

Halton Borough Council

Contaminated Land: Strategy for Inspection.

(Environmental Protection Act 1990: Part IIA)

Geographical Location.

The Borough of Halton sits at the north-westerly corner of Cheshire County on either side of the River Mersey and encompasses the two towns of Runcorn and Widnes, plus the villages of Hale, Moore, Daresbury and Preston Brook. It is situated between Liverpool and Manchester and is the lowest bridging point across the River Mersey.



Contaminated Land: Strategy for Inspection (Environmental Protection Act 1990: Part IIA)

Chapter 1: Introduction.

Page 7

This section sets out the background to the strategy to be adopted by the local authority.

- 1.0. Introduction.
- 1.1. General Council Policy.
 - 1.1.1. Halton Borough Council - Strategic Priorities.
 - 1.1.2. Environmental Issues.
 - 1.1.3. Enforcement.
 - 1.1.4. Land Contamination More Generally.
 - 1.1.5. Public Access to Information.
 - 1.1.6. Consultation and Involvement of Community Groups.
- 1.2. Regulatory Context.
 - 1.2.1. Delegation of duties in Halton.
 - 1.2.2. Government role.
 - 1.2.3. Halton's role.
 - 1.2.4. Regulatory Role of the Environment Agency under Part IIA.
 - 1.2.5. Determination of contaminated land.
 - 1.2.6. Regulatory Role of Local Authorities under Part IIA.
 - 1.2.7. Definition of Contaminated Land under Part IIA.
 - 1.2.8. Principles of Risk Assessment.
 - 1.2.9. Requirements for Strategic Approach.
 - 1.2.10. Other Relevant Sections.
- 1.3. Development of the Strategy.
 - 1.3.1. Overall Approach.
 - 1.3.2. Consultation with the Appropriate Bodies.
- 1.4. Objectives of this Strategy Document.
 - 1.4.1. Halton's Vision.**
 - 1.4.2. Government's Objectives.**
 - 1.4.3. Contaminated land inspection strategic objectives.

Chapter 2: Characteristics of the Borough of Halton.

Page 23

This section gives the background to the local authority's area and an explanation of how that influences its particular approach to inspection for contaminated land. It will also enable fair comparison with other authorities.

- 2.1. Geographical Location.
- 2.2. Historical Background.
- 2.3. Size and current land-use characteristics.
- 2.4. Population Distribution.

- 2.5. The Borough of Halton's Land Ownership.
- 2.6. Protected locations (natural habitats etc.).
 - 2.6.1. Protected habitats - Designated sites for nature conservation in Halton.
 - 2.6.2. Consultation with English Heritage.
- 2.7. Key Property Types (e.g. ancient monuments).
- 2.8. Key Water Resource/ Protection Issues.
- 2.9. Known Information on Contamination.
 - 2.9.1. Sheffield Hallam University desk reference guide.
 - 2.9.2. Landfill sites/possibly contaminated land in Halton District.
- 2.10. Current and Past Industrial History.
- 2.11. Geological Characteristics.
- 2.12. Hydrogeological Characteristics.
- 2.13. Specific Local Features.
- 2.14. Planning problems and issues.
- 2.15. Unitary Development Plan - Part 1.
 - 2.15.1. Strategic aims – Policy objectives and indicators.
 - 2.15.2. Spatial Strategy.
 - 2.15.3. Strategic Policies.
- 2.16. Action already taken to deal with contaminated land.

Chapter 3: The Local Authority Strategy:

Overall Aims, Objectives and Milestones.

Page 53

This section sets out the specific aims of the local authority, which will meet the requirements of the statutory guidance (in particular paragraph B.9) and reflect local authority circumstances. It also suggests specific objectives and priorities for achieving these aims.

- 3.1. Aims of the Strategy.
- 3.2. Strategic Objectives.
- 3.3. Milestones (Landmark Dates).

Chapter 4: Priority Actions and Time-scales.

Page 57

This section describes the focus of the specific approach of the local authority, reflecting the context set out in sections 1 & 2 and the particular aims and objectives of the authority set out in section 3. The methods to be used are described in Chapter 5.

4.1. Priorities.

4.1.1. Procedural.

4.1.2. Investigative.

4.2. Timescales.

4.3. Resources.

Chapter 5: Procedures.

Page 61

This section contains the information as required in paragraph B.15(c) and (d) of the statutory guidance i.e. details the Council's arrangements and procedures for dealing with the issues of contaminated land.

5.1. Internal management arrangements for inspections and identification.

5.2. Local authority interests in land.

5.3. Information collection.

5.3.1. Information on potentially contaminated sites.

5.3.2. Information on receptors.

5.3.3. Other information.

5.4. Information and complaints from members of the public.

5.5. Information evaluation.

5.5.1. Methodology.

5.5.2. Use of site specific risk assessment.

5.6. Interaction with Other Regimes.

5.6.1. Planning and Development Control.

5.6.2. Integrated Pollution Control (IPC) and Integrated Pollution Prevention and Control (IPPC).

5.6.3. Waste Management Licensing.

5.6.4. Statutory Nuisance.

5.6.5. Water Resources Act (WRA) 1991.

5.6.6. Radioactivity.

5.6.7. Other regimes.

Chapter 6: Liaison and Communication Strategies. Page 73

This section identifies liaison mechanisms (e.g. contact points within and without the authority).

- 6.1. Consultation.
 - 6.1.1. Statutory consultees.
 - 6.1.2. Non-statutory consultees.
 - 6.1.3. Owners, occupiers and other interested parties.
- 6.2. The inspection process.
 - 6.2.1. Statutory powers of entry.
 - 6.2.2. Notification of identification/determination of contaminated land.
 - 6.2.3. Prior to serving of remediation notice.
 - 6.2.4. Informing neighbouring owner/ occupiers.
 - 6.2.5. Voluntary remediation of contamination.
- 6.3. Transboundary considerations – transboundary pollutant linkages.
- 6.4. Risk communication.

Chapter 7: Programme for Inspection. Page 83

- 7.1. Criteria for selecting areas and individual sites.
- 7.2. Activities to be undertaken.
- 7.3. Timetable.
- 7.4. Arrangements for carrying out detailed inspection.
 - 7.4.1. Powers of entry.
 - 7.4.2. Site specific liaison.
 - 7.4.3. Methods of Inspection.
 - 7.4.4. Health and safety procedures.
 - 7.4.5. Potential Special Sites.
 - 7.4.6. Making arrangements for external appointment of consultants.

Chapter 8: Review Mechanisms. Page 89

- 8.1. Review of assumptions and information (triggers for inspection).
- 8.2. Review of Strategy Document (timetable and triggers for early review).
- 8.3. Audit of inspection procedures.

Chapter 9: Information Management.

Page 91

- 9.1. General Principles.
- 9.2. Information content.
 - 9.2.1. Register contents.
 - 9.2.2. Other information.
- 9.3. Information Management System (IMS).
- 9.4. Administration.
- 9.5. Use by other LA departments.
- 9.6. Confidentiality of information.
 - 9.6.1. Registers.
 - 9.6.2. Other information.
- 9.7. Arrangements for giving access to information.
- 9.8. Dealing with requests for information.
- 9.9. Provision of information to the Environment Agency.
 - 9.9.1. Nature, extent and distribution of Contaminated Land.
 - 9.9.2. Remediation undertaken.
 - 9.9.3. Regulatory activity.
 - 9.9.4. Collection of Information from Local Authorities.

Chapter 10: Remediation.

Page 99

- 10.1. Remediation of contaminated land.
 - 10.1.1. Standard of Remediation.
 - 10.1.2. Volunteered Remediation.
 - 10.1.3. Definition of remediation.
 - 10.1.3. Remediation process.
 - 10.1.4. Remediation process.
 - 10.1.5. Remedial options.
 - 10.1.6. Remediation standards.
 - 10.1.7. Detailed specification.
 - 10.1.8. Implementation and post-works activities.
- 10.2. Interaction between the planning and contaminated land regimes.
 - 10.2.1. Planning Control.
 - 10.2.2. Building Control.
- 10.3. Recovering Costs.

- 10.4. Remediation Process.
 - 10.4.1. Site Characterisation.
 - 10.4.2. Risk Assessment.
 - 10.4.3. Site Restoration.
 - 10.4.4. Implementation and verification.

Appendix 1	Type of receptor and categories of significant harm.	Page 109
Appendix 2	Description of significant harm to a receptor.	Page 111
Appendix 3	IPC/IPPC processes within Halton.	Page 113
Appendix 4	Licensed waste facilities within Halton.	Page 119
Appendix 5	Former landfill sites and other <i>possibly</i> contaminated land in Halton District.	Page 123
	Glossary of terms used.	Page 135

Chapter 1: Introduction.

This section sets out the background to the strategy to be adopted by the local authority.

Index.

1.0. Introduction.

1.1. General Council Policy.

1.1.1. Halton Borough Council - Strategic Priorities.

1.1.2. Environmental Issues.

1.1.3. Enforcement.

1.1.4. Land Contamination More Generally.

1.1.5. Public Access to Information.

1.1.6. Consultation and Involvement of Community Groups.

1.2. Regulatory Context.

1.2.1. Delegation of duties in Halton.

1.2.2. Government role.

1.2.3. Halton's role.

1.2.4. Regulatory Role of the Environment Agency under Part IIA.

1.2.5. Determination of contaminated land.

1.2.6. Regulatory Role of Local Authorities under Part IIA.

1.2.7. Definition of Contaminated Land under Part IIA.

1.2.8. Principles of Risk Assessment.

1.2.9. Requirements for Strategic Approach.

1.2.10. Other Relevant Sections.

1.3. Development of the Strategy.

1.3.1. Overall Approach.

1.3.2. Consultation with the Appropriate Bodies.

1.4. Objectives of this Strategy Document.

1.4.1. Halton's Vision.

1.4.2. Government's Objectives.

1.4.3. Contaminated land inspection strategic objectives.

1.0. Introduction.

Under the new contaminated land provisions contained in Part IIA of the Environmental Protection Act 1990, each local authority has to “cause its area to be inspected from time to time for the purpose of identifying contaminated land” (Section 78b). If contaminated land is identified that local authority must ensure that it is managed in an appropriate manner. The Secretary of State has issued Statutory Guidance to local authorities on the implementation of Part IIA in England. Part B of this Statutory Guidance requires local authorities to take a “strategic approach” to inspecting their areas and to describe and publish this in a written strategy.

This inspection strategy sets out below how Halton proposes to implement its inspection duties under Part IIA. The strategy provides not only inspection arrangements and procedures, but also a justification for, and transparency in, Halton’s decisions on how they will inspect their areas for contaminated land. The strategy also sets out to ensure that all those affected by, and involved in inspection, have the same clear understanding of the rationale for inspection, how this will be carried out and over what time-scale.

1.1. General Council Policy.

The document “Building a Better Future”, describes the Council’s Corporate Plan and is a key tool linking the Halton Vision to the Council’s plans and strategies and helping to translate them into action on the ground.

A key strategy referred to in that document and reflected in this strategy states that “the Council aims to promote the sustainable development of Halton as a place where people are happy and proud to live, work and bring their families in a borough offering good homes and amenities within a pleasant environment”.

1.1.1. Halton Borough Council - Strategic Priorities.

A Community Leadership.

Providing effective community leadership to improve the economic, social, cultural and environmental quality of life in the Borough and the well being of local people.

[The following are ranked in descending order of priority]

B Health.

Working with partners and local people to create a healthier community.

C Urban renewal.

Transforming the physical fabric and infrastructure, restoring derelict sites and creating a vibrant Borough that makes Halton a place where people are proud to live and see a promising future for them and their families.

D Life chances and employment.

Enhancing the personal development, training, employment opportunities and overall life chances of local people.

E Poverty and deprivation.

Tackling the widespread poverty and deprivation in the Borough.

F Safe & Attractive Neighbourhoods.

Ensuring pleasant and secure neighbourhood environments, with attractive, safe surroundings, clean, well-lit streets and walk ways, and good quality local amenities.

Guiding Principles.

Our actions should reflect the principles set out in the Council's Vision and should be:

Sustainable - improving the quality of life for today's Halton residents without jeopardising that of future generations, in keeping with Agenda 21 principles.

Fair and inclusive - promoting equal access to opportunities and facilities and helping ensure that people or sections of the community are not left out of the opportunities and progress being made in Halton.

1.1.2. Environmental Issues.

The area known as the Mersey Belt was at the forefront of the industrial revolution and consequently developed a large manufacturing base. The area continues to be a major area for manufacturing industries. In and around Halton are located industries such as heavy chemicals, petrochemicals, organic synthesis, and vehicle manufacture. In recent times the region's economy has increasingly moved away from its reliance on traditional manufacturing industries, with the growth of the number of smaller diverse industries.

Industrial activity in the area is a potential contributor to many and varied types of contamination of the environment. However, recent years have seen increasingly effective regulation and many problems previously associated with industry, such as poor air quality and the discharge of dangerous or seriously polluting substances to water and to land, have to a large extent been resolved.

Halton has inherited some serious environmental problems of pollution and dereliction from past industrial activity. Many problems have been effectively addressed and improvements are all too evident. However, concerns still remain and the Council continues to have a key role in addressing these, be they real or perceived.

The Council is actively engaged with the community, stakeholders and regulators through a number of key strategies such as Regeneration, Economic Development, Sustainable Development & Agenda 21 and the Unitary Development Plan, in order to address the varied and challenging environmental issues.

1.1.3. Enforcement.

The Council believes in firm but fair regulation and will abide by the principles laid down in the Enforcement Concordat. Underlying the policy of firm but fair regulation are the principles of:

- Proportionality in the application of the law and in securing compliance.
- Consistency of approach, with transparency about how the council operates.
- What those regulated may expect from us.

There are broadly five elements to our enforcement regime on environmental protection issues:

- Promotion
- Prevention
- Prosecution and formal notices
- Targeting
- Accountability

Halton Borough Council has adopted the central and local government “Concordat on Good Enforcement”. This commits the authority to key principles of good enforcement by its general policy:

- Standards
- Openness
- Helpfulness
- Complaints about service
- Proportionality
- Consistency

This commits the authority to key principles of good enforcement by its procedure policy:

- Advice from officers
- Opportunity for discussion prior to enforcement action
- Explanation of actions taken
- Appeal mechanisms

1.1.4. Land Contamination More Generally.

A particularly prominent issue is the amount of derelict and contaminated land in the Borough. Halton is the home of the UK's Alkali and Chemical Industry and the 19th Century pioneers left a 'legacy' of contaminated sites. Alkali tips overwhelmed Widnes and parts of Runcorn and the contents became known locally as 'Galligu', a waste associated with the LeBlanc process.

In addition to the LeBlanc process wastes, indiscriminate tipping of wastes from tanneries, copper smelting, manufacture of soap, phosphate fertiliser and asbestos cement wastes, added to what was an environmental disaster to the low-lying areas of 'salting' marshes adjoining the River Mersey. The waste was tipped as a form of reclamation of land from the flood plains of the river. Generally tipped to a depth of 3-4 metres, some of these areas extend to 200 acres and are a continuing source of leachate (contaminated rainfall) and pungent odours.

Much has already been done to overcome this legacy, with over 180 hectares of derelict land being reclaimed since 1974, over 170 hectares of which is now in beneficial use. This represents a public investment of more than £20m from the Derelict Land Grant and the Land Reclamation Programme. However, recent industrial restructuring means that the problem is not static!

The 1993 Derelict Land Survey identified 203 hectares of derelict land, mostly corresponding with the old industrial heartland of the Borough, and accounting for almost 3% of Halton's land area. This represented an increase of 88% over 1988. Approximately 82% is owned by the Private Sector, 13% by other public sector agencies and 5% by Halton Borough Council. Since 1988 the proportion of derelict land in private ownership has increased from 55% to 88%, but the proportion of land in Council ownership has fallen from 34% to 5%. The problem of derelict and contaminated land is still large enough to perpetuate the historically poor environmental image perceived of Halton.

1.1.5. Public Access to Information.

Halton Borough Council believes that increasing environmental *awareness* within the community plays an important part in helping to improve the environment. Information will be received or created by the Council in undertaking its contaminated land duties. Notwithstanding any statutory restrictions, which may apply to the disclosure of information, the council intends to be as open as possible.

The Environmental Information Regulations 1992 give legal rights of access to environmental information held by the Council, which will include information about contaminated land.

It is a requirement of the Act that certain information be placed on a Public Register and made available upon request. The public register will be kept in the offices of the Environmental Health and Consumer Protection Department of the Council. Staff will be available who are aware of the reason behind the Public Register, the need for accessibility of information and where to make

further enquiries, should the need arise. In addition facilities will be made available for the public to study and make notes from the Register.

1.1.6. Consultation and Involvement of Community Groups.

As part of this Council's drive to adopt the Governments Modernising Agenda and specifically the Best Value initiative, it has developed a Consultation Strategy¹. This document identifies how the Council should conduct the process of consultation. A Consultation Toolkit² has been prepared to support the Consultation Strategy. During the development and implementation of this Strategy, the Council will adhere to the standards set out in the Consultation Strategy.

In addition to the Council's Consultation Strategy, there are prescribed statutory consultation procedures applicable to contaminated land that the Council will follow. These are described in more detail in Chapter 6.

1.2. Regulatory Context.

1.2.1. Delegation of duties in Halton.

Halton is governed by a cabinet style system. There are seven Executive Board members, who are responsible for portfolios or particular areas of work. The portfolios are designed to pick up key national agendas and to promote integrated service planning, as well as working together on areas that may overlap between portfolios. The Executive Board is led by "the current" Leader of Halton Borough Council and includes the Leader of the opposition.

The responsibility for the contaminated land regime lies within the environment portfolio.

The work of the Executive Board is shadowed by Policy & Performance Boards, which scrutinise decisions made, as well as formulating and developing policy. The Boards are also multi-party and have the power to call on representatives and experts from other organisations for advice and comments. The decisions of both the Executive Board and the Policy & Performance Boards take place in public.

The Council's workload is allocated and delivered through the Directorates and a series of Departments. Each Directorate employs a wide range of highly skilled and dedicated people and is headed by an Executive Director responsible to the Chief Executive. Similar functions are grouped together in these multi-functional Departments to ensure that customers receive high quality, co-ordinated services. Within the Departments specialist Divisions delivers services. The responsibility for developing the contaminated land regime lies with the Executive Director - Environment & Development and with the Operational Director - Environmental Health & Consumer Protection.

¹ Halton Borough Council's Consultation Strategy (March 2000, Version 1)

² Halton Borough Council's Consultation Toolkit (March 2000, Version 1)

Powers and duties vested in the Council have been delegated to Executive and Operational Directors. The Environment Policy and Performance Board will oversee the implementation of this Strategy and receive reports on progress.

1.2.2. Government's role.

The Department of Environment Transport and the Regions [DETR] will be developing performance indicators to assess overall progress by local authorities in the task of identifying and then remediating contaminated land. This will rely on information gathered by the Environment Agency as part of its role in preparing periodic reports on contaminated land.

The indicators will, potentially, include both:

- (a) Measures of the scale of regulatory activities carried out by local authorities and the Environment Agency under Part IIA; and
- (b) Indicators of overall progress in the task of identifying and remediating contaminated land, whether this is the result of voluntary action or a response to regulatory action under Part IIA.

It is the Government's intention in due course to establish targets for overall progress.

1.2.3. Halton's role.

Identification of Contaminated Land and Special Sites will generally begin after Halton has prepared and published its strategic approach to the inspection of its area for the purpose of identification of contaminated land. However, local authorities are not precluded from commencing more detailed investigations on particular areas of land, prior to publication of their strategy. Regardless of whether or not a local authority has published its strategy for inspection, this sub-process begins when the local authority identifies an area of land for further investigation.

1.2.4. Regulatory Role of the Environment Agency under Part IIA.

Local authorities are the principle regulator for inspection of land under Part IIA, however, the Environment Agency also has an important complementary regulatory role under the regime, specifically:

- Advise on the Inspection Strategies of local authorities.
- The provision of information and advice, including site specific guidance to local authorities on matters of water pollution and other matters, where it has specific expertise.
- Inspection of land, on behalf of the local authority, which is likely to be designated a "Special Site".
- Act as the enforcing authority in the case of "Special Sites".

The Borough of Halton lies within the boundary of the Environment Agency's Northwest Region — South Area.

1.2.5. Determination of contaminated land.

The local authority has sole responsibility for determination of land as Contaminated Land. **This responsibility cannot be delegated to any other person or body.**

In determining that land is Contaminated Land, local authorities are directed to use a risk-based approach to the assessment (based on Statutory Guidance in DETR Circular 02/2000 Contaminated Land, Annex 3) and they must have regard to the statutory definition of such land. It is important to recognise that the definition of "Contaminated Land" under Part IIA is narrower than its widely understood meaning and is based on "significant harm or the possibility of significant harm".

The Environment Agency will, however, play an important role in this process through the provision of advice in relation to pollution of controlled waters and through providing information and opinions, gained from the inspection of potential Special Sites on behalf of the local authority.

1.2.6. Regulatory Role of Local Authorities under Part IIA.

The primary regulatory role under Part IIA rests with Halton Borough Council as the responsible local authority. This reflects its existing functions under the statutory nuisance regime and will also compliment its role as the responsible Planning Authority.

In outline, the role of the Council under Part IIA will be:

- 1) To cause its area to be inspected to identify contaminated land.
- 2) To determine whether any particular site is contaminated land.
- 3) To act as enforcing authority for all contaminated land which is not designated as a "special site" (the Environment Agency will be the enforcing authority for special sites).

As the enforcing authority, HBC will have four main tasks:

- 1) To establish whom should bear responsibility for the remediation of the land (the "appropriate person" or persons).
- 2) To decide, after consultation, what remediation is required in any individual case and to ensure that such remediation takes place. This might be either through agreement with the appropriate person, or by the serving of a Remediation Notice on the appropriate person if agreement was not possible or, in certain circumstances, through carrying out the work itself.
- 3) Where a Remediation Notice is served, or where the authority itself carries out the work, to determine who should bear what proportion of the liability for meeting the costs of that work.
- 4) To record certain prescribed information about their regulatory actions on a Public Register.

1.2.7. Definition of Contaminated Land under Part IIA.

Section 78A(2) of the Statutory Guidance defines "Contaminated land" as:

"Any land which appears to the local authority in whose area it is situated to be in such a condition, by reason of substances in, on or under the land, that significant harm is being caused or there is a significant possibility of such

harm being caused; or pollution of controlled waters is being, or is likely to be caused”.

This definition is to be applied in accordance with other definitions in Part IIA and the Statutory Guidance. Assessments made are of risks to human health and the environment, thus reflecting the “suitable for use” approach.

1.2.8. Principles of Risk Assessment.

The definition of contaminated land under Part IIA is based upon the principles of risk assessment. The Statutory Guidance defines risk as the combination of:

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

The Statutory Guidance follows established approaches to risk assessment, involving the concept of contaminant-pathway-receptor (often referred to as source-pathway-target).

There are 3 steps in applying the definition of contaminated land. These are that the local authority must satisfy itself, with respect to a piece of land, that it has identified a). a “contaminant”, b). that a “pathway” (or pathways) exists and c). that a “receptor” is present.. These three concepts are defined below:

- A contaminant is a substance which is in, on, or under the land and which has the potential to cause harm, or to cause pollution of controlled waters.
- A receptor is either:
 - i). a living organism, a group of living organisms, an ecological system or a piece of property, which is in a category listed in Table A as a type of receptor, (see APPENDIX 1) and is being, or could be, harmed, by a contaminant;
 - ii). or controlled waters that are being, or could be, polluted by a contaminant.
- A pathway is one or more routes or means by, or through, which a receptor is being exposed to, or affected by, a contaminant, or could be exposed or affected.

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

Principles of Pollutant Linkages.

The Statutory Guidance refers to a “pollutant linkage”, meaning the relationship between a contaminant, a pathway and a receptor. Unless all three elements of a pollutant linkage are identified in respect of a piece of land, that land will not be identified as contaminated land.

Step 1 is for the local authority to determine that such a pollutant linkage exists in respect of a piece of land.

Step 2 in determining whether land is “contaminated” is for a local authority to satisfy itself that the pollution linkage is:

- **i). Resulting in significant harm being caused to the receptor in the pollutant linkage (Appendix 1 details the categories of significant harm used in the Part IIA regime);**
- **ii). Presents a significant possibility of significant harm being caused to that receptor (Appendices 1 & 2 define what is considered to be the significant possibility of significant harm within the Part IIA regime);**
- **iii). Is resulting in the pollution of the controlled waters which constitute the receptor; or**
- **iv). Is likely to result in such pollution.**

Determination of a “significant pollutant linkage” forms the basis for a determination that a piece of land is statutory contaminated land.

