

Contaminated Land Strategy for Calderdale

**(Revised November
2008)**

Contents

1 INTRODUCTION TO THE REVISED DOCUMENT

- 1.1 general policy of the local authority**
- 1.2 regulatory context**
- 1.3 development of the strategy**
- 1.4 objectives of the strategy document**
- 1.5 requirements of the strategy document**
- 1.6 the objectives of the strategy document**

2 CHARACTERISTICS OF CALDERDALE'S AREA

- 2.1 geographical location**
- 2.2 brief description and history**
- 2.3 size**
- 2.4 demography**
- 2.5 Calderdale owned land**
- 2.6 current land use characteristics**
- 2.7 protected locations and natural habitats**
- 2.8 key property types**
- 2.9 key water resource and water protection issues**
- 2.10 known information on contamination**
- 2.11 current and past industrial history**
- 2.12 broad geological and hydrogeological characteristics**
- 2.13 specific local features**
- 2.14 redevelopment history and controls**
- 2.15 action already taken to deal with land contamination**

3 CALDERDALE'S STRATEGY: OVERALL AIMS AND PRIORITIES

- 3.1 aims of the strategy**
- 3.2 objectives and milestones**

4 PROCEDURES

- 4.1 internal management arrangements for inspection and identification**
- 4.2 local authority interest in land**
- 4.3 information collection**
- 4.4 information and complaints**
- 4.5 information evaluation**

5 GENERAL LIAISON AND COMMUNICATION

- 5.1 consultees**

- 5.2 communicating with owners, occupiers, and other stakeholders
- 5.3 powers of entry
- 5.4 enforcement action
- 5.5 the public register
- 5.6 provision of information to interested parties
- 5.7 provision of information to the environment agency

6 Review Mechanisms

- 6.1 triggers for undertaking non-routine inspections
- 6.2 triggers for reviewing inspection details
- 6.3 reviewing the strategy

7 References

Appendices

- Appendix 1 list of consultees
- Appendix 2 receptors and harm
- Appendix 3 protected locations and natural habitats
- Appendix 4 scheduled ancient monuments
- Appendix 5 licensed abstractions
- Appendix 6 groundwater vulnerability map
- Appendix 7 industry groups for priority inspections

This document is revised in accordance with Department of the Environment Transport and the Regions (DETR) and the Environment Agency's document "Contaminated Land Inspection Strategies" (May 2001) and the statutory guidance DETR Circular 2/2000.

Most documents are available for inspection on www.defra.gov.uk/environment/land/contaminated/pubs.htm

Additionally legislation can be viewed via www.hms0.gov.uk

1.0 Introduction to the Revised Document

1.1 General Policy of the Local Authority

DETR Circular 2/2000 set out the need for all councils to adopt a strategic approach to the inspection of land, to allow them to consider if any such land should be determined as “Contaminated Land” for the purposes of Part IIA of the Environmental Protection Act 1990.

Calderdales Contaminated Land Strategy was drafted between late 2000 and early 2001, approved in April 2001, consulted upon and then published in June before a copy was lodged with the Department of Environment, Transport and the Regions (DETR) in July 2001.

Subsequently legislative and technical changes have occurred at national level, changing the way in which contaminated land issues are approached. In other subject areas long awaited government guidance is still yet to be issued. Within Calderdale the workload was greater than originally envisaged. Difficulty was met in fulfilling the original strategy.

In 2002 Calderdale MBC revised its corporate priorities and vision statement. This revised contaminated land strategy seeks to fulfill those relevant issues:

Corporate Ambition:

We want Calderdale to be a place where we value everyone being different and through our actions we demonstrate that everyone matters. This will be achieved by continuing to work with local people and partners in the following areas:

Economy and Enterprise: Safeguard Calderdale's future and foster economic prosperity for all.

Environment: Improve the quality of our environment and promote respect for Calderdale's heritage.

Safer and Stronger Communities: Prosper as a place where people can feel safe and are encouraged to get involved in shaping their future.

Healthier Communities: Reduce the amount of preventable ill-health across the population as a whole.

Older People: Ensure that people stay in control of their lives and play a full and active role in society.

Children and Young People: Flourish as a place where every child and young person thrives, is safe and happy.

Narrowing the Gap: Work to ensure that the differences in health, quality of life and economic prosperity between different communities within Calderdale be reduced.

Policy statements in other subject areas link to the subject of contaminated land. Since 2005 some have been revised, or are undergoing revision.

- Agenda 21 strategy: “21 for 21” is the councils agenda for sustainability, i.e. to sustain life within earth’s natural capacity. This document can be viewed at Northgate House, Halifax.
- Sir Philip Hampton’s 2005 review, ‘Reducing administrative burdens: effective inspection and enforcement’ considered how to reduce unnecessary administration for businesses, without compromising the UK’s excellent regulatory regime. Specific to Land Contamination issues are:
 - reducing inspections where risks are low, but increasing them where necessary
 - making much more use of advice, applying the principle of risk assessment
- The Local Development Framework already contains a number of separate documents including the Local Development Scheme; Annual Monitoring Report; draft Statement of Community Involvement and a number of draft Supplementary Planning Documents. Other documents will be brought forward in accordance with the Local Development Scheme.
<http://www.calderdale.gov.uk/environment/planning/development-framework/local-development-scheme07.pdf>
- General complaints about rubbish on land/ fly tipping etc: Land subject to contamination does not necessarily fall within the definition of contaminated land, as given in Part IIA of the Environmental Protection Act 1990. Such land may give rise to a variety of concerns such as statutory nuisance, land likely to attract vermin, inadequate storage of waste etc. Such complaints are dealt with by procedural policies for dealing with general complaints.
- Public access to information: Calderdale promotes open access to information where there is no conflict with statute –e.g. Freedom Of Information Act 2000 and the Environmental Information Regulations 2004. The majority of requests are expected to fall under Chapter 8 of these latter regulations which will levee a charge from the department dealing with the request. Commonly these are to do with house selling exchanges and revaluing of commercial properties.

The contaminated land strategy compliments but does not replace these policies.

1.2 Regulatory Context.

Much land has been subject to contamination. Not all such land is to be regarded as contaminated land for the purpose of statute.

Part IIA of the Environmental Protection Act 1990 came into force on 1st April 2000 and is supported by the Contaminated Land (England) Regulations 2006 and statutory guidance by DEFRA - Circular 01/2006 Environmental Protection Act 1990, Contaminated Land. Local authorities were required to prepare a strategy document and are required to periodically review their strategies.

1.2.1 Regulatory role of local authorities under Part IIA.

Local Authorities have the primary regulatory role under Part IIA. Since 1848 we have had responsibility for dealing with various statutory nuisances. Currently these include duties to deal with premises (and land) that are prejudicial to health or a nuisance, and accumulations or deposits that are prejudicial to health or a nuisance. Statutory nuisance legislation, now embodied in Part IV of the Act ceases to apply where the new contaminated land laws apply.

Local Authorities are also the lead authorities for land-use planning. Planning Policy Statement 23 (2004) requires account to be taken of contamination issues where a site is to be developed or redeveloped. As development is directed towards brownfield sites it is envisaged that many contamination concerns will be addressed in this way. Furthermore from changes to Building Regulations, and from changes introduced under PPS 23, developers are increasingly required to show that contaminated land issues are addressed prior to on determination of a planning application, and during construction.

Under Part IIA of the Environmental Protection Act 1990 Calderdale has a duty:

- To cause it's area to be inspected for contaminated land.
- To determine whether any particular site meets the statutory definition of Contaminated Land.
- To act as the enforcement authority for all contaminated land, unless it meets the definition of a "Special Site" in which case the Environment Agency is the enforcing authority.

1.2.2 Regulatory role of Environment Agency.

The Environment Agency has 4 main roles in respect of contaminated land:

- To assist local authorities in identifying contaminated land (particularly where water pollution is involved).
- To provide site-specific guidance to local authorities on contaminated land where requested.
- To act as enforcing authority for contaminated land defined as a Special Site or designated a 'Special Site' after initial investigations.
- To publish periodic reports on contaminated land which cover the whole of England.

1.2.3 Definition of contaminated land under Part IIA.

Contaminated land is defined in section 78A(2) of Part IIA of the Environmental Protection Act 1990 as ***any area which appears to the local authority 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 significant harm (SPOSH) being caused, or***
- ***pollution of controlled waters is being, or is likely to be caused***

Section 78A(5) requires that the regulatory authority act in accordance with the guidance issued by the Secretary of State in establishing pollutant linkage and in determining significance and likelihood of harm. However a number of non-statutory documents are also taken into consideration, principally those issued by the Environment Agency and DEFRA.

