LANCASTER CITY COUNCIL

Promoting City, Coast & Countryside

ENVIRONMENTAL PROTECTION ACT 1990 - PART IIA

INSPECTION STRATEGY FOR CONTAMINATED LAND

SECOND EDITION
Version 2.0

Final

Prepared by Environmental Health Services

Explanatory note

Lancaster City Council has a duty to inspect its area for contaminated land in accordance with Part IIA of the Environmental Protection Act 1990. This document comprises an Inspection Strategy fulfilling one of the statutory responsibilities and the council intends to follow this strategy when inspecting its area for contaminated land.

This is the second edition of the council's Inspection Strategy. It sets out the basis for decisions and timescales about how and when each stage of the inspection process will be carried out based on information and resources available at the time of writing.

The council has conducted research and made a significant investment when preparing to implement this Inspection Strategy. This document should be self-explanatory and further questions may be answered by information published on the council's website at www.lancaster.gov.uk/contaminatedland. Further enquiries should be directed to Environmental Health Services (see contact details below).

Version number

This is the finalised second edition of the Inspection Strategy, version 2.0.

Record of revisions

Edition	Version	Sections revised	Nature of revisions
1.0	1.0		
2.0	2.0	All sections Section 2.1 Section 5 Section 6.4 Appendix D	General updates, page numbers revised Policy context thoroughly updated Work programme timescales updated Specific considerations introduced at 5.2.1-5.2.3 Updated to record site identification process Deleted outline procedures, references to them

Contact details

Further information is published on the council's website at www.lancaster.gov.uk/contaminatedland.

The contact points for the council in connection with this Inspection Strategy are as follows.

By letter:

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Please mark your correspondence ***For the attention of the Contaminated Land Officer***

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1. INTRODUCTION

This is a corporate strategy setting out how we intend to inspect the administrative District of Lancaster for Contaminated Land, as required by law. This is the second (updated) edition of the inspection strategy which was originally published in Autumn 2002.

This updated and revised strategy takes account of the progress achieved since initial publication in Autumn 2002 and the changes in legislation, specifically the Contaminated Land (England) Regulations 2006, and the accompanying DEFRA Circular (01/2006).

The District is a diverse and attractive area with many special features. It deserves to be protected from threats of contamination and the opportunity to support this aim is welcome. Ironically, though, it is often our prized environment that makes the District particularly vulnerable to threats from development, wastes and pollution – many of which were caused in years gone by. Part IIA of the Environmental Protection Act 1990 provides powers to deal mainly with severe problems of Contaminated Land. However the council has taken this opportunity to strengthen its protective roles for dealing with land contamination wherever it arises.

This strategy sets the scene of policy and regulation within which the council must inspect for Contaminated Land (Section 2), and outlines the careful consideration given to the District's particular characteristics when developing a suitable approach (Section 3). In view of the legislation and accompanying shifts in government policy, the council has carried out a corporate review of its operations involving land contamination (Section 4). A staged programme of work has been devised with procedures for inspection and, where necessary, enforcement (Sections 5 and 6). These also show how the council proposes to deal with its own land in a timely and exemplary fashion. This strategy will in turn be modified, refined and updated as described in Section 7.

Inevitably the formal duty to inspect the District and deal with Contaminated Land will be a rather technical and sometimes complex process. This Strategy reflects the council's commitment to a helpful and open approach, treating all cases fairly and requiring action only when it is reasonable to do so. Every effort has been made to develop a straightforward, pragmatic and effective strategy.

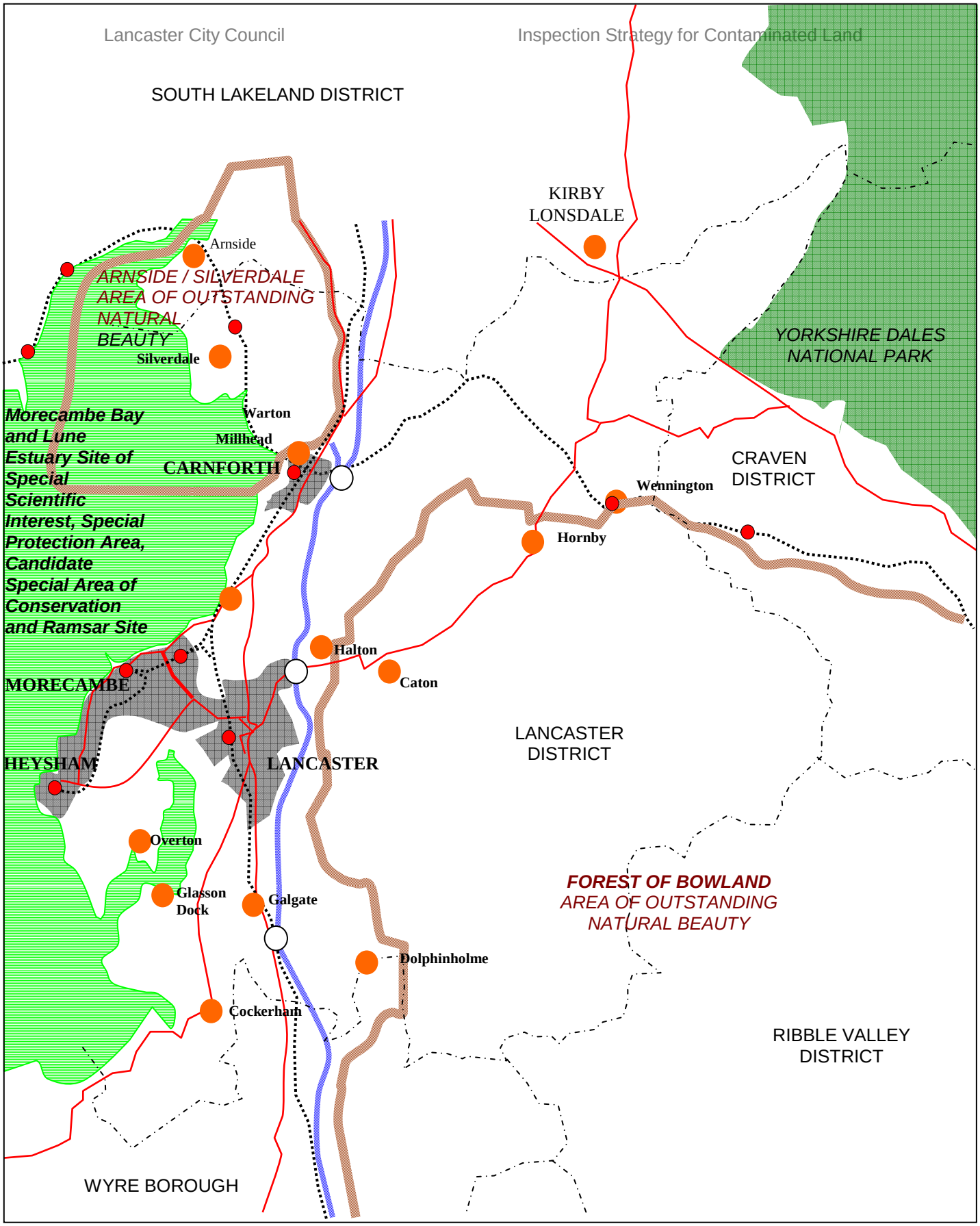


Figure 1 – Map showing the Lancaster City Council administrative District

2. BACKGROUND

The council takes seriously its statutory responsibility to publish this Strategy under Part IIA of the Environmental Protection Act 1990 ('Part IIA[1],'). The council is obliged to inspect the District (Figure 1 on the facing page) for Contaminated Land following a rational, ordered and efficient approach. The council must ensure that appropriate action is taken where Contaminated Land appears to be causing:

- significant harm,
- significant possibility of significant harm, or
- pollution or likely pollution of controlled waters[1].

This legislation is outlined in Section 2.2.

However it is important to set these duties within the context of the council's policies and commitments before considering the legislation.

2.1 Policy Context

2.1.1 Corporate aims

This Inspection Strategy, which will be in place for a number of years, reflects the council's vision and ambition for communities and the environment set out in its Corporate Plan for 2009-10[2]:

" *By promoting city, coast and countryside, we will secure a safe and prosperous community that's proud of its natural and cultural assets and provides lasting opportunities for all.*

- *In Morecambe this means a seaside town recognised as vital and vibrant in an exceptional natural setting with a sustainable economy and a stable resident community.*
- *In Lancaster this means being recognised as an important University city with an envied quality of life, strong economic opportunity and rich heritage.*
- *In our countryside this means a sustainable quality of life that protects communities and landscapes while providing the economic opportunity to flourish. "*

Economic regeneration is a priority in the Corporate Plan. There is a specific target for reducing the percentage of industrial / commercial land that is derelict, implicitly supporting planning policy requirements for delivery of 70% of new residential property on previously developed land.

Regeneration of brown field land is also reflected in the following council documents:

- Community Strategy [3]
- A Framework for Local Agenda 21 [5]
- Regeneration Strategy [6]
- Local Plan [7]

The council's policies and strategies for regeneration and more sustainable development were reflected in the development of this Inspection Strategy. In

[1] **CONTROLLED WATERS** (see Glossary) are defined by reference to the Water Resources Act 1991. See also Section 6.11.3 for discussion of the relationship with the contaminated land regime.

relation to brownfield sites, the process of contaminated land inspection and evaluation will identify polluted sites and draw conclusions about the risks they pose and suitable uses. Rather than adopt a narrow clean-up approach, it will be important to ensure that the wider interests of sustainability are reflected in the long-term interests of the community and the environment.

Internal arrangements between services will reflect:

a) the need for attention to the regeneration of brownfield sites, both in urban and rural areas, to support economic opportunities;
b) the need for avoiding potential conflicts between action on contamination and the conservation of existing ecological or heritage interests; and
c) the desire to minimise costs whilst maximising effectiveness of remediation, avoiding unnecessary or unsustainable requirements.

2.1.2 Relationship with national, regional and local planning policies

This Strategy has been prepared so as to take account of national, regional and local planning policies. These are outlined briefly below.

Planning Policy Statements have been published by the Department for Communities and Local Government (DCLG) and provide national guidance. Formerly such guidance was available from the Office of the Deputy Prime Minister (ODPM) in the form of Planning Policy Guidance Notes covering a wide range of issues. The notes increasingly emphasise the importance of sustainable development and the need to concentrate development in places well served by public transport, within town centres and other urban areas, and on previously developed sites. These policies introduce a "search sequence" that must be followed before considering the option of developing on greenfield sites.

Planning Policy Statement Note 3 on Housing (PPS 3)[8] sets a national target of achieving 60% of housing development on previously developed land. This is to promote regeneration and minimise the amount of greenfield land being taken for development. These so-called 'brownfield sites' are to be assessed against a number of constraints including land contamination to determine suitability for residential development.

Also of particular relevance is Planning Policy Statement 23[9], which sets out guidance for dealing with development proposals affecting contaminated land.

Regional guidance for the North West to the year 2016 is set out in draft Regional Planning Guidance Note RPG 13[11]. The Secretary of State's proposed changes were published in May 2002 and a final version was published in March 2003.

Amongst other things, the purpose of RPG13 is to set out the level of new housing provision to be made in the region, allocated on a county by county basis. For Lancashire this results in an additional requirement of 2,690 dwellings each year. Emphasis is placed on protection of the environment and prudent use of natural resources. RPG13 also seeks to encourage a more sustainable pattern of development and sets a county target of achieving 65% of new housing on previously developed sites.

The Joint Lancashire Structure Plan[12] prepared by Lancashire County Council, Blackpool Borough Council and Blackburn with Darwen Borough Council (the joint authorities) and adopted on 31st March 2005 takes account of national and regional guidance. It sets out the strategic policies for development and use of land in

Lancashire and the amount of new housing and employment land that Lancaster council must provide. Compared to the previous version, the Structure Plan adopted in 2005 sets a lower requirement for housing when compared to the five-year overlap period from 2001-2006. The replacement plan also states that the number of housing completions needed per year in the ten years after 2006 will be significantly lower than the number that have been needed in the recent past. The Joint Structure Plan authorities are also of the view that, in Lancaster District, all the new housing that is required between now and 2016 can be built on previously developed sites (brown field sites).

The Lancaster District Local Plan, adopted in 2004, provides the detailed framework for the control of development and use of land within the District for the period up to 2006. It identifies specific areas for housing, industry, shopping and other uses, and is used as the basis for making decisions on planning applications. The Local Plan is required to be in general conformity with the Lancashire Structure Plan. This relationship is being addressed in the Local Development Framework under development, which will replace the Local Plan.

Within the Local Plan (as at 2008) there are a number of policies which have relevance to the Part IIA regime, aiming to restrict and control pollution resulting from development insofar as it is possible through planning powers. The two key objectives of these policies are to ensure that potentially polluting development should not be located where it will be injurious to the health of local residents or where it will harm the natural environment. Conversely, other types of development should not be located adjacent or close to existing polluting development if it would be likely to give rise to conflict between the two uses.

Where sites are subject to applications for planning permission, the development control process is the primary means of addressing land contamination issues. This is not expected to change following implementation of this Strategy. Potential for contamination is currently an issue considered by Health and Strategic Housing Services when consulted on planning applications and may result in recommendations for planning conditions where permissions are granted. For further detail see Section 6.

2.1.3 Policies and Strategies of the Environment Agency and other external agencies

The Environment Agency published Local Environment Action Plans (LEAPs) in 1997-98 identifying local environmental issues and seeking to develop strategies and actions for environmental improvement. The LEAPs for the Lune[13,14] and Wyre[15,16] river catchments have been considered in detail in the development of this Strategy. Information from each is presented as part of the council's consideration of local characteristics when deciding the implications to feature in development of the Strategy. In June 2002 the Environment Agency's Central Area (North West Region) produced 'Making It Happen: Our Local Contribution'[17] as a statement of the Agency's vision and commitment, and to describe its plans for the period 2002-07. Local targets included:

- proactively identifying potential Special Sites (see 6.12.3) and working with local authorities towards their inspection under the Contaminated Land regime
- promoting the benefits of re-using brownfield sites
- participating in land remediation projects
- deployment of local enforcement resources in response to particular fly-tipping hotspots
- qualitatively characterising the pressures on groundwater resources

- developing prevention campaigns in relation to petrol and solvent pollution impacting on groundwater quality
- undertaking prevention campaigns in relation to pollution impacting on river water quality
- making progress on the implementation of Biodiversity Action Plans (see 3.3.3)

The council has some overlapping responsibilities, in particular for inspection and enforcement (contaminated land), planning powers and economic development. The council will work with the Environment Agency where there are common responsibilities and to secure common objectives. This Strategy identifies the need for promotion of good practice to minimise pollution incidents leading to sustained contamination, for example due to heating oils, vehicle fuels and solvents.

The Lancashire Biodiversity Action Plan[18] identifies the needs of the District for biodiversity protection. It is important to recognise that polluted or derelict land can be a source of rich and varied wildlife. As a result it is not unusual for such sites to be designated for special nature protection. Clearly site investigations and clean-up programmes for contaminated land could cause damage to sensitive environments. During early implementation of the Inspection Strategy, the council will seek to ensure (through information resources and established lines of communication) that appropriate consultation takes place in all cases of identifiable biodiversity protection needs. The Biological Heritage Sites Partnership has multi-agency composition and would appear to be a suitable forum for consultation (see section 3.3.3).

2.1.4 Council enforcement policy

The council has adopted the Enforcement Concordat[19] and will endeavour to apply Part IIA of the Environmental Protection Act 1990 in accordance with the principles of the Concordat. In summary, the Principles of Good Enforcement cover the following issues:

standards – setting out the level of service and performance the public and business people can expect to receive

openness – information and advice being given in plain language and disseminated as widely as possible

helpfulness – the service will be provided in a courteous and efficient manner and staff will identify themselves by name, providing a contact point and telephone number

complaints about service – an effective complaints procedure will be set up

proportionality – as far as the law allows account will be taken of the circumstances of the case and where possible action will be proportionate to the risks

consistency – duties will be carried out in a fair, equitable and consistent manner including effective arrangements for liaison with other authorities and enforcement bodies.

In relation to the Part IIA regime in particular:

- Advice from an officer will be put clearly and simply. It will be confirmed in writing, explain why any remedial action is necessary and state the time-scale for compliance.
- Before any formal enforcement action is taken an officer will provide an opportunity for the person(s) responsible to discuss the circumstances of the case and if possible resolve the matter informally (unless immediate action is necessary, for example in the interests of health and safety or environmental protection).

- Where immediate action is considered necessary an explanation of why such action is required will be given at the time and confirmed in writing.
- Enforcement action, including the service of a Remediation Notice, will only be undertaken when it has not proved possible to resolve the matter informally and in a timely manner.
- In the event that the Remediation Notice is not complied with, firm action (including prosecution where appropriate) will be taken against the person(s) who ignores the law or acts irresponsibly.

Section 6 on Procedures covers these points in more detail.

2.2 Regulatory context

2.2.1 General

Following consultation on a 1992 White Paper entitled 'Paying for our Past'[20], The Environment Act 1995[21] inserted a new section (Part IIA) into the Environmental Protection Act 1990. This provides the legislative framework that the council must follow, and will be referred to throughout this strategy as 'Part IIA'. A period of detailed consultation followed this initial legislation, and the Contaminated Land Regulations 2000[22] and Statutory Guidance[23] finally came into force in April 2000. These Regulations were in turn replaced by the Contaminated Land (England) Regulations 2006 which have slightly expanded the scope of the original regulations to include radioactively contaminated land. This regulatory regime, generally referred to as the Part IIA regime, required the production of this Strategy.

The responsibility for administering and enforcing the Part IIA contaminated land regime lies primarily with local authorities as the lead regulator and also the Environment Agency, but involves input from a number of other organisations.

The objective of Part IIA is to control threats to health and to the environment associated with land contamination through a risk based 'suitable for use' approach, requiring remediation only where necessary and applying the polluter pays principle when deciding who is liable to pay the costs.

The appropriate person(s) to bear responsibility for remediation will normally be the person(s) who caused or knowingly permitted the contamination. If, after inquiry, the person or persons who knowingly caused or permitted the contamination cannot be found then the appropriate person is the person who currently occupies or owns the land. In certain circumstances, for example, when after reasonable enquiry the appropriate person cannot be found the local authority may have to bear the costs for remediation.

2.2.2 The role of Lancaster City Council

Local authorities have been given the primary regulatory role under the Part IIA regime as they have historically had responsibility for dealing with any statutory nuisance caused by land contamination and are also the lead authorities on land use planning.

The council has a duty:

- To cause its area to be inspected for Contaminated Land
- To determine whether any particular site meets the statutory definition of Contaminated Land
- To act as the enforcing authority for all Contaminated Land, unless a site meets the definition of a 'Special Site' (see below).

2.2.3 The role of the Environment Agency

The Environment Agency has a role in assisting local authorities, providing site-specific local guidance, dealing with 'Special Sites' and publishing periodic reports on the state of land contamination nationally. More information on what constitutes a Special Site is contained in section 6.12.3 and Appendix D.

2.2.4 The definition of Contaminated Land under Part IIA

A legal definition of Contaminated Land is given in Section 78A(2) of Part IIA of the Environmental Protection Act 1990.

What is Contaminated Land ?

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

1. **significant harm is being caused or there is a significant possibility of such harm being caused; or**
2. **pollution of controlled waters[2] is being, or is likely to be caused.**

(Section 78A(2) – Environmental Protection Act 1990)

Section 78A(5) requires the regulatory authority to act in accordance with guidance[23] issued by the Secretary of State in determining whether there is significant harm or a significant possibility of significant harm. (Table A.1 in Appendix A defines "Significant harm" and Table A.2 outlines the conditions under which "Significant possibility of significant harm" may occur.)

Notes:

1. The definition ensures that only land where contamination is causing unacceptable risks to human health[3] or other specific receptors is treated as Contaminated Land. It does not seek to instigate remedial action against all land where some contamination may exist.
2. Guidance has been published[24] by the Environment Agency qualifying the requirements of Part IIA in relation to pollution of controlled waters. It is understood that new legislation is also proposed to qualify the threshold of water pollution that would trigger Part IIA involvement.

