



Contaminated Land Strategy

**Kirklees Metropolitan
Council**

April 2001

Reviewed 2002/2003 and 2006

This document has been updated to reflect the findings of the review

Contents

| Section | | Page No |
|------------|--|-----------|
| 1. | Introduction | 5 |
| 1.1 | General Policy of Kirklees | 5 |
| 1.2 | Regulatory Context | 6 |
| 1.2.1 | Regulatory role of local authorities under Part IIA | 6 |
| 1.2.2 | Regulatory role of Environment Agency | 6 |
| 1.2.3 | Definition of contaminated land under Part IIA | 7 |
| 1.2.4 | Principles of pollutant linkages | 8 |
| 1.2.5 | Principles of risk assessment | 9 |
| 1.2.6 | Requirements of the strategic approach | 9 |
| 1.3 | Development of the Strategy | 10 |
| 1.4 | Objectives of the Strategy Document | 10 |
| 2.0 | Characteristics of the Kirklees area | 11 |
| 2.1 | Geographical Aspects | 11 |
| 2.1.1 | Geological Characteristics | 11 |
| 2.1.2 | Hydrogeological Characteristics | 12 |
| 2.2 | Current Land Use Characteristics | 12 |
| 2.2.1 | Population Distribution | 12 |
| 2.2.2 | Agriculture | 13 |
| 2.2.3 | Council Owned Land and Property | 13 |
| 2.2.4 | Key Property Types | 14 |
| 2.2.5 | Protected Ecological Receptors | 14 |
| 2.2.6 | River Network and Key Water Bodies | 14 |
| 2.3 | Historical Industrial Activities | 15 |
| 3. | Aims and objectives of the Strategy | 15 |
| 3.1 | Aims | 15 |
| 3.2 | Objectives | 16 |
| 3.3 | Review | 16 |
| 4. | Priority actions and timescales | 16 |
| 4.1 | Priorities | 17 |
| 4.1.1 | Stage 1: Dealing with urgent sites | 17 |
| 4.1.2 | Stage 2: Production of Strategy document | 17 |
| 4.1.3 | Stage 3: Purchase/Acquire & Input additional data | 17 |
| 4.1.4 | Stage 4: Prioritisation of sites for detailed inspection | 17 |
| 4.1.5 | Stage 5: Detailed inspection of sites | 18 |
| 4.2 | Timescales | 18 |
| 5. | Procedures | 18 |

| | | |
|-------------------|--|-----------|
| 5.1 | Internal management arrangements for inspection and identification. | 19 |
| 5.1.1 | Internal management arrangements | 19 |
| 5.1.2 | Arrangements for inspection of land | 19 |
| 5.2 | The Local Authority's interest in its own land | 19 |
| 5.3 | Interaction with Neighbouring authorities | 20 |
| 5.4 | Information collection | 21 |
| 5.4.1 | Information collected to date | 21 |
| 5.4.2 | Other Information Requirements | 23 |
| 5.5 | Information and complaints | 23 |
| 5.5.1 | Complaints/enquiries | 23 |
| 5.5.2 | Confidentiality | 24 |
| 5.5.3 | Anonymously supplied information | 24 |
| 5.5.4 | Anecdotal evidence | 24 |
| 5.6 | Risk Assessment | 24 |
| 5.6.1 | Guideline Values | 24 |
| 5.6.2 | Risk assessment for other substances | 25 |
| 5.6.3 | Risk assessment models | 25 |
| 5.6.4 | Risk assessment for controlled waters | 25 |
| 5.7 | Interaction with other regulatory regimes | 25 |
| 5.7.1 | Planning | 25 |
| 5.7.2 | Water pollution | 26 |
| 5.7.3 | Waste Management | 26 |
| 5.7.4 | Integrated Pollution Prevention and Control (IPPC) | 26 |
| 6 | General Liaison and Communication Strategies | 26 |
| 6.1 | Consultees | 26 |
| 6.2 | Communicating with owners, occupiers and other stakeholders | 26 |
| 6.3 | Powers of entry | 27 |
| 6.4 | The Public Register | 28 |
| 6.5 | Provision of information to interested parties | 28 |
| 6.6 | Provision of information to the Environment Agency | 28 |
| 7. | Review Mechanisms | 29 |
| 7.1 | Triggers for undertaking non-routine inspection | 29 |
| 7.2 | Triggers for reviewing inspection decisions | 29 |
| 7.3 | Reviewing the Strategy | 30 |
| 8. | Information Management | 30 |
| References | | 31 |
| Appendices | | |
| Appendix 1 | Ecological Receptors | 33 |

| | | |
|-------------|--|----|
| Appendix 2 | Main Centres of Population | 34 |
| Appendix 3 | River Network and Key Water Bodies | 35 |
| Appendix 4 | Consultees - Key Organisations | 36 |
| Appendix 5 | Priority Group 1 - Heavy Contaminative Industries | 41 |
| Appendix 6 | Priority Group 2 - Medium Contaminative Industries | 42 |
| Appendix 7 | Priority Group 3 - Low Contaminative Industries | 43 |
| Appendix 8 | Work Programme | 44 |
| Appendix 9 | Potentially Contaminative Uses | 45 |
| Appendix 10 | Glossary of Terms | 47 |

List of Tables

Tables:

| | | |
|-----------------|--|----|
| Table 1: | Population figures for main urban areas in Kirklees | 12 |
| Table 2: | Information Captured onto the GIS | 22 |
| Table 3: | Information Requirements for GIS | 23 |

1 Introduction

In April 2000, Part IIA of the Environmental Protection Act (EPA) 1990 came into force introducing a new regime for the regulation of contaminated land in England. The main purpose of Part IIA is to provide a system for the identification of land that is posing unacceptable risks to health or the environment, and for securing remediation where unacceptable risks cannot be controlled by other means.

Part IIA is not the only legislation that is relevant to the management of land contamination. The planning and development control system will remain a key mechanism for managing land contamination as part of the wider process of land redevelopment and regeneration. Powers are also available under the Integrated Pollution Prevention and Control regime and the waste management licensing provisions of the EPA 1990 for dealing with contamination that results from a breach of an operating authorisation, permit or licence. Action can also be taken to prevent or remedy pollution of controlled waters under the Water Resources Act 1991, while health and safety legislation is relevant in most, if not all, land contamination applications.

The Government's intention is that Part IIA will:

- ◆ improve the transparency and focus of regulatory controls;
- ◆ ensure that regulators take a strategic approach to land contamination problems;
- ◆ allow all contamination problems to be dealt with as part of the same process;
- ◆ increase consistency in regulatory approaches; and
- ◆ provide a more tailored regulatory mechanism, including liability rules, that is better able to reflect the complexity and range of circumstances found on individual sites.

Other expected outcomes of the implementation of Part IIA are:

- more remediation carried out on a voluntary basis;
- greater scope on the part of responsible parties to plan investment in remediation in advance of any regulatory intervention;
- greater certainty on the part of developers and others about any residual liabilities associated with the redevelopment of former industrial and similar land.

The responsibility for enforcing the provisions of Part IIA lies both with local authorities and the Environment Agency. The primary regulators are local authorities who have responsibility for the identification of contaminated land, and for the regulation of all such land which is not also a Special Site.

1.1 General Policy of Kirklees

The Council's Vision is for a diverse and confident community, with access for all to:

- ◆ high quality services
- ◆ good customer care
- ◆ a thriving economy
- ◆ A healthy, safe and sustainable environment

The first three are, in the main, beyond the scope of this regime. In respect of the latter, it can make a positive contribution to the protection of human health, ecological systems, animals, crops, buildings and controlled waters.

1.2 Regulatory Context

The regime under Part IIA adopts a risk-based 'suitable for use' approach to remediation, and applies the 'polluter pays' principle to apportionment of liability. The **'appropriate person'** (or persons) to bear responsibility for remediation will normally be the person who caused or knowingly permitted the contamination. If, after enquiry, such person cannot be found, or no longer exists, then the appropriate person is the person who currently owns or occupies the land. In certain circumstances, for example, where an appropriate person cannot be found, the local authority may have to bear the costs of remediation.

1.2.1 Regulatory role of local authorities under Part IIA

The principal regulators for Part IIA are the local authorities, and their main responsibilities are:

- ◆ To cause their areas to be inspected in order to identify contaminated land
- ◆ To establish who may be the appropriate person(s) to bear responsibility for remediation of the land;
- ◆ To decide, after consultation, what remediation might be required in any individual case and ensure that such remediation takes place, by serving a remediation notice where necessary
- ◆ To record information on a public register about their regulatory actions; and
- ◆ To decide whether any such land should be designated a Special Site

The Council is obliged to set out its approach for inspection as a written strategy.

1.2.2 Regulatory role of Environment Agency

The Environment Agency has an important complementary regulatory role under the Part IIA regime. This includes:

- ◆ The provision of information and advice, including site specific guidance, to local authorities
- ◆ The regulation of Special Sites

- ◆ The preparation of a national report on the state of contaminated land

The Contaminated Land (England) Regulations 2006 define “Special Sites”, which includes land associated with the following situations:

- pollution of controlled waters as defined in the Regulations
- chemical weapons manufacture
- atomic weapon manufacture
- biological weapon manufacture
- radioactivity
- contamination by waste acid tars
- refining of petroleum
- manufacture of explosives
- nuclear sites
- land owned by the Ministry of Defence
- land on which prescribed processes designated for central control have been carried out

1.2.3 Definition of contaminated land under Part IIA

Section 78A(2) defines contaminated land for the purpose of Part IIA as:

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

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

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

OR with respect to radioactive contamination defined in section 78A(2)(as modified) as:

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

“(a) harm is being caused, or

“(b) there is a significant possibility of such harm being caused;...”

So, although land may be polluted, unless it presents a significant risk to a receptor such as a human being, crops, animals, buildings or controlled waters, the mere presence of a former contaminative use does not require immediate action by the local authority.

It should be noted that all future references to contaminated land within this document refer to the statutory definition as defined above.

1.2.4 Principles of pollutant linkages

The DETR Circular 02/2000 (superseded by DEFRA circular 01/2006) follows established approaches to risk assessment, including the concept of **pollutant linkages**.

A **pollutant linkage** is the relationship between a **contaminant**, a **pathway** and a **receptor**. A 'pollutant' is the contaminant in a pollutant linkage. Unless all three elements of a pollutant linkage are identified in respect of a piece of land, the land will not be identified as contaminated land.

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

The first step is for the local authority to satisfy itself that a contaminant, a pathway, and a receptor have been identified with respect to any land.