1.2.4 Principles of pollutant linkages

Not all land that has been subject to contamination is regarded as contaminated land (as given in 1.2.3). For a site to meet the definition of contaminated land, a pollutant linkage must be established, see Figure 1 below.

A pollutant linkage consists of 3 parts

- A source of contamination in, on or under the ground
- A pathway by which the contamination is causing significant harm (or which represents a significant possibility of significant harm being caused)
- A receptor of a type specified in the statutory guidance (found at <http://www.defra.gov.uk/environment/land/contaminated/legislation.htm>). Tables 'A' and 'B' in Annex 3 of 1/2006 (repeated in Appendix 2 of this strategy) detail types of receptors and the nature of significant harm

Figure 1. Illustrative diagram to show a pollutant linkage.



The receptors that are defined as being potentially sensitive are:

1. Humans
2. Any ecological system, or living organism forming part of such a system, within a location which is:
 - An area notified as an area of special scientific interest under section 28 of the Wildlife and Countryside Act 1981 (Calderdale has SSSI sites)
 - Any land declared a national nature reserve under section 35 of the Wildlife and Countryside Act 1981; (Calderdale has none)
 - Any area designated as a marine reserve under section 35 of the Wildlife and Countryside Act 1981; (Calderdale has none)
 - An area of special protection for birds established under section 3 of the Wildlife and Countryside Act 1981 (Calderdale has none)
 - Any European Site within the meaning of Regulation 10 of the Conservation (Natural Habitats etc.) Regulations 1994 [i.e., Special Areas of Conservation and candidate SAC site, but no other SAC sites.)
 - Any candidate Special area 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 on nature conservation (i.e., candidate Special Areas of Conservation and Special Protection areas); or
 - Any nature reserve established under section 21 of the National Parks and Access to the Countryside Act 1949
3. Property in the form of:
 - Crops including timber
 - Produce grown domestically, or on allotment for consumption
 - Livestock
 - Other owned or domesticated animals
 - Wild animals, which are the subject of shooting, or fishing rights.
4. Property in the form of Buildings. ('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).

1.2.5 Risk Assessment

If all three components of the pollutant linkage exist, a risk assessment will be undertaken to determine if significant harm is actually occurring or there is significant possibility of significant harm occurring. Land can only be deemed 'Contaminated Land' if significant risk is proven.

1.3 Development of the Strategy

The strategy complements but does not replace other environmental protection policies. It provides a clear framework for dealing with concerns. The responsibility for creating and maintaining the strategy and dealing with contaminated land concerns lies with the Pollution Team of Environmental Health Services. It consults with other officers across the council and in external agencies to provide a comprehensive facility to address concerns.

1.4 Objectives of the Strategy

This document satisfies the requirement to produce and periodically review a strategy to show how Calderdale meets statutory guidance.

The original document was advertised in the media, informed directly to interest groups, and made available for public inspection in the local libraries, at the Environmental Health Services office in Halifax and on Calderdale Councils internet site. All comments received were considered before the strategy was finalised. The revised strategy replaces the original document and is available on the internet.

1.5 Requirements of the Strategy Document

All Local Authorities are required to take a strategic approach to inspecting land in its area for contamination.

The Statutory Guidance requires that this approach

- Be rational, ordered and efficient
- Be proportionate to the seriousness of any actual or potential risk
- Seek to ensure that resources are concentrated on investigating 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

1.6 The objectives of the strategy document.

The key objectives of the strategy are as follows

- To ensure compliance with and enforcement of statute
- To ensure appropriate remediation of contaminated land to prevent serious harm
- To avoid blight by ensuring that where redevelopment of sites take place in the Borough that the process deals effectively with any land contamination, and that procedures are in place for the open provision of information to the public, developers, property surveyors etc
- To address the liability issues associated with the Council's existing land holdings and avoid any new liability associated with land

In order to achieve the above aims Calderdale Council will prioritise their actions in dealing with contaminated land in the following order

- 1 To protect human health
- 2 To protect sensitive species and environments
- 3 To protect controlled waters
- 4 To manage future liabilities on council owned land
- 5 To protect Key Property from the effects of contaminated land

2.0 Characteristics of Calderdale's Area

This section gives the background to the Metropolitan Borough of Calderdale area using

- historic, geographic and demographic information,
- some environmental information about water resources, ecological, geological and archaeological data, (acquired locally and from English Nature, English Heritage, the Office of National Statistics, the Environment Agency and the British Geological Survey)

It shows how these characteristics will influence the council's approach to inspection for contaminated land. It will also enable a fair comparison with other local authorities for the purpose of best value.

2.1 Geographical location

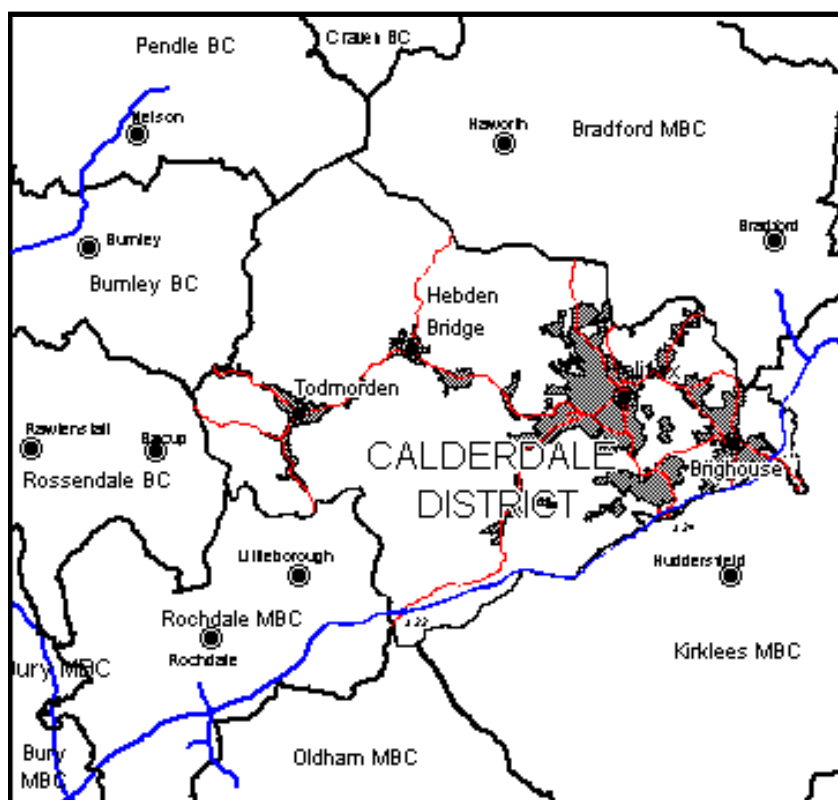


Figure 2, Position of Calderdale relative to other councils and strategic communications

Calderdale is one of 5 West Yorkshire Metropolitan councils (the others being Kirklees, Bradford, Leeds and Wakefield). To the south-west it adjoins the Greater Manchester local authorities of Oldham and Rochdale. To the west and

north-west it adjoins Rossendale, Burnley and Pendle local authorities in Lancashire.

The M62 motorway traverses the southern boundary of Calderdale. The River Calder and the Rochdale and the Calder and Hebble canals (not shown) run through Todmorden, Hebden Bridge, Sowerby Bridge, to Brighouse.

Much of the area west of Sowerby Bridge is rural, with upland moor and pasture of the South Pennine hills broken by narrow steep valleys. Development here is concentrated in the valley bottom between Hebden Bridge and Todmorden. There are some villages on the upland plateau including Heptonstall, Lumbutts, Mankinholes, Old Town (Hebden Bridge) and Midgley. The lower lying east of Calderdale is more widely developed. Here are the towns of Sowerby Bridge, Halifax, Elland and Brighouse although the southern part of this area around Ripponden and Barkisland is more rural in nature.

2.2 Brief description and history

Halifax is the largest town. Once the chief West Riding wool marketing centre and heavily dependent on the textile industry it has since diversified into other trades such as confectionery and machine tools. Buildings of historic interest include the Piece Hall where 18th century clothiers traded their wares. Early industry was concentrated along the valley bottoms where mills used the water to power equipment, and where the rail, canal and early road systems afforded carriage of goods. As growth spread the towns of Brighouse, Elland, Sowerby Bridge, Hebden Bridge and Todmorden developed a multiplicity of trades including, near Hebden Bridge, the manufacture of asbestos-based products. All have extensive rural hinterland of outstanding scenic beauty. One such area is that of Hardcastle Crag, a steeply wooded valley, and the only owned National Trust site in the Borough.