1.2.9. Requirements for Strategic Approach.

The Statutory Guidance requires a local authority to take a strategic approach when compiling and implementing its inspection strategy (section 78B(1)).

This approach should:

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

This strategic approach should reflect local circumstances, in particular it should consider:

- any available evidence that significant harm or pollution of controlled waters is actually being caused;
- the extent to which any receptor is likely to be found in any of the different parts of the authority’s area;
- the extent to which any of those receptors is likely to be exposed to a contaminant;
- the extent to which information on contaminated land is already available;
- the history, scale and nature of industrial or other activities which may have contaminated the land in different parts of its area;
- the nature and timing of past redevelopment in different parts of its area;

- the extent to which remedial action has already been taken by the authority to deal with land contamination problems or is to be taken as part of an impending redevelopment; and
- the extent to which other regulatory authorities are likely to be considering the possibility of harm being caused to particular receptors or the likelihood of any pollution of controlled waters being caused in particular parts of the authority's area.

1.2.10. Other Relevant Sections.

Health and Safety - The Health and Safety at Work etc Act 1974, the Construction (Design and Management) Regulations 1994 (S.I. 1994/3140) and their associated controls are concerned with risks to the public or employees at business and other premises; risks of these kinds could arise as a result of land contamination.

The council already has working liaison links with the Health and Safety Executive through a nominated liaison officer, which will help to ensure that unnecessary duplication of controls is avoided, and that the most appropriate regime is used to deal with any problems.

Landfill Tax - The Finance Act 1996 introduced a tax on the disposal of wastes, including those arising from the remediation and reclamation of land. However, an exemption from this tax can be obtained where material is being removed from contaminated land in order to prevent harm, or to facilitate the development of the land for particular purposes. An Exemption Certificate has to be specifically applied for, through HM Customs and Excise, in each case where it might apply. No exemption certificate will be granted where the material is being removed in order to comply with the requirements of a Remediation Notice served under Section 78E of the 1990 Act.

Food Safety - Part I of the Food and Environment Protection Act 1985 gives ministers emergency powers to issue orders for the purpose of prohibiting specified agricultural activities in a designated area, in order to protect consumers from exposure to contaminated food. The 1998 Act provides for ministers to designate authorities for the enforcement of emergency control orders. Following the coming into force of the Food Standards Act 1999, which establishes the new Food Standards Agency, the above powers are exercisable by the Secretary of State for Health, acting in the light of advice from the Food Standards Agency. The Minister of Agriculture, Fisheries and Food may, however, be designated as an enforcement authority under the 1999 Act, since in some cases his officials will be best placed to monitor compliance in the field. The Food Standards Agency may, in addition, exercise certain functions in relation to emergency control orders issued by the Secretary of State. This includes for example the power to issue consents in relation to certain activities and the power to give directions on compliance with the provisions of an order.

The Council has established links with the Food Standards Agency. There is currently no evidence that agricultural land in Halton is significantly

contaminated or that the agricultural activities present any immediate potential risk but as inspection unfolds the Food Standards Agency will be consulted.

1.3. Development of this Strategy.

1.3.1. Overall Approach.

The legislation reflects the Council's existing functions under the statutory nuisance regime and implementation of this Strategy mirrors the Council's existing approach to that regime. It also complements the planning and redevelopment roles of the Council. The approach will be inclusive, with the Council seeking the co-operation of all parties through open dialogue, when gathering information.

The Council will seek to limit remediation costs to what is needed to avoid unacceptable risks. It will encourage more effective and sustainable recycling of previously developed land and the ability to make beneficial use of such land.

The Council's regeneration process will continue to deal with much of the legacy of contaminated land. However, where the inspection process reveals land where contamination is causing unacceptable risk, the council will in the first instance be looking for voluntary action by owners or occupiers or past polluters, to rectify problems, but will resort to statutory powers when necessary

The inspection of land will be programmed and phased, in order to narrow down in stages from an overview of the whole Borough to specific areas. Local knowledge will be relevant in identifying areas likely to require more detailed investigations.

Throughout the drafting of this document membership of the Merseyside Contaminated Land Officers Group has helped in sharing knowledge and understanding of the Statutory Guidance and the development of a consistent approach. This document, however, reflects local circumstances as found in Halton.

Internal Team Responsible.

The Environment Health Division has drafted this strategy and will take the lead in its implementation. The Service Delivery Plans of the Environmental Health and Consumer Protection Department and the Division will provide the vehicle for delivery of the objectives.

Internal Liaison.

To implement the strategy fully and effectively it is recognised that close internal liaison with the Planning and Economic Development Divisions, as well as the Policy Division, will be essential. Members of the Council will be advised of the progress of the Strategy through reports to the Executive Board, and the Policy and Performance Boards.

1.3.2. Consultation with the Appropriate Bodies.

- a). Environment Agency,
- b). County Council,
- c). Statutory Regeneration Bodies,
- d). English Nature,
- e). English Heritage,
- f). Ministry of Agriculture, Fisheries and Food,
- g). Food Standard Agency.

The Statutory Guidance requires the Borough Council to consult with certain appropriate statutory bodies whilst developing its Strategy. The process for this is set out Section 6.1.

Consultation with Other Organisations.

The Council has well-established consultation procedures with the local community, developed through its Unitary Development Planning and its Agenda 21 preparation process. This will form the basis of any consultation process developed for the purpose of this regime. In addition the Council has produced a Consultation Strategy together with a Consultation Toolkit to assist and guide the process.

1.4. Objectives of Strategy Document.

The development of strategies for specific purposes cannot be undertaken in isolation, but against a wider strategic background intended to improve environmental conditions. Strategic documents such as Building a Better Future, the Community Plan, the Unitary Development Plan, Agenda 21 and Government Objectives on Sustainable Development all provide a backcloth to the Council's contaminated land inspection strategy objectives.

1.4.1. Halton's Vision.

The Council has developed the following "Vision" statement, setting out its broad aims as a Unitary Authority. We aim to be a Council that:

Provides high quality services to meet the needs and aspirations of the people of Halton;

Seeks to improve the quality of life in Halton (economically, socially, culturally and environmentally);

Supplies leadership by:

- being accessible, accountable and responsive,
- working in partnership with the community,
- enabling and empowering local people,
- providing responsible local decision making;

Ensures effective management of services with value for money, strategic management and quality performance;

Provides equal opportunity of access to all services; and

Is a first class employer.

Evidence based - challenging what we do and how we do it: ensuring we address the problems of the Borough in the most effective way and adopt best practice that has been shown to work successfully.

Good value for money - being economical, efficient and effective in delivering 'Best Value' for the public.

Co-operative - taking full advantage of the benefits from the community organisations and groups working constructively together.

We should:

- Aim high not low.
- Be challenging but realistic.
- Be open and honest in our dealings with the public and each other.

Building A Better Future.

"Building a Better Future" is the Corporate Plan for Halton Borough Council covering the Period 1999/2000 to 2003/2004. It is the overall, strategic plan for the Council and sets aims and objectives to deliver the key priorities identified in the Council's Community Plan. It provides a framework for planning Council services and developing the organisation's resources.

Community Plan.

The "Community Plan for Halton" was adopted following extensive public consultation. The Community Plan sets out the key priorities for Halton. The key priorities are;

- A. Providing Effective Community Leadership.
- B. Building Safer Communities.
- C. Improving Housing, Amenities and the Local Environment.
- D. Promoting Prosperity and Creating Employment.
- E. Improving Educational Achievement and Personal Development.
- F. Tackling Poverty and Disadvantage.
- G. Promoting Better Health and Social Well-being.

Unitary Development Plan.

The overall aim of the Unitary Development Plan is to transform the quality of the environment and improve economic prosperity as well as creating a safe and healthy environment.

Local Agenda 21 strategy.

This contains the Council's commitments to sustainable development and a new agenda for the 21st century based on action to meet local needs, while safeguarding the environment for future generations.

Two relevant key aims are:

- 1) Reduce pollution to levels that do not damage the environment
- 2) To provide a safe clean healthy and pleasant environment

1.4.2. Government's Objectives.

The Government's objectives with respect to contaminated land are:

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

These three objectives underlie the **"suitable for use"** approach to the remediation of contaminated land, which the Government considers is the most appropriate approach to achieving sustainable development in this field."

1.4.3. Contaminated land inspection strategic objectives.

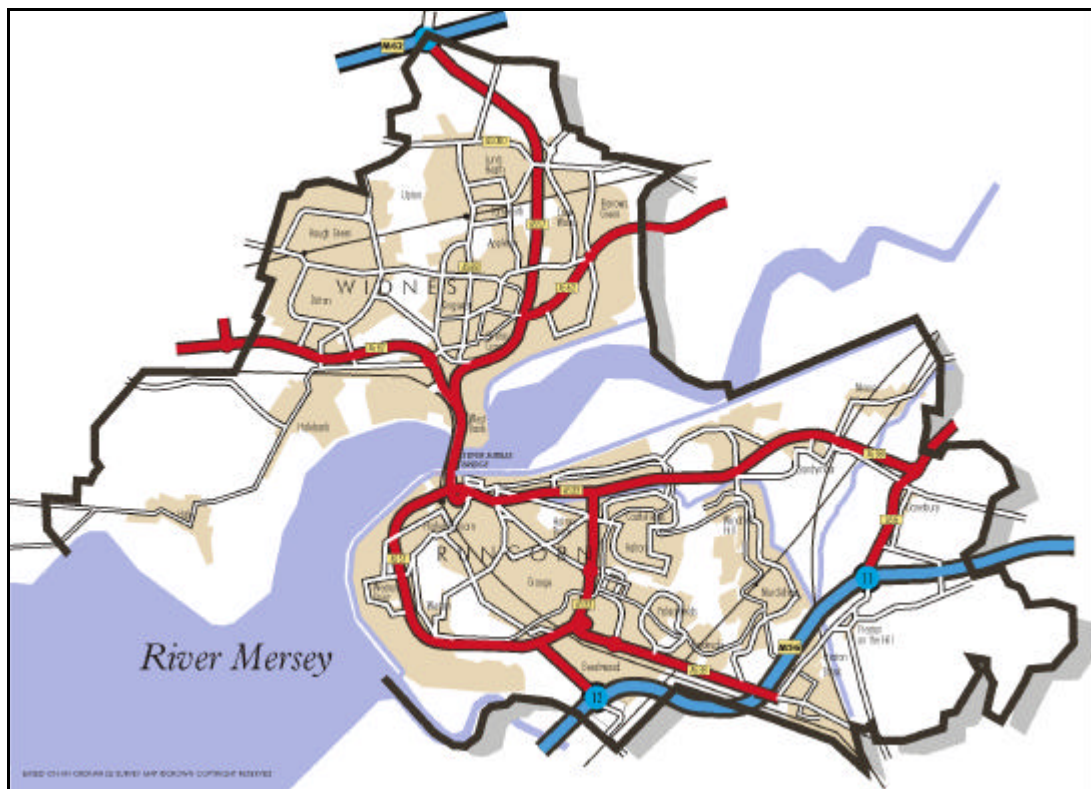
The overall aim of the Strategy is to enable the Council to identify, in a rational, ordered and efficient manner, any land which merits detailed individual inspection, and then to identify the most pressing and serious problems and so direct resources accordingly. The Strategy will enable the Council to respond to contaminated land problems in a manner and with resources proportionate to the risks involved. Chapter 3 gives more details.

Chapter 2: Characteristics of the Borough of Halton.

This section gives the background to the local authority's area and an explanation of how that influences its particular approach to inspection for contaminated land. It will also enable fair comparison with other authorities.

INDEX.

- 2.1. Geographical location.**
- 2.2. Historical background.**
- 2.3. Size and current land-use characteristics.**
- 2.4. Population distribution.**
- 2.5. The Borough of Halton's land ownership.**
- 2.6. Protected locations (natural habitats etc.).**
 - 2.6.1. Protected habitats - Designated sites for nature conservation in Halton.**
 - 2.6.2. Consultation with English Heritage.**
- 2.7. Key property types (e.g. ancient monuments).**
- 2.8. Key water resource/ protection issues.**
- 2.9. Known Information on Contamination.**
 - 2.9.1. Sheffield Hallam University desk reference guide.**
 - 2.9.2. Former landfill sites & other potentially contaminated land in Halton (see also list in Appendix 5).**
- 2.10. Current and past industrial history.**
- 2.11. Geological characteristics.**
- 2.12. Hydrogeological characteristics.**
- 2.13. Specific local features.**
- 2.14. Planning problems and issues.**
- 2.15. Unitary Development Plan - Part 1.**
 - 2.15.1. Strategic Aims.**
 - 2.15.2. Spatial Strategy.**
 - 2.15.3. Strategic Policies.**
- 2.16. Action already taken to deal with contaminated land.**



2.1. Geographical location.

The Borough of Halton sits at the north-westerly corner of Cheshire County on either side of the River Mersey and encompasses the two towns of Runcorn and Widnes, plus the villages of Hale, Moore, Daresbury and Preston Brook. It is situated between Liverpool and Manchester and is the lowest bridging point across the River Mersey.

The Borough formally became Halton in 1974 following a national reorganisation of local government, but links between Widnes and Runcorn stretch back nearly 900 years to the early 12th century, when land on both sides of the river formed part of the Halton Barony.

Widnes developed during the 19th Century around the pioneering early chemical industry. Although chemical manufacturing remains important, the economy has now diversified into a broad range of other manufacturing and service industries. Unfortunately, the legacy of the early chemical industry has left the Borough with a problem of derelict and contaminated land, which limits its scope for re-development and regeneration through brownfield development.

Runcorn developed initially as a canal port in the 19th Century and then associated activities such as shipbuilding, tanneries, soapworks and chemical industries, were developed. It is now home to one of the UK's larger chemical manufacturing complexes and a number of successful modern business and business parks. Runcorn experienced rapid growth in the 1960's and early 1970's following its designation as a New Town in 1964.

The Borough's industrial history is further developed in Section 2.10

2.3. Size and current land-use characteristics.

The total area of the Borough was 7937 hectares in April 1997 (but since extended slightly). This was broken down by area as follows:

Land-use type	Hectares	%
Residential land	2085	26
Employment land	1761	22
Shopping area	18	<1
Farmland plus open space	3723	47
River and estuary	350	4
Total	7937	100

2.4. Population distribution.

The Borough had a population of 122,300 people in April 1997. This was broken down by area as follows:

Runcorn	63,420
Widnes	55,290
Hale	2,010
Moore	740
Daresbury	400
Preston Brook	420

Halton is the most densely populated district in Cheshire with an average of 15.5 persons per hectare.

2.5. The Borough of Halton's land ownership.

The Council is a major landowner with a portfolio of "publicly owned" land in its stewardship. This will need to be considered as part of the strategic investigation of all land contamination within the Authority.

The Council will own land that has been contaminated by past land use, most often as a result of previous landowners, with the land subsequently being acquired or inherited by the Council. However, land may also have been contaminated as a result of the Council's own activities. The Council's land ownership substantially increased in 1998, when land was transferred from Cheshire County Council, some of which is known to be contaminated. The Council must identify any such areas of its land that may pose a threat of significant harm or pollution.

The Council must also identify land it owns which contains sensitive land uses in terms of their potential risk from contaminated land. For example, sites used for schools, allotments, recreational grounds or public openspaces, all introduce the possibility of risk to human receptors. Council owned housing also represents a significant potential human receptor to land contamination.

The Property Services section within the authority is currently conducting "Property Review 2000". This exercise will review all authority owned land and property. A database, detailing sites together with their geographical location, will be created and mapped in a GIS. The review is due to be completed early in 2001. It is therefore intended to use this database to conduct a comprehensive review of the Council's current land holdings.

Additional information will also be extracted from the Community Related Asset Land Register This identifies former Runcorn New Town sites now under Council ownership, some of which may not have been picked up by the "Property Review 2000".

A detailed map showing the location of school property will be obtained from the Educational Directorate via Property Services.

The Council will need to determine if pollution has occurred due to its own activities on its own land, both currently and historically. Hence historic records of sites previously owned and later sold will need to be checked. Property Services hold a relatively complete list of land and property that the Council has sold since 1976, but older records are scarcer and only available on an ad-hoc basis.

The Council also leases property to private organisations that, by their legitimate use of the land, may have caused or be causing contamination.

2.6. Protected locations (natural habitats etc.).

2.6.1. Protected habitats - Designated sites for nature conservation in Halton.

The Council records three categories of protected habitats within its area and these are:

- Sites of international importance for nature conservation (RAMSAR and SPA sites);
- Sites of Special Scientific Interest (SSSI's);
- Sites of Importance for Nature Conservation (SINC's). The location of these sites is shown in Figure 2.1.

i). Sites of international importance for nature conservation (RAMSAR & SPA's).

The RAMSAR Convention on Wetlands of International Importance requires the government to conserve the wetland sites designated under the Convention. The Mersey Estuary was designated a RAMSAR site in December 1995.

Special Protection Areas (SPA's) are designated under the EC Conservation of Wild Birds Directive 79/409, in order to conserve the habitat of sensitive species of birds and to ensure their survival and reproduction. The Mersey Estuary was designated a SPA in December 1995.

Location:

The Mersey Estuary.

ii). Sites of national importance for nature conservation (SSSI's).

The designation of a Site of Special Scientific Interest (SSSI) is made by English Nature. Sites are designated as SSSI's if they are of national importance as areas of special interest by reason of flora, fauna, geology or physiological features, and as such require protection from development.

Locations:

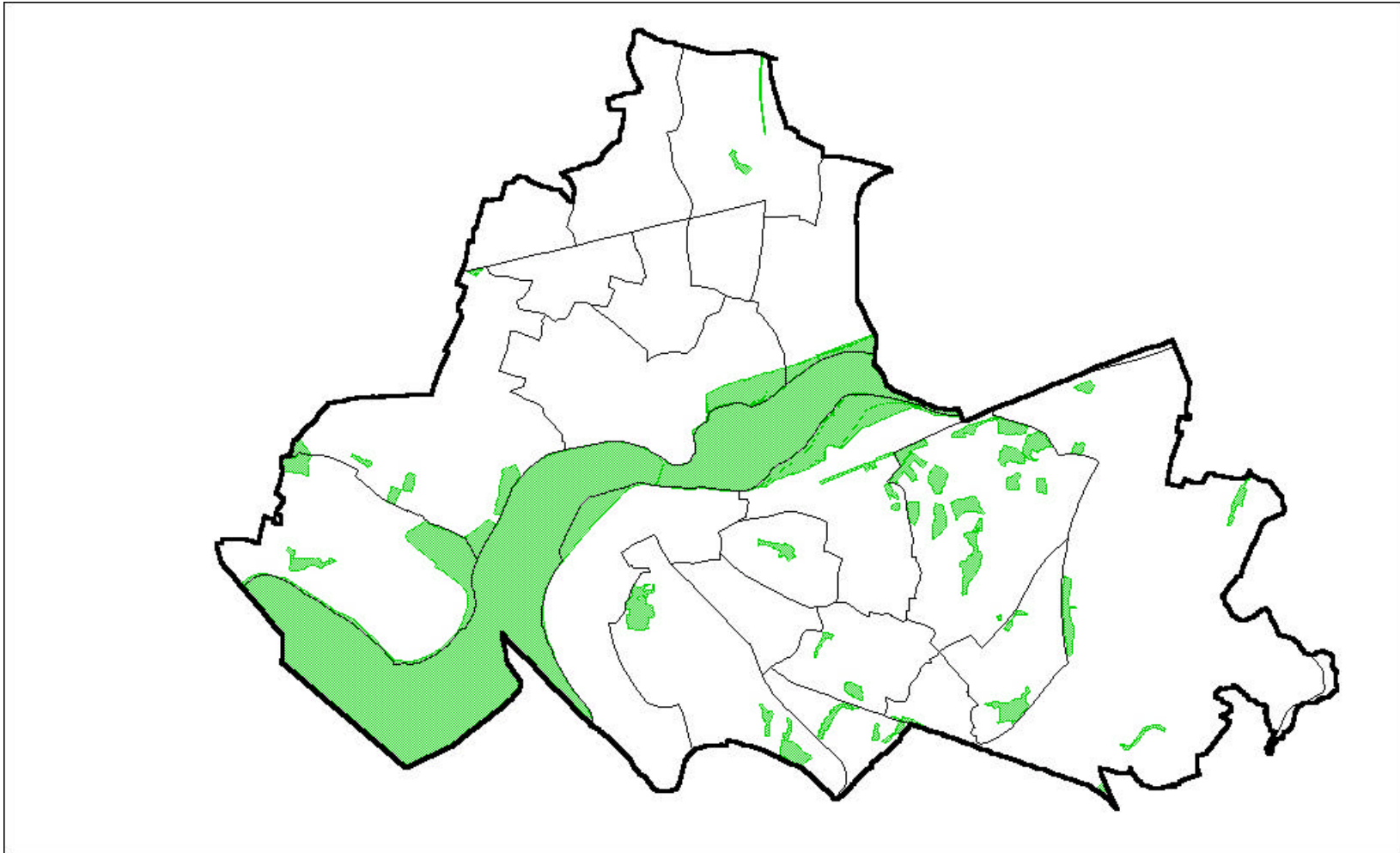
1. The Mersey Estuary.
2. Floodbrook Clough, Runcorn.
3. Red Brow Cutting, Runcorn.

iii). Sites of importance for nature conservation (SINC's).

Sites of importance for nature conservation (SINC's) are recognised by Halton Borough Council and Cheshire Wildlife Trust and are endorsed by English Nature. They are recognised as being of Borough wide importance, because of their special significance as wildlife habitats in the urban environment, or their value to local communities, or other reasons related to their Borough context.

Locations:

1. Barkers Hollow Wood, Preston Brook
2. Beechwood, Runcorn
3. Big Wood, Runcorn
4. Big Boar's Wood, Hale
5. Clifton Lagoon, Runcorn
6. Clifton Cloughs, Runcorn
7. Clinton Wood, Widnes
8. Clough Wood, Runcorn
9. Disused Railway Line, south of Warrington Rd, Widnes
10. Dutton Hospital Wood, Dutton
11. Green Wood and Pitts Heath, Runcorn
12. Haddocks Wood, Runcorn
13. Haddocks Wood Pasture, Runcorn
14. Haystack Lodge, Runcorn
15. Hopyard Wood, Hale
16. Land adjacent Preston Brook Marina
17. Land north of Hallwood Park, Runcorn
18. Land off Lunts Heath Road, Farnworth
19. Land off Dorchester Park, Sandymoor
20. Little Boar's Wood, Hale
21. Lodge Plantation, Runcorn
22. Manchester Ship Canal Bank, Astmoor
23. Manor Park 3 Woodland, Moore
24. Mill Wood, Hale
25. Morts Wood, Daresbury
26. Murdishaw Wood, Runcorn
27. Norbury Wood and Marsh, Runcorn
28. Norton Priory, Runcorn
29. Old Plantation, Hale
30. Oxmoor Wood and ponds, Runcorn
31. Pickerings Pasture LNR, Widnes
32. Pond at Delphfield, Runcorn
33. Pond off Meadway and adjacent grassland, Widnes
34. Ramsbrook Plantation, Hale
35. Rows Wood, Daresbury
36. Runcorn East railway station area
37. Runcorn Hill LNR
38. St. Helens Canal, (reclaimed), Widnes
39. Southern verge embankment A533, Brookvale
40. Sandymoor Wood, Sandymoor



Designated sites for nature conservation (comprises RAMSAR, SPA, SSSI and SINC designations).

41. Stenhills Open Space, Runcorn
42. The Glen, Runcorn Upper Mersey Estuary
43. Widnes Warth and Fiddlers Ferry Saltmarsh
44. Upper Mersey Estuary: Astmoor saltmarsh and swamp
45. Upper Mersey Estuary: Inter tidal areas and open water
46. Windmill Hill Wood, Runcorn

2.6.2. Contaminated land – an archaeological resource.

The sites of some former UK industrial activities are now Scheduled Ancient Monuments. Ground contamination as a consequence of these industrial activities may be part of their “archaeological interest” and this should be considered in a remediation strategy. Hence, where unscheduled former industrial sites are considered for remediation, the English Heritage Inspector for the Northwest will be consulted. The same applies for Listed Buildings and Conservation Areas and other sites not designated at present, which may need protection.

Figure 2.1. Designated sites for nature conservation in Halton.

See page 31.

