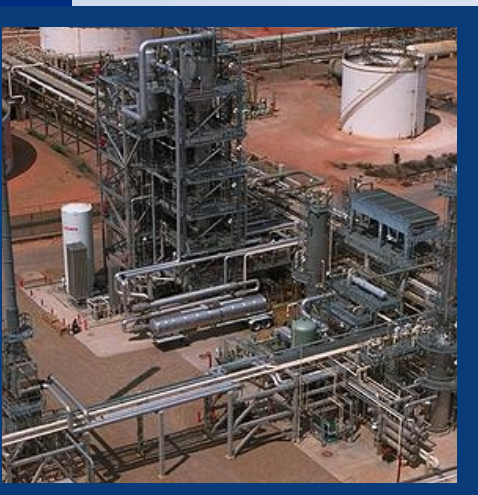




# Contaminated Land Inspection Strategy



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January 2010



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**South Kesteven District Council**

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# EXECUTIVE SUMMARY

## Regulatory Context

Under Part IIA of the Environmental Protection Act 1990, South Kesteven District Council (SKDC) has gained regulatory duties and powers relating to contaminated land. The provisions of Part IIA came into force on 1 April 2000. This document, the Contaminated Land Inspection Strategy, fulfils the first of SKDC's responsibilities – to prepare and publish a Strategy by July 2001. This document has been revised and updated in January 2010 in light of legislative and guidance updates.

The Council's duties under the Act are:

- ✳ To inspect the district of South Kesteven for land that may be contaminated
- ✳ To inspect individual sites to determine whether they are contaminated land
- ✳ To ensure that appropriate action is taken to remediate contaminated land

Part IIA places financial responsibility for remediation of contaminated land on the polluter. Where the polluter cannot be found, landowners or occupiers can be liable for the costs. Part IIA refers to people or organisations that are liable for the costs of remediation as "Appropriate Persons".

## Aims and Objectives

The main purpose of this strategy document is to explain how SKDC will carry out the duty to inspect the District and identify contaminated land. In carrying out this task, SKDC will generate a large amount of information on contaminated land. This strategy also explains how this information will be managed, and how it can be accessed.

The aims of this Strategy are:

- ✳ To establish an inspection procedure meeting the following statutory criteria:
  1. be rational, ordered and efficient
  2. be proportionate to the seriousness of any actual or potential risk
  3. seek to ensure that the most pressing and serious problems are located first
  4. ensure that resources are concentrated on investigating in areas where the authority is most likely to identify contaminated land
  5. ensure that the local authority identifies requirements for the detailed inspection of particular areas of land
- ✳ To establish an inspection procedure aimed at ensuring the protection of human health, ground and surface water resources, designated ecological sites and sites of cultural significance
- ✳ To provide published guidance to SKDC's policies and procedures on contaminated land.
- ✳ To provide a framework for the establishment of a body of information on land quality that is useful and accessible

- ✦ To aid communication between bodies and individuals interested in contaminated land
- ✦ To ensure that inspection procedures do not result in a barrier, but may form part of, the appropriate redevelopment of brownfield and/or contaminated land
- ✦ To ensure that Part IIA procedures are well integrated and consistent with the planning process
- ✦ To show how SKDC will meet its obligations under Part IIA of the EPA 1990

## What is Contaminated Land?

In general terms, contaminated land is land where human activities have resulted in the presence of substances in or on the ground that have the potential to cause harm to human health, structures or the environment. Under Part IIA, however, Contaminated Land has a specific legal meaning. SKDC also has to follow statutory guidance on how contaminated land is to be identified.

SKDC will identify contaminated land using a risk assessment methodology. For land to meet the statutory definition of contaminated land, there must be a significant pollutant linkage. To determine whether there is a significant pollutant linkage, SKDC will look for:

**A SOURCE:** the physical presence of a contaminant in, on or under the ground, in quantities large enough to be a potential hazard.

**A PATHWAY:** a means by which the SOURCE can come into contact with something or someone that could be harmed

**A RECEPTOR:** something or someone that could be harmed by the contamination – for example a person using the land, a stream close to the land, or a building built on the land.

- ✦ Where source, pathway and receptor are all present, SKDC will assess the risk of significant harm or water pollution. If the definition given below appears to be met, then the land will be classified as contaminated land.

The definition of contaminated land from the EPA 1990, Part IIA, Section 78A (2) is:

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

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

## Priorities for Inspection

Inspecting the District for contaminated land is a major undertaking, and SKDC estimates that it may take 10 years to inspect the entire area with a completion target of January 2020. To ensure that resources are concentrated in areas where problems are most likely, SKDC has established the following priorities:

1. Land that may present a risk to human health
2. Land that may present a risk to drinking water quality
3. Land that may present a risk to groundwater quality in a major aquifer
4. Land that may present a risk to surface water quality
5. Land that may present a risk to Sites of Special Scientific Interest
6. Land that may present a risk to agricultural production
7. Land that may present a risk to historic buildings or sites of archaeological importance

## Sources, pathways and receptors in South Kesteven

To establish the priorities, SKDC has undertaken a review of the environment and industrial history of the District to see what sources of contamination may be present, where these are likely to be located, and where potential sources may be close to receptors. This review concludes:

Important potential sources identified are:

- \* Railways and railway land: oils, fuels, asbestos, metals, coal ash
- \* Heavy engineering and metals sites: oils, solvents, metals, fuels, coal ash
- \* Other manufacturing industry: variable depending on industry, fuels and coal ash common
- \* Transport and distribution sites (including petrol stations): oils, fuels
- \* Sewage works: sewage sludge, metals, methane, radioactivity
- \* Old landfill sites: landfill gas, leachate, waste, radioactivity
- \* Farms: biocides, fertilisers, fuels
- \* Ironstone mining areas: metals, radioactivity
- \* Town gas manufacturing sites: tars, spent oxides – cyanides, sulphur
- \* Military sites: munitions, fuel, oils, radioactivity

Important potential receptors are:

- ✳ Residential areas
- ✳ Sports fields (including schools)
- ✳ Other amenity areas
- ✳ Footpaths and unofficial play areas on derelict/contaminated land
- ✳ Lincolnshire Limestone aquifer – particularly within a source protection zone
- ✳ River Gravel aquifer – particularly within a source protection zone
- ✳ Rivers used for drinking water supplies (Welland, Witham)
- ✳ All other surface water bodies
- ✳ Sites of Special Scientific Interest
- ✳ Buildings within Conservation Areas
- ✳ Scheduled Ancient Monuments

In the main, we expect the sources and receptors to exist in the same location in the main towns. There will be exceptions, however we expect that most of these will be in places where we are already aware of the possible existence of the source – good examples are military land, ironstone mines and filled-in railway cuttings.

## The Environment Agency

In carrying out its duties as regulator for contaminated land, SKDC will work closely with the Environment Agency. The Environment Agency will assist SKDC by providing site specific technical guidance. There are also certain categories of land, referred to as Special Sites where the Environment Agency will be the regulator. SKDC will provide information about regulatory activity on contaminated land to the Environment Agency to help the Agency prepare summary reports on the state of contaminated land in England.

## The Inspection Process

In order to carry out the inspection of the District, SKDC needs to know the locations of all the above potential sources and receptors. The most efficient means to store and use this information is to use Geographical Information System (GIS) software. SKDC has already set up a GIS, and much of the necessary information is already available. Additional information, such as site addresses and details of regulatory action taken will be stored in the Council's Environmental Protection Services database.

SKDC will use the GIS to carry out a preliminary survey to identify sites that could be contaminated and that require further investigation. These sites will be classified into priority categories using the priorities above. More detailed work will then be carried out in priority order.

Investigations will be carried out on a site by site basis. The Environment Agency will be consulted, as will any other appropriate statutory body – for example Nature England, English Heritage, DEFRA or the HSE. Landowners and occupiers, and those who may be Appropriate Persons will also usually be consulted at an early stage. SKDC will generally visit sites and make enquiries for any information on the state of the land that exists. For example, a landowner may have had site investigation carried out prior to erecting a new building.

If there is insufficient information available to decide whether or not the site is contaminated land, SKDC may decide to carry out detailed intrusive investigation. If necessary, SKDC has statutory powers to enter land to take samples. Normally, however, this will be done with the agreement of the landowner.

When sufficient information is available, SKDC will carry out a full risk assessment to decide whether or not the site is contaminated land. If the site is contaminated land, a written record explaining the reasons will be prepared and all stakeholders will be informed.

## **Remediating Contaminated Land and the Public Register**

SKDC has a duty to ensure that appropriate action is taken to remedy contaminated land. When contaminated land is identified, SKDC will consult the Appropriate Persons with the objective of agreeing voluntary action.

If voluntary action is not forthcoming, SKDC has the power to serve a remediation notice, requiring that particular action to address risks from contamination is taken. Details of any such regulatory action will be held on a Public Register, kept by Environmental Protection Services at the Council Offices in Grantham. The Public Register can be viewed, free of charge, during normal office hours.

SKDC will generate a great deal of information that will not be on the Public Register. Except where the information is commercially confidential, or confidential for other reasons, all the information that SKDC holds will be in the public domain. Any individual or organisation may ask for information. SKDC may make a reasonable charge to cover its costs in responding to queries.

All queries about contaminated land should be directed to:

Environmental Protection Services  
South Kesteven District Council  
Council Offices  
St Peter's Hill  
Grantham  
Lincolnshire  
NG31 6PZ

Telephone 01476 406300  
Fax 01476 406006  
e-mail: [ehs@southkesteven.gov.uk](mailto:ehs@southkesteven.gov.uk)

## Contaminated Land and Development Control

Development control officers will consult Environmental Protection Services when a planning application is submitted where there is a possibility of contamination. It is SKDC standard practice to request that a desk study and preliminary risk assessment accompanies such applications. Environmental Protection Services will advise on whether further investigations or remedial works are required to ensure that the land is suitable for the proposed use (i.e. not statutory Contaminated Land). The Planning Authority will ensure that the appropriate works are carried out by means of planning conditions. When remediation is needed, Environmental Protection Services will ask for a Remediation Statement detailing the works that have been completed. Environmental Protection Services will advise development control officers when conditions on remediation can be discharged. A leaflet adopted by SKDC titled "Development on Land Affected by Contamination" is available for download (<http://www.southkesteven.gov.uk>) to assist developers of land which may be contaminated.

## Reviewing the Strategy

The Strategy will be kept under review to ensure that it continues to fulfil SKDC's statutory obligations and that it meets SKDC's needs and the needs of the community. This document dated January 2010 is the strategy's first revision and it will continue to be periodically reviewed as and when required.

Site inspections will also be kept under review. The risks posed by contamination may change, for example if the site use changes. SKDC has therefore established a number of instances that will trigger a review of a site inspection – for example the receipt of a planning application, or new information from another statutory body.



# CONTENTS

## EXECUTIVE SUMMARY

|   | Page |
|---|------|
| <b>1. Introduction</b>  |      |
| 1.1. General Policy of SKDC   | 9    |
| 1.2. Regulatory Context   | 11   |
| 1.3. Responsibility for Contaminated Land and Strategy Development          | 16   |
| 1.4. Objectives of the Strategy Document                                    | 17   |
| 1.5. Overview of the Inspection Process                                     | 17   |
| <b>2. CHARACTERISTICS OF SOUTH KESTEVEN DISTRICT</b>                        |      |
| 2.1. Introduction   | 18   |
| 2.2. General description  | 18   |
| 2.3. Industrial History   | 19   |
| 2.4. Current land use patterns  | 21   |
| 2.5. South Kesteven Population Distribution                                 | 21   |
| 2.6. Redevelopment history and controls                                     | 22   |
| 2.7. Known information on contamination                                     | 22   |
| 2.8. Action already taken on contamination                                  | 23   |
| 2.9. Protected Locations (natural habitats etc)                             | 23   |
| 2.10. Historic Buildings and Ancient Monuments                              | 25   |
| 2.11. Geology   | 25   |
| 2.12. Water Resources and Hydrogeology                                      | 26   |
| 2.13. Radon   | 29   |
| 2.14. Conclusions   | 29   |
| <b>3. The Local Authority Strategy: Overall Aims</b>                        |      |
| 3.1. Aims of the Strategy   | 31   |
| 3.2. Objectives and Milestones  | 31   |
| 3.3. Performance standards  | 32   |
| <b>4. PRIORITIES</b>  |      |
| 4.1. Priorities   | 33   |
| 4.2. Priority Categories for Survey and Inspection                          | 35   |
| 4.3. Land Owned and Occupied by SKDC  | 35   |
| <b>5. SURVEYING THE AREA AND PRIORITISING SITES FOR DETAILED INSPECTION</b> |      |
| 5.1. Information collection for survey and inspection                       | 36   |
| 5.2. Methodology for Initial Survey and Prioritisation                      | 37   |
| 5.3. Information Evaluation   | 39   |
| 5.4. Ongoing Identification of Potentially Contaminated Sites               | 40   |



|            |  |    |
|------------|--|----|
| <b>6.</b>  | <b>FURTHER INSPECTION</b>  |    |
| 6.1.       | Ensuring Compliance with Statutory Guidance on Inspection                | 41 |
| 6.2.       | Criteria for Selecting Areas and Individual Sites                        | 42 |
| 6.3.       | Methodology and Procedures for Detailed Inspection                       | 42 |
| 6.4.       | Potential Special Sites  | 46 |
| 6.5.       | Health and Safety Statement  | 46 |
| 6.6.       | Appointing Consultants   | 46 |
| <b>7.</b>  | <b>Information Management</b>  |    |
| 7.1.       | General Principles   | 47 |
| 7.2.       | The Public Register  | 47 |
| 7.3.       | Information not on the Public Register                                   | 49 |
| 7.4.       | Confidentiality of Information   | 50 |
| 7.5.       | Excluding commercially confidential information from the Public Register | 50 |
| 7.6.       | Storage Systems  | 51 |
| 7.7.       | Administration   | 51 |
| 7.8.       | Use By Other SKDC Departments  | 52 |
| <b>8.</b>  | <b>General Liaison and Communication Strategies</b>                      |    |
| 8.1.       | Viewing the Public Register and requesting information                   | 53 |
| 8.2.       | Land Charges ~   | 54 |
| 8.3.       | Offering information and making complaints                               | 54 |
| 8.4.       | Guidance for potential Appropriate Persons                               | 54 |
| 8.5.       | Planning and Development Control   | 55 |
| 8.6.       | Consultation with Statutory Bodies                                       | 55 |
| 8.7.       | Environment Agency: consultation and provision of information            | 56 |
| 8.8.       | Lincolnshire County Council  | 57 |
| 8.9.       | Neighbouring Local Authorities   | 57 |
| 8.10.      | English Heritage   | 58 |
| 8.11.      | Natural England  | 58 |
| 8.12.      | Department of the Environment, Food & Rural Affairs                      | 59 |
| 8.13.      | Food Standards Agency  | 59 |
| 8.14.      | Anglian Water  | 60 |
| 8.15.      | Health & Safety Executive  | 60 |
| 8.16.      | Consulting Owners, Occupiers and Other Interested Bodies                 | 60 |
| 8.17.      | Risk Communication   | 62 |
| <b>9.</b>  | <b>Review Mechanisms</b>   |    |
| 9.1.       | Reviewing Inspections and Responding to New Information                  | 63 |
| 9.2.       | Review of the Inspection Strategy  | 64 |
| 9.3.       | Auditing Procedures  | 64 |
| <b>10.</b> | <b>OTHER SUPPORTING INFORMATION</b>                                      |    |
| 10.1.      | Glossary   | 65 |
| 10.2.      | References   | 70 |

## Section 1

### 1. Introduction

Under Part IIA of the Environmental Protection Act (EPA) 1990, Local Authorities in England are given responsibilities for regulating contaminated land. Part IIA came into force in April 2000.

There are two main parts to the local authority's duties under Part IIA – an inspection function and an enforcement function. It is a statutory requirement that each local authority publish a strategy for carrying out inspection of its area to identify land that may be contaminated. This strategy fulfils that requirement. It deals principally with the inspection function, showing how the South Kesteven District Council (SKDC) will inspect the district for contaminated land, identify contaminated land and manage the information that is collected in the process.

The purpose of the contaminated land legislation is to ensure that historically contaminated land is cleaned up in such a way that it is safe, suitable for a beneficial use, and does not pose a risk to health or the environment.

Prevention of new contamination is dealt with by different legislation, for example Environmental Permitting Regulations (EPR April 2008) and the waste management licensing system (Part 2 of the EPA 1990).

#### 1.1. General Policy of SKDC

This strategy is written in the context of South Kesteven District Council's corporate mission statement.

**Customer First** - Making sure our customers are at the heart of everything we do by getting it 'right first time' and making it easy to access our services.

**Quality Living** - To create an attractive and sustainable environment for the community to enjoy, with an environment which is green, clean, safe and well maintained.

**Quality Organisation** - Provide effective access to services and to improve the skills and capacity of the organisation to meet local priorities and deliver excellent services.

**Good for business** - Work in partnership to promote the growth of local business and develop the economy in our district.

The contaminated land function will be managed by Environmental Protection Services, and their mission statement is also relevant.

#### **Environmental Protection Services Mission Statement**

Everyone has a basic right to health and it is recognised that the environment in which people live has a profound effect on their health and their development and on the quality of life that they enjoy.

Environmental Protection Services are dedicated to protecting public health, to the elimination of unhealthy environmental conditions and to securing the health, safety and wellbeing of all in the community.

Contaminated land is an important environmental issue, and this strategy is written in the context of South Kesteven District Council's broader environmental policy as set out in our Local Agenda 21 Statement. In 1992 at the United Nations Conference on Environment and Development (the Earth Summit), over 150 nations including the UK endorsed

a 500 page document setting out how both developed and developing nations can work together towards sustainable development.

Local action is an important feature of Agenda 21, and our Local Agenda 21 Statement explains how South Kesteven District Council will contribute to the sustainable development process. All SKDC decisions are made in the context of a five-point strategy to improve sustainability in the district:

### **Local Agenda 21 Aims**

- ✿ To create an environment conducive to enhanced economic activity
- ✿ To improve quality of life for people of the district and in particular for the vulnerable groups in the community
- ✿ To ensure the continued physical well-being of the area
- ✿ To provide its people with opportunities for a healthy and fulfilled lifestyle through recreation and culture
- ✿ To address the imbalances in service standards and accessibility suffered by our rural residents

In addition to seeking environmental, social and economic sustainability, SKDC is fully committed to a Government initiative designed to ensure that local authorities are delivering value for money across all services. This is known as "Best Value". SKDC will apply the principles of Best Value across all the activities that form part of the contaminated land regulation under Part IIA of the EPA 1990.