2.3 Size

Calderdale is approximately 36,379 hectares (138.5 sq. miles) in area.

2.4 Demography

In 1999 the population was estimated as 193,000 with 12,400 (6.4%) and 25,900 (13.4%) of the population being in the 0-4 and 5-14 age groups respectively. The 1991 census estimated 28.3% households having 1 or more children aged 0-15. Almost half of the total population lives in Halifax. Further demographic details are given in paragraph 3.2, figure 7.

2.5 Details of Calderdale Ownership of Land

The reorganisation of local government in 1974 created the Calderdale district. When, later, the West Yorkshire Metropolitan County Council disbanded

Calderdale gained some county-owned land. Calderdale now holds 6500 title deeds for property of all descriptions – residential property, schools, community centres, offices, shops, industrial premises, car parks, cemeteries, parks, moorland and other amenity land. Most of these records exist in paper format only. It is hoped to produce a computerised database by 2005.

In addition there is some 1440 km of surfaced and unsurfaced roads owned and maintainable by the council and 1350 km of footpaths and bridleways.

At the time of writing this draft strategy document the sale of the majority of the council housing stock to private ownership is pending.

2.6 Current Land Use Characteristics

Figures 3,4 and 5 offer three sources of data suggestive of land use within the borough:

- employment statistics,
- the Unitary Development Plan
- other land use data held by the planning service.

Figure 3 - Employment data 1997

Industry	1997
Manufacturing	29.6 %
Banking, Finance, Insurance etc	22.4 %
Public Admin, Education, Health	19.7 %
Distribution, Hotels, Catering	17.1 %
Other Services, Agriculture & Mining	4 %
Construction	3.6 %
Transport & Communications	3.6 %
Total (to nearest '00)	80,300

This employment data represents the nature of employment within the borough. Those employed within the Borough may not necessarily reside in Calderdale.

The Local Development Plan, last revised in 2006, together with other data held by Planning Services allow an approximation of land area given over to various uses. These are given in Figures 4 and 5 below

Figure 4 Land Use as per 2006 LDP

Use	Area (Hectares)	% of all land in Calderdale
Rural Open Space	986.9	2.71%
Primary employment and employment allocation areas	962.6	2.65%
Urban Open Space	686	1.89%
Quarries	251.4	0.69%
Waste Disposal Sites	167.5	0.46%
M62 motorway	120	0.33%
Town Centres and other retail sites	111.75	0.31%
Railway Lines	86.98	0.24%

Figure 5 Other Land Use Data

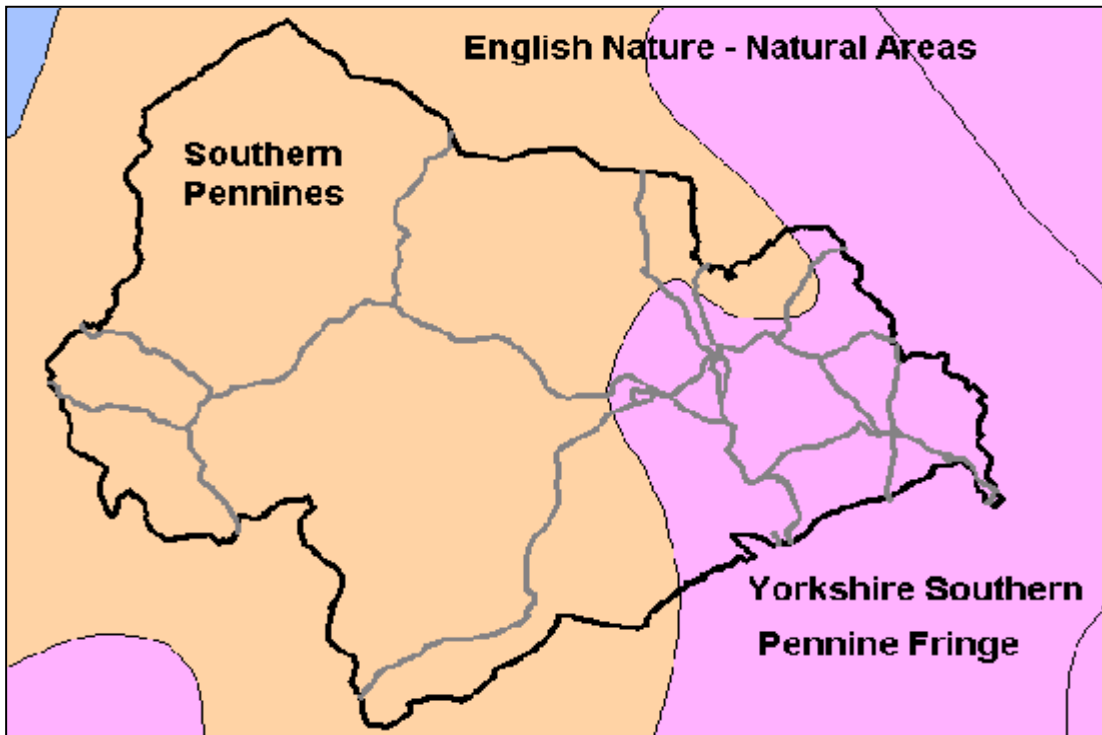
Use	Area (Hectares)	% of Land in Calderdale
Total Area of Greenbelt	22935	63%
Special Landscape Area	24075	66%
Sites of Special Scientific Interest (SSSI) [see appendix 3]	9667	26.6%
Sites of Ecological and or Geological Interest (SEGI) [see Appendix 3 for ecological SEGI]	863	2.4%
Conservation areas	511	1.4%
Common Land	5421	14.9%

NB: several categories of land are accounted for in more than one designation listed in figure 5; eg part of a common may have a SSSI designation.

2.7 Protected Locations and Natural Habitats

English Nature describes ‘natural areas’, i.e. areas of distinct characteristics, Two of these - the Southern Pennines, and the Southern Pennine Fringe –apply to the Calderdale area, see figure 6 below. Some of these features of these are of National Importance, some of local or regional importance. Some are not found within Calderdale at all.

Figure 6 – Map Showing English Nature Natural Areas



Some of these features have been recognised by being designated under various statutes.

Calderdale has

- Sites of Special Scientific Interest (SSSI) designated under the Wildlife and Countryside Act 1981.
- Special Protection Areas (SPA) under European Directive 79/409 on the Conservation of Wild Birds. One such site is a proposed Special Area of Conservation (see below)
- Sites of Ecological and Geological Interest (these are also known as sites of Sites of Scientific Interest under the Wildlife and Countryside Act 1981)
- A proposed Special Area of Conservation (pSAC) to be designated under Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora.
- Areas and Individual Trees deemed 'Ancient Woodland' by English Nature and also 1100 Tree Preservation Orders.

Calderdale does not have

- National Nature Reserves (NNR) designated under the National Parks and Access to the Countryside Act 1949 or Wildlife and Countryside Act (1981).
- "Ramsar" sites listed as a Wetland of International Importance under the Convention on Wetlands of International Importance 1973

Some sites have multiple designation. The main sites are listed in Appendix 3, together with maps showing location. Within the contaminated land regime areas such as SEGI and Ancient Woodland, unless otherwise designated are

not automatically protected. We would expect to only consider the impact of intrusive investigation and remediation on these areas in respect of action at nearby sites

2.8 Key Property Types

The unique Halifax Piece Hall has already been mentioned. The preserved village of Heptonstall has an unusual 13th century church. The area around Hardcastle Crag and Hebden Dean is owned by the National Trust and a well known beauty spot. There are several historic buildings and monuments throughout Calderdale. Under the contaminated land regime only scheduled ancient monuments (see appendix 4) warrant protection, although other historic sites have to be considered should the council require intrusive investigation or remediation at a nearby site.

2.9 Key Water Resource and Protection Issues

Mains (i.e. treated) water is provided by Yorkshire Water. There are a number of collection and storage reservoirs within the Calderdale area, principally

Albert Raw Reservoir

Baitings Reservoir

Booth Dean Upper Reservoir

Castle Carr Reservoir

Dean Head Reservoir

Gorple Lower and Upper Reservoirs

Gorpley Reservoir

Mixenden Reservoir

Ogden Reservoir

Ramsden Wood Reservoir

Ringstone Reservoir

Ryburn Reservoir

Walshaw Dean Lower, Middle and Upper Reservoirs

Widdop Reservoir

Witherns Clough Reservoir

In addition there are known to be approximately 1800 properties (mostly residential) on 869 private water supplies, derived from springs and boreholes.