2.2.5 Principles of pollutant linkages

For a site to meet the definition of Contaminated Land, a pollutant linkage must first be established. A pollutant linkage consists of three parts:

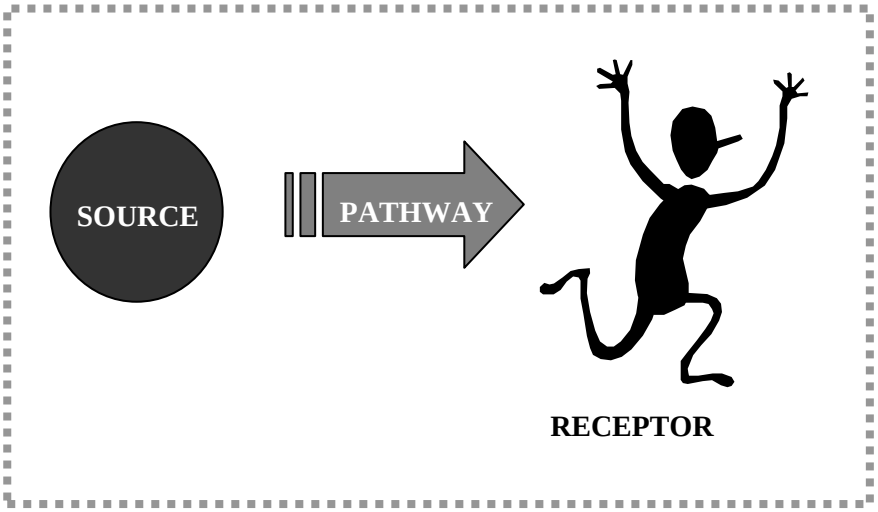
1. A source of contamination in, on or under the ground
2. A pathway by which the contaminant is causing significant harm (or which presents a significant possibility of such harm being caused)
3. A receptor of a type specified in the Statutory Guidance

Figure 2 on the next page illustrates this concept.

[2] **CONTROLLED WATERS** (see Glossary) are defined by reference to the Water Resources Act 1991. See also Section 6.11.3 for discussion of the relationship with the contaminated land regime.

[3] **HUMAN HEALTH** – People can be affected by contaminants through direct skin contact, breathing dusts or gases, or by eating or drinking contaminated food or drink (including water supplies). The Council will primarily be examining the local soil and water environment when considering risks to human health from contaminants, also local produce (food and drink) and water supplies.

Figure 2 – Illustration of the 'Source-Pathway-Receptor' relationship



However, Contaminated Land cannot be determined unless the pollutant linkage is also **significant** (see Appendix A).

EXAMPLE - a significant pollutant linkage might exist where refuse in a landfill is generating landfill gas, this gas is migrating through permeable ground and entering residential properties in concentrations that could cause a risk of explosion.

2.2.6 Identifying receptors

The receptors recognised as being potentially sensitive are, in the general order of appearance in the Statutory Guidance:

Human beings

Ecological systems or living organisms forming part of a system within certain protected locations, including:

- Sites of Special Scientific Interest (SSSIs);
- National Nature Reserves;
- Marine Nature Reserves;
- Areas of special protection for birds;
- Special Areas of Conservation (SACs);
- Special Protection Areas (SPAs);
- Candidate SACs or potential SPAs;
- RAMSAR sites;[4]
- Local Nature Reserves;

[4] **RAMSAR sites** - designated under the provisions of the 'RAMSAR Convention on the Protection of Wetlands of International Importance Especially as Wild Fowl Habitats'[25] signed by the UK Government in 1973. Under the RAMSAR convention the Government has a duty to conserve internationally important estuaries.

Property in other forms:

- Crops including timber;
- Home-grown produce;
- Livestock;
- Owned or domesticated animals; and
- Wild animals subject to shooting or fishing rights.

Property in the form of buildings, including Ancient Monuments

Controlled waters:

- Inland fresh waters (e.g. rivers, watercourses, lakes and ponds);
- Ground waters (e.g. aquifers supplying drinking water);
- Coastal waters; and
- Territorial waters.

2.2.7 Introducing risk assessment

If the three components of the pollutant linkage exist, a risk assessment will be undertaken to determine the likelihood of harm being caused and the likely nature and extent of the harm caused if the predicted event actually occurred. An area of land can only be determined as Contaminated Land if a significant pollutant linkage has been identified. See Section 6.8 on risk assessment.

Where more than one significant pollutant linkage exists, the advice of the Environment Agency is to identify as many such linkages as possible before making a Determination (see section 6.10.2). In the case of a Special Site the Agency can only deal with the linkages that create its existence.

Even where land containing contaminants is not presenting an unacceptable risk to any receptors under its current use[5] introducing new 'receptors' may be unacceptable. In such cases the development control system can be used to make land suitable for any new use when planning permission for a change of use is granted. This approach requires a pragmatic level of safety from contaminants rather than their complete removal in all cases, and is termed 'suitable for use'. Similarly Part IIA may not be applicable when other legislation applies (see section 6.11).

2.2.8 Dealing with Contaminated Land

If an area of Contaminated Land has been identified, the general approach for dealing with it will be the same regardless of whether the local authority or the Environment Agency is the regulator. There are four main stages to this approach:

1. To establish who is the "appropriate person" to bear responsibility for the remediation (or "clean-up") of the land (the categories of Appropriate Person are defined in the Statutory Guidance[23]).

[5] **CURRENT USE** – any use of particular land which is currently being made, or which is in the foreseeable future likely to be made legitimately and which is consistent with any existing planning permission (or is otherwise lawful under Town and Country Planning legislation). This definition is subject to certain qualifications (see Statutory Guidance[23] Paragraph A.26).

2. To decide what remediation is required and to ensure that this occurs, through:

    - Reaching a voluntary agreement

    And if a satisfactory outcome is not reached under voluntary agreement:
    - Serving a remediation notice, if agreement cannot be reached
    - Carrying out work themselves, in certain circumstances

3. To determine who should bear what proportion of the liability for meeting the costs of the work (unless it is carried out under voluntarily agreement).
4. To record certain information about regulatory action on a public register.

It should be noted that pollutant linkages may arise with the source of contamination in one local authority area and the receptor located in another. The council shares boundaries with four other local authorities (see section 3.1.1). Communications and data sharing will be established to ensure that 'transboundary' pollutant linkages receive fair consideration.

2.3 Development of the Strategy

2.3.1 Outline

All local authorities are required to take a strategic approach to inspecting land in their area for contamination.

Why is an Inspection Strategy necessary?

The council is obliged by law to take a strategic approach that will:

- **be rational, ordered and efficient;**
- **be proportionate to the seriousness of any risk;**
- **deal with the most pressing and serious problems first;**
- **concentrate resources on investigating areas most likely to be Contaminated Land; and**
- **carry out detailed inspections efficiently and effectively.**

(Summarised from DEFRA Statutory Guidance, 2006[23])

This Strategy was developed to meet these requirements. Particular reference was made to "Contaminated Land Inspection Strategies - Technical Advice for Local Authorities"[26] issued by the former Department of the Environment, Transport and the Regions.

A draft Strategy prepared by the council's Health and Strategic Housing Services in consultation with other services was approved by the Cabinet meeting on 26 November 2001 and subjected to formal consultation between January and March 2002. The first edition was finalised on 26 November 2002.

This second, 2008, edition follows a planned formal review of the first edition. It contains a small number of updates reflecting the passage of time since 2002,

however, it is largely unchanged with the exception of section 5. The consultees are listed in Appendix C. Additionally a number of organisations were notified of the consultation. All consultation responses were considered and the Strategy amended where appropriate. Although the council's aims and objectives, approach and methods have not been changed significantly, the structure and appearance of the Strategy have altered since consultation. The finalised Strategy was adopted by the council's Cabinet in 2002.

A formal review of the strategy will be carried out whenever legislative change occurs and in any case after five years. Good practice will be maintained throughout the life of the document and working procedures will reflect the Strategy.

2.3.2 Internal team responsible

The lead Service within the council for development of this Inspection Strategy is Health and Strategic Housing Services. The lead officer is the Environmental Protection Manager. Contact details are provided inside the front cover of the document. A dedicated Contaminated Land Officer (CLO) is employed by the Council and a Contaminated Land Working Group exists to provide a corporate focus on contaminated land issues.

3. CHARACTERISTICS OF LANCASTER CITY COUNCIL'S AREA

Across the UK there are marked differences in geography, industrial activity and prevalence of vulnerable 'receptors' such as protected wildlife and water resources. The manner in which contaminants have been deposited, have moved and have affected (or threatened) vulnerable receptors can vary, even between localities a few miles apart. The council has considered the character of the District when developing priorities and objectives for inspecting land that may be contaminated.

A key feature that influences this Strategy is the fact that although extensive urban development is concentrated in the west of the District at Lancaster, Morecambe and Heysham, elsewhere the District is principally rural with many important features. The District possesses a wealth of locally, nationally and internationally designated areas of ecological importance, has large water resources (both groundwater and substantial surface waters), has been settled for thousands of years, has a rich built heritage and many areas of archaeological importance.

The key features of the District relevant to land contamination are outlined below and the implications for this Strategy are identified in each section.

3.1 Geographical and Natural Features

3.1.1 Location

Lancaster City Council is the northernmost of 14 district and borough councils in Lancashire. It is bounded by South Lakeland District Council and the Cumbrian border to the north, Craven District Council and the Yorkshire Dales to the east, and the Lancashire districts of Ribble Valley Borough Council and Wyre Borough Councils to the south. To the west lies the Irish Sea and Morecambe Bay. The council is responsible for a population of around 140,000 and a land area totalling 565 square kilometres. The District includes Lancaster, Morecambe, the Lune Valley as far as Leck (near Kirby Lonsdale) and part of the Forest of Bowland. The city of Lancaster is situated in the west of the District and is the administrative headquarters, being both the historical capital and county town of Lancashire. Cockerham and Silverdale are situated on the coast, 9km to the south and 15km to the north respectively.

Implications:
The District's population and development tend to be concentrated in the west, particularly around Lancaster and Morecambe. However it is the large, predominantly rural area which has the most diverse geography and land uses. Its special qualities of widely varied rural character and coastal location make it a desirable place to live and work, and a tourist destination. A wide variety of local issues are relevant to land contamination, as outlined in the following paragraphs.

3.1.2 Population distribution

There are 29 electoral wards in the District and the total population is approximately 140,000 comprising nearly 60,000 households. Population growth in the 1970s and 1980s resulted in construction of almost 8,000 new dwellings, most concentrated within the broad boundaries of Lancaster, Morecambe and Heysham. By infill development this resulted in the merging of these into a single, fairly compact urban area. At the time of the Local Plan (1997)[7] this area covered 20 square miles and hosted 105,000 residents during term-time reflecting the status as a university city. Carnforth forms the remaining town in the District.

The 1991 census recorded a population of 29,085 (24% of the District's total at that time) living in the rural electoral wards of Arkholme, Bolton-le-Sands, Caton, Ellel, Halton-with-Aughton, Hornby, Kellet, Overton, Silverdale, Slyne-with-Hest and Warton. The rural areas tend to be sparsely populated with small villages. Some rural areas qualify for economic development assistance and new enterprises may be expected on isolated brownfield sites.

Implications:
Approximately three quarters of the population is located in the urban areas to the west of the District. Allowing for District-wide identification of urgent sites for intervention, the remainder of potentially contaminated sites may need to be prioritised according to the numbers of people that could be affected.

3.1.3 Landscape characteristics

Development between Lancaster, Morecambe and Heysham has resulted in an urban conurbation spanning the River Lune. The variety and number of important natural areas within the District are outlined later in section 3.3, but the District's countryside is remarkably diverse in character and includes:

- the limestone pavements, outcrops and features of Warton and Silverdale;
- the high, airy southern Pennine uplands around Leck, Wray and the Forest of Bowland;
- the lowland pastoral landscapes around Borwick, Capernwray and Priest Hutton, Galgate and Dolphinholme;
- the river valley landscapes of the River Lune and River Wyre and tributaries;
- the undulating gritstone landscapes either side of the Lune east of Lancaster;
- the flat reclaimed pasture lands of Lancaster and the Heysham peninsula; and
- the coastal salt marsh areas at Cockerham and west of Carnforth.

The District is bisected north east to west by the River Lune and further divided by the River Wyre (in the south east) and River Conder (in the south west). The west of the District is bordered by the marine environments of the Lune estuary and Morecambe Bay.

Implications:
Landscape and ground conditions can affect vulnerability to pollution. Much of the District provides rapid drainage of water to rivers, and this raises the potential for spread of surface contamination. Conversely pollution by, for example, fuel oils will tend to seep down quickly into limey and silty landscapes.

3.1.4 Geological and hydrogeological features

The bed rock or 'solid geology' of the District is diverse in ages and types, reflected the wide variety of local landscapes. The limestone of Silverdale in the north-west, in demand by the aggregates industry, is quite permeable and weathering leads to rapid and complex flows of water. The millstone grit series of strata are extensively evident across the Lune and Wyre valleys with alternating layers of impermeable shales/mudstones separating individual aquifer units of permeable sandstones/grits.

This paragraph summarises the loose cover or 'drift geology' often found over bed rock. Consideration here has been simplified and the reader should make no localised assumptions from consideration here. The geomorphology of the District has been influenced heavily by glaciation. Upland areas are generally drift-free except for peat deposits, particularly in upland areas separating the Lune and Wyre valleys. In contrast the predominance of lower-lying areas are generally well covered with glacial deposits ('glacial till') of boulder clay. Such areas of thick drift deposits tend to inhibit the recharge of groundwater below, affording local protection from water-borne pollution. However drift layers represent minor aquifers where

permeable sands and gravels are present, for example along the River Keer and around Carnforth, where there have been extensive sand and gravel workings. Alluvium exists along the River Lune and widely in coastal margins of the Lune estuary, also at the mouth of the River Keer. Alluvium is generally classified as a minor aquifer.

Implications:
These features will influence the way in which contaminants move through and penetrate the natural environment. Knowledge of local geology and hydrogeology will inform judgements about where contamination may be found and its significance. Considerations for aquifers are considered separately in section 3.6.

3.2 Sources of Contamination

3.2.1 Historical and industrial development

Key sources of the following information are listed as references 27-33 in Appendix G.

The District is largely rural but it has seen a long history of development and industry since prehistoric settlements appeared in upland areas of the Lune valley and an iron age hill fort was located on Warton Crag. The Roman conquest provided the first highly organised settlement at Lancaster and the first evidence of industries following the building of a fort on Castle Hill at modern-day Lancaster c.70-90 AD. Along with iron-making (with pig iron from Furness) came coal mining and quarrying for stone, sand, clay and gravel, along with the manufacture of bricks, pottery and tiles at Quernmore c.80-150 AD. Such processes had a significant demand for wood so forestry and coppicing may have been other key rural industries.

Local people would quickly have realised the benefits of Roman life and a modest civilian settlement grew to the east of the Roman fort involving manufacture and trades at the time would have included pottery, tanning, wood and metal-working. The fort may then have extended to include a section of the riverside including ship repair. Lancaster was by this time probably serving as a reception point for deep-draughted ships to transfer men and commodities inland. The Roman fort remained active until about the fifth century and this early pattern of a modest village adjacent to the fort and a large rural population continued largely unchanged throughout the Saxon and Medieval periods as the same natural products were exploited (iron, wood, construction materials) and agriculture dominated the Lune valley. Extraction of stone, gravel, clay and shale took place in numerous rural locations around the District. A brickworks appears to have operated at Claughton for centuries, and it is quite likely that further historical industrial sites will be discovered in the Lune valley. There are records also of surface or shallow coal mining at Tatham, Quernmore and Wray.

Whilst the first borough charter was granted to it in 1193, Lancaster did not appear to grow urbanised until the town's "age of transition" starting in 1690. Stone buildings now replaced timber and thatch, and the previously rural population of the borough started to become urbanised. Much of the stone for rebuilding Lancaster came from what is now Williamson Park. In the fifteenth century Lancaster emerged as a port for Ireland and it was well-placed later to capitalise on transatlantic trade exchanging hardware and woollen goods for tropical loads including hardwoods. Shipbuilding on the banks of the Lune and at Sunderland Point was the chief industry peaking in about 1800, along with cabinet-making. Allied with ship-building and repair were anchor-smiths, block, rope and sail-makers by around 1720.

By 1750-1800 there was strong production of textiles at some mills along the Lune, particularly at Caton. Iron works and paper mills were also emerging at this time. With the loss to the nation of transatlantic trade around 1800 just as the town had grown to include Skerton, Bulk and Scotforth, were matched by the seasonal influxes of visitors and retailing was increasingly important to the local economy. By the time domestic shipping was struggling against strong competition, textile mills were beginning to employ great numbers of people. Then in the 1860s and 1870s cotton manufacturing was largely subsumed into manufacture of table baize, oilcloth and eventually linoleum. Industrial diversification continued with a wide range of manufacturing industries represented in the early twentieth century, including munitions manufacture on a site between Lancaster and Morecambe. The arrival of the Lancaster Canal and the railways led to loading areas and sidings for transporting coal, raw materials and products. Evidence for this can be seen from the extensive railway loading areas at Water Street in Lancaster, at Morecambe, the Trimpell industrial site near Middleton and at Heysham harbour. Construction of a harbour at Poulton commenced even before the railway arrived in 1850, and stimulated a strong tourist trade and equally strong cargo shipping. The local population grew rapidly from 1,301 in 1851 to 13,783 in 1901 as Poulton became Morecambe. In 1904 a new harbour opened at Heysham and Morecambe harbour became a ship breaking yard.

In 1919 the principal industrial areas in Lancaster were concentrated close to the river and east of the canal. During and after World War II large-scale industrial development took place close to Heysham harbour (oil refinery, nitrate chemical works) and smaller-scale light industries became located out-of-town as some of the larger manufacturing facilities began to downsize or close in the 1960s.

Implications:
The key potential sources of contamination within the District are those associated with former mineral extraction and/or landfilling and such sites as former gas works, petrol stations, railway land and transport depots, scrap yards and sewage treatment works/waste water treatment works. Appendix B outlines some commonly occurring and potentially contaminative uses associated with key industries present in the District. In addition historic industrial uses may have resulted in localised contamination in areas that have not been fully redeveloped, for example sites of shipbuilding.

Phases of industrial development, chronicled above, may have led to yet undiscovered contamination.

The long industrial heritage of the District is important but it could be threatened by future development plans, including well-intentioned regeneration initiatives. Suitable mechanisms will be established for maintaining a record of sites of interest and for consulting Lancashire County Council's archaeologists, English Heritage and the University of Lancaster where appropriate.

3.2.2 Current land use characteristics

Heysham port is of regional significance and an advanced gas reactor nuclear power station operating at Heysham is a major employer. Significant industry remains in well-defined areas of the District. However, it continues to decline and currently represents only 12% of employment in the District. Some urban wards are recognised for deprivation and high rates of unemployment. Despite decline Morecambe remains a significant resort and it now houses 38% of the resident population. As a long-term objective the Regeneration Strategy[6] seeks to take advantage of business opportunities raised by the proposed Heysham/M6 road link.

The District has continued to grow in terms of residential populations and demand for new homes continues to increase. The housing stock is predominantly owner occupied with a significant contribution to the rented sector from students (c.18,000). Given the high take-up of home ownership and policies for new build on brownfield sites, it is anticipated that there will be growing interest in the Part IIA regime.

The Land and Premises Study for the District[34] conducted in 1996 identified that a number of large, older properties are awaiting redevelopment for other uses. The study also noted that a shortage of industrial sites is likely to increase demand for brownfield sites.

Despite the growth in population, due to the large number of protected locations, there are still substantial areas of the District that are undeveloped and largely unchanged.

Implications:
The current land-use pattern will tend to result in more of the potentially contaminating activities being concentrated in and around the major towns. Potentially contaminative uses are also likely to be found in rural areas just as in towns, although the lower population density may in many cases reflect lower potential for human exposure to contaminants. The council will seek to support regeneration and beneficial environmental gains through Development Control and Economic Development services by assigning a priority to identifying any problem areas suitable for initiative funding, also through encouraging the redevelopment of brownfield sites. Good practice will be actively promoted for dealing with potentially contaminated sites.

In order to promote regeneration and brownfield site re-use, joint working is proposed between key services (e.g. Development Control, Economic Development, Environmental Health). The needs for protection of heritage, conservation and sustainability interests are addressed elsewhere in this Strategy and will inform this work.