SKDC also has some specific aims related to the use and recycling of derelict and brownfield land.

### **Aims for use and recycling of brownfield land**

- ✿ To ensure that public health, water resources and the environment are protected from harm
- ✿ To promote the best use of urban land and buildings to meet local housing needs
- ✿ To increase the reuse of brownfield sites to reduce pressure on greenfield sites, thereby protecting the countryside
- ✿ To help meet the Governments national target of at least 60% of new homes being built on previously developed land (2000/2001)
- ✿ To improve the quality of available mapping to allow planners to channel development away from greenfield sites
- ✿ To ensure that procedures under this legislation do not hinder the redevelopment of brownfield land

The main outcomes of SKDC's activities under Part IIA will be that action will be taken to clean up any harmful or polluted land, and a large body of useful information on land quality will be generated. SKDC will aim to make redeveloping brownfield land in South Kesteven more straightforward whilst ensuring that public health and the environment are always protected to the same high standards.

## Sustainable Communities Strategy

SKDC, with its partners, will both lead and co-ordinate the preparation of a sustainable communities strategy for the district, as required under the Local Government Act 2000. This will aim to enhance the quality of life of the local community and contribute to the achievement of sustainable development through action to improve the economic, social and environmental well being of the district and its inhabitants. The Council will build on existing strategies including Local Agenda 21 planning.

The community plan and the contaminated land strategy are complementary programmes within the framework of the Agenda 21 objectives and SKDC's corporate mission statement.

## Enforcement Policy

SKDC's policy on the enforcement of Part IIA is determined by the statutory guidance and by SKDC Environmental Protection Services Enforcement Policy. SKDC is a signatory to the national Enforcement Concordat. The main principles of enforcement will be:

- ✱ Proportionality: the enforcement action will be proportional to the risk posed by the site
- ✱ Consistency: we will strive to apply a consistent approach to all contaminated land sites, and this strategy aims to explain how this will be achieved
- ✱ Targeting: this strategy sets out how we will target inspections to ensure that the most serious problems are identified first
- ✱ Transparency: we aim in this strategy to help all parties understand our duties under Part IIA, and how our decisions on enforcement will be made.
- ✱ Voluntary action: we will encourage people who are, or may be, responsible for contaminated land to take voluntary action
- ✱ Equal Opportunities: we will ensure that our strategies and methodologies treat everyone in a way that leads to the same outcome. We will warrant that people from all groups are aware of their rights and have access to and information about services available to them.

## 1.2. Regulatory Context

This strategy is principally concerned with the inspection of land to determine whether or not it may be statutorily contaminated land. This is only one aspect of the responsibilities that local authorities have gained. In this section, an overview of the legislation is given, to place the strategy in context and explain some terminology that will be used later on in the document.

Please note that this section provides a summary and explanation of the main provisions of the contaminated land legislation. It is not a definitive or exhaustive guide, and it has no legal force. Please refer to the EPA 1990, Part IIA [1], the statutory guidance, DETR Circular **01/2006** [2] and the **Contaminated Land (England) Regulations 2006** [3] for a full description.

## Regulatory role of the Local Authority

Local authorities have gained significant new responsibilities for contaminated land. Local authorities must [1]:

- ✳ Ensure that their areas are inspected to identify contaminated land
- ✳ Determine whether any particular site is contaminated land
- ✳ Act as enforcing authority to ensure that contaminated land is remediated appropriately (except where the site is a special site, in which case the Environment Agency acts as enforcing authority)

The enforcement role applies only to sites that are identified as statutorily contaminated land. When such a site is identified, the authority will:

- ✳ Establish who is responsible for the contamination
- ✳ Decide what action is required
- ✳ Ensure that the appropriate action is carried out – either through agreement with the person responsible for the contamination, or by serving a remediation notice.
- ✳ Determine who should bear what proportion of the costs of the remediation
- ✳ Record information about the regulatory action on a public register

In carrying out its duties, the authority is required to act in accordance with the statutory guidance [2].

## Regulatory role of the Environment Agency

The Environment Agency has four important functions in regulating contaminated land:

- ✳ To assist local authorities in investigating contaminated land
- ✳ To provide site specific guidance to local authorities on contaminated land, particularly where water pollution is involved
- ✳ To act as enforcing authority when a site is designated as a Special Site
- ✳ To publish periodic reports on contaminated land

A Special Site is a site that meets one of the statutory definitions for Special Sites. In general, Special Sites have had uses where the Environment Agency is likely to already have a regulatory responsibility, for example IPC and EPR sites. Special Sites are not necessarily more contaminated than other kinds of site. Examples of Special Sites are nuclear sites, current MOD sites, land contaminated in terms radioactivity, oil refineries, and sites that may be causing pollution of drinking water resources. For a full legal definition of the term “Special Site”, please refer to the Contaminated Land (England) Regulations 2006 [3].

## What is contaminated land ?

In general terms, contaminated land usually means land where anthropogenic activities have resulted in the presence of substances in the ground with potential to cause harm to human health, structures, or the environment. However, in English law the term “contaminated land” means something more specific than this. The duties and powers of local authorities extend only to land that falls within the statutory definition of contaminated land – enforcement action cannot be taken where land is not legally “contaminated land”.

The definition of contaminated land from the EPA 1990, Part IIA, Section 78A [2] is:

### Statutory definition of Contaminated Land

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

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

The meanings of the terms within the definitions are important. The statutory guidance gives quite detailed explanations of what each term in the definition means. Below, a brief summary is given to aid understanding of the statutory meaning of contaminated land.

### Significant Harm includes:

- ✱ Death, disease, serious injury, genetic mutation, birth defects or the impairment of reproductive functions in humans
- ✱ Irreversible adverse change, or threat to endangered species, affecting an ecosystem in a protected area (e.g. site of special scientific interest)
- ✱ Death, serious disease or serious physical damage to pets, livestock, game animals or fish
- ✱ A substantial loss (20%) in yield or value of crops, timber or produce
- ✱ Structural failure, substantial damage or substantial interference with right of occupation to any building

### Significant Possibility of Significant Harm:

In determining whether there is a significant possibility of significant harm, the local authority will use a risk assessment approach, considering both the severity and the likelihood of the possible harmful effect. This will involve establishing:

- ✱ The nature and degree of harm predicted
- ✱ The susceptibility of the receptors to which harm might be caused
- ✱ The timescale within which the harm might occur

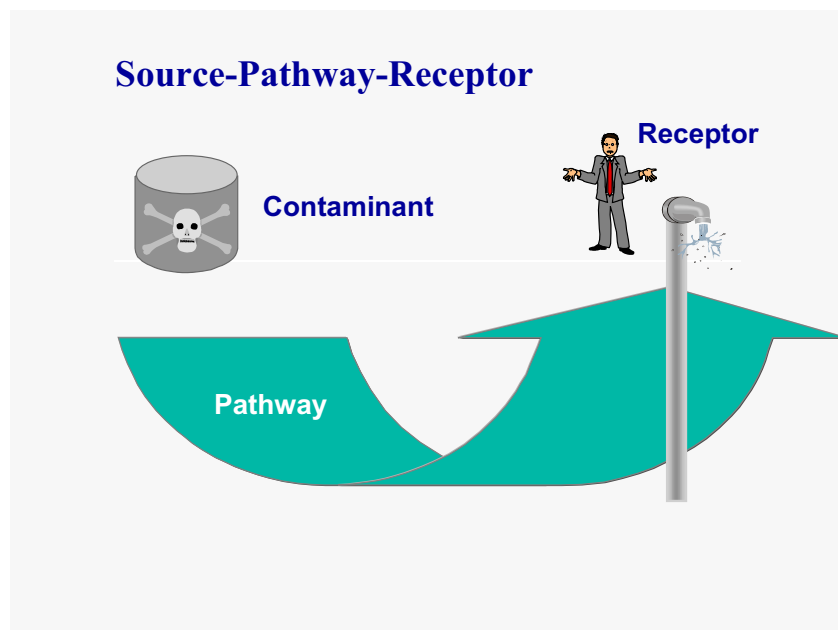
## Pollution of controlled waters

“Controlled waters” are all natural inland and near coastal waters, including groundwater. Therefore, all lakes, rivers, streams, estuaries and coastlines are controlled waters. Pollution of controlled waters means the addition of any “poisonous, noxious or polluting matter or any solid waste matter”.

## Principles of pollutant linkages: Source, pathway and receptor

In order to be sure that any harm or pollution is a result of the presence of substances in, on or under the land, the local authority will check to see whether there is a demonstrable or plausible means for the substance (termed the “source”) to come into contact with something that may be harmed (the “receptor”). This means of contact is termed the “pathway”. Where a source, a receptor and a pathway exist together, we call this a pollutant linkage. If there is no pollutant linkage, the substance cannot cause harm.

For example, consider an old industrial site that has become contaminated with lead (a toxic metal). The receptor of concern is the people that live near the site. To be harmed by the lead, the people must be able to come into physical contact with the soil that contains the lead – they must be able to inhale soil dust, or get soil in their mouths. If buildings cover all the contaminated soil, concrete and tarmac, the people cannot contact the soil. There is no pollutant linkage, and no risk of harm. In this case, even though a potentially harmful substance was present, the site would not legally be contaminated land.



## Principles of risk assessment

Risk assessment is the means by which SKDC will determine whether land appears to be contaminated land in accordance with the definitions above, in particular whether there is a significant pollutant linkage.

Risk assessment is a structured method for making decisions in circumstances where there is uncertainty. In risk assessment we distinguish between the concepts of hazard and risk:

**Hazard** is an attribute or situation that in particular circumstances could lead to harm



**Risk** is a combination of the probability, or frequency, of occurrence of a defined hazard and the magnitude of the consequences of the occurrence (i.e. how likely is the hazard, and how bad would it be if it happened).

The source-pathway-receptor analysis described above is used to identify the hazard (the pollutant linkage). The risk assessment considers how likely the pollutant linkage is to exist, and how severe the consequences would be if it did exist. This could involve, for example, considering how much contaminant might contact the receptor, over what time period, and how sensitive the receptor might be to the contaminant. At the end of the process, the assessor will be able to determine whether the pollutant linkage is deemed to be 'significant', and therefore whether the site is contaminated land.

To find out more about risk assessment, we recommend publications [4] - [5] inclusive.

## Policy on remediation – suitable for use

It is Government policy that land should be remediated to a standard where it is suitable for its current use, and significant harm or pollution of controlled waters can no longer occur. This is to be achieved by considering the pollutant linkages that have been identified and ensuring that each is treated such that the linkage is broken – for example:

- (i) remove or treat the source (the pollutant)
- (ii) break or remove the pathway
- (iii) protect or remove the receptor

When identifying the best method for remediation, the local authority will use the concept of “best practicable technique”. Such techniques will have proven effectiveness, be practical to achieve in the particular circumstances of the site, and will be durable over a timescale appropriate to the problem. SKDC will show a preference for more sustainable techniques wherever these are technically feasible. The authority will also consider the cost of the remediation in proportion to the severity of the harm or water pollution.

## Requirements for a strategic approach

The statutory guidance requires local authorities to take a strategic approach to the inspection of land and identification of land that may be contaminated. The statutory guidance states that the approach must:

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

### 1.3. Responsibility for Contaminated Land and Strategy Development

The Environmental Protection Services Section of SKDC is responsible for carrying out the inspection of land within the district.

- ✳ The Corporate Head of Healthy Environment holds the overall responsibility for compliance with Part IIA.
- ✳ Responsibility for management of the contaminated land duties is held by the Environmental Protection Services Manager.
- ✳ Responsibility for carrying out site inspections and for liaising with the public and other interested parties is held by designated Environmental Protection Services Officers.

This strategy has been prepared by SKDC Environmental Protection Services with assistance from consultants Symonds Group Ltd. The first revision of the strategy was carried out with assistance from GRM Development Solutions.

In accordance with the principles of Best Value, South Kesteven has participated in a partnership approach to preparing the strategy. Thirteen authorities in the Lincolnshire and East Midlands area have collaborated in preparation of their strategies, and have shared consultancy costs, experiences and ideas. The authorities that contributed to the group were East Lindsey District Council, West Lindsey District Council, City of Lincoln Council, North Kesteven District Council, South Kesteven District Council, Boston Borough Council, South Holland District Council, East Northamptonshire Council, Harborough District Council, Melton Borough Council, Rutland County Council, North East Lincolnshire Council and Peterborough City Council.

Other organisations were also been consulted in the preparation of the strategy. These were:

- ✳ Environment Agency
- ✳ Lincolnshire County Council
- ✳ East Midlands Development Agency
- ✳ English Nature (now known as Natural England).
- ✳ English Heritage
- ✳ Heritage Trust of Lincolnshire
- ✳ Department for Environment, Food & Rural Affairs
- ✳ Food Standards Agency
- ✳ Anglian Water

Contact details for these organisations are given in Section 8.

## 1.4. Objectives of the Strategy Document

The main objectives of this strategy document are:

- ✦ To meet the statutory requirement to publish a strategy for inspection of the District of South Kesteven for contaminated land
- ✦ To explain how SKDC plans to meet the particular statutory objectives for the strategy, i.e.
  1. be rational, ordered and efficient
  2. be proportionate to the seriousness of any actual or potential risk
  3. seek to ensure that the most pressing and serious problems are located first
  4. ensure that resources are concentrated on investigating in areas where the authority is most likely to identify contaminated land
  5. ensure that the local authority efficiently identifies requirements for the detailed inspection of particular areas of land

To provide a readily available source of reference on SKDC's aims, objectives, procedures and information management systems for all interested parties, including members of the public, local businesses and landowners, environmental organisations and the Council itself.

## 1.5. Overview of the Inspection Process

The basic tasks required for the inspection of SKDC's area for contaminated land are set out below. SKDC has already completed several of them, and this strategy explains how and when the other tasks will be undertaken.

| Task  | Status                                   |
|---|--|
| Establish a team within SKDC and allocate responsibilities for contaminated land  | Completed                                |
| Establish links with statutory bodies and appropriate local organisations   | Completed                                |
| Acquire information required to carry out survey and inspection   | Completed                                |
| Establish systems to manage the information and keep it updated   | Completed                                |
| Carry out initial desk based survey of entire area and prioritise sites that may be contaminated for more detailed assessment (Stage 1)         | Completed                                |
| Carry out preliminary risk assessment of sites in priority order and assign priority for detailed inspection (Stage 2)                          | Completed                                |
| Carry out detailed inspections in priority order  | Ongoing                                  |
| Use risk assessment to determine whether inspected sites are contaminated land  | Ongoing                                  |
| Place details of contaminated land on a public register and commence appropriate action   | Ongoing                                  |
| Assess new information provided by the planning process, the public, statutory bodies or other organisations using the same procedures as above | Ongoing                                  |
| Respond to enquiries, complaints and requests for information   | Ongoing                                  |
| Review the strategy and performance against objectives and targets regularly to ensure compliance with the law and to monitor progress          | January 2010 and periodically thereafter |

## SECTION 2

### 2. CHARACTERISTICS OF SOUTH KESTEVEN DISTRICT

#### 2.1. Introduction

The purpose of this section is to describe South Kesteven's environment, history and economy in terms of the likely nature, extent and location of contaminated land. We have undertaken a review of published information and records within South Kesteven DC in order to determine the most effective strategy for carrying out the inspection of the area.

Below, South Kesteven district is described, identifying potential sources, pathways and receptors. In order to fulfil the statutory requirement that the inspection strategy should ensure the most serious problems are addressed first, it makes sense to begin the inspections in locations where sources, pathways and receptors are most likely to be found in the same place.

This section outlines South Kesteven's most important sources, pathways and receptors and identifies their geographical distribution. Much of the information has already been entered into South Kesteven's Geographical Information System (GIS) software, which has been used to identify locations where sources, pathways and receptors may coincide. The conclusions of our study are summarised at the end of the section. Section 4 explains how the identified potential problem areas will be prioritised for inspection.

#### 2.2. General description

South Kesteven, whose name derives from the Celtic for "wood" is located in the south-west of the county of Lincolnshire. South Kesteven district has an area of 94,310 hectares, split up into 84 parishes. Approximately 65% of the population live in the four main towns of Grantham, Stamford, Bourne and the Deepings (Market Deeping and Deeping St James) [6].

Outside these towns, the character of the district is predominantly rural, with around two-thirds of the land area identified as of great landscape value in the Local Plan [7]. The rural area is dotted with picturesque villages and hamlets, many of which have well preserved historic buildings and churches.

Grantham, the main town, is famous for being birthplace of Sir Isaac Newton and Britain's first woman Prime Minister Margaret Thatcher. It is also the district's most important road and rail link, served by the A1 and the London-Edinburgh East Coast main rail line.

Stamford lies in the south west of the district. As one of the most picturesque towns in England, its architecture and history have drawn famous writers, painters and more recently, the film industry.

Bourne and Market Deeping are small market towns to the south-east of South Kesteven, located on the edge of the fens.

South Kesteven's rural landscape is dominated by agriculture. Central and western parts of the district consist of low undulating terrain with occasional sharp escarpments of limestone. Much of the area is high quality farmland, interspersed with numerous areas of woodland. The rolling landscape gives way to the flat lands of the Fens in the eastern part of the district. The Fens are characterised by flat open country with few trees, and peat bogs with networks of straight drainage channels.

## 2.3. Industrial History

Britain's long history of industrial activity, responsible for much of our wealth and relatively powerful position amongst the world's developed nations has been largely responsible for the legacy of contaminated land that we are now seeking to tackle. Identifying land that has been used for an activity that could have caused contamination will be one of South Kesteven's main tasks.

It is generally accepted that most contamination has resulted from industrial practices of the past – before it was realised that industrial wastes, discharges and spills could harm the environment, and before we realised that we would need to use the land in future. Modern industry is much less contaminative because practice has changed, through increased regulation and awareness, particularly over the last twenty years.

In comparison to many areas of England, South Kesteven has little in the way of potentially contaminative industry. Current employment is dominantly in the service sector, for example local government, distribution, catering, banking, finance and retail. However, employment in manufacturing industry is above the national average, and above the average for Lincolnshire [6]. For a rural district, employment in agriculture is low (less than 5%). Principal industries are heavy engineering, food processing, distribution, cold storage, agriculture and agricultural engineering and tourism.