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

A **RECEPTOR** is either:

- (a) a living organism, a group of living organisms, an ecological system, or property which:
 - ◆ is in a category listed in Table A of DEFRA Circular 01/2006 (see below) as a type of receptor, and
 - ◆ is being, or could be, harmed, by a contaminant; or
- (b) controlled waters, which are being, or could be, polluted by a contaminant; or
- (c) a person subjected to lasting exposure resulting from the after-effects of a radiological emergency, past practice or past work activity

Receptors are defined in Table A of DEFRA Circular 01/2006 as:

- 1 **Human beings**
- 2 Any **ecological system**, or living organism forming part of such a system, within a location which is, amongst others:
 - ◆ a site of special scientific interest
 - ◆ a national nature reserve
 - ◆ a site of special protection for birds
 - ◆ a special area of conservation and special protection area
 - ◆ a national park
- 3 **Property** in the form of:
 - ◆ crops, including timber;
 - ◆ produce grown domestically, or on allotments, for consumption;
 - ◆ livestock;
 - ◆ other owned or domesticated animals; and

- ◆ wild animals, which are the subject of shooting, or fishing rights.

4 **Property** in the form of buildings.

A **PATHWAY** is one or more routes or means by or through which a receptor:

- ◆ is being exposed to, or affected by, a contaminant, or
- ◆ could be so exposed or affected.

The second step in applying the definition of contaminated land is for the local authority to satisfy itself that both:

- (a) such a **pollutant linkage** exists in respect of a piece of land; and
- (b) the pollutant linkage
 - ◆ is resulting in **significant harm** being caused to the receptor in the pollutant linkage
 - ◆ presents a **significant possibility of significant harm** being caused to that receptor,
 - ◆ is resulting in the pollution of the **controlled waters** which constitute the receptor,
 - ◆ is likely to result in such pollution,
 - ◆ is resulting in harm so far as attributable to radioactivity being caused to any person in the pollutant linkage, or
 - ◆ presents a significant possibility of harm so far as attributable to radioactivity being caused to any person in the pollutant linkage.

1.2.5 **Principles of risk assessment**

DETR Circular 02/2000 (as superseded by DEFRA circular 01/2006) promotes a risk-based approach to dealing with contaminated land. "Risk" is defined as the combination of:

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

The aim of this type of approach is to protect human health and the environment without unnecessarily wasting finances on cleaning up sites that do not pose a significant risk.

The need for and extent of any remediation will be based on a site-specific risk assessment of the facts.

1.2.6 **Requirements of the strategic approach**

In carrying out its inspection duty, the local authority is required to take a strategic approach to the identification of land that merits detailed individual inspection. This approach is required to:

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

In developing this strategic approach, the local authority is required to reflect local circumstances. In particular it is required to consider:

- ◆ any available evidence that significant harm or pollution of controlled waters is actually being caused;
- ◆ the extent to which any receptor is likely to be found in any of the different parts of the authority's area;
- ◆ the extent to which any of those receptors is likely to be exposed to a contaminant;
- ◆ the extent to which information on land contamination is already available;
- ◆ the history, scale and nature of industrial or other activities which may have contaminated the land in different parts of its area;
- ◆ the nature and timing of past redevelopment in different parts of its area;
- ◆ the extent to which remedial action has already been taken by the authority or others to deal with land-contamination problems or is likely to be taken as part of an impending redevelopment; and
- ◆ the extent to which other regulatory authorities are likely to be considering the possibility of harm being caused to particular receptors or the likelihood of any pollution of controlled waters being caused in particular parts of the local authority's area.

1.3 Development of the Strategy

The strategy has been developed to meet the requirements of the Statutory Guidance, and with particular reference to "Contaminated Land Inspection Strategies -Technical Advice for Local Authorities" issued in a draft form by the Department of the Environment, Transport and the Regions in April 2000.

The Council's Environment and Transportation Management Board on the 23 April 2001 and the Council's Policy Board formally adopted the strategy on the 2nd May 2001. The adopted Strategy was then published and copied to the Environment Agency during June 2001.

1.4 Objectives of the Strategy Document

- ◆ To meet the requirements of DETR Circular 02/2000(as superseded by DEFRA circular 01/2006) in producing, formally adopting and publishing a written strategy by the end of June 2001.

- ◆ To detail the strategic approach to be followed for the inspection of land in accordance with paragraph B.9 of DETR Circular 02/2000(as superseded by DEFRA circular 01/2006) (see section 1.2.6).
- ◆ To make information freely available to all relevant sections of the Council to enable consideration to be given about land contamination in policy making processes, and bringing sites forward for economic development.
- ◆ To make information freely available to all relevant sections of the Council to enable potential liability issues associated with their own land to be fully assessed.
- ◆ To avoid any unnecessary blight of land.
- ◆ To provide information to the Environment Agency for its annual report on Contaminated Land. The first such report was published in 2002 (EA, 2002).
- ◆ To make available to any interested parties, information about the Council's intentions with respect to Contaminated Land.
- ◆ To provide a mechanism whereby the strategy is reviewed on a regular basis to allow for changes in Guidance etc

2 Characteristics of the Kirklees Areas

This section gives background information about the area of Kirklees Metropolitan Council and highlights how some of the factors, in relation to potential contaminants, pathways and receptors, will influence the Council's approach to inspection for contaminated land.

2.1 Geographical Aspects

Kirklees is the third largest Metropolitan district in the country, covering an area of 41,000 hectares (160 square miles). This part of West Yorkshire reveals many contrasting landscapes, from scenes of industrialisation in the main valleys to sparsely populated high Pennine moorlands around Marsden and Holmfirth in the west. The River Calder below Dewsbury is the lowest point in Kirklees at 120ft above sea level. The highest is Black Hill to the south west of Holmfirth at 1,908ft above sea level.

The Kirklees area also takes in 4,600 hectares of the Peak District National Park, and stretches to the borders with Leeds, Bradford and Wakefield in the East.

2.1.1 Geological Characteristics

Geology influences whether a contaminant is likely to remain close to the source or migrate, ie whether a pathway is present. Certain formations, such as aquifers, are potential receptors for contamination, and some formations may even present a source of contamination, for example radon emissions from granite or acid waters rich in iron from old coal mine workings.

The physical appearance of Kirklees is due largely to the Carboniferous geology of the area which alternates between grit, sandstone or flagstone with soft shales or mudstone. There are thin layers of coal seams in the Millstone Grit and many more in the Coal Measures.

The regional tilt of local rock is eastward, and the process of weathering has created a series of escarpments with steep westward facing slopes and gentler slopes to the east. Longwood Edge and Crosland Edge in Huddersfield are examples of these. Beneath these within the Holme Valley lies the boundary between the Coal Measures and the older rough rock, which forms the uppermost bed of the Millstone Grit in the area to the south and west of Huddersfield. Coal Measures form the uppermost beds in the area to the east and north of Huddersfield.

Peat beds cover the uplands plateau, head and landslip materials occur on the valley sides. Isolated patches of boulder clay occur in the north of the district. Alluvium and River Terrace Deposits are also found in varying thickness throughout the river valleys.

2.1.2 Hydrogeological Characteristics

There are no major aquifers in the district and no public drinking water supply sources abstracted from the rock within the district. However, the Millstone Grit is of great regional importance and supports several hundred private drinking water abstractions and three commercial water-bottling plants. The largest of these abstracts one hundred million litres of water annually.

The Coal Measures, Alluvium and River Terrace Deposits are classified as minor aquifers and support only a small number of licensed abstractions mainly for use in industrial purposes.

2.2 Current Land Use Characteristics

Kirklees was formed in 1974 when local government reorganisation brought together 11 former boroughs. In population terms, Kirklees is the seventh largest Metropolitan Borough in the country, with approximately 388,500 people.

2.2.1 Population Distribution

There are several small centres of population in the numerous villages within the area, but the main urban areas are centred on the following 5 towns: (Appendix 2 highlights the main centres of population).

Table 1: Population figures for main urban areas in Kirklees (2001)

| Town | Estimated Population |
|--------------|-----------------------------|
| Huddersfield | 130,200 |
| Dewsbury | 55,600 |
| Batley | 45,600 |
| Heckmondwike | 11,300 |
| Cleckheaton | 44,600 |

Statistics suggest that the number of households is increasing. As the number increases new land will need to be brought forward to meet the requirement.

The Council has an objective of securing that 65% of any new housing is developed on brownfield sites. This is the central issue to be addressed in the review of the statutory Kirklees Unitary Development Plan (UDP). It is known that about one-third of the brownfield sites identified in the National Land Use Database (NLUD) for Kirklees are coincident with or adjoin potentially contaminated sites. It will be essential that before any potentially contaminated brownfield site is identified for use for housing, sufficient is known about potential contamination to enable a judgement to be made as to whether or not there are likely to be exceptional development costs in bringing the land forward.

2.2.2 Agriculture

Of the 41,000 hectares within Kirklees, 29,340 are designated as greenbelt land, and agriculture is considered to be a significant land use.

2.2.3 Council owned Land and property

The Council and its predecessors own or have owned significant land and property holdings within the Metropolitan boundary. The portfolio of Council owned land currently comprises:

- schools (196)
- leisure centres (12)
- swimming pools (7)
- park depots (5)
- cemeteries (6)
- crematoria (2)
- miscellaneous park buildings (25)
- plant nurseries (1)
- recreation/sports grounds (21 + 18)
- libraries and art galleries (22)
- museums (6)
- town halls (4)
- older people residential (7)
- adults resident (6)
- children's residential (5)
- older people day care (3)
- adults day care (4)
- children's and families/family centre (4)
- youth centres (8)
- community centres (33)
- public halls (8)
- enterprise/business centres (10)
- market halls (6)
- open markets (4)
- Council dwellings (23,914)
- garage sites(800)
- lock-up garages (1,927)
- Estates garage site tenants (882)

- car parks – external (71)
- lorry park (1)
- bus park (1)
- transport depots (2)
- bricks and mortar commercial properties (481)
- approximately 900 ground leases created for commercial use

2.2.4 Key Property Types

There are 21 Ancient Monuments within the district. The most prominent of these is Jubilee Tower at Castle Hill, Almondbury. Positioned on the urban fringes of Huddersfield, it provides a landmark across the south and west of the region.

There are approximately 4,500 listed buildings, comprising 1% of all the listed buildings in England. The Council has also designated 56 Conservation areas. These are places where buildings co-exist in an environment that exhibits special features deemed worthy of retention and enhancement.