3.2.3 Information on potential sources of contamination

The council has completed the identification of potentially contaminative land uses within the District from historic information sources and land-use records. Further information on specific sites has been stored over the past 10 years from reports submitted as part of the development control process. This information has been collated and added to the corporate GIS[6] and database[7].

Following the introduction of the Part IIA regime, the council has purchased a dataset of historical information derived from old maps to identify potentially contaminative former land uses. This data and further study of historical maps, together with other land-use records, will form a starting point for identifying land requiring inspection under the terms of the Strategy.

Implications:

[6] **GEOGRAPHICAL INFORMATION SYSTEM (GIS)** – a computer software package capable of storing and displaying graphical information (digital maps) and associated information (for example in a database). Typically a GIS is used to enter and analyse information from various sources, perform queries on collections of information and produce reports and printed maps.

[7] **DATABASE** – a logically ordered collection of interrelated information, managed and stored as a unit, whether on paper or on a computer.

A starting point for information collection has been established. The database will require analysis and management in accordance with the procedures outlined in Sections 6.5 to 6.7. Prioritisation will be important for ensuring that the most important and pressing problems are dealt with first (see Section 5.3, Stage 5 – prioritisation). Prioritisation and risk assessment are outlined in Sections 6.7 and 6.8.

3.3 Naturally occurring Receptors

3.3.1 Natural areas with special protection status relevant to Part IIA

Lancaster District contains some of the most important nature conservation sites in the country. The variety of natural environments and habitats in and around the District supports a wealth of wildlife, indeed the District makes a significant contribution to the biodiversity resource of the county of Lancashire. It contains an exceptional range of habitats, associated species and contains numerous sites that are of national and international importance for nature conservation. The Lancashire Biodiversity Action Plan (LBAP)[18] contains further details of natural environments, species and habitats of importance. The extent of coverage is also significant.

Appendix A identifies types of ecological receptors for which harm should be regarded as significant for the purposes of Part IIA legislation and in summary within the District there are the following types of sites:

Sites of Special Scientific Interest

Sites of Special Scientific Interest (SSSIs) are areas of land notified under the Wildlife and Countryside Act 1981[35] (as amended) as being of special interest for nature conservation. Their protection is essential to the conservation of wildlife within the District and they are therefore also protected by Local Plan policies. Development within and around SSSIs is strictly controlled and there are 25 sites designated as SSSIs within the District with a total area of some 19,000 hectares including large areas such as Leighton Moss, the Lune Estuary, and parts of the Bowland Fells, Leck Beck and Morecambe Bay.

National Nature Reserves/Local Nature Reserves

National Nature Reserves (NNR) and Local Nature Reserves (LNRs) are statutory designations relating to the management of land. The essential character of NNRs is that their primary use is for nature conservation. LNRs are areas managed for either educational purposes and/or to preserve the flora, fauna, geological or physiographical features of special interest. There is one National Nature Reserve (NNR) within the District at Gait Barrows SSSI (69.5 hectares) and the council owns two LNRs at Warton Crag and Trowbarrow Quarry. Gait Barrows SSSI is also an LNR.

Special Areas of Conservation

Where areas are considered to make a significant contribution to the conservation of habitats and species identified in the Habitats Directive[8][36] they are designated as Special Areas of Conservation (SACs). Morecambe Bay has now been designated as an SAC. Another large SAC is the limestone pavement area around Gaitbarrows that forms the Morecambe Bay Pavements SAC.

[8] **The Habitats Directive** is European legislation providing for the creation of a network of protected areas across Europe which are known as 'Natura 2000' sites. The network consists of SPAs and SACs. These measures together aim to ensure that rare species can survive and maintain their populations and natural range on a long-term basis.

Special Protection Areas

Special Protection Areas (SPAs) are designated under the European Union's Council Directive of April 1979 on the Conservation of Wild Birds[37]. The aim is to conserve the habitat of certain rare or vulnerable birds and regularly occurring migratory birds. In these areas any significant pollution, disturbance or deterioration must be avoided. Partly or wholly within the District there are three SPAs – the Bowland Fells, Morecambe Bay and Leighton Moss.

RAMSAR Sites

RAMSAR sites are designated under the provisions of the 'RAMSAR Convention on the Protection of Wetlands of International Importance Especially as Wild Fowl Habitats'[25] signed by the UK Government in 1973. Under the RAMSAR convention the Government has a duty to conserve internationally important estuaries. There are two RAMSAR sites partly or wholly within the District – Morecambe Bay and Leighton Moss.

It is worth emphasising that some of the above-mentioned sites have more than one designation.

3.3.2 Natural areas without special protection status relevant to Part IIA

There are also two Areas of Outstanding Natural Beauty (AONB), Arnside/Silverdale AONB and Forest of Bowland AONB. These cover some 30,500 hectares and the primary objective within AONBs is to conserve the natural beauty of the landscape.

There are also many non-statutory sites of local conservation importance including around 250 County Biological Heritage Sites, plus County Geological Heritage Sites, Limestone Pavement Order sites, Regionally Important Geological Sites and numerous areas of ancient woodland and common land. In 1994 the District contained over 1,100 hectares of ancient woodland[7]. A Register of Parks and Gardens of Special Historic Interest[38] is compiled by English Heritage to draw attention to historic parks and gardens as an essential part of the nation's heritage and within the District there are a number of Historic Parks and Gardens, details of these sites can be obtained from the Local Plan. County councils have commented during consultation elsewhere that the protection afforded by Part IIA does not extend to all local ecosystems that might warrant specific protection. The council will seek to ensure full consultation and inspection in relation to such sites.

3.3.3 Biodiversity considerations

Following the Biodiversity Convention at the Rio Summit in 1992, the UK government published 'Biodiversity – the UK Action Plan' in 1994. In response a Regional Biodiversity Steering Group for North West England commissioned an audit of species and habitats. This opened the door to production of Lancashire's Biodiversity Action Plan or LBAP (2001)[18] which identifies the loss of 10 species from the county in the last 100 years including the pine marten, the corncrake and five species of wild plant. The last 200 years have seen the loss of 97% of flower-rich meadows, 99% of lowland bogs and 11,000 ponds.

Containing 29 species action plans and 10 habitat action plans, the LBAP aims to:

- identify suitable targets for species and habitats appropriate to local areas and people;
- develop effective local partnerships;
- raise awareness of needs for biodiversity conservation; and
- ensure opportunities for conservation and enhancement of the whole biodiversity resource are fully considered.

Implications (of ALL these concerns for natural areas deserving special protection):

Given the large area of land covered by sites of ecological sensitivity across the District, the Strategy assigns a relatively high priority to this class of receptors – see Section 5. During consultation it was proposed that the most appropriate body to consult over potentially damaging works would be the Biological Heritage Sites Partnership comprising the Wildlife Trust for Lancashire, Lancashire County Council and Natural England. The council proposes to establish communications with the Partnership for both awareness-raising and formal/informal consultation purposes.

3.4 Man-made Receptors

The Statutory Guidance includes general protection for all 'property in the form of buildings', and stronger protection for scheduled ancient monuments (see Appendix A). Whilst scheduling relates only to certain buildings, English Heritage commented elsewhere during consultation that "the total known archaeological resource is much larger…and it cannot be assumed that all nationally important archaeological sites will have been legally protected." Former industrial activities such as mining, quarrying, manufacturing and railways could pose potential risks of contamination. However these sites may themselves be of heritage importance and in need of protection, either because contamination poses a threat to on-site buildings or because site investigations and remediation could cause irreversible damage to archaeological interests. This latter point was also confirmed by The Wildlife Trust for Lancashire during consultation.

The state of the environment report 'Lancashire Environment 2002'[39] prepared by Lancashire County Council reports that numbers of scheduled ancient monuments, historic sites/monuments, and conservation areas have all risen between 1990-01 and 2000-01. It must be assumed that there may be further important but unscheduled monuments requiring protection.

Built Environment and Protected Properties
Lancaster District was colonised during pre-historic times and there are around 39 Scheduled Ancient Monuments, 1344 Listed Buildings and 37 Conservation Areas within the District. A list of these buildings/areas (as at 1997) is given in the Local Plan[7].

Scheduled Ancient Monuments
Under the Ancient Monuments and Archaeological Areas Act 1979[40], the Secretary of State for Culture, Media and Sport is responsible for both compiling and maintaining a schedule of nationally important archaeological sites and monuments. Once a site or monument is included in this list it is subject to legal protection. Consent of the Secretary of State is required before any works are carried out which would have the effect of demolishing, destroying, damaging, removing, repairing, altering, adding to, flooding or covering up the monument or site. If it appears during inspection that any scheduled site may be affected by Contaminated Land, English Heritage will be consulted informally for site-specific advice which will be considered when determining what constitutes significant harm. Numbers and types of scheduled site are subject to change and the council will endeavour to maintain up to date records.

Listed Buildings
The Statutory List of Buildings of Architectural or Historic Interest[41] is compiled and updated by the Department of Culture, Media and Sport and English Heritage is currently reviewing the grading of listed churches. Buildings are classified in grades to show their relative importance i.e. Grade I, Grade II* or Grade II. Such buildings may not be demolished or altered without the consent of the Local Planning Authority.

Conservation Areas
Conservation Areas are defined under the Planning (Listed Buildings and Conservation Areas) Act 1990[41] and are designated to secure the preservation of the character or appearance of areas (as distinct from individual buildings) of special architectural or historic interest. Within such areas, particularly stringent standards for new development and alterations to existing buildings are imposed.

Implications of Man-made Receptors:
Former land uses will feature as potential causes of contamination throughout the inspection programme. Notwithstanding the special categories of buildings identified, the council must consider the risks of Contaminated Land causing harm to any building within the District. In the Strategy this class of receptors has been given a relatively low priority because the risks of 'structural failure, substantial damage or substantial interference with any right of occupation' from Contaminated Land are considered to be rather lower than the threats to other classes of receptors (see Section 5.1 and Stage 6 – prioritisation). The council endorses comments made by English Heritage elsewhere during consultation to the effect that potential heritage significance should always be considered when inspecting sites, and will make appropriate consultation and inspection arrangements for protecting all potentially important archaeological and industrial heritage features (see also section 3.2.1). Occupied buildings may also be considered at an earlier stage when the council considers certain risks of significant harm to people, for example risks of fire or explosion. When effecting remediation of contaminated land the council will have due regard to any protected property.

3.5 Property in the form of animals and crops

Man's property in the form of domesticated pets, animal livestock, cultivated crops and shooting and fishing rights all feature for protection under Part IIA. The Statutory Guidance identifies what might constitute significant harm in these cases (see tables in Appendix A). The council has considered these receptors and is satisfied generally that the likelihood they will be affected by Contaminated Land is relatively low and case-specific for the following reasons:

Domestic Pets
Implications for pet animals are likely to be identified when humans and controlled waters are considered, and no separate wide-scale consideration is deemed necessary.

Livestock, Cultivated Crops, Shooting and Fishing Rights
In order for significant harm (or significant possibility of significant harm) to be caused to such receptors, particularly severe and/or widespread environmental degradation would be expected to occur. There would probably be an acute impact on a class of receptor in a locality and one that was noticed rapidly. Large-scale fish kills would normally fall to the Environment Agency for investigation and enforcement although liaison will be maintained (see section 6.12). The council is satisfied on the basis of advice from DEFRA that the existence at this time of contamination likely to threaten other livestock or game within the District is unlikely. Distribution of appropriate information to owners of such property, or rights to game or fish, is likely to raise awareness sufficiently that District-wide inspection need not be a high priority.

Whilst there are relatively few areas of commercial or community food growing within the District, those that exist include leafy and root crops, and use of private

allotments. Such areas will be recorded and afforded special consideration in connection with inspection for human health impacts. Particular attention will be paid to the 'Mission nutrition' initiative of the Healthy Living Centre in Poulton – this seeks the development of new allotment sites.

Implications:
It is considered relatively unlikely that Contaminated Land affecting these classes of receptors either exists or is likely to arise in such a way that proactive District-wide inspection would be appropriate. However it will be important to raise awareness to ensure that, should such impacts arise, the council is notified without delay so that appropriate action may be taken. The council intends to monitor/sample allotments in the near future.

3.6 Water Resources

Rainfall and evaporative losses vary across the District as measured at a number of stations by the Environment Agency. Measurements at Hazelrigg identify monthly totals of rainfall as above average (about 110mm per month or 1.3m annually) between August and January. Soil moisture deficit is a better indicator of capacity of land to absorb rainfall. In the Lune catchment[13] soil moisture deficit tends to be negligible between mid-October and mid-April, indicating that mobile contaminants can be expected to spread or drain rapidly.

Given the complexity of water resources across the District, separate consideration has been afforded below to surface waters, groundwaters, coastal waters and flooding issues.

3.6.1 Surface waters

The River Lune is one of the largest rivers in the north west of England and quite unusual as it remains in a relatively pristine condition. This is reflected in the range of habitats and species it supports. The Lune meanders into the District near Kirby Lonsdale in an area of four distinct characters: the South Cumbria Low Fells, Yorkshire Dales, Bowland Fringe and Morecambe Bay Limestones. Continuing south west through a floodplain of improved pastures, the Lune reaches the distinctly different environment of the estuary before Lancaster. Just downstream of Lancaster at the confluence with Oxcliffe Dyke is a County Biological Heritage Site. Salmon populations in the River Lune are still recovering from decimation in the 1960s due to disease, however a number of fisheries and angling clubs are permitted under licence from the Environment Agency which holds the fishing rights. River habitats are degraded in some areas although the causes do not appear relevant to Part IIA and may be due to agricultural run off and sewage effluent.

The River Wyre occupies a large catchment in central Lancashire but features relatively briefly in the sweeping heathland and wooded Bowland area of the Lancaster District. A salmonid river, its upper reaches are generally of good chemical quality but action is warranted[15] to reduce the high Biological Oxygen Demand (BOD) from agricultural discharges impacting on salmonid fish populations.

The Lancashire Conjunctive Use Scheme[13] commissioned in the 1970s provides for water to be transported from the River Lune to the River Wyre via Abbeystead Reservoir if flows in the Wyre are inadequate to support licensed abstractions.

The River Keer is a relatively small catchment including the towns of Carnforth and Priest Hutton in the east and Morecambe Bay in the west. The River Conder rises near Quernmore and drains to the Lune estuary west of Conder Green – fish

populations appear to be declining. The River Cocker drains locally in the south west of the District. Several environmental threats to the River Cocker have been reported[15]:

a) sensitive species have been impacted by surface drainage of the M6 motorway;
b) chemical water quality has been poor in the lower reaches;
c) regional water quality objectives have marginally failed in places, presumably due to agricultural run-off; and
d) low flows of water caused by abstractions including service of Lancaster Canal have impacted the aquatic ecosystems.

The largely hydraulically isolated Lancaster Canal runs roughly north-south through the District with a branch joining from Glasson at Galgate. The canal provides recreational facilities for navigation and angling. It is also is designated a County Biological Heritage Site for its floral communities and service as a wildlife corridor.

The main use of all inland surface waters is recreational angling for game fish including salmon, sea trout and trout. The River Lune used to host the national slalom canoeing event held at Halton and unofficially it remains one of the best rivers in the north west for canoeing, both touring and white water runs. It appears that canoeists may be present at any point on the Lune within the District. Club rowing also takes place above Skerton weir and a local club undertakes sub-aqua diving in the river on occasion[13].

As at 1997[13,15] the licensed surface water abstractions within the District were 13 for public water supplies, two for spray irrigation of crops, approximately 30 for other agricultural purposes including fish farming, 11 for industrial uses, and three for amenity uses.

3.6.2 Groundwaters

Groundwater is found in significant quantities in certain types of rock which hold and release water, known as aquifers. Major Aquifers are defined as highly permeable strata capable of storing large volumes of water. The only major aquifer in the District is the sandstone underlying the mouth of the Lune estuary and much of the Flyde, serving as an important source of large public and industrial water supplies. Major aquifers tend to be highly prone to pollution, which can become extensive and difficult and expensive to remedy. The Environment Agency advised during consultation that these aquifers should be assessed further for their vulnerability when identifying potential risks of contamination.

Minor aquifers have limited capacity to hold groundwater and often some degree of defence against contamination by pollution. Minor aquifers within the District are:

a) the sand and gravel drift deposits along the River Keer and around Carnforth
b) the geological sequence of millstone grits and other Carboniferous strata across the Lune and Wyre valleys which lends itself to small private water supplies in rural locations.

As at 1997[13,15] the licensed groundwater abstractions within the District were four for industry and two for drinking water supplies, all lying between Lancaster and Kirby Lonsdale, and approximately 30 more widely spread for agricultural purposes.

The Environment Agency has defined Source Protection Zones (SPZ) around key groundwater abstraction points to give protection to the parts of aquifers which are considered to form the catchments to the public water supplies. However it is important to note that these zones do not take into account the nature and thickness of the overlying unsaturated zone and cover which may have an important influence on groundwater vulnerability (i.e. whether any covering layer such as clay is thick,

fractured or of sandy composition which will affect its integrity and impermeability). The are four SPZs in the District – the extensive area running south into the Wyre District from the mouth of the Lune estuary, a small area at Leck Fell and two total catchment SPZs to the east of Abbeystead.

3.6.3 Coastal waters

The District has approximately 53 of kilometres coastline excluding the inner Lune estuary. The Bathing Waters Directive provides the primary control for long-term coastal water quality where people are most likely to bathe. Effluent discharges into surface waters and the sea are generally regulated by the Environment Agency (see Sections 6.11.3 and 6.12.3). Small storage containers from shipping have been known to wash ashore along the coastline, also oil and other substances on occasion. Coastal pollution incidents are generally dealt with using well-established procedures.

Morecambe Bay is recognised nationally and internationally as of importance for its mudflats and saltmarsh whish support a wide variety of migratory and breeding wildfowl and waders. The mudflats are exposed for considerable periods between the tides and are rich in invertebrate life. The area has the largest intertidal mudflats in the UK. The coastline attracts substantial recreational use with power boating, jet skiing, windsurfing, sailing and dinghy angling facilities in various locations. There is bathing on the seafront at Morecambe.

Sea fishing takes place from the Carlisle Bridge at Lancaster down the estuary and along the entire coastline of the District. Fish takes can be generalised to salmonid fish from the estuary, cockles off Sunderland Point and Hest Bank/Bolton-le-Sands, mussels between Heysham and Morecambe, and shrimps right along the coast a little distance from the shore.

3.6.4 Private water supplies

The council regulates over 200 domestic private water supplies that serve approximately 450 premises (estimated to serve around 1,000 to 1,200 people) of which 42 are in commercial premises such as dairies, a boarding school, a caravan park, a tourist visitor centre and Abbeystead village. The sources of water include roof supplies, springs, streams, shallow wells and deep boreholes[9]. There has been interest expressed in several places for the creation of commercial abstraction of bottled water.

3.6.5 Flooding issues

Flooding can arise from river (fluvial), tidal or exceptionally severe rainfall. Information from the Environment Agency indicates that the District contains over 4,000 hectares of fluvial flood plain and over 3,700 hectares of tidal flood plain. Exceptional rainfall centred on the Forest of Bowland in August 1967 causing severe flooding which was known historically as the Wray disaster. Debris, boulders and gravel in the flood water of becks leading to the River Lune caused severe damage to local farmland, livestock and infrastructure. The Lune floodplain is prone to flooding in Winter months, mainly affecting agricultural land. Localised fluvial flooding has also been reported in Galgate. Coastal and estuarine flooding continues to pose threats to some developed areas when higher astronomical tidal surges combine with episodes of strong westerly winds. The council has completed important flood defence work at St. Georges Quay, Lancaster and along the coast at Morecambe.

[9] **BOREHOLE** – a hole drilled below ground for the abstraction of groundwater (usually by pumping), also used for monitoring water characteristics.

Implications (of ALL water resources issues):
Some surface water resources within the District are used for drinking water directly. There are also agricultural abstractions – several for spray irrigation – and fishery uses. These provide a potential route for pollution entering surface waters to enter the food chain. Any areas of potentially Contaminated Land near surface or groundwater abstraction points will need to be assessed carefully and following consultation, where appropriate, with relevant agencies and statutory undertakers. Early consideration will be given to any potential Contaminated Land that might pose threats to drinking water supplies, fisheries or agricultural uses such as crop irrigation, on the basis of the need to protect human health. In relation to public utility supplies, the statutory water undertaker will be notified without delay of any implications for a water supply source due to:

1. *a significant pollutant linkage being identified, or*
2. *pollution of water being identified, where appropriate.*

Arrangements will be made for notifying statutory undertakers of any evidence that contamination could reach a public water supply.