South Kesteven's population would have grown steadily from Roman times, with the main towns being established by the Saxons. The district contributed to Lincolnshire's wool trade; by the 13th Century Boston was England's main wool-exporting port [8]. The wool brought prosperity, evidenced by some magnificent buildings such as St Wulfram's church in Grantham.

The 18th Century saw the start of major changes in the district with new toll roads allowing much improved transport between the main towns, boosting trade. Grantham began to develop as a transport and distribution centre, and the opening of the Grantham-Nottingham canal in 1797 allowed export of grain and import of coal in bulk. During the 19th Century industrial development in the district began in earnest with the construction of the railways. Heavy engineering works grew in importance, and the district's population soared. Engineering works and associated metalworking sites like foundries, smelters and scrapyards are often contaminated. Common contaminants include coal, clinker and coal ash, metal fragments and heavy metal compounds, acids, oils and solvents.

Industrialisation brought other developments that may have caused contamination. Town gas began to be produced in the 1830's. Gas works sites are often contaminated with waste materials from the process of producing gas from coal – for example tar and sulphur. Sewage treatment also developed at around this time, and disposal of sewage sludges around the treatment works frequently resulted in contamination.

The outbreak of the World War One began the construction of Belton Camp near Grantham. Military installations grew rapidly, and soon doubled Grantham's population with military personnel. The town's military importance continued in World War Two, with the establishment of large munitions and aircraft manufacturing factories. This is probably the reason for Grantham having been extensively bombed.

The military history of the area may have resulted in some land contamination. Occasional discoveries of unexploded bombs make headlines, however more mundane contaminants such petrol, lubricating oil, solvents and aviation fuel are more likely to be responsible for environmental harm.

Other 20th Century industrial and commercial activities may also have resulted in contamination. In many areas of manufacturing industry, even up to the mid 1970's, it was reasonably common to dispose of waste materials on site. We therefore consider any former manufacturing site potentially contaminated with the substances that were used there – the nature of the contamination is highly dependent on the nature of the business. Some contaminants are common across many industries – these include coal related contaminants from boiler ash (arsenic, heavy metals, sulphate), lubricating oils, fuel hydrocarbons and asbestos.

Hazardous substances are routinely used in modern agriculture. Farmers use fertilisers, pesticides and herbicides to maximise production, and in excess these substances can cause harm to human health, water quality and ecosystems. In general, these substances are used up, biodegraded or run off rapidly into surface waters when they are spread onto land, so we do not expect farmers' fields to be contaminated land. However, large concentrations as a result of spillage or poor storage practice could cause contamination. Farms, like other industrial premises often have fuel tanks, and leakage of these can also cause contamination.

Another important activity that increased dramatically in the late 20th Century is waste disposal. Our modern society produces much more waste than previous generations, mainly because of packaging. We have disposed of most of our waste into holes in the ground, and until the mid 1970's there were few controls and limited records. Both SKDC and the Environment Agency hold registers of former landfill sites, and the locations of many are known – however there may well be others that we are not aware of. Typically, old landfills fill up holes in the ground that were created for some other reason – for example gravel pits and old railway cuttings. Operational landfill sites are licensed by the Environment Agency, and are now very strictly controlled by regulations.

Waste in landfill sites slowly rots, and in so doing it produces the gases methane and carbon dioxide ("landfill gas"). This can be a hazard, since landfill gas is flammable and can cause explosions if it is allowed to accumulate in confined spaces. Landfills can also cause water pollution, if leachate rich in dissolved organic substances and metals reaches surface and groundwaters.

We have therefore identified a number of potential sources of contamination that may exist as a result of South Kesteven's industrial history. In summary, these are:

- ✱ Railways and railway land: oils, fuels, asbestos, metals, coal ash
- ✱ Heavy engineering and metals sites: oils, solvents, metals, fuels, coal ash
- ✱ Other manufacturing industry: variable depending on industry, fuels and coal ash common
- ✱ Transport and distribution sites (including petrol stations): oils, fuels
- ✱ Sewage works: sewage sludge, metals, methane, radioactivity
- ✱ Old landfill sites: landfill gas, leachate, waste, radioactivity
- ✱ Farms: biocides, fertilisers, fuels
- ✱ Ironstone mining areas: metals, radioactivity
- ✱ Town gas manufacturing sites: tars, spent oxides – cyanides, sulphur
- ✱ Military sites: munitions, fuel, oils, radioactivity

In general, the potentially contaminated sites from these sources are likely to coincide with the areas of the main towns, with the exception of ironstone mines, military sites and farms. Ironstone mines and military land are readily identified; farms are widely distributed and numerous, but not likely to be a priority as their use of hazardous substances is already controlled by the Environment Agency under the Groundwater Directive.

## 2.4. Current land use patterns

The majority of South Kesteven's land area is used for agriculture, and in the rolling countryside between Grantham and Stamford there are significant areas of woodland. On the eastern side of the district are the flat fens, also mainly in agricultural use. Around Market Deeping there are several lakes resulting from sand and gravel workings. The rural land is dotted with small towns and villages, and as a result there are dwellings in nearly all areas. South Kesteven has no large tracts of very sparsely populated land.

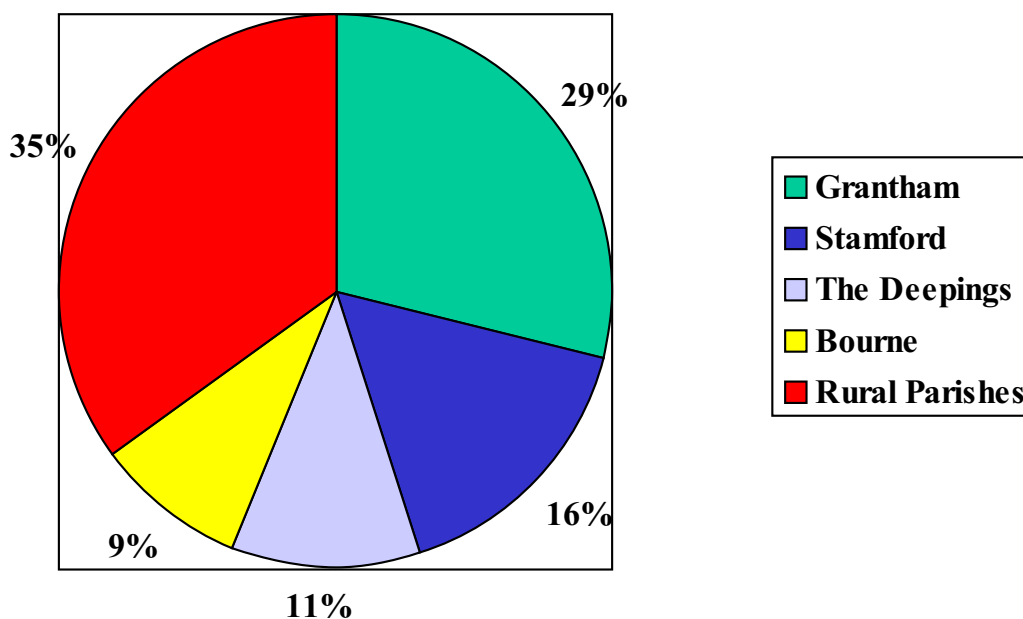
Industry and commerce are very much concentrated around the larger towns, particularly Grantham as a result of its excellent transportation links. In general, industrial premises are present around the edges of the main towns because the centres pre-date large scale industrialisation. Much of the residential land is also around the outskirts of the main towns as a result of rapid expansion.

We are interested in current land use because residential properties are an important "receptor" – if homes are built on or near contaminated land there may be a health risk. Examination of current land use patterns leads us to the conclusion that the most important coincidence of source and receptor is likely to be in the outskirts of the main towns, in estates constructed post-World War 2. It should be noted here that our preliminary study has not indicated any sites where significant risks are thought likely.

Another important public health related receptor is land (and water) used for leisure and amenity purposes, such as public parks, nature reserves and sports grounds. The mechanism for people to be exposed to contamination in these areas would normally be direct contact with soil or water. Uses which increase this contact – for example football or rugby – would be of particular concern.

Finally, public exposure to contamination may occur where people cross a contaminated site (usually derelict) on a footpath, or children use the area for playing on. SKDC is usually aware of such sites.

## 2.5. South Kesteven Population Distribution





In 2001 South Kesteven's population was about 130,000 [6]. Comparison of population figures between 1988 and 1994 shows that South Kesteven's population has been growing fast – at almost four times the national average, and more than any other Lincolnshire district. The population growth has been largest in the four main towns, and in fact the population in about half of the rural parishes has actually fallen between 1981 and 1991. Currently, the population is approaching 125,000.

More people mean more homes. Between 1988 and 1995, 38% of all new homes in South Kesteven were built in Grantham, and almost two thirds were built in the four main towns. Nearly all homes are owned by their occupiers.

## **2.6. Redevelopment history and controls**

South Kesteven has benefited from a sustained high level of economic growth, coupled with a significant rise in population over the last twenty years. This has resulted in significant expansion of developed land, both in housing and employment uses. Because of South Kesteven's rural character, much of this expansion has taken place on greenfield sites – there was not very much derelict land available, and where it was available it was often in the wrong place.

Of course some new building has occurred on previously used land. SKDC is responsible for controlling development under the planning system, and has considered the potential for contamination in cases where the risk was apparent. It is recognised, though, that standards for contaminated land clean-up have changed considerably over the last ten years. It is possible that developments have been permitted in the past without the stringent risk control measures that would be required today. These may be deemed to warrant further inspection as part of this Strategy.

Some land in South Kesteven is in the District Council's ownership. As part of the inspection of the district for contaminated land, SKDC will inspect its own land, and land that it has previously owned.

Most SKDC land is in Grantham, Stamford, Bourne and Market Deeping, with smaller landholdings in numerous smaller towns and villages across the district. Much of SKDC's land is housing, however SKDC also owns public open spaces, land used for shops, offices and factories, and some land that is derelict and waiting to be developed. There are also the premises where SKDC conducts its own business, such as council offices and depots.

## **2.7. Known information on contamination**

SKDC is aware of some sites in the district that are likely to be contaminated, and in some cases the authority is already in possession of a significant amount of information on these sites. In most cases the sites have come to the authority's attention via the planning process. Where development on potentially contaminated sites is proposed, SKDC asks developers to provide detailed information on sources, pathways and receptors and to carry out risk assessment. Where risk assessment shows that clean up is needed, SKDC requires the developer to provide a remediation method statement detailing how the clean up will be achieved.

There are also a number of lists and registers kept by SKDC, Lincolnshire County Council and the Environment Agency that contain details of sites that have had potentially contaminative uses. These include lists of closed landfill sites, registered petrol storage sites and registered scrapyards.

## 2.8. Action already taken on contamination

Since publication of this strategy over 400 sites from an initial 1200 sites identified have been inspected and over 200 planning applications have been assessed. One site, Wharf Road car park, Stamford, has been determined as statutorily contaminated land, and has been remediated.

The Wharf Road carpark in Stamford was a former gasworks. This site was determined as statutorily contaminated land because of gas works waste affecting groundwater. The site has since been remediated by bioremediation and excavation and disposal.

## 2.9. Protected Locations (natural habitats etc)

The legislation on contaminated land empowers local authorities to take action to prevent significant harm to important ecological sites. Action can only be taken to require remediation of contaminated land where a site with statutory protection is at risk (see Box 2.1 for list). The authority is not allowed to take action to prevent damage to ecology and wildlife on any non-designated site.

South Kesteven has 28 Sites of Special Scientific Interest (Box 2.2), representing a variety of important habitats across the district. There are currently no sites in South Kesteven in any of the other categories of protected site listed in Box 2.1, and no sites currently under consideration for such status.

There are also seven County Trust Nature Reserves in South Kesteven (Box 2.3). These are run by the Lincolnshire Wildlife Trust. Although the Nature Reserves are afforded protection from disturbance or damage by development in the planning process, they do not qualify as “receptors” under Part IIA. In practice, this is not likely to be an issue for the Nature Reserves, since any contamination severe enough to damage wildlife or habitat would also probably be prone to damage other receptors – such as people – or to pollute controlled waters.

### Box 2.1 Ecological and Conservation Protected Areas to which Part IIA applies

- ✱ Sites of Special Scientific Interest (Wildlife and Countryside Act 1981 Section 28)
- ✱ National Nature Reserves (Wildlife and Countryside Act 1981 Section 35)
- ✱ Marine Nature Reserves (Wildlife and Countryside Act 1981 Section 36)
- ✱ Areas of Special Protection for Birds (Wildlife and Countryside Act 1981 Section 3)
- ✱ European Sites – Special Areas of Conservation and Special Protection Areas, and candidate sites for these designations (Conservation (Natural Habitats etc) Regulations 1994 Regulation 10)
- ✱ Any habitat or site afforded policy protection under paragraph 13 of Planning Policy Guidance Note PPG 9 on nature conservation (i.e. candidate Special Areas of Conservation, potential Special Protection Areas and Listed Ramsar sites)
- ✱ Nature Reserves established under section 21 of the National Parks and Access to the Countryside Act 1949

South Kesteven's protected ecological sites are all located in rural areas, and at this stage of our study we do not expect to find that any are likely to be damaged by contaminated land.

## Box 2.2 Sites of Special Scientific Interest

| Site Name                     | Grid Ref.                | Site Name                               | Grid Ref.                  |
|-------------------------------|--------------------------|---|----------------------------|
| Great Casterton Road Banks    | TF 006 084               | Porters Lodge Meadows                   | SK 962 196                 |
| Swinstead Valley              | TF 007 222               | Copper Hill Verges                      | SK 980 428                 |
| Horbling Fen                  | TF154 353                | Castle Bytham Quarry                    | SK 990 180                 |
| Little Warren Verges          | TF 010 144<br>TF 027 137 | Holywell Banks                          | SK 995 157                 |
| Dole Wood                     | TF 093 162               | Tortoiseshell Wood                      | SK 963 200                 |
| Math and Elsea Wood           | TF 097 183               | Woodnook Valley                         | SK 936 324                 |
| The Hermitage                 | TF 009 266               | Kirton Wood                             | SK 980 330                 |
| Grimsthorpe Park              | TF 025 200               | Honington Camp                          | SK 955 423                 |
| Dunsby Wood                   | TF 085 260               | Moor Closes                             | SK 980 438                 |
| Sapperton and Pickworth Woods | TF 030 340               | Ancaster Valley                         | SK 988 430                 |
| Baston Fen                    | TF 140 175               | High Dyke                               | SK 991 505                 |
| Deeping St James Gravel Pit   | TF 180 082<br>TF 175 082 | Ryhall Pasture and Little Warren Verges | TF 010 144 –<br>TF 027 137 |
| Langtoft Gravel Pits          | TF 112 108               | King Lud's entrenchment and The Drift   | SK 855 204                 |
| Allington Meadows             | SK 872 398               | Cross Drain                             | TF 163 133                 |

## Box 2.3 County Trust Nature Reserves

| Site Name                     | Grid Ref                   |
|-------------------------------|----------------------------|
| Robert's Field                | TF 001 150                 |
| Thurlby Fen Slipe             | TF 124 166                 |
| The Chasm                     | TF 150 183                 |
| Horbling Line                 | TF 112 362 –<br>TF 115 347 |
| Colsterworth/Woolsthorpe Line | SK 308 242 –<br>SK 917 243 |
| South Witham                  | SK 925 190 –<br>SK 945 193 |
| South Witham Verge            | SK 931 191 –<br>SK 945 193 |

## 2.10. Historic Buildings and Ancient Monuments

South Kesteven has a rich cultural heritage and many places of historical and environmental interest. Historic buildings and monuments are particularly numerous – there are approximately 2,600 listed buildings in South Kesteven, 32% of all Lincolnshire's listed buildings. Stamford has a particular concentration of historic buildings, with one quarter of South Kesteven's listed buildings [6]. The centre of Stamford, together with around 40 other locations in the district, has been designated as a Conservation Area by the council, ensuring that these areas are protected by planning policy.

South Kesteven also has 89 Scheduled Ancient Monuments and 7 Historic Parks (Belton House, Grimsthorpe Castle, Harlaxton Manor, Caythorpe Court, Easton Park, Marston Hall and Stoke Rochford Hall).

Buildings, property, ancient monuments and important archaeological sites are all considered receptors that should be protected under the contaminated land legislation. Most of them pre-date industrial development, and are not likely to be actually located on contaminated land. Any instances of significant harm would be more likely to be as a result of migration of contamination – for example migrating landfill gas, or contaminants in groundwater.

## 2.11. Geology

Geology is important in the assessment of contaminated land because it can be a cause of contamination (a source), a means for contamination to move from one place to another (a pathway) or the reason for the existence of something that could be harmed by contamination (a receptor).

The rocks of South Kesteven are predominantly limestones, sandstones and clays [9,10]. Their geological age is Jurassic, meaning between approximately 195 and 135 million years old. Overlying the solid rocks in places are much younger sediments deposited by glaciers and ancient rivers. The glacial sediments are often either gravels or boulder clay. Within the last 10,000 years or so, modern rivers have deposited alluvium consisting of clays, silts, sand and gravels within their floodplains and peat has formed in the Fens.

The Jurassic rocks are tilted downwards (dip) towards the east-south-east, resulting in the oldest layers (strata) being exposed at the surface in the west-north-west of the district and the youngest in the east-south-east. This means that in general, the rocks get younger towards the east. The limestone layers are often more resistant to weathering than other rocks, and these form several escarpments. Low-lying areas are often formed by softer clays.

Some of South Kesteven's rocks contain iron, and in places there is sufficient for iron ores to be mined. Ironstone mining has taken place mainly in particular iron-rich layers of rock, including the Marlstone Rock Bed and the Northampton Sand Formation. These outcrop in northern and western parts of the district. Mining has generally been carried out by opencast methods. Notable areas where ironstone mining has occurred are around Caythorpe, just south of Woolsthorpe by Belvoir, south of Harlaxton and west of Colsterworth.

## Geological sources

Organic rich deposits such as peat and river clays can generate gas, typically methane and carbon dioxide

Natural processes can cause enrichment of particular substances – for example the ironstones. Occasionally potentially harmful substances such as lead and arsenic can be naturally enriched.