The reservoirs, springs and boreholes would be classed as receptors. All rivers and their tributaries are Controlled Waters and too classed as receptors.

These with known licensed abstractions (i.e. bore holes), but not private water supplies, appear on a map as Appendix 5

2.10 Known information on contamination

Prior to the enactment of Part IIA one regime to administer contaminated land was given in Department of Environment Circular 21/87. It listed 15 land uses that presumed land to be contaminated, without any assessment as to if it was

actually contaminated being made. In 1993 Calderdale drew up a list of 866 sites which met the criteria of DoE 21/87. Additionally we inherited records for a number of landfill sites from West Yorkshire Waste Management (WYWM) -itself a residual body created from the demise of WYMCC- when WYWM was absorbed into the Environment Agency.

The Environmental Health Service requested reports be submitted to account for any land contamination, mindful of previous land use, when conditional planning permission was granted. Since 1994 some 400 permissions have been so granted. Reports should have been submitted to comply with the conditions permitting that development. Planning Officers only investigated breaches of condition upon complaint (which likely had little to do with contaminated land). If no complaint was made no check was made to ascertain compliance. We do not know how many reports were submitted. This is a matter to be addressed in this strategy. (See paragraph 4.3)

Since the operation of Part IIA in April 2000 one site has been brought to our attention, this being a waste site in the Copley area, near a former foundry. This site is said to have been used for disposal of chemical waste from the nearby Copley Chemical Works and there is Chromium based leachate entering the River Calder.

2.11 Current and Past industrial History

In the Local Economy in recent years service industries have overtaken manufacturing in terms of number of employees. However, manufacturing (31%) continues to account for almost one-third of Calderdale employment, far above the West Yorkshire (23%) and Great Britain (18%) figures.

2.12 Broad Geological, Hydrogeological and Soil Characteristics

The following is a simplified description of the geology of the Borough progressing east to west, as derived from British Geological Survey maps:

- Sheet 68 'Clitheroe' scale 1,50,000 solid with drift
- Sheet 69 'Bradford' scale 1:50,000 solid with drift
- Sheet 76 'Rochdale' scale 1:50,000 solid with drift
- Sheet 77 'Huddersfield' scale 1:50,000 solid and drift

The solid geology arises from the carboniferous period.

The geology of the eastern part of Calderdale (Shelf, Northowram, Southowram, Brighouse, the eastern part of Elland and Ainley Top) comprises the Westphalian A series of lower coal measures. Here Thick Stone and Elland Flags (the latter being and having been quarried in the area) are at or near the surface. They overlay 80 yard, 60 yard and 36 yard rock bands, and then hard, middle and finally soft bed flags. These strata overlay the Millstone Grits and

subsequent strata which, by virtue of faults and erosion, are exposed on the higher ground to the west.

Illingworth, Ovenden, Halifax, Norland Moor, the western part of Elland, and Hollywell Green and then westward towards Todmorden, display strata of the Namurian (Millstone Grit Series). Here Rough Rock of the Yeadonian (G_1) series overlies the Huddersfield White Rock, Nab End Sandstone, Midgley Grit and Scotland Flags of the Marsdenian (R_2) series. This, in turn, overlies the Upper Kinderscout Grit, Lower Kinderscout Grit and Todmorden Grit of the Kinderscoutian (R_1) series. These deeper strata are progressively exposed at the surface as one proceeds west. On reaching Todmorden the surface strata are millstone grit and lower coal measures.

Sheet 68 'Clitheroe' displays a cross section through the north-west of Calderdale, from the administrative boundary with Burnley BC, above Widdop Reservoir and as far east as Greaves Clough. The strata are those of the Namurian (Millstone Grit Series). Here Kinderscout Grit overlies Marchip Grit, which in turn overlies Warley Wise Grit.

Most of the higher ground is deemed covered in peat or hill peat. The groundwater vulnerability map (see appendix 6) shows glacial drift on pennine hill tops

Water resources are divided into surface and groundwater, the latter being contained within underground strata of various types. There are 869 known spring water supplies of both types within the Borough. Abstractions from these aquifers provide potable water for varied use. A map showing surface sources (i.e. rivers and streams) and licensed abstractions appears as Appendix 5

Groundwater is usually of high quality and often requires little treatment prior to use, but it is vulnerable to contamination from diffuse and point sources, from both discharges directly into the groundwater and indirect discharges into or onto land. Surface water can be polluted. For the purpose of the Contaminated Land Regulations 2006 the Minor Aquifers identified on the groundwater vulnerability map would be classed as a major aquifer under the regulations. Together with the rivers they would also be classed as receptors

The Environment Agency has produced a 'Policy and Practice for the Protection of Groundwater. In their Groundwater Vulnerability Map, Sheet 11 'South Pennines' scale 1:100,000 Calderdale is depicted as a minor aquifer (being variably permeable). Such aquifers can be fractured or potentially fractured rocks which do not have a high permeability or other formations or variable permeability including unconsolidated deposits. Although these aquifers will seldom produce large quantities of water for abstraction they are important both for local supplies and in supplying base flow to rivers.

It is possible for major aquifers to be below minor aquifers although not all such major aquifers are shown on that map.

Minor aquifers comprise the following solid formations: coal measures, millstone grit and carboniferous limestone series. They also comprise the following drift deposits: landslip, head (sandy), alluvium, alluvial fan deposits, river terrace deposits, glaciofluvial sand and gravel deposits, glaciolacustrine sands and gravels, and glacial sand and gravel deposits.

Superficial drift deposits that overlie the solid geological strata can sometimes be substantial in thickness. They are often variable in composition changing from highly permeable outwash gravels to low permeability clays over short distances both laterally and vertically. Generally the presence of low permeability drift deposits at the surface overlying aquifers occur on the Pennine hill tops whereas more permeable drift deposits are recognised as minor aquifers.

In terms of soil vulnerability classification the soils fall into High, Intermediate and Low Leaching Potential classes, based on the physical and chemical properties which affect the downward passage of water and contaminants. These include texture, structure, soil water regime and the presence of distinctive layers such as raw peaty topsoil and rock or gravel at shallow depth.

In Calderdale only the following soil classes are represented

- High Leaching Potential classes 3 and U
- Intermediate Leaching Potential class 1
- Low Leaching Potential
- Low Permeability drift

Soils of high leaching potential (H) are soils with little ability to attenuate diffuse source pollutants and in which non-adsorbed diffuse source pollutants and liquid discharges have the potential to move rapidly to underlying strata or to shallow groundwater. They include soils of Blackwood, Newport and Rivington associations of the National Soil Map.

Class H3 are coarse textured or moderately shallow soils which readily transmit non adsorbed pollutants and liquid discharges but which have some ability to attenuate adsorbed pollutants because of their clay or organic matter contents.

Class H3 soils are found

- west of Cornholme,
- south of Todmorden and along the Walsden corridor,
- north of Heptonstall,
- Old Town, east of Hebden Bridge, Mytholmroyd,
- Warley and Mount Tabor,
- Soyland and Rishworth, North of Barkisland,
- Holywell Green and Outlane,
- Southowram,
- Priestly Green

Soil information for urban areas eg Halifax, Northowram, Brighouse, Elland, Greetland, Ripponden and Sowerby Bridge, and for restored mineral workings is

based on fewer observations than elsewhere. A worst case vulnerability classification (H) is therefore assumed for these areas and for current mineral workings. All are given a designation HU until proved otherwise. The majority of soils surrounding HU areas are H3 soils and to a much lesser extent class I1 soils and Low Leaching Potential Soils (L)

Soils of Intermediate Leaching Potential (I) are soils which have a moderate ability to attenuate diffuse source pollutants or in which it is possible that some non-adsorbed diffuse source pollutants and liquid discharges could penetrate the soil layer. They include soils of the Alun, East Keswick and Turbary Moor Association of the National Soil Map.

Class I1 are soils which can possibly transmit a wide range of pollutants

Class I1 soils are found

- in the Shibden valley,
- in the Red Beck valley between Southowram and Brighouse
- Cromwell Bottom, between Elland and Rastrick,
- around Copley,
- east and south of Barkisland and Krumlin
- east of Ripponden

Soils of low leaching potential (L) are soils in which pollutants are unlikely to penetrate the soil layer because either water movement is largely horizontal or, they have the ability to attenuate diffuse pollutants. Lateral Flow from these soils may contribute to groundwater recharge elsewhere in the catchment. They generally have high clay or organic matter contents and include soils of the Dukeswick, Wilcocks and Winter Hill Associations.