Evaluation of geology and hydrogeology confirms that both major and minor aquifers exist which require protection. Overlying boulder clay should afford some protection to minor aquifers but this cannot be assumed with confidence. Potential sources of contamination will therefore be treated the same regardless of major or minor aquifer classification.

The protection of both surface waters and groundwater is of great importance, since once pollution has occurred it is extremely difficult and costly to clean up. For this reason, and given that part of the District is underlain by a major aquifer (plus parts of the rest of the District are underlain by minor aquifers) and the existence of several source protection zones within the District, the importance of protecting water resources is reflected in the high priority afforded to controlled waters in the aims of the Strategy (see Section 5.1).

The District's location on the coast, the low-lying flood plain, presence of land drains and culverts all provide an increased risk of flooding. Flooding may cause damage, mobilise pollutants or simply spread existing contamination more widely, affecting people and property. There is also the threat that marine pollution incidents may cause contamination along coastal and estuarine areas, although it is relatively unlikely that inspections will become necessary under Part IIA. However this potential source of new Contaminated Land will be considered during incidents and kept under review. Threats of harm to fish and shellfish consumers, bathers and other recreational users are not anticipated but will be evaluated as any relevant land areas near watercourses or on the coast are inspected under Part IIA.

3.7 Council-owned land

The council owns, rents, manages and occupies a variety of land and premises, ranging from offices and businesses to housing and open spaces. Some land holdings may have been previously developed. However, most non-residential property consists of playing fields and other open land. The majority of council land is owned freehold but some commercial land is leased from private owners. In addition to owning the freehold interests in land, the council also lets a significant proportion of its holdings to private individuals and companies on leases of variable length. Where council land is tenanted, tenants are responsible for their own sites and contractually for maintaining the land and buildings. This responsibility extends to all statutory consents and the duty not to cause nuisance or inconvenience to the

council or neighbouring occupiers. Under the continuing Asset Management Plan, the council is selling off its surplus land and buildings.

Implications:
Given the significant numbers and areas of land holdings, some of which may be under the control of other persons (for example under leases), attention is required to the inspection of these sites. Arrangements for dealing with council-owned land are outlined in Section 5.3, Stage 9.

4. REVIEW OF THE COUNCIL'S CURRENT POSITION

Contaminated Land, as a by-product of society, tends to accumulate unless decisive action is taken. Unlike other forms of pollution, contamination entering land disperses slowly if at all and can remain for centuries. The District's community and important natural resources can become vulnerable to the effects of polluting activities both past and present. Prior to the new Part IIA legislation coming in to force, the council was already dealing with land contamination issues in a number of ways:

Environmental Health – investigating about 1,200 complaints overall each year of statutory nuisance due to noise, odours, smoke, etc. (complaints include Contaminated Land and landfill gas specifically plus odours, land condition, dumped wastes); responding as an informal consultee to other Services on technical matters related to Contaminated Land; responding to land charges and requests for environmental information; maintaining the council's public register of Contaminated Land
Development Control – processing several thousand planning applications overall every year of which a significant number involve potential land contamination, imposing requirements to investigate and/or clean up contaminated sites and ensuring these are properly discharged
Building Control – handling about 1,100 building consent applications overall every year of which a significant number involve potential land contamination, and requiring building solutions to Contaminated Land and landfill gas problems
Planning Policy – considering the Contaminated Land aspects of Local Plan preparation and supplementary planning guidance
Property Services – managing council land holdings that may be affected by contamination, and taking action to minimise any risk due to existing contamination
Land Charges – answering the questions raised on land charges enquiries (several thousand every year)
Legal Services – assisting and advising the council when dealing with Contaminated Land issues

The Environment Act 1995 provides new duties and responsibilities for dealing with sites that may be affected by contamination. However, changes to Government policy also demand that the council reconsiders its approach to land contamination in other decision-making areas, for example the clean-up standards demanded of proposed developments. The council has reviewed its operations involving land contamination to ensure that this Inspection Strategy is properly informed, and as a result plans to support it by:

- revising policies and service roles to reflect changes in law and guidance;
- re-examining operating procedures to ensure that those responsible for causing contamination of land or cleaning it up do so properly and effectively;
- maintaining and strengthening close working relationships between the key operational Services by introducing working protocols, formal liaison points and cross-services training; and
- pooling and disseminating the wealth of emerging information about land contamination to inform the council's decision-making responsibilities.

These actions will help to deliver the council's Inspection Strategy. However the council also recognises that its decision-making roles, when taken together, can have an important effect on preventing new contamination, minimising the effects of existing problems, and securing clean-up of land that, whilst contaminated, cannot be regulated under Part IIA.

5. THE LANCASTER CITY COUNCIL STRATEGY: AIMS AND OBJECTIVES, IMPLEMENTATION

This section sets out the council's specific aims, objectives and priorities reflecting the requirements of Statutory Guidance and taking into account local policies, strategies and recognised needs.

5.1 Aims of the Strategy

Dealing with Contaminated Land will be a complex task involving large areas of land and limited information. The council must prioritise its work to tackle the most serious problems first. For each site a variety of issues must be balanced in order to decide the best course of action.

The council aims to:

1. Identify all potentially Contaminated Land across the District by a process of rational, ordered and efficient investigation
2. Tackle unacceptable risks from contamination to health or the environment in order of priority
3. Encourage co-operation and voluntary action to deal sustainably with contaminated land, expediting and optimising environmental gains and prospects for regeneration
4. Take a firm approach where necessary as the lead regulator for contaminated land requiring action that cannot be secured voluntarily
5. Ensure that all polluted land is recorded for future consideration if circumstances change
6. Prevent the creation of new land contamination, as far as possible, by:
   - raising awareness about the causes and effects of land contamination
   - promoting good practice by businesses and the community
   - encouraging good design and management in new developments
7. Enable developers to deal effectively with land contamination and bring polluted land back into safe and beneficial use without unnecessary burden (the 'suitable for use'[10] approach)
8. Deal with land contamination issues in accordance with all relevant legislation, guidance and best practice
9. Deal with its own land as a responsible land-owner that may have potentially Contaminated Land amongst its property holdings.
10. Provide advice and assistance to facilitate the regeneration and re-use of previously developed land (brown field sites) in line with corporate policies and strategies, and those of the Local Strategic Partnership.

Where a development-led solution is proposed, land should not subsequently be capable of being legally determined as 'Contaminated Land'.

[10] **''SUITABLE FOR USE'** – the 'suitable for use' approach focuses on the risks caused by land contamination. The approach recognises that the risks presented by any given level of contamination will vary greatly according to the use of the land and a wide range of other factors, such as the underlying geology of the site. Risks need, therefore, to be assessed on a site-by-site basis. The 'suitable for use' approach provides a policy mechanism for reconciling to best effect various environmental, social and economic needs in relation to contaminated land, within the context of sustainable development.

Inspecting a District of more than 200 square miles for contaminants that are usually under the ground and often invisible to the naked eye is inevitably complex and lengthy. The council will concentrate its resources and efforts in the following order of priority (starting with the highest):

Order of priority for receptors

Receptors will be treated in the following order of priority when the council decides the order of its inspections under Part IIA:

1. **Humans**
2. **Controlled waters**
3. **Vulnerable ecosystems**
4. **Pets, livestock and game**
5. **Crops**
6. **Property (buildings and monuments)**

5.2 Key considerations affecting the work programme

5.2.1 Identification of potentially contaminated sites and receptors

The Council has completed a thorough review to identify land that is potentially contaminated by virtue of its known historical uses. Approximately 2,400 sites have been identified. Where these sites may impact significantly upon relevant 'receptors' (see box text above) they will be prioritised and inspected in order. It is expected that the overwhelming majority of the sites will not pose significant risks to human health or the environment but this can only be confirmed through individual site inspections and it is impossible to predict accurately which sites will be most heavily contaminated. The timetable for implementing work in accordance with this strategy is set out at 5.3 below.

Work to identify and record all relevant receptors is planned for completion during 2009-10.

5.2.2 Inspection of communal food growing areas (allotments)

Increasingly people are growing some of their own food either in their own gardens or on allotment sites, of which there are a number around the district. Consumption of privately grown produce has the benefit that people know what chemicals have been applied during food growing. However, the underlying soil in allotments, some of which have been in use for many years, may not be so well known and private growers do not normally carry out the close vetting of their plots land or quality testing of produce that is routine in commercial growing.

This class of land use is considered to be particularly sensitive to soil contamination. It used to be quite common for allotment soils to be ameliorated with ash and clinker from domestic fires and from industrial furnaces and boilers. Sometimes other materials may have been added to allotments as nutrients or soil improving materials. Leaking containers may also have been stored by individual allotment holders. Also, elsewhere in the United Kingdom, it has occasionally been found that allotment sites have had industrial pasts. The council has no evidence of allotments

within the district being contaminated but it has identified communal food growing as a priority for consideration within this inspection strategy to safeguard and offer reassurance to local communities.

Working with other local authorities the council has recently purchased equipment (an X-ray Fluorescence analyser) that allows soils to be screened for certain types of contamination without causing significant disturbance. Some limited non-intrusive screening of soils from allotment sites across the district in consultation with allotment holders' associations has confirmed that no identified sites are significantly contaminated by heavy metals.

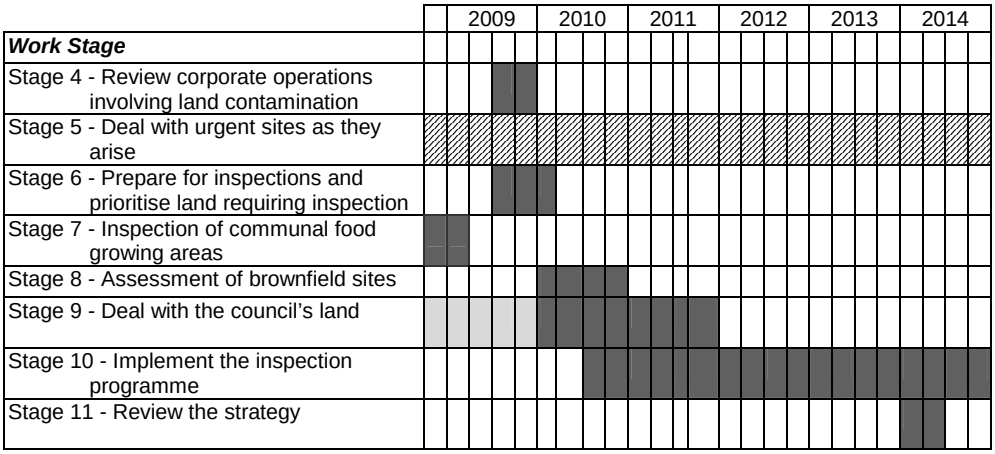
5.2.3 Facilitating regeneration of previously developed land (brownfield sites)

The council and partners are committed to the regeneration and sustainable development of previously developed land. It is recognised that the potential presence of chemical contamination due to former land uses can act as a barrier to redevelopment, despite contamination rarely proving to be an insurmountable obstacle. Equally it is possible that the possible presence of contamination might not be considered at an early stage. Where sites within the council's area have been formally identified as brown field land, information about foreseeable presence of contamination (based on knowledge of land use histories) will be compiled on a site-by-site basis and made available corporately in order to assist planning and regeneration processes.

5.3 Programme of work

Phasing the inspection process reflects the council's aims and priorities, and enables it to prepare the groundwork for inspection and establish suitable information systems. The work plan is outlined in Figure 3 and the purpose, objectives and timescale of each stage are outlined.

Figure 3 – Programme of work



Stage 1 – Preparing for new inspection duties (Completed)

This process has been completed (see section 6.4.2) and given the significance of this new area of work, the council has dedicated resources have been used for the employment of a Contaminated Land Officer.

The following preparatory work was undertaken:

- recruiting and training specialist officers;
- obtaining information systems (computers and software), including a capable 'Arcview' Geographical Information System[11] from ESRI and a state-of-the-art networkable 'GeoEnviron' data management system from Danish company Geokon;
- purchasing historical maps to provide a record of past land-uses and development;
- purchasing historical land-use information concerning potentially contaminating activities. This spans the period 1843 to 1997. Referred to as 'Landmark' data after the supplier, this was derived by extensive inspection of historical maps;
- maintaining a technical library to keep pace with rapidly evolving standards, technical guidance and research; and
- forming a technical working group representing the District and Borough councils of Lancashire to make efficient use of resources to prepare for district inspection whilst promoting consistency and best practice. Through this group a number of objectives were achieved:
  - promoting discussion and shared expertise
  - drafting an inspection strategy template
  - devising a standardised approach to prioritising sites for inspection
  - obtaining technical/monitoring equipment in order to inspect sites.

Stage 2 - Drafting the Strategy (Completed)

The first version of the Inspection Strategy was drawn up in accordance with draft technical advice provided by DETR[26]. The council understands that DEFRA has no plans to finalise the draft Technical Advice Note, although the Strategy will be reviewed should this happen.

Stage 3 – Consulting and finalising the Strategy (July 2008-December 2009)

The council has a statutory duty to inspect the District for Contaminated Land and to prevent harm as outlined in Section 2. This Strategy sets out the council's proposed approach to implementing this duty. Views and constructive comments were invited from all sections of the community, not just those with special interests. The council was particularly interested to receive comments on the following issues:

- the arrangements for inspecting the District for Contaminated Land
- the arrangements for notifying people and organisations of suspected Contaminated Land
- the arrangements for requiring remediation of Contaminated Land
- the arrangements for providing environmental information about Contaminated Land

The council consulted widely on the draft Inspection Strategy. The consultees, listed in Appendix C, included:

- statutory consultees
- parish and town councils

[11] **GEOGRAPHICAL INFORMATION SYSTEM (GIS)** – a computer software package capable of storing and displaying graphical information (digital maps) and associated information (for example in a database). Typically a GIS is used to enter and analyse information from various sources, perform queries on collections of information and produce reports and printed maps.

- developers and landlords with substantial local interests
- utility companies
- non-governmental organisations, environmental and local interest groups

After considering the comments received and making appropriate modifications, the first version of this Inspection Strategy was finalised and adopted by the Cabinet meeting on 26 November 2002.

Stage 4 – Reviewing corporate operations (October 2009–March 2010)
Recognising that Contaminated Land issues cut across the work of different services, and that an informed and co-ordinated approach was needed which reflects local policies, strategies and needs, during 2002 the council:

- reviewed the council's policies, commitments, roles and operations
- studied the implications of new legislation and guidance
- devised new ways to secure good practice amongst external parties
- recommended revision of policies and operational matters where necessary to comprehensively deal with land contamination

Corporate arrangements will be reviewed again during 2009-10.

Stage 5 – Dealing with urgent sites (Ongoing)
The legislation and Statutory Guidance provide streamlined procedures for dealing with urgent sites warranting special attention. The council is expected to deal with urgent sites as they arise, rather than wait until prioritisation of land for routine inspection has been completed. This is to prevent desk-based duties from interfering with pressing cases and to prevent undue harm from occurring. At the time of writing, no urgent sites have been identified or brought to the council's attention. Some individual sites continue to receive attention, however.

When urgent sites are identified, these will be prioritised above routine inspections. This is in accordance with Statutory Guidance. If it appears that an urgent site may be a 'Special Site', the Environment Agency will be informed without delay – see Appendix D for information on Special Sites.

Stage 6 – Preparing for inspections and prioritising sites (To March 2010)
The council has decided its general order of receptor priorities when dealing with Contaminated Land (Section 5.1) and protecting human health will be the first priority. Nevertheless the entire District will have to be considered for sources of contamination and vulnerable receptors. In every case where contamination may influence a receptor, the location has been recorded to a database. Many sites are likely to require inspection and these will be prioritised. Decisions on when and where to carry out inspections will be made following the procedures contained in Sections 6.6 and 6.7.

Contamination is not always visible and it would be impossible to inspect the entire District by eye even if it could all be seen. For each site, the basis for inspection will be a desk-top study gathering together information about the likelihood of contamination, the presence of vulnerable receptors, and the potential for harm or pollution of controlled waters to be caused.

Inspections will concentrate on land where there is reason to believe that a source of contamination, a pathway and a receptor might be found together and there could there be any significant risk of significant harm. These sites will be prioritised so that those posing greatest risk are inspected first, in accordance with the procedure outlined in Section 6.7.

The council intends to use the prioritisation facility included within the Geokon database to prioritise sites for inspection.

Stage 7 – Inspection of communal food growing areas (Completed)
As outlined at section 5.2.2 the council has conducted limited testing of soil on allotment sites and detected no significant heavy metal soil contamination.

Stage 8 – Assessment of brownfield sites (October 2009 – December 2010)
The council's policies and land-use planning considerations are considered at section 2.1 of this document and the importance of facilitating regeneration and sustainable development was noted at section 5.2.3. The council considers it appropriate to prioritise these areas for outline inspection so that land contamination issues should not present an obstacle to future development, also so that information of the nature and extent of any foreseeable contamination might be available when first required. Time will be allocated during this stage of the programme to assess brownfield land in support of corporate priorities. This may assume priority over non-urgent inspections at times but it will assume a lower priority than work dealing with proposed new developments.

Stage 9 – Land where the council has responsibilities (To December 2011)
The council has substantial land holdings across the District as outlined in Section 3. The council is a responsible landowner and wishes to set an example for others when dealing with land contamination issues. Its proposals to study council-owned land managed by Property Services are set out in section 6.3.

There are also areas of land within the District that the council (or its predecessors) may have owned or managed at some stage in the past and where potentially contaminative activities (for example old tips) may have been operated during that time. There is little relevant information about such activities, particularly prior to 1974, and these areas of land will be inspected at Stage 8.

Council owned land, the Middleton Wood/Trimpell site, has (as at December 2009), been inspected by the Environment Agency as a candidate Special Site at the request of the council. A decision is pending.

Stage 10 – Implementing the inspection programme (From Summer 2010)
The inspection programme will be commenced without delay, in order of priority. Whilst the risk assessments necessary for prioritisation will shortly be undertaken, it is already accepted that priority inspections are needed where people live close to former landfill sites which may generate flammable landfill gas or pollute controlled waters. During the summer of 2007 the Council retained specialist contract staff to undertake a preliminary risk assessment of former landfills within the district; forty six have been identified. Similarly the threat of pollution posed by fuels and industrial solvents to the District's vulnerable groundwaters makes them another priority. Investment will be required in measurement equipment to detect flammable gases and vapours (e.g. landfill gas and petrol vapour) has been carried out. Inspecting the District is likely to be a lengthy process and involve a sustained workload. There are limited resources available and the council will use these effectively. However it is likely that soil sampling and analysis will be necessary, and in some cases it may be necessary to engage external services (under supervision) to support our operations. Section 6 outlines the council's intended approach for conducting District-wide and site-specific inspections.

Stage 11 – Reviewing the Strategy (January – June 2014)

Techniques and experience in Contaminated Land inspection are evolving rapidly. In order to ensure that the Strategy remains effective, the council undertook a review and revision of the Inspection Strategy first edition during 2008/09. Areas of the Strategy will in future be reviewed as necessary in response to new statutory and corporate developments. Public consultation will be carried out if significant changes are required. In any event this second edition of the Inspection Strategy will be formally reviewed after five years.

6. 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 business community and members of public can expect from the council in dealing with these issues.

6.1 Consultation on the 2008 Edition of the Inspection Strategy

The council was obliged to formally consult on its strategic approach to inspection and to take all comments into account when finalising the Strategy. The council established liaison with all the statutory consultees specified in Statutory Guidance paragraph B.11 and a wide range of other organisations that may have (or need) information in connection with Part IIA inspection duties - the consultees are listed in Appendix C.

The council considered that consultation was particularly important within the local community and amongst potentially interested parties. It was anticipated that businesses with interests in land contamination – for example developers – might also wish to comment on the council's strategic approach.

Consultation on this second strategy took place in 2008. Copies of the draft Strategy were made available in fifteen public libraries and in key council offices. A short non-technical leaflet summarising the draft Strategy was distributed more widely to facilitate consultation. Publicity was encouraged to raise awareness and participation in the consultation process.

Consultation on inspection and enforcement decisions is a matter of procedure discussed in the relevant parts of Section 6.