2.2.5 Protected Ecological Receptors

Certain Ecological Systems are defined in the legislation as requiring specific protection, and Kirklees has the following:

Sites of Special Scientific Interest (SSSI)

- ◆ Honley Station
- ◆ Dark peak/south Pennine Moors
- ◆ Park Clough (North West of Marsden)

Special Protection Areas (SPA)

- ◆ South Pennine Moors

The area also takes in 4,600 hectares of the Peak District National Park. The map in Appendix 1 shows the position of the National Park, the SSSI's and the SPA.

2.2.6 River Network and Key Water Bodies

The main arteries of the Rivers Calder, Colne and Holme dominate the river catchment network of Kirklees. These waters start in the Pennines on the western edges of the authority and drain easterly, leaving the borough in the River Calder, near Dewsbury. Along with the river network, there is the Calder and Hebble Navigation Canal and the Huddersfield Narrow Canal.

In the western Pennine regions of the district, several of the river tributaries have been dammed for water supply. There are over 20 reservoirs, of varying capacity, within Kirklees.

Industrial activity over the last 150 years has led to the pollution of many rivers, and the water quality varies greatly, ranging from very good on some sections, to bad on particular stretches of the River Calder and Spen Beck.

2.3 Historical Industrial Activities

Some of the towns within Kirklees, such as Huddersfield, Dewsbury and Batley, are well known industrial and commercial centres. The main sources of industrial wealth originated from the textile, engineering and chemical (including dyestuffs) industries. Industrial premises tend to be concentrated in the inner urban areas and along the river valleys, but there are also groups of such premises throughout the built-up areas, and many are of 19th century origin.

There is evidence of ancient sites across the district having strong connections with the Bronze Age, the early Iron Age, the Roman and Anglo Saxon periods, and the Norman invasion.

The entire district to the east of Huddersfield lies within the exposed Yorkshire coalfield. The Kirklees coal mining industry began as early as 1357, and at one time there were 40 mines operating within three miles of Dewsbury, providing fuel for the shoddy mills. Underground extraction of coal has now ceased, with the exception of one small private sector mine.

Business and industry in Kirklees continues to be based mainly on traditional manufacturing activities, textiles, engineering and chemicals. In recent years, there has been some diversification as new industries have become established and the service sector has grown.

The Council has had a longstanding land reclamation programme funded for many years by the derelict land grant, and many sites have also been remediated as a result of redevelopment controls, instigated through Planning approvals.

3 Aims and Objectives of the Strategy

Land contamination has significant impacts on both the environment and the economy. These areas are key considerations in developing the aims of this Inspection Strategy.

The Council's approach emphasises the need to be open and accountable for its actions. This document was therefore initially presented as a consultation draft and made available to all interested sections of the community. Comments were considered before the strategy was adopted.

3.1 Aims

- ◆ To ensure compliance with and enforcement of Part IIA of the Environmental Protection Act 1990 inserted by Section 57 of the Environment Act 1995.
- ◆ To ensure that where redevelopment of land takes place within Kirklees, the planning process deals effectively with any land contamination so that the land is suitable for its intended use.
- ◆ To address the liability issues associated with the Council's existing and former land holdings and avoid any new liability associated with land transactions.

3.2 Objectives

- ◆ Ensure that where a planning application is received for a site which is potentially contaminated either:
 - (a) Planning permission is not approved until a site investigation with respect to contamination has been undertaken, remedial works have been approved and the works completed prior to development commencing, or
 - (b) Where, after consultations, it is considered that the risk associated with the development is low and planning permission is granted, any conditions relating to contaminated land must be discharged prior to development commencing.
- ◆ Forward to the Corporate Development Unit, twice a year, an up to date copy of the Attribute data associated with the Geographical Information System (GIS) in Environmental Service. This will enable Services of the Council to view the data on the Councils mapping service PlanWeb.
- ◆ Compare the database of potentially contaminated sites with council ownership records to establish any potential liabilities, and with a view to identifying those sites for priority inspection and possible remediation.
- ◆ Assess the 4000 potentially contaminated land sites across Kirklees and develop a list for inspection, ensuring, as far as possible, that the most pressing sites are dealt with first.

3.3 Review

A review of the Contaminated Land Strategy that had originally been published in June 2001 was carried out in 2002/2003 and again in 2006. All external bodies, internal departments and neighbouring local authorities listed in appendix 4 were informed of the review and asked if they would like to make comment. All responses were considered and this document has been amended to reflect the changes made.

4 Priority actions and timescales

To date, the work carried out in Kirklees has focused on researching OS Maps and other sources of information in an attempt to identify where, within the Council's area, potentially contaminative uses have taken place. This exercise has identified approximately 4,000 potentially contaminated sites across the district. Due to the previous uses of the land, many of these sites will contain substances in, on, or under the ground, which have the potential to cause harm.

However, in order to be determined as contaminated land, within the definition of Part IIA, these sites must have both a **pathway** by which significant harm may be caused, and a **receptor** on which significant harm can be inflicted. So, although the site may be land in a contaminative state, it cannot be designated as contaminated land if either the pathway or the receptor is missing from the pollutant linkage. It should be emphasised that only a small

proportion of these sites that have been subject to potentially contaminated land uses are expected to meet the strict definition of contaminated land.

In order to ensure that contaminated land is not created in the future, for example by the introduction of a receptor through the planning process, all planning applications will be screened to ensure that appropriate conditions are imposed before development of the site begins.

4.1 Priorities

4.1.1 Stage 1 - Dealing with urgent sites

Throughout the process of prioritisation and inspection, if any sites are strongly suspected of causing significant harm, or if any site is referred by the Environment Agency for determination as a 'Special Site', then these will need to take priority.

If there is considered to be a need, investigative work and determination of contaminated land may have to begin before completion of the prioritisation process. The Regulations recognise this scenario is realistic and the proposed approach is in line with the guidance.

4.1.2 Stage 2 - Production of the strategy document

The following stages were involved in the production of the strategy document:

1. Production of the draft consultation strategy
2. Consultation period
3. Modification of draft strategy
4. Formally adopt and publish the strategy
5. Forward a copy of adopted strategy to the Environment Agency

4.1.3 Stage 3 - Purchase/Acquire and Input additional data onto the G.I.S

To be able to begin the process of prioritisation, the Council needed to purchase/acquire data for the G.I.S. Section 5.4 details the data sets that are available to officers and those that are still required.

4.1.4 Stage 4 - Prioritisation of sites for detailed inspection

In carrying out its inspection duty the local authority is required to seek to ensure that the most pressing and serious problems are located first (Annex 2 (3.3) Circular 01/2006 (DEFRA, 2006)). The 4,000 (approx.) potentially contaminated sites previously identified by the Council will form the starting point for this prioritisation exercise.

In an attempt to ensure that the most pressing and serious problems are located first, a risk assessment process will be undertaken. The first step involves dividing the potentially contaminated land sites into three groups to reflect the level of risk posed by the sites. The lists in Appendices 5, 6 and 7 illustrates which of the 'contaminative uses' have been chosen for each of the priority groups. Consequently, those sites that have been subject to

the most contaminative industries and therefore potentially present the greatest 'risk' appear in priority group 1.

The second stage in this exercise is then to consider the other factors that influence the risks posed at any particular site and these will include:

- The geographic coincidence or proximity to vulnerable receptors e.g. residential properties, schools, allotments etc
- the existence of a potential pathway

Throughout this exercise the Council's priorities will be:

- To protect human health
- To protect controlled waters
- To protect designated ecosystems
- To prevent damage to property

The GroundView™ Site Prioritisation Tool which links in with the department's GIS has been purchased for this stage and allows for scores to be allocated to each of the priority groups and to each of the receptors so that the sites can be ranked in order of priority. It is also anticipated that some walkover survey work will be necessary in order to fill in some of the gaps in the data in relation to pathways and receptors.

It is anticipated that this process may provide information that would reveal imminent threats to humans, controlled waters or protected areas of the environment posed by the contaminated land. If the evidence demonstrates a need for urgent action, this will be taken as soon as practicable alongside the rolling programme of inspections.

4.1.5 Stage 5 - Detailed inspection of sites

Once the risk ranking process has been completed, the detailed inspection of sites will commence. Sites will be inspected in order of priority, based on the outcome of the previous stage. Where contaminated land sites are identified, they will be determined in accordance with statutory requirements. The sites which are in a contaminative state, but which do not constitute contaminated land, will only be inspected further if the status of the land changes, for example, if a new receptor is introduced through the planning process.

4.2 Timescales

Anticipated timescales involved in completing the above stages are contained in the work programme in Appendix 8. However, it is the intention to keep the Strategy under regular review so that performance can be monitored.

5 Procedures

Procedures have been drawn up to describe how contaminated land issues will be handled within the Council. This section also details the level of service the community can expect from the Council in dealing with these issues.

5.1 Internal management arrangements for inspection and identification

5.1.1 Internal Management Arrangements

Within Kirklees Council, Environmental Services has responsibility for the implementation of Part IIA Environmental Protection Act 1990.

As a subsection of the Pollution and Noise Control Team, the Contaminated Land Officers report directly to the Pollution Control Manager who, in turn, reports to the Environmental Health Manager.

The team can be contacted at:

Riverbank Court

Wakefield Road

Aspley

Huddersfield HD5 9AA

Tel: 01484 226431

Fax: 01484 226409

E-mail: contaminated.land@kirklees.gov.uk

5.1.2 Arrangements for inspection of land

Members of the Pollution and Noise Control team will undertake the initial reconnaissance/assessment of sites. It is likely, however, that certain aspects of the investigation (and possibly remediation) of land will require the involvement of specialists/experts. Such services may include, amongst others;

- Laboratory analysis of potentially contaminated soils
- Intrusive site investigations
- Specialist consultations
- Remedial technologies

Where the Authority needs to employ such external parties it will do so in compliance with financial regulations. Any assessment will be carried out in accordance with current government guidance and all inspections will be carried out in accordance with the Authority's Health and Safety Policy and in consideration of appropriate guidance.

5.2 The Local Authority's interest in its own land

The Council owns an extensive land and property portfolio.

Land and property assets of the Council are held to provide services or investments which achieve an acceptable rate of return or for the betterment of local people.

The non operational land and property portfolio promotes and supports a thriving economy and a healthy, safe and sustainable environment. It provides social, community and environmental benefits and so supports the Council's Vision. (It also therefore acknowledges and addresses the fact (as outlined in 3 above) that land contamination has significant impacts on both the environment and the economy).

The aim is to address the liability with the Council's existing and former land holdings, avoiding any new liability associated with land transactions and therefore contributing to the Council's vision for a healthy environment.

The strategy to deal with the legacy of contaminated land impacts on some of the aims of the Council's Estates Management Policy (EMP) in dealing with the land and property portfolio that requires efficient and effective management to ensure it remains a valuable resource.