Low Permeability drift deposits occurring at the surface and overlying Major and Minor Aquifers are head (clayey) peat, glaciolacustrine silts and clays, glacial silts and clays, sandy till, till and morainic drift.

Class L soils are found in the remaining areas. They predominate on the higher ground in the western part of the Borough, with Drift found on the upland moors:

- Widdop moor
- Wadsworth Moor
- Oxenhope Moor
- Ovenden Moor
- Heptonstall Moor
- Soyland Moor
- Rishworth Moor

A copy of the groundwater vulnerability map for the Calderdale area is reproduced in Appendix 6

The Minor Aquifers identified and the rivers would be classed as receptors in terms of pollution linkage.

2.13 Specific local features

Analysis of local spring waters in the Borough shows that many are naturally high in aluminium and, when sourced from deeper aquifers, high in iron and manganese also. Levels experienced are often in excess of those allowed in the standard of wholesomeness given in the Private Water Supply Regulations 1991 yet within relaxation levels allowed by DETR in DoE Circular 24/91. It is anticipated a sea change will come in the 2009 April edition of the UK's Private water supply regulations.

2.14 Redevelopment history and controls

Much redevelopment has occurred over time. Most will not have been catalogued prior to formal planning records being kept as from 1948. We will consult archive material to identify former land uses. Some housing developments overlay former mine workings and filled land, others are on land with a former industrial use. More major projects have seen the creation of shopping precincts and supermarket style retail outlets throughout the Borough. Lowfields at Elland, is an area of land formerly given to power generation and the storage of waste from the power station, but now redeveloped for new industry.

Calderdale's LDP policy recognises that there are pockets of derelict and degraded land within the Borough and redevelopment to acceptable end uses is promoted. The Council seeks external and, as resources permit, internal grant assistance to reclaim derelict and neglected sites in the following order of priority:

- The provision of suitable sites for employment and housing
- The improvement of the environment, including the provision of sport, leisure and recreation facilities
- The provision of land for woodland and nature conservation.

2.15 Action already taken to deal with land contamination

Paragraph 2.10 highlighted one site under investigation. Individual schemes submitted as part of planning permission approval are outside the scope of this document. No contaminated land has been determined at the present time

3.0 The Strategy for Calderdale: Overall Aims and Priorities

This section describes how we will go about achieving the strategy objectives. It sets key milestones for monitoring progress.

3.1 Aims Of the Strategy

Dealing with contaminated land issues is a complex task, especially where limited information is available. We will adopt a strategic approach to identifying that land which merits detailed individual inspection. Our approach will

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

To aid decision making in Calderdale the table below sets out our priorities.

Calderdale's priorities in dealing with contaminated land will be:

1. To protect Human Health
2. To protect sensitive environments and species
3. To protect controlled waters
4. To protect Key Property from the effects of contaminated land
5. To manage future liabilities on council owned land

In addressing each issue regard will be had, in order, to contaminative or potentially contaminative situations where effects are or have the potential to be manifest in the immediate term (0 – 1 year), short term (1 – 5 years) or long term (> greater than 5 years). In all cases we will comply with statute and official guidance.

This strategy will supplement but not replace other frameworks, such as planning and wildlife and countryside legislation. It will not seek to remedy situations which could have been or ought to be resolved under other legislation more directly or quickly.

The remediation of brownfield sites ought to be largely achieved through Planning redevelopment rather than through this strategy.

We will encourage voluntary remediation where possible to achieve these aims

Accordingly sites displaying a demonstrable risk to human health will be identified as a priority.

The Council recognises its responsibilities as a landowner and will discharge its duties responsibly under the legislation. Any land identified or suspected as contaminated will be dealt with in the same manner as if it were not Council owned, albeit that the Council cannot take enforcement action against itself.

It is intended that all actions taken to establish and implement this legislation will be open and transparent, subject to preserving confidentiality of complaints and complying with statute

3.2 OBJECTIVES AND MILESTONES

A breakdown of the identification and inspection process is given below. It will form the basis of a project plan to define a series of key milestones. This project plan will be confirmed in the publication of the final strategy.

Stage 1 – Dealing with Urgent Sites. (From April 2000)

Currently we have no knowledge of sites that meet this description. If sites causing significant harm are identified through the consultation phase or otherwise then the general approach –see stage 6 below-will be secondary to dealing with such sites. See also Section 6 of this document.

Stage 2 – Preparation of Geographical Information (From November 2000)

Collation of information from various sources – see paragraph 5.3 – attaching them to the computerised Geographical Information System, and linking the GIS to other pollution records databases. This will be an ongoing task. The GIS will be the main tool used to identify potentially contaminated land.

Whilst much land may have been subject to contamination it is likely that only a very small amount will meet the strict definition of Contaminated Land. (See paragraph 1.2.3). As the project is progressed this may identify areas that are considered to be a greater priority than initially thought and thereby assist in the prioritisation of land

This tool has proven to be most useful in the identification and management of contaminated land issues. The majority of sites that are dealt with by the contaminated land regime are through the planning system when applications become live on wither residential sites – in the form of extensions or small permissions, or through permission sought for a major change of use on some land that formerly had land contamination issues associated with it.

Stage 3 – Draft Consultation Strategy – (November 2000 – February 2001)

This draft strategy document was prepared in line with “Inspection Strategies for Contaminated land” Draft Technical Note for Comment, DETR April 2000. This

is so that the statutory deadline of July 2001 to have consulted and published the finalised strategy can be met. Consultation comments and any necessary revisions were incorporated in the final strategy.

Stage 4 – Consultation and External Contacts (April 2001 – May 2001)

The data sources held and envisaged may not identify all potentially contaminative sites. Local knowledge will help in identifying gaps. Statutory consultees and Interest Groups as identified in Appendix 1 were asked to provide any relevant knowledge that they may had.

Many contacts with external consultees already exist within the Council. In this consultation phase contact between the pollution team and external consultees for the purpose of dealing with contaminated land concerns will be established.

Stage 5 – Publish Final Inspection Strategy (June 2001)

The amended draft strategy, post consultation, was put to the councils’ Health and Social Care Scrutiny Committee on 6 June 2001 and Cabinet on 1 July 2001. It was approved in its amended format and is now published.

Stage 6 – General Approach to Investigation (July 2001 – April 2005)

The Council’s first priority in dealing with contaminated land is to protect human health. We will consider issues supporting immediacy of harm first, wherever sites lie in Calderdale. We envisage using DTI industry profiles to highlight pollutant concerns, and published toxicology references to depict the likelihood, immediacy, and extent of harm. Initially we intend to consider sites in ‘industry use’ groups as given in Appendix 7, with sites in the first use group being given priority. The initial identification by basic Geographical Information System trawl of know works and any map located sources was completed in August 2004.

All sites, once risk assessed, will scrutinised with a to a desk-top study and then a walkover survey before the need for intrusive investigation (eg taking of soil samples for analysis) is considered.

Stage 7 – Risk Assessment, risk evaluation and site prioritisation

The risk assessment of the sites in the borough has been completed in April 2005. This list has not been actively worked on for some time, due to commitments of the land contamination team. To date only a second determined site has been investigated and funding has been sought from DEFRA through their Capital Grants scheme for the site in question. Further sites are en-visionsed to begin active work in early 2009. A further detailed risk assessment of landfill sites only is planned to be carried out by the end of 2008.

Figure 7 Estimated ward population densities - 1998 (Ranked)

WARD	1998 Total	% of total population	Total Children	% children in ward
------	------------	-----------------------	----------------	--------------------

	Population		age 0 - 15	population
Greetland & Stainland	12000	6.2	2250	18.7
Saint John's	11700	6.1	3305	28.2
Town	11800	6.1	2787	23.6
Ryburn Valley	11925	6.1	2281	19.1
Calder Valley	11650	6	2207	18.9
Luddendenfoot	11050	5.7	1955	17.7
Elland	10750	5.6	2400	22.3
Skircoat	10800	5.6	1853	17.2
Mixenden	10525	5.5	2884	27.4
Warley	10650	5.5	2313	21.7
Northowram & Shelf	10600	5.5	1770	16.7
Todmorden	10400	5.4	2286	22.0
Ovenden	10250	5.3	2790	27.2
Rastrick	10075	5.2	1938	19.2
Hipperholme & Lightcliffe	9775	5.2	1672	17.1
Sowerby Bridge	9875	5.1	1960	19.8
Brighouse	9625	5	1784	18.5
Illingworth	9525	4.9	2309	24.2
Total	192,975		40746	

Stage 7 – Final Prioritisation of Sites (from April 2005)

Regulations require the remediation of contaminated land sites to be prioritised. This prioritisation can only properly take place once all sites have been identified. This will therefore occur at the end of the investigation stage, which was completed in April 2005. In an attempt to ensure that the most pressing and serious problems are located first it is intended initially to assess those sites that have been subject to the most heavily contaminative industries and which therefore present a greater risk. (See Appendix 7). However should a site be identified as causing an intolerable risk then these will be addressed at that time and not be left until all areas have been evaluated.