6.2 Internal arrangements for implementing the Inspection Strategy

Within the council the responsibility for preparation of the Strategy is with the Head of Health and Strategic Housing Services.

Lancaster City Council has officers with expertise in dealing with all aspects of land contamination, both as a regulator and as an organisation with land holdings. Land contamination has traditional links with environmental health matters but equally so is closely connected with many aspects of project work carried out by planners and engineers. Implementation of the Inspection Strategy will be led by the council's Health and Strategic Housing Services, in particular the Environmental Protection Team, with support from other services.

The council's Community Services Review Board will be informed at the earliest opportunity of any plans to determine as Contaminated Land any council owned property, or land where the council is an "appropriate" person and may be liable for remediation costs.

6.3 Considering local authority interests in land

The council is a property owner of occupied, leased, rented and open access land, some of which has been subjected to potentially contaminative former uses. It takes its potential obligations under Part IIA seriously and will act responsibly, just as it would expect of other landowners.

Subject to the availability of appropriate finances, the council's Property Services proposes that consultants should be employed to carry out desk-top studies on all its property holdings. By considering the risk presented by every potential source of contamination lying within 250 metres of any council property boundary, all land that poses a low risk can be screened out without delay. Any remaining land 'not at low risk' will be researched in more detail. Reports will be prepared to identify and describe each area of land, recommending any further work necessary. In a relatively small number of cases desk-top studies may raise the need for physical site investigations – including site walkovers and intrusive sampling to identify and quantify any contaminants. These would provide an accurate picture of risks of harm or pollution of controlled waters, enabling the council to identify any land requiring remediation.

6.4 Information gathering

A wide variety of information sources have been carefully researched in order to identify potential sources of contamination and potential receptors. Some key resources are detailed below.

6.4.1 Documentary sources of information

Table 6.1 – Key information sources

Resource	Where Available	Use
Historic maps (all available epochs)	Historical map data is to be purchased from Landmark Information Group. This is at a scale of 1:12500 and begins with the county series maps for 1840.	To identify changes in use of land over the last 160 years
Historical Land Use Data	Historical land use data has been purchased from Landmark Information Group and is on disk to complement the mapping system. The disk contains seven layers of data on sources of potentially contaminative use.	To identify potential sources of contamination.
Hydrogeological and Soil Maps	Environment Agency	To characterise sources and pathways.
Source Protection Zones	Areas of groundwater that receive special protection by the Environment Agency are identified on the EA website.	To characterise receptors (controlled waters).
Planning Records	The council holds detailed planning records of development in the area including in some instances information on ground condition presented in surveys.	To identify known information on contamination.
District Local Plan[7]	This is a valuable source of up to date information on land use.	To identify receptors (particularly historic monuments and protected areas of the environment).
Waste Management Licences	The Environment Agency maintain a public register of sites licensed for waste management activities.	To identify potential sources of contamination.
Trade Directories	Local library/Lancaster University Library	To identify potential sources of contamination
Trading Standards-petroleum licences	Preston	To identify potential sources of contamination

6.4.2 Process for identifying sites from historical and land-use records

The council has reviewed its own records and archives to identify sites where information about potential contamination is available. It has also conducted industry-specific research to identify past and present potentially contaminative land uses within the district plus a two kilometres search area along its boundaries. The following industrial classes were researched in this way:

- Engineering Works - ship building repair and ship breaking including naval shipyards
- Dockyards and dockland
- Textile works and dye works
- Chemical works - linoleum, vinyl and bitumen-based floor covering manufacturing works.
- Gas works, coke works and other coal carbonisation plants
- Oil refineries and bulk storage of crude oil and petroleum products
- Road vehicle fuelling, service and repair - garages and filling stations
- Road vehicle fuelling, service and repair - transport and haulage centres
- Timber products manufacturing works
- Timber treatment works
- Chemical Works - fertiliser manufacturing works
- Mines, associated workings and waste arisings
- Asbestos manufacturing works
- Engineering Works - vehicle manufacturing works
- Metal manufacturing, refining and finishing works - lead works
- Chemical Works - coatings, paints and printing inks manufacturing works
- Chemical Works - mastics, sealants, adhesives and roofing felt manufacturing works
- Chemical Works - cosmetics and toiletries manufacturing works.
- Chemical Works - disinfectants manufacturing works
- Chemical Works - explosives, propellants and pyrotechnics manufacturing works
- Chemical Works - fine chemicals manufacturing works
- Chemical Works - inorganic chemical manufacturing works
- Organic Chemical Works
- Chemical Works - pesticide manufacturing works
- Chemical Works - pharmaceutical manufacturing works
- Chemical Works - rubber processing works
- Chemical Works - soap and detergent manufacturing works
- Ceramics, cement and asphalt manufacturing works
- Engineering Works - aircraft manufacturing works
- Engineering Works - electrical and electronic equipment manufacturing works (including works manufacturing equipment containing PCBs)
- Engineering Works - railway engineering works
- Garages and vehicle service centres
- Metal manufacturing, refining and finishing works - electroplating and other metal finishing works
- Metal manufacturing, refining and finishing works - iron and steel works
- Metal manufacturing, refining and finishing works - non-ferrous metal works (excluding lead works)
- Power stations excluding nuclear power stations
- Railway land
- Used oil storage (where not covered by Waste Management Licensing)
- Waste recycling, treatment and disposal sites - drum and tank cleaning and recycling plants

- Waste recycling, treatment and disposal sites - hazardous waste treatment plants
- Waste recycling, treatment and disposal sites - waste treatment or waste disposal
- Landfill sites
- Waste recycling, treatment and disposal sites - metal recycling sites
- Waste recycling, treatment and disposal sites - solvent recovery works
- Above ground oil storage tanks
- Animal & Animal processing works
- Highway depots
- Hospitals and Health Care Establishments
- Metal manufacturing, refining and finishing works - precious metal recovery works
- Oil separators in surface water drainage systems
- Pulp and paper manufacturing works
- Sewage works and sewage farms
- Storage and handling of drums and intermediate bulk containers
- Vehicle washing and cleaning
- Dairies and other milk handling operations
- Storage, Use and Disposal of Sheep Dip
- Airports
- Marinas and crafts
- Quarries and other mineral workings

All identified sites with evidence of potentially contaminative uses have been recorded for further consideration.

6.4.3 Information supplied to the council

From time to time, the council may receive complaints from members of the public, business or community groups alleging that land may be contaminated. People may also decide to supply information relating to land contamination that does not directly affect themselves, their families or their property. Such information may influence the inspection process. In all cases, the Environmental Health Service will use knowledge and experience to decide what, if any, further investigation is required following a complaint or provision of information.

The procedures for handling complaints and other sources of information are described below.

Complaints

Complaints regarding Contaminated Land will be handled and investigated as with any statutory nuisance complaint made to Health and Strategic Housing Services.

All complainants may expect:

- their complaints to be logged and recorded,
- an initial response by an officer regarding their complaint within seven working days of receipt, and
- to be kept informed of progress with complaint investigations and the outcome.

Every effort will be made to resolve complaints quickly and efficiently. The legislation requires a number of steps to be taken to resolve problems:

1. Proof of a significant pollutant linkage before any formal determination as Contaminated Land is permissible, which might only be possible after detailed investigation.

2. Prior consultation with interested parties before determining land as Contaminated Land.
3. A minimum of a three month period between determining land as Contaminated Land and serving a remediation notice.
4. The duty of the enforcing authority to make every effort to identify the person who caused or knowingly permitted the contamination("Class A" person).

The Contaminated Land (England) Regulations 2006[22] allow conditions 2 and 3 above to be waived in emergencies, but not conditions 1 and 4.

Every complainant will be asked to supply their name, address and the address giving rise to the complaint. The identity of the complainant will remain confidential. The only circumstance in which this information might be publicised would be if the complaint became important to legal proceedings and needed to be discussed in court proceedings. Therefore few, if any, complaints are likely to be publicised. Services other than Environmental Health may receive complaints about contaminated land. It will be necessary to raise corporate awareness and establish an electronic forwarding system to direct all relevant information received by the council to the right place.

Voluntary provision of information
If a person or organisation provides information relating to Contaminated Land that is not directly affecting their own health, the health of their families or their property, this will not generally be treated as a complaint. The information will be recorded and may be acted upon. There will, however, be no obligation for the council to keep the person or organisation informed of progress towards resolution, although it may choose to do so as general good practice.

Anonymously supplied information
The council does not normally undertake any investigation based on anonymously supplied information, and this general policy will be adopted for Contaminated Land issues. This policy does not, however, preclude investigation of an anonymous complaint in exceptional circumstances.

Anecdotal evidence
It is recognised that anecdotal evidence may, whilst provided with good intentions, have no basis in fact. All anecdotal evidence will be recorded. Some anecdotal evidence may be helpful, especially where polluting activities may not have come to the attention of the authorities. The council will not undertake any detailed investigation without checking the credibility of any anecdotal information it receives.

6.5 Information management

6.5.1 Computerised information
The council is seeking through its National Land and Property Gazetteer (NLPG) officer working group to work towards a corporate Geographical Information System (GIS). This would enable efficient information exchange between services and it would be an important method for sharing knowledge about Contaminated Land. Maintenance of a wide range of spatial environmental and mapping information will be required for successful implementation of the Inspection Strategy.

A 'GeoEnviron' database is being built to manage Contaminated Land information, and this offers a number of networkable solutions for sharing detailed site-specific information between services. These systems will be operated together to inform investigations and decisions involving the acceptability of land uses by comparing:

1. Knowledge of the proximity and behaviour of potential receptors (such as humans and controlled waters), and
2. Knowledge about potentially polluting activities concentrations and harmfulness of contaminants on land where they are present.

6.5.2 Documentary records

Issues concerning documentary records are discussed in various places in this Strategy. As a matter of general principle all information received and generated concerning Part IIA will be recorded without delay and maintained securely to ensure accuracy, identify the source, and to provide traceability of decisions and actions. Information about the contamination of land will be primarily be held in computer records, backed up in some cases by paper documents such as inspection sheets and reports.

6.6 Evaluating information

All information received by the council will be validated as far as is reasonably practicable for authenticity before it is accepted fully. If the accuracy of information cannot be confirmed then it will be treated with caution. When deciding whether further investigation of any particular land is warranted by the information gathered, the council will satisfy itself that:

- there may be a source of contamination, a vulnerable receptor and a pathway between them; and
- risk of significant harm or pollution of controlled waters cannot be ruled out.

When considering any particular land and before deciding what further inspection is required, the council will take into account all known information and any previous action to deal with land contamination.

In order to decide whether land may require physical inspection, information about the locations of potential sources and receptors will be gathered, recorded and compiled. The likelihood of pathways existing between individual sources and receptors will be established from this information. In each case where the council is satisfied that there is a reasonable possibility that a significant pollutant linkage may exist, the land concerned will be identified for further inspection once prioritisation has been completed. Investigations including some of the measures detailed in Section 6.10.1, such as site walkovers, may be undertaken to gather sufficient information to enable such a decision.

6.7 Prioritising Land for Inspection

A large number of inspections will be required. Clearly these cannot all be carried out at once, so they will be prioritised according to the council's priorities outlined in Section 5.1.

The approach to District-wide inspection will be to identify and record all land areas that may potentially have been contaminated by a former or current use. Similarly the locations of all 'receptors' (see section 2.2.5) will be recorded. Using knowledge of local conditions, all sites where receptors may be influenced by potential contamination will be highlighted and transferred to the GeoEnviron database. For each site in the database at least one potential pollutant linkage will warrant further inspection. Sufficient information will be gathered to enable risk scoring so that the collection of sites can be subjected to individual site inspection in order of priority.

The aim of prioritisation will be to list all the sites warranting further study and arrange them into a rational order of priority. If a site has more than one type of receptor - for example humans and animals - then the highest priority receptor will generally be considered first.

The methodology for risk scoring is built into the GeoEnviron database software. It includes assessment of the seriousness of the hazard posed by each type of contaminant, likelihood that the pathway exists, the vulnerability of the receptor, and any knowledge of the site's physical condition or use. The resulting prioritisation scores and the details of how they were achieved will be recorded and revised as new information is received.

6.8 Risk Assessment

When deciding whether contamination of land or water is sufficient to require action, some comparison of contaminant concentrations in land and water is almost inevitably required. Previous practice in the UK has been to apply simplistic, generalised standards and guidelines. However recent advances are leading to a departure from this approach in favour of site-specific risk assessment involving mathematical modelling. Whilst further developments and exceptions are to be expected in this emerging scientific discipline, the following paragraphs describe the council's intended approach:

6.8.1 Human health risk assessment

Local authorities are expected to observe statutory guidance and employ the Contaminated Land Exposure Assessment or CLEA UK model (updated in 2008/09)[43] when assessing the significance of individual contaminants for human health. CLEA provides for some of these contaminants a report on researched toxicology and a basis for risk assessment modelling enabling users to derive site-specific 'Soil Guideline Values' (SGVs). The first of these have been published and at the time of writing they relate to around ten key contaminants. The council will adopt the CLEA approach as generally the most up-to-date and suitable for developing site-specific targets. Where CLEA cannot be applied to particular contaminants, officers of Health and Strategic Housing Services with specialist training will make site-specific risk assessments using other human health risk assessment tools such as the SNIFFER model[44], CLEA UK etc. This comprehensive and rigorous model enables site-specific limits to be calculated for a wide range of soil contaminants. Other assessment criteria, published in 2006, and called 'generic assessment criteria', will also be used. Former ICRCL values (DoE circular 59/83)[45] will not be used, having been withdrawn by DEFRA. Under exceptional circumstances criteria adopted in other countries (such as the 'Dutch Standards') may be used but only after justification and modification for UK conditions.

In exceptional circumstances there may be some reference to the 'ICRCL guidelines' which have been used widely in the UK since their publication two decades ago. The Interdepartmental Committee on Redevelopment of Contaminated Land (ICRCL) "Guidance on the assessment and redevelopment of Contaminated Land"[45] provided a set of trigger and action levels for a range of contaminants. Occupational exposure standards specified by the Health and Safety Executive may also be considered in exceptional circumstances.

In exceptional circumstances the advice of the Health Protection Agency may be sought when conducting risk assessments for human health impacts due to contamination. In its consultation response to this document the Health Protection

Agency has confirmed that it offers expertise with regard to providing authoritative toxicological information and the significance of exceeding guideline values.

6.8.2 Other generally accepted guidelines

Risk assessments may also involve substances not covered by ICRCL or CLEA guidelines. Indeed water pollution legislation refers to 'poisonous, noxious or polluting' matter and this could in practice include a wide range of substances. In such cases, it is anticipated that risk assessments and remediation will be carried out in accordance with Environment Agency guidance [46], also other sources including:

- site-specific pollution prevention guidelines from authoritative sources such as the Environment Agency;
- CONSIM; and
- authoritative sources of guidelines adopted overseas e.g. the 'Dutch List'[47] is commonly referred to in the UK for organic contaminants including fuels. If guidelines from other countries are referred to, the council will keep in mind the significant differences in remediation standards between the UK and other countries.

6.8.3 Risk assessment for controlled waters

Advice on risk assessment will be sought from the Environment Agency if the pollutant linkages under consideration involve controlled waters such as rivers and underground resources (groundwater) as the receptors. Reference will be made to any future published guidance.

6.8.4 Risk assessment for other receptors

For receptors such as ecosystems, buildings and crops, further technical guidance on risk assessment is expected to be published soon. DEFRA has advised that it may be impractical to evaluate harm to animals and plants on agricultural land by predicting contaminant uptake from soil, and that site-specific advice from DEFRA may be required. The Food Standards Agency has offered to provide specialist advice to local authorities in relation to food crops as the need arises and on request. The Environment Agency is expected to publish its Ecological Risk Assessment framework imminently. The Council will use this framework where appropriate.

6.9 Communicating information

Environmental information is often requested and levels of demand are expected to increase significantly as information is compiled during the process of district-wide inspection for contaminated land. The following paragraphs set out how the council proposes to communicate and alternatively to protect information. Attention is also drawn to the specific communication issues and information needs of the council's relationship under Part IIA with the Environment Agency (see section 6.12).

It will be the general intention of the council to make information available where it is appropriate and legal to do so. Reasonable requests will not normally be refused. However the resources of the council are generally stretched just to deliver existing mainstream services, and the workload of meeting requests must be managed and balanced against this in terms of response times and the level of detailed information that can reasonably be expected. The council is governed by the opposing and equally complex regimes of providing information and protecting confidentiality. The council will levy a charge for such requests with respect to its officer's time.

6.9.1 Communicating with people having interests in land

There is considerable scope for members of the public, businesses and voluntary organisations to play a role in dealing with Contaminated Land in the District.

Consultation on the first edition and the 2008 edition of the Inspection Strategy has already involved parish councils, interest groups and the community. Efforts will be made to encourage participation in the process of identifying potential Contaminated Land. This collaborative approach to dealing with contamination issues will be maintained and built upon.

The council's approach to its regulatory duties is generally to seek voluntary action before taking enforcement action. This approach will normally be adopted for issues of land contamination, recognising that in many cases more effective remediation can be achieved by agreement than by enforcement.

This approach requires effective communication with owners, occupiers and other interested parties. Health and Strategic Housing Services will be the central contact point within the authority on land contamination issues and for individual sites will encourage open and continuing dialogue with owners, occupiers and other interested parties, regardless of whether there is a formal determination of Contaminated Land or voluntary action.

6.9.2 Communicating with local people

Land contamination is a complex technical subject and effective methods for communicating information are essential.

The council will treat any concerns raised by a member of the public seriously and with respect, recognising the importance of the issue to the individual. In all instances, the council will recognise and try to overcome the critical barriers to effective risk communication. The overriding principles will be to be open about sharing information and explaining the decision-making process whilst respecting valid grounds for confidentiality. Where appropriate the City Council will liaise with the relevant Parish Council.

Communities cannot expect to see polluted land returned to an as-new condition because the legal requirement is only that it should reach a standard where it is 'suitable for use'. Occasionally people would wish for any material that is not naturally present in the ground to be removed, especially if it is in the vicinity of their own home. However the council can only require the clean-up of contamination where this is a significant risk of significant harm. Some expectations will not be met even with full implementation of Part IIA legislation.

The council will have regard to financial "hardship" in accordance with statutory guidance when it requires remediation to take place.

6.9.3 Registers

The council has a duty to maintain a public register in accordance with Section 78R(1) of Part IIA. The information to be included in the register is specified in Regulation 15 of the Contaminated Land (England) Regulations 2006[22]. This will include, for example, details of all remediation notices and the condition of land subject to these notices. However the Statutory Guidance also specifies when information must be excluded from the public register on grounds of national security and commercial confidentiality.

The council's Health and Strategic Housing Services will maintain a public register[48] of Contaminated Land at the Town Hall, Marine Road East, Morecambe, Lancashire LA4 5AF.

It will be paper-based and accessible on request by members of the public during normal office hours.

The regulations clearly specify what information may be recorded on this register:

- Remediation notices;
- Details of site reports obtained by the authority relating to remediation notices;
- Remediation declarations, remediation statements and notifications of claimed remediation;
- Designation of sites as 'special sites';
- Any appeals lodged against remediation and charging notices; and
- Convictions.

The public register will not include details of historic land use and other records used in the investigation or inspection of potentially contaminated land. These are research documents and as such will not be made available directly to the public. Lancaster City Council will, however, provide reports of a general nature about information kept on any particular piece of land. There will be a charge for this information.

6.9.4 Requests for Environmental Information

The council's Health and Strategic Housing Services responds to formal requests for information relevant to environmental health matters when they are made in accordance with the Environmental Information Regulations 2004[49] and the Freedom of Information Act 2000. These regulations stipulate that requests must satisfy certain tests and be accompanied by reasonable payment where demanded.

Given the time-consuming nature of these enquiries and likelihood of sudden growth in volumes of environmental information held, investment is necessary in computerised methods for expediting detailed responses to requests.

How to request environmental information

The council makes its growing quantity of site-specific environmental information available in accordance with the Environmental Information Regulations 2004 and the Freedom of Information Act. Requests must be:

- **made in writing specifying the address of the land;**
- **accompanied by a local map clearly marking the boundary of the land;**
- **reasonable and specific in the questions asked, e.g. *"is the council aware of any land within 250 metres of the site which has been used for waste disposal to landfill?"*; and**
- **accompanied by appropriate payment to cover administrative costs**

For advice or to make such a request please contact the council as shown inside the front cover.