2.7. Key property types (e.g. ancient monuments).

The Department of Culture, Media and Sports has scheduled seven historic monuments within the Borough: -

	Parish	Reference	Monument	Easting	Northing
1	Hale	27581	Duck Decoy Pond 220 yds SE of Marsh Bridge	347810	382700
2	Halton	27611	Halton Castle	353766	382041
3	Halton	27608	Norton Priory	354840	383080
4	Halton	13435	Lovel's Hall, moated site and fishpond, Widnes	347860	384790
5	Halton	13480	Cranshaw Hall, Moated Site	351758	388735
6	Halton	25704	Standing Cross in St Luke's Churchyard, Farnworth	351741	387749
7	Preston Brook	13483	New Manor Farm, moated site	358058	380390

The Cheshire County Sites and Monuments Record includes over 450 entries listed within the Borough. A full list of these sites will be supplied for use in the Strategy.

2.8. Key water resource / protection issues.

The Environment Agency has supplied Information about surface water quality in Halton. The Agency emphasises that surface waters are a vulnerable receptor and also a pathway for contamination to impact on a receptor. *Source protection zones and private water abstractions are shown in Figures 2.2. & 2.3. (Page 45).*

Water Quality.

The Environment Agency monitors pollution of controlled waters. These include rivers, lakes, ditches, groundwater, estuaries and coastal waters. Monitoring allows the waters to be categorised against targets.

Mersey Estuary.

The Mersey Estuary receives the drainage from Greater Manchester, Merseyside and Cheshire, 5,000 square kilometres, much of which is urbanised. The area has been the home of heavy industry for 200 years and although coal mining and shipbuilding have declined, their place has been taken by oil refining and car production. There are areas of intensive agriculture, including market gardening, arable and livestock farming, with dairy farming particularly important in Cheshire.

The towns of Liverpool, Manchester, Warrington, Runcorn and Widnes all expanded in the 19th century with the Industrial Revolution and with trade with America. However, waste effluents from industry, agriculture and domestic sources continued to be discharged directly into the Mersey with no prior treatment. The pollution associated with discharges into the Mersey is made worse by the physical shape of the estuary, which has a wide shallow basin, but a narrow outlet to the Irish Sea. With tidal ebb and flow it can take 30 days for a pollutant entering Howley Weir to clear the mouth.

Discharges to inland waters began to be controlled following the 1876 Rivers Pollution Prevention Act, however, it was not until the 1974 Control of Pollution Act that full control of discharges to the Mersey Estuary was implemented. The Mersey Estuary was one of the most polluted in Europe and in 1985 a political decision was taken to clean up the watercourse and its catchment area. The Mersey Basin Campaign was launched and since then investment has improved domestic effluent, trade effluent and the agricultural use of chemicals.

In Halton both **Ditton Brook** and the **Manchester Ship Canal** inputs into the Mersey are of poor water quality.

Ineos, Runcorn (formerly ICI) has a number of discharges into the **Weston Canal**, which then drains into the **Manchester Ship Canal** at Sutton Weir. Mercury cathode cells are used in the production of chlorine and the waste brine becomes contaminated with mercury, prior to discharge into Weston Canal. Discharges are now much reduced, but mercury has accumulated in older sediments. Chlorinated organic residues are now air-scrubbed from effluents prior to their discharge and incinerated on site.

All sewage sludge from effluent treatment plants in the Mersey basin is undergoes anaerobic decomposition (generating methane gas) and is then pumped to the Shell Green incinerator, Widnes.

Ditton Brook on the North Bank of the Mersey starts as Prescott Brook in the heavily urbanised area of Prescott. Ditton Brook is canalised after its confluence with Netherley Brook. The watercourses that make up the catchment are of very poor water quality, including **Stewards Brook**, which joins Ditton Brook at its entry into the Mersey Estuary.

The **Bridgwater Canal** has a high amenity value, as does the short section of the **St Helens Canal** that is within Halton. The **Manchester Ship Canal** is of very poor water quality as it receives discharges from industry and from wastewater treatment works.

2.9. Known information on contamination.

There is within the borough considerable information and knowledge about contaminated sites that have undergone regeneration i.e. reports are submitted to the Council prior to redevelopment taking place.

It is certain that landowners throughout the borough have assessed the state of their sites, however, the data has not been co-ordinated into a single useable data base.

From our knowledge of the past industrial usage of land in the Borough, it is possible to make broad-brush assumptions about likely areas of potential contamination. However, the danger of doing this as a basis for prioritisation will be to miss the rational of the inspection strategy. *This is to identify all potential sites before focussing in on those posing greatest risk.*

2.9.1. Sheffield Hallam University desk reference guide.

A desk reference guide produced by Sheffield Hallam University (Paul Syms) provides a useful risk-based classification of land uses. Using this table and the existing knowledge of the Borough it is possible to estimate the number of sites with a history similar to each of these classifications. However, many of these sites have since been developed, even so all sites will need to be assessed or re-assessed.

Risk based classification of land uses.

CLASS	LAND USE CLASSIFICATION	PERCEIVED RISK CATEGORY	Estimated number of sites in HALTON (historical use)
CLASS A	Asbestos manufacture and use	High	2
	Organic and inorganic chemical production not included elsewhere.	High	62
	Radioactive materials processing and disposal	High	1
	Gasworks, coke works, coal carbonisation and similar sites.	High	3
	Waste disposal sites, including hazardous wastes, landfills, filled pits and quarries incinerators, sanitary depots, drum and tank cleaning, solvent recovery.	High	40
	Oil refining, petrochemical production and storage.	High	0
	Manufacture of pesticides.	High	1
	Pharmaceutical industries, including cosmetics and toiletries.	High	1
	Fine chemicals, dyestuffs and pigments manufacturing.	High	1
CLASS B	Paint, varnishes and ink manufacture	High	1
	Animal slaughtering and by-products, including soap, candle and bone works, detergent manufacture.	High	11
	Tanning and leather works.	High	10
	Metal smelting and refining, including furnaces and forges, electro-plating, galvanising and anodising.	High	5
	Explosives industry, including fireworks manufacture.	High	0
	Iron and steelworks.	High	2
	Scrap yards.	High	20
CLASS C	Engineering (heavy and general)	Medium	3
	Rubber Products and processing	Medium	0
	Tar bitumen, linoleum, vinyl and asphalt works.	Medium	0
	Concrete, ceramics, cements and plaster works.	Medium	10
	Mining and extractive industries.	Medium	1
	Electricity generating (excluding nuclear power stations).	Medium	1
	Film and photographic processing.	Medium	0

CLASS	LAND USE CLASSIFICATION	PERCEIVED RISK CATEGORY	Estimated number of sites in HALTON (historical use)
	Manufacture of disinfectants	Medium	0
	Paper and printing works, including newsprint (usually excludes 'high street' printers).	Medium	0
	Glass manufacture	Medium	0
	Fertiliser manufacture	Medium	2
CLASS C	Timber treatment works	Medium	4
	Sewage treatment works.	Medium	2
	Garages, including sale of automotive fuel, repair of cars and bikes.	Medium	50
	Transport depots, road haulage, commercial vehicle fuelling, local authority yards and depots.	Medium	10
	Railway land, including yards and tracks.	Medium	10
	Electrical and electronics manufacture, inc. semi-conductor manufacturing plants.	Medium	3
	Textiles manufacture and dyeing.	Medium	0
	Laundries and dry-cleaning (larger scale, not usually "high street").	Medium	0
CLASS D	Plastic products manufacture, moulding and extrusion; building materials; fibreglass, fibreglass resins and products.	Medium	5
	Dockyards and wharves.	Medium	3
	Food processing, including brewing and malting, distilling of spirits.	Low	2
	Airports and similar	Low	0

2.9.2. Former landfill and other potentially contaminated sites in Halton

Appendix 5 contains the name, location and a brief description of 137 sites that are potentially contaminated.

2.10. Current and past industrial history.

2.10.1. Runcorn and its industrial development.

During the 18th century Runcorn was a holiday resort, renowned for its spa waters and its salt-water bathing. In the 1720's the River Weaver was improved for navigation and this enabled the transshipment of salt and coal and the export of local sandstone. The Bridgewater Canal Docks were completed in 1776 and Runcorn became an important transport hub.

The chemical industry in Runcorn started with a single soap works established in 1803 next to the Bridgewater Canal, with a second works joining it in 1816. In the 1830's both works diversified into chemical products. From 1836 Leblanc alkali and sulphuric acid were produced at Rocksavage Works. The tanning industry became established in Runcorn and there were 7 shipyards. By 1850 the former health resort had gained a reputation for severe atmospheric pollution.

However, the rise of the railways diminished the role of water transport and the chemical industry in Runcorn was overshadowed by the rise of the chemical industry in Widnes. There was no further growth in Runcorn until the establishment in 1898 of the Castner-Kellner Alkali Company in Weston to produce caustic soda by electrolysis.

Runcorn is now home to one of the UK's largest chemical manufacturing complexes. Runcorn experienced rapid growth in the 1960's and 1970's since being designated a New Town in 1964 and now contains a number of business and office parks. However, the legacy of the early chemical industry has left the older parts of Runcorn with a problem of derelict and contaminated land.

2.10.2. Widnes and its industrial development.

Prior to the 1830's the area now named Widnes was agricultural land supporting a number of hamlets. However, in 1832 Widnes Docks were linked both by canal and by railway to St Helens. Coal from St Helens was exported to Cheshire and salt was imported to St Helens to supply the glass and chemical industry.

The chemical industry in Widnes started with a single lime kiln, built in 1847 by John Hutchinson, then the advantages of cheap land plus rail/water communications were quickly realised. Goddage's soap works was established in 1850 and the Gaskell-Dean works in 1855. Within a few years alkali production units extended for 2 miles along the canal. The census records 2,100 residents in 1841 and 30,000 in 1891. The Leblanc soda ash process waste, known locally as "galligu", was deposited on Widnes Marsh and also formed the "Ditton Alps". By the 1880's the industry had diversified and there were 16 soda ash factories and 4 copper smelter/refiners operating. Widnes achieved national notoriety as "the dirtiest, ugliest and most depressing town in England" Daily News 1886.

During the Great War of 1914-18 the range of industry expanded. Chlorine and caustic soda were produced from salt by electrolysis, high-speed alloys produced for armaments and there were both alum and asbestos sheet works. In 1926 much of the chemical industry was absorbed into ICI. Again during the Second World War industrial output grew and included uranium research (ICI) and Bailey bridge production (Widnes Foundry).

In 1956 a detailed survey of industrial processes and boiler plants was undertaken in Widnes. The survey identified 52 major factories manufacturing heavy chemicals, metals, soap, gelatine glue, bone meal, animal food and

fertilisers. There were also premises producing amongst other products; cement and asbestos cement goods, insulating materials, furniture and light engineering products. There were 62 chimneys attached to boiler plant and 37 chimneys from other processes, plus numerous vents and openings at low level that emitted smoke and fume from processes.

The chemical industry remains important, but the economy in Widnes has diversified into a broad range of other manufacturing and service industries. However, the legacy of the early chemical industry has left Widnes with a problem of derelict and contaminated land.

2.11. Geological characteristics.

What follows is a brief introduction highlighting the importance of geology i.e. source / pathway / receptor.

Geology.

The geology of an area can have an important impact on the assessment of contamination. According to its make up, geological strata can act as a **source** of natural contamination, which may impact upon local receptors. For example, methane can occur naturally from coal measures or, radon from granites and sandstones. A geological stratum can also act as a **pathway**, allowing the transport of pollutants from a source to a receptor. The type of geological strata present will affect this transport. For example, sandstones are highly permeable allowing the flow of any pollutants, whereas superficial (Drift) deposits of clay are generally impermeable. Finally, geological strata can act as a major **receptor** for pollutants, hence the vulnerability of strata containing groundwater in exploitable quantities (aquifers) to contamination.

Geological information about Halton has been obtained from:

- The British Geological Survey sheets and memoirs (Solid and Drift Geology),
- The National River Authority (NRA) - Policy and Practice for the Protection of Groundwater, North West Regional Appendix,
- The NRA Groundwater Vulnerability Map for West Cheshire,
- Other commissioned reports.

Solid Geology.

Halton is located on the northern margin of the Cheshire Basin, a large geological depression containing mainly Permian and Triassic rocks. In the Widnes area, the basin is underlain and flanked by the Carboniferous strata of the Coal Measures. Of particular importance for the area is the Sherwood Sandstone Group, which represent a major aquifer, and the Boulder Clays, which overlie and can protect these sandstones. Sherwood Sandstones occupy the western part of the Runcorn peninsula and much of the area to the north of the River Mersey. In the eastern part of the peninsula and the south east of the area, mudstones and siltstones, the Mercia Mudstone Group, overlie the strata. The area has been subject to extensive faulting, the dominant trend being to the Northwest or north, often with considerable downthrow to the east, bringing Mercia Mudstone adjacent to Sherwood sandstones where they outcrop.

The solid geology is poorly exposed in some parts of the area, particularly to the north of the River Mersey, due to extensive quaternary and more recent sedimentary drift cover.

The Sherwood Sandstone Group.

Rocks of the Sherwood Sandstone Group can reach up to 600 metres in thickness. They are subdivided into four sections.

The Mercia Mudstone Group.

To the south of the River Mersey, the Sherwood Sandstone Group is covered by rocks of the Mercia Mudstone Group, which outcrop to the east of the Weston fault (which trends from north to south across the Runcorn Peninsula) and over areas to east and south-east of Runcorn. The Tarporley Siltstones form the lowest part of the Group, consisting of a diverse mudstone, siltstone and fine grained sandstone sequence. These are transitional between the sandstones of the Sherwood Sandstone and the predominantly red brown mudstones of the overlying Mercia Mudstone proper.

Drift geology.

Superficial (drift) deposits, with the exception of a few areas of rock outcrop, cover much of the area. Glacial deposits (boulder clay) widely cover the Sherwood Sandstone to the north of the Mersey, with very occasional sandstone outcrop. South of the Mersey, boulder clay occurs at the surface around much of the margin of the peninsula at varying depths. The boulder clay can be sandy or contain frequent lenses and layers of glacial sands and gravels.

A windblown deposit of Shirdley Hill Sands covers the western margin of the Runcorn peninsula and Hale area. Alluvial deposits and fluvio-glacial sands and gravels flank the Rivers Mersey and Weaver.

Made ground.

“Made Ground” (artificial deposits) underlies many areas of Runcorn and Widnes, often from the infilling of former ditches, pits, quarries and the levelling of sites. In Widnes, much of the former Widnes and Ditton Marsh

area was infilled, raising the area above sea level. “Made Ground” can obviously be very variable in nature. Commonly it consists of ash, clinker, brick, concrete, rubble, clay, sand and various chemical wastes. A significant proportion of the “Made Ground” that underlies much of southern Widnes is made up of alkaline “Galligu” from the Leblanc alkali process. This “soap waste” has also been noted in “Made Ground” at many locations in Runcorn and Widnes.

2.12. Hydrogeological characteristics.

Groundwater is usually of high quality and often requires little treatment prior to use. It is, however, vulnerable to contamination from both diffuse and point source pollutants. These may be from both direct discharges into groundwater and indirect discharges into or onto land. Aquifer remediation is difficult, prolonged and expensive and therefore the prevention of such pollution is a high priority.

Table 2.1. Regional geology and hydrogeology.

Age/ Rock Type	Main Locations	Description	Flow Mechanism	Geological Classification
Alluvium	Throughout Region	Silts clays	Intergranular	Minor aquifer
Fluvioglacial sands and gravel	Throughout Region	Sands and gravels	Intergranular	Minor aquifer
Boulder clay	Throughout Region	Clays and occasional sand lenses	Varied	Non – aquifer
Jurassic	Cumbria	Clays	Fracture	Non – aquifer
Permo – Triassic	Throughout Region	Sandstones shales	Fracture Intergranular	Major aquifer
Carboniferous	Throughout Region	Limestones mudstones siltstones sandstones coals	Fracture	Major/minor aquifer
Devonian	Lake District	Greywackes siltstones	Fracture	Non – aquifer
Silurian	Lake District	Greywackes mudstones siltstones	Fracture	Non – aquifer
Ordovician	Lake District	Mainly tuffs and lavas some limestone	Fracture	Non – aquifer
Igneous and metamorphic of various ages	Lake District	Granites, lava & basalt	Fracture	Non – aquifer

Table 2.2. Classification of regional aquifers.

Major Aquifer	Minor Aquifer		Non-Aquifer
Highly permeable formations usually with the known or probable presence of significant fracturing. High productive strata of Regional importance. Often used for large potable	Fractured or potentially fractured but without high granular permeability. Generally only support locally important abstractions	Variable porous permeable but without significant fracturing. Generally only support locally important abstractions.	Formations with negligible permeability. Only support very minor abstractions if any.
Permo – Triassic sandstones Magnesian limestones Jurassic limestones	Coal Measures Millstone grit Old Red sandstones Silurian limestone	River gravels Glacial sands and gravels	All clays shales marls and siltstones Igneous and metamorphic Mercia mudstones Lias Clay

The NRA Policy and Practice for the Protection of Groundwater, North West Regional Appendix (see reference), shows Halton is underlain by both major and minor aquifers. It classifies the aquifers in the area as follows:

Geologic Strata	Classification	Description
Alluvial Deposits	Minor Aquifer	Variable porous permeable but without significant fracturing. Generally only support locally important abstractions
Sands and Gravels (including Shirdley Hill Sands)	Minor Aquifer	Variable porous permeable but without significant fracturing. Generally only support locally important abstractions
Boulder Clays	Non-Aquifer	Formations with negligible permeability. Only support very minor abstractions if any.
Mercia Mudstones	Non-Aquifer	Formations with negligible permeability. Only support very minor abstractions if any.
Permo-Triassic Sandstones (Sherwood Sandstone Group)	Major Aquifer	Highly permeable formations usually with the known or probable presence of significant fracturing. High productive strata of Regional importance. Often used for large potable abstractions

Groundwater vulnerability.

The NRA Groundwater Vulnerability Map for West Cheshire (Sheet 16) broadly subdivides the area on the basis of vulnerability of groundwater to contamination. This takes into account the distribution of underlying aquifers, the physio-chemical properties of the overlying soils and the characteristics of rock strata in the unsaturated zone (top part of an aquifer where the rock spaces contain air as well as water).

Groundwater source protection zones.

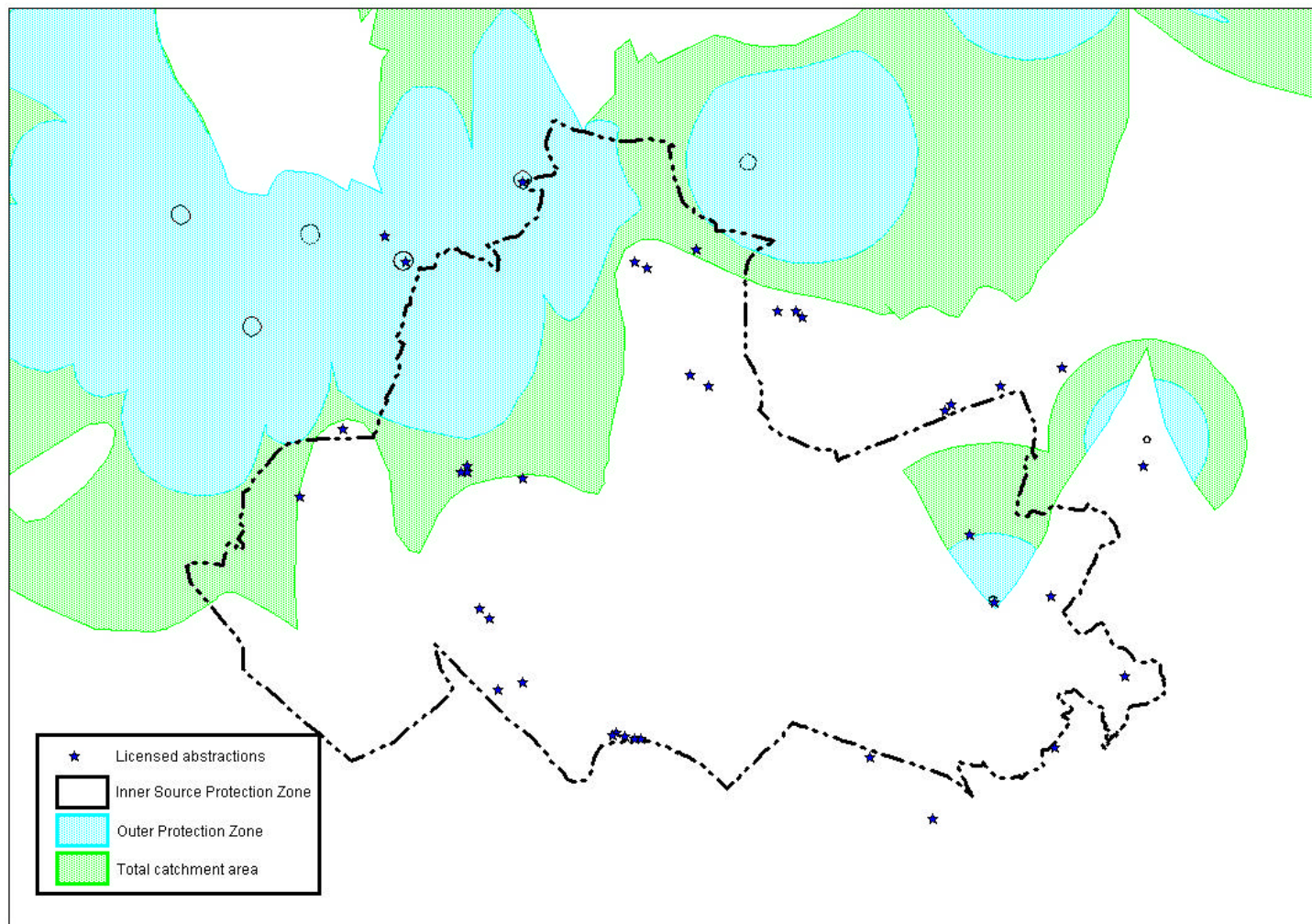
Halton contains the following Groundwater Vulnerability classes:

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

- **Zone I (Inner Protection Zone)** – Zone defined by a travel time of 50 days or less from any point within the zone at, or below, the water table. Additionally, the zone has as a minimum a 50-metre radius. It is based principally on biological decay criteria and is designed to protect against the transmission of toxic chemicals and water-borne disease.
- **Zone II (Outer Protection Zone)** – Zone defined by a 400-day travel time, or 25% of the source catchment area, whichever is the larger. The travel time is derived from consideration of the minimum time required to provide delay, dilution and attenuation of slowly degrading pollutants.
- **Zone III (Total Catchment)** – Zone defined by the total area needed to support the abstraction or discharge from the protected groundwater source.
- **Zone of Special Interest** – For some groundwater sources an additional “Zone of Special Interest” may be defined. These zones highlight areas (mainly on non-aquifers) where known local conditions mean that potentially polluting activities could impact on a groundwater source even though the area is outside the normal catchment of that source.

For further information on SPZs see the Environment Agency’s ‘Policy and Practice For the Protection of Groundwater’ (1998).

Figure 2.2. Source Protection Zones and Private Water Abstractions.



2.14. Redevelopment history and controls.

Planning problems and issues.

Of particular significance for land use planning is the legacy of the chemical industry in Halton. This has left very large areas of land so badly contaminated that they are neither suitable nor commercially viable for development. Much of this land is either in the form of chemical waste tips or in use for low value industrial use, such as open storage and scrap yards. This legacy presents a major disincentive for development in the Borough and makes it impossible to meet the Government policy objectives for most new development to take place on “previously used” land. This peculiar situation in Halton therefore has to be taken into account when evaluating the Unitary Development Plan against national planning policy.

Contaminated land.

The large area and extent of land contaminated by past chemical industries sited in Halton district, particularly in Widnes but also on older areas of Runcorn, imposes a strong constraint to development. Much of this land comprises of chemical fill and contains potentially dangerous and hazardous substances. It is extremely costly to reclaim for beneficial use. The widespread expectation, evident from public consultation, that such new development in Halton can be accommodated on “brownfield land” is clearly not possible, without major public subsidy on a far greater scale than has been available in the past. This is bound to put pressure on “greenfield sites”, particularly for much needed employment development. These points are described fully in the “Strategic Options Issues Report”.

Public consultation response.

The Council has received a range of views as a result of a consultation programme. Within that range of views it is apparent that there is a clear preference for brownfield rather than greenfield development. The draft UDP to some extent departs from these stated preferences, particularly because of the lack of suitable brownfield sites available for housing and employment development within the Borough and for other strategic reasons.