A risk assessment method to aid decision making by evaluating the components of the source-pathway-receptor linkages will be acquired. The DETR are to publish a methodology for risk assessment, (Handbook of Model Procedures for the Management of Contaminated Land, CLR 11) and guidance on the levels of certain contaminants to assist in that process (the 'CLEA' Model). Neither document is available at the time of publishing this strategy. It may be that these will provide a suitable risk assessment method.

Pending the publication of these documents should the need to investigate an urgent site arise, eg during stage 1, we will apply the following tests:

1. Reference to document an appropriate document (see paragraph 4.5) to determine is the presence of a particular contaminant exceeds desirable levels

2. Assess confidence that a particular linkage actually exists (rather than potentially exists), eg that soil of a high leaching potential actually connects a proven source with an at-risk receptor
3. Consider the effects of the pollutant linkage being established eg explosion, cancer risk, SSSI compromised, yield affected
4. Determine if the degree of uncertainty within the linkage prevents the determination of significant harm, and whether that supports further investigative action at that point in time or a future point in time.

The council will consider appointing consultants to assist in the ultimate determination of contaminated land.

4.0 Procedures

4.1 Internal management arrangements for inspection and identification

Currently the enforcement of Part IIA of the Environmental Protection Act 1990 is to be carried out by the Pollution Team of Environmental Health Services. The lead officer of this team is the Principal Environmental Health Officer (Pollution Control). Reports to the Council will depend on the nature of that report. Operational and financial matters would go to the Cabinet. Issues arising out of paragraph 4.2 below would go via the appropriate chief officer to cabinet. Should any site be declared as a "Special Site" the lead regulatory role and responsibility will lie with the Environment Agency

Elected members will be informed at the earliest opportunity of any plans to designate an area of Council-owned land, land where the Council is the "appropriate" person, or where it may be liable for some or all of the remediation costs.

4.2 Considering Local Authority Interests in Land

The timescales and procedures for investigation all land are as given in chapter 3. This is essentially a risk-based approach to inspection. Calderdale owned or managed land, land formally owned by Calderdale, and any other situations where Calderdale is the appropriate person will not receive any more or less favourable consideration than any other land. Any matters that need to be addressed on council owned land would be put to the land owning or land managing service within the council for action.

4.3 Information Collection

Many sources of information will be consulted to identify potential sources of contamination, pathways and potential receptors. Some are given below in figure 8. This list is not exhaustive.

Figure 8 Sources of Information

General Resource	Borough Specific Resource	Use
Historic maps	Paper records of Ordnance Survey Maps held by Planning Services and Reference Library, possibly Digital versions of the maps will be purchased in the future.	To identify possible sources of past contaminative use
Geological maps 1:50 000	Solid and Drift geology maps are held by the Planning Department	To characterise sources and pathways
Hydrogeological maps	The Groundwater Vulnerability Maps produced by the Environment Agency	To identify pathways and receptors (controlled waters)
MAFF	Makes provision for grading land	To establish polluting linkage

Agricultural Land Classification System	according to long term limitations which can result from soil contamination	via soils
Source Protection Zones	Areas of groundwater that receive special protection by the Environment Agency are identified on the EA website, and could be used with a GIS in the longer term	To characterise Receptors (controlled Waters)
Environmental Health records	Calderdale maintains records of complaints and investigations	To identify known information on contamination
Planning records	Calderdale holds detailed planning records of development in the area, including information on ground condition presented in surveys.	To identify known information on contamination and missing contaminated land assessments
LDP	The current plan is a valuable source of up-to-date information on land use	To identify receptors
Integrated Pollution Control register	The Council has maintained a public register containing details of authorised industrial processes in Calderdale since 1990	To identify sources of contamination
Waste Management Licences	The Environment Agency maintain a public register of sites licensed for waste management activities and have provided relevant information relating to sites in the Borough	To identify sources of contamination
Records of landfill sites and sites of potentially contaminated land	Calderdale maintains a record of closed landfill sites including some gas emission data	To identify sources of contamination
DOE 21/87 register	860 records fulfilling definition of contaminative land under DoE circular 21/87, based on former site use	To identify possible sources of contamination
Local Studies Archives	Reference Libraries hold historical records and sources suggesting previous land use.	To Identify sources of contamination

4.4 Information Management

The Environmental Health Service is constructing a computerised Geographical Information System (GIS) to manage the contaminated land information. Efforts are being made to attach all scanned material available through the Flare recording system to the MapInfo GIS system. eg landfill gas emission data, spring water supply analysis or previous site investigation documents.

The GIS will spatially determine the proximity of potential receptors (residents, sensitive ecology, and controlled waters) to sources of contamination and highlight possible pathways. Digitisation of paper records and linkage of the databases is complete and the information management system and will allow statistical information to be drawn together for reporting and comparison with other authorities.

Subject to paragraphs 5.5 and 5.6 steps will be taken to ensure that there is no public access to records which, by virtue of statute, ought not to be disclosed.

4.4.1 Complaints and Anecdotal, Anonymous and Voluntarily Provided Information

Anecdotal evidence relating to contaminated land will be noted, but no designation of contaminated land will occur without robust scientific evidence or unless clear witnessing of contamination by an authoritative appropriate person can be carried out.

Anonymous complaints and anonymously provided information will be dealt with as if complainant details had been provided. The extent to which such complaints are investigated may by their nature be limited for technical reasons, or without Calderdale incurring unreasonable or unnecessary expense in investigation. Such information and complaints will be marked as having been provided anonymously and as unverified until verified.

Calderdale will try to resolve complaints quickly. The legislative framework does, however, present a number of obstacles to speedy resolution of problems:

1. Proof of a viable pollutant linkage before any formal designation as contaminated land is permissible, which might only be possible with detailed investigation
2. Prior consultation with interested parties before designation as contaminated land
3. A minimum of a three month period between designation and serving of a remediation notice
4. The requirement for the enforcing authority to make every effort to identify the original polluter of the land (or "Class A" person)

The regulations allow conditions 2 and 3 to be waived in extreme cases, but not conditions 1 or 4

4.5 Information Evaluation

All information on substances in, on, or under the ground that may cause significant harm or pollution will be evaluated against current governmental guidelines and good practice.

In the case of reports that include or lead to an analysis of contaminated land initial reference will be made against the desktop evaluation justifying the contents of that report. Poorly justified or ratified reports will be rejected.

The CLEA and SNIFFER 'Generic Assessment Criteria (GAC's)' - gives the most widely used set of trigger and action levels for a range of contaminants and is likely to remain a key reference document. Unfortunately the systems are in a state of flux as the models that produce the figures are unreliable and new

research into human health variability's depending on accessibility of the chemical substances to the human system are constantly fluctuating.

The Private Water Supply Regulations 1991 and Department of Environment Circular 24/91 define and suggest levels of chemical permissible in drinking water. This has been in part superseded by the Water Resource Act 2003, and is due to be altered by the April 2009 Private Water Supply Regulations, bringing us up to meet European Private Water supply standards.

DEFRA Agricultural Land Classification system in respect of soil contamination and danger to crops, this is also now subject to a European scheme to protect soil quality for the purposes of good farming. Calderdale lacks large area of crop production and so small influence from this quarter is expected.

The Contaminated Land Exposure Assessment ('CLEA') guidelines, to be published by DEFRA, have replaced ICRCL 59/83.

Risk assessments may also be required for substances not covered by CLEA guidelines. In these cases reference may be made to occupational exposure levels issued by the Health and Safety Executive, or other authoritative sources of information, such as guidelines adopted in other countries. If guidelines from other countries are referred to, it will be important to bear in mind the significant difference in remediation standards between the UK and these other countries and also what assumptions or reference standards have been made or used in developing these standards.

In respect of controlled waters advice will be sought from the Environment Agency. It is anticipated that risk assessments and remediation will be carried out in accordance with Environment Agency guidance as laid down in "Methodology for the Derivation of Remedial Targets for Soil and Groundwater to Protect Water Resources" (EA R&D Publication 20, 1999).

There are other regulatory bodies that can take action to deal with contamination on land in certain circumstances. Part IIA legislation overlaps with planning, certain pollution and wildlife protection legislation.