Geological resources such as the ironstone, limestones, clays, sand and gravel are often extracted by mining and quarrying. Waste rock from mining and quarrying and waste from mineral processing can contain high concentrations of potentially harmful substances such as lead and arsenic.

The extraction of geological resources often causes holes in the ground. People have always been prone to fill these holes with waste. Old tip sites may generate methane and carbon dioxide, and they may release a variety of harmful substances into the groundwater, or into rivers and streams.

## Geological Pathways

Liquids and gases can move through the ground where the ground is sufficiently permeable. Many rocks and sediments have significant permeability because they contain pores and cracks. In general, the larger the grains that make up the rock, the more easily liquids and gases will pass through – so for example, water will travel through gravel quicker than it travels through sand. Rocks that have significant fracturing can also transmit water very quickly. If the water contains contaminants, then the contaminants will also be able to move through the rock with the water.

Rock types in South Kesteven that are typically good transmitters of water are sands and gravels deposited by rivers and glaciers, and the limestone and sandstone layers within the solid rocks. Of particular significance is the Lincolnshire Limestone, which provides much of South Kesteven's drinking water.

Geology can also prevent the movement of contamination. Much of South Kesteven is covered by glacial boulder clay, and this is a very poor transmitter of water and gases. Contaminants on land that is underlain by clay are much less likely to be able to move downwards into the groundwater. The clay provides a protective layer over the more permeable rocks beneath. There are also solid clay rocks – notably the Oxford Clay and Lower Lias that perform a similar protective function.

## Geological receptors

Geology determines the location of receptors because of the role it plays in supplying our water. Rocks that supply water are called aquifers, and they underlie much of South Kesteven. Rocks that are good transmitters of water are often suitable for water supply. Unfortunately that means that the same rocks that transmit contamination most easily are also the rocks from which we get our drinking water. Preventing these aquifers from becoming polluted is therefore of crucial importance. Aquifers and water supply is discussed in more detail below, under water resources.

## 2.12. Water Resources and Hydrogeology

Water resources are an important receptor that must be protected from pollution by contaminated land. All groundwater and all surface waters are considered to be receptors, whether they are used for drinking water supply or not. Water is also an important pathway, as flowing water can transport contamination and may thereby provide the link between source and receptor – the receptor in this case would be user of the water, or an aquatic ecosystem.

Hydrogeology is the study of groundwater. Rocks that can store and supply water are known as aquifers, and they are one of our principal sources of drinking water. Water is also taken from rivers and reservoirs, and is treated before entering the public mains supply system. Most homes and businesses in South Kesteven get their water from the public mains supply. Some industries make use of separate water supplies, which they take directly from rivers or from groundwater by means of wells. Common examples are farms using water for irrigation or stock watering, and manufacturing industries using it for cooling. Some private homes get their drinking water from a well or spring on their property.

All commercial enterprises taking water directly from a river or a well have licences issued by the Environment Agency. South Kesteven's Healthy Communities keeps a register of domestic private water supplies, and carries out regular monitoring to ensure that the water is fit to drink. The act of taking water from a source, whether a river, spring, or well is called abstraction.

## Surface water resources

"Surface water" describes all rivers, streams, lakes and ponds. The Environment Agency is responsible for protecting the quality of surface water, and has the power to prosecute those that cause water pollution. The Environment Agency also carries out regular monitoring of surface water quality.

South Kesteven's main rivers are the River Witham, flowing north through Grantham to Lincoln and the River Welland, which flows east, then north east from Stamford. The West Glen and East Glen flow south through the centre of South Kesteven, joining between Bourne and Market Deeping, then turning to flow north east, eventually joining the Welland. All these rivers, and the rest of South Kesteven's numerous smaller rivers and streams drain into the Wash.

Water quality in the Witham and Welland catchments is generally good to fair. As the Witham enters South Kesteven, it is largely unpolluted; however as it flows through the fertile agricultural land north of Grantham, nutrients from farm run-off can reduce the water quality [11]. The Welland headwaters are good enough quality to support native brown trout, and water quality is also good as the Welland flows through Stamford. Downstream, especially to the east of Market Deeping the Welland suffers from low flow and nutrient enrichment, which cause excess algal and weed growth (eutrophication) [12].

Approximately 35% of SKDC's water supply comes from surface water resources, however quite a proportion of these are not actually within South Kesteven. This water is taken from the rivers Nene, Welland and Witham, from Cringle Brook and Bath Springs. Rutland Water also forms a major source of water supply for some areas of South Kesteven.

Surface water supplies are maintained by rainwater and from groundwater. Groundwater levels are also maintained by rainwater, so ultimately all our water derives from rain. Because the rain must pass over or through the land to reach rivers, streams and reservoirs any land that is contaminated may be able to cause deterioration in water quality. The closer the land is to the water body, the more likely it is to be able to affect water quality.

Regular monitoring by Anglian Water and modern water treatment plant means that contamination from land is not likely to contaminate drinking water supplies to households, although a significant contamination problem could increase treatment costs or make a particular abstraction point unsuitable. The principal risk is likely to be to the general health of surface water bodies, to the aquatic ecosystems, fisheries and use of the water for recreation and leisure.

South Kesteven will identify potentially contaminated sites that are close to surface water to ensure that rivers, streams, ponds and lakes within the district are not at risk of pollution from contaminated land.

## Groundwater resources

Aquifers are classified by the Environment Agency into "major" and "minor" aquifers. Broadly speaking, major aquifers are those that supply large amounts of water over an extensive area. They are normally used for large scale public supply. Minor aquifers are those that are only able to supply limited amounts of water, or are present only in localised areas. There are more precise, technical definitions of the terms "major aquifer" and "minor aquifer", given in the Glossary.



South Kesteven is underlain by a major aquifer called the Lincolnshire Limestone [13]. The Lincolnshire Limestone is responsible for the majority of South Kesteven's water supply, providing approximately 65% of the total water required by the District. Bourne, Stamford and Billingborough are almost entirely dependent on groundwater. The Lincolnshire Limestone resource is at full capacity – we are using the water as fast as it can be replenished.

Water quality in the Lincolnshire limestone is generally good, however in some places it is highly vulnerable to pollution. Fertiliser application on farmland has increased nitrate levels in the aquifer, in some cases to above EC Surface Water and Nitrate Directive standards.

Groundwater is pumped from the Lincolnshire Limestone from relatively few, large scale abstraction boreholes, each one producing many thousands of cubic metres of water per day.

A major aquifer like the Lincolnshire Limestone stores an enormous quantity of water. In the absence of abstraction for water supply, this water would flow through the rock, under the ground, in an approximately easterly direction. Water in the Lincolnshire Limestone can flow at speeds of up to 100m per day. In some areas, groundwater reaches the surface as springs, forming the source of rivers and streams. Water in the aquifer is replenished by rainwater, mainly in the areas where the aquifer rock outcrops at the surface.

The slow movement of underground water, and the large volume stored, means that water pumped from boreholes can have been in the ground for many years (thousands, in some cases). The soil and rock that the water passes through acts a natural purification system, with the result that groundwater is often very pure, and requires little treatment. If land above the aquifer is contaminated, rainwater can wash them down through the soils to cause pollution of the groundwater beneath. Although soils and rock are good purifiers, they are not completely reliable as a means of removing contamination. Different kinds of soils and rocks have varying abilities to prevent the passage of pollutants.

In locations where the aquifer is covered by soil or rock of low permeability – for example glacial boulder clay or clay rocks such as the Oxford Clay, then contamination at the surface cannot easily reach the aquifer to cause pollution. The Oxford Clay protects the Lincolnshire Limestone in the far east of the district, beginning approximately where the landscape flattens towards the fens between Billingborough and Bourne. Boulder clay is present in patches throughout the district, particularly in the central area east of the River Witham.

Pollution is most likely in areas where the aquifer outcrops at the surface, as this potentially provides an opportunity for contaminants to enter the groundwater directly. The Environment Agency has produced groundwater vulnerability maps to illustrate areas where groundwater may be most easily polluted. In South Kesteven, the Lincolnshire Limestone is particularly vulnerable between Grantham and Stamford, although it is protected by boulder clay in some places [14].

In addition to the Lincolnshire Limestone, river gravel deposits form a minor aquifer. This outcrops on the eastern side of the district, from Market Deeping, through Bourne to Billingborough. It is not generally used for public supply, but may supply local industries, agriculture and households on private water supplies. The Environment Agency considers the river gravel aquifer to be vulnerable to pollution over most of its outcrop area [14].

As well as defining the vulnerability to pollution of groundwater in general, the Environment Agency has defined particular areas of land where pollution might result in the contamination of a public water supply borehole. These areas are called source protection zones. They are classified into Zones 1, 2 and 3, where Zone 1 is closest to the borehole and most vulnerable to pollution. A full definition of source protection zones is given in the Glossary. Because South Kesteven and neighbouring North Kesteven have quite a number of public supply boreholes, a large area of South Kesteven (about 50%) falls within a source protection zone.



## 2.13. Radon

Radon is a naturally occurring radioactive gas. It is emitted by some rock types, and its occurrence is thus determined by the geology. If allowed to accumulate inside buildings, exposure to radon can increase cancer risk.

Some areas of South Kesteven are in a risk category for radon, and surveys have been carried out to identify properties that may be at risk.

Radon is not included as a “contaminant” in the contaminated land legislation – so ground that may emit radon will not be “contaminated land”. South Kesteven District Council manage risks from radon under different legislation.

## 2.14. Conclusions

The review of South Kesteven's characteristics has identified important potential sources and receptors within the district. At this stage in most cases we do not know whether these sources are actually present, or whether they are connected to the receptors by significant pathways – it will be the purpose of the inspection to discover this. Initially, we take the simplest assumption that a pathway is more likely if the source and receptor are close to each other; this will be the means by which we decide which sites are likely to be most important. The mechanism for this is expanded upon in Sections 4 and 5.

Important potential sources identified are:

- ✱ Railways and railway land: oils, fuels, asbestos, metals, coal ash
- ✱ Heavy engineering and metals sites: oils, solvents, metals, fuels, coal ash
- ✱ Other manufacturing industry: variable depending on industry, fuels and coal ash common
- ✱ Transport and distribution sites (including petrol stations): oils, fuels
- ✱ Sewage works: sewage sludge, metals, methane, radioactivity
- ✱ Old landfill sites: landfill gas, leachate, waste radioactivity
- ✱ Farms: biocides, fertilisers, fuels
- ✱ Ironstone mining areas: metals, radioactivity
- ✱ Town gas manufacturing sites: tars, spent oxides – cyanides, sulphur
- ✱ Military sites: munitions, fuel, oils, radioactivity

Important potential receptors are:

- ✳ Residential areas
- ✳ Sports fields (including schools)
- ✳ Other amenity areas
- ✳ Footpaths and unofficial play areas on derelict/contaminated land
- ✳ Lincolnshire Limestone aquifer – particularly within a source protection zone
- ✳ River Gravel aquifer – particularly within a source protection zone
- ✳ Rivers used for drinking water supplies (Welland, Witham)
- ✳ All other surface water bodies
- ✳ Sites of Special Scientific Interest
- ✳ Buildings within Conservation Areas
- ✳ Scheduled Ancient Monuments

In the main, we expect the sources and receptors to exist in the same location in the main towns. There will be exceptions, however we expect that most of these will be in places where we are already aware of the possible existence of the source – good examples are military land, ironstone mines and filled-in railway cuttings.

## SECTION 3

### 3. The Local Authority Strategy: Overall Aims

In this section we set out the specific aims and objectives of this strategy to meet our obligations.

#### 3.1. Aims of the Strategy

SKDC wishes to identify contaminated land present in its area in the most practical and efficient way and ensure that the most pressing and serious problems are addressed first. The strategy must also be consistent with our Agenda 21 and Best Value objectives, outlined in Section 1. With these priorities in mind, SKDC has identified the following overall aims for this strategy:

- ✿ To establish an inspection procedure meeting the following statutory criteria:
  1. be rational, ordered and efficient
  2. be proportionate to the seriousness of any actual or potential risk
  3. seek to ensure that the most pressing and serious problems are located first
  4. ensure that resources are concentrated on investigating in areas where the authority is most likely to identify contaminated land
  5. ensure that the local authority efficiently identifies requirements for the detailed inspection of particular areas of land
- ✿ To establish an inspection procedure aimed at ensuring the protection of human health, ground and surface water resources, designated ecological sites and sites of cultural significance
- ✿ To provide a framework for the establishment of a body of information on land quality that is useful and accessible
- ✿ To aid communication between bodies and individuals interested in contaminated land
- ✿ To ensure that inspection procedures do not result in a barrier, and form part of, the appropriate redevelopment of brownfield and/or contaminated land
- ✿ To ensure that Part IIA procedures are well integrated and consistent with the planning process
- ✿ To show how SKDC will meet its obligations under Part IIA of the EPA 1990

#### 3.2. Objectives and Milestones

The publication of this strategy document meets many of the aims set out above. SKDC proposes to review the strategy and the detailed procedures after a maximum of 5 years of operation to assess the extent to which the strategy is actually effective in meeting these aims.

In the table below, we set out the activities that will be required in order to carry out the inspection of South Kesteven district in accordance with our aims. Where appropriate, we have given target dates for completion.

| Task   | Target Completion Date |
|--|------------------------|
| Complete set up of Geographical Information System, purchase and install historical map data and complete staff training                                 | Completed              |
| Establish a contaminated land web page   | Completed              |
| Prepare public information leaflet on scope of required desk study and site investigation required for planning applications                             | Completed              |
| Commence inspection on sites where significant harm or water pollution is already suspected  | Completed              |
| Prepare detailed procedures/standard forms for site identification and prioritisation and set up Flare to accept the information.                        | Completed              |
| Collect, collate and enter additional information not already on GIS system  | Ongoing                |
| Finalise details of external consultation and information transfer arrangements  | Completed              |
| Develop detailed procedures and standard format for information provision (response to enquiries)  | Completed              |
| Produce preliminary database of potentially contaminated sites from sources other than historical mapping (see Section 5)                                | Completed              |
| Prepare guidance for people who may be “appropriate persons”   | Completed              |
| Examine historical maps for potentially contaminated land and assign Survey Priority Categories to these sites and those identified from non-map sources | Completed              |
| Complete risk assessments in Survey Priority Categories A and B to establish Inspection Priority Categories  | Completed              |
| Commence detailed inspections for Inspection Priority 1  | Completed              |
| Review strategy and detailed procedures  | January 2010           |
| Complete detailed inspections for sites in Inspection Priority Categories 1 and 2.   | July 2011              |

It is anticipated that the detailed inspection of sites will be an ongoing process, over many years, and we are not able to predict at this stage how long it will take. We can also expect that relevant information will be gained over a number of years, since not all possible sources will be investigated during the initial strategic inspection. Other changes, such as changes to land uses, new developments, or water abstraction patterns may alter a site’s priority classification and trigger a new inspection.

Broadly speaking, we may expect that the majority of the activity required in terms of man-hours has been carried out in the first 5 years of the programme; however the review, information maintenance and response to changes in status will be a continuous process.

### 3.3. Performance standards

It is one of our aims to ensure clear and consistent communication with the public and organisations that are interested in contaminated land. To help us achieve this aim, we have set ourselves some performance standards:

- ✿ We will respond to complaints or requests for service within 5 working days
- ✿ We will endeavour to resolve queries and requests for information within 90 working days

## SECTION 4

### 4. PRIORITIES

In this section of the strategy we set out what our priorities for action are and why, with reference to:

The background information presented in Sections 1 and 2

SKDC's overall aims as presented in Section 3

We also explain how these priorities are incorporated into our procedures for identifying contaminated land. These procedures are detailed in Sections 5 and 6.

#### 4.1. Priorities

South Kesteven District Council will adopt the following priorities in dealing with land that may be, or is, contaminated land. These priorities have been established with reference to the environment and history of the district, together with our general policies for environmental protection. They are presented in priority order.

1. Land that may present a risk to human health

Our first priority will be to inspect land where people may come into contact with harmful levels of contamination in soil, including residential areas, allotments, schools, playgrounds, sports fields, land used for recreation. It is our expectation that this will be most likely in the outskirts of the main towns.

2. Land that may present a risk to drinking water quality

Our second priority will be to inspect land that could be affecting a drinking water supply, particularly private drinking water supplies. Drinking water abstractions from groundwater and surface water will be treated with equal importance. We will identify these sites by their proximity to abstraction points.

3.. Land that may present a risk to groundwater quality in a major aquifer

Our third priority will be to protect the district's major aquifer, the Lincolnshire Limestone. This is important for our future water supply, and for the health of the district's rivers and wetlands. Highest risk will be from land where the aquifer is vulnerable to pollution – where no protective cover of low permeability soils or rocks is present.

4. Land that may present a risk to surface water quality

Priority number 4 is to protect all surface resources, whether used for drinking water supply or not. Good quality surface water is a high priority because of the importance of our main rivers for quality of life, for human and ecological health and for the landscape and wildlife value in both towns and countryside. In general, risk will be higher from sites that are very close to surface water features.

5. Land that may present a risk to Sites of Special Scientific Interest

Ecology and wildlife are extremely important issues in South Kesteven and we will seek to ensure that no protected areas are damaged by contaminated land. In most cases, to be damaged by contamination, the SSSI will have to be actually on or immediately adjacent to contaminated soil. Polluted waters from sites further afield could damage SSSI's, however in most cases we would identify these as causing water pollution, and therefore already a high priority.

6. Land that may present a risk to agricultural production

Much of South Kesteven is good quality farmland, and we consider it essential to inspect land where contamination may impact on the health or quality of crops or animals. Note that we will not be considering the issue of food quality related to agricultural practices (e.g. pesticide residues on vegetables) – this is a matter for the Food Standards Agency. In most cases, we would expect the harm to be as a result of soil quality, and therefore the farm would have to be actually located on the contaminated land.

7. Land that may present a risk to historic buildings or sites of archaeological importance

Protecting South Kesteven's rich heritage in the built environment from harm related to contamination is our seventh priority item. Risk to buildings and structures would most usually be as a result of contaminated groundwater affecting the foundations.

## 1.1. Priority Categories for Survey and Inspection

To ensure that the priorities described above are translated into rational and systematic action, SKDC has developed a two-stage prioritisation procedure, fully described in Section 5. In Stage 1 sites that may be contaminated will be placed in a priority category based on the environmental sensitivity of the site and its surroundings.

**Table 4.1 Stage 1 Survey Priority Categories**

|                   |   |
|-------------------|---|
| Survey Category A | <ul style="list-style-type: none"> <li>✱ Residential development, school, playground or allotment within 50m of site boundary</li> <li>✱ Surface water feature (river, stream, pond, lake, canal) within 50m of site boundary</li> <li>✱ Site located within Zone 1 or Zone 2 Source Protection Zone, or within 100m of a private potable water abstraction</li> </ul>  |
| Survey Category B | <ul style="list-style-type: none"> <li>✱ Residential development, school, playground or allotment within 250m of site boundary</li> <li>✱ Sites in agricultural or amenity use including parks</li> <li>✱ Industrial or commercial development within 50m of site boundary</li> <li>✱ Significant surface water feature within 500m of site boundary, to which site run-off is likely to drain</li> <li>✱ Site located within Zone 3 Source Protection Zone or on a major aquifer or within 250m of a private potable water abstraction</li> <li>✱ Site within 100m of an SSSI</li> </ul> |
| Survey Category C | All other sites   |

In Stage 2, sites will be subjected to more detailed assessment in survey category order (i.e. all of Category A sites first), ensuring that sites where significant harm or water pollution is most likely to occur are dealt with first. In the Stage 2 assessment, each site will be given a priority category for inspection. The inspection priority categories are detailed below in Table 4.2.

**Table 4.2 Stage 2 Inspection Priority Categories**

|                       |   |
|-----------------------|---|
| Inspection Priority 1 | * Significant harm or pollution of controlled waters exists or is considered likely (i.e. more likely than not)   |
| Inspection Priority 2 | * Significant harm or pollution of controlled waters considered possible (i.e. source-pathway-target connection probably exists)  |
| Inspection Priority 3 | * Significant harm or pollution of controlled waters considered unlikely (i.e. source-pathway-target connection probably does not exist)  |
| Inspection Priority 4 | * Significant harm or pollution of controlled waters considered extremely unlikely or impossible (i.e. source-pathway-target connection does not exist or is highly improbable) |

After the Stage 2 prioritisation, each site will have a two-part priority category, for example A1, B2, etc. This will be used to determine the order in which sites are subjected to detailed inspection (procedures for detailed inspection are given in Section 6).

The order for detailed inspections proposed by SKDC takes into account the probability of there being significant harm or water pollution. For example, survey Category A contains the most sensitive site uses and Inspection Priority 1 the most likely occurrence of significant harm or water pollution. SKDC will therefore inspect sites in the A1 category first. The remaining categories are dealt with in descending order of importance/seriousness as determined by SKDC and shown below:

- A1
- B1
- C1
- A2
- B2
- C2
- A3
- B3
- C3
- A4
- B4
- C4

### 4.3. Land Owned and Occupied by SKDC

SKDC keeps records of all land which it owns or occupies. This includes all land in current or ownership or occupation by SKDC, and land where SKDC may be responsible for the site's condition (i.e. where SKDC may be the appropriate person). SKDC considers that the priorities set out above apply to SKDC land equally with all other land in the district.

SKDC will review its records of land that it owns and/or occupies as part of the initial survey of the whole area. Where the records indicate that such land may have had a potentially contaminative use, the land will be added to the list of potentially contaminated sites and prioritised in exactly the same way as all other sites.



## SECTION 5

### 5. Surveying The Area And Prioritising Sites For Detailed Inspection

In this section we set out our procedures for carrying out the survey of our area to identify contaminated land, and explain how we will prioritise potentially contaminated sites for detailed inspection. The procedures for carrying out detailed inspections are explained in Section 6.

#### 5.1. Information collection for survey and inspection

The early stages of surveying SKDC's area for contaminated land make use of information that is available from a wide variety of sources. SKDC will collect the information needed and use it to identify land that may be contaminated.

There are two basic categories of information required. The first is information that SKDC will use to identify sites where contamination may be present (listed in Table 5.1). The second is information about environmental sensitivity (listed in Table 5.2). SKDC will use the environmental sensitivity information to determine whether significant harm or pollution of controlled waters may be occurring.

We explain below in Section 5.2 how we will use the information in Tables 5.1 and 5.2 to identify land that may be contaminated, and prioritise the land for further inspection. In Section 7 we explain how we will manage the information and keep it up to date. Much of the information is already loaded onto SKDC's GIS system.

**Table 5.1 Indicators of Potentially Contaminated Land**

| Type of information   | Source of Information  |
|---|--|
| Records of actual harm or pollution of controlled waters  | Environment Agency, SKDC Environmental Protection and Planning Departments   |
| Historical maps (scales 1:10,000 ; 1:2,500)<br>Published 1850's, 1890's/1900's, 1920's, 1930's, 1950's, 1960's/70's, 1980's/90's. | Digital historic maps on SKDC GIS system. These will be supplemented as necessary by paper maps held by SKDC, local libraries, and if necessary the Bodleian Library in Oxford |
| Other information on historical land use – aerial photos, books, local knowledge, trade directories, planning history             | SKDC planning records, local libraries   |
| Sites with IPC and PPC authorisations   | Environment Agency, SKDC Environmental Protection Services   |
| Registers of other potentially contaminative uses e.g. scrapyards, petrol stations, quarries                                      | SKDC, Lincolnshire County Council  |
| Sites with waste management licences  | Environment Agency   |
| Closed landfill sites   | Environment Agency, SKDC   |
| Existing lists of potentially contaminated land   | SKDC Environmental Protection Services, East Midlands Development Agency   |
| Existing lists of potentially contaminated land   | SKDC Environmental Protection Services, East Midlands Development Agency   |
| Current land uses   | Ordnance Survey maps, SKDC Local Plan  |
| Records of remediation or clean-up work   | Environmental Protection Services, Environment Agency, East Midlands Development Agency  |

**Table 5.2 Indicators of Environmental Sensitivity**

| Type of information  | Source of Information   |
|--|---|
| <b>Water resources</b>   |   |
| Groundwater source protection zones  | Environment Agency  |
| Aquifer classification and vulnerability   | BGS Geological Mapping; Groundwater Vulnerability Maps            |
| Locations of drinking water abstractions   | Environment Agency, SKDC Environmental Protection Services        |
| Surface waters (rivers, streams, ponds, lakes etc.)                                      | Ordnance Survey mapping and Environment Agency                    |
| Flood information (floodplain/washland area/other flood risk areas)                      | Environment Agency, SKDC Planning                                 |
| Environmentally sensitive areas  | SKDC  |
| Nitrate vulnerable zones   | DEFRA   |
| <b>Ecology and Wildlife</b>  |   |
| Sites of Special Scientific Interest (SSSI's), and other sites with statutory protection | Natural England   |
| <b>People and Property</b>   |   |
| Listed buildings, Conservation Areas   | SKDC Local Plan, SKDC Planning, DETR, English Heritage            |
| Archaeological sites, Scheduled National Monuments                                       | Heritage Trust of Lincolnshire, English Heritage, SKDC Local Plan |
| Land uses (e.g. residential areas, allotments, schools)                                  | Ordnance Survey, SKDC Local Plan.                                 |

## 5.2. Methodology for Initial Survey and Prioritisation

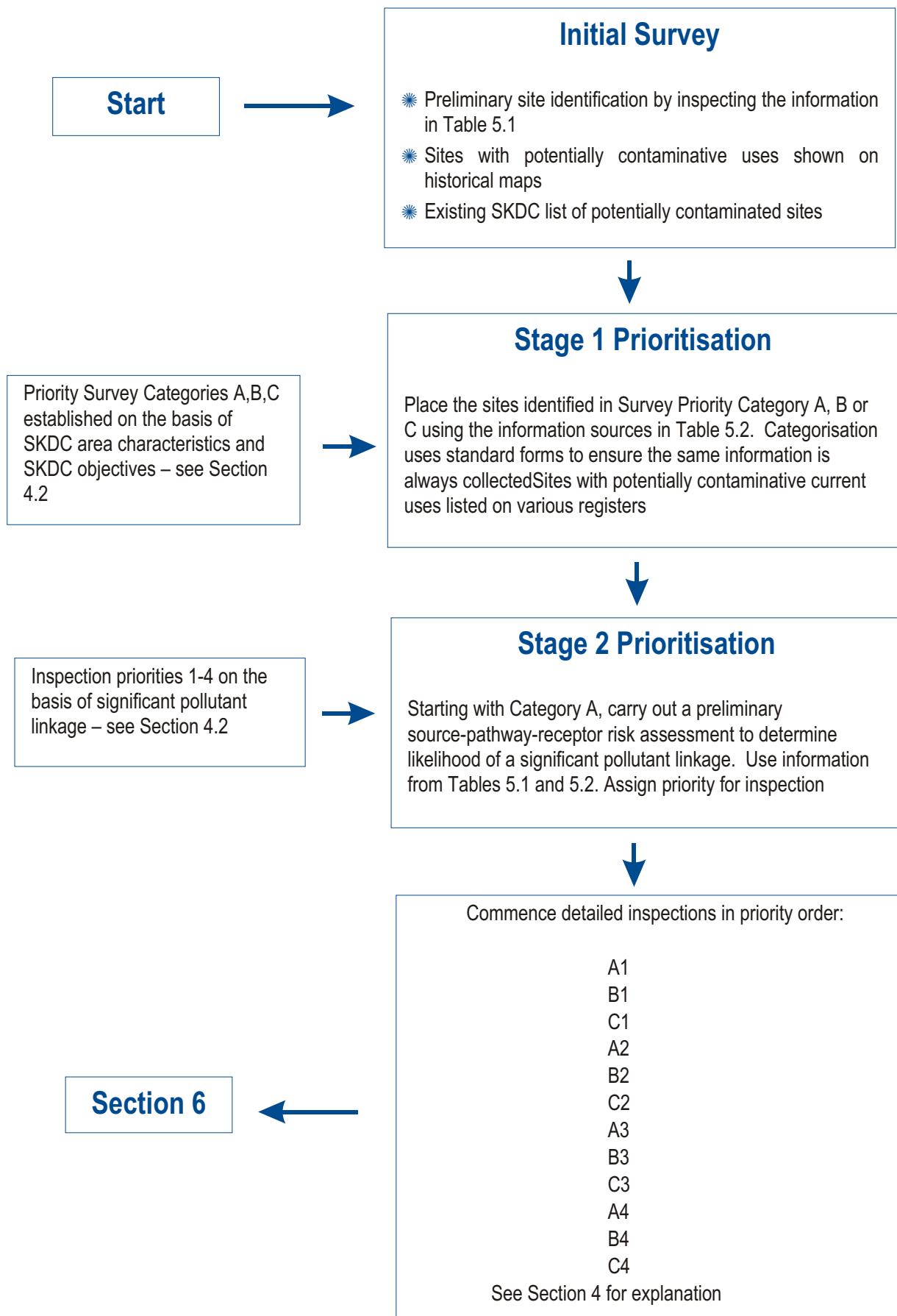
SKDC will develop written procedures in this strategy that will be followed to ensure that the process for identifying contaminated land is systematic and consistent. The procedures will be designed to ensure that the most serious cases are identified and dealt with at an early stage, and that resources are allocated preferentially to investigating where significant harm and pollution of controlled waters is most likely to occur.

The methodology intrinsically incorporates SKDC's priorities, as set out in Section 4, by means of a priority classification system. The priority categories are defined closely (see Section 4 for definitions) to ensure that the prioritisation process is clear, transparent and reproducible.

The flow chart below summarises the procedure that will be used to carry out an initial survey of SKDC's entire area and prioritise the sites that are identified for further inspection. The detailed inspection process is explained in Section 6. The initial survey and prioritisation outlined here is an entirely desk based procedure, utilising information that the authority will collect from the sources listed in Tables 5.1 and 5.2. Visits to the site and taking samples are part of the detailed inspection process in Section 6, and these would commence soon after the site had been prioritised for detailed inspection. This is considered to be the most rapid and efficient means of ensuring that serious problems are identified quickly.

To ensure that information collected on a site, and the basis for decision making, is well organised and easily retrieved, it will be entered into a computer database using a standard format. Further details of the information management system are given in Section 7.

## Flow chart showing method for initial survey and prioritisation



## 5.3. Information Evaluation

In this section the methods for evaluating information are briefly explained. The subheadings refer to the stages shown in the flow chart above in Section 5.2.

### Initial Survey of the area

The purpose of the initial survey is to create a list of potentially contaminated sites within SKDC's area. In general, this will be based on evidence that the site is being, or has been, used for an activity that may have caused contamination (a potentially contaminative use).

SKDC will first collect records of land either known or suspected to be contaminated from within SKDC and from the Environment Agency. In some cases there may already be evidence of actual harm or pollution of controlled waters. If information already exists that is sufficient to determine that the site should be in Category A, Inspection Priority 1 (i.e. likely to be in need of urgent attention), then this priority will be assigned directly, without waiting for the whole initial survey to be completed. Otherwise, these sites will be placed on the list of potentially contaminated sites.

Next, historical maps covering the entire area will be reviewed and areas that may have had potentially contaminative uses identified and added to the list.

SKDC will also review records of land in SKDC's ownership or occupation. Where the records indicate that SKDC land may have had a potentially contaminative use, the land will be added to the list.

Both SKDC and the Environment Agency hold registers of sites where potentially contaminative activities are currently carried out. These exist as result of other environmental legislation. SKDC will review these registers and add sites to the list of potentially contaminated sites as appropriate. Examples of registers which may contain details of potentially contaminative uses are IPC and PPC sites, sites with waste management licences, registered scrapyards registered petrol storage sites and the register of radioactive substances.

Some sites may be identified by more than one of the above searches. Site boundaries will be entered onto the GIS system and a unique identification number will be assigned to each site. This will ensure that all information relating to the same site is logged under the same reference number.

### Sites where remediation has already been carried out

SKDC and the Environment Agency hold records of sites that have already been remediated. SKDC will collect and examine these as part of the initial survey. SKDC will place all these sites on the list of potentially contaminated sites for prioritisation. They will be evaluated in the same way as the other sites, and the remedial action taken into account when prioritising the detailed inspection.

### Stage 1 Prioritisation

Stage 1 prioritisation is based on environmental sensitivity. Those sites placed in Category A are therefore those where receptors are considered most sensitive, or where receptors are closest. The definitions of the Stage 1 categories are fully explained in Section 4.2 (see Table 4.1).

Once the list of potentially contaminated sites has been completed by examining the information described above (listed in Table 5.1), each site will be assigned a Stage 1 Survey Priority category. The Stage 1 prioritisation is carried out by recording specific factual information, for example the distance of the nearest housing from the site boundary. As with the initial survey, this process is entirely desk based, and utilises the information in Table 5.2. Each site is categorised by its most sensitive receptor.

## **Stage 2 Prioritisation**

In Stage 2 Prioritisation, all the available information is considered. A preliminary source-pathway-receptor analysis and risk assessment is carried out to determine whether a significant pollutant linkage is likely to be present. The assessor considers the likely severity of contamination, the sensitivity of the receptors and the probability of the existence of a pathway.

The site is placed in one of four inspection priority categories, based on the result of the preliminary risk assessment. The inspection priorities are explained in Section 4 (see Table 4.2), and they determine how quickly the site will be subjected to further inspection. The procedures for further inspection are given in Section 6.

## **5.4. Ongoing Identification of Potentially Contaminated Sites**

The work of identifying and prioritising sites that may be contaminated will continue after the initial survey and prioritisation work is complete. New information provided by the statutory bodies involved, the planning process and by the general public, businesses and other organisations may identify new sites or affect the prioritisation of sites that have already been identified.

Section 8 explains how SKDC will obtain and respond to new information and complaints. Section 9 details how new information will trigger reviews of the survey, prioritisation and inspection process.

## SECTION 6

### 6. FURTHER INSPECTION

The survey of SKDC's area will result in a prioritised list of sites that require further inspection to determine whether they are contaminated land. Section 5 explains how SKDC will generate the prioritised list of sites in a systematic and efficient manner. This section explains how SKDC will carry out the detailed inspections.

#### 6.1. Ensuring Compliance with Statutory Guidance on Inspection

SKDC is obliged to demonstrate that the arrangements for detailed inspection comply with the statutory guidance relating to inspecting particular areas of land. The guidance is summarised below. The remainder of Section 6 explains in more detail how SKDC will carry out detailed inspections in compliance with the statutory guidance.

- i) The further inspection should provide sufficient information or evidence to indicate the actual presence of a pollutant.
- ii) The further inspection may include the following actions:
  - a) collation and assessment of documentary information, or other information from other bodies (see Section 5);
  - b) A site visit to carry out a visual inspection and, in some cases, limited surface sampling;
  - c) An intrusive investigation of the land (e.g. trial pits, boreholes).
- iii) SKDC has the statutory power to enter a site/area in order to carry out inspection and take samples.
- iv) Before exercising its powers of entry to a site, SKDC should be satisfied on the basis of information already obtained that:
  - a) There is a reasonable possibility of the presence of a contaminant, a receptor and a linkage;
  - b) Where intrusive investigation is deemed necessary, that it is likely that the contaminant is actually present and given the current use of the land that the receptor is actually or likely to be present.
- v) SKDC should not use its power of entry to carry out any intrusive investigation if:
  - a) Detailed information\* on the condition of the land has been provided by the Environment Agency, or some other person;
  - b) A person offers to provide such information\* within a reasonable and specified time and subsequently provides the information within the agreed time period.

\*provided that the information is reliable and adequate
- vi) SKDC should ensure that any intrusive investigations are carried out in accordance with the appropriate technical standards.
  - i) SKDC should ensure that it takes all reasonable precautions to avoid harm, water pollution or damage to natural resources, or features of historical or archaeological interest, whilst carrying out an intrusive investigation.

- ii) SKDC shall consult Natural England on any action that would require the consent of English Nature, prior to carrying out intrusive investigations on any area notified as a Site of Special Scientific Interest.
- iii) SKDC should not carry out any further detailed inspection if, on the basis of information supplied from an inspection, there is no longer a reasonable possibility of a pollutant linkage.

## 6.2. Criteria for Selecting Areas and Individual Sites

All sites which SKDC considers may be statutorily contaminated land will have a priority category (e.g. A1, B2) assigned to them before further inspection continues. The order in which further inspection will be carried out is given in Section 5.2 (flow chart), and the reasons for the order given are explained in Section 4.2.