6.9.5 Exchanging information with third parties

Other exchange of information is likely to involve either receipt or supply by the council of information relevant to land contamination. The council expects that information will generally be exchanged with other regulators under Part IIA, in particular with neighbouring local authorities and with the Environment Agency (see section 6.12), in order to facilitate inspections of land and resulting decisions on dealing with contamination. However the legal requirements of confidentiality and copyright will be fully observed at all times. In every case the nature of the information, area of land concerned and the supplier/addressee will be recorded.

Information will also be supplied when Land Charge questions are asked.

6.9.6 Confidentiality

The council observes fully all legislation governing both freedom of access to information (including environmental information) and confidentiality. Corporate policies and procedures are maintained to ensure that such legal requirements are met and that the community is both protected and afforded good access to information, as appropriate. Given the complexities and the potential for confusion that can be generated by these needs, representatives of the council's Legal Services may advise on individual cases.

Particular controls will be placed on the following information;

- the name and address of any complainant;
- contents of confidential reports supplied to the council; and
- details of any information which is commercially confidential.

The information held by the Health and Strategic Housing Service will normally be accessible by all other services within the council, within the bounds of confidentiality and relevant legislation. However such information will not automatically be available to third parties, where the appropriateness, need and legality of providing information will be examined closely.

As stated in 6.9.1, the Statutory Guidance specifies when information must be excluded from the public register on grounds of national security and commercial confidentiality.

6.10 Outline of Inspection and Enforcement Procedures

The procedures for inspecting land, determining whether it is Contaminated Land, notifying the appropriate persons and securing remediation are set out in the legislation and Statutory Guidance. Figure 4 on the next page illustrates the key steps in the procedure and these are summarised below. Please note that it has not been possible to preserve the detail of complex procedures here and this content should serve only as an indication of the council's approach.

6.10.1 Inspection

The council has a statutory duty to "cause its area to be inspected from time to time" in order to identify any Contaminated Land. This duty extends to land outside the District where it appears to be causing relevant impacts within the District. In this context an inspection may include:

- collating and assessing documentary and other information;
- visiting an area of land to carry out a visual inspection and (where appropriate) sampling of surface deposits; and
- intrusive investigations, for example exploratory excavations.

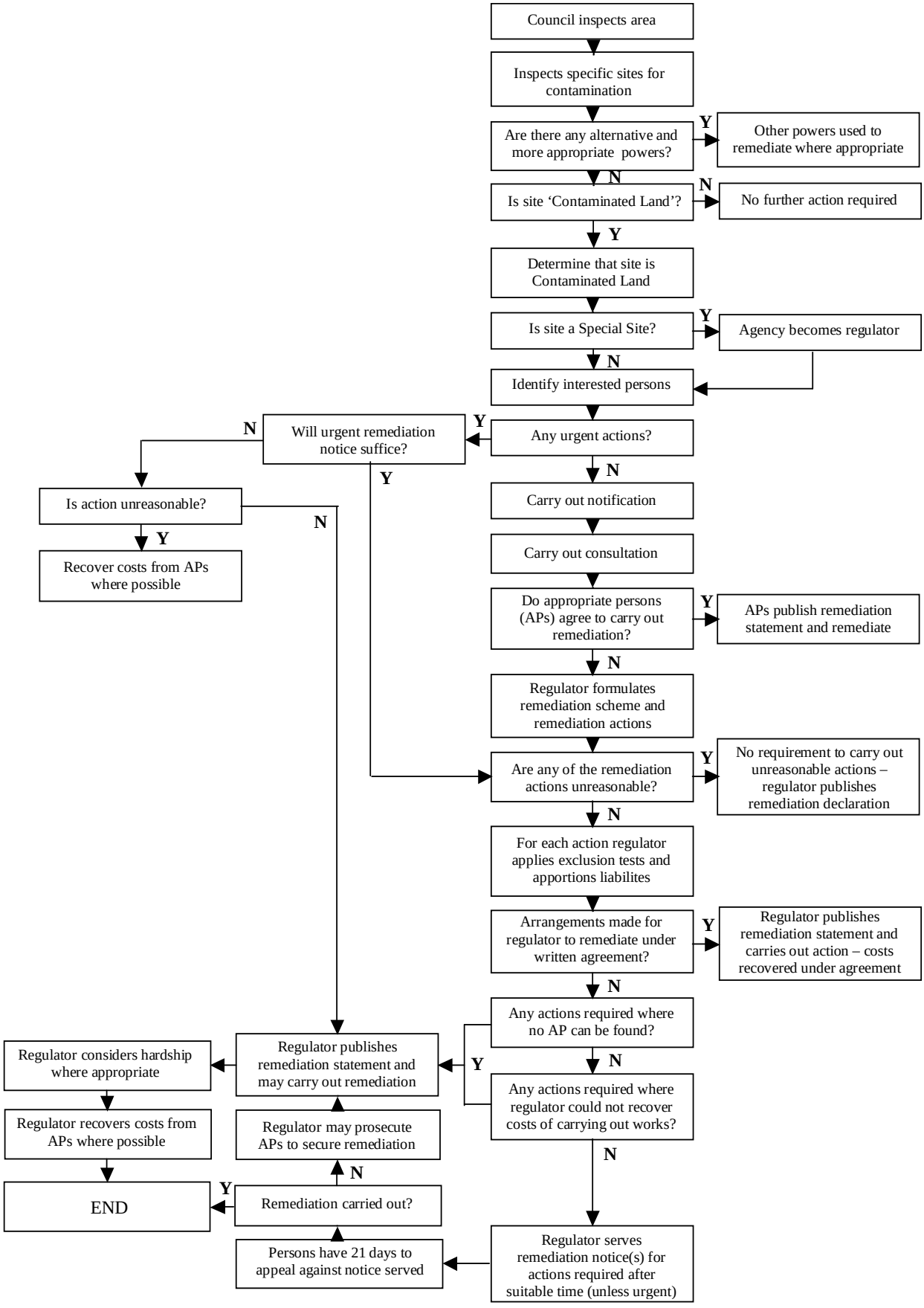
As stated previously, contamination is not always visible and it would be impossible to inspect the entire District by eye even if it could all be seen. For each site the basis for inspection will be a desk-top study gathering together information about the likelihood of contamination, the presence of vulnerable receptors, and the potential for harm or pollution of controlled waters or other receptors to be caused. A study will then be made across the District to find locations where a source and a receptor are likely to be linked. In such cases assessments will be made of whether receptors are actually exposed to contaminants (i.e. is there a pathway?) and whether there is any risk of harm to receptors. A source, a pathway and a receptor must all be present together to create a significant pollutant linkage (see Section 2).

Investigating former and historical land-uses with the potential to cause land contamination will be an important part of an inspection. Specific measures will be taken to inspect any geographical areas rendered particularly sensitive to contamination due to the presence of vulnerable receptors, in particular underground aquifers. Natural areas with special protection will also require careful consideration.

If insufficient information exists but there are reasonable grounds to suspect that land may be Contaminated Land then physical inspections will normally be carried out. If sufficient information is already available to make a determination that land is Contaminated Land then no further inspection will normally be carried out, and all available information will be considered when making the determination. Some inspections may be made using statutory powers of entry. The council will consult Natural England before carrying out any intrusive investigation within a Site of Special Scientific Interest.

If at any stage the council is satisfied on the basis of its information that (1) there is a reasonable possibility that the land may be Contaminated Land, and (2) if so it would be a special site, the council will ask the Environment Agency to carry out any further inspection on behalf of the council, explain its reasoning behind the request and will provide any necessary authorisation in accordance with the legislation and Statutory Guidance. It is understood that the Environment Agency will, when agreeing to carry out inspections, supply its proposed specifications for inspections to the council. Wherever it is reasonable to do so and acting in accordance with the legislation, the council will authorise the Environment Agency to carry out the specified inspection measures.

Figure 4 – Flowchart of inspection procedures



Informal Consultation

In appropriate cases, persons who are potentially liable to attract responsibilities for Contaminated Land may be offered the opportunity for informal consultation before or during inspections.

The council is obliged to act once it is satisfied that any land should be determined as Contaminated Land and Part IIA does not require any prior consultation in such instances. A 'Determination' is likely to reduce property value and may prevent access to any subsidies available for remediation.

However informal consultation may bring about beneficial progress:

- **it may facilitate availability of additional information relevant to the inspection of the land (and any subsequent decision);**
- **further persons might be identified who should be included in the 'liability group; and'[12]**
- **a beneficial opportunity may be identified for persons to undertake voluntary work, for example by carrying out site investigations.**

6.10.2 Determination

There are a number of circumstances under which the council would determine whether any particular land is Contaminated Land:

1. significant harm is being caused;
2. there is a significant possibility of such harm being caused;
3. pollution of controlled waters is being caused; or
4. pollution of controlled waters is likely to be caused.

To ensure a consistent and informed approach and under local arrangements the council will normally consult with the Environment Agency and (in appropriate cases) Natural England and/or English Heritage before making each determination. These organisations will therefore have an additional opportunity to contribute information at their disposal and make their views known - it will be important to assess whether a site might potentially be a special site. Similarly other bodies charged with conservation duties may be consulted informally.

Assessments by the council will be appropriate to each site and the issues it raises, and will be based on sound scientific and technical knowledge taking into account all available evidence including information and advice received from other regulatory bodies. Particular reference will be made to authoritative and scientifically derived guideline values for the assessment of ground(water) quality.

The physical extent of land to be determined as Contaminated Land will be considered carefully and in accordance with Statutory Guidance. Any determination

[12] **LIABILITY GROUP** - this term refers collectively to the persons who are appropriate persons with respect to any particular significant pollutant linkage (Paragraph D.5(c) of the Statutory Guidance[23])

will clearly identify the area of Contaminated Land and all three elements of the significant pollutant linkage.

Any determination that land is contaminated will be documented to include:
- the basis on which the decision was made;
- information on the specific significant pollutant linkage(s) identified; and
- confirmation that the assessment satisfies the requirements of Statutory Guidance.

Each determination will be reviewed as and when new information is received.

In relation to pollution of controlled waters the guidance[24] published by the Environment Agency will be observed.

6.10.3 Notification

Part IIA requires that all appropriate persons and the owner and/or occupier be notified once the council makes a determination that land is Contaminated Land. The council will establish as far as is reasonably practicable the identities of the relevant landowner(s) and occupier(s), also any appropriate person to bear responsibility for any remediation action that might be necessary. The council will then notify these persons that the land has been determined as Contaminated Land, identifying the capacity in which each person is being notified.

When notifying a person about determination of Contaminated Land the council will include:
- a copy of the written record of determination that the land appears to be Contaminated Land;
- information about availability and access to site investigation reports;
- the reasons why particular persons appear to the council to be appropriate persons;
- the names and addresses of the other persons notified at the same time or previously, indicating the capacity in which each person was notified; and
- information on the tests for exclusion and apportionment set out in the Statutory Guidance.

Copies of all notifications will be sent to the Environment Agency, who will also be provided (upon specific request) with any further information the council holds or can reasonably obtain. Special arrangements will apply where the land may be a special site (see Section 6.12).

Where the council has determined land as Contaminated Land, notified all relevant persons and the land has not been designated as a special site, the council will be the enforcing authority for taking any formal action.

6.10.4 Remediation

Where land is Contaminated Land remediation may be necessary having regard to a cost-benefit analysis. The council will ensure that remediation follows the best practicable techniques, but will only require remediation that it considers to be reasonable. The council does not wish to cause unnecessary expenditure and advises persons liable for remediation that cost minimisation will best be achieved by (1) entering voluntary agreements for remediation, (2) developing a clear and unambiguous understanding of the council's expectations, (3) keeping to agreed sequences of remediation actions, and (4) maintaining an effective dialogue during remediation.

The council must identify the appropriate remediation scheme to ensure the relevant land and/or waters are remediated to the necessary standard[13]. Advice will be requested from the Environment Agency where it has particular expertise and in particular where there are concerns over pollution of controlled waters. The Environment Agency is entitled under Part IIA to provide site-specific guidance and the council is obliged to have regard to such guidance.

After notifying persons about a determination of Contaminated Land, and in particular where voluntary remediation has not yet been proposed, the council will make reasonable endeavours to consult and provide information on the remediation work required and timescale for completion. Any other interested parties may also be consulted. Consultation is intended to facilitate dialogue – this may result in additional information becoming available and/or an alternative method of remediation being identified. Agreement to undertake voluntary remediation may provide significant benefits and is to be encouraged. The council will serve formal remediation notices if no satisfactory voluntary agreement can be reached or where voluntary remediation is not being carried out satisfactorily.

Formal Remediation

Before serving a remediation notice the council will satisfy itself that the required remediation actions are unlikely to be carried out otherwise, and will ensure that the council is not itself an appropriate person. Every remediation notice will include a description of the circumstances constituting Contaminated Land, the remediation requirements, a list of the appropriate persons and the rights of appeal against the notice. A remediation notice specifying the actions required and timescales for completion will generally be served not less than three months after the appropriate persons were notified. Copies of all remediation notices will be included in the Public Register.

It is an offence for any person to fail without reasonable excuse to comply with a remediation notice. Enforcement action will conform to the council's relevant enforcement policy. If a failure by one person is preventing others from proceeding with remediation then the council will consider carrying out the remediation action, whilst instigating enforcement proceedings, and will normally seek to recover any associated costs from the responsible person.

Urgent remediation

In cases of imminent danger of serious harm or serious pollution of controlled waters the council will seek to disapply the standard requirements (prior consultation and waiting time), carry out remediation without delay and recover the costs from the appropriate person(s). If this power is exercised the council will prepare and publish a remediation statement describing the action taken, and will place it on the register.

Voluntary remediation

Voluntary remediation may also be proposed before or during consultation on remediation requirements, often as part of a redevelopment proposal requiring planning permission or to take advantage of financial incentives. Where an acceptable remediation scheme is proposed, the council will not serve a formal remediation notice as long as the remediation scheme proceeds in a satisfactory and timely manner. The person responsible will normally have to prepare and publish a remediation statement. If the council is not satisfied by the manner or timescale of voluntary remediation it will have a duty to serve a formal remediation notice.

[13] Remediation standards are discussed in Annex 3, Chapter C, Part 4 of the Statutory Guidance[23].

In certain circumstances the council itself may consider carrying out remediation where:

- no appropriate person can be found;
- genuine financial hardship[14] is a barrier to remediation; and
- on behalf of appropriate persons (for example residents who unwittingly become liable) in some instances.

Benefits of Voluntary Remediation

The council is obliged to act to ensure that Contaminated Land is remediated. However, if a Remediation Notice has to be served, then persons responsible for Contaminated Land may lose out in a number of ways:

- **the value of the land is likely to be affected;**
- **the Remediation Notice will remain on the council's register permanently once served (because Part IIA does not provide any mechanism for removal);**
- **any subsidies available for remediation works will generally disapply; and**
- **a wider choice of remediation works may be available.**

Varying Remediation Requirements

Whilst remediation actions are being carried out on any land, if relevant new information arises the council will require preparation and publication of a new remediation statement (if there is suitable voluntary agreement) or will serve a new remediation notice (where suitable voluntary agreement cannot be secured).

6.10.5 Completion of Remediation

Confirming that remediation has been completed

Where land has been determined as Contaminated Land, its potential future uses and its value will benefit from remediation actions. Whilst the council will enter details of remediation into the register as soon as reasonably practicable, Part IIA does not provide a 'signing-off' procedure. The council will instead confirm its view as to whether there are any grounds for requiring any further remediation or taking any enforcement action. Taken together with the detailed assessment of the land established during inspection and remediation, this confirmation should enable commercial decisions to be made about the land with greater certainty and comfort.

Remediation Declarations

There are certain circumstances where land may be contaminated but no remediation action is required. This is most likely to arise where any remediation would prove unreasonable, for example where water pollution is being caused and the costs of remediation would be very high when compared with the seriousness of the water pollution. In such cases the council will prepare and publish remediation declarations containing the reasons it would have specified remediation action in remediation notices, and the grounds for considering that to do so would be unreasonable. Details of remediation declarations will be entered on the register.

[14] **HARDSHIP** – a factor underlying any cost recovery decision made by an enforcing authority under section 78P(2) of Part IIA, EPA 1990. (See Statutory Guidance Paragraphs 10.8 to 10.10 for interpretation and discussion of this term).

6.10.6 Apportioning Liability

Deciding who is liable for remediating any Contaminated Land may prove complex and contentious. The intention behind Part IIA is that the polluter pays for the costs of remediating land determined as Contaminated Land. However even relatively recent polluters may be difficult to track down, and the District has been subject to potentially contaminative land uses (for example the textile industry) for many decades. Owners and occupiers of land may therefore become liable if those who caused or knowingly permitted the Contaminated Land cannot be found. The council will do everything reasonably practicable to identify all potentially liable persons. It will exercise fairness and diligence to apportion liabilities strictly in accordance with the legislation and Statutory Guidance. Once liabilities are established they will be communicated clearly and sensitively.

The council is compelled by law to have regard to the Statutory Guidance and will determine liabilities following the procedures set out in Chapter D, Annex 3, Part 3. Often there will be more than one appropriate person. Apportioning liability for the costs of particular remediation actions will be achieved by agreement wherever possible. Where the council itself carries out remediation on behalf or in default of any appropriate person's liability, all costs reasonably incurred will become the appropriate person's liability.

6.10.7 Cost Recovery

The council is entitled to recover all costs reasonably incurred in carrying out remediation, except where it did so with the written agreement of the appropriate person (when reimbursement would be covered in that agreement). When considering whether to recover costs, and how much, the council is obliged to consider any hardship that cost recovery might cause, and the requirements of Statutory Guidance (Chapter E). Where appropriate a charging notice will normally be served in accordance with legislation and Statutory Guidance in order to safeguard the council's rights to recover costs.

6.11 Interactions with other regulatory regimes

The council has identified a number of interactions between Part IIA and other regulatory regimes, as outlined below. It will be important to ensure that the most appropriate legislation is applied in each case, avoiding conflicting or unsuitable requirements that might otherwise be imposed. Generally the enforcing authority is either the council or the Environment Agency but various internal services within each organisation may become involved.

The council has corporately reviewed its operations involving land contamination (Section 4). One aim of the review is to ensure that consistency, best practice and good communication are maintained at all levels, and that they reflect the new powers and duties provided under Part IIA. The council's key services will work closely on Contaminated Land issues. Arrangements for information sharing and inter-departmental consultation will ensure effective handling of Contaminated Land issues.

The relationship between the council and the Environment Agency warrants specific consideration and is discussed in Section 6.12.

The following key areas of interaction between Part IIA and regimes will require particular attention as outlined below. It should be noted that action to comply with Part IIA does not absolve any person from the need to comply with any other legislation.

6.11.1 Planning

The majority of Contaminated Land issues have, until now, been identified and addressed through the planning regime where contamination is a material consideration. While the introduction of Part IIA will undoubtedly lead to an increase in the number of sites that need to be addressed, planning control will remain the primary mechanism for cleaning up polluted sites. This will be influenced by pressures for new housing and the redevelopment of 'brownfield' sites. Where cases arise during the development process, any investigations and remediation agreed as planning conditions will normally be dealt with under planning controls and not under Part IIA.

6.11.2 Building Control

Applications for erection, modification or demolition of buildings are handled by a number of regulatory organisations. Where the council acts as the regulator, potentially contaminated sites may become subject to such applications and require decisions to be made. In some cases land contamination will have been considered recently and fully under a planning application, in which case the council will not normally re-consider the same issue under a building consent application other than to ensure that such development is carried out so as to deal effectively with the contamination issue. Quite often, however, building consent applications may have the advantage of more detailed site-specific environmental information than planning applications or, in some cases, building consent is not required. Where cases arise during the Building Control process, any investigations and remediation agreed as a building consent condition will be dealt with under the specifically relevant legislation and not under Part IIA.

6.11.3 Water Pollution

The Water Resources Act 1991[50] gives the Environment Agency powers to take action to prevent or remedy the pollution of controlled waters. The Agency has powers to serve 'works notices' where there is actual or likely pollution of controlled waters, and also to carry out the works itself where there is the need for urgent action or where no liable person can be found. These powers reflect the Environment Agency's particular expertise and capabilities in response to water pollution incidents. The council understands that the Environment Agency, whilst seeking to use the most appropriate regulatory powers in each case, would normally seek to employ powers under the Water Resources Act and Groundwater Regulations 1998[51] in response to water pollution incidents. However, when the need arises the council and the Environment Agency will seek to agree which legislation should take priority on a case-by-case basis.

Where the council proposes to address water pollution incidents under the new Contaminated Land regime (normally where incidents present on-going impacts of land contamination) the following actions have been identified:

- The council will consult with the Environment Agency to obtain site-specific advice before determining any Contaminated Land due to risk to controlled waters and will take into account any comments made with respect to remediation; and
- If the Environment Agency identifies a risk to controlled waters from land affected by contamination, the council will, when notified, consider determining the land as Contaminated Land. Once a determination has been made the council has a duty to act unless the site is designated a Special Site and the Environment Agency becomes the enforcing authority for remedial action under Part IIA.

The Environment Agency's advice[24] to third parties on pollution of controlled waters will be observed when Part IIA implications are being considered.

6.11.4 Waste Regulation

Three specific areas of interaction between regimes have been identified:

Permitted and Licensed operations – the Environment Agency enforces the waste management licensing regime under the Environmental Protection Act 1990, the PPC Act 1999 and the Environmental Permitting Regulations 2008 regulating activities such as waste handling, i.e. the treating, keeping and disposal of wastes. Where significant harm or pollution of controlled waters is suspected to arise from breaches of an existing waste management licence the Part IIA regime will not normally apply. However Part IIA would apply if the land contamination problem arose from activities that did not breach the site licence, or was in fact permitted by the site licence.

Illegal waste disposal – where waste is dumped illegally and causes land contamination the enforcing authority will be either the council or the Environment Agency – decided through existing procedures – and Part IIA will not normally apply if the Environment Agency is acting as the enforcing authority. Agricultural, mining and quarrying wastes have traditionally operated outside the waste management licensing regime, and records of such activities tend to be sketchy at best. However, since 2006 these waste streams have been regulated, and where necessary permitted.

Remediation – where Contaminated Land requires remediation this operation in itself may require a Mobile Treatment Licence from the Environment Agency.

The council will work closely with the Environment Agency to ensure that the most appropriate legislation is applied when investigating potential land contamination. Arrangements will be sought to ensure that any decisions on land contamination that may be proposed by the council or the Environment Agency are communicated for the purposes of consultation.

6.11.5 Integrated Pollution Prevention and Control (IPPC)[52]

Under legislation to regulate pollution from industrial processes, operators of certain sites are required to undertake site condition surveys before they are granted permits to operate. These surveys will establish baseline environmental conditions against which any subsequent pollution arising from the authorised installations can be assessed. If the conditions revealed on a site meet the definition of Contaminated Land, then submission of a site survey may trigger action under Part IIA. Existing processes should all be permitted by the end of 2008. However new proposals and substantial changes to existing industries will trigger an immediate requirement to comply. This area of regulatory interaction is discussed further in Section 6.12.3. It is expected that the Environment Agency will be the lead regulator for prescribed A1 installations.

6.11.6 Statutory nuisance

Part IIA generally replaces the statutory nuisance powers of the Environmental Protection Act 1990 (as amended). The statutory nuisance regime will generally no longer apply to any situation where it is alleged that land is causing 'harm', but continues to apply to matters causing offence to human senses, such as nuisance odours. The council will ensure that incoming complaints are referred for appropriate investigation and action under the relevant regime.

6.11.7 Radiation

The new Contaminated Land (England) Regulations, 2006, seek, amongst other things, to remedy any harm due to radioactive contamination of soil and water in so

far as the radioactive contamination is not attributable to or controlled by the Nuclear Installations Act, 1963, as amended...

6.12 Relationship with the Environment Agency

Interactions between the council and the Environment Agency are already provided for in legislation, Statutory Guidance, the Environment Agency's Process Handbook[54], the Memorandum of Understanding on Fly-Tipping[55] agreed between the Environment Agency and the Local Government Association, and their Land Contamination Protocol[56]. These will prove important for effective and efficient regulation. The Environment Agency is entitled to provide site-specific guidance to which the council must have regard. Locally a good working relationship already exists between the council and the Environment Agency, and this will be particularly beneficial.

Key areas of this relationship are discussed on the below page.

6.12.1 Sharing information

The Environment Agency holds key sources of environmental information relevant to land contamination (see Section 3) and the council holds detailed information about the District and its residents. Such information will be useful when carrying out inspections and making decisions about Contaminated Land. The council and the Environment Agency have arranged to share all relevant information as freely as possible unless prohibited from doing so on grounds of national security, commercial confidentiality or data protection.

6.12.2 Requesting and providing advice and assistance

The council and the Environment Agency each have areas of particular expertise and experience which may be of benefit to the other. Good communication exists and mutual support has been offered. Requests for advice or assistance will generally be made on an informal basis in the first instance to minimise the administrative burden. Formal requests will more often be made to support documentation of decisions that are likely to affect the status of any land under Part IIA.

6.12.3 Dealing with Special Sites

The council has a duty to determine Contaminated Land as 'Special Sites' under certain circumstances, generally where the Environment Agency has particular expertise, or it is already regulating the site, or where there are issues of national security. The effect of designating a Special Site is that it then falls to the Environment Agency as the enforcing authority for Part IIA. The council's role will then be to provide all reasonable advice and assistance, and it will expect to be kept informed of relevant actions and progress by the Environment Agency.

Special sites, outlined in Appendix D are defined by the Regulations[22]. Generally they include:

- prescribed industrial processes already regulated primarily by the Environment Agency for Integrated Pollution Control (IPC and IPPC);
- certain other specified industrial processes (such as petrochemical plants and explosives manufacturers);
- land used currently by the Ministry of Defence (MoD), or at any time for manufacturing, processing or disposing of chemical or biological weapons, or for nuclear activities;
- places where drinking water is abstracted and action is required due to Contaminated Land affecting supplies;

- controlled waters where water quality is seriously affected due to Contaminated Land; and
- controlled waters that are either (a) affected by certain hazardous or polluting chemicals and (b) contained in certain types of vulnerable rock formations (aquifers).

The council recognises the need to receive and evaluate new information when changing circumstances of land over time could have special site implications. The types of new information requiring most consideration are:

- failures of controlled waters to meet specified water quality criteria due to Contaminated Land;
- failures of drinking water quality standards due to contamination affecting abstraction points;
- reports of certain especially hazardous or polluting chemicals in controlled waters;
- proposals for new drinking water abstraction points; and
- proposals for new industrial processes of certain types.

Incidents such as water pollution can cause significant pollution and significant harm both directly in controlled waters and after leaving contaminants behind on land. The Local Environment Agency Plans[13-16] warned of risks from unconsented effluent discharges and surface water run-off from farms and industrial land that could carry contaminants into watercourses. The liability of a polluter for contaminants that have escaped onto other land is addressed in Section 78(K) of the Environmental Protection Act 1990 (as amended).

Good communications and liaison have already been established between the council and the Environment Agency. These will be essential for ensuring new information is communicated and for handling inspection of sites which may, if determined as Contaminated Land, be classed as special sites. The council will work with the Environment Agency and other organisations to gather relevant new information and respond efficiently to incidents. If newly available information indicates that any land may be Contaminated Land for the purposes of Part IIA and may also be a special site then the Environment Agency will be supplied with copies of that information without delay and will be asked to carry out any further inspection. The council's reasoning for making the request will be explained. The first point of contact will be the Environment Agency's relevant Area Contaminated Land Officer. The District is served mainly by the Environment Agency's Central Area Office (Bamber Bridge, Preston) but also by the North Area Office (Penrith).

As outlined at Section 6.10.1 if the council considers that either:

- sufficient information already exists to determine the land as Contaminated Land for the purposes of Part IIA; or
- available information supports a reasonable possibility that a significant pollutant linkage may be present, and an inspection is required

then it will seek to consult the Environment Agency informally before taking any decisions, confirming its view as to whether the land in question might forseeably be a special site.

6.12.4 Decision-making

By consulting appropriately as outlined previously, and by maintaining good communications, it is envisaged that any decisions by either the council or the Environment Agency will be subject to agreement. In any case where it is minded to disagree with a decision by the council, the Environment Agency will be invited to

discuss its reasons with a view to reaching a satisfactory resolution. This will not affect the Environment Agency's right of appeal to the Secretary of State against any decision by the council, nor the council's right to defend its decision. Under these circumstances the time period for disagreeing with a decision is 21 days. For the purposes of clarity it is proposed that the relevant first points of contact will be the relevant Area Contaminated Land Officer at the Environment Agency and the Contaminated Land Officer and specialist Senior Environmental Health Officer at the council. Good communications between the council and the Environment Agency will be essential to successful handling of sites that may, if determined as Contaminated Land, be classed as Special Sites.

7. REVIEW MECHANISMS

This Strategy outlines the general approach to be taken in inspecting land in the District for contamination. This Section will describe instances when inspections will occur outside this general inspection 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 reviewing the inspection programme

The Strategy has already recognised there may be occasions where inspections may have to be carried out outside of the general inspection framework. Triggers for undertaking non-routine inspection may include:

- **Unplanned events** – e.g. if an incident such as a spill has occurred;
- **Introduction of new receptors** – e.g. if housing is to be built on a potentially contaminated site, designation of a new protected ecosystem, persistent trespass onto a site by young people;
- **Supporting voluntary remediation** – e.g. a potentially liable party wishing to undertake clean-up before their land has been inspected by the local authority;
- **Identification of localised health effects** which appear to relate to a particular area of land; and
- **Responding to information** from other statutory bodies, owners, occupiers, or other interested parties – e.g. when updated LEAP environmental overviews are received.

While these occurrences may trigger non-routine inspections, if this Strategy is to prove effective, they must not be allowed to significantly interfere with the stages laid down in the general inspection framework. It will be important to consider this issue in all strategy reviews.

7.2 Triggers for reviewing decisions about land

In addition there may be occasions where 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; and
- Revision of guideline values for exposure assessment.

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

7.3 Reviewing the Strategy

It will be important to review the Strategy regularly, and also in response to changes in policy, guidance or legislation. Any significant changes arising from Stage 10 of the work programme (Section 5.3) will be reported to the council's Cabinet for approval. In any event a formal review of this Inspection Strategy has been scheduled for 2013.

TABLE A.1 – CATEGORIES OF SIGNIFICANT HARM (see Section 2.2.2)

Source: Statutory Guidance[23] - DEFRA Circular 01/2006 Annex A3, Table A

Type of Receptor	**Description of harm to that type of receptor that is to be regarded as significant harm**
1 Human beings	Death, disease, serious injury, genetic mutation, birth defects or the impairment of reproductive functions. For these purposes, disease is to be taken to mean an unhealthy condition of the body or a part of it and can include, for example, cancer, liver dysfunction or extensive skin ailments. Mental dysfunction is included only insofar as it is attributable to the effects of a pollutant on the body of the person concerned. In this Chapter, this description of significant harm is referred to as a "human health effect".
2 Any ecological system, or living organism forming part of such a system, within a location which is: • an area notified as an area of special scientific interest under section 28 of the Wildlife and Countryside Act 1981; • any land declared a national nature reserve under section 35 of that Act; • any area designated as a marine nature reserve under section 36 of that Act; • an area of special protection for birds, established under section 3 of that Act; • any European Site within the meaning of regulation 10 of the Conservation (Natural Habitats etc) Regulations 1994 (i.e. Special Areas of Conservation and Special Protection Areas); • any candidate Special Areas of Conservation or potential Special Protection Areas given equivalent protection; • any habitat or site afforded policy protection under paragraph 13 of Planning Policy Guidance Note 9 (PPG9) on nature conservation (i.e. candidate Special Areas of Conservation, potential Special Protection Areas and listed Ramsar sites); or • any nature reserve established under section 21 of the National Parks and Access to the Countryside Act 1949.	For any protected location: • harm which results in an irreversible adverse change, or in some other substantial adverse change, in the functioning of the ecological system within any substantial part of that location; or • harm which affects any species of special interest within that location and which endangers the long-term maintenance of the population of that species at that location. In addition, in the case of a protected location which is a European Site (or a candidate Special Area of Conservation or a potential Special Protection Area), harm which is incompatible with the favourable conservation status of natural habitats at that location or species typically found there. In determining what constitutes such harm, the local authority should have regard to the advice of Natural England and to the requirements of the Conservation (Natural Habitats etc) Regulations 1994. In this Chapter, this description of significant harm is referred to as an "ecological system effect".
3 Property in the form of: • crops, including timber; • produce grown domestically, or on allotments, for consumption; • livestock; • other owned or domesticated animals; • wild animals which are the subject of shooting or fishing rights.	For crops, a substantial diminution in yield or other substantial loss in their value resulting from death, disease or other physical damage. For domestic pets, death, serious disease or serious physical damage. For other property in this category, a substantial loss in its value resulting from death, disease or other serious physical damage. The local authority should regard a substantial loss in value as occurring only when a substantial proportion of the animals or crops are dead or otherwise no longer fit for their intended purpose. Food should be regarded as being no longer fit for purpose when it fails to comply with the provisions of the Food Safety Act 1990. Where a diminution in yield or loss in value is caused by a pollutant linkage, a 20% diminution or loss should be regarded as a benchmark for what constitutes a substantial diminution or loss. In this Chapter, this description of significant harm is referred to as an "animal or crop effect".
4 Property in the form of buildings. For this purpose, "building" means any structure or erection, and any part of a building including any part below ground level, but does not include plant or machinery comprised in a building.	Structural failure, substantial damage or substantial interference with any right of occupation. For this purpose, the local authority should regard substantial damage or substantial interference as occurring when any part of the building ceases to be capable of being used for the purpose for which it is or was intended. Additionally, in the case of a scheduled Ancient Monument, substantial damage should be regarded as occurring when the damage significantly impairs the historic, architectural, traditional, artistic or archaeological interest by reason of which the monument was scheduled. In this Chapter, this description of significant harm is referred to as a "building effect".

TABLE A.2 – SIGNIFICANT POSSIBILITY OF SIGNIFICANT HARM

Descriptions Of Significant Harm (As Defined In Table A.1)	**Conditions For There Being A Significant Possibility Of Significant Harm**
1 Human health effects arising from • the intake of a contaminant, or • other direct bodily contact with a contaminant	If the amount of the pollutant in the pollutant linkage in question: • which a human receptor in that linkage might take in, or • to which such a human might otherwise be exposed, as a result of the pathway in that linkage, would represent an unacceptable intake or direct bodily contact, assessed on the basis of relevant information on the toxicological properties of that pollutant. Such an assessment should take into account: • the likely total intake of, or exposure to, the substance or substances which form the pollutant, from all sources including that from the pollutant linkage in question; • the relative contribution of the pollutant linkage in question to the likely aggregate intake of, or exposure to, the relevant substance or substances; and • the duration of intake or exposure resulting from the pollutant linkage in question. The question of whether an intake or exposure is unacceptable is independent of the number of people who might experience or be affected by that intake or exposure. Toxicological properties should be taken to include carcinogenic, mutagenic, teratogenic, pathogenic, endocrine-disrupting and other similar properties.
2 All other human health effects (particularly by way of explosion or fire)	If the probability, or frequency, of occurrence of significant harm of that description is unacceptable, assessed on the basis of relevant information concerning: • that type of pollutant linkage, or • that type of significant harm arising from other causes. In making such an assessment, the local authority should take into account the levels of risk which have been judged unacceptable in other similar contexts and should give particular weight to cases where the pollutant linkage might cause significant harm which: • would be irreversible or incapable of being treated; • would affect a substantial number of people; • would result from a single incident such as a fire or an explosion; or • would be likely to result from a short-term (that is, less than 24-hour) exposure to the pollutant.
3 All ecological system effects	If either: • significant harm of that description is more likely than not to result from the pollutant linkage in question; or • there is a reasonable possibility of significant harm of that description being caused, and if that harm were to occur, it would result in such a degree of damage to features of special interest at the location in question that they would be beyond any practicable possibility of restoration. Any assessment made for these purposes should take into account relevant information for that type of pollutant linkage, particularly in relation to the ecotoxicological effects of the pollutant.
4 All animal and crop effects	If significant harm of that description is more likely than not to result from the pollutant linkage in question, taking into account relevant information for that type of pollutant linkage, particularly in relation to the ecotoxicological effects of the pollutant.
5 All building effects	If significant harm of that description is more likely than not to result from the pollutant linkage in question during the expected economic life of the building (or, in the case of a scheduled Ancient Monument, the foreseeable future), taking into account relevant information for that type of pollutant linkage.

Source: Statutory Guidance[23] - DETR Circular 02/2000 Annex A Part 3, Table B

APPENDIX B

COMMON SOURCES OF POTENTIAL CONTAMINATION

Commonly occurring and potentially contaminative industrial uses (section 3.2) include:

Landfill Sites
Landfills are sites where waste materials are deposited for the purposes of final disposal. In the past these sites were essentially holes in the ground, but since 1974 various legislation has imposed increasingly strict controls on the development and operation of landfill sites. This disposal option is still the most popular disposal route for waste in the United Kingdom. Certain landfill sites accepting 'putrescible'[15] wastes such as household rubbish are significant because of the production of landfill gas and leachate by the decomposing waste. Landfill gas is usually composed, in varying ratios, of methane and carbon dioxide. Leachate is a polluting liquid often resulting from the decomposition of the waste, and its composition will change according to the material deposited in the site. Landfill gas in the right concentrations and under the right circumstances presents an explosive risk whilst the leachate often contains substances which can affect ground and surface water. Both landfill gas and leachate may, if uncontrolled, migrate off site. Landfill activity accounts for 205 hectares within the District.

Sewage Treatment Works
Sewage treatment works produce a solid waste termed 'cake' in addition to the liquid discharges. In the past the solid waste which was produced at many sites was disposed of by spreading the sewage cake or liquid slurry on land surrounding the works. Depending on the effluent being received and treated at the works, sludge 'cake' and slurry can contain pollutants such as heavy metals and extended disposal over many years on the same piece of land can result in elevated levels of contaminants in the soil.

Gas Works
A large number of sites throughout the country have been used to produce town gas. These were first operated in the middle of the 19th Century and their use continued until the introduction of natural gas in the 1970s. Producing town gas involved heating coal in the absence of air to separate the volatile and liquid components from the coke. Before being distributed to customers the gas needed to have the tar, ammonia, cyanides and various other impurities removed. The liquid component comprised tars and ammoniacal liquors. It is these liquid by-products and substances removed from cleaning the gas that are the source of contamination at many gas works sites.

Railway Land
Railway land includes historic track routes, sidings and goods yards, etc. Contamination may have occurred due either to material being spilled whilst being transported by train or from locomotive fuel spills and other petroleum oils used for hydraulics or lubrication. Due to the wide variety of material with potential to cause contamination that is transported by railway it is not possible to be more prescriptive about likely sources of contamination. What is more certain is that railway land may have been routinely treated with pesticides, carriage works involved asbestos, and were generally associated with coal storage yards (sources of various coal-related contaminants).

[15] **PUTRESCIBLE** – this term refers to organic wastes, such as food, paper and garden rubbish, which will decompose once buried in the ground. Thus bricks and tipped soil would not be putrescible wastes.

APPENDIX B

LIST OF CONSULTEES

The following consultees were provided with full copies of the draft second edition Inspection Strategy or summary leaflets and advice about where to access full copies. Responses were received from those marked (*).