The strategy may impact on the following aims of the EMP.

- promoting a stronger economy by providing sites for development;
- provision of brownfield sites for development in accordance with Planning Policy Guidance Note 3(Housing);
- provide land for residential development by private developers, housing associations and partnership organisations to meet housing and other accommodation needs;
- promotion of environmental and sustainable initiatives;
- provision of land for activities to meet the needs of local communities;

It has been established which of the priority 1 sites (at appendix 5) are or have been owned by the Council. Further investigation is required to establish which of these sites are or have been occupied by the Council.

In relation to general disposals of Council owned development land, the following processes are in place to mitigate risk, satisfy the Environmental Protection Act 1990 and meet the aims and liability issues outlined above.

- (a) preparation of a desk study considering historical information concluding with preliminary risk assessment of contamination;
- (b) where necessary an intrusive site investigations and contamination testing will be undertaken to satisfy the planning process, or by the purchaser prior to legal completion.

5.3 Interaction with Neighbouring authorities

A situation may occur where contaminated land located outside the local authority, or straddling the border with a neighbouring authority, is having a significant impact on specified receptors within Kirklees.

The Act states that where land outside, but adjoining or adjacent to, the local authority's area is within the definition of "contaminated land" and that significant harm or pollution of controlled waters is or will be caused within its area, then the authority may exercise its functions under Part IIA as if the land were situated within its area. This provision is stated to be without prejudice to the functions of the authority in whose area the land is actually located.

If such circumstances are encountered liaison with the adjacent Local Authority will take place prior to initiating any specific action.

5.4 Information collection

This section gives details of the information requirements that will enable identification of potential sources, pathways and receptors for contamination within the district.

5.4.1 Information collected to date

In May 1995, a survey was carried out to identify potentially contaminated sites within the Kirklees Metropolitan Council district. The survey adopted a methodology laid down by the DoE in the 1991 consultation paper "Public Registers of Land Which May Be Contaminated" and was adapted to take into account the results of the DoE 1990 "Pilot Study of Potentially Contaminated Land in Cheshire". Appendix 9 gives the full list of those 'uses' that were utilised in the survey.

The primary emphasis of the survey was to carry out a systematic search of available sources of information to provide a baseline level of data for each site, and to create a portfolio of contaminative uses operated on each site.

The data sources used in the survey were;

OS Maps

- ◆ 1854 County Series - 6 inch
- ◆ 1893 County Series - 25 inch
- ◆ 1907 County Series - 25 inch
- ◆ 1918 County Series - 25 inch
- ◆ 1933 County Series - 25 inch
- ◆ 1948 County Series - 6 inch
- ◆ 1965 County Series - 6 inch
- ◆ 1950/60 1:2500 maps held by Kirklees Planning Department
- ◆ Latest 1:1250 maps held by Kirklees Planning Department

Primary Collated Sources

- ◆ Derelict and Despoiled Land Survey - 1973 and 1993
- ◆ HMIP Public Registers of Prescribed Processes
- ◆ Register of Waste Disposal Licences held by Kirklees Minerals Planning Section
- ◆ Landfill Gas Constraint Maps held by Kirklees Minerals Planning Section
- ◆ Register of Licensed Scrap yards held by Kirklees Environment &

Secondary Sources

- ◆ HMIP Register of Premises regulated under the Radioactive Substances Act 1960
- ◆ NRA Register of Effluent Discharge Consents
- ◆ Other historic maps - Tithe Maps, Town Plans
- ◆ Fire Insurance Plans published by Goad
- ◆ Fire Service records of petrol storage sites
- ◆ Environment & Transportation Service' general files
- ◆ Minerals Planning files
- ◆ Aerial photographs

Trade Directories

- ◆ Selected Directories dating from 1837 to 1922 at 8-15 year intervals

The survey identified approximately 4000 potentially contaminated sites. The information was originally transferred onto a series of 1:10000 base maps, and data sheets were compiled for each site, detailing the portfolio of contaminative uses, dates of operation and the sources of information. More recently the data has been transferred onto the Geographical Information System (GIS) held in the Pollution and Noise Control section of Environmental Services.

Other information that has now also been captured onto the GIS includes those detailed in the table below.

Table 2: Information Captured onto the GIS

| Data | Source |
|---|---|
| Integrated Pollution Control Register which details premises that operate under local & central control | Environmental Services files |
| Ecological Areas defined as Receptors in DETR Circular 01/2006 | English Nature |
| Post 1974 operational/non-operational landfill sites | Environment Agency / KMC Waste Disposal |
| Ancient/Historic Monuments | English Heritage |
| Licensed Ground and Surface Water Abstraction Points | Environment Agency |
| Discharge Consents for the Discharge of Effluents into Controlled Waters | Environment Agency |
| Allotments | KMC |
| Schools & Nurseries | KMC |
| Playing Fields / Parks | KMC |
| Geological Maps 1:50000 (Sheets 78 & 86) detailing the solid and superficial geology underlying the Kirklees area | British Geological Society |
| Maps of artificial Deposits (made & worked ground) within the Kirklees area - 1:50000 | British Geological Society |
| Data Management Tool - to enable information from inspection of land to be stored effectively. | GroundView™ |

| | |
|---|--------------------------------------|
| Site Prioritisation Tool - to enable the most pressing sites to be dealt with first | GroundView™ Site Prioritisation Tool |
| Historical Ordnance Survey maps | Landmark |
| Private groundwater abstractions | Environmental Services files |
| Reservoirs | Yorkshire Water |

Environmental Services also holds for reference a paper copy of:

Policy and Practice for the Protection of Groundwater, Groundwater Vulnerability 1: 100000 Map Series (Sheet 11 South Pennines).

5.4.2 Other Information Requirements

Other data that is either to be inputted or is in the process of being entered onto the GIS is detailed in the table below.

Table 3: Information Requirements for GIS

| Data | Source |
|--|---|
| Historical Information relating to Site Investigation Reports/Remediation Strategies undertaken on land which has been subject to 'Development Control' | KMC Planning Department, Environmental Services files |
| Digitise Locations of other water bodies including rivers and canals as 'Receptors' for use in conjunction with the GroundView™ Site Prioritisation Tool | KMC |

5.5 Information and complaints

From time to time, the Council may receive a complaint or information regarding contaminated land. Upon investigation, information may be forthcoming which could impact on the approach to inspection laid down in this document. Procedures to be adopted include the following:

5.5.1 Complaints/enquiries

It is the intention of Environmental Services to respond to complaints/ enquiries as quickly as possible, but in any case within:

- ◆ 5 working days, or
- ◆ immediately, if an act of contamination is occurring at the time of notification

5.5.2 Confidentiality

All complainants will be asked to supply their names and addresses, and details of the site being complained about. The identities of complainants will, as far as is practicable, remain confidential.

5.5.3 Anonymously supplied information

Environmental Services uses its discretion in investigating alleged nuisances based on anonymously supplied information, and this general policy will be adopted for contaminated land issues.

5.5.4 Anecdotal evidence

Any anecdotal evidence provided to the Council relating to contaminated land will be noted, but no determination of contaminated land will occur without robust scientific evidence. In all cases, contaminated land officers will use knowledge and experience to decide what, if any, investigation is required following receipt of a complaint or information.

5.6 Risk Assessment

All information on contaminants will, initially, be evaluated against current governmental generic guidelines or by use of prescribed risk assessment models.

5.6.1 Guideline values

Until recently the 'Trigger values' in the ICRL Standards developed in the late 1970s and early 1980s were seen as the backbone of the contaminated land regime in the U.K. by which the risk posed by contaminants at a particular site could be assessed (ICRCL, 1987). These were withdrawn in December 2002 as they were seen by DEFRA as not being "suitable for assessing 'significant possibility of significant harm to human health' in the context of the Part IIA regime" (DEFRA, 2002a).

In 2002 new guidance was published in the form of The Contaminated Land Report (CLR) series of guidance documents (CLR 7-10 and Soil Guideline Values (SGV) and Toxicological (TOX) series) (DEFRA & EA, 2002a-f). These are intended to "provide regulators, developers, landowners and other interested parties with relevant, appropriate, authoritative and scientifically based information and advice on the assessment of risks arising from the presence of contamination in soil" (Environment Agency, 2002a).

The SGVs are 'intervention values' (i.e. levels above which there is an unacceptable risk to human health), they are not intended as clean up or remediation standards (DEFRA & EA, 2002f).

DEFRA has identified almost 50 contaminants that are classed as "having the potential to affect human health and the environment" (DEFRA & EA, 2002b). To date SGVs have only been calculated for twelve substances.

5.6.2 Risk assessment for other substances

It is likely that guideline values will be required for substances that are not yet covered by SGVs. In these cases, reference may be made to authoritative sources of information, such as generic guidelines adopted in other countries. However, if guidelines from other countries are referred to, it is important to bear in mind the significant difference in remediation standards that may exist between the UK and other countries, and also what assumptions or reference standards may have been made or used in developing these standards.

5.6.3 Risk assessment models

Whilst generic guidelines will be used in the first instance, it may be necessary to further define the risk by generating a site specific value for a contaminant. To achieve this, a risk assessment model will be used. The 'Contaminated Land Exposure Assessment Model' (DEFRA & EA, 2002e) will be the preferred option. However, other risk assessment models that adopt either deterministic or probabilistic methods of deriving the risk may also be considered.

5.6.4 Risk assessment for controlled waters

Advice will be sought from the Environment Agency on risk assessment if controlled waters are the receptor in a particular pollutant linkage. It is anticipated that risk assessments and remediation will be carried out in accordance with Environment Agency guidance as laid down in R&D Publication 20 "Methodology for the Derivation of Remedial Targets for Soil and Groundwater to Protect Water Resources" (Environment Agency, 1999).

5.7 Interaction with other regulatory regimes

There are other regulatory actions that can be taken to deal with contamination on land. Overlaps with planning, water pollution, waste management and IPPC legislation are considered the most important and are addressed here. Any issues of land contamination that may previously have been dealt with under the statutory nuisance regime will now be dealt with through Part IIA processes.

5.7.1 Planning

The majority of contaminated land issues are currently addressed through the planning regime, where contamination is a material planning consideration. It is anticipated that redevelopment of brownfield sites, and the associated planning controls, will remain the primary mechanism for dealing with contaminated land. Any remediation agreed as a planning condition will be dealt with under planning controls and not under Part IIA. Environmental Services is currently working closely with Planning Services (Development Control) to ensure that where redevelopment of land takes place within Kirklees, the planning process deals effectively with any land contamination so that the land is suitable for its intended use.

5.7.2 Water pollution

The Water Resources Act 1991 gives the Environment Agency powers to deal with harm to controlled waters being caused by contaminated land. Part IIA legislation does not revoke these powers and, prior to any determination being made, the Council will always consult with the Environment Agency to establish which is the preferred route of control. If control is to be achieved through Part IIA the Council will consult with the Environment Agency before determining any contaminated land and will take into account any comments made with respect to remediation.

5.7.3 Waste Management

Powers are available under the Waste Management Licensing Provisions of the Environmental Protection Act 1990 for dealing with contamination that result from a breach of an operating licence.

5.7.4 Integrated Pollution Prevention and Control (IPPC)

Under recently introduced legislation to regulate pollution from industrial processes, relevant site operators are required to undertake a site condition survey prior to receiving a licence to operate. If the site condition is such that areas of land meet the definition of contaminated land, then submission of a site survey may trigger action under Part IIA. Existing processes will be brought under this legislation in stages up to 2007, although it will apply immediately to any new processes or any substantial change to an existing process.

6 General Liaison and Communication strategies

Much of the work proposed in this strategy will be collaborative and require effective liaison with other bodies.

6.1 Consultees

A list of consultees is included in appendix 4. Each organisation were invited to comment on the consultation draft and reviews of the strategy. Specific organisations will also be consulted in relation to specific sites where the circumstances are appropriate. For example, if an ancient monument is being affected then English Heritage would be invited to comment on the issues involved.

6.2 Communicating with owners, occupiers and other stakeholders

The Council's approach to its regulatory duties is, in the main, to seek voluntary action before considering enforcement action. This approach will be adopted for issues of land contamination, recognising that in many cases more effective remediation can be achieved by agreement than by enforcement. Wherever possible attempts will be made to reach an amicable solution.

The regime also provides two incentives to undertake voluntary action. Firstly, any materials that require disposal as a result of voluntary remediation will be exempt from landfill taxes. This exemption does not apply to materials generated as a result of a remediation notice having been served. Secondly, contaminated land (except for Special Sites) will not be entered on the Public Register unless a remediation notice has to be served, thus avoiding the issue of 'blight'.

Determination of Contaminated Land

Where a formal determination of contaminated land is required, the Council will take the following action:

- 1 Write to the owners and/or the occupiers and/or the appropriate persons of the contaminated land at least 5 working days prior to determination of that land, explaining the Council's intention and summarising the reason for the determination.
- 2 Write to the owners and/or the occupiers and/or the appropriate persons explaining that the land has been formally determined as contaminated land and that, initially, the Council is seeking appropriate remediation without the service of a remediation notice.
- 3 In conjunction with step 2 notify the Environment Agency of the formal determination.
- 4 If requested by one of the Stakeholders, dispatch a copy of the formal Determination document within 5 working days of receipt of the request.

Serving a remediation notice

If voluntary remediation is not undertaken, a remediation notice will be served on the owners/occupiers and or appropriate persons, as required, specifying the action required.

6.3 Powers of Entry

Under Section 108(6) and Schedule 18 of the Environment Act 1995, the Council has been granted powers of entry to carry out investigation. At least seven days' notice will be given of proposed entry onto any premises, unless there is an immediate risk of serious pollution of the environment or serious harm to health or that circumstances exist that are likely to endanger life or health.

Where the site involved is likely to be a Special Site, the Council will consider authorising a person nominated by the Environment Agency to exercise the above powers on behalf of the Council.

These powers will only be used where the appropriate access cannot be agreed.

6.4 The Public Register

Under the Regulations, the Council is required to maintain a register for contaminated land. The register will be held in the Pollution & Noise Control section of Environmental Services

at West Riding House, Huddersfield and will be accessible, on request, during normal office hours, Monday to Friday.

The Regulations clearly specify the information that can be recorded on this register. This register will therefore include:

- ◆ remediation notices
- ◆ details of site reports obtained by the authority in relation to remediation notices
- ◆ remediation declarations
- ◆ remediation statements
- ◆ notifications of claimed remediation
- ◆ determination of sites as “special sites”
- ◆ any appeals lodged against remediation and charging notices
- ◆ convictions

The public register will **not** include details of historic land use and other records used in the investigation of potentially contaminated land. These are research documents and as such will not be made available to the public.

6.5 Provision of information to interested parties

The information relating to historical land uses, which is held on the GIS within Environmental Services, is available to the public and can be obtained by writing to the department and enclosing a plan of the site of interest.

The cost for such information is charged at an hourly rate as set out in the Service’s list of fees and charges document ES25.

6.6 Provision of information to the Environment Agency

The Environment Agency is required to prepare an Annual Report for the Secretary of State on the state of contaminated land in England and Wales. This report will include:

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

As local authorities are the lead regulators on contaminated land, the national survey will clearly be reliant on information provided by local authorities. A memorandum of understanding has been drawn up between the Environment Agency and the Local Government Association (EA/LGA 1998) that describes how information will be exchanged between local authorities and the Environment Agency.

The Council will therefore provide information to the Environment Agency following the guidelines agreed through this national forum. The local authority must also provide information to the Environment Agency whenever a site is determined as contaminated land, and whenever a remediation notice, statement or declaration is issued or agreed. The Environment Agency has supplied standard forms so that this information can be provided in a consistent format, and the Council will adopt these to fulfil its reporting requirements.

7 Review Mechanisms

This strategy outlines the general approach to be taken in inspecting land for contamination. This section will describe instances when inspections will occur outside this general strategic framework, circumstances under which previous inspection decisions should be reviewed and measures to be taken to ensure the strategy remains effective and up-to-date.

7.1 Triggers for undertaking non-routine inspections

The strategy recognises there may be occasions where inspections have to be undertaken outside of the general strategic framework. Triggers for undertaking non-routine inspection will include:

- ◆ **Unplanned events**, eg where an incident such as a spill has occurred.
- ◆ **Introduction of new receptors**, eg where a new protected ecosystem is designated, or there is persistent trespass on a site which otherwise does not have a sensitive receptor.
- ◆ **Identification of localised health effects** which appear to relate to a particular area of land
- ◆ **Responding to information** from other statutory bodies, stakeholders, or other interested parties, which reveal that a site requires urgent action.

While these occurrences may trigger non-routine inspections, they will not be allowed to significantly interfere with the milestones laid down in the general strategic framework.

7.2 Triggers for reviewing inspection decisions

There may be occasions when the findings of previous inspection decisions should be reviewed. This might occur, for example, if there were:

- ◆ Significant changes in legislation
- ◆ Establishment of significant case law or other precedent
- ◆ Revision of guideline values for exposure assessment

It is important that all decisions are made and recorded in a consistent manner that will allow efficient review.

7.3 Reviewing the strategy

Local Authorities have a duty to keep their inspection strategies under periodic review. The Council felt that it was appropriate to review the milestones in light of progress after the first full year of operation.

A review was undertaken in 2002/2003 and again in 2006.

The reviews revealed that changes were required to the Strategy to reflect, in the main, changes to legislation and to the work programme. This document has been updated to reflect those findings.

The work programme will be kept under regular review and providing there are no major detractors then the next full review will commence in July 2010. By this time prioritisation of sites should be complete and the inspection process will have commenced.

8 Information Management

Environmental Services holds the GIS that will be the primary tool used to manage the contaminated land information. This system will be used to correlate all information and to determine the proximity of potential receptors (residents, controlled waters etc) to sources of contamination.

An up to date copy of the Attribute data associated with the GIS will be forwarded to the Corporate Development Unit twice a year, at the beginning of January and the beginning of July.

As data becomes available in relation to particular sites, paper copies or digitised data will be kept for reference in a dedicated filing system, within Environmental Services.

References

British Geological Survey, 1981. 1:50,000 Series Sheet 86, Solid and Drift Edition.

British Geological Survey, 1981. 1:50,000 Series Sheet 77, Solid and Drift Edition.

Contaminated Land (England) Regulations 2006. SI 2006/1380. HMSO.

Radioactive Contaminated Land (Enabling Powers)(England)Regulations 2005.SI 2005/3467

Radioactive Contaminated Land (Modification of Enactments)(England)Regulations 2006.SI 2006/1379.

DEFRA, 2002a. Withdrawal of ICRCL guidance note 59/83 (second edition).Letter from Steven Griffiths, Contaminated Land Europe Environment Division to Local Authorities.

DEFRA & EA , 2002a. Assessment of Risks to Human Health from Land Contamination: An Overview of the Development of Guideline Values and Related Research, Report CLR7. Environment Agency's R&D Dissemination Centre, WRC plc, Swindon.

DEFRA & EA , 2002b. Priority Contaminants Report, Report CLR8. Environment Agency's R&D Dissemination Centre, WRC plc, Swindon.

DEFRA & EA , 2002c. Contaminants in Soil: Collation of Toxicological Data and Intake Values for Humans, Report CLR9. Environment Agency's R&D Dissemination Centre, WRC plc, Swindon.

DEFRA & EA , 2002d. Toxicological Reports for Individual Soil Contaminants, Report CLR9 TOX 1-12,14,16-25. Environment Agency's R&D Dissemination Centre, WRC plc, Swindon.

DEFRA & EA , 2002e. Contaminated Land Exposure Assessment Model (CLEA):Technical Basis and Algorithms, Report CLR10. Environment Agency's R&D Dissemination Centre, WRC plc, Swindon.

DEFRA & EA , 2002f. Soil Guideline Values Report for Individual Soil Contaminants, Report CLR10 SGV 1-10, 15&16. Environment Agency's R&D Dissemination Centre, WRC plc, Swindon.

DEFRA & EA, 2004. Model Procedures of the Management of Land Contamination, Report CLR 11. ISBN 1844322955

DEFRA Circular 01/2006 Environmental Protection Act 1990:Part IIa.

DETR, April 2000. Inspection Strategies for Contaminated Land – Draft Technical Note for comment. Land Quality Branch. DETR, London.

DETR, 2000. Circular 2/2000 Environmental Protection Act 1990: Part IIA Contaminated Land.

Environment Act 1995, HMSO, London. ISBN 010542595-8.

Environment Agency, 1999 R&D report 20. "Methodology for the Derivation of Remedial Targets for Soil and Groundwater to Protect Water Resources

Environment Agency, 2002. 'Dealing with Contaminated Land in England' progress in 2002 with implementing the Part IIA regime. Environment Agency, Bristol. ISBN 1857059581.

Environment Agency, 2002a, CLR Pre Seminar Workbook: Contaminated Land Reports 7 to 10. Environment Agency, Bristol.

Environment Agency/Local Government Association, 10 September 1998. Memorandum of Understanding, Protocol for Land Contamination. LGA Circular 563/98.

Environmental Protection Act, 1990, HMSO, London.

Forest of Dean District Council, November 2000. Contaminated Land Inspection Strategy (Consultation Draft)

Interdepartmental Committee on the Redevelopment of Contaminated Land (ICRCL), 1987, "Guidance on the assessment and redevelopment of Contaminated Land: Guidance Note 59/83 (2nd Edition), ICRCL, London.

Kirklees Metropolitan Council, 1995. Survey of Potentially Contaminated Land - Draft Final Methodology Report.

Kirklees Metropolitan Council, 1999. Unitary Development Plan

Policy and practice for the protection of Groundwater: Groundwater Vulnerability 1:100,000 Map Series (Sheet 11) Environment Agency (1997).

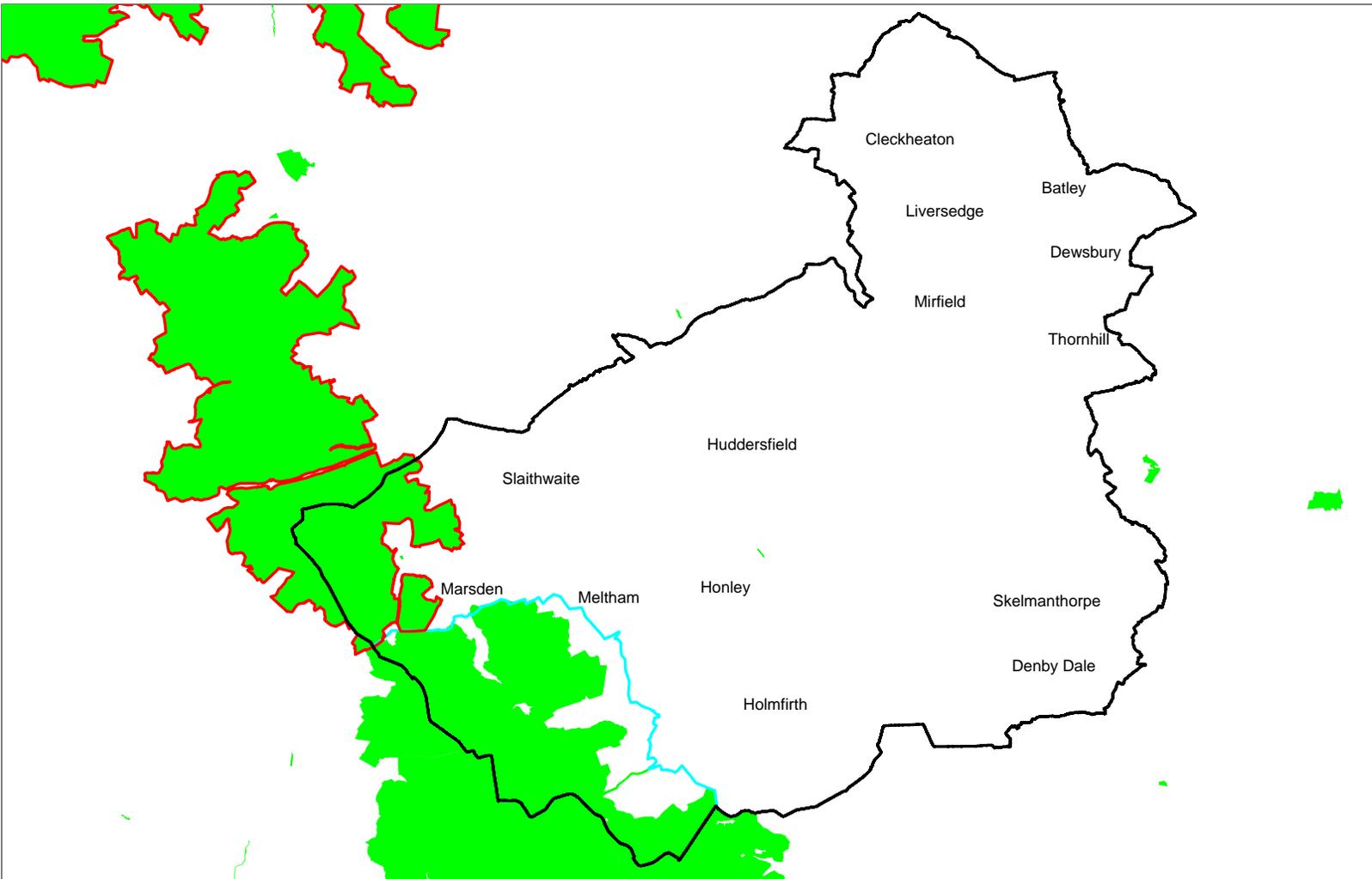
Scotland & Northern Ireland Forum for Environmental Research (Sniffer), 2000. Communicating Understanding of Contaminated Land Risks

The Yorkshire Regional Appendix to the Environment Agency "Policy and Practice for the Protection of Groundwater"

Water Resources Act 1991. ISBN 0105457914

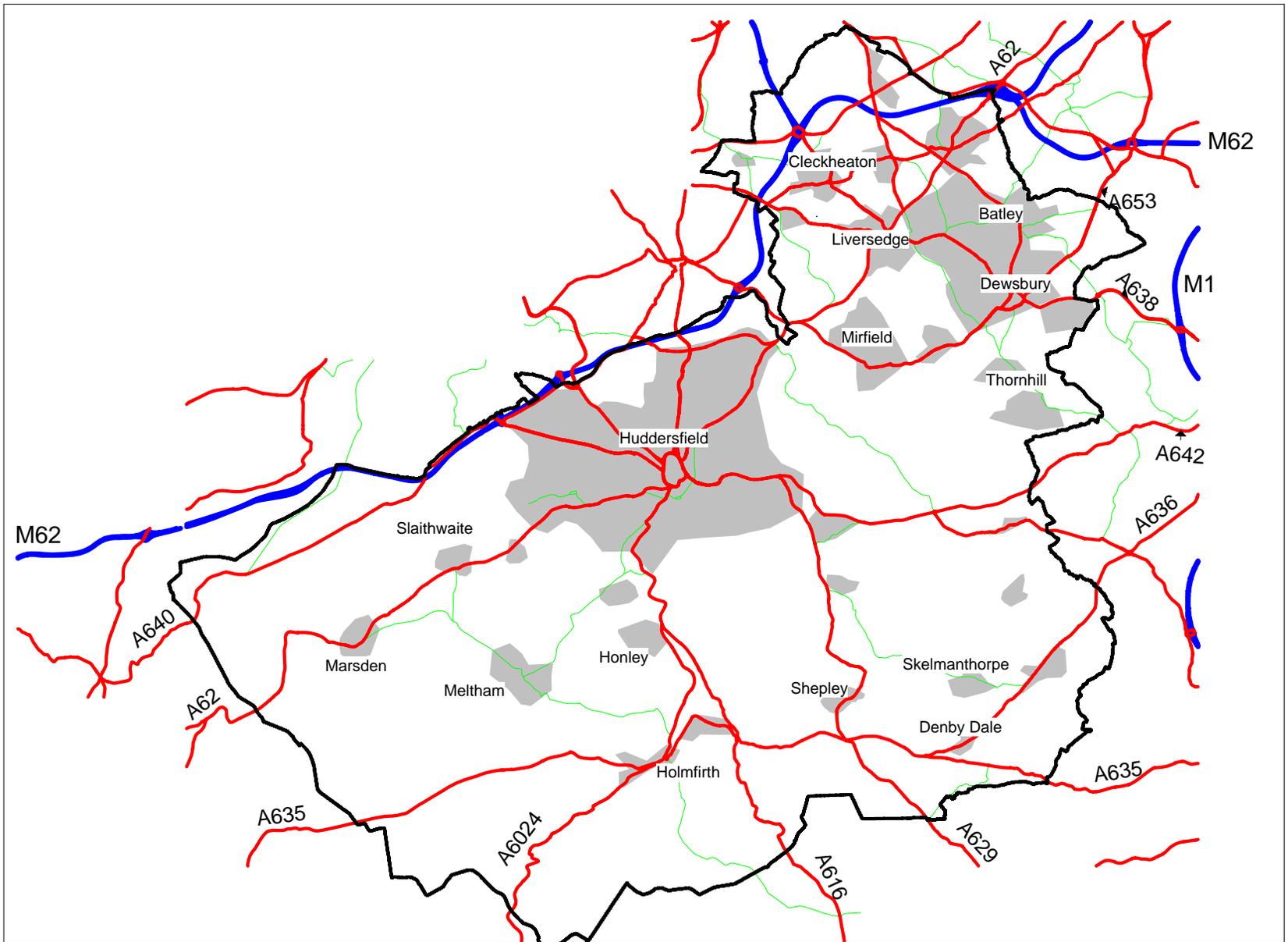
Water Act 2003. ISBN 0105437034

Appendix 1 : Ecological Receptors in Kirklees



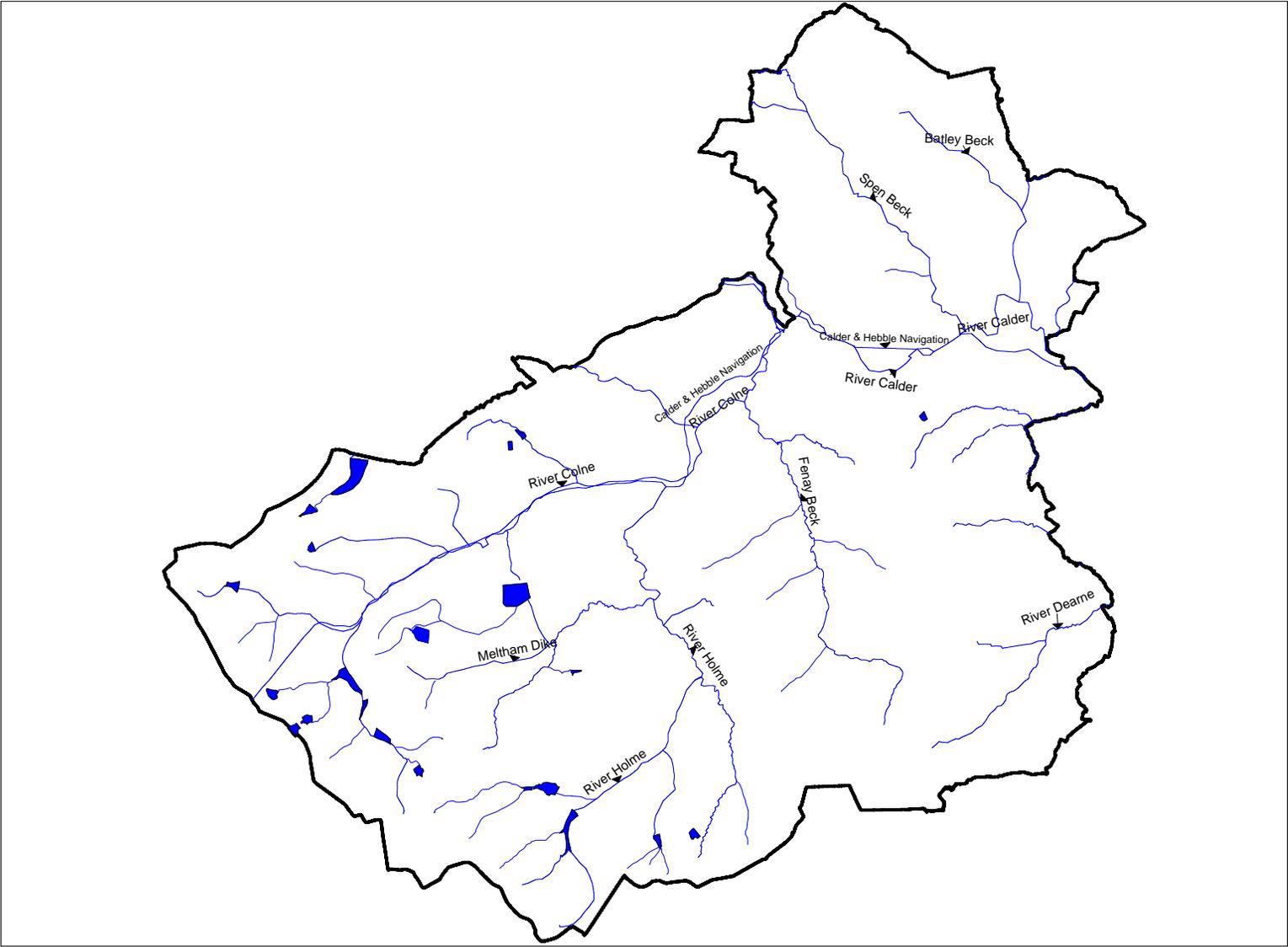
KEY

| | |
|--|--|
| | Site of Special Scientific Interest (SSSI) |
| | Special Protection Area |
| | Peak District National Park (within Kirklees) NB not a designated receptor |



Appendix 2: Main Centres of Population in Kirklees

Appendix 3: River Network and Key Water Bodies



Appendix 4

Consultees - Key Organisations

The following identifies the key organisations to be consulted during the implementation of the inspection strategy. The list cannot be exhaustive, as other organisations may come to light during the process.

External Bodies

David Walmsley
Environment Agency
Phoenix House,
Global Avenue,
Leeds LS11 8PG
Tel: 0113 244 0191
Fax: 0113 213 4850
Email: david.walmsley@environment-agency.gov.uk

Mr J Navaratnam
English Partnerships
110 Arpley House
Birchwood Boulevard
Birchwood
Warrington WA3 7QH
Tel: 01925 651144
Fax: 01925 411493
Email:
johnnavaratnam@englishpartnerships.co.uk

West Yorkshire Ecology
Leeds City Council
Learning and Leisure Department
Parks and Countryside Division
The Town Hall
The Headrow
Leeds LS1 3AD
Tel: 0113 2375310
Fax: 0113 237 5224

DEFRA
Rural and Marine Environment Division
Sustainable Agriculture Branch
Room 141 Nobel House
17 Smith Square
London
SW1P 3JR
Tel: 020 72385426
Fax: 020 72386700

Mr Keith Parker,
Environmental Manager
The Coal Authority
200 Lichfield Lane
Berry Hill
Mansfield
NG18 4RG
Email:thecoalauthority@coal.gov.uk

Ian Smith
Regional Land Use Planner
English Heritage
37 Tanner Row
York YO1 6WP
Tel: 01904 601977
Fax: 01904 601999
Email:ian.smith@english-heritage.org.uk

Mirfield Town Council
Council Offices
198 Huddersfield Road
Mirfield WF14 9BA
Tel/Fax: 01924 499240
Email:mirfieldtc@aol.com

Meltham Town Council
Town Hall
Meltham
Huddersfield HD7 3AD
Tel/Fax 01484 852367
Email:melthamcouncil@btconnect.com

Kirkburton Parish Council
Burton Village Hall
Northfield Lane
Highburton
Huddersfield HD8 0QT
Tel 01484 604391

Food Standards Agency
Aviation House
125 Kingsway
London
WC2B 6NH
Tel: 020 72768731

English Nature
Bull Ring House
Northgate
Wakefield WF1 3BJ
Tel:01924 334500
Fax: 01924 334535
Email:humber.pennines@english-nature.org.uk

Health Protection Agency
Centre for Radiation, Chemical and
Environmental Hazards
Chilton
Didcot
Oxfordshire
OX 110RQ

Internal Departments

Jonathan Barrett
Head of Planning Services
Civic Centre III
Huddersfield HD1 2JR

Head of Design and Property Service
Kirkgate Buildings
Byram St
Huddersfield HD1 1BY

Kevin Kendall
Head of Building Control & Licensing
1st Floor
Civic Centre III
Huddersfield HD1 2NA

John Griffiths
Head of Economic Development
2nd Floor
Civic Centre III
Huddersfield HD1 2EY

Graham Kennedy
Joint Head of the Central Resource Group
Finance
2nd Floor
Oldgate House
Huddersfield

Steve Noble
Assistant Director (Environment)
Environmental Services
West Riding House
9 Manchester Road
Huddersfield HD1 3HH

Greg Jennings
Assistant Director for Partnerships and
Procurement
1st Floor
Civic Centre III
Huddersfield

Simon Rogers
Chief Executive Officer
Kirklees Neighbourhood Housing
Perseverance House
St Andrews Road
Huddersfield

Tony Hood
Director for Adults & Communities
Civic Centre 1
Huddersfield

Kim Brear
Head of Housing
Civic Centre 1
Huddersfield

Susan Betteridge
Head of Legal Services
2nd Floor
Civic Centre III
Huddersfield

Janet Russel
Director for Environment, Transportation and
Property
West Riding House
9 Manchester Road
Huddersfield

Alan Bruce
Director of the Kirklees Partnership
2nd Floor
8 Market Place
Huddersfield

Rob Vincent
Chief Executive
1st Floor
Civic Centre III
Huddersfield

Patrick Burnham
Building Services
Flint Street
Fartown
Huddersfield

Philip Cotterill
Director for Organisation and Development
Oldgate House
2 Oldgate
Huddersfield

Phillip Webber
Head of Environment Unit
23 Estate Buildings
Railway Street
Huddersfield

Kimiyo Rickett
Head of Culture and Leisure Services
Galpharm Stadium
Stadium Way
Huddersfield

Alison O'Sullivan
Director for Children and Young People
2 Oldgate
Huddersfield

Jan Paley
Corporate Safety & Emergency Planning
Environmental Services
West Riding House
9 Manchester Road
Huddersfield

Jeff English
Highways and Transportation
Flint Street
Fartown
Huddersfield

Steve Beresford
Group Finance Manager
Strategic Finance Manager
Civic Centre 1
Huddersfield

Michael Butler
Head of Democratic Support Service
1st Floor
Civic Centre III
Huddersfield

Dave Harris
Director for Corporate Services
2nd Floor
Civic Centre III
Huddersfield

Ken Gillespie
Director of Regeneration
1st Floor
Civic Centre III
Huddersfield

David Bagley
Interim Manager of Customer Relations Unit
High Street Buildings
High Street
Huddersfield

Terry Meehan
Chief Executive
Kirklees Active Leisure
Galpharm Stadium
Stadium Way
Huddersfield

David Martin
Head of Asset Management
Ground Floor
Oldgate House
2 Oldgate
Huddersfield

Jim Cowell
Internal Communications Manager
Crown Court Buildings
Princess Street
Huddersfield

Neighbouring Local Authorities

Ann Barker
Specialist Pollution Team
City of Bradford Metropolitan District Council
Town Hall
Kirkgate
Shipley BD18 3EJ
Tel: 01274 437003

John Scott
Barnsley Metropolitan Borough Council
Central Offices
Kendray Street
Barnsley S70 2TN
Tel: 01226 772456

Peter Broadbent
Environmental Services
Calderdale Metropolitan Borough Council
Northgate House
Northgate
Halifax HX1 1UN
Tel: 01422 357 257

Stella Casserley
Development Department
Leeds City Council
Leonardo Building
2 Rossington Street
Leeds LS2 8HD
Tel: 0113 247 8154

Steve Woodhouse
Environmental Protection
Environment and Transportation
Oldham Metropolitan Borough Council
Westend House
Westend Street
Oldham OL9 6DW
Tel: 0161 9114492

Mark Brown
Environmental Protection & Control Section
Metropolitan Borough of Rochdale
Floor 2
Telegraph House
Baillie Street
Rochdale OL16 1JH
Tel: 01706 924122

David Jackson
Environmental Health Services
Wakefield Metropolitan District Council
Lower Building
Newton Bar
Leeds Road
Wakefield WF1 2TX
Switchboard: 01924 305967

I J Nicholls
High Peak Borough Council
Town Hall
Buxton
Derbyshire SK17 6EL
Tel: 01298 28404

Industry

It is recognised that the introduction of this Strategy may have a significant impact on local industry. In an attempt to widen the area of consultation over 200 major employers (those who employ more than 100) within the area were specifically invited to comment on the draft strategy.

Copies of the Strategy are available for inspection at the Reference Library, Huddersfield and also at Riverbank Court, Wakefield Road, Aspley, Huddersfield, HD1 5HH.

Appendix 5 Priority Group 1

| Contaminative Use | Number of uses on sites within Kirklees |
|--|---|
| Manufacture of gas, coke, or bituminous material from coal. | 98 |
| Manufacture or refining of lead or steel or an alloy of lead or steel. | 266 |
| Manufacture of asbestos or asbestos products. | 6 |
| Manufacture, storage, refining or recovery of petroleum or its derivatives, other than extraction from petroleum bearing ground. | 64 |
| Manufacture, bulk storage, refining or recovery of other chemicals, excluding minerals. | 103 |
| Final deposit in or on land of household, commercial or industrial waste (within the meaning of section 75 of the Environmental Protection Act 1990) other than waste consisting of ash, slag, clinker, rock, wood, gypsum, railway ballast, peat, bricks, tiles, concrete, glass, other minerals or dredging spoil; or where the waste is used as a fertiliser or in order to condition the land in some beneficial manner. | 293 |
| Treatment at a fixed installation of household, commercial or industrial waste (within the meaning of section 75 of the Environmental Protection Act 1990) by chemical or thermal means. | 76 |
| Use as a scrap metal store, within the meaning of section 9(2) of the Scrap Metal Dealers Act 1964(a). | 239 |
| Holes in the ground now filled with unidentified material. | 199 |
| | |
| Total Number of sites | 1146 |

It should be noted that the individual uses and the total number of sites do not tally. This is because some of the sites have been subjected to more than one contaminative use.