There are some other issues that may influence the order in which sites are dealt with:

- ✦ SKDC may progress several further inspections simultaneously, and the time taken to obtain information may vary between sites
- ✦ If information is obtained indicating the possible existence of a site with a higher priority category than those being progressed at the time, SKDC may divert resources to investigating the potentially more serious problem

## 6.3. Methodology and Procedures for Detailed Inspection

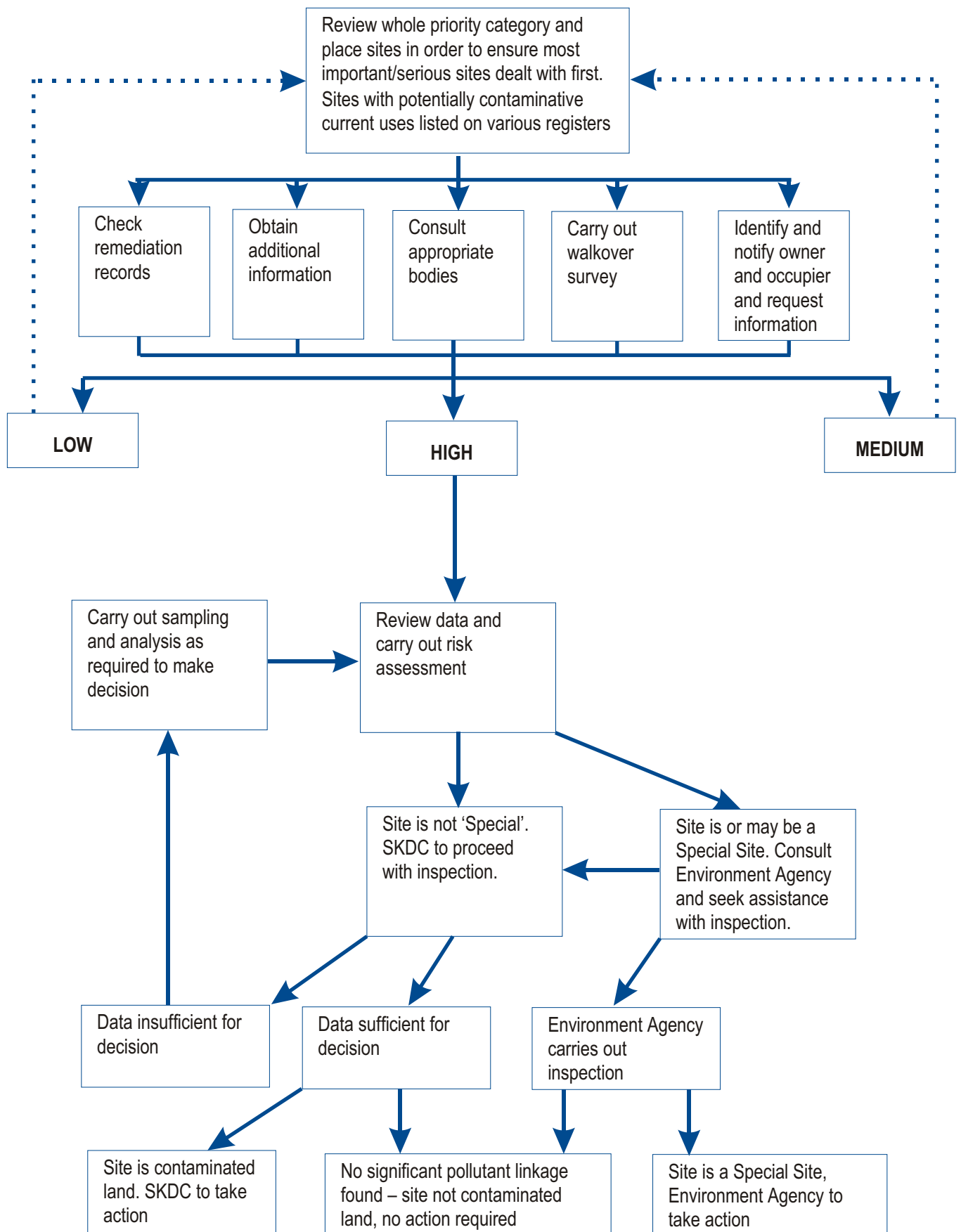
The purpose of the detailed inspection is to obtain sufficient information for SKDC to establish

- i) if the land appears to be contaminated land
- ii) if the land is a Special Site

SKDC will establish procedures for carrying out detailed inspections to obtain information sufficient to decide whether the site is contaminated land or a Special Site, and to comply with the statutory guidance outlined above. The methodology for detailed inspection is summarised in the flow chart below, and is based on the CLR 11 Model Procedures [24].



## Flow Chart for Further and Detailed Inspection



## Review priority category

Before commencing further inspections on a priority category (e.g. category “A1”, as described in Section 4) the inspector will review the information for each site in the category and decide the relative urgency of each case in terms of the likelihood that significant harm or water pollution is occurring. This will ensure that the potentially most serious sites are dealt with first. This review will take place only at the start of the inspection process on each category. Similar reviews of progress and relative urgency of cases will be undertaken at regular intervals as part of reviewing the strategy. Further details of review procedures are given in Section 9.

## Check remediation records

The first step for further inspection is to check whether the site has recently been remediated. SKDC keeps records of site remediation, which are kept up to date through the planning process. If the site has been remediated, the likelihood of significant harm or water pollution may well have been reduced. If this is the case, SKDC will amend the priority category to reflect the new situation. SKDC will not automatically assume that remediation has been effective in preventing a significant pollutant linkage, and will seek information to demonstrate that this is so.

## Obtain additional information

The initial survey and prioritisation process will have provided information that is adequate to determine the likely presence and significance of contamination in most cases. All sites are different, however, and where appropriate SKDC will carry out further research to clarify the possible sources, pathways and receptors.

## Consult appropriate bodies

SKDC will consult both within SKDC and externally to seek further details and advice on a site-specific basis. The list of consultees will depend on the nature of the possible significant pollutant linkage. For example, Natural England would be consulted if there was a risk of significant harm to an ecologically important area. The Environment Agency will be consulted in most cases. SKDC may determine at this stage that the site may be a Special Site, and in these cases will request that the Agency assists with the inspection. SKDC has already established links with the organisations that may need to be consulted; these are given in Section 8.

## Carry out walkover survey

SKDC will visit sites during further inspection to confirm the current site use and condition and to look for any evidence of contamination. A standard proforma will be used to ensure that the same information is sought on each site. Walkover surveys will be carried out in accordance with published guidance on best practice [17].

SKDC has statutory powers to enter sites to inspect them, but will normally inspect sites by agreement with the site owner and/or occupier. Prior to carrying out the walkover survey, SKDC will review the information currently held for the site to ensure that there still appears to be a reasonable possibility of the presence of a contaminant, a pathway and a receptor.

## Identify and notify owner and occupier

SKDC will make contact with site owners and occupiers at the further inspection stage. The principal purposes of this first contact will be to inform them that SKDC are inspecting the site for contamination problems, and to request any information (e.g. site investigation data) that already exists.

## Review data and carry out risk assessment

Information from the above activities will be reviewed and used to produce an updated risk assessment. The risk assessment will indicate whether significant harm or water pollution is likely, in a similar manner to the prioritisation procedure in Section 5.

## Site is, or may be, a Special Site

In many cases, potential Special Sites will be obvious at the outset because of their former usage, and consultation with the Environment Agency will begin at the earliest opportunity. In more complex cases it is likely that the potential for a site to be Special will be determined during the preliminary risk assessment. In all cases where a site is, or may be, a Special Site, SKDC will request assistance from the Environment Agency.

## Data sufficient for decision

It is possible that there will be sufficient information to determine that the site appears to be contaminated land without the need for SKDC to carry out sampling and analysis. In this case the information must always include evidence that contamination is certainly present on the site. SKDC will inform the Environment Agency whenever a contaminated land site is identified.

The risk assessment may show that there is no significant pollutant linkage; for example the landowner may have carried out a site investigation and found no contamination to be present. In these cases, no action will be necessary and SKDC will not pursue the inspection any further. Details of such sites will remain on SKDC's database, since changes such as new development on a site can create new pollutant linkages. Triggers for a site inspection to be reviewed are detailed in Section 9.

## Carry out sampling and analysis

Where the risk assessment shows that there is a reasonable possibility of a significant pollutant linkage, SKDC will seek evidence that contamination is actually present on the site. This generally requires taking samples and analysing them for the contaminants that may be present. This is referred to as detailed inspection.

The scope of the sampling and analysis required depends on the site. In all cases SKDC will seek only the information that is required to decide whether the site is contaminated land. In deciding the particulars of the required site investigation, SKDC will make reference to appropriate published guidance [18, 19, 22, 23, 24].

In some cases the landowner or occupier, or other party (e.g. an organisation that is, or expects to be the appropriate person) may offer to carry out a site investigation. In these cases, SKDC will direct to the appropriate guidance to ensure that adequate information is obtained. SKDC will also agree a suitable timescale within which the information must be provided.

Once adequate site investigation data is obtained, SKDC will repeat the risk assessment as above, and decide whether the site appears to be contaminated land or a Special Site.

## 6.4. Potential Special Sites

A Special Site is a site which meets one or more of the prescribed descriptions defined in the Contaminated Land (England) Regulations 2006 [3]. Special Sites will be regulated by the Environment Agency. The category of Special Sites includes sites where the Environment Agency already has regulatory responsibility, for example IPC and PPC sites, to prevent duplication of regulatory roles. Special Sites are not necessarily more contaminated or more likely to cause significant harm than contaminated land that is not a Special Site.

Examples of Special Sites are:

- ✳ Sites that could be contaminating drinking water resources
- ✳ Industrial sites likely to have difficult contamination problems, such as waste acid tar lagoons, oil refining, explosives and sites regulated under IPC/PPC.
- ✳ Nuclear sites
- ✳ Current MoD land (with some exceptions, like off-base housing)

When SKDC identifies a site that is considered likely to be a Special Site, the Environment Agency will be notified and all the information on the site copied to the Agency. Provided that the Agency agrees that the site may be a Special Site, the Agency will complete the inspection process, which will enable SKDC to formally decide whether the site is contaminated land. The Agency will keep a register of Special Sites similar to the Public Register of Contaminated Land held by SKDC. SKDC will retain details of Special Sites on its computer database, and the Agency will notify SKDC of significant progress on the site's remediation.

## 6.5. Health and Safety Statement

SKDC will fulfil its obligations under the Health & Safety at Work etc Act (1974) in all the work carried out under Part IIA, as it does for all other Council activities.

We will carry out a health and safety risk assessment in respect of all work activities. If there is considered to be a significant risk then the risk assessment will be documented and made available on request. Any necessary safety precautions identified will be implemented.

Although we may not have direct responsibility for staff working for contractors employed by South Kesteven District Council, we will ensure, so far as is reasonably practicable, that these companies and their staff also comply with the requirements of health and safety legislation.

## 6.6. Appointing Consultants

SKDC may, from time to time, need to appoint external consultants to assist in a number of areas to fulfil its statutory duties, for example:

- ✳ Advise on particular technical issues;
- ✳ Undertake some or all of the detailed site inspections
- ✳ Prepare and undertake detailed technical presentations to the general public or to other bodies.

## SECTION 7

### 7. Information Management

#### 7.1. General Principles

In the course of preparing this strategy and subsequent work, SKDC expects to obtain large amounts of information from a variety of sources that will need to be managed efficiently. The Statutory Guidance states that we must tell you how we will do this. In this section of the strategy we therefore set out how we will manage the information we obtain. Section 8 explains the arrangements we have made for allowing access to the information we hold.

It is the intention of SKDC to have an inspection strategy that is as transparent as possible so that reasons for the decisions made concerning contaminated land can be readily understood. SKDC will therefore manage information as set out below to achieve this aim and to comply with requirements of the statutory guidance [2].

#### 7.2. The Public Register

SKDC is obliged to maintain a public register of information about regulatory action in respect of contaminated land within the District. All sites where a Remediation Notice has been served will be included on the Public Register. To find out how to access information on the Public Register, please refer to Section 8. Details of what must be included in the register are set out in the Contaminated Land (England) Regulations 2006. Briefly, these details are:

##### Remediation Notices

✳ Details of the remediation notice:

1. Who SKDC has served a notice on
2. Where the contaminated land the notice refers to is
3. Why the land is contaminated land, what the contamination is and where it came from (if not from the land in question)
4. What the contaminated land is currently used for
5. Details of what remediation each appropriate person has to do and when this has to be done by
6. The date of the notice

##### Appeals Against Remediation Notices

✳ Details of any appeal against a remediation notice served by SKDC and any decision on such an appeal.

##### Remediation Declarations

✳ Any remediation declaration prepared and published by SKDC and for any such declaration, details of items 2-5 as detailed in 'Remediation Notices' above.

## **Remediation Statements**

- ✳ Any remediation statement prepared and published by the responsible person or by SKDC and for any remediation statement, details of items 2-5 as detailed in 'Remediation Notices' above.

## **Appeals Against Charging Notices**

- ✳ Any appeal against a charging notice served by SKDC and any decision on such an appeal.

## **Designation of Special Sites**

- ✳ Details of any land in SKDC's area of responsibility designated as a special site by SKDC or the Secretary of State and the reasons for this.
- ✳ Any notice given by the Environment Agency (EA) of its decision to adopt a remediation notice (The EA being the enforcing authority for special sites).
- ✳ Any notice given by or to SKDC terminating the designation of any land as a special site

## **Notification of Claimed Remediation**

- ✳ Any notification given to SKDC of remediation claimed to have taken place

## **Convictions for Offences in relation to a Remediation Notice**

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

## **Guidance issued to SKDC by the Appropriate Agency**

- ✳ Details of any guidance issued to SKDC for a particular site (by the Environment Agency in most cases)

## **Other Environmental Controls**

- ✳ Where SKDC cannot issue a remediation notice because the powers of the appropriate agency (usually the Environment Agency) may be exercised instead:
  1. Details of items 2-5 in 'Remediation Notices' above for the contaminated land
  2. Any steps of which SKDC has knowledge, taken towards remedying any significant harm or pollution of controlled waters that causes the land to be contaminated land
- ✳ Where the powers of the appropriate waste regulation authority or waste collection authority may be exercised instead (in relation to deposition of controlled waste which causes the land to be contaminated land) SKDC may not issue a remediation notice and may record the following details on the register:
  1. Details of items 2-5 in 'Remediation Notices' above for the contaminated land
  2. Any known steps taken to remove the waste, or reduce the consequences of its deposit, including steps taken by a waste regulation authority or waste collection authority and the name of the authority.

- ✦ Where SKDC cannot specify something by way of remediation in a remediation notice because this would impede or prevent a discharge to a water body for which a discharge consent is in force:

1. Details of the consent
2. Details of items 2-5 in 'Remediation Notices' above for the contaminated land

### **Arrangement of Information in the Public Register**

For ease of reference, the above information is organised so that all the entries relating to a particular site can be readily consulted in connection with each other.

SKDC will add new information to the register as soon as is reasonably possible after it has been generated. The contents of the register therefore change over time as the information in it is added to or updated.

## **7.3. Information not on the Public Register**

SKDC will generate a great deal of information during the survey of the area for contaminated land and the detailed inspections of sites. Most of this information will not appear on the Public Register. SKDC will encourage voluntary remediation wherever possible.

The statutory guidance [2] requires SKDC to prepare a written record of any determination that particular land is contaminated land. The record must include information summarised below (by reference to other documentation if necessary):

- ✦ A description of the particular significant pollutant linkage, identifying all three components of source, pathway and receptor;
- ✦ A summary of the evidence upon which the determination is based;
- ✦ A summary of the relevant assessment of this evidence; and
- ✦ A summary of the way in which the SKDC considers that the requirements of the statutory guidance [2] have been satisfied

When a site is not considered to be contaminated land, any information about it that SKDC holds will not be on the Public Register.

Under the Environmental Information Regulations 2004, all the information that SKDC holds on contaminated land is potentially available to the public on request. Information will only be not available if it is commercially confidential, or if its release would be against the interests of National Security. Arrangements for releasing information are given in Section 8.



## 7.4. Confidentiality of Information

The majority of the information generated by, or supplied to SKDC about the condition of land will be in the public domain. This will be true whether or not the site appears on the Public Register.

Under certain circumstances SKDC may not be able to place information on the Public Register (or release it in response to other requests). Circumstances where information is withheld are:

- ✳ Where this is in the interests of national security
- ✳ Where this is commercially confidential
- ✳ Where the information relates to the affairs of any individual or business

Where information has been excluded from the Public Register for reasons of commercial confidentiality, SKDC will place a statement on the Register to indicate this. Any person who wishes to have information excluded from the Public Register on the grounds of commercial confidentiality must follow certain procedures – these are set out below in Section 7.5.

Supply of any other environmental information held by SKDC is also subject to certain exceptions (determined by the Environmental Information Regulations 2004). These are:

- ✳ Where this is in the interests of national security
- ✳ Where the information is an issue in any legal proceedings or enquiry
- ✳ Where the information is still being completed, or is an internal communication of a relevant person
- ✳ Where this would affect the confidentiality of the deliberations of a relevant person
- ✳ Where this is commercially confidential

The confidentiality of any information supplied to SKDC by third parties is determined when the information is received. Where a third party states that information it supplies to SKDC is commercially confidential, or cannot be released for any of the other reasons given above, then SKDC asks for a justification to be provided giving the reasons for this. Information which is confirmed as confidential on the basis of a justification cannot be released to other parties. Where SKDC is unable to supply information it will give the reason for this.

## 7.5. Excluding commercially confidential information from the Public Register

Under Part IIA, information cannot be excluded from the Public Register on the grounds of commercial confidentiality solely because its release might affect the value of the land.

Any business, organisation or individual that believes an item should be excluded from the Public Register on the grounds of commercial confidentiality may contact SKDC. If SKDC considers that a Public Register entry may be commercially confidential, we will contact the person concerned to allow them an opportunity to request that the information should be excluded. In order for information to be excluded, the affected person must:

- ✦ Request in writing that particular information should be excluded from the Public Register
- ✦ Provide a written explanation of why the information is commercially confidential (note that this may not consist solely of a potential effect on land value)

SKDC will then decide whether the information should be excluded from the Public Register. When exclusions are made, a statement will appear on the Public Register explaining that information has been excluded because it is considered commercially confidential.