Arkholme-with-Cawood Parish Council *
Arnside/Silverdale Countryside Management Service
Bolton-le-Sands Parish Council
Borwick Parish Council
Burrow-with-Burrow Parish Council
Cantsfield Parish Council
Carnforth Chamber of Trade and Commerce
Carnforth Town Council
Caton-with-Littledale Parish Council
Claughton Parish Council
Cockerham Parish Council
Council for the Protection of Rural England (Lancashire) *
Craven District Council
Duchy of Lancaster
Ellel Parish Council *
English Heritage (North West Region)
Environment Agency *
Food Standards Agency
Forestry Commission (North West England)
Government Office for the North West
Gressingham Parish Council
Halton-with-Aughton Parish Council
Health & Safety Executive *
Heaton-with-Oxcliffe Parish Council
Heysham Neighbourhood Council
Hornby-with-Farleton Parish Council
Ireby & Leck Parish Council
Lancashire County Council
Lancashire Fire & Rescue Service
Lancaster District Chamber of Commerce
Lattice Property
Melling-with-Wrayton Parish Council
Middleton Parish Council
Ministry of Defence (Defence Estates)
Morecambe District Chamber of Trade & Commerce
Morecambe Neighbourhood Council
Network Rail
National Farmers Union
Natural England *
National Trust (Regional Office)
Nether Kellet Parish Council
North Lancashire Primary Care Trust
North West Development Agency
Over Kellet Parish Council
Overton Parish Council
Over Wyresdale Parish Council
Priest Hutton Parish Council
Quernmore Parish Council
Ribble Valley Borough Council
Roeburndale Parish Meeting
Scotforth Parish Council
Silverdale Parish Council
Slyne-with-Hest Parish Council
South Lakeland District Council
Tatham Parish Council
Thurnham Parish Council
Tunstall Parish Council
United Utilities *
Warton Parish Council
Wennington Parish Council
Whittington Parish Council
Wildlife Trust for Lancashire, Manchester & North Merseyside
Wray-with-Bolton Parish Council
Wyre Borough Council *
Yealand Conyers Parish Council
Yealand Redmayne Parish Council

APPENDIX C

In addition a range of groups were contacted with summary leaflets of this, the 2008 draft edition of the Inspection Strategy and were invited to view and comment on the full document if they wished. These included:

Registered social landlords
Building control agencies
Planning agents
Building surveyors
Architects
Local environmental organisations
Special interest groups
Community groups

SPECIAL SITES - EXTRACT FROM STATUTORY GUIDANCE[23]

For information the following paragraphs are transcribed directly from the Statutory Guidance, Annex 4. Please note that all cross-referencing refers to the original text and is not included in this Strategy. The paragraphs outline what will constitute a Special Site:

Special Sites
7. Section 78C(8) provides that land is to be a special site if it is land of a description prescribed in regulations. Regulations 2 and 3, with Schedule 1, provide the necessary descriptions. The procedures related to special sites are described in section 18 of Annex 2 to this circular.
8. There are three main groups of cases where a description of land is prescribed for this purpose. The individual descriptions of land to be designated are contained in paragraphs (a) to (j) of regulation 2(1). If land is contaminated land ***and*** it falls within one of the descriptions, it must be designated as a special site. Otherwise, it cannot be so designated. The descriptions of land do not imply that land of that type is more likely to constitute contaminated land. They identify cases where, ***if*** the land is contaminated land, the Environment Agency is best placed to be the enforcing authority.

Water-pollution Cases
9. Regulations 2(1)(a) and 3 ensure that the Environment Agency becomes the enforcing authority in three types of case where the contaminated land is affecting controlled waters and their quality, and where the Environment Agency will also have other concerns under other legislation. These cases are set out in regulation 3, and are broadly as follows:

(a) *Wholesomeness of drinking water:* Regulation 3(a) covers cases where contaminated land affects controlled waters used, or intended to be used, for the supply of drinking water. To meet the description, the waters must be affected by the land in such a way that a treatment process or a change in treatment process is needed in order for such water to satisfy wholesomeness requirements. The standards of wholesomeness are currently set out in the Water Supply (Water Quality) Regulations 2000 (as amended in 2001 - S.I.s 2000/3184 and 2001/3911) and the Private Water Supplies Regulations 1991 (SI 1991/2790). An intention to use water for the supply of drinking water would be demonstrated by the existence of a water abstraction licence for that purpose, or an application for such a licence.

(b) *Surface-water classification criteria:* Regulation 3(b) covers cases where controlled waters are being affected so that those waters do not meet or are not likely to meet relevant surface water criteria. These are currently set out in four sets of Surface Waters (Dangerous Substances) (Classification) Regulations: SI 1989/2286, SI 1992/337, SI 1997/2560 and SI 1998/389.

(c) *Major aquifers:* Regulation 3(c) covers cases where particularly difficult pollutants are affecting major aquifers. The Environment Agency will already be concerned both with pollutants of this type and with managing water resources. The list of pollutants is set out in paragraph 1 of Schedule 1. It corresponds to List I of the Groundwater Directive (80/86/EEC). The major aquifers are described in paragraph 2 of Schedule 1 by reference to the underground strata in which they are contained. The British Geological Survey publishes maps that show the location and boundaries of such strata.

10. For the purposes of regulation 3(c), the fact that contaminated land may be located over one of the listed underground strata does not by itself make the land a special site. The land must be contaminated land on the basis that it is causing, or is likely to cause, pollution of controlled waters; the pollution must be by reason of one or more substances from schedule 1; and the waters being or likely to be polluted must be contained within the strata.

Industrial Cases

11. The subsequent items in regulation 2(1) ensure that the Environment Agency is the enforcing agency in respect of contaminated land which is, or has been, used as a site for industrial activities that either pose special remediation problems or are subject to regulation under other national systems, either by the Environment Agency itself, or by some other national agency. The designation of such sites as special sites is intended to deploy the necessary expertise and to help co-ordination between the various regulatory systems. The descriptions are in respect of:

(a) *Waste acid tar lagoons (regulation 2(1)(b):* Regulation 2(2) defines what falls into this description. The retention basins (or lagoons) concerned typically involve cases where waste acid tar arose from the use of concentrated sulphuric acid in the production of lubricating oils and greases or the reclamation of base lubricants from mineral oil residues. The description is not intended to include cases where the tars resulted from coal product manufacture, or where these tars were placed in pits or wells.

(b) *Oil refining (regulation 2(1)(c)(i)):* The problems resulting from this are again considered more appropriate for the expertise of the Environment Agency. As for waste acid tar lagoons, activities related to coal are not included.

(c) *Explosives (regulation 2(1)(c)(ii)):* The relatively few sites in this category pose specific problems, which are more appropriately handled by the Environment Agency.

(d) *IPC (Integrated Pollution Control) sites (regulation 2(1)(d)):* Sites which are regulated under Part I of the 1990 Act and which have become contaminated will generally be regulated under those powers. But there may be situations where Part IIA powers will be needed. This item ensures that the Environment Agency will be the enforcing authority under Part IIA where it is already the regulatory authority under Part I. The description therefore refers to a "prescribed process designated for central control". In England, this means a Part A process. This description covers:-

(i) land on which past activities were authorised under "central control" but which have ceased;

(ii) land where the activities are continuing but the contamination arises from a non-"central control" process on the land; and

(iii) land where the contamination arises from an authorised "central control" process but a remediation notice could nevertheless be served. (Section 78YB(1) precludes the service of a remediation notice in cases where it appears to the authority that the powers in section 27 of the 1990 Act may be exercised.)

This description does not cover land where the Part I authorisation is obtained in order to carry out remediation required under Part IIA. It also does not cover land that has been contaminated by an activity that ceased before the application of "central controls", but would have been subject to those controls if it had continued after they came into force. (Legislation to implement the Integrated Pollution Prevention and Control Directive (96/61/EC) may lead to an additional special site description being prescribed in the future concerning activities authorised under the proposed Pollution Prevention and Control regime.)

(e) Nuclear sites (regulation 2(1)(e)): Regulation 2(5) defines what is to be treated as a nuclear site for this purpose. The designation of a nuclear site as contaminated land under these regulations will have effect only in relation to non-radioactive contamination. Any harm, or pollution of controlled waters, attributable to radioactivity will be dealt with under a separate regime to be introduced by regulations to be made under section 78YC. Consultation is under way on the form that this separate regime should take.

Defence Cases

12. Regulation 2(1)(f), (h) and (i) ensures that the Environment Agency deals with most cases where contaminated land involves the Ministry of Defence (MOD) estate. Broadly speaking, the descriptions include any contaminated land at current military, naval and air force bases and other properties, including those of visiting forces; the Atomic Weapons Establishment; and certain lands at Greenwich Hospital (section 30 of the Armed Forces Act 1996). However, off-base housing or off-base NAAFI premises are not included, and nor is property which has been disposed of to civil ownership or occupation. Training areas and ranges that MOD does not own or occupy but may use occasionally do not fall within the descriptions. Regulation 2(1)(h) describes land formerly used for the manufacture, production or disposal of chemical and biological weapons and related materials, regardless of current ownership. In all these cases, the Environment Agency is best placed to ensure uniformity across the country and liaison with the Ministry of Defence and the armed forces.

OTHER ASPECTS OF SPECIAL SITES

13. *Adjoining/adjacent land (regulation 2(1)(j):* Where the conditions on a special site lead to adjacent or adjoining land also being contaminated land by reason of the presence of substances which appear to have escaped from the special site, that adjacent or adjoining land is also to be a special site. This does not apply where the special site is one of the water-pollution cases described in regulations 2(1)(a) and 3. With this exception, the Environment Agency will be the enforcing authority for the adjoining land as well as for the special site that has caused the problem. This approach is intended to avoid regulatory control being split.

14. *Waste management sites:* Land used for waste management activity, such as landfill, is not as such designated as a special site. This is because Part II of the 1990 Act as amended by the PPC Act 1999 already contains wide powers for the Environment Agency to ensure that problems are tackled. However, such land may fall within one or more of the special site descriptions, for example if pollution of controlled waters is being caused. The interface between Part IIA controls and waste management controls is described at Annex 1, paragraphs 55 to 58.

15. *Role of the Environment Agency:* It remains the task of the local authority to decide, in the first instance, whether land within the description of a special site is contaminated land or not. The work of the Environment Agency as enforcing authority only starts once that determination is made. However, the Statutory Guidance on the identification of contaminated land says that, in making that determination, local authorities should consider whether, if land were designated, it would be a special site. If that is the case, the local authority should always seek to make arrangements with the Environment Agency to carry out any inspections of the land that may be needed, on behalf of the local authority (see Annex 3, paragraphs B.26 to B.30).

ABBREVIATIONS AND GLOSSARY OF TERMS

ABBREVIATIONS

AOD – above ordnance datum (geographical term)

AONB – Area of Outstanding Natural Beauty

CLEA – Contaminated Land Exposure Assessment guidelines (developed by the Environment Agency)[43]

DEFRA – the Department of the Environment, Food and Rural Affairs

DETR – the former Department of the Environment, Transport and the Regions

DCLG – The Department of Communities and Local Government

DoE – the former Department of the Environment (now part of DEFRA)

EPA 1990 – the Environmental Protection Act 1990 as amended[1]

ESA – Environmentally Sensitive Area

FSA – the Food Standards Agency

GIS – geographical information system (see Glossary)

HSE – the Health and Safety Executive

ICRCL – the former Interdepartmental Committee on the Redevelopment of Contaminated Land, often associated with Reference[45]

IPC – Integrated Pollution Control regime (regulated by the Environment Agency)[1]

IPPC – Integrated Pollution Prevention Control regime (due to replace IPC and be regulated by local authorities and the Environment Agency)[52]

LBAP – Local Biodiversity Action Plan[7]

LNR – Local Nature Reserve (see Glossary)

MAFF – the former Ministry of Agriculture, Fisheries and Food

MoD – the Ministry of Defence

NLPG – National Land and Property Gazetteer

NNR – National Nature Reserve (see Glossary)

OPDM – (the former) Office of the Deputy Prime Minister

Part IIA – Part IIA of the Environmental Protection Act 1990[1] inserted by Section 57 of the Environment Act 1995

PPG – Planning Policy Guidance Notes (issued by DEFRA)

RPG – Regional Planning Guidance

SAC – Special Area of Conservation

SNCI – Site of Nature Conservation Importance (designated by County Councils)

SPA – Special Protection Area

SPZ – Source Protection Zone (see Glossary)

SSSI – Site of Special Scientific Interest (see Glossary)

"Statutory Guidance" – DETR Circular 02/2000[23] issued by the Secretary of State

"The council" – the Lancaster City Council

GLOSSARY OF TERMS

ABSTRACTION – the removal of water from resources such as a SURFACE WATER or GROUNDWATER. See also BOREHOLE

ALLUVIUM – geological materials eroded, transported and deposited by the action of river flow. See also DRIFT DEPOSITS

ANCIENT MONUMENT (SCHEDULED) – Nationally important archaeological sites and monuments included in the Schedule of Ancient Monuments compiled by the Secretary of State under the Ancient Monuments and Archaeological Areas Act 1979[18] (as amended by the National Heritage Act 1983).

APPROPRIATE PERSON - defined in section 78A(9) of Part IIA EPA 1990 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".

AQUIFER – underground water source; water-bearing rock. See also MAJOR AQUIFER and MINOR AQUIFER

BOREHOLE – a hole drilled below ground for the abstraction of groundwater (usually by pumping), also used for monitoring water characteristics.

BROWNFIELD SITE – see PREVIOUSLY DEVELOPED LAND.

"CAUSED OR KNOWINGLY PERMITTED" – a term contained in Section 78F(2) for establishing responsibility for remediation of Contaminated Land.

CONTAMINANT – a substance which is in, on or under the land and which has the potential to cause harm or cause pollution to controlled waters. (see Statutory Guidance[23] Paragraph A.12).

CONTAMINATED LAND – refer to Section 2.2.

CONTROLLED WATER(S) – defined in Section 78A(9) of Part IIA 1990 by reference to Section 104, Part III of the Water Resources Act 1991[37]. Controlled waters include all rivers, canals, streams, brooks, drainage ditches, lakes, reservoirs, estuaries, coastal waters and groundwaters to which British pollution control legislation applies. Small ponds and reservoirs that do not in themselves feed other rivers or watercourses are not included within this definition unless specifically addressed by the Secretary of State.

DIFFUSE SOURCE – a source of pollution which is not an identifiable and discrete POINT DISCHARGE. This may includes RUN-OFF from fields or urban areas, atmospheric emissions or the cumulative emissions from numerous poorly defined discharges.

DRIFT DEPOSIT – a collective term for unconsolidated superficial geological deposits (e.g. alluvium) overlying solid rock.

ECOSYSTEM – all living and non-living matter within a defined space (such as a lake or a wood) and their interactions.

FISSURE (FRACTURE) – natural cracks in rocks. These may permit rapid water movement underground.

GROUNDWATER – water stored or moving underground in the 'saturation zone', i.e. where all pore spaces in the DRIFT DEPOSITS and/or solid rock layers are completely filled with water. See also CONTROLLED WATERS

HARM – 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, harm to his property. See also SIGNIFICANT HARM

INTRUSIVE INVESTIGATION - an investigation of land (for example by exploratory excavations) which involves actions going beyond simple visual inspection of the land, limited sampling of the surface layers of soil, or assessment of documentary information (See Statutory Guidance Paragraph B.20 (c)).

LANDFILL GAS – gases generated in landfill sites during decomposition of waste materials producing a mixture of gases, the most important of which is Methane due to its properties of flammability.

LEACHATE – liquor formed by the act of 'leaching' where liquids and soluble substances are removed from solid substances into underground water. Commonly refers to polluted liquids arising from disposal of wastes to landfill sites, which may percolate through soil or rock.

LISTED BUILDING – a building of special architectural or historic interest included on the Statutory List of Buildings of Architectural or Historical Interest compiled by the Secretary of State in consultation with English Heritage under the Planning (Listed Buildings and Conservation Areas) Act 1990[20]. Grade I buildings are those of exceptional interest, Grade II* buildings are those of particular importance (more than being of special interest) and Grade II buildings are those of special interest, warranting efforts to protect and preserve them.

LOCAL NATURE RESERVE (LNR) – particular area of land subject to local nature interest, generally being publicly owned and safeguarded for public education and enjoyment. These areas are designated under the National Parks and Access to the Countryside Act 1949[45], as amended by the Local Government Act 1972[46].

MAJOR AQUIFER – layer(s) of rock known or considered likely to be able to receive, hold and transmit water in significant quantity by virtue of either high permeability or significant fracturing. They are usually productive and are able to support large abstractions for public supply and other purposes. Major aquifers may occur below MINOR AQUIFERS.

MINOR AQUIFER – layer(s) of rock known or considered likely to have low or variable permeability or fracturing, including unconsolidated deposits. Although these aquifers will seldom produce large quantities of water for abstraction, they are important both for local supplies and in supplying flow to rivers.

NATIONAL NATURE RESERVE (NNR) – nationally important areas of land assigned special protection for key wildlife habitats and geological features across Britain. These are carefully managed by Natural England for national enjoyment and scientific research.

OWNER – defined in Section 78A(9) of Part IIA, EPA 1990 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.

POINT SOURCE – a source of pollution which is a discrete identifiable discharge such as a sewage outfall or industrial discharge. See also DIFFUSE SOURCE

POLLUTANT – a CONTAMINANT that forms part of a POLLUTANT LINKAGE. (See Statutory Guidance Paragraph A.17).

POLLUTANT LINKAGE - the relationship between a CONTAMINANT, a PATHWAY and a RECEPTOR. See also SIGNIFICANT POLLUTANT LINKAGE

POLLUTION OF CONTROLLED WATER(S) – defined in Section 78A(9) of Part IIA EPA 1990 as: "the entry into controlled waters of any poisonous, noxious or polluting matter or any solid waste matter". See also CONTROLLED WATERS

POSSIBILITY OF SIGNIFICANT HARM – a measure of the probability or frequency of occurrence of circumstances which would lead to SIGNIFICANT HARM being caused. See also HARM

PREVIOUSLY DEVELOPED LAND – land that is or was occupied by a permanent structure and any associated infrastructure, to the boundary of the development. This includes land used for mineral extraction or waste disposal, but excludes land in built-up areas such as parks, recreation grounds and allotments.

REGISTER – the public register maintained by the enforcing authority of particulars relating to CONTAMINATED LAND under Section 78R of Part IIA, EPA 1990 and the Contaminated Land (England) Regulations 2000.

REMEDIATION – defined in Section 78A(7) of Part IIA EPA 1990 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 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. "

REMEDIATION DECLARATION – defined in Section 78H(6), such a document is prepared and published by the enforcing authority to record:

- remediation actions which it would otherwise have specified in a REMEDIATION NOTICE, but which it was precluded from specifying by virtue of Sections 78E(4) or (5) of Part IIA EPA 1990
- the reasons why it would have done so;
- those actions and the grounds on which it is satisfied that it is precluded from specifying them in such a notice.

REMEDIATION NOTICE – defined in Section 78E(1) of Part IIA EPA 1990 as a notice specifying what an APPROPRIATE PERSON is to do by way of REMEDIATION and the periods of time within which he is required to do each of the things so specified.

REMEDIATION STATEMENT – defined in Section 78H(7) of Part IIA EPA 1990 as a statement prepared and published by the responsible person detailing the remediation actions which are being, have been, or are expected to be taken, and the time periods within which these actions are to be taken.

RISK ASSESSMENT – a technical and scientific, qualitative and/or quantitative assessment of risk that examines the probability or frequency of a defined hazard occurring and the extent of its consequences.

RUN-OFF – water that flows over the land rather than infiltrating into the ground.

SECRETARY OF STATE – the Secretary of State for the Environment, Food and Rural Affairs, specifically responsible under Part IIA of EPA 1990 for making certain decisions.

SIGNIFICANT HARM – defined in Section 78A(5) of Part IIA EPA 1990, this is HARM determined as significant in accordance with the legislation and Statutory Guidance, e.g. it meets one of the descriptions of types of HARM (see Appendix A which reproduces part of the Statutory Guidance – Tables A.1 and A.2). See also HARM

SURFACE WATER(S) – a watercourse such as a stream, river or lake that lies or moves on the surface of the ground, rather than underground. See also GROUNDWATER

SIGNIFICANT POLLUTANT LINKAGE – a POLLUTANT LINKAGE that forms the basis for a determination that a particular area of a piece of land is CONTAMINATED LAND. See also POLLUTANT LINKAGE

SITE OF SPECIAL SCIENTIFIC INTEREST (SSSI) – a particular area of land notified by Natural England as an area under the Wildlife and Countryside Act 1981, or of special interest due to its importance for nature conservation.

SOURCE PROTECTION ZONE (SPZ) – a defined geographical area in which protection is given to a water ABSTRACTION. All sources of water for abstraction – including springs, wells and boreholes – are liable to contamination and require protection. Three groundwater protection zones are recognised: Zone 1 (Inner), Zone 2 (Middle) and a Zone 3 (total catchment). An additional zone, a zone of special interest, is occasionally delineated.

SPECIAL SITE – defined by Section 78A(3) of Part IIA EPA 1990 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 types of land that may qualify as potential special sites are set out in the Contaminated Land (England) Regulations 2000[30]. 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) of Part IIA EPA 1990 as:

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

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