Regional Planning Guidance for the Northwest (RPG 13).

Development framework.

In Halton the scope for “redevelopment, renewal and conversions” has been examined by the Halton Urban Capacity Study and found to be limited, given the extensive amount and costly problem of developing highly contaminated land.

Halton’s Economic Development Strategy.

This strategy is to target environmental improvement and derelict land reclamation in key employment areas, in order to retain and attract industry and commerce into the Borough.

2.15. Unitary Development Plan - Part 1.

This contains the Council's policies and proposals for the development and use of land within Halton district.

2.15.1. Strategic aims – policy objectives and indicators.

Main strategic aim: To transform the quality of Halton's environment and improve economic prosperity and social progress through sustainable development.

➤ **Environmental and cultural assets.**

Aim: To protect and enhance the natural environment and man-made heritage.

Indicator: The area of untreated contaminated land remaining.

➤ **Environmental quality.**

Aim: Make contaminated land safe and bring back into beneficial use.

Objectives:

- a). Deal with the historical legacy of the chemical industry, with its dereliction and contaminated sites.
- b). Ensure that unsuitable development does not take place on or near to contaminated land, if that land has the potential to pollute or the potential to create major accidents.

Indicator: Area of contaminated land treated and brought back into beneficial use.

➤ **Regeneration.**

Aim: Return previously used land to beneficial use.

Objective: Prepare action plans for regeneration of run down areas of Halton in accordance with the Council's Regeneration Strategy.

Indicators:

- a). Area of development on previously used land.
- b). Number of new dwellings on previously used land.

2.15.2. Spatial strategy.

➤ **Greenfield and brownfield development.**

- 1). New sustainable development on the edges of Widnes and Runcorn.
- 2). Regeneration of worn out and unsuitable industrial areas and deprived housing areas in both Widnes and Runcorn, designated as action areas.

Phasing policies will be used to ensure that new uncommitted greenfield housing sites are only released for development after existing brownfield and committed sites are developed. [Note: The very restricted supply of previously used "brownfield" sites in Halton suitable for housing development has been described previously.]

➤ **Housing and employment development.**

The sites allocated for housing have been assessed using “Planning Policy Guidance Note 3: Housing” This guidance includes assessment of the “physical and environmental constraints on development of land, including the level of contamination”. Unfortunately the lack of realistically available sites within existing neighbourhoods has restricted the allocation of such sites, resulting in most of the new housing land being allocated on the edge of the urban area.

➤ **Development areas.**

The North Widnes Development Area comprises land for a mixture of housing and business use (Class B1) for development up to 2011.

This is necessary because the problems of poor location and contamination of the existing land supply in Widnes have failed to attract much needed employment to the town, leading to continued population out migration, low economic prosperity and continued social deprivation.

➤ **Post 2011 development.**

The reason why Halton will continue to rely largely on greenfield sites for post 2011 housing development is because it is recognised that the supply of remediated previously used (brownfield) land in Halton is unlikely to increase significantly in the future. This is due to the legacy of ground contamination that exists, particularly in Widnes, but also the relatively modern buildings and infrastructure of Runcorn New Town. It is considered, therefore, that due to these constraints much of the post 2011 housing development will require greenfield sites on the edge of the urban area.

For employment purposes there will continue to be the need for new sites to be available beyond 2011. It is assumed, based on the evidence of local experience, that land contamination problems in Widnes will continue to restrict the supply of marketable employment land beyond 2011. Safeguarded land is unlikely to meet the whole of Halton’s housing need post 2011. Therefore the Council will have to steadily increase the amount of brownfield housing development land available within the urban areas, through its Regeneration Strategy and particularly by development within the Action Areas proposed in the UDP.

➤ **Regeneration.**

A number of “action areas” (7) are designated in the UDP (for action within 10 years).

2.15.3. Strategic policies.

➤ S1 Regeneration.

Development within these action areas and throughout the Borough will be expected to: - Reclaim derelict and contaminated land and bring such land back into beneficial use.

Justification.

Reclaiming derelict and contaminated land and bringing such land back into use is an essential part of any regeneration programme for Halton. This is due to the amount of contaminated land in the Borough, which is a legacy of the early chemical industry. The UDP allocates this land for appropriate new uses. The larger areas of contamination are covered by the Action Area policies of Part 2 of the UDP.

➤ S6 Reuse and remediation of previously used or contaminated land.

The Council intends to bring all derelict, contaminated and previously used land back to beneficial use, to ensure it is safe for the intended after-use and to ensure it does not cause harm to the environment or to people.

Justification.

- 1). All derelict, contaminated and other previously developed (brownfield) land, which is not in safe and beneficial use, will be assessed for its potential for uses. These might include housing, employment and open space uses, and land will be allocated, reclaimed and decontaminated as appropriate, to ensure it will contribute to the creation of a safe, healthy and prosperous economy, environment and society.
- 2). Land uses should contribute to urban regeneration objectives and to the implementation of "Action Plans".
- 3). Land uses which contribute to urban regeneration, including recreation, tourism, education, amenity, heritage and nature conservation facilities, particularly those which also contribute to environmental initiatives such as the Mersey Forest, Mersey Basin Campaign and the Council's Urban Regeneration Initiatives, will be encouraged.
- 4). Previously used and contaminated land is a wasted land resource, which can be potentially dangerous to health, create a nuisance and help create a poor image. This affects not only the health and overall quality of life of the community but also the investment confidence necessary to bring about the urban regeneration essential to the Borough as a whole. Previously used waste disposal sites are the subject of a 250-metre consultation zone "PPG 23". These sites and the associated consultation zones will be identified in Supplementary Planning Guidance.
- 5). From 1st April 2000 the Council is required to maintain a form of register of contaminated land.

➤ **S18 Provision of land for housing.**

Adequate land will be made available during the period 1996 to 2011 to accommodate 7,735 dwellings.

Justification.

A specific allowance (of around 354 dwellings) has been made in the Plan for future potential brownfield windfalls, on the basis of the work carried out by Pidea in the Halton Urban Capacity Study (1997) and after an examination of past trends (1996-1999). The supply of land from allocations and windfalls will be closely monitored to ensure that there is adequate provision to achieve the key aim of this plan.

➤ **S19 Provision of land for employment.**

Adequate land will be made available during the period 1996 to 2011 to accommodate around 283 hectares for employment uses, including business, general industrial, storage and distribution development.

Brownfield sites are available in the “Southern Widnes Action Areas”. Other sites are greenfield sites, i.e. Manor Park, the “North Widnes Development Area” and the “East Runcorn Development Area”.

2.16. Action already taken to deal with contaminated land.

Much has already been done to overcome this legacy, with over 180 hectares of derelict land being reclaimed since 1974, over 170 hectares of which is now in beneficial use. This represents a public investment of more than £20m from the Derelict Land Grant and the Land Reclamation Programme. However, recent industrial restructuring means that the problem is not static!

The 1993 Derelict Land Survey identified 203 hectares of derelict land, mostly corresponding with the old industrial heartland of the Borough, and accounting for almost 3% of Halton's land area. This represented an increase of 88% over 1988. Approximately 82% are owned by the Private Sector, 13% by other public sector agencies and 5% by Halton Borough Council. Since 1988 the proportion of derelict land in private ownership has increased from 55% to 88%, but the proportion of land in Council ownership has fallen from 34% to 5%. The problem of derelict and contaminated land is still large enough to perpetuate the historically poor environmental image perceived of Halton.

To continue to address this major outstanding issue the Council has produced the Land Reclamation Strategy which provides information on the dereliction problem how it has been tackled and plans.

In dealing with contaminated land over the last twenty years the council has amassed specialist knowledge and experience in site surveys, reclamation engineering and options, and delivering reclamation schemes.

The thrust of the reclamation has been about bringing derelict land back into use both for recreational and industrial/business development purposes. Traditional techniques to cap and stabilise or in some cases remove contamination have been employed.

Chapter 3: The Local Authority Strategy: Overall Aims, Objectives and Milestones.

This section sets out the specific aims of the local authority, which will meet the requirements of the statutory guidance (in particular paragraph B.9) and reflect local authority circumstances. It also suggests specific objectives and priorities for achieving these aims.

Index.

3.1. Aims of the Strategy.

3.2. Strategic Objectives.

3.3. Milestones (Landmark Dates).

3.1. Aims of the Strategy.

The overall aims of the strategy are:

- to match as far as possible the service provided with the priorities and problems identified by the Council;
- to ensure that all the policies of the Council in relation to its duties to inspect and remediate contaminated land are published in one comprehensive document;
- to enable the council to identify, in a rational, ordered and efficient manner, areas of land which merit detailed individual inspection in order to identify the most pressing and serious problems; and
- direct resources accordingly. The strategy will enable the council to respond to contaminated land problems in a manner proportionate to the risks involved.

3.2. Strategic Objectives.

The strategic objectives are:

- to approach land contamination issues in a rational ordered and efficient manner, with planned and appropriate allocation of resources;
- to assess land within Borough for the purpose of identifying potentially contaminated sites;
- to identify any land where contamination is causing an unacceptable risk to human health and/or the environment;
- to return land identified as having an unacceptable risk to a condition where such unacceptable risk no longer exists;
- to ensure that land is made suitable for any new use i.e. planning permission has been granted;
- to assist in the "recycling" of previously developed land;
- to ensure that adequate arrangements exist to liaise internally and externally with appropriate stakeholders and regulatory bodies;
- to ensure that the best practicable techniques are employed to return land to a condition where identified unacceptable risks no longer arise;
- to apportion responsibility, liability and costs in a transparent manner in accordance with statutory guidance;

- to maintain and make available appropriate information to interested persons;
- to act appropriately to any information received about contamination and potential risks in a manner appropriate to the immediacy of any known or potential risk;
- to share with Companies who may be responsible for contamination, as land owners or former land owners, that it is the intention of the Borough Council to allow them to plan their own investment programmes, in order to encourage wider voluntary remediation actions;
- to demonstrate how the Halton Borough will meet the criteria of the statutory guidance; and
- to promote the Councils contaminated land inspection policy and inform the community about them.

Whenever possible contaminated land will be dealt with on a voluntary basis or in conjunction with new development.

3.3. Milestones.

Subject to any unforeseen constraints in resourcing the regime, or any unanticipated circumstances resulting from the inspection regime, the following are anticipated landmark targets:

Action	Landmark Date
Consultation period on strategy document.	February to June 2001
Publish a local strategy/framework for the investigation of potentially contaminated land.	July 2001
Co-ordinate and collate existing information on past uses which may have contaminated the land. Identify the potential contaminated sites.	By December 2002
Develop a plan for information collection and dissemination from and to the community.	By December 2002
Develop a common information management system, utilising GIS, compatible with government guidance.	By December 2002
Characterise the district, identify potential receptors, liaise with the Environment Agency on controlled waters and aquifers.	By December 2002
Appraise information and perform qualitative risk assessment to prioritise sites requiring detailed investigation and liaise closely with the Environment Agency on controlled waters.	By July 2003
Draw up site by site profiles to identify the polluter, land ownership and establish liabilities.	By December 2003
Commence site by site investigation, on a priority basis, as established by risk assessments.	Late 2003 onwards
Seek appropriate remediation projects to remove identified risks on determined sites and recovery of costs, or seeking funding for orphan sites.	Late 2003 onwards
<i>Continual review required.</i>	iterative

Chapter 4: Priority actions and time-scales.

This section describes the focus of the specific approach of the Council, reflecting the context set out in Sections 1 & 2 and the particular aims and objectives of the Council, set out in Section 3. The methods to be used are described in Chapter 5.

Index.

4.1. Priorities.

4.1.1. Procedural.

4.1.2. Investigative.

4.2. Timescales.

4.3. Resources.

4.1. Priorities.

4.1.1. Procedural.

In directing resources to the issues raised by contaminated land and any subsequent assessment of potential hazards and risk, the Council's ranked priorities for action will be to address threats to:

Health.

Residential property.

Surface water.

Deep aquifers.

The Environment Agency has pointed to the possible interaction between these various categories, as pollution of both deep aquifers (drinking water supply) and surface waters (physical contact) can lead to harm to human health.

Activity	Priority rating
Advise and inform all significant stakeholders in the Borough of the implications of this strategy.	A
Complete a prioritisation model procedure.	A
Complete procedural guidance for Council staff.	A
Address in more detail an approach to Council owned land.	A
Develop working protocols for consulting with North Cheshire Health Authority and for assimilating into the Part IIA regime assessments of potential and/or actual risks to health.	A
Work closely with the Environment Agency to develop and document information on controlled water and groundwater that may be at risk.	A
Complete procedural guidance for consultation with Development Control [Planning] on new developments.	A

4.1.2. Investigative.

Activity	Priority rating
Systematically assess all packages of land in the Borough using the methodology outlined, to identify and record any potential contaminated sites.	A
Record and delineate these sites on GIS for further detailed prioritisation.	A
Using a combination of existing knowledge and desktop studies broadly categorise areas of land in the Borough into categories for further more detailed prioritisation [chapter 5 Section 5.5.].	A
Respond to those site/packages of land where existing information confirms a level of risk demanding early intervention by the Council. This will begin with a risk assessment and an assessment of the need either for further information or for site specific investigations.	A
Taking each prioritised category of site in turn, there will be a further detailed desk top study, plus a site walkover/preliminary investigation, to refine the prioritisation based upon pollutant linkage (this methodology will be used for any new information which is received at any time) [chapter 5 Section. 5.5.].	B
Systematically work through listed contaminated sites and produce prioritised lists for detailed risk assessment. [Land undergoing regeneration and subject to council schemes, will be timetabled for investigation, in order to meet the demands of regeneration timetable].	B
Systematically work through each site [packages of land] highest priority sites first and carry out site specific risk assessments [chapter 5 paragraph 5.5.2].	B
Establish a site by site investigation programme of work for those sites so delineated.	B

4.2. Timescales.

Priority A activities will be carried out within 18 months of the publication of this Strategy.

Priority B activities will be sequential and will begin in the second year following publication of this Strategy.

4.3. Resources.

Part 1 of the procedure involves desktop surveys, preliminary prioritisation, initial risk assessment. The Scientific Officer (Contaminated Land) will undertake drafting of procedural documents.

Part 2 of the procedure, detailed site by site investigations, will need additional expertise and analytical support services which, when necessary, will be sought outside the Council. Liability for costs will be based upon the statutory guidance.

Liability for remediation will rest with the polluter, landowner, or occupier and will be recovered in accordance with the statutory guidance.

Where the council is remediating their own sites, or "orphan sites", existing resources within the regeneration group in Economic Development will be utilised.

Where land development requires a full site investigation, the developer will be expected to bear the cost.

Chapter 5: Procedures.

This section contains the information as required in paragraph B.15(c) and (d) of the statutory guidance i.e. details the Council's arrangements and procedures for dealing with the issues of contaminated land.

Index.

5.1. Internal management arrangements for inspections and identification.

5.2. Local authority interests in land.

5.3. Information collection.

5.3.1. Information on potentially contaminated sites.

5.3.2. Information on receptors.

5.3.3. Other information.

5.4. Information and complaints from members of the public.

5.5. Information evaluation.

5.5.1. Methodology.

5.5.2. Use of site specific risk assessment.

5.6. Interaction with Other Regimes.

5.6.1. Planning and Development Control.

5.6.2. Integrated Pollution Control (IPC) and Integrated Pollution Prevention and Control (IPPC).

5.6.3. Waste Management Licensing.

5.6.4. Statutory Nuisance.

5.6.5. Water Resources Act (WRA) 1991.

5.6.6. Radioactivity.

5.6.7. Other regimes.

5.1. Internal management arrangements for inspections and identification.

This section outlines the departmental responsibilities within the authority for inspection and identification of contaminated land. It also outlines areas of delegation to officers and matters that are reserved for decision by elected members.

Within the Council certain departments will have specific responsibilities during implementation of the inspection strategy. Each department will need to delegate an appropriate officer as a contact point for contaminated land. A list of internal officer contacts is shown below in Table 5.1. (See also Section 1.3.2).

Table 5.1. Internal Liaison Contact Points.

Name	Service Area	Responsibilities
Stuart Baxter & Will Watson	Environmental Health & Consumer Protection Department	Environmental Protection duties under the Contaminated Land Regime (Part IIA) & Environmental Protection Act 1990
Rob Barnett	Legal Services	Legal Advice & Enforcement Action
Phil Watts	Development Control	Town & Country Planning – Planning Control
Andrew Pannell	Forward Planning	Town & Country Planning - Development Plans & Strategies
Dave Tierney	Building Control	Building Regulations
Ian Lifford	Landscape Architects	Landscape maintenance & development for the Council
Pat Bickerstaffe	Estates	Estates Officer
	Housing Services	
Alex Villiers	Policy Unit	Consultation Strategies
Keith Hanson	Property Services	Safety and Planning of Construction Projects
Jane Astle	Corporate Communications	Public Relations
Stephen Leng	Highways & Transportation	Civil engineering input and project management
Mike Curtis	Economic Development	Economic regeneration activities and site regeneration

5.2. Local authority interests in land.

The assessment and inspection of local authority land will be undertaken within this strategic framework in common with all other land and by applying the same techniques. It will be subject to the same prioritisation, hazard evaluation and risk assessment scrutiny. Identification, inspection and assessment of former local authority landholdings and other areas where the authority may be the “appropriate person”.

5.3. Information collection.

To identify the presence of contaminated land, the Council will collect data relevant to undertaking a risk assessment procedure. For the purposes of the Strategy development, the Council will need to seek available information on potential contaminant sources and receptors. This will, in turn, allow the Council to prioritise further data gathering. *In certain cases, sufficient information may already be available to determine sites as contaminated land and this will be recorded within the Strategy.*

The Council is in the process of collecting information from other regulatory bodies, as directed by the statutory guidance³. Specific arrangements have been made with such bodies to avoid duplication of effort. *Protection of public health is the main objective of the Strategy; therefore, the identification of significant harm to humans will be given top priority.*

5.3.1. Information on potentially contaminated sites

The identification of potential contaminated sites will form the basis for the Council's risk assessment and prioritisation procedures. Information will be obtained through a series of phased desk studies to identify potentially contaminated sites. Sources for this information will include:

- historical maps (including County Series, Ordnance Survey and local maps);
- internally held information (including Environmental Health files, Planning and Building Control files, Economic Development files, Statutory Public Registers, consultants reports etc);
- regulatory bodies (including the Environment Agency, MAFF and English Nature);
- trade directories;
- aerial and satellite photography;
- Local knowledge (including members of the local community and Halton Borough Council Staff); and Utility companies i.e. United Utilities, TRANSCO and Lattice Properties (formerly British Gas Properties).

³ B.16

5.3.2. Information on receptors.

As discussed in Section 1.2. the principles of Part IIA risk assessment rely upon the identification of potential receptors to contamination.

Table 5-2 shows the receptors of concern relevant to Part IIA.

Table 5.2. Part IIA receptors and their potential locations⁴.

Receptors	Land Use Types
Human beings	Allotments Residential with gardens Residential without gardens Schools or nurseries Recreational / Parks / playing fields & open space Commercial / industrial
Ecological systems or living organisms forming part of a system within protected locations	SSSIs National nature reserves Marine nature reserves Areas of special protection for birds European sites SAC, SPAs Candidate SACs and SPAs Ramsar sites Nature reserves
Property in the form of buildings	Ancient monuments Buildings
Property in other forms (crops, livestock, home-grown produce, owned or domesticated animals, wild animals subject to shooting or fishing rights)	Agricultural land Allotments and gardens Forestry areas Other open spaces, rivers, lakes etc.
Controlled waters	Surface waters Drinking Water Abstractions Source Protection Zones Groundwater – Private Abstractions Groundwater – Major Aquifers

⁴ Box B4.3 Contaminated Land Inspection Strategies – Technical Advice for Local Authorities (DETR April 2000)

Sources for this information will include:

- Environment Agency (for details of controlled waters, including groundwater aquifers and potable water abstractions); *This will include information on actual harm or pollution of controlled waters.*
- North Cheshire Health Authority (health related data);
- English Nature (ecological systems and organisms within protected locations)
- English Heritage (historic monuments);
- Cheshire County Council (historic monuments);
- Halton's Unitary Development Plan (for allotments, residential areas, commercial/ industrial areas, agricultural land and recreational/ parks, playing fields & open space)
- Educational & Social Inclusion Directorate (schools and nurseries)

5.3.3. Other information.

Local information will be sought from the Catalyst Museum, local history societies, voluntary groups, and interested individuals.

5.4. Information and complaints by members of the public.

The Council may receive complaints or information from members of the community regarding contaminated land. Each complaint received will be recorded separately, although several complaints may relate to the same source, or the land already be subject to investigation or other action. (Anonymous complaints or information given anonymously will be evaluated by an investigating officer and responded to on the merits of the information received).

Complaint in this context means receipt by the Council of a request for intervention to address any matter that is alleged to be a hazard, to health or the environment, associated with contaminated land. The complaint may be received by the council in any form i.e. telephone call, letters, personal visit, electronically or via a third party, or it may be made anonymously.

A competent investigating officer will be allocated the responsibility of dealing with the complaint in accordance with Divisional Procedures. Investigating Officers will undertake whatever actions and enquiries they consider necessary to resolve any complaint, having regard to the Departments Procedures, Statutory Requirements and their own professional judgement.

The nature of the complaint will trigger a response that will be proportionate to the nature of the complaint and the initial findings of any investigation. Any imminent risk to persons, buildings or the environment will trigger appropriate

emergency responses, which may include multi-disciplinary intervention. It may be that complaints can be dealt with in the strategic time-scale and no immediate action is taken, or it may trigger a review of the priority given to a particular site.

Procedures for dealing with complaints, or information, will include the need for adequate and effective customer care, from the point of complaint to the point of resolution. Complainants will be kept informed about progress, time-scales, and results of any investigations.

Resolution means:

- No further local authority action is possible or necessary and appropriate advice has been given; or
- Prescribed formal action has been taken; or
- The policy and procedure adopted by the local authority for dealing with contaminated land complaints has been followed through to completion i.e. informal action by negotiation; or
- Reference has been made to another regulatory body outside the local authority's control.

Maintain any appropriate confidentiality.

Whilst the council will endeavour to fulfil requests for confidentiality and will adhere to the measures for maintaining confidentiality in legislation covering, data protection, human rights, freedom of information and the disclosure of evidence. In so doing it will not be able to guarantee confidentiality of information it receives in all circumstances.

5.5. Information evaluation.

A major aim of this Strategy document is to set out how the Council will deal with contaminated or potentially contaminated sites, in an appropriate order. This requires the Council to adopt a set of prioritisation procedures, in order to assign priorities for the further systematic investigation of particular areas of land.

5.5.1. Methodology.

As part of this Council's involvement in developing a pan Merseyside Contaminated Land Information Management System, the Council is developing a risk prioritisation model for the purposes of this inspection strategy. This will utilise a Geographical Information System to enable preliminary prioritisation to be carried out systematically and efficiently.

The methodology used broadly follows the good practice outlined in the DETR report CLR 6⁵. This has been updated to include all the receptor datasets identified in the Part IIA regime and all other currently applicable source and pathway datasets.

⁵ CLR 6: Prioritisation and Categorisation Procedure for sites which may be contaminated, DOE 1995

Part I assessment. Given limited resources, the Council will need to apply a preliminary screening process to assign an initial priority ranking to all sites. This will place sites in one of three groups. Group A sites will be given the highest priority for investigation, followed by Group B sites, but sites of lowest priority will be placed in Group C.

Part II Assessment. Following this initial assessment, sites will be further prioritised within each Group. More detailed information about each site will be required in order to detail the hazards likely to be present, plus the pathways and receptors present. This may involve a more detailed desktop study, site walkover or an exploratory survey. The Part II Assessment will utilise best practice methods available and follow established guidance, including CLR6.

This methodology is based upon the pollutant linkage concept (source-pathway-receptor), investigating the spatial correlation between potential contamination sources and their proximity to potential receptors (as defined in the statutory guidance, see Section 5.3.2).

5.5.2. Use of Site Specific Risk Assessment and Numeric Guidance.

Following the initial prioritisation procedures described in 5.5.1, the Council will have to engage in an in-depth appraisal of contaminated sites. As described previously, any assessment of contaminated land will use a risk-based approach.

When assessing contaminated land the Council will choose the most appropriate method for risk assessment. The current methodologies for assessing the potential health and environmental impacts of land contamination broadly consist of the following:

- site specific risk assessment models;
- generic guideline values; and
- qualitative expert judgement.

The Council will be site-specific when selecting the most appropriate methodology based on the characteristics of a site and the nature of the contamination present.

When using any models, consideration will be given any assumptions underlying any numerical values, any conditions relevant to their use, and any adjustments that need to be made to reflect site-specific circumstances.

1). Site-Specific Risk Assessment Models.

a). Contaminated Land Exposure Assessment Model (CLEA): Technical Basis and Algorithms. *Contaminated Land Research Report 10. (DETR 2000).*

The CLEA model has been developed for the purpose of calculating the concentrations of contaminants in soil below which the risks to human health are considered negligible. The model uses data on the human toxicological

effects of contaminants, information collated by the DETR and the Environmental Agency. *The CLEA model is currently unpublished, but is anticipated in the near future.*

In addition, CLEA has been used to derive guideline values for soils (DETR and Environment Agency, 2000) "Guideline values for Contamination in Soils, Contaminated Land Report GV Series (DETR, in press). Again, the Council is awaiting their publication. When published, these will replace the trigger concentrations of the Interdepartmental Committee on the Redevelopment of Contaminated Land (ICRCL).

Agricultural Land.

DEFRA advice is that if a model such as CLEA is used to assess contaminated agricultural land, it is unlikely to establish a pollution linkage showing plant/animal uptake from soil contamination data. Instead specific information on the receptor should be obtained. Additional advice on soil contamination values is available in Appendix II of DEFRA's "Soil code of good practice".

However, the value of agricultural land is such that it is unlikely that land contamination can be dealt with, other than by either a change in land management, or by a change in land use i.e. from food crops to energy crops or forestry.

b). *Framework for Deriving Numeric Targets to Minimise the Adverse Human Health Effects of long-term Exposure to Contaminants in Soil, (Scotland and Northern Ireland Forum for Environmental Research (SNIFFER)) January 2000.*

This report provides a methodology for deriving site-specific numeric targets for contaminant concentrations in soil that are protective of human health, using toxicological information, according to the source-pathway-receptor risk assessment framework. The exposure pathways considered are direct ingestion of soil, consumption of home-grown or allotment vegetables, inhalation of soil vapours outdoors and inhalation of soil vapours.

It is envisaged that the methodology can be used as both a risk assessment and risk management tool.

2). Guideline Values:

ICRCL 59/83 (2nd Edition, July 1987) – "Guidance on the Assessment and Redevelopment of Contaminated Land".

This document sets out threshold and action trigger concentration levels for a range of contaminants depending on the intended use of the site. The document has been widely used since its publication and is likely to remain so, pending publication of the guideline values and risk assessment models currently being prepared by the DETR.

[Note: ICRCL 70/90 "Notes on the restoration and aftercare of metalliferous mining sites for pasture and grazing" is also available].

3). Use of guideline values.

To simplify risk assessment the Council will use authoritative and scientifically based guideline values for concentrations of the potential pollutants in, on, or under the land in pollutant linkages of the type concerned. When using any appropriate guideline values for the purpose of assessing the risk from contaminated land, the Council will ensure:

- the guideline values used are relevant to the judgement of the potential effects from the pollutant linkage in question i.e. the significant possibility of significant harm;
- the assumptions underlying the derivation of any numerical values in the guideline values are relevant to the circumstances of the pollutant linkage in question e.g. assumptions regarding soil conditions, the behaviour of potential pollutants, the existence of pathways, the land-use patterns, and the availability of receptors;
- any other conditions relevant to the use of the guideline values have been observed e.g. the number of samples taken or the methods of preparation and analysis of those samples; and
- appropriate adjustments have been made to allow for the differences between the circumstances of the land in question and any assumptions or other factors relating to the guideline values.

4). Health related data and health related hazard assessments

The North Cheshire Health authority (NCH) will have a crucial role to play where guideline values do not exist or can be extrapolated. Protocols and procedures will be developed and agreed to allow suitable hazard assessments to be made. The NCH will also be a source of expertise in the hazard review process.

5). Controlled Waters

Advice will be sought from the Environment Agency on risk assessment if controlled waters are the receptor in a particular pollutant linkage. It is anticipated that risk assessment and remediation will be carried out in accordance with Environment Agency guidance. The Environment Agency will normally use the "Methodology for the derivation of remedial targets for soil and groundwater to protect resources" (EA R&D publication 20, 1999), and the ConSim model. The latter has been developed on behalf of the Environment Agency to provide a model to assess the risks posed to groundwater by leaching contaminants.

For surface waters, the Environment Agency will normally seek to protect existing water quality and have particular regard to Environmental Quality Standards.

5.6. Interaction with Other Regimes.

In addition to the Part IIA regime, there are certain other regulatory regimes whose actions have been used to address the issue of contaminated land. In all cases, the Council will liaise with the appropriate regulatory authority where there is potential overlap of interests with the Part IIA regime.

5.6.1. Planning and Development Control.

As part of the Town and Country Act, the Council's Planning Department considered the potential implications of contamination when developing the Unitary Development Plan. The potential implications of contamination are also considered for individual applications for planning permission. Although Part IIA will address *current* contamination issues, it is anticipated that the planning process will continue to be the primary mechanism to assess contamination risks, and set appropriate remediation requirements, on the basis of both the current *and* proposed land use.

Guidance for dealing with contaminated land through the planning process is set out in *Planning Policy Guidance: Planning and Pollution Control (PPG 23) (1994)*, and DOE Circular 11/95 *The Use of Conditions in Planning Permissions*. Further planning guidance on contaminated land (expanding on PPG23) is currently being prepared by the DETR, which will explain the interface with the Part IIA regime from a planning perspective. However, within the terms of the planning guidance, the term "contaminated land" does not refer to the definition used in the Part IIA regime.

Under the Building Regulations 1991, the Council's Building Control Section will also specify specific measures to be taken during construction, to protect buildings and future occupants from the effects of contamination. Guidance on such requirements is given in *Approved Document Part C (Site Preparation and Resistance to Moisture)*.

For new development, it will be the developer's responsibility to carry out the necessary remediation. In most cases, enforcement of remediation requirements will be through planning conditions and building control, rather than through a remediation notice issued under Part IIA.

5.6.2. Integrated Pollution Control (IPC) and Integrated Pollution Prevention and Control (IPPC).

Currently, the IPC regime of authorising specific industrial processes is being progressively replaced by the recently introduced IPPC legislation. All authorised processes will be brought under the IPPC legislation over the next seven years. Under the IPC and IPPC regimes ⁶, the Environment Agency has power to remedy harm caused by land contamination from authorised processes. In such cases, **this Council is precluded from serving a Remediation Notice**. The new IPPC regime has the same relationship to Part IIA as does the IPC regime. However, under IPPC the EA will require the operator of permitted plants to undertake a site condition survey prior to receiving a permit to operate. If an IPPC site meets the definition of

⁶ Section 27, EPA 1990

contaminated land (under Part IIA) then this will trigger the site to become a “special site” and will be dealt with as such by the EA under the Part IIA regime.

[A list of these processes is included in Appendix 3].

5.6.3. Waste Management Licenses.

The EA currently licences and manages waste management activities under Part II of the EPA 1990. This regime can potentially interact in three ways with the Part IIA regime:

- where significant harm or pollution of controlled waters occurs, due to a breach of a site licence under Part II;
- where the contamination results from an illegal dumping of waste; and
- where certain remediation processes on contaminated land may fall within the Part II licensing regime.

In all these circumstances the Council will not be able to serve a remediation notice under Part IIA to remedy harm caused by contaminated land. The Environment Agency has power to act in these cases.

[A list of these processes is included in Appendix 4].

5.6.4. Statutory Nuisance.

The Part IIA regime now replaces the statutory nuisance regime⁷ for dealing with nuisance that consists of, or is caused by, “land in a contaminated state” i.e. all land where there are substances in, on or under the land which are causing harm, or where there is a possibility of harm being caused. However, where land is causing offence to human senses, for example odours, the statutory nuisance regime will still apply.

5.6.5. Water Resources Act (WRA) 1991.

Under the WRA 1991, the EA retains powers to deal with harm to controlled waters being caused by contaminated land. Consequently, there is great potential for overlap between these powers and the Part IIA regime. Therefore, the DETR in conjunction with the EA, has provided guidance on how the two regimes will operate in tandem. Taking this into account, the Council will:

- consult the EA prior to determining that land is contaminated land in respect of pollution of controlled waters;
- take into account any comments the EA makes regarding remediation requirements on contaminated land potentially affecting controlled waters;
- formally identify contaminated land where the EA has identified actual or potential water pollution, caused by land contamination; and
- normally use Part IIA enforcement procedure for land identified as “contaminated land”, rather than the works notice system used by the EA under the WRA 1991.

⁷ Part III of the EPA 1990

5.6.6. Radioactivity.

The Part IIA Regime currently precludes the Council from using these powers when harm or water pollution is attributable to the radioactivity of a substance⁸. The Council is awaiting the finalised document from the DETR which will outline the approach Councils should take when applying the Part IIA regime to this issue.

5.6.7. Other Regimes.

Several other statutory regimes may also overlap with Part IIA, including:

- Food Safety (Part I of the Food and Environmental Protection Act 1985).
- Health & Safety (Health & Safety at Work Act 1974 & Construction, Design & Management Regulations 1994).
- Landfill Tax (Finance Act 1996).
- Major Accident Hazards (Control of Major Accident Hazards Regulations 1999 S.I. 1999/743).

In all cases, the Council will liaise with the appropriate regulatory authority where there is potential overlap of interests with the Part IIA regime.

⁸ Section 78YC, EPA 1990

Chapter 6: Liaison and Communication Strategies.

This section identifies liaison mechanisms (e.g. contact points within and without the authority).

Index.

6.1. Consultation.

6.1.1. Statutory consultees.

6.1.2. Non-statutory consultees.

6.1.3. Owners, occupiers and other interested parties.

6.2. The inspection process.

6.2.1. Statutory powers of entry.

6.2.2. Notification of identification/determination of contaminated land.

6.2.3. Prior to serving of remediation notice.

6.2.4. Informing neighbouring owner/ occupiers.

6.2.5. Voluntary remediation of contamination.

6.3. Transboundary considerations – transboundary pollutant linkages.

6.4. Risk communication.

6.1. Consultation. *(This is linked with to Section 1.3.2.).*

An important component of the preparation and implementation of the Strategy will be the effective liaison and communication with third parties. Establishment of clearly defined links with the appropriate external organisations and individuals at the Strategy preparation stage will ensure efficient consultation, information transfer (a two-way process) and, where necessary, the transfer of regulatory control during implementation of the Strategy.

The consultation being developed as part of the strategy is based upon a genuine invitation to give advice with a genuine consideration of that advice. The draft strategy forms a framework for ongoing, regular, coherent, consistent and sustained communication with the community, so that the council can take full advantage of local knowledge about historic land use. The term community includes all possible groups and organisations, not just local residents, but also business and industry, voluntary organisations and community bodies. The aim is to seek participation and partnership.

6.1.1. Statutory consultees.

The Statutory Guidance requires HBC to consult with certain appropriate statutory bodies whilst developing its Strategy. HBC will circulate a copy of the draft strategy document to the organisations for comment.

Statutory Consultees are:

Environment Agency (Area Contaminated Land Officer)
English Nature
English Heritage
MAFF (DEFRA)
Food Standards Agency
English Partnerships
North West Development Agency

A contact officer has already been established with these consultees to enable the efficient dissemination of information when needed. This has also enabled HBC to take note of any initial concerns expressed by the statutory consultees. Certain consultees are key to providing information and being directly involved in the practical implementation of the Strategy.

The Environment Agency has already contributed a significant amount of background information required for the drafting of this Strategy. The Agency will continue to be a major contributor during the strategy implementation due to their complementary regulatory role to assist Local Authorities in: identifying contaminated land; providing site specific guidance; regulating “special sites”; and compiling details on the statutory regime as a whole. Therefore, the continuation of this effective working relationship with the Agency is imperative to ensure the objectives and issues of the Part IIA legislation are met.

6.1.2. Non-statutory consultees.

In addition to the statutory consultees discussed in **section 6.1.1**, the Council will also consult with other relevant non-statutory parties on the Strategy preparation. This will include key stakeholders from the wider community, in an inclusive approach that recognises the important role the community can play; if the Council is to identify and remediate contaminated land.

Non-statutory consultees will include:

BGS
British Waterways
Chamber of Commerce
Chemical Industries Association
Cheshire County Council
Coal Authority
English Partnerships
Groundwork Trust
Health & Safety Executive
Halton Friends of the Earth
House Builders Federation
Lattice Properties (formerly BG Properties)
Local Health Authority (at present North Cheshire Health Authority)
Ministry of Defence
National Farmers Union
National House Builders Confederation
Neighbouring Local Authorities (Districts of Knowsley, St. Helens, Vale Royal and Warrington)
North West Regional Assembly
Railtrack
Regional Development Agency
TRANSCO
United Utilities (NW Water)
North and Mid Cheshire Chamber of Commerce
Halton Town Centre Steering Group

Parish Councils

Daresbury Parish Council
Hale Parish Council
Moore Parish Council
Preston Brook Council

MP /MEP

Hall, Mike MP
Twigg, Derek MP
Simpson, Brian MEP

Specific local businesses.

Aventis CropScience
Rhodia Consumer Specialities
Asda Stores Ltd
Atofina

Betz Dearborn Ltd
International Flavours and Fragrances
Business Link Halton
Catalloy
Croda Colloids Ltd
DATS (Holdings) Ltd
Eternit UK Ltd
Halton Association of Food Co-ops
Granox Ltd
ICI Chemicals and Polymers
Ineos Chlor/Fluor
Kawneer (UK) Ltd
Rockwood Specialities
Luzenac Micro Milling
Manchester Ship Canal Company Ltd
PDFM Ltd, owners of Albert Square
P&O Transeuropean
Honeywell Electronic Materials
Clariant UK
Wm Morrison Supermarkets PLC

Residents Associations.

Avondale Drive Tenants Association
Brookvale Residents Association
Camelot Residents Association
Castle Rise Residents Association
Castlefields Residents Association
Cherry Sutton Residents Association
Clifton Village Residents Association
Cunninghsm Road Tenants Association
Dukesfield Residents Association
4 DS Tenants Association
Halebank Community Action Group
Hallwood Park Residents Association
Halton Brook Residents Association
Halton Lodge Residents Association
Halton Tenants Federation
Heath Road South Tenants Association
Kendall Road Tenants Association
Kingsway Estate Residents Association
Lacey Street Tenants Association
Lambert Court Tenants Association
Manor Road Tenants Association
Moor Lane Tenants Association
Moorside Tenants Association
Murdishaw Residents Association
Newbank and Manor Tenants Association
Oxford Street Tenants Association

Palacefields Residents Association
Percival Lane Tenants Association
Runcorn Hill Residents Association
Runcorn Residents Federation
Sandymoor Residents Association
Stenhills Tenants Association
Stewards Avenue Tenants Association
The Brow Residents Association
Town Hall Residents Association
Trinity Area Residents Association
Upton Community Association
West Bank Community Association
Westminster Close Tenants Association
Weston Point Residents Association
Weston Village Residents Association
W.R.A.G. (Weston Village)
Widnes New Town Association
Windmill Hill Residents Association

Housing Associations.

Anchor Housing Association
CDS Housing Association
Cosmopolitan Housing Association
English Churches Housing Association
Guinness Trust
Halton Housing Association
Hanover Housing Association
Liver Housing Association
Liverpool Housing Trust
Maritime Housing Association
Riverside Housing Association
Sutton Housing Trust

The general public.

A general awareness campaign will be organised to reach a wider audience i.e. property owners, occupiers and other interested parties.

6.2. The inspection process.

The Council recognises the importance of consensus building when dealing directly with owners, or occupiers and other interested parties, in addition to its intention to consult more widely and generally on the inspection strategy. It will be necessary, as the inspection process evolves, to focus in on smaller groups. The challenge and complexity of the regime is considerable. By engaging with the community local skills knowledge and skills can be utilised. It will provide mutual education and exchange and build trust and confidence between the groups.

6.2.1. Statutory powers of entry.

If necessary, failing all reasonable attempts to gain access to land for the purpose of inspection, the Council can exercise powers under Section 108(6) of the Environment Act 1995. These powers allow the Council to authorise in writing any suitable person to enter premises for investigation. A minimum of seven days notice of the proposed entry will be given to the occupier of the premises. However, in an emergency situation the Council may gain immediate entry to any premises without giving notice.

6.2.2. Notification of identification/determination of contaminated land.

When the Council has identified a piece of land as being contaminated land, it will ensure that the following persons are notified in writing:

- the Environment Agency;
- the owner of the land;
- any person who appears to be in occupation of the whole or part of the land; and
- each other person who appears to be an appropriate person.

The notification will inform the person of their capacity with regard to the Notification e.g. as the owner or appropriate person. The issuing of this Notification will start the Council's official process of consultation on remediation. This requirement is coupled with a moratorium of at least three months following notification of contaminated land, to allow time for such consultation to take place. Where the Council believes it is necessary, the consultation period may be extended further, where it believes a satisfactory conclusion may be reached, or at least the reasonable prospect of such a conclusion. However, consultation may be dispensed with where it appears there is an imminent danger of serious harm or pollution.

The Council will make available to the recipients of the Notification the following information:

- a copy of the written record of determination;
- information on the availability of site investigation reports;
- an indication of the reason why particular persons appear to be appropriate persons; and

- the names and addresses of other persons notified, indicating their capacity i.e. as owner or appropriate person.

The Council will make information available to the appropriate persons informing them of the tests for exclusion from, and apportionment of, liabilities as set out in the statutory guidance⁹.

6.2.3. Prior to serving of remediation notice.

Prior to serving a Remediation Notice the Council will make all reasonable endeavour to consult those persons with an interest in the contaminated land or remediation. Again, consultation may be dispensed with where it appears there is an imminent danger of serious harm or pollution. The Council will consult the following persons:

- the person on whom the notice is to be served (i.e. the appropriate person);
- the owner of the land to which the notice relates; and
- any person who appears to be in occupation of the whole or any part of the land.

Observing the statutory consultation requirement¹⁰, the Council's consultation will, as a minimum, inform any potential recipient of a Remediation Notice of the details of what is being required, and the time within which this must be done. In addition to the statutory requirements the Council will also, wherever possible, seek to consult on the following issues:

- the condition of the land which is regarded as rendering it contaminated land;
- the reasons why harm or the possibility of harm are regarded as significant;
- the range of remediation measures which at the present time appear appropriate;
- the prospect of voluntary remediation;
- who appears to be the appropriate persons to bear responsibility for remediation; and
- whether there are circumstances that would bring the case within any of the exclusion tests described in the statutory guidance.

6.2.4. Informing neighbouring owner/ occupiers.

Before serving any remediation Notice the council will have in its determination of the contaminated land defined the extent of contamination. Circumstances will exist where it will be necessary to advise neighbouring owner/occupiers of the extent of remediation or any investigative work. The council will take a view on the extent and content of any advice to neighbouring owner/occupiers on a site by site basis. This will always be in the context of a fully open and transparent regime and will be in addition to any requirements to keep a public register.

⁹ Chapter D

¹⁰ Section 78H(1) of Part IIA

Informing any complainants.

Complainants will be advised of the initial outcome of their complaint and will continue to be advised of progress until a satisfactory resolution is reached.

6.2.5. Voluntary remediation of contamination.

Where the Council has identified contaminated land, prior to taking formal action, it will liaise with the appropriate person(s) to try to secure a programme of mutually agreed remediation to a satisfactory standard. Although a formal Remediation Notice does not require to be served in this case, the agreed remediation actions must be described in a Remediation Statement, to be published by the person carrying out the remediation.

6.3. Transboundary considerations – transboundary pollutant linkages.

Pollutant linkages may exist across administrative boundaries e.g. a source in Halton may be affecting a receptor in a neighbouring authority or vice versa. The Council will need to:

- identify who will be notified in neighbouring authority if this arises i.e. the appropriate person for consultation and liaison (see contacts list);
- consider establishing a Lead Authority to be agreed between the parties involved;
- be aware that an appropriate person may not be the original source, but be caused by the introduction of a pathway in a neighbouring authority.
- consider the EA's transboundary policy.

6.4. Risk Communication.

Under Part IIA, the Council will be determining the presence of contaminated land using a risk-based approach. Decisions about contaminated land can often be very complex. In many cases, this will impact upon a variety of stakeholders who, in turn, may have an interest in contaminated or suspected contaminated land. Public acceptance of decisions made is very important if contaminated sites are to be remediated successfully and effectively. Therefore, effective risk communication is an integral part of the Strategy.

However, stakeholders may not appreciate that the Part IIA regime only grants limited powers to the Council to deal with contaminated land issues. Some stakeholders may believe any source of contamination in their vicinity should be removed entirely. It is, therefore, essential that the Part IIA principles of "pollutant linkages", "significant harm" and the "potential of significant harm" (as described in Section 1.2.8. & 1.2.9.) should be explained to stakeholders.

Note:

The expectations of some stakeholders will not be met by the Statutory Powers the Council can exercise under the current contaminated land Part IIA legislation.

Continuing on from the consultation process set out in Sections 6.1 and 6.2, the Council will ensure all appropriate stakeholders receive appropriate levels of information, both during the inspection stage of the Strategy and during any ensuing remediation of contaminated land.

Reference will be made to the SNIFFER publication “Communicating Understanding of Contaminated Land Risks” (1999) for further information in formulating any specific risk communication strategy for individual sites.

Following this guidance, the Council will address the four key steps in the process of communicating risk:

Step 1 - When to communicate:

Early dialogue will ensure maximum benefit can be gained and help build trust and understanding with stakeholders. *Continual communication* will be maintained throughout the process.

Step 2 – Who to communicate with:

Identify *appropriate stakeholders*.

Step 3 – What to communicate:

Identify the *key messages* to be communicated, but remain *open, accessible, listening and responsive*. Any strategy developed will remain flexible to deal with the unexpected.

Step 4 – How to communicate:

Seek *professional guidance and support* on communication approaches. A range of different approaches will probably be required. The process will be a *two way process*, respecting the views of all participants.

At all times, the Council's risk communication procedures will maintain *transparency* to promote trust in the regulatory role and *openness* to enhance the legitimacy of the overall process to stakeholders.

Chapter 7: Programme for Inspection.

Index.

7.1. Criteria for selecting areas and individual sites.

7.2. Activities to be undertaken.

7.3. Timetable.

7.4. Arrangements for carrying out detailed inspection.

7.4.1. Powers of entry.

7.4.2. Site specific liaison.

7.4.3. Methods of Inspection.

7.4.4. Health and safety procedures.

7.4.5. Potential Special Sites.

7.4.6. Making arrangements for external appointment of consultants.

7.1. Criteria for selecting areas and individual sites.

Local Issues.

Notwithstanding that the Council intends to follow a strategic approach, based upon an assessment of risk, it will stay alert to local issues, such as development and regeneration opportunities, or unplanned incidents that might demand a review and assessment of a specific site.

Selection of sites for inspection will be based upon the following criteria;

- Identification from a general assessment of possible hazard on the source / pathway / receptor approach, due to the actual presence of a pollutant i.e. an identified potential or known pollution source, an identified receptor or receptors.
- The probability of a source / pathway / receptor link being in operation, based upon current knowledge and professional judgement.

A professional judgement will be made based on the information obtained.

7.2. Activities to be undertaken.

The strategy has been developed in a series of phases with preparation beginning in mid 2000. The project is led by a dedicated officer, who drew upon expertise from within the various Council Departments and from outside agencies.

Phase I.

- Responsibility for production of the strategy delegated to Environmental Health and Consumer Protection Division and the Divisional Manager in Environmental Protection.
- Familiarisation with the guidance and requirements of the regime, identifying any training needs.
- Taking stock of the current position of the Council to date, on contaminated land issues, sources of information and collection / interpretation of existing data.
- Development of suitable and sufficient information handling systems [an ongoing process throughout the project].
- Defining the strategy structure, any noting common elements from existing strategic approaches in environmental areas.
- Drafting an outline strategy to share with elected members and analysing feedback.
- Producing a final draft for wider consultation and analysing feedback.
- Publishing the final document.

Phase 2.

- Produce working protocols for implementing the regime.
- Begin and continue dialogue with stakeholders and interested parties.
- List potentially contaminated sites, then produce a more focussed list.
- Borough wide audit of all sites and an audit of potential receptors.
- Produce list of sites/areas for further evaluation.
- Rank sites by potential risk for further evaluation.
- Identification of potential Special Sites and liaison with the Environment Agency.
- Draft programme for detailed inspection, including invasive investigation.