If SKDC considers that the information is not commercially confidential, then the person concerned will be notified in writing. That person then has 21 days to appeal to the Secretary of State, during which time the information will not appear on the Public Register. If no appeal is made, the information will be placed on the Public Register.

If an appeal is made, the information will not appear on the Public Register whilst the appeal is pending.

Exclusions from the Public Register will generally lapse after a period of 4 years. Where a person considers that the information is still commercially confidential, a further application to have the information excluded can be made, using the same procedures as outlined above.

## **7.6. Storage Systems**

Information generated by the inspection procedure will be stored and cross-referenced using the Environmental Protection Services database. This system comprises a digital map of SKDC's area of responsibility, linked to a database containing all the information held by SKDC. The GIS contains most of the information on land use and environmental sensitivity, and is used to identify the boundaries of potentially contaminated sites.

These two software packages will be the principal means by which SKDC manages the information that it generates.

Some information will be obtained in paper form and require a paper filing system.

## **7.7. Administration**

Information will be managed by the Environmental Protection Services. EPS is responsible for collation of data, entering this onto the system and subsequent management. This includes ensuring that all confidential information is identified and managed in an appropriate manner.

SKDC is also responsible for ensuring that all information is accurately recorded and up to date. This is achieved in part through links with other regulatory regimes (see Section 8) and through the review process detailed in Section 9.

Where digital data is supplied by third parties, SKDC will seek to ensure that a mechanism for regular updates of the data is put in place. Such data is supplied by both commercial organisations (suppliers of digital historic maps) and public bodies such as the Environment Agency, Natural England and English Heritage.

## **7.8. Use By Other SKDC Departments**

There are links between the regulatory role of SKDC in inspection of contaminated land and other regulatory regimes such as planning and development control. Other departments of SKDC will, from time to time, therefore need access to the information obtained during site inspections for internal use. For example, when the planning department receives an application to redevelop a site, it will need to consult any information held by Environmental Protection for that site (or adjacent sites) to identify any potential issues to be addressed. These consultations are also used to keep information obtained up to date.

Other departments of SKDC will have access to public register information about contaminated land and to other information obtained by SKDC in the course of this work used to compile the public register. This will include access to confidential information (detailed above) as is required by SKDC to carry out its duties. Where access to confidential information takes place, SKDC will record this so that such access can be audited.

## SECTION 8

### 8. General Liaison and Communication Strategies

This section explains how to contact SKDC to ask for, or offer information about contaminated land.

We also identify the organisations that SKDC has regular contact with in carrying out its contaminated land duties, and explain when and why we will contact them.

#### 8.1. Viewing the Public Register and requesting information

The information available on the Public Register is defined by law, and is detailed in Section 7.2. South Kesteven District Council is also in possession of information about contaminated land that is not on the Public Register. You may ask for information about any site, or general questions about contaminated land. We will do our best to answer all queries, however we may make a charge if your query requires significant staff time. We will tell you about any charge before carrying out the work. In some cases the information you have asked for may be confidential. If we cannot provide what you have asked for, we will explain why.

The Public Register is available for inspection, free of charge at SKDC's offices between the hours of 9.30am and 4.30pm, Monday to Friday (except Bank Holidays). Facilities are also provided for making copies of individual register entries. If required, visitors can ask for help in getting to know the layout of the Public Register and how to find information at the time of their visit.

Requests for copies of information from the Public Register may be made by telephone, fax, e-mail or letter to the address given above. You may also request information that is not on the Public Register. A reasonable charge is made for this service to cover SKDC costs.

The Public Register of Contaminated Land is located at

Environmental Protection Services  
South Kesteven District Council  
Council Offices  
St Peter's Hill  
Grantham  
Lincolnshire  
NG31 6PZ

Telephone 01476 406300  
Fax 01476 406006  
email [ehs@southkesteven.gov.uk](mailto:ehs@southkesteven.gov.uk)

You can also visit our web-site at <http://www.southkesteven.gov.uk>. We plan to provide general information about contaminated land on the web-site, together with links to other relevant sites.

## 8.2. Land Charges

SKDC provides responses to requests for a search of the Local Land Charges Register, for which there is a fee. This search is regularly requested by solicitors on behalf of clients who wish to purchase a particular piece of land. The search provides answers to standard questions. Contaminated land is included in the questions, however this only relates to sites that appear on the Public Register. If a local land search is made the specific questions on the search relating to the Public Register will be answered. A negative reply does not imply that the land is free from contamination or the risk of it.

## 8.3. Offering information and making complaints

Organisations and members of the public may wish to contact SKDC to offer information about contaminated land. For example you may wish to:

- ✳ Tell us about contaminated land or water pollution
- ✳ Complain about the condition of land
- ✳ Complain about our performance in dealing with contaminated land

All offers of information and complaints should be addressed to the contact in 8.1 above.

## 8.4. Guidance for potential Appropriate Persons

The term “Appropriate Person” is used by the Part IIA to refer to any organisation or individual who will bear responsibility for carrying out any action required by SKDC (or the Environment Agency). The definition is given in section 78A (9) as:

“any person who is an appropriate person, determined in accordance with section 78F .., to bear responsibility for any thing which is to be done by way of remediation in any particular case.”

When contaminated land is identified, it will be determined by means of identifying one or more significant pollutant linkages. SKDC will seek to discover the organisation or individual who caused or knowingly permitted the contamination. This person is a “Class A Appropriate Person”. There may be more than one Class A Appropriate Person, and in this case they will be held liable for the costs of remediation in proportion to the amount or severity of contamination that they have caused.

In a circumstance when no Class A Appropriate Person can be identified, liability for remedying a significant pollutant linkage will fall to the landowner or occupier. These people are referred to as “Class B Appropriate Persons”.

SKDC will seek to identify and consult with people who may be Appropriate Persons as soon as possible during the detailed inspection process (see Section 6). It is the intention of the legislation that Appropriate Persons will pay the costs of remediation, either by volunteering to do so or by compulsion following service of a Remediation Notice. There are a number of exemptions where Appropriate Persons may not have to pay for the works.

SKDC recommends that anyone who believes that they may be an Appropriate Person should in the first instance refer to the EPA 1990 Part IIA [1] and the statutory guidance DETR Circular 01/2006 [2]. 1.1. Planning and Development Control

## 8.5. Planning and Development Control

There are links between the regulatory role of SKDC in inspection of contaminated land and other regulatory regimes such as planning and development control. SKDC will in the course of its duties therefore liaise with and communicate information between the inspection team and other departments.

### Development Control

Development control officers may consult Environmental Protection Services in every case when a planning application is submitted to develop a brownfield site. It is SKDC standard practice to request that a desk study and preliminary risk assessment accompanies such applications. A public information leaflet explaining the scope of information required is available from Environmental Protection Services and from development control officers. Environmental Protection Services will review the information provided and check the site's status on the GIS system. They will advise on whether further investigations or remedial works are required to ensure that the land is suitable for the proposed use (i.e. not statutory Contaminated Land). The Planning Authority will ensure that the appropriate works are carried out by means of planning conditions. When remediation is needed, Environmental Protection Services will ask for a Remediation Statement detailing the works that have been completed. Environmental Protection Services will advise development control officers when conditions on remediation can be discharged.

Environmental Protection Services will monitor any remediation works carried out, and will enter details of the site into the GIS and database system. Copies of any reports provided will be retained.

### Planning

The Planning Authority will make use of the contaminated land GIS and database in developing planning policy. This will enable SKDC to ensure that land is not allocated for uses that are likely to result in significant risk.

## 8.6. Consultation with Statutory Bodies

SKDC needs to consult with various statutory bodies from time to time during the course of the detailed inspection process. These bodies may be able to supply specialist advice and information about sites, or they may have a prior interest. For example, the Environment Agency will be consulted when a site may be causing water pollution, and English Nature will be consulted if harm to designated areas of ecological importance is suspected. In some cases, other organisations may need to contact SKDC in order to ask for information about contaminated land.

SKDC will contact the following priority list of statutory bodies as appropriate with respect to sites which may be contaminated land.

- ✳ Environment Agency
- ✳ Lincolnshire County Council
- ✳ English Heritage
- ✳ Nature England
- ✳ Department for Environment, Food & Rural Affairs (DEFRA)
- ✳ The Health and Safety Executive (HSE)

In some circumstances it may also be appropriate to contact neighbouring local authorities where there are issues that may affect them.

## 8.7. Environment Agency: consultation and provision of information

South Kesteven falls with the Environment Agency's Anglian Region. The Environment Agency has appointed contaminated land officers to liaise with the local authorities and to regulate Special Sites. All contact will be made via the Area Contaminated Land Officer.

Area Contaminated Land Officer  
The Environment Agency  
Waterside House  
Waterside North  
Lincoln  
LN2 5HA

Web: [www.environment-agency.gov.uk](http://www.environment-agency.gov.uk)  
Tel: 08708 506506  
Fax: 01522 785989

Contact with the Environment Agency will take place on the following occasions:

- ✦ To seek site specific guidance at the detailed inspection stage
- ✦ When a site is, or may be, a Special Site
- ✦ When a site is designated "contaminated land"
- ✦ To provide summary information on contaminated land (see below)

From time to time, the EA has to prepare and publish a report on the state of contaminated land in England. The purpose of this report is to assess the scale and significance of the problem and the effectiveness of measures put in place to address it. To allow the EA to do this, SKDC has to supply data to it from the body of information obtained under this inspection strategy.

Details of the information the EA expects to obtain from SKDC are presented in a Procedural Note [11], which is available free of charge from the Environment Agency website: [www.environment-agency.gov.uk/gwcl](http://www.environment-agency.gov.uk/gwcl).

The EA has prepared 3 standard forms for submission of information to it from Local Authorities. These forms are:

- ✦ SOCOL/LA/FORM1 – Information about a site when the Local Authority determines it as contaminated land (to be submitted with the written notice of determination)
- ✦ SOCOL/LA/FORM2– Information about the remediation process, when a remediation notice, statement or declaration notice is published.
- ✦ SOCOL/LA/FORM3– Information about the level of regulatory activity, every April/May summarising the previous financial year.



The Environment Agency has already provided a considerable amount of digital data to assist in the preparation of this strategy. This includes, for example, information on the location of sites regulated under IPC, PPC and the waste management licensing regimes. SKDC will ask the Environment Agency to provide updates to this information.

## **8.8. Lincolnshire County Council**

Lincolnshire County Council (LCC) is likely to hold some information that may be useful in the identification of contaminated land, for example details of old landfill sites and mineral workings. They may also hold information on sites that have been remediated, and County Council officers may know of sites that may be contaminated. South Kesteven District Council will make requests for information to the appropriate sections of LCC during the initial survey of the district.

LCC is also a landowner, and may own sites that could be contaminated land. SKDC will contact LCC when it begins detailed inspection of any sites in current or former LCC ownership.

The principal contact in LCC is:

Head of Planning & Conservation  
Highways & Planning Directorate  
Lincolnshire County Council  
County Offices  
Newland  
LN1 1YL

Tel: 01522 552222  
Fax: 01522 516137

For County Council owned sites:

Property Division  
Hyder Business Services  
Block A  
Orchard House  
Orchard Street  
Lincoln  
LN1 1BA

## **8.9. Neighbouring Local Authorities**

Communications with adjacent authorities is greatly enhanced by the Lincolnshire Pollution Liaison Group which collaborated on the preparation of the contaminated land strategy. All South Kesteven's neighbours except Newark and Sherwood are members of this group.

Formal contact on contaminated land issues will be made when site specific circumstances dictate. The Pollution Liaison Group meets regularly to discuss issues of mutual interest, and this will frequently include contaminated land.

The list below gives details of contaminated land representatives in authorities sharing a border with South Kesteven.

| Authority                          | Department                            | Address  |
|------------------------------------|---------------------------------------|--|
| North Kesteven District Council    | Environmental Health Department       | District Council Offices<br>PO Box 3<br>Kesteven Street<br>Sleaford, NG34 7EF    |
| Newark & Sherwood District Council | Environmental Health Department       | Kelham Hall<br>Newark<br>Nottinghamshire, NG23 5QX                               |
| Environmental Health Department    | Environmental Health Department       | Council Offices<br>Nottingham Road<br>Melton Mowbray<br>Leicestershire, LE13 0UL |
| Rutland County Council             | Environmental Health Department       | Catmose<br>Oakham<br>Rutland, LE15 6HP   |
| Peterborough City Council          | Environmental Health Department       | Bridge House<br>Town Bridge<br>Peterborough, PE1 1HB                             |
| South Holland District Council     | Department of Environment and Leisure | Council Offices<br>Priory Road<br>Spalding, PE11 2XE                             |
| East Northamptonshire Council      | Environmental Health Department       | Cedar Drive<br>Thrapston<br>Northamptonshire, NN14 4LZ                           |

## 8.10. English Heritage

English Heritage keeps information on listed buildings, scheduled ancient monuments and other important heritage sites. SKDC will contact English Heritage whenever an inspection is being carried out on a site which may be able to impact an important building or site of historical interest.

English Heritage  
East Midlands Region  
44 Deragate  
Northampton  
NM1 1UH  
Tel: 01604 735400

## 8.11. Natural England

Natural England is responsible for designating sites with ecological significance and providing advice on ecology and conservation. SKDC will ask Natural England to provide periodic updates of information on the location of sites with statutory protection (as defined in Box 2.1) within South Kesteven. SKDC will also consult Natural England whenever an inspection is carried out on a site which may be able to impact an area with statutory protection.

Natural England  
Midlands Team  
First Floor  
The Maltings  
Wharf Road  
Grantham  
Lincolnshire  
NG31 6BH

Tel: 01476 584800  
Fax: 01522 510638

## **8.12. Department of the Environment, Food & Rural Affairs**

SKDC will consult DEFRA early in the initial survey process to ask for any information that may help to identify contaminated land. DEFRA may also be consulted on a site specific basis when a detailed inspection is carried out on a site that is in agricultural use, or may be able to impact land in agricultural use.

The Department of the Environment, Food & Rural Affairs  
East Midlands Regional Service Centre  
Government Buildings  
Block 7  
Chalfont Drive  
Nottingham  
NG8 3SN

Tel: 0115 929 1191  
Fax: 0115 929 4886

## **8.13. Food Standards Agency**

The Food Standards Agency has responsibility for food safety, including the safety for consumers of any food that may be affected by contaminated land. This includes food produced in domestic gardens and allotments and food collected from the wild as well as commercially produced food.

SKDC will consult the FSA whenever a detailed inspection is carried out on a site that might impact food quality.

Contaminants Division  
Food Standards Agency  
Rm 238 Ergon House  
17 Smith Square  
PO Box 31037  
London  
SW1P 3WG

Tel: 020 7276 8727

## 8.14. Anglian Water

Anglian Water is responsible for supplying South Kesteven's drinking water, and for sewage treatment. SKDC will consult Anglian Water to ask for any information that may help to identify contaminated land. SKDC will also consult Anglian Water on a site-specific basis whenever a detailed inspection is carried out on a site that might have an impact on one of Anglian Water's abstraction points.

Water Resources Planner  
Anglian Water Services  
Henderson House  
Lancaster Way  
Ermine Business Park  
Huntingdon  
PE29 7DU

Tel: 01480 323 900

## 8.15. Health & Safety Executive

The HSE provides expertise and advice on Health and Safety. SKDC expects to consult the HSE where a site may be causing a significant health risk, and where contaminated land inspection raises health and safety issues outside the scope of the contaminated land legislation.

Health and Safety Executive  
1st Floor  
The Pearson Building  
55 Upper Parliament Street  
Nottingham  
NG1 6AU

Tel: 0115 971 2800

Fax: 0115 971 2802

## 8.16. Consulting Owners, Occupiers and Other Interested Bodies

### Owners/occupiers

SKDC will normally contact site owners and occupiers when a detailed inspection is required, to make arrangements for a site visit (see Section 6). SKDC will also request site owners and occupiers to provide any information regarding the site that is relevant to contamination. Some landowners and occupiers may be Appropriate Persons. Guidance for those who may be Appropriate Persons is given in Section 8.4 above.

Landowners and businesses can contact SKDC for information about contaminated land at any time. Contact details are given above in Section 8.1.

## Other interested bodies

The following list of local organisations/groups within the community may also need to be contacted for information about sites and/or to be advised on the possible presence of sensitive sites and contaminated land.

Organisations who wish to contact SKDC about contaminated land should use the contact given above in Section 8.1.

Heritage Trust of Lincolnshire  
Old School  
Cameron Street  
Heckington  
NG34 9RW

Tel 01529 461499  
Web: [www.lincsheritage.org](http://www.lincsheritage.org)

Lincolnshire Wildlife Trust  
Banovallum House  
Manor House Street  
Horncastle  
Lincolnshire  
LN9 5HF

Tel 01507 526667  
Web: [www.lincstrust.org.uk](http://www.lincstrust.org.uk)

### Parish Councils

Grantham Civic Society  
80 Harrowby Road  
Grantham  
Lincolnshire  
NG31 9DS

Phone: 01476570353

Stamford Civic Society  
P.O. Box 205  
Stamford  
Lincolnshire PE9 4YS

Web: [www.stamfordcivicsociety.org.uk](http://www.stamfordcivicsociety.org.uk)

## 8.17. Risk Communication

SKDC has responsibility for communicating information about contaminated land to the land owner/occupier, local residents and other interested groups. It is our policy to ensure that people are allowed access to information that they may want to see (unless there are good reasons that the information is confidential), and also that they are aware that such information exists.

When contaminated land is identified, we will also identify people who may want to know about the contamination. We will contact people who may be interested and explain what the problem is, and what SKDC is doing about it. We will also keep the individuals or groups concerned informed about the progress of any remedial works. Where appropriate a Public Information leaflet will be prepared and distributed.

In communicating risks, SKDC will refer to published guidance on good practice [21].

## SECTION 9

### 9. Review Mechanisms

In this section, we tell you how we will review the work we are carrying out for this strategy including the factors that will influence when such review takes place.

#### 9.1. Reviewing Inspections and Responding to New Information

The process for identifying potentially contaminated land is an ongoing activity. Further information may come to light at any stage in the procedure, and SKDC will take into account information obtained from or volunteered by the public, site owners, businesses and voluntary organisations. New and updated information will also often be provided as a result of SKDC's regular exchanges of information between departments (particularly between Environmental Health and Planning) and with the Environment Agency and other statutory bodies (see Section 68 for details).

Sections 5 and 6 explain how SKDC will identify potentially contaminated land and carry out inspections to determine which sites are contaminated land. SKDC makes decisions about contaminated land on the basis of information available at the time. The decision relates to 'current use' which means any use which is currently being made, or is likely to be made and which is consistent with any existing planning permission. 'Current use' is defined by the statutory guidance [2] and includes:

- ✦ Temporary uses permitted under planning legislation
- ✦ Future uses or developments which do not require a new or amended grant of planning permission
- ✦ Likely informal recreational use of land (authorised and unauthorised) e.g. children playing on the land

When considering a future use which qualifies as a 'current use' SKDC assumes that this proceeds in accordance with any existing planning permission, including any conditions relating to cleaning up or preventing contamination.

For agricultural uses, 'current agricultural use' [2] does not extend beyond growing or rearing of crops or animals which are habitually grown or reared on the land.

When further information is obtained for a site, SKDC will check the database to determine whether the site concerned has already been assessed. If so, the site priority will be reviewed in the light of the new information. If the site has not previously been identified, SKDC will follow the procedure outlined in Section 5, including the new information, to determine its priority category.

If the site has already been subject to further inspection, SKDC will review the inspection and the decisions made in the light of the new information.

Examples of information that will result in SKDC carrying out reviews of site prioritisation and inspection decisions are as follows:

- ✦ Proposed changes in the use of surrounding/adjacent land (planning applications and Development Structure Plan reviews)
- ✦ Planning applications



- ✳️ Unplanned changes in the land use (persistent unauthorised use of land by children, travellers, fly-tipping)
- ✳️ Unplanned events where consequences cannot be addressed through other relevant environmental legislation (localised flooding, landslides, accidents, fires, spillages)
- ✳️ Reports from statutory bodies of localised health effects that appear to relate to a particular area of land
- ✳️ Reports from statutory bodies of adverse ecological effects that appear to relate to a particular area of land
- ✳️ Reports from statutory bodies of adverse water quality effects that appear to relate to a particular area of land
- ✳️ Verifiable reports of unusual or abnormal site conditions received from members of the public, business, voluntary organisations (wildlife trusts, conservation groups, environmental pressure groups, etc)
- ✳️ Updates of information provided by the Environment Agency e.g. changes to receptors such as Source Protection Zones, abstraction licence applications
- ✳️ Updates of information provided by Natural England e.g. new SSSI's or other designated protected areas

## 9.2. Review of the Inspection Strategy

SKDC will routinely review its inspection strategy to ensure that:

- ✳️ The inspection strategy is fulfilling SKDC's statutory obligations
- ✳️ The inspection strategy is appropriate to the needs of SKDC
- ✳️ The inspection strategy and its procedures incorporate and develop in line with practical experience and new information gained during its operation.
- ✳️ Inspection procedures represent efficient use of resources

It is proposed to review the strategy every 5 years of publication. A regular review frequency will be set as part of the first review.

## 9.3. Auditing Procedures

There is a need for SKDC to demonstrate that it is fulfilling its obligations with respect to contaminated land inspection, maintenance of a register and reporting under Part IIA.

To ensure that the system is operating efficiently and properly, an auditor will be appointed by SKDC to audit the data systems. The auditing will be undertaken by either an internal auditor, a member of another Local Authority, or by an external consultant.

## SECTION 10

### 10. OTHER SUPPORTING INFORMATION

#### 10.1. Glossary

This glossary has been prepared to assist understanding of technical and legal terms used in this contaminated land strategy. Definitions should therefore be taken in the context of contaminated land; they are not necessarily full and all encompassing definitions appropriate to any purpose. Explanations of terms with legal meaning have been simplified and/or further explained for clarity and should not be assumed to comprise full legal definitions. These are given by the statutory guidance [2].

#### **ABSTRACTION**

The pumping or collection of water for drinking or other use from a well, spring, river or other water source.

#### **APPROPRIATE PERSON**

Any person who is found to be liable to pay for remediation under the terms of the EPA 1990 Part IIA. This is firstly the polluter. If no polluter can be identified, then the landowner may be the appropriate person.

#### **AQUIFER**

A body of rock or sediment that is sufficiently permeable to store and transmit water under the ground, in quantities that permit use of the water.

#### **BROWNFIELD LAND**

Any land that has been developed previously, with the exception of land previously developed by agricultural or forestry buildings. "Brownfield" does not mean "contaminated"; the majority of brownfield sites are not contaminated land.

#### **CHARGING NOTICE**

A notice placing legal charge on land by an enforcing authority enabling the authority to recover reasonable remediation costs from the appropriate person (s).

#### **CONTAMINATED LAND**

The definition of contaminated land from the EPA 1990, Part IIA, Section 78A (2) is:

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

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

## **CONTROLLED WATERS**

“Controlled waters” are all natural inland and near coastal waters, including groundwater. Therefore, all lakes, rivers, streams, estuaries and coastlines are controlled waters. Pollution of controlled waters means the addition of any “poisonous, noxious or polluting matter or any solid waste matter”.

## **DISCHARGE CONSENT**

A consent issued by the Environment Agency, allowing the discharge of waste water (e.g. run-off, or treated effluent from a factory) to a controlled water. The consent specifies the quantity and quality of waste water that may be discharged at the consented location.

## **GEOGRAPHICAL INFORMATION SYSTEM (GIS)**

A computer program that enables map-related data to be stored, viewed and processed.

## **INTEGRATED POLLUTION CONTROL (PPC)**

A system for regulating industrial sites in the UK, made under the EPA 1990. It requires industrial sites operating particular processes to obtain authorisation to operate from the Environment Agency or the Local Authority (depending on the nature and scale of the process). In general, processes regulated under Integrated Pollution Control are likely to be more polluting than those not regulated; however this covers all forms of pollution and does not necessarily mean that Integrated Pollution Control sites are likely to cause contamination of the ground.

## **MAJOR AQUIFER**

A major aquifer is a highly permeable formation (rock) usually with a known or probable presence of significant fracturing. They may be highly productive and able to support large abstractions for public supply or other purposes.

## **MINOR AQUIFER**

These can be fractured or potentially fractured rocks, which do not have a high primary permeability, or other formations of variable permeability including unconsolidated sediments. Although these aquifers will seldom produce large quantities of water for abstraction, they are important both for local supplies and for supplying baseflow to rivers.

## **PATHWAY**

A mechanism for a receptor to be exposed to a contaminant that may harm the receptor.

## **POLLUTANT LINKAGE**

A circumstance where it is possible that a contaminant (source) may contact a receptor (via a particular pathway)

## **POTENTIALLY CONTAMINATIVE USE**

A development that exists, or has previously existed, on a site where the nature of the development is such that it is possible that contamination of the ground may have occurred.

## **PUBLIC REGISTER**

The register maintained by the enforcing authority containing details of regulatory action on land that is contaminated land.

## **RADIOACTIVE CONTAMINATED LAND**

Section 78A(2) (as modified) of the Part 2A regime defines contaminated land as “any land which appears to the local authority in whose area it is situated to be in such a condition, by reason of substances in, on or under the land, that –

- (i) harm is being caused, or
- (ii) there is a significant possibility of such harm being caused.”

In the case of radioactivity, “Harm” should be regarded as being caused where lasting exposure gives rise to radiation doses equal to or in excess of prescribed values set out in the statutory guidance. Lasting exposure is not defined in the Directive but the Government considers it to be exposure that could take place over a protracted period as a result of the nature of the contamination and the use to which land is put.

## **RECEPTOR**

- (a) A living organism (including humans) or group of organisms, and ecological system or piece of property that is being, or could be harmed by a contaminant
- (b) controlled waters which are being, or could be, polluted by a contaminant

## **REMEDIATION**

Remediation is an action carried out to reduce the risk of significant harm or water pollution. It entails breaking or removing significant pollutant linkages, by treating the source (contaminant); blocking the pathway or protecting or removing the receptor.

## **REMEDIATION DECLARATION**

A document prepared and published by the enforcing authority, detailing remediation actions that it would have specified for a given site, but is prevented from so doing by Section 78E (4) and (5). This says that the authority must only specify remediation that is reasonable, given the seriousness of the harm or water pollution, and the cost of the works that would have to be carried out.

## **REMEDIATION NOTICE**

A notice specifying what an appropriate person has to do by way of remediation and when he is to do each of the specified actions by. Note that the actions specified do not always consist of “remediation”. “Assessment actions” and “monitoring actions” can also be specified in remediation notices.

## **REMEDIATION STATEMENT**

A statement prepared and published by the responsible person detailing the remediation actions that have been carried out (or are planned).

## **RESPONSIBLE PERSON**

The person responsible for carrying out the remediation. Not necessarily the same as the appropriate person.

## **RUN-OFF**

Surface water that flows across an area and into rivers, streams etc. or drains during rainfall (i.e. all the water that does not soak into the ground).

## **SIGNIFICANT HARM**

Significant harm includes:

Death, disease, serious injury, genetic mutation, birth defects or the impairment of reproductive functions in humans

Irreversible adverse change, or threat to endangered species, affecting an ecosystem in a protected area (e.g. site of special scientific interest)

Death, serious disease or serious physical damage to pets, livestock, game animals or fish

A substantial loss (20%) in yield or value of crops, timber or produce

Structural failure, substantial damage or substantial interference with right of occupation to any building

Further information on significant harm is given in Chapter A, Table A of Circular 02/2000 DETR (the statutory guidance)

## **SIGNIFICANT POLLUTANT LINKAGE**

A pollutant linkage where the amount of contaminant (source) that may be able to contact the receptor is likely to be sufficient to result in significant harm or pollution of controlled waters.

## **SIGNIFICANT POSSIBILITY OF SIGNIFICANT HARM**

In determining whether there is a significant possibility of significant harm, the local authority will use a risk assessment approach, considering both the severity and the likelihood of the possible harmful effect. This will involve establishing:

The nature and degree of harm predicted

The susceptibility of the receptors to which harm might be caused

The timescale within which the harm might occur

## **SOURCE**

A substance capable of causing harm, that is present in, on, or under the ground.

## **SOURCE PROTECTION ZONE**

An area around a major groundwater abstraction (drinking water source) where ground contamination may result in the contamination of the water source. Source protection zones are defined by the Environment Agency and there are restrictions on development of some kinds (e.g. landfill sites) within them.

The following explanation is adapted from the Environment Agency's website ([www.environment-agency.gov.uk](http://www.environment-agency.gov.uk))

Source Protection Zones (SPZ) have been defined by the Environment Agency for nearly 2000 groundwater sources (wells, boreholes and springs) used for public drinking water supply (in the whole of England and Wales). The SPZ provide an indication of the risk to groundwater supplies, for which SPZ have been defined, that may result from potentially polluting activities and accidental releases of pollutants. Generally the closer the activity or release is to a groundwater source the greater the risk. Three zones (an inner, outer and total catchment) are usually defined although a fourth zone (zone of special interest) is occasionally defined.

The definition starts with consideration of all significant public water supply and private wells or boreholes that supply water to potable or equivalent standards (groundwater sources). For example mineral waters, breweries, food processing etc.

The risks posed by a particular activity to an existing groundwater source depends on its proximity. More specifically, the pollution threat depends on whether the activity is located within the catchment of that source and on the time it would take (travel time) for any contaminant in the groundwater to reach the source. The SPZ relate purely to groundwater flow below the water table and do not take account of the depth to groundwater and the nature of the overlying soils and rock which may have an important influence on groundwater vulnerability.

The Agency has subdivided groundwater source catchments into four zones. Two of these are determined by the travel time of potential pollutants, the third by the source catchment area itself and the fourth is a "Zone of Special Interest". This fourth zone highlights areas where known local conditions mean that potentially polluting activities could impact on a groundwater source even though the area is outside the normal catchment of that source.

## **SPECIAL SITE**

A Special Site is a contaminated land site that is regulated by the Environment Agency instead of the Local Authority. The definition of a Special Site is given in Section 78C (7) and 78D (6) of the EPA 1990.

Examples of Special Sites are:

- ✱ Sites that could be contaminating drinking water resources
- ✱ Industrial sites likely to have difficult contamination problems, such as waste acid tar lagoons, oil refining, explosives and sites regulated under Integrated Pollution Control
- ✱ Nuclear sites
- ✱ Current MoD land (with some exceptions, like off-base housing)
- ✱ Land deemed 'statutorily contaminated' by virtue of radioactivity

## **STATUTORY GUIDANCE**

Guidance that must be complied with by the enforcing authority. The statutory guidance for English local authorities is given in DETR Circular 01/2006.

## **WALKOVER SURVEY**

A preliminary survey of a site carried out by visual inspection. Normally the survey is guided by a checklist of areas or features to be inspected.

## WASTE MANAGEMENT LICENCE

Under the Waste Management Licensing Regulations 1994, all businesses involved in waste management must hold a license for each site or premises on which waste management operations are carried out. Licenses are issued and enforced by the Environment Agency.

## 10.2. References

[1] Environmental Protection Act 1990, Part IIA: inserted by Environment Act 1995, Section 57. See Environment Act 1995 for text of Part IIA.

[2] Environmental Protection Act 1990, Part IIA. Contaminated Land, DETR Circular 01/2006, Department of the Environment, Transport and the Regions, September 2006.

[3] The Contaminated Land (England) Regulations 2006, SI 2000/No. 1380

[4] Department of the Environment (1995) A Guide to Risk Assessment and Risk Management for Environmental Protection, HMSO, London

[5] Ferguson, C., Darmendrail, D., Freier, K., Jensen, B.K., Jensen, J., Kasamas, H., Urzelai, A. and Vegter, J. (editors) 1998 Risk Assessment for Contaminated Sites in Europe. Volume 1 Scientific Basis. LQM Press, Nottingham

[6] Census 2001

[7] South Kesteven Local Plan April 1995

[8] Knapp, M 1990 Grantham, a pictorial history, Phillimore & Co. Ltd, Chichester

[9] British Geological Survey Geological map Grantham, Sheet 127, 1:50,000

[10] British Geological Survey Geological map Bourne, Sheet 143, 1:50,000

[11] Local Environment Agency Plan Witham Action Plan July 2000

[12] Local Environment Agency Plan Welland Action Plan January 1998

[13] British Geological Survey Hydrogeological map North and East Lincolnshire 1:126,5720

[14] National Rivers Authority Groundwater Vulnerability of North Northamptonshire and West Fens, Sheet 24, 1:100,000

[15] M.J. Carter Associates (1995) Prioritisation and Categorisation Procedure for Sites which may be Contaminated CLR Report No. 6, Department of the Environment

[16] RPS Consultants Ltd (1994) Documentary Research on Industrial Sites CLR Report No.3, Department of the Environment

[17] Applied Environmental Research Centre Ltd (1994) Guidance on preliminary site inspection of contaminated land Contaminated Land Report No. 2 (2 volumes), Department of the Environment



- [18] Centre for Research into the Built Environment (1994) Sampling Strategies for Contaminated Land CLR Report No. 4, Department of the Environment
- [19] CIRIA (1995) Remedial Treatment for Contaminated Land Volume III: Site investigation and assessment, Special Publication 103, CIRIA
- [20] Environment Agency Procedural Note 6: State of Contaminated Land Report (2000)
- [21] SNIFFER (1999) Communicating understanding of contaminated land risks Scotland and Northern Ireland Forum for Environmental Research, SEPA, Stirling
- [22] Environment Agency (2004). Assessment of Risks to Human Health from Land Contamination: An overview of the development of Soil Guideline Values and Related Research. Contaminated Land Report 7.
- [23] Environment Agency (2004). Priority Contaminants for the Assessment of Land. Contaminated Land Report 8.
- [24] Environment Agency (2004). Model Procedures for the Management of Land Contamination. Contaminated Land Report 11.

## Alternative formats and languages

South Kesteven has a rich and diverse culture - a community made up of people from different cultures, with differing backgrounds, beliefs or experiences. This diversity is one of the things that make South Kesteven such a great place to live and work.

To ensure all residents of South Kesteven have access to our information material, our information is available in the following languages and formats:

### Large print, Braille, audio tape, audio CD or computer disc

This information can be made available in large print, Braille, on audio tape, audio CD or computer disc. If you, or someone you know, might benefit from this service, please contact us.

#### 繁體中文 / Cantonese

本資料有繁體中文版，若你本人或你認識的甚麼人會受益於此版本，敬請聯絡我們。

#### Česky / Czech

Tato informace může být dostupná i v češtině. Pokud byste Vy, a nebo někdo koho znáte, mohl využít tohoto servisu, obraťte se prosím na nás.

#### Magyar / Hungarian

Ezeket az információkat magyar nyelven is tudjuk biztosítani. Ha Ön, vagy valaki, akit Ön ismer igényt tart erre a szolgáltatásra, kérem, keressen fel minket.

#### Latviski / Latvian

Šo informāciju var iegūt arī latviešu valodā. Ja Jums vai kādai no Jūsu paziņai šādi pakalpojumi nāktu par labu, lūdzu kontaktēties mūs.

#### Lietuviškai / Lithuanian

Šią informaciją galite gauti lietuvių kalba. Prašome kreiptis į mus, jei jums arba jūsų pažįstamiems ši paslauga galėtų būti naudinga.

#### Polski / Polish

Informacja ta może być dostępna w języku polskim. Jeżeli Państwo albo ktoś kogo Państwo znają, może z tej usługi skorzystać, proszę nas kontaktować.

#### Português / Portuguese

Esta informação pode ser disponibilizada em português. Se você, ou alguém que conhecer, beneficiar com este serviço, por favor contacte-nos.

#### Русский / Russian

Данная информация может быть предоставлена на русском языке. Если Вы или Ваши знакомые посчитаете такую услугу необходимой, пожалуйста, свяжитесь с нами.

#### Türkçe / Turkish

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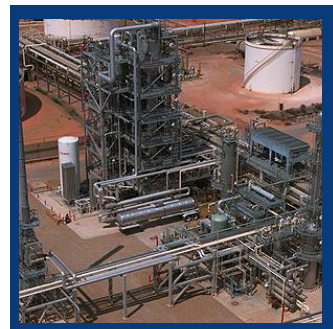
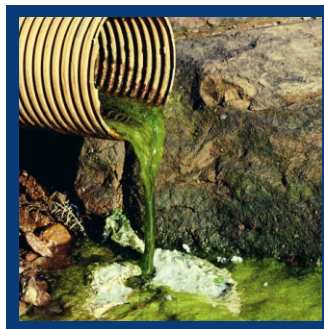
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