Most contaminated land issues are currently addressed through the planning regime. Here contamination is a material consideration for development. Planning controls remain the primary mechanism to deal with contaminated brownfield sites. Environmental Health Officers may recommend to planning officers that a planning proposal should be subject to a conditional requirement to address concerns about contaminated land. They may also appraise any action taken to satisfy such a condition. Remediation agreed by planning condition will not be dealt with under Part IIA,

The Environment Agency has powers to deal with harm to controlled waters caused by contaminated land. While Part IIA legislation does not revoke these powers, the DETR have indicated that such problems should now be dealt with under the new contaminated land regime. Calderdale will consult with the Environment Agency before designating any contaminated land as a result of

risk to controlled waters and will take into account any comments made with respect to remediation. If the Agency identifies a risk to controlled waters from contaminated land, the Council will be notified to enable designation of the land and remedial action will be taken under Part IIA.

In respect of Local Authority: Pollution Prevention and Control (LA:IPPC) site operators must undertake a site condition survey prior to receiving a license to operate. If this identifies contaminated land it may trigger action under Part IIA. Existing processes will be brought under this legislation by 2008 although it will apply to new processes or any substantial change to existing processes as of now.

Calderdale will remain open to communication with other bodies to secure that method of resolution most appropriate in all the circumstances.

5.0 General Liaison and Communication

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

5.1 Consultees

A list of consultees is given in Appendix 1. Each was invited to comment on the consultation draft of the strategy. Liaison with all consultees will be with the Pollution Control Team of the Commercial Section of Environmental Health Services at Northgate House, Halifax.

5.2 Communicating with owners, occupiers and other stakeholders

The Council's usual approach to its regulatory duties is to seek voluntary action before taking enforcement action. We believe that effective remediation of contaminated land can be achieved by agreement as well as enforcement.

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

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

- 1** Write to the owners and/or the occupiers and/or the appropriate persons of the contaminated land, prior to determination of that land, explaining the Council's intention and summarising the reason for the determination.
- 2** Write to the owners and/or the occupiers and/or the appropriate persons confirming that the land has been formally determined as contaminated land and that, initially, the Council is seeking appropriate remediation without the service of a remediation notice. Concurrently notify the Environment Agency of the formal determination.
- 3** If requested by one of the Stakeholders, provide a copy of the formal Determination document

5.3 Powers of Entry

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

5.4 Enforcement action

The Council has adopted the Enforcement Concordat which will followed in relation to this regime and will ensure consistent, fair, and transparent practices are used when taking enforcement action.

5.5 The Public Register

Under the Contaminated Land Regulations 2006, the Council is required to maintain a register of contaminated land. The register will be held by Environmental Health Services at Northgate House, Northgate, Halifax, and will be accessible, on request, during normal office hours.

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

- ◆ remediation notices
- ◆ details of site reports obtained by the authority in relation to remediation notices
- ◆ remediation declarations
- ◆ remediation statements
- ◆ notifications of claimed remediation
- ◆ determination of sites as "special sites"

- ◆ any appeals lodged against remediation and charging notices
- ◆ convictions

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

Initially it will be part paper based and part electronic and be accessible on request, free of charge, by members of the public during office hours. Copies of the register or assisted searches can be requested given the availability of staff and after payment of a suitable fee.

5.6 Provision of information to interested parties

The provision of other information not on the register eg historical land use, polluting uses of land etc, may be available to the public and can be obtained by writing to the service and enclosing a plan of the site of interest.

The provision of such information will be charged at a rate yet to be determined and which may be revised from time to time.

5.7 Provision of information to the Environment Agency

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

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

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

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

6.0 Review Mechanisms

Section 3 outlined the envisaged approach to be taken in inspecting land in the Borough for contamination and the timetable for inspecting the Borough. This section describes instances when inspections will occur outside that framework, circumstances under which previous inspection decisions should be reviewed and measures to be taken to ensure the strategy remains effective and up-to-date and relevant.

6.1 Triggers for Inspecting Land

The strategy has already recognised there may be occasions where inspections may have to be carried out outside of the general inspection framework.

Triggers for undertaking non-routine inspection will include:

- **Unplanned events** – e.g. if an incident such as a spill has occurred.
- **Introduction of new receptors** – e.g. if housing is to be built on a potentially contaminated site, designation of a new protected ecosystem, persistent trespass onto a site by young people. Mostly dealt with through the planning system.
- **Supporting voluntary remediation** – e.g. a potentially liable party wishing to undertake some remediation before their land has been inspected by the Local Authority.
- **Identification of localised health effects** that appear to relate to a particular area of land.
- **Responding to information** from other statutory bodies, owners, occupiers, or other interested parties.

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

6.2 Triggers for Reviewing Inspection Decisions

In addition there may be occasions where the findings of previous inspection decisions should be reviewed. This might occur, for example, if there were

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

It is important therefore that all decisions are made and recorded in a consistent manner that will allow efficient review. ***Currently there is not a definite system in place and the CLEA and SGV system is under review due to the uncertainty in the calculations of the Model and the back ground science regarding toxicology.***

6.3 Reviewing the Strategy

As part of the overall quality management of this work, it is important to consider the need to review the strategy from time to time.

The Strategy was originally published in July 2001 following consultation and work will then begin in implementing the strategy. Therefore because of several mentioned uncertainties it will be appropriate to review the progress of the strategy in July 2009. Any changes to the draft strategy will be submitted to the Health and Social Care Scrutiny Committee

7.0 References

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

Communicating Understanding of Contaminated Land Risks, SNIFFER (2000)

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

Geological Maps Solid and Drift Edition 1:50 000 Series (Sheets 68, 69, 76 and 77) British Geological Society

DEFRA Circular 1/2006 Environmental Protection Act 1990: Part IIA Contaminated Land

The Environmental Protection Act 1990

The Contaminated Land (England) Regulations 2006

Contaminated Land Inspection Strategies, Technical Advice for Local Authorities, DETR (Draft for Comment April 2000)

The Environment Act 1995

Water Resources Act 1991

Calderdale Local Development Plan – 2006

Survey of Potentially Contaminated Land, HMSO – 1993

Water Act 2003 – HMSO, 2003

Appendix 1: List of Statutory and Other Consultees and Method of Consultation

	<i>Location</i>	<i>Consultation Method</i>
Internal Consultees		
Planning Services	Calderdale MBC	Memorandum / Web site
Leisure Services	Calderdale MBC	Memorandum / Web site
Technical Services	Calderdale MBC	Memorandum / Web site
External Consultees – National / Regional Public Bodies		
Countryside Agency	Leeds	Letter / Web Site
English Heritage	London	Letter / Web Site
English Nature	Wakefield	Letter / Web Site
Environment Agency	Leeds	Letter and Document
English Partnerships	Warrington	Letter / Web Site
Forestry Commission	York	Letter / Web Site
Food Standards Agency, Contaminants Division	London	Letter / Web Site
Ministry of Agriculture Fisheries and Food	Leeds	Letter / Web Site
West Yorkshire Archaeology Service	Leeds	Letter / Web Site
West Yorkshire Ecology	Leeds	Letter / Web Site
Yorkshire Forward RDA	Leeds	Letter / Web Site
Yorkshire Water	Leeds	Letter / Web Site
<u>External Consultees – Local Bodies</u>		
Calderdale Civic Trust		Letter / Web Site
Elland Historical Society	Elland	Letter / Web Site
Friends of the Earth	Hebden Bridge	Letter / Web Site
General Public	Calderdale	Letter, Press Release for all Local Media, Web Site, Reference Library copies and Office copy
Halifax Antiquarian Society	Queensbury	Letter / Web Site
Halifax Civic Trust	Halifax	Letter / Web Site
Halifax Scientific Society		Letter/ Web Site
Nature Friends	Brighouse	Letter / Web Site
RSPB	Huddersfield	Letter / Web Site
Sustainability Forum	C/O Calderdale MBC	Letter/ Web Site
Todmorden Antiquarian Society	Todmorden	Letter / Web Site
Yorkshire Wildlife Trust	York	Letter / Web Site

<u>External Consultees – Neighbouring Authorities</u>		
Bradford MBC	Bradford	Letter / Web Site
Kirklees MBC	Huddersfield	
Oldham MBC	Oldham	
Rochdale MBC	Rochdale	
Rossendale BC	Rawtenstall	
Burnley MBC	Burnley	
Pendle BC	Nelson	