Phase 3.

Site by site investigations ranked in order of priority. This inspection will involve any or all of the following;

- A detailed historical review of sites and current data.
- Identification of receptors and their location and identification of exposure routes for each receptor.
- Identification of source characteristics.
- Detailed hazard assessment of the likelihood of exposure and the consequences of exposure.
- Risk assessment.
- A visual inspection and limited sampling.
- Detailed investigations to confirm or eliminate risks.
- Review of findings.
- Action plan.
- Remediation design.

All such site investigations will take place in accordance with any current technical guidance and procedures.

7.3. Timetable (See Chapter 4.).

Subject to any unforeseen constraints in resourcing the regime or any unanticipated circumstances resulting from the inspection regime the following are anticipated landmark targets

Phase 1 completed by July 2001.

Phase 2 completed by July 2003.

Phase 3 indeterminate depending on scale of the problem.

7.4. Arrangements for carrying out detailed inspection.

Detailed inspection will involve a combination of in-house and external expertise including the use of consultants. The mix will depend very much on the nature of the problem, the ownership of the land, and the involvement of any developer.

The quality control of the inspection process will remain in house using statutory powers of entry.

7.4.1. Powers of entry.

Section 108 Environment Act 1995.

Appropriate officers of the Council who have demonstrated suitable competence and training will be authorised by the Council to enter land to obtain information and carry out investigations. In addition any appointed representative or specialist appointed by the Council will be authorised. Protocols will be drafted to ensure that the exercise of statutory powers of entry all appropriate information has been gathered prior to any on site investigation and that the local authority are satisfied of the need to use these powers.

7.4.2. Site specific liaison.

At the time of any proposed site visit or investigation site specific liaison will be undertaken with:

Owners

Appropriate persons

Any parties with an interest but in all cases:

Environment Agency

English Nature

English Heritage

A protocol will be drafted to ensure that intrusive investigations do not cause harm to the environment natural resources or site of archaeological interest.

7.4.3. Methods of Inspection.

Protocols will be developed to address the following stages of inspection

- **Collection of documentary information.**
- **Liaison**
- **Visit to the area and visual inspection.**
- **Intrusive sampling.**

7.4.4. Health and safety procedures.

As the Council proceeds to site visits and investigations personnel and the public will need to be protected. The Councils existing health and safety policies and procedures will be augmented to meet any new requirements.

7.4.5. Potential Special Sites.

The Environment Agency has provided the Council with baseline information, which will allow an initial assessment of potential contaminated sites. This baseline information will also be of help in identifying "Special Sites".

The inspection process will identify sites, which *may be* special sites. At this point a request will be made to the Agency for any additional site specific information that they may hold on the site. This will be done *before* any intrusive site investigation is undertaken.

This information will be reviewed and on the basis of the information received a decision will be made on whether to proceed to determination of the site as contaminated. The Agency will then be formally asked to undertake an inspection and will form its own opinion on the status of the site. If both parties agree on the status of the site it will be formally refereed to the environment agency. If parties do not agree the decision lies with the secretary of state.

To aid in the implementation of this procedure the Council intend to draft a working protocol with more detailed procedures.

7.4.6. Making arrangements for external appointment of consultants.

The Council does not currently have a select list of consultants for contaminated land investigation and intend at the moment to appoint consultants on a task-related basis demonstrated by the investigative needs of each specific site.

The Councils service procurement strategy will be utilised and adhered to when procuring external services. This strategy provides a common framework within which all strategic service procurement in Halton is to be carried out in order to: -

- to further the Council's corporate strategy and objectives (which include better quality services)
- to enter into contracts for the delivery of services where the traditional in-house provision no longer offers best value.

The appointment of individual consultants will be subject to the Councils standing orders on contracts and will be balanced between the need to obtain high levels of expertise and best value through competitive negotiated procurement.

Chapter 8: Review Mechanisms.

Index.

8.1. Review of assumptions and information (triggers for inspection).

8.2. Review of Strategy Document (timetable and triggers for early review).

8.3. Audit of inspection procedures.

8.1. Review of assumptions and information (triggers for inspection).

The following new information will trigger a re-evaluation and reassessment of any site;

- New technical guidance on risks or risk assessment.
- Any incident, or unplanned event, that has discharged substances to ground.
- Any development which introduces new receptors.
- New verifiable information from the public or voluntary organisations.
- In response to information from owners, or occupiers of land, or any other interested party.
- New information or guidance from the Environment Agency.
- Any new activity on the land planned or otherwise.

8.2. Review of Strategy Document (timetable and triggers for early review).

The inspection strategy will be automatically reviewed in four years from publication or;

- In response to the government guidance, or any relevant Environment Agency issues, or new and significant technical guidance.
- In response to any new and significant information on harm to potential receptors.
- In the light of practical experience of implementing the regime.

8.3. Audit of inspection procedures.

The inspection procedure will be undertaken in a systematic manner, using formalised procedures to enhance data quality. It will be fundamental to the inspection regime to prepare these procedures and implement and integrate these procedures into working methods, and to ensure that all such working methods are clearly defined and documented.

All procedures will be subject to a systematic internal examination; in order to determine whether activities and related results comply with planned arrangements and whether these arrangements are being implemented.

Records will be maintained to substantiate all inspection procedures and kept active for six years.

The Operational Director, or his nominee, will establish and implement a programme of audits, which will objectively evaluate the adequacy of the systems and inspection procedures. The Divisional manager will review, agree and correct deficiencies revealed by documented audit results.

Chapter 9: Information Management.

Index.

9.1. General Principles.

9.2. Information content.

9.2.1. Register contents.

9.2.2. Other information.

9.3. Information Management System (IMS).

9.4. Administration.

9.5. Use by other LA departments.

9.6. Confidentiality of information.

9.6.1. Registers.

9.6.2. Other information.

9.7. Arrangements for giving access to information.

9.8. Dealing with requests for information.

9.9. Provision of information to the Environment Agency.

9.9.1. Nature, extent and distribution of Contaminated Land.

9.9.2. Remediation undertaken.

9.9.3. Regulatory activity.

9.9.4. Collection of Information from Local Authorities.

9.1. General Principles.

As a general principal the Council will store information in an accessible manner, which is as simple and as logical as practicable, and make it available to the community, notwithstanding any statutory or legal restraints.

To aid and assist access to users of the information, the aim is to standardise the format in which information is stored.

In addition to its specific duties relating to keeping a Public Register the Council will comply with the following current provisions, and any which may be introduced, on the storage, use, sale and dissemination of information owned or obtained from other people or organisations;

- Data Protection Act.
- Environmental Information Regulations.
- Copyright law.
- Current case law.

The Council will recover any reasonable costs incurred when handling requests for information.

9.2. Information content.

9.2.1. Register contents.

Under Section 78R of Part IIA HBC, as an enforcing authority for its area, has a statutory duty to maintain a public register of contaminated land. The register will be held at the Environmental Health Department offices located at the Council Offices in Grosvenor House, Runcorn. It will initially be held in a paper-based format with an aim to eventually place the register in an electronic format. The register is open for public inspection during normal Council office working hours. Copies of register entries can be obtained for which an appropriate and reasonable charge will be made.

The register is intended to act as a full and permanent record of all regulatory action taken by HBC in respect of the remediation of contaminated land, including information about the condition of the land.

Specifically, the register will include information on:

- **Remediation Notices** i.e. site information & remediation information.
- References to **site investigation reports** obtained or provided to HBC relating to the condition of the land or any remediation action, and accessible under the Environmental Information Regulations.
- **Remediation declarations, remediation statements and notifications of claimed remediation.**
- **Other regulatory environmental controls** i.e. land formally identified as contaminated land but dealt with either under IPC or Waste Management Licensing powers, instead of under Part IIA.
- **Discharge Consents (WRA 1991)** into controlled waters, which have impeded specifying particular remediation actions in a remediation notice.

- **Special sites designations.**
- Reference to any **Environment Agency site-specific guidance** issued.
- **Appeals against a remediation notice or charging notice.**
- **Convictions.**

For further information of the particular details to be included in the register see Regulation 15 of, and Schedule 3 to the Contaminated Land (England) Regulations 2000. Details will be added to the register as soon as reasonably practicable after the information they contain is generated.

It should be noted that the public register will not contain records detailing previous contaminative uses and other records used in the investigation of potentially contaminated land. These are research documents and as such will not be made available to the public.

9.2.2. Other information.

Information held will be broadly categorised as;

- Details of location of the land.
- History of the site.
- Interests in the site.
- Contamination and its effects.
- Actions or proposed actions.

The information will comprise a large number of individual records and elements of data.

9.3. Information Management System (IMS).

To fulfil the duties placed upon it by the Part IIA regime, the Council will need to assemble, store and handle a large volume and range of different datasets. To address this issue, the Council has been involved in the development of a common IMS across Merseyside. Input to this system has come from this Council in conjunction with all the Merseyside local authorities and Warrington Borough Council. Technical development of the necessary software has carried out by Merseyside Information Service (MIS) who specialises in data handling systems.

The use of a common system across Merseyside will make it easier to share data and result in economies of scale in development of the system and support once it is in use. In broad terms the IMS will capture, hold and display all the basic information required to develop the Council's strategy. In addition it will facilitate the sharing of information on specific areas, for example, in response to external information requests. An additional facility is currently being developed to aid Part I of the site prioritisation process as described in Section 5.5.

The IMS system will utilise the Council's current MapInfo GIS software package, with the necessary adaptations being completed by MIS.

The **general benefits of using a GIS** for this type of work are several:

- Provides a digital system for systematic data entry and storage. This provides quality control forms part of the process of inputting information, GIS is a highly efficient way of storing huge amounts of data.
- Provides integrated data layers for easier management; different layers of information can be superimposed simultaneously for a given area.
- GIS is a system that allows data to be translated easily into information, such as multi-layered maps or reports, which can support policy-making or planning decisions; if digital 3-D geology were represented in the GIS, it could provide a sound basis for making decisions on underground development plans.
- Provides an updateable knowledge store; if a key person leaves the organisation, the information is left behind in the GIS and not lost.
- GIS is dynamic, versatile and can be interactive with larger modular IT environmental packages.
- GIS can be made to be address-linked; the facility to click on a point or a single address to bring up a whole series of different databases is a powerful method to help answer enquiries for that address point.
- GIS can be customised for automatic report generation; a programme language can be used to co-ordinate selected information that is spatially related to a given area or point on the map; the output to the printer can be programmed as a series of maps, tables, or diagrams with text.
- GIS offers an accessible system for answering customer enquiries; a report writing facility may be required for this function, but once in place, a non-GIS expert can operate the GIS in order to respond to enquiries.
- GIS makes it easier to export and import information to or from internal and external bodies.
- GIS is a way of increasing the efficiency of information transfer.
- GIS is useful when interpreting complex data e.g. the spatial relationships between land use and any soil contaminants present can be explored in GIS making the identification of pollution linkages easier.
- Provides a sound basis for site risk assessments e.g. the GIS databases can be adapted as input files for modelling in LANDSIM, CONSIM and other modelling codes.
- GIS offers a good visualisation facility for presentations to contractors or to Agency staff and the public.
- GIS could be used in training new LA staff; it is possible to draw up a variety of different maps of the area illustrating land use, geology, problem sites etc, for discussion with the newcomer.
- GIS can provide overall cost savings for a LA; more efficient management of environmental information will give long-term advantages as less time and therefore fewer staff are required to prepare information for regulatory or enquiry purposes.

9.4. Administration.

Information will be indexed to facilitate access primarily on geographical location.

A log will be developed and maintained to track any changes to records showing the date of any alteration.

Access will be restricted by password to prevent unauthorised changes and users will generally only have access to working copies.

9.5. Use by other LA departments.

Much of the information generated during the strategy will be of use to other internal Council departments:

- Environmental Health
- Planning (Development Control & Forward Planning)
- Building Control
- Landscape
- Engineering
- Legal
- Economic Development
- Estates
- Property Services

9.6. Confidentiality of information.

9.6.1. Registers.

The Council will ensure no information relating to the affairs of an individual or business shall be included on the register without the consent of the individual or where that information is commercially confidential. The Council will judge if information is commercially according to the procedures laid down in Section 78T of Part IIA.

9.6.2. Other information

During the inspection and determination procedures, the Council will collect information that may relate to the affairs of an individual or business. When dealing with this information on a day to day basis, the Council will consider the provisions laid down in the Environmental Information Regulations 1992, the Local Government Act 1972 and also general issues of confidentiality and data protection legislation.

9.7. Arrangements for giving access to information.

The public register will be kept in the offices of the Environmental Health Division of the Council. Staff will be available who are aware of the reason behind the register, the need for accessibility of information and where to make further enquiries, should the need arise. In addition facilities will be made available for the public to study and make notes from the register. Similar arrangements will exist to view and take notes of other public information pertinent to this regime.

9.8. Dealing with requests for information.

Requests for information will be directed to the environmental health division who will co-ordinate the response. Simple requests may be dealt with by telephone .as a general rule requests for information will be in writing and a response will be given as soon as practicable and within six weeks.

9.9. Provision of information to the Environment Agency.

Under Section 78U of Part IIA the EA is required to publish a report on the State of Contaminated Land in England, the first due to be published in 2002. Local Authorities, as the lead regulators, are to provide the EA with much of the information necessary to write the report. The Local Government Association has drawn up a Memorandum of Understanding with the EA that sets out the exchange of information process. HBC will therefore provide information to the EA following the guidelines agreed at the national level.

The aim of the report will be to assess the scale and significance of the problem and the effectiveness of the measures put in place to address it under Part IIA.

Hence, it will compile information on the following:

- the nature, extent and distribution of contaminated land;
- the level of remediation undertaken (under Part IIA); and
- the level of regulatory activity (under Part IIA)

9.9.1. Nature, extent and distribution of Contaminated Land.

This will be determined from two sources of information supplied by each Local Authority to the EA:

- A copy of their Inspection Strategy; and
- Notification of any site determined to be contaminated land.

9.9.2. Remediation undertaken.

The EA will require each Local Authority to supply a copy of any notice, statement and declaration made for a site. No detailed information for individual sites will be included in the report, however, summary data will be presented.

9.9.3. Regulatory activity.

The EA will need summary information of each Local Authorities regulatory activity. The suggested format for this is on an annual basis, in April/May, for the previous financial year.

9.9.4. Collection of Information from Local Authorities.

To facilitate the easiest and most time efficient method for information collection, the EA has produced three standard forms for the summary information that is required (see Appendix 3):

- Summary form SOCL/LA/FORM1 - When a site is determined.
- Summary form SOCL/LA/FORM 2 – When remediation action is taken for a site.
- Summary form SOCL/LA/FORM 3 – Annual summary of Local Authority regulatory activity.

These forms will be adopted by HBC to fulfil its information reporting requirements. All information will be supplied as soon as the relevant stages of work have been completed. In addition, a copy of the HBC Inspection Strategy will be supplied to the EA on its publication.

Chapter 10: Remediation.

Index.

10.1. Remediation of contaminated land.

- 10.1.1. Standard of Remediation.**
- 10.1.2. Volunteered Remediation.**
- 10.1.3. Definition of remediation.**
- 10.1.3. Remediation process.**
- 10.1.4. Remediation process.**
- 10.1.5. Remedial options.**
- 10.1.6. Remediation standards.**
- 10.1.7. Detailed specification.**
- 10.1.8. Implementation and post-works activities.**

10.2. Interaction between the planning and contaminated land regimes.

- 10.2.1. Planning Control.**
- 10.2.2. Building Control.**

10.3. Recovering Costs.

10.4. Remediation Process.

- 10.4.1. Site Characterisation.**
- 10.4.2. Risk Assessment .**
- 10.4.3. Site Restoration.**
- 10.4.4. Implementation and verification.**

10.1. Remediation of contaminated land.

10.1.1. Standard of Remediation.

Any remediation required under this regime should result in land being 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 the wide range of other factors, such as the underlying geology of the site. Risks therefore need to be assessed on a site by site basis.

The suitable for use approach consists of three elements:

- Ensuring that land is suitable for its current use.
- Ensuring that land is made suitable for any new use as planning permission is given for that new use.
- Limiting requirements for remediation to the work necessary to prevent unacceptable risk to human health or the environment in relation to the current use or future use of the land for which planning permission is being sought.

It is always open for the appropriate person to carry out remediation on a broader basis than this if he considered it in his interests to do so.

The standard to which the relevant land or waters as a whole will be remedied to will be established by considering separately each significant pollutant linkage identified on the land in question.

For each such linkage the standard of remediation will be that which would be achieved by use of a remediation package which forms the best practicable technique for remediation for:

- Ensuring that the linkage is no longer a significant pollutant linkage by doing any one or more of the following: - a). removing or treating the pollutant, b). breaking or removing the pathway or c. protecting or removing the receptor.
- When considering that is the best practicable techniques for remediation in any particular case the Council will work on the basis of authoritative, scientific and technical advice.

Where there is established good practice for the remediation of a particular type of significant pollutant linkage, the Council will assume that this represents the best practicable technique for remediation for a linkage of that type. That is provided that the Council is satisfied that the use of that means of remediation is appropriate, given the circumstances, and that the actions involved would be reasonable having regard to cost and the seriousness of the harm.

Remediation action will be implemented in accordance with best practice, including any precautions necessary to prevent damage to the environment and any other appropriate quality assurance procedures.

10.1.2. Volunteered Remediation.

Where a person carrying out remediation wishes to adopt an alternative remediation scheme to that which could be required in a remediation notice, the Council will consider such a remediation scheme as appropriate remediation. This is provided that the scheme will achieve at least the same standard of remediation, with respect to each of the significant pollutant linkages identified on the land, as would be achieved by the remediation scheme, which the Council would otherwise specify in a remediation notice.

10.1.3. Definition of remediation.

The definition of 'remediation' given in section 78A(7) of Part IIA extends more widely than the common usage of the term (Environmental Protection Act 1990 as amended). It includes not only the actions to restore the "contaminated land", but also the assessment of:

- The land in question;
- Any controlled waters affected by that land; or
- Any land adjoining or adjacent to the land in question.

It also includes subsequent inspections to keep the condition of the land or waters under review. For the purposes of this section, 'remediation' should be understood in these terms, unless the context dictates otherwise.

10.1.4. Remediation process.

Key stages In the Remediation Process.

- 1. Site characterisation (comprising site investigation and risk assessment)
- 2. Formulation of a restoration strategy
- 3. Detailed design specification
- 4. Implementation and post-works activities (including monitoring)

1. Site characterisation.

A site is typically characterised by undertaking site investigations (desk study, walkover survey and intrusive investigations) in association with a risk assessment, to develop a conceptual site model, whereby the source(s), pathway(s) and receptor(s) are identified. A multi-disciplinary approach is especially important for investigations into contamination.

There is no firm dividing line where site investigation ends and risk assessment begins. The purpose of risk assessment is to establish whether a site is likely to pose unacceptable risks to human health or the environment, given its existing or proposed use. Risk is a combination of the likelihood of an event occurring and the consequences if it did occur. The approach adopted by the new regime is for site specific risk assessment.

2. Formulation of a restoration strategy.

A restoration strategy (also known as a remediation plan, or risk management) should be prepared for contaminated sites. It should address the management of the risks identified in the risk assessment, and should not only include details for restoring the site, but also the means of verifying the restoration. In order to do so, the strategy should identify means by which all the source-pathway-receptor links are broken. The table below shows a variety of remedial options. For any one site a number of different means might be employed, particularly if there is a variety of contaminants and/or receptors.

3. Detailed design specification.

Means of remediation	Example(s)
Treatment of source	<i>Remove all contaminated material from the site and dispose of it elsewhere (dig 'n' dump); Treat contaminants on site so that concentration and/or availability is reduced.</i>
Blocking pathways	<i>Break pathway through installation of a physical barrier.</i>
Isolating receptors	<i>Design layout so that receptors cannot make contact with areas of contamination.</i>

Standards.

There are no UK statutory standards for acceptable concentrations of contaminants in soil, as decisions are made on a site by site basis

Detailed specification.

Once an appropriate restoration strategy has been identified the next stage is to prepare a specification to implement the strategy. The detailed design should include health and safety procedures and environmental precautions. An implementation plan should be prepared to specify the works to be undertaken, the provisional remedial targets to be met, the verification procedure to be carried out, and any on-going monitoring to ensure the effectiveness of remedial measures after the works have been implemented.

4. Implementation and post-works activities.

At the implementation stage, once the remedial works have commenced, appropriate records will be kept on the progress of the works. Progress reports (including verification sampling) will enable the implementation to be monitored, and enable the significance of any variations against the implementation plan to be assessed. Modifications to the remedial works may need to be undertaken if remediation standards are not being met.

Ongoing monitoring might be required as part of post-treatment management to demonstrate effectiveness in the long term or as regulation of waste licensing or planning conditions. What constitutes completion of the remedial works should be determined at the outset of the project.

If all contaminants of significance are removed or destroyed at the end of implementation, and the site specific remediation standards have been met, no further action is needed apart from ensuring comprehensive, appropriate documentation is prepared and maintained. If, however, contaminants remain or the end-point of remedial treatment is uncertain, post-treatment management will be required.

In some cases, the carrying out of remediation activities may itself constitute development and therefore require planning permission.

10.2. Interaction between the planning and contaminated land regimes.

10.2.1. Planning Control.

Although the planning and contaminated land regimes are two distinct systems, there is a degree of interaction between them. There are two main circumstances in which Planning Applications and Part IIA procedures may overlap:

- where land is designated as contaminated land under Part IIA, and subsequently the appropriate person wishes to develop the land; and
- Where development of land means, in its new use, that land will be designated as contaminated land under Part IIA.

Development may provide the finance necessary to fund the remediation, for example. In addition, some engineering operations carried out for remediation purposes may require planning permission.

If remediation of Part IIA contaminated land is proposed as part of a planning application, then it is the responsibility of the planning authority to ensure that the land is suitable for the proposed use. In this instance, the proposal to develop the land may represent agreed remediation. The appropriate person would have to supply sufficient information to both the enforcing authority under Part IIA, and to the planning authority, which may require separate documentation of the proposed development. Remediation should be enforced through the planning permission and/or conditions, wherever possible.

If a site is “Part IIA contaminated land”, it is unlikely to be acceptable for such land to remain in a contaminated state for a long period of time awaiting development. By definition the site is causing significant harm or there is a significant possibility of such harm being caused. In the absence of a definite timetable for progress, in a reasonable period of time, the option is available to the enforcing authority to take action under Part IIA to deal with the harm from the current use of the site.

A development proposal may be submitted to the planning authority. In its current use the land is not causing any harm, and therefore is not Part IIA land. However, development may:

- introduce new receptors onto a site, for example by changing the use of the site; or
- Expose new pathways by which contaminants can reach existing receptors.

In either of these instances, development may result in land being designated as Part IIA contaminated land. It is in the developer's interests to ensure that development of the site will not result in designation as contaminated land under Part IIA, and thus become prone to a remediation notice under the contaminated land regime. As with scenario (i) the planning authority should ensure that the land is suitable for its proposed use.

There are also opportunities for sharing information. Under the new regime, local authorities are required to prepare a strategy to identify Part IIA contaminated land in their area. Historical planning records could prove useful to an authority carrying out its Part IIA duties and the subsequent inspection of sites is likely to yield a more thorough information base for councils than has hitherto been the case.

10.2.2. Building Control.

Where it is proposed to build on a contaminated site, particular attention will be paid to the provisions of Part C of the Building Regulations 2000. The intention of Part C is to ensure that measures are taken to protect people, and the fabric of a building, from harm that could be caused by site conditions. Essentially the site beneath a building and ground immediately adjoining that site must have harmful or dangerous substances removed or made safe. Thorough investigation is necessary to ensure that appropriate measures can be taken where there is evidence of such substances.

10.3. Recovering Costs.

Where land is statutorily defined as contaminated land then the provisions of Part II A allow for the recovery of the enforcing authorities remediation costs from the polluter or, if the polluter is unable to be located, from the owner or occupier of the land. However, remediation notices can only require that land is made suitable for its existing use. Where development is involved it is expected that the remediation costs would be borne by the developer.

10.4. The Remediation Process.

10.4.1. Site Characterisation.

A site is typically characterised by undertaking site investigations (desk study, walkover survey and intrusive investigations) in association with a risk assessment, to develop a conceptual site model.

Site Investigation.

Site investigations should always commence with a desk study, so that consideration can be given to health, safety and environmental hazards prior to fieldwork commencing. Information on potential hazards should be translated into a Health & Safety Plan for the work. A key indicator of whether a site is potentially contaminated is the current and/or previous uses.

Several sources of information can be used in an initial investigation to establish the potential for contamination:

- Planning history.
- Current and historical OS maps.
- Current and historical site plans.
- Photographic information.
- Financial records.
- Information about surrounding sites.
- Previous investigations.

The industrial revolution and later industrial developments have left Halton with a considerable legacy of contaminated land and this is an archaeological resource. *Therefore the County Archaeologist will be consulted prior to remediation of historical industrial remains i.e. even trial pits on such sites could provide archaeological information.*

The desk study should be followed by a walkover study if there are indications that contamination may be present, and provided that the initial desk study has indicated that risk to personnel is minimal. A walkover study can provide obvious visual signs of pollution such as oil staining and vegetation stress.

If the initial investigation gives cause to believe that there may be a problem with contamination then further more detailed investigation will be required. Physical site investigations take a variety of forms including:

- Trial pits / Surface samples.
- Boreholes.
- Soil gas and vapour surveys.
- Groundwater monitoring / Surface water sampling.
- Geophysics.

For an effective site investigation an appropriate sampling strategy has to be developed. Data quality is dependent on:

Completeness — the extent to which the available information adequately defines the situation being assessed;

Relevance — the extent to which the information is relevant to the situation being assessed;

Reliability — the extent to which measurements or observations accurately reflect true or likely site conditions and the implications of information gaps on assessment findings; and

Clarity — the extent to which the available information presents a clear and unambiguous account of the situation being assessed.

10.4.2. Risk Assessment.

There is no firm dividing line where site investigation ends and risk assessment begins. The purpose of risk assessment is to establish whether a site is likely to pose unacceptable risks to human health or the environment. Generally it comprises identifying and assessing potential hazards and then estimating and evaluating the degree of risk. Risk is a combination of the likelihood of an event occurring and the consequences if it did occur.

Purposes of risk assessment.

- Systematically determine whether there are any current or potential unacceptable risks to human health or other targets;
- Determine the effects of foreseeable events, such as weather extremes, rising water table, flooding, increases in neighbouring populations etc., on the nature and magnitude of the risks;
- Determine the consequences (e.g. potential impacts on the environment, groundwater resources, human health) of a change of use, development, redevelopment or other works on site;
- Identify the critical contaminants and pathways relevant to the site so that the steps necessary to reduce risks to 'acceptable' levels both currently and in the foreseeable future, can be determined;
- Make judgements about the significance and acceptability of identified risks;
- Help to set objectives and priorities for reducing risks; and
- Provide a rational and defensible basis for discussing a proposed course of action with third parties (e.g. regulators, communities, funding agents, insurers etc.).

Generally risk assessment comprises four main components:

1. Hazard investigation.

- identification of contaminant sources, pathways and receptors, taking into account the actual or intended use of the site and its environmental setting.

2. Hazard assessment.

- consideration of the plausibility of pollutant linkages and determination of the potential for human health and environmental risks.

3. Risk estimation.

- estimation of the risk that identified receptors will suffer adverse effects if they come into contact with contaminants under defined conditions.

4. Risk evaluation.

- evaluation of the need for risk management action having regard to the nature and scale of risk estimates, any uncertainties associated with the assessment process and, where further action is required, the objectives and broad costs and benefits of that action.

This approach allows a view to be taken of the risks posed by the site, given the particular source, pathways and receptors. It also helps to set objectives and priorities for reducing risks so that a restoration strategy can be devised.

10.4.3. Site Restoration.

A restoration plan (also known as a remediation plan, or risk management) should be prepared for contaminated sites. It should address the management of risks identified in the risk assessment and should include details for restoring the site, and also the means of verifying the restoration. Such a plan is an essential part of a planning application for contaminated land. Alternatively, where contamination is only suspected or is of a minor nature the planning authority may wish to make restoration a condition of the planning consent.

Methods of Restoration.

Source, pathway and receptor may be considered as links in a chain. The potential for harm only occurs when the chain is complete. In order to manage risk the links must therefore be broken. This might be done by removing or reducing the source of the pollution by the physical removal of the offending material or by treatment e.g. bio-remediation, incineration or soil washing. Alternatively the pathway may be blocked by, for example, a physical barrier. The final link may be broken by keeping receptors away from the source/pathway e.g. preventing the establishment of sensitive uses on sites that have not been the subject of remediation.

Generally, restoration proposals will entail one of the following:

- Removal of all the contaminated material from the site and disposing of it elsewhere (dig 'n' dump);
- Breaking the pathways through installation of barriers etc.;
- Treatment of contaminants on site such that concentrations and/or availability of contaminants are reduced; or
- Retaining the contaminants in a particular area of the site.

Remediation measures should be evaluated to identify an appropriate and cost-effective strategy to deal with those unacceptable actual or potential risks to human health or the environment which have been identified, taking into account the actual or intended use of the site. For any one site a number of different means might be employed, particularly if there is a variety of contaminants.

The following criteria may be used for the analysis of remedial options:

- Protection and compliance - the ability to provide the necessary degree of protection for receptors, achieve specific remedial objectives and comply with any regulatory requirements.
- Long-term performance and permanence - residual risk remaining at the site after treatment should be considered, and post-treatment management controls should be assessed.

- Technical sufficiency - depends on the nature of the material treated, the quantities of hazardous materials on-site, and the reversibility of the methods and the types of residual materials generated.
- Impacts during implementation - on human health, health and safety of the workforce, and the environment including air, land and water quality and ecosystems.
- Practicality - assess the risks and uncertainties associated with the use of each method in the field and the effects of any known constraints.
- Cost - including pre-implementation costs, implementation costs and longer-term operation and/or maintenance costs.
- Social and community impact and acceptance - any specific requirements or concerns likely to be expressed by the local community.
- Institutional acceptance - potential concerns of owners, investors etc.

10.4.4. Implementation and verification.

The implementation of the restoration plan begins when the preferred remedial strategy has been selected and decisions need to be taken about how it is going to be applied. "Remedial action", may be of a technical nature (i.e. involving direct action on the contaminants or their behaviour) or a non-technical nature (i.e. where action involves the management of receptor behaviour to reduce/alter their ability to come into contact with the contaminants).

The main stages in implementation are:

Management Context: identifying management objectives for the implementation of risk management action and ensuring that the technical, planning and management scope of the preferred remedial strategy is clear and documented.

Design and Procurement: confirming that the remedial works have been designed and specified in sufficient detail for the strategy to be implemented.

Implementation and Verification: ensuring that once the remedial works have commenced appropriate records are kept on the progress of the works (including any variations). Records of verification sampling should be used to confirm that objectives have been met.

Ongoing Monitoring and Maintenance: The purposes, aims and results of ongoing monitoring and maintenance should be recorded.

Appendix 1.

Type of receptor and categories of significant harm	
Type of Receptor	Description of harm to that type of receptor that is to be regarded as significant harm
CHAPTER 3: 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 so far as it is attributable to the effects of a pollutant on the body of the person concerned. This description of significant harm is referred to as a "human health effect".
<i>Any ecological system, or living organism forming part of such a system, within a location which is:</i> • 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 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 English Nature and to the requirements of the Conservation (Natural Habitats etc.) Regulations 1994. This description of significant harm is referred to as an "ecological system effect".

Property in the form of: • crops, including timber; • produce grown domestically, or on allotments, for consumption; • livestock • other owned or domesticated animals; or • 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 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. This description of significant harm is referred to as an “animal or crop effect”.
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. This description of significant harm is referred to as a “building effect”.

(Taken from Statutory Guidance Part IIA)

Appendix 2.

3.1.1.1 Description of significant harm to a receptor.	
Descriptions of significant harm (as defined in Table A)	Conditions for there being a Significant Possibility of Significant Harm
Human health effects arising from the intake of or from direct bodily contact with a contaminant.	This depends on the amount of the pollutant (in the pollutant linkage in question) to which a human receptor in that linkage might take in, or to which such a human might otherwise be exposed, as a result of that pathway. That linkage might represent an unacceptable risk of intake or of direct bodily contact, as assessed on the basis of 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 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.

All other human health effects (particularly by way of explosion of fire)	This depends on whether the probability (or the frequency of occurrence) of significant harm is unacceptable, as assessed on the basis of relevant information concerning the pollutant linkage. 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.
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.
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.
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.

(Taken from Statutory Guidance Part IIA)

Appendix 3. Part “A” Authorisation of Industrial Processes.

Authorisation Number.	Company Name	Address	Ordnance Survey	Section	Process
AO 0261	Atofina	West Bank Dock Estate, Widnes	SJ 350500 384200	4.4(b)	Chlorotoluenes
BA 2440	Atofina	West Bank Dock Estate, Widnes	SJ 350500 384200	4.5(m)	Organic chemicals (organosilicon)
BC 3650	Atofina	West Bank Dock Estate, Widnes	SJ 350500 384200		Acid chlorides & chlorosilane
AK 8708	Atofina	West Bank Dock Estate, Widnes	SJ 350500 384200	4.2	Organic chemicals (benzyle cyanide & derivatives)
AK 8716	Atofina	West Bank Dock Estate, Widnes	SJ 350500 384200	4.2(d)	Organic chemicals (esters)
AL 9645	Atofina	West Bank Dock Estate, Widnes	SJ 350500 384200	4.4(d)	Organic chemicals (aromatic ketones)
AN 9891	Atofina	West Bank Dock Estate, Widnes	SJ 350500 384200	4.2(d)	Organic chemicals (acid chlorides & chlorosilanes)
AJ 5053	Aventis CropScience	Gorse Lane, Widnes	SJ 353200 386100	4.2 (d)	Organic chemicals (Ethofumesate)
AL 7308	Aventis CropScience	Gorse Lane, Widnes	SJ 353200 386100	4.2.(d)	Organic chemicals (Prochloraz)
AK 3986	BetzDearborn	Foundry Lane, Widnes	SJ 349100 384100	4.2(d)	Aqueous polymer solutions
AH 9251	British Gypsum-Isover	Whitehouse Ind. Est., Runcorn	SJ 356500 379900	3.3(i)	Phenolic resin bonded glass fibre

Authorisation Number.	Company Name	Address	Ordnance Survey	Section	Process
AK 7370	Bush Boake Allen	Dans Road, Widnes	SJ 353600 386500	4.2(c)	Organic chemicals ("aroma" aldehydes)
AK 7388	Bush Boake Allen	Dans Road, Widnes	SJ 353600 386500	4.2(d)	Organic chemicals from alcohols ("aroma" esters)
AJ 8478	Bush Boake Allen	Dans Road, Widnes	SJ 353600 386500	4.2(d)	Organic chemicals (lilistralis)
AL 9025	Bush Boake Allen	Dans Road, Widnes	SJ 353600 386500	4.4(d)	Organic chemicals from myrcene (terpene alcohols)
AL 9033	Bush Boake Allen	Dans Road, Widnes	SJ 353600 386500	4.4(d)	Organic chemicals (Tetralide & abbalide)
AQ 9722	Bush Boake Allen	Dans Road, Widnes	SJ 353600 386500		Esters & unsaturated hydrocarbons
AL 4325	Clariant UK	Tanhouse Lane, Widnes	SJ 352800 385500	4.3(c)	Sodium hydrosulphite (reducing agent)
AK 5504	Croda Colloids	Moss Bank Road, Widnes	SJ 353100 386400	4.2(c)(d)	Organic chemicals (maleic & sulphosalicylic acids)
AN 8569	Croda Colloids	Moss Bank Road, Widnes	SJ 353100 386400	4.5(m)	Organic chemicals (sodium heptonate)
AK 6039.	European Vinyls Co	Runcorn	SJ 350800 380100	4.2	VC & EDC
AP 8730	European Vinyls Co	Runcorn	SJ 350800 380100	4.2(a)	PVC plastic granules
AE 7490	Honeywell Electronic Materials	Moss Bank Road, Widnes	SJ 351300 384300		Rare earth metals

Authorisation Number.	Company Name	Address	Ordnance Survey	Section	Process
AV 7645	Hyloc Ltd	Jenson Court, Astmoor, Runcorn	SJ 352500 383100	4.2(i)	Acrylates (adhesives)
AO 7479	Industrial Chemicals	Gorse Lane, Widnes	SJ 353100 386300	4.3(f)	Ferric sulphate
AL 4414		Gorse Lane, Widnes	SJ 353100 386300	4.3(f)	Aluminium chlorohydroxy cpds
AL 7243	Ineos Fluor	Rocksavage, Runcorn	SJ 351300 379900	4.4	Fluorinated organic compounds (refrigerants)
AL 7421	Ineos Chlor	Castner Kellner, Runcorn	SJ 351300 379900	4.4(b)	Chlorinated ethylenes (125,000 T/a)
AL 7430	Ineos Chlor	Rocksavage, Runcorn	SJ 351300 379900	4.4	hydrochloric acid
AL 7448	Ineos Fluor	Rocksavage, Runcorn	SJ 351300 379900	4.4(c)	Anhydrous hydrogen fluoride (33,000 T/a)
AN 1718	Ineos Chlor	Rocksavage, Runcorn	SJ 351300 379900	4.3(b)	Sulphur dioxide (30,000 T/a)
AN 1726	Ineos Chlor	Rocksavage, Runcorn	SJ 351300 379900	4.3(c)	Chlorosulphonic acid (17,000 T/a)
AI 5162	Ineos Chlor	Castner Kellner, Runcorn	SJ 350500 380500	5.1(b)	Incinerator (gases - VOC's & chlorinated VOC'S)
AL 7456	Ineos Chlor	Castner Kellner, Runcorn	SJ 349800 381100	4.4(b)	Chloromethanes
AL 7332	Ineos Fluor	Castner Kellner, Runcorn	SJ 349800 381100	4.4(b)	CTF (1000 T/a "an intermediate" pyridine)
AL 7294	Ineos Chlor	Castner Kellner, Runcorn	SJ 349800	4.4(a)	Chlorine (767,000 T/a), H ₂ , NaOH,

Authorisation Number.	Company Name	Address	Ordnance Survey	Section	Process
AL 7413	Ineos Chlor	Castner Kellner, Runcorn	381100 SJ 349800	4.4(d)	KOH, & HClO Cereclor (chlorinated paraffin 60,000 T/a)
AA 3123	Ineos Chlor	Weston Point, Runcorn	381100 SJ 349800	1.3(a)	Combustion plant
AL 7278	Ineos Chlor	Rocksavage, Runcorn	380700 SJ 349800 381100	4.3(a)	Sulphuric acid (250,000 T/a)
AI 7980	ICI C&P	Rocksavage, Runcorn	SJ 351100 379800	4.4(c)	Hydrogen chloride gas
AI 3224	ICI C&P	Waterloo Road, Widnes	SJ 351500 384800	4.5(d)	Experimental reffridgerants
AJ 9164	ICI C&P	Waterloo Road, Widnes	SJ 351300 384800	4.4(d)	Pilot Plants (hydrofluorochemicals)
AM 2867	N.W. Water (Shellgreen)	Benetts Lane, Widnes	SJ 353300 386200	5.1(c)	Sewage sludge incinerator
AR 6525	P. & O. Trans European	Warrington Road, Widnes	SJ 352300 386000	5.2(a)	Reclamation of refrigerant gases
AO 1519	Rhodia Consumer Specialities	Earle Road, Widnes	SJ 351800 384900	4.5	Ammonium phosphates
AO 1527	Rhodia Consumer Specialities	Earle Road, Widnes	SJ 351800 384900	4.5	Ammonium polyphosphates
AU 8431	Rhodia Consumer Specialities	Earle Road, Widnes	SJ 351800 384900	4.2(a)	Organic chemicals (sodium acetate)

Authorisation Number.	Company Name	Address	Ordnance Survey	Section	Process
AT 6474	Rocksavage Power Co.	Rocksavage (ICI), Runcorn	SJ 351700 380200	1.3(a)	Combined cycle gas turbine Power Station
AL 7251	Saffil	Moss Bank, Widnes	SJ 352900 385300		High Temperature insulation
AL 7499	Shepherd Widnes	Moss Bank Road, Widnes	SJ 351300 384200	4.3(f)	Cobalt salts & acid processes
AM 3812	Scottish Hydro Electric (Salt Union)	Weston Point, Runcorn	SJ 349600 381400	1.3(a)	Gas fired combined heat & Power Station

APPENDIX 4.

Licensed Waste Facilities in Halton - [Landfill and Waste Transfer.]

<u>Reference Number</u>	<u>Operative</u>	<u>Location</u>
61587	Advanced Reclamation Facilities LTD	Ditton Rd, Widnes
61515	AHC Warehousing LTD	Mathieson Rd, Widnes
61728	AT Car Spares	Unit 4 Eddarbridge Ind Est, Widnes
61748	Mr R Avis	Transit Shed 13 Weston Point Docks, Runcorn
61687	Banks Car and Commercial	Unit 12 Percival Lane, Runcorn
61766	Birse Constructions	Wilmere Lane, Widnes
60960	Bold St Car Dismantlers	Unit 6+7 Bold St, Widnes
61589	Department of Transport	The Bongs, Widnes
60945	M + J Burns	Ditton Rd, Widnes
60944	J Byran (Victoria) LTD	Pickerings Rd, Widnes
60900	Bush Boake Allen	Dans Rd, Widnes
60602	Chemcat LTD	Moss Bank Rd, Widnes
60897	Household Waste Site	Land off Johnsons Lanes, Widnes
60863	Cleanaway	Ditton Rd, Widnes
61643	Cliniwaste	Percival Lane, Runcorn
60442	DPE	Percival Lane, Widnes
60907	Elf Atochem LTD	West Bank Docks Estate, Widnes
60948	S Evans + Sons	Ditton Rd, Widnes
60949	Fallon Bros	1a Victoria Rd West Bank, Widnes

<u>Reference Number</u>	<u>Operative</u>	<u>Location</u>
61626	Grace Dearborn	Foundry Lane, Widnes
61567	Halton General Hospital	Hospital Way, Runcorn
61620	Halton Recycling Project	Unit 7 Marshgate St Michaels Ind Est, Widnes
61552	ICI Castner Keller	Castner Keller, Runcorn
61668	ICI Widnes Experimental Site	Waterloo Rd, Widnes
60547	ICI Randle Island	Randle Island, Runcorn
60951	J P Hayes + Sons	Ditton Rd, Widnes
60915	ICI Rock Savage	Rock Savage Site, Runcorn
60532	ICI Weston Marsh	Weston Marsh Lagoon, Runcorn
61531	Impex	Davy Rd Astmoor, Runcorn
61622	Mr G Kay	Unit 2 Percival Lane, Runcorn
61578	Karalius Bros	Unit 2 Dennis Rd Tanhouse Ind Est, Widnes
61772	Mr P Kershaw	Yard Off Ditton Rd, Widnes
60908	Laportes	Moorfield Rd, Widnes
61541	M + C Aluminium Alloys	Unit 6 Fairway Trading Park Ditton Rd, Runcorn
61652	Mechanelec LTD	Waterloo Rd, Widnes
61772	Mersey View Car Breakers LTD	Mersey View Rd, Widnes
50022	North West Water	Shell Green, Widnes
61634	Oakfield Oils and Fats	Unit 32b Eddarbridge Ind Est West Bank, Widnes

<u>Reference Number</u>	<u>Operative</u>	<u>Location</u>
61703	P J Commercials	Percival Lane, Runcorn
60902	Platt Insulations	Warrington Rd, Widnes
60841	P N Skip Hire	Pickerings Rd, Widnes
61588	P + O Distribution LTD	Warrington Rd, Widnes
60957	Riverside Haulage	Mersey View Rd, Widnes
60901	Shering Agro Chemicals	Gorse Lane, Widnes
61629	Snowflake LTD	Desoto Rd, Widnes
60916	Stewart Mechanical Services	Tailors Row, Runcorn
60896	3C Waste LTD	Picow Farm Rd, Runcorn
61526	CZ Transfer Station	Unit 31 Eddarbridge Ind Est, Widnes
61613	V P Demolition	Milton St, Widnes
61655	North West Water (Runcorn) Waste Water	Warrington Rd Astmoor, Runcorn

Appendix 5: Landfill sites and other possibly contaminated land in Halton District.

No.	Name and address	Grid reference	Information
1	Old reservoir, Algernon Street, Runcorn.	SJ 506 829	1928-68 reservoir, 1982 presumed filled in. DoE survey 25/122.
3	Alum Waste Tip, Astmoor Road, Runcorn.	SJ 527 831	1928-54 Tip adjacent to the Australian Alum Works. 1968 site apparently restored. Alum tipped here (Halton Chemical Museum). DOE survey 25/125.
4	Astmoor Salt Marsh, Runcorn.	SJ 527 834	1869-1960 All heavy chemicals tipped here (Halton Chemical Museum). DOE survey 25/174.
6	Beaconsfield Road, Westfield, Runcorn.	SJ 503 819	1938-54 Quarry/pit, 1968 filled in and built upon. DOE survey 25/131.
7	Former Reservoir, by St Helens Canal, Newton, Widnes.	SJ 515 843	1891-1938 reservoir, 1954 presumed filled in. DOE survey 20/089.
8	Cartmel Close, Cavendish Farm, Runcorn.	SJ 518 806	1938-54 Quarry/pit, 1968 Filled in and residential accommodation built. DOE survey 25/105.
9	Castlefield Avenue, South, Runcorn.	SJ 541 824	1938-54 Quarry. DOE survey 25/102.
10	Castner Kellner, Weston Point, Runcorn.	SJ 499 800	1908-28 Quarry/pit/tip, 1938 half reclaimed and built upon. 1954 completely reclaimed and built upon, part of the Castner Kellner site. DOE survey 25/116.
11	Castner Kellner Works, Runcorn.	SJ 505 800	1875-1911 quarry, 1929 area filled in. Also SJ 508 800. DOE survey 25/053.
12	Picow Farm Road, Westfield, Runcorn.	SJ 504 824	1968 tip, unlabelled 1982. Source DOE pilot survey 25/146.
14	Crofton Road, Westfield, Runcorn.	SJ 506 823	Former Household Waste site. DOE survey 25/098(marked as tip/landfill).
15	Derby Road, Farnworth, Widnes.	SJ 522 879	Planning application No. 2049/0 Tip 23 acres.

No.	Name and address	Grid reference	Information
16	Former reservoir, Desoto Road, Widnes.	SJ 504 841	1968 reservoir. 1982 presumed filled in. DOE survey 20/208.
17	Ditton Bank Farm, Ditton, Widnes.	SJ 490 862	1908-67 Ditton quarry - disused. 1977 not shown and residential housing built upon. DOE survey 20/112.
18	Ditton Marsh, Widnes.	SJ 491 840	1954-70 Works, 1984 works plus sludge beds. Unofficial tipping on site in past 100 years. 1986 Dearborn Chemicals possibly on this site licensed for nitric acid, muriatic acid and hydrogen cyanide. DOE survey 20/196.
19	Ditton Marsh, Widnes.	SJ 495 842	1859 onwards all heavy chemicals, alkali, acids, sulphides, phosphates, asbestos and fleshiness included. (Halton Chemical Museum). 1928-54 tipping area. 1970 most of area reclaimed, 1984 all reclaimed. DOE survey 20/170.
20	Ditton Marsh, Widnes.	SJ 498 844	1970 small tip area. DOE 20/170/1.
21	Ditton Marsh Tip, West Bank, Widnes.	SJ 495 839	1865 tipping commenced. Pre-1948 notifiable industrial wastes, 1986 still active. 1859 all heavy chemicals, alkalis, acids, sulphides, phosphates deposited here, 12 hectares (29.6 acres). DOE pilot survey 20/056.
22	Ditton Road, Widnes.	SJ 496 851	Albright and Wilson.
23	Ditton Road, Widnes.	SJ 501 849	1928-54 tip, 1968 works, 1982 works. 1860's - 1940's chemical waste site for alkali, copper, slag alumina, and most heavy metals. (Halton Chemical Museum). DOE pilot survey 20/199.
25	Ditton Road, Widnes.	SJ 505 849	1928-54 tip, 1968 overbuilt by road. DOE pilot survey 20/191. Also SJ 506 849 1928 tip covered by small works 1969. DOE pilot survey 20/139.