Appendix 6 Priority Group 2

| Contaminative Use | Number of uses on sites within Kirklees |
|--|---|
| Extraction/Handling/Storage of Carbonaceous materials | 298 |
| Extraction/Handling/Storage of ores | 2 |
| Cement, lime and gypsum manufacture, brickworks and associated processes. | 50 |
| Manufacture of glass and glass-based products. | 5 |
| Manufacture of ceramics and ceramic-based products. | 7 |
| Manufacture/repair of electrical and electronic components and equipment. | 3 |
| Manufacture of pet foods or animal feed stuffs | 4 |
| Processing of animal by-products | 9 |
| Making of paper/pulp/board or related products (plus inking/de-inking) including print works | 19 |
| Chemical treatment and Coating of timber and timber products, including timber yards. | 43 |
| Textile Industry (Mills unspecified) | 621 |
| Tanning, dressing, fellmongering or other leather treatment processes. | 38 |
| Fulling, bleaching, dyeing or finishing of fabric or fibres | 132 |
| Manufacture of carpets or other textile floor coverings. | 10 |
| Process of natural or synthetic rubber | 2 |
| Marshalling/dismantling/repairing/ or maintenance of railway rolling stock | 43 |
| Dismantling/repairing or maintenance of canal vessels. | 3 |
| Dismantling/repairing/storage or maintenance of road transport vehicles | 150 |
| Dry Cleaning operations | 4 |
| Laboratories for educational/research purposes. | 2 |
| "Works" unspecified | 587 |
| "Garage" unspecified | 231 |
| Use/keeping of radioactive material. | 9 |
| | |
| Total sites in priority group 2 | 1340 |

Appendix 7 Priority Group 3

| Contaminative Use | Number of uses on sites within Kirklees |
|--|--|
| Electricity sub station | 842 |
| Mineral workings/quarries | 741 |
| Miscellaneous and Unspecified Groups | 94 |
| | |
| Total sites in priority group 3 | 1354 |

Appendix 8 Work Programme

| | 2005 | | 2006 | | | | | 2007 | | | | | 2008 | | | | | 2009 | | | | | | | | |
|---|------|--|------|-----|-----|-----|-----|------|-----|-----|-----|-----|------|-----|-----|-----|-----|------|-----|-----|-----|-----|-----|-----|-----|-----|
| | | | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
| Deal with urgent sites | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Purchase, acquire, input additional data onto GIS | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Prioritisation of sites | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Commence Detailed inspection of sites | | | | | | | | | | | | | | | | | | | | | | | | | | |

| | |
|---|--|
|  Action timetabled this period |  Action may occur this period |
|---|--|

Appendix 9

Potentially Contaminative Uses

Used in the 1995 survey of Contaminated Sites within Kirklees

Agriculture

Burial of diseased livestock

Extractive Industry

Extraction/Handling/Storage of Carbonaceous materials

Extraction/Handling/Storage of ores

Energy Industry

Production of gas from oil, lignite, oil etc.

Reforming/Refining/Purifying/Odorising/Storing gas

Treatment of carbonaceous material. e.g. gas/charcoal production

Thermal power station

Electricity sub station

Production of Metals

Production/Refining/Recovery of metals

Heating/ melting/casting of metals

Cold forming processes

Finishing treatments

Production of Non-Metals

Mineral workings/quarries

Production/processing of mineral fibres from ore. e.g. asbestos

Cement, lime and gypsum manufacture, brickworks and associated processes.

Glass Making and Ceramics

Manufacture of glass and glass-based products.

Manufacture of ceramics and ceramic-based products.

Production and Use of Chemicals

Production/refining/recovery/storage of petroleum or petrochemicals.

Production/refining/bulk storage of organic or inorganic chemicals.

Engineering and Manufacturing Processes

Manufacture of metal goods. (engineering/heavy engineering)

Storage/manufacture/testing of explosives, propellants.

Manufacture/repair of electrical and electronic components and equipment.

Food Processing Industry

Manufacture of pet foods or animal feed stuffs

Processing of animal by-products

Paper, Pulp and Printing Industry

Making of paper/pulp/board or related products (plus inking/de-inking) including print works

Timber and Timber Products Industry

Chemical treatment and Coating of timber and timber products, including timber yards.

Textile Industry

Tanning, dressing, fellmongering or other leather treatment processes.

Fulling, bleaching, dyeing or finishing of fabric or fibres

Manufacture of carpets or other textile floor coverings.

Rubber Industry

Process of natural or synthetic rubber

Infrastructure

Marshalling/dismantling/repairing/ or maintenance of railway rolling stock

Dismantling/repairing or maintenance of marine vessels.

Dismantling/repairing/storage or maintenance of road transport vehicles

Waste Disposal

Treating of sewage or other effluent.

Storage/treatment or disposal of sludge

Treating/keeping/disposal of waste including scrap and incinerators

Landfill sites

Miscellaneous and Unspecified Groups

Dry Cleaning operations

Laboratories for educational/research purposes.

Holes in the ground now filled with unidentified material.

"Works" unspecified

"Garage" unspecified

Use/keeping of radioactive material.

Appendix 10 Glossary of Terms

Appropriate person: defined in section 78A(9) as:

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

Caused or knowingly permitted: test for establishing responsibility for remediation, under section 78F(2).

Controlled waters: defined in section 78A(9) by reference to Part III (section 104) of the Water Resources Act 1991; this embraces territorial and coastal waters, inland fresh waters, and ground waters. Section 78A(9) was amended by section 86 of the Water Act 2003 so that for Part IIa purposes "ground waters" does not include waters contained in underground strata but above the saturation zone.

Harm: defined in section 78A(4) as:

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

OR with respect to radioactive contamination defined in section 78A(4)(as modified) as:

"lasting exposure to any person being resulting from the after effects of a radiological emergency, past practice or past work activity."

Owner: defined in section 78A(9) as:

"a person (other than a mortgagee not in possession) who, whether in his own right or as trustee for any other person, is entitled to receive the rack rent of the land, or where the land is not let at a rack rent, would be so entitled if it were so let."

Pathway: one or more routes or means by, or through, which a receptor:

- (a) is being exposed to, or affected by, a contaminant, or
- (b) could be so exposed or affected.

Pollutant linkage: the relationship between a contaminant, a pathway and a receptor.

Pollution of controlled waters: defined in section 78A(9) as:

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

Possibility of harm: relates to radioactive contamination only and is a measure of the probability, or frequency, of the occurrence of circumstances which would lead to lasting exposure being caused.

Possibility of significant harm: a measure of the probability, or frequency, of the occurrence of circumstances which would lead to significant harm being caused.

Register: the public register maintained by the enforcing authority under section 78R of particulars relating to contaminated land.

Relevant information: information relating to the assessment of whether there is a significant possibility of significant harm being caused, which is:

- (a) scientifically-based;
- (b) authoritative;
- (c) relevant to the assessment of risks arising from the presence of contaminants in soil; and
- (d) appropriate to the determination of whether any land is contaminated land for the purposes of Part IIA, in that the use of the information is consistent with providing a level of protection of risk in line with the qualitative criteria set out in Tables A and B of Chapter A of the statutory guidance (Defra Circular 01/2006).

Remediation: defined in section 78A(7) as

- "(a) the doing of anything for the purpose of assessing the condition of -
 - "(i) the contaminated land in question;
 - "(ii) any controlled waters affected by that land; or
 - "(iii) any land adjoining or adjacent to that land;
- "(b) the doing of any works, the carrying out of any operations or the taking of any steps in relation to any such land or waters for the purpose -
 - "(i) of preventing or minimising, or remedying or mitigating the effects of any significant harm, or any pollution of controlled waters, by reason of which the contaminated land is such land; or
 - "(ii) of restoring the land or waters to their former state; or
- "(c) the making of subsequent inspections from time to time for the purpose of keeping under review the condition of the land or waters."

OR with respect to radioactive contamination defined in section 78A(7)(as modified) as:

- "(a) the doing of anything for the purpose of assessing the condition of -
 - "(i) the contaminated land in question; or
 - "(iii) any land adjoining or adjacent to that land;

- "(b) the doing of any works, the carrying out of any operations or the taking of any steps in relation to any such land for the purpose -
 - "(i) of preventing or minimising, or remedying or mitigating the effects of any harm by reason of which the contaminated land is such land; or
 - "(ii) of restoring the land to their former state; or
- "(c) the making of subsequent inspections from time to time for the purpose of keeping under review the condition of the land."

Remediation declaration: defined in section 78H(6). It is a document prepared and published by the enforcing authority recording remediation actions which it would have specified in a remediation notice, but which it is precluded from specifying by virtue of sections 78E(4) or (5), the reasons why it would have specified those actions and the grounds on which it is satisfied that it is precluded from specifying them in a notice.

Remediation notice: defined in section 78E(1) as a notice specifying what an appropriate person is to do by way of remediation and the periods within which he is required to do each of the things so specified.

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

Risk: the combination of:

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

Significant harm: defined in section 78A(5). It means any harm which is determined to be significant in accordance with the statutory guidance in Chapter A (that is, it meets one of the descriptions of types of harm in the second column of Table A of that Chapter).

Significant pollutant: a pollutant which forms part of a significant pollutant linkage.

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

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

Special site: defined by section 78A(3) as:

"any contaminated land -

"(a) which has been designated as such a site by virtue of section 78C(7) or 78D(6)... ...;and

"(b) whose designation as such has not been terminated by the appropriate Agency under section 78Q(4)... ...".

The effect of the designation of any contaminated land as a special site is that the Environment Agency, rather than the local authority, becomes the enforcing authority for the land.

Substance: defined in section 78A(9) as:

"any natural or artificial substance, whether in solid or liquid form or in the form of a gas or vapour."

OR with respect to radioactive contamination defined in section 78A(9)(as modified) as:

"whether in solid or liquid form or in the form of a gas or vapour, any substance which contains radionuclides which have resulted from the after-effects of a radiological emergency or which are or have been processed as part of a past practice or past work activity, but shall not include radon gas or the following radionuclides: Po-218, Pb-214, At-218, Bi-214, Rn-218; Po-214 and Tl-210."