Appendix 2 Receptors and Harm

Table A and Table B

Table A – Categories of Significant Harm	
1 Type of Receptor	Description of harm to that type of receptor that is to be regarded as significant harm
1 Human beings	<p>Death, disease, serious injury, genetic mutation, birth defects or the impairment of reproductive functions.</p> <p>For these purposes, disease is to be taken to mean an unhealthy condition of the body or a part of it and can include, for example, cancer, liver dysfunction or extensive skin ailments. Mental dysfunction is included only in so far as it is attributable to the effects of a pollutant on the body of the person concerned.</p> <p>In this Chapter, this description of significant harm is referred to as a “human health effect”.</p>
<p>2 Any ecological system, or living organism forming part of such a system, within a location which is:</p> <ul style="list-style-type: none"> • an area notified as an area of special scientific interest under section 28 of the Wildlife and Countryside Act 1981; • any land declared a national nature reserve under section 35 of that Act; • any area designated as a marine nature reserve under section 36 of that Act; • an area of special protection for birds, established under section 3 of that Act; • Any European Site within the meaning of regulation 10 of the Conservation (Natural Habitats etc.) Regulations 1994 (i.e. Special Areas of Conservation and Special Protection areas); • any candidate Special Areas of Conservation or potential Special Protection Areas given equivalent protection; • any habitat or site afforded policy protection under paragraph 13 of Planning Policy Guidance Note 9 (PPG9) on nature conservation (i.e. candidate Special Areas of Conservation, potential Special Protection Areas and listed Ramsar sites); or • any nature reserve established under section 21 of the National Parks and Access to the Countryside Act 1949 	<p>For <u>any</u> protected location:</p> <ul style="list-style-type: none"> • 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. <p>In addition, in the case of a protected location which is a European Site (or a candidate Special Area of Conservation or a potential Special Protection Area), harm which is incompatible with the favourable conservation status of natural habitats at that location or species typically found there.</p> <p>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) Regulations 1994.</p> <p>In this Chapter, this description of significant harm is referred to as an “ecological system effect”.</p>
<p>3 Property in the form of:</p> <ul style="list-style-type: none"> • crops, including timber; • produce grown domestically, or on allotments for consumption; • livestock; • other owned or domesticated animals; • Wild animals which are the subject of shooting or fishing rights. 	<p>For crops, a substantial diminution in yield or other substantial loss in their value resulting from death, disease or other physical damage. For domestic pets, death, serious disease or serious physical damage. For other property in this category, a substantial loss in its value resulting from death, disease or other serious physical damage.</p> <p>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.</p> <p>In this Chapter, this description of significant harm is referred to as an “animal or crop effect”.</p>

<p>4 Property in the form of buildings.</p> <p>For this purpose, “building” means any structure or erection, and any part of a building including any part below ground level, but does not include plant or machinery comprised in a building.</p>	<p>Structural failure, substantial damage or substantial interference with any right of occupation.</p> <p>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.</p> <p>Additionally, in the case of a scheduled Ancient Monument, substantial damage should be regarded as occurring when the damage significantly impairs the historic, architectural, traditional, artistic or archaeological interest by reason of which the monument was scheduled.</p> <p>In this Chapter, this description of significant harm is referred to as a “building effect”.</p>
---	--

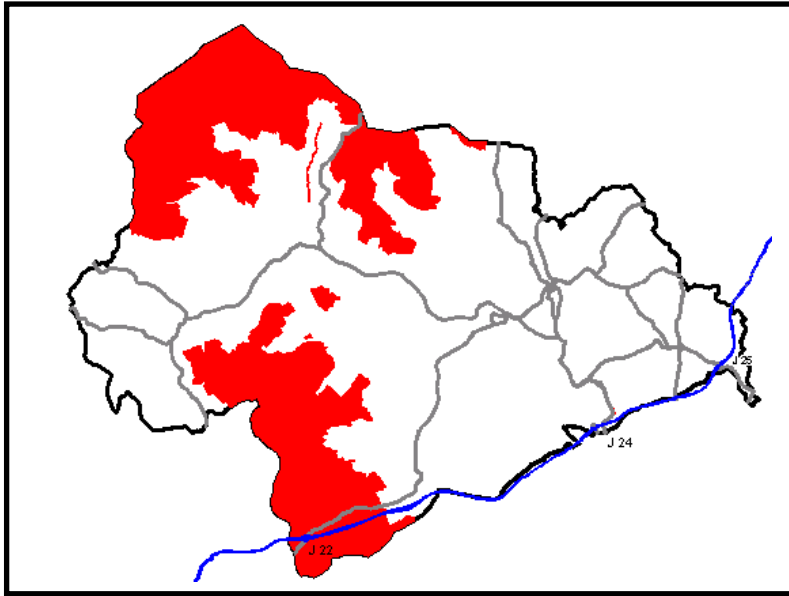
Table B – Significant Possibility of Significant Harm

2 Descriptions of Significant Harm 3 (As Defined in Table A)	Conditions For There Being a Significant Possibility Of Significant Harm
<p>1 Human health effects arising from</p> <ul style="list-style-type: none"> • the intake of a contaminant, or • Other direct bodily contact with a contaminant. 	<p>If the amount of the pollutant in the pollutant linkage in question:</p> <ul style="list-style-type: none"> • which a human receptor in that linkage might take in, or • to which such a human might otherwise be exposed, <p>As a result of the pathway in that linkage would represent an unacceptable intake or direct bodily contact, assessed on the basis of relevant information on the toxicological properties of that pollutant.</p> <p>Such an assessment should take into account:</p> <ul style="list-style-type: none"> • the likely total intake of, or exposure to, the substance or substances which form the pollutant, from all sources including that from the pollutant linkage in question; • the relative contribution of the pollutant linkage in question to the likely aggregate intake of, or exposure to, the relevant substance or substances; and • The duration of intake or expose resulting from the pollutant linkage in question. <p>The question of whether an intake or exposure is unacceptable is independent of the number of people who might experience or be affected by that intake or exposure.</p> <p>Toxicological properties should be taken to include carcinogenic, mutagenic, teratogenic, pathogenic, endocrine-disrupting and other similar properties.</p>
<p>2 All other human health effects (particularly by way of explosion or fire).</p>	<p>If the probability, or frequency, of occurrence of significant harm of that description is unacceptable, assessed on the basis of relevant information concerning:</p> <ul style="list-style-type: none"> • that type of pollutant linkage, or • that type of significant harm arising from other causes. <p>In making such an assessment, the local authority should take into account the levels of risk which have been judged unacceptable in other similar contexts and should give particular weight to cases where the pollutant linkage might cause significant harm which:</p> <ul style="list-style-type: none"> • 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.
<p>3 All ecological system effects.</p>	<p>if either:</p> <ul style="list-style-type: none"> • 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. <p>Any assessment made for these purposes should take into account relevant information for that type of pollutant linkage, particularly in relation to the ectotoxicological effects of the pollutant.</p>
<p>4 All animal and crop effects.</p>	<p>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 exotoxicological effects of the pollutant.</p>
<p>5 All building effects.</p>	<p>If significant harm of that description is more likely than not to result for 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.</p>

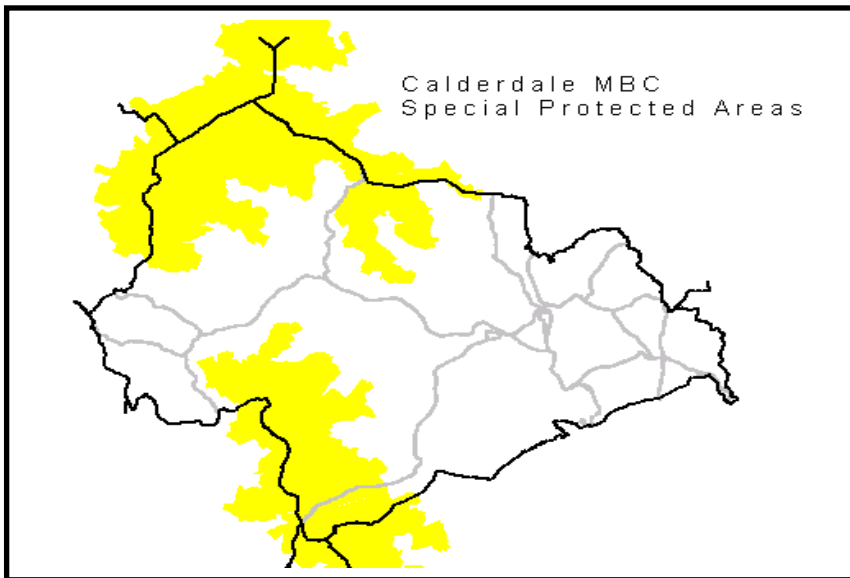
Appendix 3 – