and a guide to the other relevant Regulations and Commencement Orders.

Apart from the extension to include radioactivity, only one other substantial change has been made to the Part IIa regime. This concerns the

arrangements for appeals against remediation notices served by local authorities. The Secretary of State is now the appellate authority for such appeals rather than the Magistrates' Court.

### **1.3 Key Guidance Relating to Site Investigation and Risk Assessment**

In 1992 the then Department of the Environment began research to develop a scientifically robust framework for assessing the risks to human health from land contamination. The first outputs of this research programme were launched on the 14<sup>th</sup> March 2002 at the Barbican Centre, London. The package consisted of four main reports (CLR 7, 8, 9 and 10) and supporting toxicology reviews and Soil Guideline Values (SGVs) for individual substances.

For the first time, these publications provided a UK framework for a coherent and consistent approach to human health risk assessment in relation to contaminated soil. This framework could be used to support Part IIa and the Town and Country Planning Acts and so formed an integral part of the Council's strategic duty.

The development of the CLEA (Contaminated Land Exposure Assessment) model and the Soil Guideline Values is an on-going programme of work supported by DEFRA, the Environment Agency, and the Scottish Environmental Protection Agency. Future publications were planned to include evolution of the CLEA model, its technical basis and algorithms, as well as further individual toxicology reviews and Soil Guideline Values.

However, the programme of SGV production and roll out of the revised CLEA model was halted due to a full scale review by the Soil Guideline Task Force set up by the Cabinet Office in early 2004. This followed widespread concerns throughout the contaminated land community about SGVs representing an overly stringent benchmark and issues relating to their use and practicality in

deriving '*significant possibility of significant harm*' ('SPOSH' - a requirement in Part IIa determination).

In Autumn 2005, DEFRA took over leadership of the Task Force. A number of aspects identified proved contentious, and there was not a clear consensus within the Task Force on how to proceed. DEFRA undertook to consider the issues raised and identify a way forward engaging with the Environment Agency, Health Protection Agency and a range of other stakeholders. In November 2006 DEFRA published the document "Soil Guideline Values: The Way Forward" for consultation. This paper outlined the issues and the emerging conclusions relating to the production of SGVs. The purpose of this paper was to allow wider stakeholder discussion on the emerging conclusions.

The outcome of the "Way Forward" exercise on Soil Guideline Values was finally published by DEFRA on 22<sup>nd</sup> July 2008, after four years of uncertainty. This has prompted the withdrawal of all the above described CLR7-10 documents, including the associated SGVs and the CLEA software model, to be replaced by revised CLR9 and 10 guidance with a new version of the CLEA software and associated SGVs.

DEFRA also published "Guidance on the Legal Definition of Contaminated Land" in an attempt to remove uncertainty over the interpretation of the definition where land poses a '*significant possibility of significant harm*'.

The Environment Agency promises production of new SGVs, toxicological guidance and other technical guidance, but as before, no definitive programme has been set although the initial rollout of the revised SGVs began and an updated CLEA model (v1.06) was issued in 2010.

The statutory guidance requires local authorities' decisions on what is an 'unacceptable intake' (i.e SPOSH) to be made on the basis of toxicological risk assessment. However, the problem still remains that such risk assessments cannot answer the policy question about what is acceptable or

unacceptable. Thus in DEFRA's view, whilst decisions should be based firmly on scientific risk assessment, the law still leaves the conclusion as to whether the risks represent SPOSH, to the 'professional judgment' of each local authority. Such decisions in the face of complex issues and potentially large degrees of scientific uncertainty clearly leave local authorities vulnerable to legal challenge. It is of paramount importance that throughout the Part IIa investigation, assessment, determination and remediation phases, that all decisions have to be made with thorough 'reasonableness' to defend any subsequent challenge and provide the Council with as sound a legal position as possible. A peer review of the assessment may provide this level of confidence.

The following press release from the Chartered Institute of Environmental Health perhaps sums up the current position of local authority Contaminated Land Officers:

*"The CIEH is disappointed Defra cannot provide the clarity and consistency local authority officers and developers require in determining whether land is contaminated.*

*CIEH Principal Policy Officer Howard Price said:*

*"While Defra has previously acknowledged the shortcomings of the existing technical materials and agreed that local authority officers should not be left to make case-by-case decisions in this highly technical area without central guidance, the "Way Forward" has so far turned out to be a dead end."*

*"Unless another solution can be found, local authority officers will **still** have to make decisions without the support of guidance, either statutory or non-statutory, describing where the legal trigger point for the determination of contamination lies. This will leave local authorities even more exposed to legal challenge and detract from efforts to provide a consistent approach."*

## **1.4 East Cambridgeshire District Councils approach to the SPOSH problem**

At the time of the Soil Guideline Task Force (2004-06), ECDC's investigation into a residential development sited on a former gasworks in Littleport was underway. As such, to allow a determination under Part IIa to be made and therefore also allow the site itself to be delineated, the Council and its consultants had to derive its own SPOSH criteria. For further information on this site and its determination, see Section 2.4.

## **1.5 Responsibilities**

East Cambridgeshire has the sole responsibility for the identification of contaminated land within its boundary's, this cannot be delegated. The guidance states that 'each local authority has a duty to cause its area from time to time for the purpose of identifying contaminated land'.

The Environmental Services department has been assigned the task of inspecting and identifying contaminated land, to carry this out to best effect relationships with other sections of the Council have been forged. In particular, departments such as ICT, Planning, Legal, Finance, Forward Planning and Building Control.

Links with bodies outside of East Cambridgeshire District Council have also been formed to implement the legislation effectively. These links include liaison with the Environment Agency and other Districts which border East Cambridgeshire as sites and contaminants are potentially transboundary, government bodies such as DEFRA, Health Protection Agency/Primary Care Trust and the Food Standards Agency. Private bodies include the providers of ICT solutions for the handling of data, providers of information to help with the investigation of sites.

The Environment Agency under its statutory obligation has provided a significant quantity of data free of charge. Land owners, occupiers and

consultants which may be employed by them will also be an integral component.

This list is not exhaustive and any bodies or persons thought appropriate to contact will be.

## **1.6 Inter-department working**

This strategy impacts on potentially on all departments of the Council, in particular:

**Planning and Development Control:** The inspection of the District will identify areas of potentially contaminated land, which may be developed, awaiting development, derelict, protected or green belt. This may result in the need to re-examine past development control files or identify development routes for contaminated sites, which may subsequently impact on the Local Development Plan. The Tree Officer may also need to be consulted on remediation and tree growth; the Landscape Officer on impacts on eco-receptors. Depending upon the nature of the problem, it is likely that external expert advice may need to be sought.

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

**Legal:** This is a highly complex piece of legislation which could have significant implications for the Council, landowners and occupiers. The Solicitor s advice may be required on many aspects including those relating to enforcement, liability, powers of entry, data protection, access to information etc.

**Cambridgeshire County Council Highways:** Land under highways, pavements, verges and common areas may be contaminated and present a risk to potential receptors. Highways Authorities must maintain registers under Part III of the New Roads and Street Works Act 1991 regarding, amongst

other things, streets with special engineering difficulties. This includes risks from contamination.

**Information Technology:** There are significant volumes of data, which need to be held both on database and geographical information systems. Support will be required on the use of these systems and data protection.

**Parks & Open Spaces:** Land in use and controlled by this department may be contaminated and require remediation.

**Finance:** This legislation may have significant resource implications for the Council, both as an Enforcing Authority and landowner (see also i.11 below). The need for close corporate team working to ensure the smooth implementation of the strategy cannot therefore be over stressed.

### 1.7 Risk Assessment

The definition of contaminated land is based upon the principles of risk assessment. For these purposes, "risk" is defined as the combination of:

- a) The probability, or frequency, of occurrence of a defined hazard (for example, exposure to a property of a substance with the potential to cause harm); and
- b) The magnitude (including the seriousness) of the consequences.

Part IIa recognises that harm to health and the environment arises not merely from the presence of contaminating substances in land, but requires movement along a "pathway" to where they can cause damage to a "receptor". The local authority has to satisfy itself that a "source", a "pathway", and a "receptor" have been identified with respect to that land.

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



A **receptor** is either:

- a) a living organism, a group of living organisms, an ecological system or a piece of property which:
  - (i) is in a category listed in Table A (see below) 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.

A **pathway** is 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.

The identification of each of these three elements is linked to the identification of the others. A pathway can only be identified if it is capable of exposing an identified receptor to an identified contaminant. That particular contaminant should likewise be capable of harming or, in the case of controlled waters, be capable of polluting that particular receptor.

A **pollutant linkage** means the relationship between a contaminant, a pathway and a receptor, and a "pollutant" means the contaminant in a pollutant linkage. Unless all three elements of a pollutant linkage are identified in respect of a piece of land, that land should not be identified as contaminated land. There may be more than one pollutant linkage on any given piece of land. For the purposes of determining whether a pollutant linkage exists (and for describing any such linkage), two or more substances can be treated as being a single substance, in any case where:

- a) The substances are compounds of the same element, or have similar molecular structures; and
- b) It is the presence of that element, or the particular type of molecular structures, that determines the effect that the substances may have on the receptor which forms part of the pollutant linkage.

The various elements of a risk assessment can be illustrated and summarised in the form of a Conceptual Model. This is a textual or graphical representation of the source(s) and pathway(s) for a site along with the potential for these to impact a receptor or receptors. The next step in applying the definition of contaminated land is for the local authority to satisfy itself that both:

- a) Such a pollutant linkage exists in respect of a piece of land;  
and
- b) That the pollutant linkage:
  - (i) is resulting in significant harm being caused to the receptor in the pollutant linkage,
  - (ii) presents a significant possibility of significant harm being caused to that receptor,
  - (iii) is resulting in the pollution of the controlled waters which constitute the receptor, or
  - (iv) is likely to result in such pollution. or in the case of radioactivity:
  - (v) harm is being caused, or
  - (vi) there is significant possibility of such harm being caused.

A **significant pollutant linkage** means a pollutant linkage that forms the basis for the determination that a piece of land is contaminated land. A "significant pollutant" is a pollutant in a "significant pollutant linkage".

The guidance also advocates the '**SUITABLE FOR USE**' approach, this focuses on the risks caused by land contamination in relation to it's current or intended end use, thus, higher element values would be permitted for an area of land used for car parking than land used for domestic gardens.

## 1.8 Categories of Significant Harm

Harm is defined as meaning "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". Which harm is to be regarded as significant and whether the possibility of significant harm being caused is significant shall be determined in accordance with Table A.

## **1.9 Significant possibility of significant harm**

### **Descriptions Of Significant Harm (As Defined In Table A) Conditions For There Being A Significant Possibility Of Significant Harm:**

1) Human health effects arising from the intake of a contaminant, or other direct bodily contact with a contaminant. 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. Such an assessment should take into account: the likely total 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.

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. Toxicological properties should be taken to include carcinogenic, mutagenic, teratogenic, pathogenic, endocrine disrupting and other similar properties.

2) All other human health effects (particularly by way of explosion or fire). 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. 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.

3) All ecological system effects. If either:

- Significant harm of that description is more likely than not to result from the pollutant linkage in question; or
- 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. Any assessment made for these purposes should take into account relevant information for that type of pollutant linkage, particularly in relation to the ecotoxicological effects of the pollutant.

4) All animal and crop effects.

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.

5) All building effects

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. The definition of contaminated land makes it clear that not all land containing measurable concentrations of contaminants is expected to fall within the scope of this legislation, although it may be included within other statutory regimes. The contaminated land regime applies to sites with radioactive substances but not to sites currently controlled under other regulatory regimes such as Environmental Permitting (Integrated Pollution Control (IPC), Integrated Pollution Prevention and Control (IPPC), Waste Management Licensing). Section 161 of the Water Resources Act 1991 empowers the Environment Agency to serve a notice regarding remediation actions on a site causing pollution to controlled waters and this will probably be the legislative route where single event pollution incidents are involved.

As per the statutory guidance, the Council should not regard harm to receptors of any type other than those listed above and in Table 2 as being significant harm for the purposes of Part 2A. In addition, the Council should disregard any receptors which are not likely to be present, given the “current use” of the land or other land which might be affected.

### **1.10 Regulatory Roles of the Council and the Environment Agency**

The Council has the sole responsibility for determining whether any land in its area is contaminated land. It cannot delegate this responsibility although it can rely on information or advice provided by another body such as the Environment Agency, or by a consultant appointed for that purpose. One of the critical concepts underlying the new regime is the “suitable for use” approach, with the specific exception applying to where an environmental licence or permit has been breached.

The Council is required to inspect its area from time to time in order to identify contaminated land and to carry out a periodic review. If when inspecting its area the Council identifies a site as being contaminated land by virtue of a pollutant linkage being established it will have to ensure that it is managed in an appropriate manner. This will include determining who will be the

“appropriate person” to bear the responsibility for the cost of any further action. The Council will also have to determine whether the contaminated land should be designated a “special site” and hence be transferred to the regulatory control of the Environment Agency.

The Council is also under a duty to report progress to the Environment Agency to allow the preparation of a National Report on Contaminated Land.

### **Special Sites**

These are sites where the Environment Agency rather than the local authority is the enforcing authority, by virtue of the land falling into one of the ‘special site’ descriptions prescribed in the Part IIa Regulations. Both the Council and the Environment Agency can identify potential special sites but any particular area of land cannot be designated as a special site unless the Council has first determined that the land is contaminated land. The Council will, therefore, consult the Environment Agency where it identifies potential special sites of contaminated land.

Contaminated Land is designated as a Special Site where one or more of the following conditions are met:

Any of the following activities have been carried out at any time:

- disposal of waste acid tars in a retention basin
- purification of crude petroleum or oil
- manufacture or processing of explosives
- the manufacture, production or disposal of:
  - chemical weapons
  - biological agents or weapons
- an authorised prescribed process

The land is any of the following:

- used for naval, military or air force purposes
- an atomic weapons establishment
- within a nuclear licensed site

- subject to Section 30 of the Armed Forces Act 1996
- the land appears to be contaminated as a result of the escape of substances from land meeting any of the above descriptions

Land which is affecting any controlled waters that:

- are used for drinking water supply, and are likely to require treatment in order to be fit for human consumption, or -are not likely to meet the requirements for water quality specified in regulations made under the Water Resources Act 1991, or -are contaminated land within one or more defined aquifers and where pollution relates to one or more defined substances.

For full definitions, see the Contaminated Land (England) Regulations 2006

### **Appropriate Persons**

Part IIa defines different categories of appropriate person and sets out the circumstances in which persons in these categories might be liable for the responsibility of remediation.

Appropriate persons are categorised either as Class A or Class B persons:

A Class A person is any person, organisation or company that has “caused or knowingly permitted” the contaminant(s), by which the land could be considered as contaminated land, in, on, or under the land. Such a person will be the appropriate person only in respect of remediation that is referable to the particular substance(s) that he caused or knowingly permitted to be in, on or under the land. This means that the question of liability has to be considered separately for each significant pollution linkage identified on the land. The enforcing authority would then have to identify a liability group and apportion liability between the members of that group.

Other appropriate persons could be created where they have been responsible for causing harm by introducing a pathway between a contaminant and a receptor where one did not previously exist. This could arise, for example, if groundworks were allowed to penetrate through impervious strata that had been retaining contaminative substances causing

them to migrate into the underlying permeable strata of an aquifer. In some circumstances the introduction of a receptor into an area where a contaminant and a pathway already exist could also generate Class A persons.

If Class A persons cannot be found and the significant pollution linkage relates solely to the pollution of controlled waters rather than to any significant harm there will be no liability group for that significant pollution linkage and it should be regarded as an orphan linkage.

A person who would otherwise be a Class A person is exempted from liability arising with respect to water pollution from an abandoned mine.

A Class B person is normally the current owner or occupier and will only be deemed responsible for remediation where a Class A person cannot be found. However, a Class B person is exempted from liability that arises from the escape of a pollutant from one piece of land to other land.

A person is exempted from liability by virtue of his being a person “acting in a relevant capacity” (such as acting as an insolvency practitioner). The statutory guidance details procedures for determining liabilities and applying exclusion tests to appropriate persons. The Council will, wherever possible, apply the principle of the “polluter pays”.

### **Orphan Sites**

If contaminated land has been identified and it has not been possible to find either Class A or Class B appropriate persons or where certain members of the liability group are exempt from liability under the provisions of Part IIa the site may be categorised as an “orphan site”.

If the significant pollution linkage relates solely to the pollution of controlled waters, and no Class A person can be found, then the site becomes an orphan site.

*Orphan sites become the responsibility of the enforcing authority and this includes the liability for the cost of remediation.*



## **Environment Agency**

The Environment Agency has particular duties and powers under Part IIa, including;

- Providing information to the local authority on contaminated land
- Ensuring the remediation of Special Sites;
- Maintaining a register of Special Sites remediation;
- Preparing from time to time a national report on the state of contaminated land in England and Wales;
- Providing site specific guidance to local authorities on pollution of controlled waters; and
- Providing site specific guidance to local authorities on Contaminated Land

The Environment Agency becomes the enforcing agency for special sites, which includes the following contaminated land sites:

- Where controlled waters are used, or intended to be used for the supply of drinking water are affected.
- Where controlled waters do not meet or are not likely to meet relevant surface water criteria.
- Where particularly difficult pollutants are affecting major aquifers.
- Where current or former industrial activities pose special remediation problems or are subject to regulation under other regimes, including waste acid tar lagoons, oil refineries, sites used for explosives, IPC sites, or nuclear sites (only non-radioactive contamination).
- Where a Ministry of Defence estate is involved.

### **1.11 Application of the Strategy**

In applying a strategic approach to its inspection duties the Council has considered the principles of risk assessment in association with its particular local circumstances.

Contaminated land will be identified and then prioritised on the basis of risk assessment. For a site to be contaminated a significant pollutant linkage must exist. All three elements of the pollutant linkage must be in place (i.e. source,

pathway and receptor) in order for the land to be considered as contaminated land under the new regulations.

The initial stage in producing the strategy was to source a wide range of information including the following:

- Map identification of known contamination including landfill sites.
- Map identification of sites where there is the possibility of contamination.
- Identification of receptors within the area of risk i.e. schools, playing fields, public buildings, residential areas, Council owned land, protected sites and controlled waters.
- Map identification of key water resource/protection areas.
- Geology and hydrogeology of the area.

Data acquisition also involves liaison with the Environment Agency, local history societies, museums, library archives and the British Geological Survey.

By using the above information potential pollutant linkages can be identified by desk top risk assessment and the assembled data will be incorporated on a Geographic Information System (GIS) which is now online and constitutes the 'Contaminated Land' module within the Councils CAPS Uniform central system.

Once the various levels of information have been collated it is possible to prioritise areas using risk assessment analysis based on proximity of potentially contaminated sites to critical land use and controlled waters. More detailed geological and hydrogeological information, such as the nature of any overlying drift deposits, depth to aquifer etc., may be required in order to assist with the risk assessment process.

### **Internal Team and Departments Responsible**

Implementation of the contaminated land strategy requires interdepartmental liaison and collaboration. However, the main responsibility for its implementation remains with the Scientific Officer working within the Environmental Services Department.

### **Consultation with Public Authorities**

The Council consults and liaises with the Environment Agency, Cambridgeshire County Council, adjoining local authorities, Department of Food, Environment and Rural Affairs, Natural England, English Heritage and local authorities within the Cambridgeshire Pollution Prevention Group.

### **1.12 Exclusions and Overlaps to the Regime**

There are certain situations in which other regimes will be the primary source of enforcement:

### **Planning and Development Control**

Land contamination, or the possibility of it, is a material consideration for the purposes of town and country planning. This means that a planning authority has to consider the potential implications of contamination both when it is developing structure or local plans and when it is considering individual applications for planning permission.

The planning authority should satisfy itself that the potential for contamination is properly assessed, and the development incorporates any necessary remediation.

Where appropriate planning permission should include relevant investigation and remediation conditions, thus with new developments it will be the responsibility of the developer to carry out the necessary investigation and remediation to comply with the planning conditions.

### **Environmental Permitting Programme**

The Environmental Permitting Programme (EPP) is a new development in UK environmental regulation, initially affecting the waste management and industrial pollution prevention/control sector in England and Wales. Jointly developed by Defra, the Welsh Assembly Government and the Environment Agency, the initiative will streamline the waste management licensing regime from April 2008.

Existing WML or PPC permits will automatically become Environmental Permits when the EP Regulations come into force on 6 April 2008.

Section 27 of the Environment Protection Act 1990 gives the Environment Agency the power to take action to remedy harm caused by a breach of EPP controls under section 23(1)(a) or (c) of the Act.

In some cases the remediation activities may themselves constitute processes which cannot be carried out without a permit issued under the EPP regime.

This legislation can be the predominant driving force in three main areas:

There may be significant harm or pollution of controlled waters arising from land for which a site license is in force under Part IIa. If action were needed to deal with a pollution problem this would normally be enforced through a 'condition' attached to the site license. However if the problem were to have arisen from the normal operation of the site, with no breaches of any conditions then the contaminated land regulations under Part IIa will apply.

In cases of land contamination through illegal depositing of controlled waste. In such circumstances, the Environment Agency and the waste disposal authority have powers to deal with the waste and resultant problems under section 59 of the 1990 EPA.

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

These Regulations transpose the provisions of the EU Environmental Liability Directive into law in England and Wales.

The Regulations require action in response to the most significant cases, covering specific types of:

- i) damage to species and habitats;
- ii) damage to water; or
- iii) risks to human health from contamination of land.

These specific types of damage are referred to in the Regulations and the Regulations apply to both imminent threats and actual cases of damage. Where these arise, those responsible must take immediate action to prevent damage occurring or remediate damage where it does occur.

Remediation activities on contaminated land may themselves fall within the definitions of “waste disposal operations”, and therefore be subject to the relevant licensing requirements and environmental permitting regime.

### **Statutory Nuisance**

Statutory nuisance until the implementation of Part IIa was the main mechanism for dealing with contaminated land. This will continue to apply for land contamination issues in any cases where an abatement notice or court order is still in force.

The statutory nuisance regulations will also be the enforcing legislation were deposits on the land cause offence and not harm, such as odour.

### **Water Resources Act 1991**

Sections 161 to 161D of the above Act give the Environment Agency powers to take action to prevent or remedy the pollution of controlled waters. The Environment Agency can serve a ‘works notice’ which specifies actions to be taken and in a given time frame. It is served on a person who has ‘caused or knowingly permitted’ the potential pollutant to be in such a place that controlled waters are being or the potential to be polluted.

The Water Resources Act will be the enforcing body in cases where contaminants are entirely contained within an applicable groundwater body for which no source is identifiable.

In any respect, all contaminated land issues that have or potential to have a bearing on controlled waters, the advice of the Environment Agency will be sought.

In addition it should also be noted that a remediation notice cannot be served which would have the effect of impeding or preventing a discharge into a controlled water for which a 'discharge consent' already exists.

### **Food Safety**

The secretary of State for Health under Part I of the food and Environmental Protection Act 1985 has the power to prohibit specified agricultural activities in a designated area in order to protect consumers from contaminated food. This action would be taken on the advise of the Food Standards Agency and thus could potentially break the pollution linkage, however in such cases East Cambridgeshire District Council and the Food Standards Agency should be in close consultation with each other in order to co-ordinate actions.

### **Health and Safety**

Where employees and members of the public at business or other premises, are at risk from contaminated land, then the Health and Safety Executive would be the enforcing body under COSHH legislation. Again in such cases there should be close liaison between East Cambridgeshire District Council and the HSE to co-ordinate the best route forward with regard to regulatory action and to avoid duplication.

### **Major Accident Hazards**

The Control of Major Accident Hazards Regulations 1999 (COMAH) require operators of establishments handling prescribed dangerous substances to prepare emergency plans which include the restoration of the environment

after such an incident. The responsible body for the enforcement of these regulations is the Health and Safety Executive.

The Finance Act of 1996 provides fiscal incentives for the remediation of contaminated land by providing an exemption of landfill tax. This exemption is only possible if no remediation notice has been served; this is to encourage voluntary remediation.

### **1.13 Consultation with Other Groups**

The Council invites discussion and consultation with the larger commercial and industrial organisations operating in the District.

## **2 Characteristics of East Cambridgeshire**

### **2.1 Description of East Cambridgeshire**

The District of East Cambridgeshire lies approximately 60 miles to the north of London, covers an area of approximately 64,941 hectares and is bordered by Fenland to the north and west, Kings Lynn and West Norfolk to the north-east, Forest Heath to the east, St Edmundsbury to the south-east, South Cambridgeshire to the south and Huntingdonshire to the west.

The district is also experiencing rapid population growth due its close proximity to the city of Cambridge and its good road and rail links to London and the rest of the country.

At present the population is approximately 78,000 and rising, the largest population centre being Ely with approximately 18,000 residents, other main population centres are Soham, Littleport, Burwell and Sutton.

The majority of the District is underlain by mudstone of the Kimmeridge and Gault Clay Formations, which forms a natural barrier to vertical and to a lesser extent horizontal movement of potentially contaminative substances. However the southeast corner of the District is underlain by chalk, this offers no such barrier and is in fact a principal aquifer.

As defined in the guidance (see table A) receptors fall into four groups.

Human Beings, the main population centres have been alluded to above, however a significant proportion of the population within East Cambridgeshire live in relatively isolated locations widely dispersed throughout the District.

Ecological, both in terms of living organisms and protected areas of land. The largest area of land in relation to this receptor is the SSSI at Wicken Fen; details of other ecological receptors are currently in both paper and electronic form.



Property, in the form of growing crops or any form of live stock as defined in the guidance. East Cambridgeshire has some of the richest agricultural land in Europe; farming is an important activity within the District and covers a significant proportion of the District.

Property, in the form of buildings and monuments, as defined in the guidance, the majority of which are concentrated around the population centres. The District also has a rich heritage of protected buildings and monuments, details of which are held electronically, the most famous of which being the cathedral and the surrounding area in Ely.

Controlled waters, such as the Great Ouse run through the District while the chalk aquifer in the south-west lies beneath, relevant information pertaining to these and other controlled waters is held in electronic form.

The area of East Cambridgeshire has naturally elevated levels of the heavy metal arsenic and this will be taken into account when assessing sites for the contaminated land criteria.

## **2.2 Land in Council Ownership**

In the case of land in Council ownership, this presents the issue of conflicting interests, as ownership and enforcing body are, one and the same.

Land ownership details for East Cambridgeshire District Council, are held within the legal department, to deal with any issues relating to contaminated land a formal relationship with legal will be forged.

Procedures for the prioritisation, investigation, classification and remediation of land will be as detailed in further chapters.

In the past where contaminated land has been a potential issue to Council owned land, appropriate measures have been taken.

### **2.3 Financial and Manpower Implications**

To put figures to these issues would be foolhardy, as it is nearly impossible to predict the exact number and nature for sites that will require investigation.

One site could have potential to involve large amounts of officer time and have serious financial implications; this has been demonstrated by the Littleport Gasworks site (for a summary of this site, see Section 2.4).

However it would be prudent to budget for equipment and laboratory analysis for the council to be able to carry out some initial investigation work on possibly contaminated sites utilising in-house expertise.

The Council notes that if it were found to be an 'appropriate person' as set out in the statutory guidance or through an 'orphan site' identification, then significant financial implications for the authority could follow.

### **2.4 A brief summary of Littleport Gasworks**

From 2003 to 2009, the Council was responsible for implementing the investigation and remediation of a former gasworks occupied by 31 properties acting under Part IIa of the Environmental Protection Act 1990. The project was successful in its objectives but required a great deal of Council resources, comprising around £1m total cost, not including the significant amounts of time spent by the Scientific Officer, Chief Executive and other staff. It was partially funded by DEFRA's capital projects scheme and involved both voluntary and involuntary (i.e determinations) aspects.

Of key importance was the use of a concentration of Benzo(a)pyrene that was used as the significant concentration, the SPOSH value, which underpinned the determination. It was 10.2mg/kg but required a great deal of site-specific risk assessment to get to this stage. Records held in Environmental Services fully document the project.

## **2.5 Initial Sources of Contamination**

The main industry associated with East Cambridgeshire is agriculture, this usage while often related to green field sites does have the potential to yield contaminative processes, such as storage and filling locations for agricultural chemicals, burial pits and slurry lagoons.

Additionally the district has had its share of historic contaminative uses ranging from old gasworks and coal yards to furniture manufacturers, landfills and transport yards.

In more recent times registers have been held by the council on some of the potentially contaminative industries under the Environmental Permitting Regulations 2007, COMAH and Hazardous Substances regulations.

Under its statutory obligations the Environment Agency has furnished the Council with current and historical information relating to potentially contaminative processes, which it holds, such as landfill operations and pollution incidents.

## **2.6 Known Information Relating to Contamination, and Actions Taken**

Known information relating to contamination within the District is limited.

A handful of sites where a problem has been suspected have been the subject of a site investigation, including intrusive work, these include broad street, Ely and mill lane, Soham. Both sites subject to former uses on or near by the site which could have given rise to contamination. The findings of these reports have shown varying degrees of contamination and will have a bearing on future use of the sites, especially if domestic housing is the intended development.

Other known areas of suspected contamination are limited to local knowledge, bomb craters are known to have been filled with waste and covered, records of such activities are patchy or non-existent.

Local Parish Councils have been contacted to identify areas of land that they consider may be contaminated, a file of the responses has been made but again the information is based on local knowledge and not formal records.

There is however data supplied by the Environment Agency relating to pollution incidents and these will be known sites of possible contamination, these records are held electronically on the Council GIS application.

## **2.7 Action and Controls Used to Deal with Known Contamination**

The actions and controls used by the Council to deal with contamination so far have mainly been through planning, whereby remediation involvement has been through the over seeing and supporting of planning conditions attached to developments where ground quality was an issue.

However the attachment of such conditions is relatively recent and there is the potential for this aspect to have been over looked in the past. Before 1994, whereby the predecessor to PPS23 was introduced, are the key focus for sites of this nature. Environmental Services' files detail evidence of the actions taken to remediate the site, however such evidence in relation to these conditions and actions is not always quite so clear cut especially in older cases of development.

Although there have been several voluntarily remediated Part IIa sites, the only site whereby formal notices and enforcement action was taken was the Littleport Gasworks. This site also required financial significant financial input from the Council and DEFRA, through the capital projects program.

The area of East Cambridgeshire does have naturally elevated levels of the heavy metal arsenic and as such this will be taken into account when assessing sites for the contaminated land criteria.

## **2.8 Protected Locations**

East Cambridgeshire has 18 Conservation Areas and 589 Listed Buildings of which 19 are recognised as being of outstanding national interest and are Grade 1 Listed Buildings. There are eight Sites of Special Scientific Interest

(SSSI's), two Regionally Important Geological Sites (RIGS), three Local Nature Reserves and over a third of the District is designated as being either an Area of Outstanding Natural Beauty or of Great Landscape Value.

## **2.9 Key Water Resource / Protection Issues**

Anglian Water supply the District's drinking water. Potable abstraction is undertaken for this purpose in the district and immediately outside of it.

There are several private water drinking supplies throughout the district.

## **2.10 Description of the Geology and Hydrogeology**

Information regarding the geology of the district is important in determining whether potential pollutant pathways are present and assists in the risk assessment analysis, evaluating the potential for a contaminant source to adversely affect an adjacent receptor.

Sites situated on low permeability rocks are less likely to effect groundwater than sites on sandstones, gravels or the chalk but there will be an increased potential risk of pollution of surface waters.

The majority of the District is underlain by mudstone of the Kimmeridge and Gault Clay Formations, which forms a natural barrier to vertical and to a lesser extent horizontal movement of potentially contaminative substances. However the southeast corner of the District is underlain by chalk, this offers no such barrier and is in fact a principal aquifer.

## **2.11 Soil Classification**

A description of the various soil types occurring in the District is included in Appendix B.

## **2.12 Redevelopment History and Controls**

The planning system is the main control mechanism for the redevelopment of land with a previous history of use. This primary function will continue. A set of planning conditions have been developed requiring land contamination

assessments (and remediation in some cases) to be carried out where brownfield sites are being scheduled for redevelopment and where there has been the potential for contamination.

The Planning Policy Statement 23 (PPS 23) document provides advice on dealing with contaminated land during the planning process, for further information and guidance on the process of tackling land contamination through the planning process, reference should be made to the Councils supplementary planning document entitled 'Guidance on submitting planning applications on land that may be contaminated' (2010).

### **3 East Cambridgeshire District Councils Strategy**

#### **3.1 The Councils Priorities**

In carrying out its inspection duty the Council implements a strategic and prioritised approach to the management of contaminated land in order to:

- Protect human health
- Protect controlled waters that are used, or intended to be used, for the supply of drinking water for human consumption
- Protect designated ecosystems
- Prevent damage to property
- Prevent any further contamination of land
- Encourage voluntary remediation
- Encourage re-use of brownfield sites

Priority is given to the inspection of sites with the greatest risk or potential risk of causing harm to human health or to the environment. Sites requiring urgent attention take precedence over the routine duties and general approach of the Inspection Strategy.

#### **3.2 Identification and Prioritisation of Potentially Contaminated Land**

To search for potentially contaminated land, the concept of source, pathway and receptor must be understood; this concept has been described in the opening chapter.

The Government's contaminated land guidance requires that the resources used to identify contaminated land be targeted where such land is likely to be found.

The prioritisation regime of sites to be investigated is to be based on the Department of the Environment's CLR 6 report of 1995.

This document works in two stages, firstly a preliminary prioritisation and then categorisation into priority groups for further investigation. However the

Council does recognise that some sites may be identified outside the scope of this investigation, which may require urgent action. These will be dealt with as they occur.

### **3.3 Initial Prioritisation**

The initial appraisal system assesses sites under three key areas: human health, property and environmental receptors. This initial system is developed into the Council's main system, CAPS Uniform, which allows the management, updating and detailed site boundary development on the electronic system. It is also safe (backed up), secure (limited user access for sites under investigation) and allows the generation of progress figures and an overall ranking list.

After this initial appraisal, each site will have a score, which indicates its priority in terms of the need for further assessment. From these scores, a group of high-risk sites can be identified and prioritised to determine the sites that most urgently require further detailed investigation. For general consideration, scores  $\geq 35$  are high risk, scores 34-20 are medium risk and scores  $< 20$  are low risk.

### **3.4 Investigation Prioritisation**

This part of the assessment process will assign a priority number, 1-4 to the high-risk group identified from the initial prioritisation.

Priority one: Contaminants almost certainly present and likely to have an unacceptable impact on receptor. Site not suitable for current use and urgent action in the short term is required.

Priority two: Contaminants probably present and likely to have an unacceptable impact on a receptor. Site may not be suitable for its current use and action in the medium term may be necessary.



Priority three: Contaminants may be present but unlikely to have an unacceptable impact on a receptor. Site is suitable for its current use and action is unlikely while the site use remains constant or lies undisturbed.

Priority four: Contaminants may be present but very unlikely to have an unacceptable impact on a receptor. Site is suitable for its current use and no action is needed while current use exists or the site remains undisturbed.

To place the sites into a given priority group further sources of information need to be consulted and these will include relevant geological and hydrological maps, water abstractions, pollution incidents, data sets detailing activities and consents which may have a bearing on the site along with investigation and monitoring data if such information exists.

Additionally if possible a walkover study of the site should be carried out, as this will hopefully confirm the validity of some of the data already used and may provide useful clues as to the condition of the site. This part of the investigation should be carried out after all relevant information has been consulted as this may preclude the need to visit the site.

The categorisation of priorities will be assigned by following flow charts for development (active or derelict), surface or ground water or any combination of them, which will then be stated in the CAPS Uniform module. These flow charts are presented in CLR, Figures 1 – 8b.

There is not an exhaustive list of information sets that are to be explored or measures to be taken as any information considered to be relevant for a given site will be investigated along with advances in industry standards.

### **3.5 Further Investigation**

After the grouping and prioritisation of sites, each will have an assessment score and a priority number. This information should indicate the most sensitive site, which warrants detailed assessment first.

For sites with a high assessment score/priority number, especially those where there is a high degree of uncertainty, further investigation may be required in the form of an invasive survey to assess for the presence and concentration of contaminants. This is the final phase of the investigation process and will only be invoked were the risk of contamination is thought to be a distinct possibility.

The exact specification of such investigations will need to be drawn up on a site-by-site basis taking into account all known information so as to pinpoint potential problems and concentrate resources.

On completion of this phase of the investigation a more accurate risk assessment can be carried out and remediation measures considered if necessary.

### **3.6 Powers of Entry**

Were further investigation of a site is deemed necessary and access to the site is required, this will be sought on a voluntary basis with the relevant people.

If voluntary access cannot be gained, for example the owner of the site may be temporarily absent and the case is of an urgent nature, then the Council under Section 108, schedule 18 of the Environment Act 1995 can gain access to the site for the purpose of carrying out further investigation. In cases where powers of entry are to be exercised those relevant will be notified in writing one working week prior to access being gained. This has been undertaken on a previous site and an example of the documentation used is attached in Appendix E.

### **3.7 Complaints and the Provision of Information from Members of the Public**

If a complaint is received regarding potentially contaminated land, it will be investigated accordingly and records kept as a potential Part Ila site. Nuisance issues, such as odour, will also be considered where necessary.

However the designation of such land as contaminated will not occur without robust scientific data being available.

It should be noted that land can be causing a nuisance such as an odour problem, but if no specified harm is being or likely to be caused then no action can be taken under contaminated land legislation.

### **3.8 The Data Sets**

The Council use various data sets to carry out its inspection duties, these include:

- Mapping of historical and present sites which may be contaminated
- Mapping of receptors
- Mapping of known contamination, where available
- Mapping of key water resource/protection issues
- Mapping of the broad hydrogeology and geology of the District
- Additional in-house data sets, such as the local plan and Hazardous Substances Register and Radioactive Substances Register
- Again, this list is not exhaustive and the potential to add additional relevant data sets will remain to keep the system as effective as possible.

### **3.9 Data Provision to the Environment Agency**

As local authorities lead on the majority of Part Ila sites but the Environment Agency are required to draw up an annual report on the state of contaminated land within England and Wales, then information between these two bodies must clearly be exchanged.

### **3.10 Determination of Land as Contaminated**

In determining land as contaminated, East Cambridgeshire District Council will be satisfied that a pollution linkage exists or has the potential to exist based on the source, pathway and receptor concept set out in the guidance.

The Council will then prepare a written record containing the following details on how the decision was arrived at:

1. A description of the particular significant pollutant linkage(s), identifying all three components of source, pathway and receptor.
2. A summary of the evidence upon which the determination is based.
3. A summary of the relevant assessment of this evidence.
4. Additionally a summary of the way in which East Cambridgeshire District Council considers the requirements of the legislation has been satisfied.

Upon the identification of land as contaminated, East Cambridgeshire District Council will write to the owner, occupier and appropriate person relating to the contaminated land identified. One person or company could potentially be all of these. The correspondence will detail who the Council believes they are, i.e. owner, occupier or appropriate person, this will be based on the best available information and how the Council has come to its conclusion.

However, if possible the appropriate person(s) with an interest in an area of land under investigation should be kept abreast of developments made by the Council, it is hoped this flow of information would be reciprocated by the interested parties.

### **3.11 Special Sites**

These are sites, which due to their nature are best dealt with by the Environment Agency due to their expertise in certain areas.

These special sites can be allocated to three broad headings:

**(a) Water Pollution Cases**

Where the *wholesomeness of drinking water* is being affected to such an extent that additional treatment or process measures are required for the water to remain as drinking water.

If *surface water classification criteria*, do not meet or are not likely to meet their relevant parameters.

Where *principal aquifers* are the receptor(s) and is being affected by a pollutant(s) in List I of the Groundwater Directive (80/86/EEC).

**(b) Industrial Cases**

*Waste acid tar lagoons*, were typically the acid tar arose from the use of concentrated sulphuric acid in the production of lubricating oils. Tar resulting from coal product is not included in this description.

*Oil refining processes*, again more suited to the skills of the Environment Agency.

*Explosives* pose significant problems, which are best, dealt with by the Environment Agency.

*Environmental Permit sites under central control*; Contamination from such sites should be controlled by the Environment Agency. However this description is applicable to all activities authorised under central control and on a site where a current installation operates but the contamination has been caused by a non-centrally controlled body.

*Nuclear sites* will be dealt with under section 78YC, however non-radioactive contaminants on such a site would be applicable to the contaminated land regime.

### (c) **Defence Cases**

This includes contaminated land at current military, naval and airforce bases and other properties, including those of visiting forces; the Atomic Weapons Establishment and certain lands at Greenwich Hospital.

Some of this is obviously not applicable to East Cambridgeshire District Council but significant military installations do exist in close proximity to this district.

However, off-base housing, NAAFI and property disposed of to private ownership or occupation is not included, neither are training sites used by the MOD but not owned by them.

Irrespective of current ownership, land used for the manufacture, production and disposal of chemical and biological weapons, and any related materials will also be dealt with by the Environment Agency.

### **3.12 Additional Aspects Relating to Special Sites**

Land adjoining or adjacent to a special site which appears to be contaminated by substances from the special site will also be classed and treated as a special site.

Contamination from a Waste Management site, despite all conditions being upheld could potentially be a special site if the receptor were a controlled water or by the nature of the contaminant.

### **3.13 Determining a Special Site**

Before authorising or carrying out an inspection of any land using statutory powers of entry, East Cambridgeshire District Council should consider if, the land were found to be contaminated, would it meet any of the descriptions which would classify it as special.

If East Cambridgeshire District Council already has information that may suggest a particular site could be classed as special the Environment Agency will be informed at the earliest possible opportunity.

Additionally East Cambridgeshire District Council would seek to make arrangements with the Environment Agency to carry out investigation into a suspected special site.

If the site is then classified as special the Environment Agency will then take on the role of the enforcing authority, and details placed on the public register.

### **3.14 Communication with Relevant Person(s) and Bodies**

As stated earlier in the Strategy, relevant bodies such as the Environment Agency, Natural England, other local authorities and The Food Standards Agency will be contacted by East Cambridgeshire District Council as and when appropriate in the process of identifying and investigating land which may be contaminated.

### **3.15 Communication with Land Owners, Occupiers and Potential Class A or B Persons**

Communication channels between the Council and the above interested parties should be established at the earliest appropriate stage when investigating a site. The process of identifying and prioritising sites that are potentially contaminated will not be made available to the public until the process of investigation is complete and a decision is made whether a Detailed Assessment is necessary or not. This is in accordance with Freedom of Information and Environmental Information Regulations and will avoid unnecessarily blighting large numbers of properties or land.

However it may be appropriate to contact such persons in the prioritisation phase as they may have additional information to help with the prioritisation of the site.

Contact will certainly be made if further investigation of a site is required, providing these people can be located.

Additionally it should be noted that the Councils approach to its duties under the contaminated land regime is to seek co-operation with relevant bodies and person(s) and where necessary voluntary rather than enforced action.

### **3.16 Notification of those Appropriate in Classification of Land as Contaminated**

Prior to the classification of land as contaminated the Council will write to the owner, occupier and to the best of its knowledge the appropriate person(s) at least two working weeks before the classification becomes formal.

The written correspondence will outline the reasons for such a designation and whom the Council believes they are, i.e. appropriate person, owner and occupier, (this may be the same person in some cases).

The Council will explain that voluntary remediation is the preferred option with the benefits that such action will incur, such as landfill tax exemption for the remediation scheme.

At this point the Environment Agency will also be formally contacted so as they are aware of the impending classification, however in some cases the Environment Agency will already have been consulted, for example, with potentially special sites.



## 4 Remediation of Contaminated Land

As previously stated in Section 3.1 of the strategy, the Councils preferred option will be by **voluntary** means as this will maintain a better relationship between the Council and the owner occupier and appropriate person(s). In addition, more effective remediation is likely than that achieved by enforcement action.

Good communication with all parties concerned with the voluntary remediation of a given site will be pursued in all instances to ensure the best possible outcome.

The Council notes that any historic contamination may be of archaeological significance in certain circumstances and this will have to be taken into account when assessing remediation measures.

### 4.1 Formal Action

Formal action is also an option open to the Council to secure the remediation of an area of land classed as contaminated.

Formal action is implemented by the serving of a remediation notice, the serving of such a notice is a final resort particularly as this has the potential to increase the remediation costs significantly as landfill tax exemption would no longer be available.

A remediation notice will not be served until a period of three months has elapsed between the date of notification to the person(s) concerned and the service of a remediation notice on that person or later if the Council is to designate an area of land as a special site. In such cases a remediation notice cannot be served for a period of three months after the date on which the site was designated as special.

However in cases where the Council considers there is an imminent danger of serious harm or serious pollution of controlled waters then urgent remediation may need to be carried out.

In such cases the above time scale will not be applicable nor will the need for prior consultation. In cases where the Council feels that remediation of a given contaminated land site will not occur soon enough or the appropriate person cannot be immediately identified then it may consider taking the appropriate action itself and reclaiming back the cost.

The remediation notice will state the land to be remediated, the person(s) on whom this burden falls with actions and timescales to be met.

A remediation notice will not be served when the Council is satisfied that appropriate measures are in place to secure the remediation of a contaminated land site, providing the time scale is reasonable.

In cases where the remediation notice would be served on the Council a remediation declaration will be prepared in place of the notice.

#### **4.2 Aim of Any Remediation**

The aim of any action taken to remediate contaminated land must be to eliminate the risk posed to the receptor. In doing this the pollution linkage must be broken in an effective manner.

## 5 Liability

In establishing liability this regime is guided by the principal of 'polluter pays'.

### 5.1 Definitions and Terms

In broad terms there are two types of people that may be held as liable for the purpose of serving a remediation notice, these are known as an '**appropriate person(s)**', class A or B person(s).

A **Class A person(s)** has caused or knowingly permitted a pollutant to be in, on or under the land, and it is a class A person(s) that the Council shall seek to serve a remediation notice on in the first instance.

If a class A person(s) can not be found then the owner or occupier of the contaminated land site is an appropriate person(s) to serve a remediation notice on, a **Class B person(s)** is used to described those liable in such circumstances.

### 5.2 More than one Appropriate Person

In some cases there may be more than one appropriate person applicable to a given site, such examples could arise from multiple ownership of a given site, such as a gasworks occupying the site originally followed by a dry cleaners and then used as a transport yard.

Each one of these landuses is indicative of certain pollutants, investigation may reveal pollutants such as spent oxide, chlorinated solvents and diesel, each of these indicative of the above activities.

In such cases for the purpose of remediation there would be three appropriate persons, the portion of the costs each party would be liable for will be decided by the Council, in accordance with the current guidelines.

### 5.3 Agreement between Appropriate Persons on Remediation

Where there are more than one appropriate persons then, if they so wish they can come to an agreement on how they will divide the responsibility for remediation.

In such cases a copy of the agreement will be provided to the Council along with details from each party that it does not intend to challenge the agreement. Instances of the above are known as D.38 agreements.

### 5.4 Exclusion Tests for Class A Person(s)

The guidance specifies six tests which may be applied to class A person(s) which would have the effect of eliminating them from the burden of remediation.

**Test one:** this test is for *excluded activities*. Types include providing financial assistance, such as a bank, or provide advice, as a consultant would to business.

**Test two:** this test details *payments made for remediation*, the purpose of this test is to exclude those who have already met their responsibilities by means of financial payments. The guidance gives detailed types of payments eligible for this test, an example would be an appropriate person already having paid a contractor to remediate the contaminated land but the work carried out was sub-standard.

**Test three:** this test deals with cases of *'sold with information'*, an example of which could be the buyer carrying out an intrusive investigation before the purchase was made.

**Test four:** deals with *changes to substance*, broadly speaking this is where a given substance has become a problem by the introduction of another substance at a later date by another person, an example could be the acidification of a given site which could mobilise certain pollutants.

**Test five:** relates to *escaped substances*, where the contaminant is attributable to another area of land.

**Test six:** concerns the *introduction of pathways or receptors*, where a later party introduces a pathway which allows an otherwise contained pollutant to have an unacceptable effect on a receptor, such as the building of new homes on the site in question.

Specifics relating to each of the tests and the criteria to be met before exemption can be granted are detailed in the guidance.

### **5.5 Exclusion of Class B Person(s)**

This is a test to exclude those from liability who do not have an interest in the capital value of the land in question, however this test will not be applied if the result would be the exclusion of all members of the liability group.

### **5.6 Orphan Linkages**

Where no class A or B persons can be found for pollution linkage(s) then the Council will/should bear the cost of remediation itself or shared, where appropriate, if the Council is the enforcing body. Where such cases exist there is the potential for a significant financial burden to be placed on the Council.

## **6 Review Mechanisms**

The inspection strategy details the approach to be taken by the Council while carrying out its duty to inspect the District for the purpose of identifying contaminated land. It is envisaged that there may be certain circumstances in which previous decisions should be reassessed.

### **6.1 Reassessment of Inspection Decisions**

Circumstances, which may facilitate such action, could include changes to legislation, new information being made available, revision of current guidelines used to assess the site initially, a pollution incident or other such unplanned events, or a legal precedent of relevance.

### **6.2 Advancing of Specific Sites for Earlier Inspection**

The Council recognises that there may be certain circumstances in which sites can move forward in the inspection timetable. Instances could include new information being made available and in support of voluntary remediation.

### **6.3 Reviewing the Strategy**

The strategy will be periodically reviewed and updated or amended as necessary when changes occur in the legislative regime or circumstances more localised to East Cambridgeshire. It is not envisaged that the whole strategy needs to be updated and re-issued routinely, but amendments are likely to be necessary which can be incorporated revised strategy as required.

## **7 Time scales**

The time scales listed below are approximate and should be viewed as such given the potential for unforeseen circumstances to place added strains on manpower and finance resources.

The target rate for undertaking Detailed Inspections of high-risk sites and subsequent remediation targets are outlined in the Councils Service Plan. This is to allow regular updates to be made with regard to progress, budgets and resources.

### **7.1 Strategy Consultation and Adoption**

It is anticipated that this document will be adopted by the end of February 2011 although it will remain 'live' and can therefore be amended or updated as necessary.

The Council now undertakes impact assessments, also known as 'Impact and Needs/Requirements Assessments' (INRAs), on all policies and strategies to assess whether its services and functions are meeting the needs and requirements of all members of the local community. This strategy underwent such a review and gained approval on the 8<sup>th</sup> November 2010. A summary of the review findings can be viewed on the Councils website.

### **7.2 Data Handling**

To assist in the search for contaminated land and to manage the data generated in such a process the Council operates a dedicated module of its central CAPS Uniform system, which allows for the input, maintenance, secure storage and updating of all Part Ila work. This system also allows the generation of detailed polygons showing the site layout.

For inspecting historical maps, geological data and other environmental issues, the Council utilise ARC VIEW GIS system (Geographical Information System). This allows for a co-ordinating link between planning, forward planning and data of a very high accuracy to be utilised. ARC VIEW allows

the operator to interrogate several maps/data sets or themes at once and quickly relate the information to a particular site. Thus helping the operator to make an informed decision as to the possible risk a given site may pose.

### **7.3 Contaminated Land Register**

The Contaminated Land register is available in hardcopy at the Council Offices and electronically on the Councils website. The register will contain all relevant information as set out in the regulations. This includes remediation notices served and any subsequent appeals, remediation declarations where remediation notices cannot be served, appeals against charging notices, designation of a site as special, notifications to the Council on what remediation has taken place and to what standard, and convictions.

Enquiries or information relating to contaminated land should be forwarded to the Environmental Service, East Cambs DC, The Grange, Nutholt Lane, Ely, Cambs. CB7 4EE.



## **8 Procedures**

### **8.1 Internal Management Arrangements for Inspection and Identification**

The Environmental Services Department has responsibility for the management of contaminated land in East Cambridgeshire. The Scientific Officer will be responsible for producing and reviewing the Inspection Strategy and its routine implementation.

### **8.2 Information Collection**

Information from a wide and diverse range of sources is required in order to evaluate the potential for the presence of pollutant linkages. The information required includes:

- a) Land-use information on Part IIa receptors and potential receptors
- b) Current and past industrial and waste management activities (potential sources)
- c) The nature of the terrain (potential pathways)

These data sets can be sub-divided into the following information groups:

### **8.3 Data Sources**

Reference will be made to records held internally at the Council. Primarily, those records held in Environmental Services but also those held by the Councils Planning, Building Control and Economic Development departments. In addition, reference will be made to trade directories, historical information held in libraries, museums, archives and local history and archaeological societies.

### **8.4 Sources of information on contamination land**

- Historical maps Ordnance Survey and others
- Environmental Permits issued by the Environment Agency
- Environmental Permits issued by East Cambridgeshire District Council
- Locations of consent to discharge (Environment Agency)
- Closed and current landfill sites and other (Environment Agency)

- Waste management licensed sites
- Records of pollution incidents, fires, (Environment Agency)
- Industrial cases and defence cases
- Potential pollutant pathways:
- Geology (British Geological Survey)
- Hydrogeology (Environment Agency)
- Topography Ordnance Survey and local knowledge

### **8.5 Information Received in the Form of a Complaint**

The Council may receive information regarding contamination of land in the form of a complaint. The complaint will be processed through the Environmental Health Department using the same procedure as for other statutory nuisance complaints.

The complainant can expect:

- a) The details of their complaint to be logged;
- b) To be contacted by a Council Officer within three working days of the Receipt of the complaint;
- c) To be kept informed of progress of the investigation;

Progress may however not be very rapid as investigations into the contamination of land are complex. In particular:

1. The presence of a significant pollutant linkage has to be proved before land can be designated as contaminated land;
2. Interested parties have to be consulted prior to the land being designated as contaminated land;
3. A minimum period of three months must elapse between the designations of
4. Land as contaminated land and the serving of a remediation notice;
5. The original polluter of the land and/or other “appropriate person(s)” have to be identified to accept the liability and bear the cost of remediation.

6. Where the Enforcing Authority is satisfied that there is a need for urgent remediation paragraphs 2) and 3) can be waived.

## **8.6 Information Management**

In the course of preparing its Inspection Strategy the Council will accumulate considerable quantities of information in a variety of formats. For ease of storage and efficient data exchange between internal departments of the Council it is proposed to transfer and store a large proportion of it onto the Council's existing Geographical Information System. The use of map overlays will expedite the identification of key geographical areas, individual sites, potential pollutant linkages and will highlight information shortfall.

The use of the GIS will allow rapid and efficient access to site investigation information but will not be accessible to third parties. The majority of the information will be regarded as research material and will remain confidential.

## **8.7 Public Access to the Register**

A copy of the Public Register will be kept at The Grange, Nutholt Lane, Ely, Cambridgeshire, CB7 4EE (and online at the Council's website) and will be available for inspection by the public. It will contain a full and permanent record of all regulatory action taken in respect of the remediation of contaminated land, and will include information about the condition of the land.

This information will include:

- a) The location and extent of the contaminated land;
- b) The significant harm or pollution of controlled waters by reason of which the land is contaminated land;
- c) The substances by reason of which the land is contaminated land and, if any of the substances have escaped from other land, the location of that other land;
- d) The current use of the land in question;
- e) The name and address of the person on whom the notice is served; and

f) What each appropriate person is to do by way of remediation, and the periods within which they are required to be carried out.

The Public Register will not include any information if, in the opinion of the Secretary of State, its inclusion would be against the interests of national security. Certain information can also be excluded on the grounds of commercial confidentiality.

### **8.8 Information Evaluation**

When the Council is carrying out its inspection duties and is collating and evaluating information about a site thought to be contaminated, high reliance will be placed upon existing information held within the Council and information supplied by other statutory organisations. High levels of reliability will also be placed upon information based on factual and documented events and investigations and reports carried out by reputable and suitably qualified organisations and individuals.

Any information that is regarded as anecdotal or has been supplied anonymously will have to be subjected to intense scrutiny and supported by robust scientific evidence before being included in the contaminated land database.

### **8.9 Contaminated Land Guidelines**

The Contaminated Land Exposure Assessment (CLEA) Soil Guideline Values have been issued for a limited number of contaminants, by the Environment Agency. The issuing of Soil Guideline Values has been overdue since their introduction, so other CLEA derived assessment criteria will be considered where appropriate. In addition, provided transparent/acceptable toxicological data is provided, other UK models of deriving assessment criteria can be considered.

### **8.10 Public Water Supplies**

Where a potential pollution linkage includes a public water supply source as a receptor, the Environment Agency and the relevant water supply company, (Anglian Water) will be immediately notified.

## **APPENDIX A      Glossary**

### **Aquifer**

A groundwater reservoir of rock containing water-filled pore spaces or fissures that are sufficiently connected to allow the water to flow through the rock matrix to wells, springs and boreholes.

### **Brownfield Site**

A site with a previous history of use where redevelopment may be being complicated because of the derelict state of the land and the possible presence of contamination. Very few brownfield sites will be categorised as contaminated land under the new regulations.

### **Controlled Waters**

These include:

Inland waters (rivers, streams, underground streams, canals, lakes, ponds and reservoirs). Groundwater (any water contained in underground strata, wells or boreholes) Coastal waters.

### **Eco-system**

A biological system of interacting organisms and their physical environment

### **Groundwater**

Any water contained in underground strata, wells or boreholes

### **Hydrogeology**

The geological aspects of groundwater.

### **Outlier**

An area of rock surrounded by older strata.

### **Remediation**

The carrying out of works to assess, minimise, remedy or mitigate the effects of contamination on land or controlled waters.

## Source Protection Zone

A designated and protected area above an underground aquifer used for the abstraction of water.

ECDC

East Cambridgeshire District Council

## **APPENDIX B      References**

Contaminated Land Inspection Strategies, Technical Advice for Local Authorities, Environment Agency.

Contaminants in Soil: Collation of Toxicological Data and Intake Values for Humans.

DEFRA / EA. R & D Publications TOX Series.

DEFRA Circular 01/2006 Environmental Protection Act 1990: Part 2A "Contaminated Land" includes extensions to the Part IIa regime of DETR Circular 02/2000 chiefly to address land that is contaminated by virtue of radioactivity.

Development on Land Affected by Contamination. ODPM: HMSO

Department of the Environment: Contaminated Land Research Report. CLR Report

No. 6. 1995. Prepared by M.J. Carter Associates.

Environmental Protection Act 1990, Part IIA – Section 78B as amended by Section 57 of the Environment Act 1995. HMSO.

Guidance for the Safe Development of Housing on Land affected by Contamination – R&D Publication 66. NHBC, CIEH, Environment Agency 2008 (update).

Model Procedures for the Management of Land Contamination. DEFRA / EA (2004). CLR 11.

Planning Policy Statement 23: Planning and Pollution Control. Annex 2.

Soil Guideline Values. DEFRA / EA. R & D Publications. SGV Series.



The Contaminated Land (England) Regulations 2000 (S.I.2000/227)

Waste Management Paper No. 27: Landfill Gas DOE / HMSO 1989

## APPENDIX C Significant Harm

<b>Table A - Categories of Significant Harm</b>	
<b>Type of Receptor</b>	<b>Description of harm to that type of receptor that is to be regarded as significant harm</b>
1. Human Beings	<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. In this Chapter, this description of significant harm is referred to as a "human health effect".</p>
<p>2. Any ecological system, or living organism forming part of such a 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>• any area designated as a marine nature reserve under section 36 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 6 of Planning Policy Statement (PPS 9) 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 any 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. In determining what constitutes such harm, the local authority should have regard to the advice of English Nature and to the requirements of the Conservation (Natural Habitats etc) Regulations 1994.</p> <p>In this Chapter, this description of significant harm is referred to as an "ecological system effect".</p>

<p>3. Any candidate Special Areas of Conservation or potential Special Protection Areas given equivalent protection; Any habitat or site afforded policy protection under paragraph 6 of Planning Policy Statement (PPS 9) on nature conservation (i.e candidate Special Areas of Conservation, potential Special Protection Areas and listed RAMSAR sites); or Any nature reserve established under section 21 of the National Parks and Access to the Countryside Act 1949.</p>	<p>In PPS 9, significant harm is referred to as an 'ecological system effect'.</p>
<p>4. Property in the form of:</p> <ul style="list-style-type: none"> <li>• crops, including timber;</li> <li>• produce grown domestically, or on allotments, for consumption;</li> <li>• livestock;</li> <li>• other owned or domesticated animals;</li> <li>• 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. 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 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 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. In this Chapter, this description of significant harm is referred to as an "animal or crop effect".</p>
<p>5. 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 of occupation. 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. 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>

	In this Chapter, this description of significant harm is referred to as a "building effect".
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**Table B – Significant Possibility of Significant Harm**

	Descriptions Of Significant Harm (As Defined In Table A)	Conditions For There Being A Significant Possibility Of Significant Harm
1	Human health effects arising from <ul style="list-style-type: none"> <li>• the intake of a contaminant, or</li> <li>• other direct bodily contact with a contaminant</li> </ul>	<p>If the amount of the pollutant in the pollutant linkage in question:</p> <ul style="list-style-type: none"> <li>• which a human receptor in that linkage might take in, or</li> <li>• 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.</li> </ul> <p>Such an assessment should take into account:</p> <ul style="list-style-type: none"> <li>• the likely total intake of, or exposure to, the substance or substances which form the pollutant, from all sources including that from the pollutant linkage in question;</li> <li>• the relative contribution of the pollutant linkage in question to the likely aggregate intake of, or exposure to, the relevant substance or substances; and</li> <li>• the duration of intake or exposure resulting from the pollutant linkage in question.</li> </ul> <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. Toxicological properties should be taken to include carcinogenic, mutagenic, teratogenic, pathogenic, endocrine-disrupting and other similar properties.</p>
2	All other human health effects (particularly by way of explosion or fire).	<p>If the probability, or frequency, of occurrence of significant harm of that description is unacceptable, assessed on the basis of relevant information concerning:</p> <ul style="list-style-type: none"> <li>• that type of pollutant linkage, or</li> <li>• that type of significant harm arising from other causes.</li> </ul> <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:</p> <ul style="list-style-type: none"> <li>• would be irreversible or incapable of being treated;</li> <li>• would affect a substantial number of people;</li> <li>• would result from a single incident such as a fire or an explosion; or</li> <li>• would be likely to result from a short-term (that is, less than 24-hour) exposure to the pollutant.</li> </ul>
3	All ecological system effects.	<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;</li> </ul> <p>or</p> <ul style="list-style-type: none"> <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</li> </ul>



		beyond any practicable possibility of restoration. Any assessment made for these purposes should take into account relevant information for that type of pollutant linkage, particularly in relation to the ecotoxicological effects of the pollutant.
4	All animal and crop effects.	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.
5	All building effects	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.

## **APPENDIX D Documents associated with the determination and remediation of Littleport Gasworks**

- 1) Notice of Determination
- 2) Residents Agreement for remediation works
- 3) Schedule for re-instatement of plots post remediation.