No.	Name and address	Grid reference	Information
26	Ditton Road, Widnes.	SJ 508 846	1893 alkali and sulphur works and chemical works, 1907 site vacant, 1928-37 corrugated iron works and steel alloys work tip. DOE pilot survey 20/013.
27	Ditton Road, Widnes.	SJ 483 850	Filled site No records.
28	Dundalk Road, Ball o' Ditton, Widnes.	SJ 499 860	1908 brickfield, 1928 unlabelled, not shown. DOE pilot survey 20/114.
29	Dundalk Road, Widnes.	SJ 500 854	Landfill ICI.
30	St Michael's Golf Course, Dundalk road, Widnes.	SJ 503 853	George Wimpey, Process Barium wastes, construction waste, tipping stopped 1973.
31	St Michael's Golf Course, Birch House, Dundalk Road, Widnes.	SJ 503 853	ICI. process barium wastes and construction wastes tipped till 1973 - part of golf course.
32	Vines, Esther Road, Widnes.	SJ 520 861	Area now marked as reclaimed land. Possibly part of the old Vines tip.
33	Foundry Lane, Halton.	SJ 491 842	1880's - 1930's alkalis, staerine, nitrated cotton and acids deposited here. (Halton Chemical Museum). 1974 D + DLS area used for tipping. DOE pilot survey 20/048.
34	Foundry Lane, Widnes.	SJ 492 838	Croda Colloids Ltd. Construction, Household/commercial, incinerator residues and pulverised fly ash deposited 1862-1940's iron slag, some asbestos and sludges deposited here. DOE pilot survey 20/049.
35	Pickerings Pasture, Hale Bank, Mersey View Road, Widnes.	SJ 490 833	Construction, industrial (asbestos) and household wastes deposited. Closed 1972. (Parrs House and Shore House adjacent).
36	Hale Road, Ditton, Widnes.	SJ 489 844	1954 tip, 1974 not present, presumed filled in. DOE pilot survey 20/181.
37	Hale Road, Ditton, Widnes.	SJ 490 847	1928-54 tip and pit, 1970 tip reclaimed and pit filled in. DOE pilot survey 20/173.
38	Heath Road South, Runcorn.	SJ 510 812	1912 old quarry, 1980 still present. DOE pilot survey 25/058.
40	Hough Green Junction, Widnes.	SJ 490 865	Sandstone quarry filled in by 1894. DOE pilot survey 20/219.

No.	Name and address	Grid reference	Information
41	Jackson's, Percival Lane, Runcorn.	SJ 499 823	DOE reg. site of Runcorn docks filled with construction and industrial process waste. Early 1970's used for dock waste, Jackson's skip hire used site to tip waste till 1986, 1984 site of many tanks and warehouse/depots. DOE pilot survey 25/029.
42	Speke Road/Bridge Depot, Ditton Brook, Widnes.	SJ 485 850	1977 area used for tipping of construction, commercial and non-hazardous industrial waste. DOE pilot survey 20/054.
43	Lugsdale, Widnes.	SJ 522 855	Land in this area has recently been reclaimed - see book "The Halton Legacy".
44	MacDermott Road, Widnes.	SJ 507 844	1911-68 reservoir, 1982 apparently filled in. DOE pilot survey 20/006.
45	Main Street, Castlefields, Runcorn.	SJ 539 817	1899-1938 sandpit, 1954 presumed filled in. DOE pilot survey 25/094.
46	McKechnie Chemicals Ltd, Ditton Road, Widnes.	SJ 499 849	1860's-1940's tipping of alkalis, copper, slag, alumina, most heavy chemicals (Halton Chemical Museum). Smelting, sulphuric acid, arsenic, lead, copper and sulphate reduction. DOE reg. landfill site for disposal of construction, non-hazardous industrial, difficult and mine and quarry wastes. Part of area subsequently operated under Licence No. 60308 1977-84. Now incorporated into golf course. DOE pilot survey 20/057.
48	Mercer Lane, Widnes.	SJ 509 852	Filled site No records
49	Mersey View, Widnes.	SJ 493 839	Filled site No records
50	Nazareth House, Widnes.	SJ 500 852	Filled site No records
51	Newtown, Widnes.	SJ 508 846	1891 chemical works, 1911-54 vacant site used for tipping, 1968 apparently restored. DOE pilot survey 20/013.
52	Norton Lane, Halton.	SJ 549 819	1912-68 old sandpit, 1982 filled in. Source DOE pilot survey 25/079.
53	Foundry Land, Ditton, Widnes.	SJ 490 843	1928-54 tip, 1970 reclaimed. DOE pilot survey 20/171.

No.	Name and address	Grid reference	Information
54	Old Lane Site, Ditton Road, Widnes.	SJ 496 849	1860's-1940's alkalis, copper, slag, alumina, most heavy chemicals. Pre-1963 including waste from manufacture of phosphates including elemental phosphorus. 1974 spoil heap since developed. DOE pilot survey 20/045.
55	M.S.C., Old Quay Street, Runcorn.	SJ 520 832	1972-3 old quay quarry mostly filled with inert rubble and some tannery waste. Partly covered by busway. DOE pilot survey 25/036.
56	Orrs Zinc White, Widnes.	SJ 491 850	Possible part of extension of chemical and fly ash tipping. DOE pilot survey 20/106.
57	Percival Lane, Runcorn.	SJ 505 829	1968 tip, 1982 restored. Source DOE pilot survey 25/147.
58	Pickerings Pasture, Widnes.	SJ 492 838	Pre-1948 industrial wastes, 1974 abandoned spoil heap, 1984 area immediately behind Croda and Dearborn works used for process waste, 1985 CWD plan - construction, non-hazardous industrial including difficult waste and domestic wastes. Licence 60312 - 1977-78 deposits on 3 acres behind factory. See Planning app. No. 2027/0, 2032/1 and 2307/0 (vaults). DOE pilot survey 20/049.
59	Pickerings Road, Halebank Industrial Estate, Widnes.	SJ 490 845	1880's-1930's alkalis, staerine, nitrated cotton and acids deposited. 1970 joinery works, 1984 depots and warehouses, 1985 skip hire depot for builders rubble, scrap metal etc. DOE pilot survey 20/062.
61	Prescott and Mort, Hale Road, Widnes.	SJ 490 848	Filled site No records.
63	Randle Island, Astmoor, Runcorn.	SJ 540 840	1914-18 MOD mustard gas Factory. 162 acres Planning App. No. 2315/0 and DOE pilot survey 25/138 and 25/035. Area subsequently covered by Licence 60547.
64	Runcorn and Weston Canal.	SJ 495 820	De-watered canal/British Waterways. 1974 D + DLS. Also used for dock refuse. DOE pilot survey 25/025.
65	M.S.C. Runcorn Docks, Percival Lane, Runcorn.	SJ 498 823	1.5 acres. Planning app. No. 2313/0.

No.	Name and address	Grid reference	Information
66	Runcorn Expressway, Southgate, Runcorn.	SJ 536 804	1954 pit, 1968 filled in. DOE pilot survey 25/133.
67	Simms Cross, Widnes.	SJ 519 858	Filled site No records.
68	South Parade, Runcorn.	SJ 497 811	1928-54 reservoir, 1970 not present and within Castner Kellner site. Cyanide residue store. DOE pilot survey 25/118.
69	Southgate, Runcorn.	SJ 532 810	1954 pit, 1968 filled in. DOE pilot survey 25/134.
71	St Helens Canal, Widnes.	SJ 517 847	1928-54 tip, 1968 apparently restored. DOE pilot survey 20/195.
72	St Michaels Road, Ditton, Widnes.	SJ 495 850	1860's-1940's alkali, copper, slag, alumina, heavy chemicals deposited here. 1928-54 tip, 1967 reclaimed. DOE pilot survey 20/161.
73	St Michaels Road, Widnes.	SJ 496 847	1928-38 pit, 1954 apparently filled in, Liver timber yard on right of former pit, 1970 depot, 1984 building removed and circular tanks left. DOE pilot survey 20/174.
74	St Michaels Road, Widnes.	SJ 495 852	Filled site No record.
75	Stenhills Quarry, Runcorn.	SJ 526 825	D + DLS domestic and trade refuse, area reclaimed. Closed pre-1970 for domestic and construction wastes. DOE pilot survey 25/107.
76	Stewards Brook East, Widnes.	SJ 505 850	Filled site No records.
77	Stewards Brook West, Liver Tip, Widnes.	SJ 500 850	Filled site No records.
78	Sullivan Tip, Moss Bank Road, Widnes.	SJ 536 856	41 acres. Planning App. No. 2037/0.
80	The Underway, Castlefields, Runcorn.	SJ 539 819	1968 quarry, 1982 filled in. DOE pilot survey 25/139.
81	Millbrow Quarry, Union Street, Runcorn.	SJ 519 827	1875 quarry, 1899-1912 disused, 1928 became a rock park, some infilling having taken place. 1982 unlabelled. DOE pilot survey 25/015.
82	Vickers Road, West Bank Dock Estate, Widnes.	SJ 505 840	1928-54 tip, 1968 works, 1982 unlabelled though buildings still present. D + DLS Albright and Wilson waste lagoon - restored, DOE reg. construction waste. DOE pilot surveys 20/193 and 20/110.

No.	Name and address	Grid reference	Information
85	West Bank, Widnes.	SJ 498 842	Hutchinson Estate. Planning app. No. 2304/0 35 acres?
86	West Bank Dock, Widnes.	SJ 509 830	D + DLS docks filled with refuse and industrial waste, 6.69 hectares. DOE reg. - filled with construction waste. DOE pilot survey 20/064.
87	West Bank Dock, Widnes.	SJ 509 830	1860's-1940's tipping of chemicals and fly ash. DOE pilot survey 20/106.
88	Weston Canal, Runcorn.	SJ 497 822	1954 gravel pit, 1970 presumed filled in. DOE pilot survey 25/120.
90	Sutton, Rocksavage, Runcorn.	SJ 525 798	Filled site No records.
92	Weston point, Runcorn.	SJ 495 819	1928 -38 reservoir shown, 1954 not present presumed filled in. DOE pilot survey 25/117.
93	ICI Weston Quarry, Runcorn.	SJ 507 812	1930's-1950's lime and coke slurry tipped. 1974-8 ICI used and owned site for hazardous and toxic wastes including mercury and many chlorinated organic wastes, 4.65 hectares. DOE pilot survey 25/037.
94	Weston Road, Runcorn.	SJ 503 812	1938-54 pit, 1968 filled in. 1938-82 quarrying area and in 1968 southern area used for tipping and restored by 1982. NWWA - building rubble and soil, asbestos in other half. DOE pilot surveys 25/130 and 25/103.
95	Precott Tip, Widnes Loop Line, Hough Lane, Widnes.	SJ 496 857	D + DLS railway cutting used for tip and scrap yard. DOE pilot survey 20/111.
96	Widnes Warth tip, Widnes.	SJ 523 849	ICI tip for dry industrial wastes. DOE 10/175.
97	Wigg Works Tip, Runcorn.	SJ 531 835	ICI tip for inert process solids (used in emergency only in 1973).
98	York Place, Runcorn	SJ 514 827	1891 Runcorn works including gasometer, 1899 soap and alkali works including quarrying, 1938 buildings removed, 1954 Runcorn alkali works including quarrying, 1968-82 built over by offices and A533. DOE pilot survey 25/003.

No.	Name and address	Grid reference	Information
99	Highlands Road, Runcorn.	SJ 509 816	Filled site No records.
100	Weston Road, Runcorn.	SJ 5068 8143	Factory, household, commercial, construction wastes, closed pre-1976.
101	No 3 Lagoon, Sutton, Runcorn.	SJ 5277 79162	Inert process sludge - used in emergency only (1973).
103	Old Widnes Foundry, Widnes.	SJ 519 854	General waste deposited on remains of foundry also included asbestos. Site believed to have been cleared and waste removed to Hedco landfill. Infilling recurred later to a depth of 1 metre. See Enforcement File 16.
104	New Manor Farm, Summer Lane, Runcorn.	SJ 581 809	15m ² of infilling of sub soil and soil believed clean.
105	Hallem Hall Farm, Summer Lane, Runcorn.	SJ 588 814	Installation of underground storage tanks, excess material used to fill depression around tanks.
106	Laverick Land of Norlands Lane, Widnes.	SJ 510 885	Tipping of tarmac, builder's rubble, paving stones etc.
107	Knights House Farm, Barrows Green Lane, Widnes.	SJ 530 878	Filled site No records.
108	Runcorn Old Dock, Percival Lane, Runcorn.	SJ 503 829	M.S.C. depositing mineral and other waste without licence.
109	Hillcrest Hotel, Cronton Lane, Widnes.	SJ 505 885	Landfill adjacent to school and housing; waste included rubbish from hotel, household waste; hardcore, timber etc.
110	Happy Valley, Runcorn Hill, Runcorn.	SJ 505 815	HBC tipping ground maintenance waste. Areas a disused and dangerous quarry tipping to cover tunnel.
111	M.S.C. Runcorn lay-by, Runcorn docks, Runcorn.	SJ 570 850	Filled site No records.
112		SJ 499 823	Tipping of hardcore, timber, asbestos corrugated sheeting, fibreglass, household waste etc.

No.	Name and address	Grid reference	Information
113	Crest Hotel Ltd, Wood Lane, Sutton Weaver.	SJ 539 797	Builders waste, timber, piping and concrete etc.
114	C.C.C., Ditton Marsh, Widnes.	SJ 495 849	Filled site No records.
115	C.C.C., Windmill Lane, Preston on the Hill.	SJ 570 811	Filled site No records.
116	Greenall Whitley, Chester Road, Daresbury.	SJ 57808295	Tipping of inert material in old quarry, 1979.
117	Micro Milling Ltd, Johnsons Lane, Widnes.	SJ 534 -	Area of hard standing 2m high created from concrete demolition and builders waste and considerable quantities of industrial waste including bags containing sufficient quantities of barium carbonate to be classed as special waste.
118	Ditton Marsh, Widnes.	SJ 494 845	1859 onwards, all heavy chemicals, alkali, acids, sulphides, phosphates deposited here. 1970-84 timber yards and mills present. DOE pilot survey 20/182.
119	Victoria Road, Higher Runcorn.	SJ 513 829	1801-1923 Alkali and soap waste deposited. DOE pilot survey 25/173.
120	ICI Weston, Runcorn.	SJ 506 810	1930's-50's Lime and coke slurry tipped here. ICI tipping site (post World War 2). DOE pilot survey 25/171.
121	Widnes Warth, Widnes.	SJ 516 845	Alkalis deposited here. DOE pilot survey 20/224.
122	Queensway, Newtown, Widnes.	SJ 508 844	1850's-1920's Alkali and copper waste deposited here. DOE pilot survey 20/222.
123	Ditton Road, Widnes.	SJ 507 E47	1938-54 industrial development. 1860's-1940's alkali, copper, slag, alumina and most heavy chemicals deposited here (as far east as Victoria road. Covers Newtown area). DOE pilot survey 20/189.
124	Newtown, Widnes.	SJ 514 843	1848-1938 docks, 1954 appears to have been filled in. DOE pilot survey 20/025.

No.	Name and address	Grid reference	Information
125	By St Helens Canal, Newtown, Widnes.	SJ 521 849	1891-1938 Alkali works, 1938-55 dismantling. 1852-1930's alkali waste deposited at extreme southwest of site. DOE pilot survey 20/085.
126	St Marys Road, Newtown, Widnes.	SJ 502 837	1849-59 Alkali waste deposited here. DOE pilot survey 20/055.
127	St Helens Canal, Widnes.	SJ 514 845	1911 chemical works, 1928-54 site vacant appears to have been tipped, 1968 tipping appears to have ceased. DOE pilot survey 20/019.
128	Ball o'Ditton, Widnes.	SJ 498 852	1860's-1940's alkalis, copper, slag, alumina and heavy chemicals. DOE pilot survey 20/223. May not be tipped.
129	Weston Point, Runcorn.	SJ 496 816	1891-1908 Salt works, 1928 additional buildings + small quarry, 1954 small quarry expanded and used for tipping. 1970 tipping area reclaimed. DOE pilot survey 25/040.
130	Mersey View, Pickerings Pasture, Hale Bank, Widnes.	SJ 489 837	1862-1940's iron, slag, some asbestos and various acid sludges deposited here, 1984 timber yard. DOE survey 20/188.
131	Moore Lane, Moore, Warrington.	SJ 579 853	Appears to be a former quarry, water filled, and no sign of tipping.
132	Astmoor Road, Runcorn.	SJ 525 831	1928-68 reservoir, 1982 presumed filled in. DOE survey 25/124.
133	Alumina Co Ltd, Ditton Road, Widnes.	SJ 500 847	1928 tip, 1938 building covering site, 1954 still present, 1968-82 works. 1860's-1940's alkalis, copper, slag, aluminium, mostly heavy chemicals deposited here. Alumina CO Ltd landfill at SJ 499 847 may cover part of the area. DOE pilot survey 20/198.
134	Old Bridgewater Locks, Algernon Street, Runcorn.	SJ 504 828	Partly filled locks, derelict scrap yard and disused railway line. Plus site of old chemical tip. DOE pilot survey 25/023.
135	Spike Island, East of Newtown, Widnes.	SJ 514 842	Railway dereliction (marshalling yard), Victorian alkali works, site contains Radioactive site (thorium). DOE pilot survey 20/109. High radioactive readings recorded during work on new southern road.

No.	Name and address	Grid reference	Information
136	Dundalk Road, Widnes.	SJ 500 859	Tip as marked on the Despoiled and Derelict Land Survey. See also HBC ref. 2/103.
137	Flood Brook, Under M56, Beechwood, Runcorn.	SJ 530 795	Shown as a tip on a green belt planning map of area. Also shown in area of bone works.

Glossary.

This glossary sets out the terms used within this Strategy which may be unfamiliar to the reader. For a full explanation of the terms used within DETR Circular 02/2000 (including the statutory guidance) a Glossary of Terms is provided in Annex 6 of the Circular.

Apportionment	Any determination by the enforcing authority under section 78F(7) (that is, a division of the costs of carrying out any remediation action between two or more appropriate persons).
Appropriate person	"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."
Assessment action	A remediation action falling within the definition of remediation in section 78A(7)(a), that is the doing of anything for the purpose of assessing the condition of the contaminated land in question, or any controlled waters affected by that land or any land adjoining or adjacent to that land
The Council	Halton Borough Council (should be understood to mean officers and staff)
Contaminant	A substance that is in on or under the land and which has the potential to cause harm or to cause pollution of controlled waters.
Contaminated land	Defined in section 78A(2) as "any land which appears to the local authority in whose area it is situated to be in such a condition, by reason of substances in, on or under the land, that - "(a) significant harm is being caused or there is a significant possibility of such harm being caused, or; (b) Pollution of controlled waters is being, or is likely to be, caused."
Controlled waters	Any territorial and coastal waters, inland fresh waters, and ground waters, as defined in the WRA 1991

Current use	Any use, which is currently being made, or is likely to be made, of the land and which is consistent with any existing planning permission (or is otherwise lawful under town and country planning legislation). This definition is subject to the following qualifications: (a) the current use should be taken to include any temporary use, permitted under town and country planning legislation, to which the land is, or is likely to be, put from time to time; (b) the current use includes future uses or developments which do not require a new, or amended, grant of planning permission; (c) the current use should, nevertheless, be taken to include any likely informal recreational use of the land, whether authorised by the owners or occupiers or not, (for example, children playing on the land); however, in assessing the likelihood of any such informal use, the local authority should give due attention to measures taken to prevent or restrict access to the land; and (d) In the case of agricultural land, however, the current agricultural use should not be taken to extend beyond the growing or rearing of the crops or animals that are habitually grown or reared on the land.
DEFRA	Department of Environment, Food and Rural Affairs
DETR	Department of the Environment, Transport & the Regions
EA	Environment Agency
EPA 1990	Environmental Protection Act 1990
FSA	Food Standards Agency
GIS	Geographic Information System
Harm	Defined in section 78A(4) as "harm to the health of living organisms or other interference with the ecological systems of which they form part and, in the case of man, includes harm to his property."
HBC	Halton Borough Council

Intrusive investigation	An investigation of land (for example by exploratory excavations) which involves actions going beyond simple visual inspection of the land limited sampling or assessment of documentary information.
IMS	Information Management System
MAFF	Ministry of Agriculture, Fisheries & Food
MIS	Merseyside Information Service
Owner	Defined in section 78A(9) as: "A person (other than a mortgagee not in possession) who, whether in his own right or as trustee for any other person, is entitled to receive the rack rent of the land, or where the land is not let at a rack rent, would be so entitled if it were so let."
Part IIA	Part IIA of the Environmental Protection Act 1990, inserted by Section 57 of the Environment Act 1995. The primary legislation for the new Contaminated Land Regime
Pathway	one or more routes or means by, or through, which a receptor: (a) is being exposed to, or affected by, a contaminant, or (b) Could be so exposed or affected.
Pollutant	A contaminant which forms part of a pollutant linkage.
Pollution of controlled waters	defined in section 78A(9) as: "the entry into controlled waters of any poisonous, noxious or polluting matter or any solid waste matter."
Possibility of significant harm	A measure of the probability, or frequency, of the occurrence of circumstances that would lead to significant harm being caused.
Pollutant linkage	The relationship between a contaminant, a pathway and a receptor.
Ramsar	A wetland site designated and protected under the Convention on Wetlands of International Importance, in particulate habitats for waterfowl, named after the city in Iran where the Convention was signed

Receptor	either: (a) a living organism, a group of living organisms, an ecological system or a piece of property which: (i) is in a category listed in Table A in Chapter A as a type of receptor, and (ii) is being, or could be, harmed, by a contaminant; or (b) controlled waters that are being, or could be, polluted by a contaminant.
Register	The public register maintained by the enforcing authority under section 78R of particulars relating to contaminated land.
Relevant information	: information relating to the assessment of whether there is a significant possibility of significant harm being caused, which is: (a) scientifically-based; (b) authoritative; (c) relevant to the assessment of risks arising from the presence of contaminants in soil; and (d) appropriate to the determination of whether any land is contaminated land for the purposes of Part IIA, in that the use of the information is consistent with providing a level of protection of risk in line with the qualitative criteria set out in
Remedial action	treatment a remediation action falling within the definition in section 78A (7)(b), that is 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: (a) of preventing or minimising, or remedying or mitigating the effects of any significant harm, or any pollution of controlled waters, by reason of which the contaminated land is such land, or (b) of restoring the land or waters to their former state.

Remediation	defined in section 78A(7) as "(a) the doing of anything for the purpose of assessing the condition of - "(i) the contaminated land in question; "(ii) any controlled waters affected by that land; or "(iii) any land adjoining or adjacent to that land; "(b) the doing of any works, the carrying out of any operations or the taking of any steps in relation to any such land or waters for the purpose - "(i) of preventing or minimising, or remedying or mitigating the effects of any significant harm, or any pollution of controlled waters, by reason of which the contaminated land is such land; or "(ii) of restoring the land or waters to their former state; or "(c) the making of subsequent inspections from time to time for the purpose of keeping under review the condition of the land or waters."
Remediation notice	Remediation notice: defined in section 78E(1) as a notice specifying what an appropriate person is to do by way of remediation and the periods within which he is required to do each of the things so specified.
Risk:	the combination of: (a) the probability, or frequency, of occurrence of a defined hazard (for example, exposure to a property of a substance with the potential to cause harm); and (b) the magnitude (including the seriousness) of the consequences
Significant harm:	Defined in section 78A(5). It means any harm which is determined to be significant in accordance with the statutory guidance
Significant pollutant:	A pollutant which forms part of a significant pollutant linkage.
Significant pollutant linkage:	A pollutant linkage that forms the basis for a determination that a piece of land is contaminated land.
Significant possibility of significant harm:	a possibility of significant harm being caused which, by virtue of section 78A(5), is determined to be significant in accordance with the statutory guidance

Stakeholder	Individuals, communities, community organisations businesses, land owners, land occupiers environmental groups, government and non governmental organisations and voluntary groups who may have a direct or indirect interest.
SPA	Special Protection Area (EC Conservation of Wild Birds Directive 79/409)
SSSI	Site of Special Scientific Interest. Areas of importance as areas of special interest by reason of flora, fauna, geological or physiological features, and as such require protection from development
Special site:	defined by section 78A(3) as: "any contaminated land - "(a) which has been designated as such a site by virtue of section 78C(7) or 78D(6)...;and "(b) Whose designation as such has not been terminated by the appropriate Agency under section 78Q(4)..." The effect of the designation of any contaminated land as a special site is that the Environment Agency, rather than the local authority, becomes the enforcing authority for the land.
Substance:	defined in section 78A(9) as: "Any natural or artificial substance, whether in solid or liquid form or in the form of a gas or vapour."
WRA 1991	Water Resource Act 1991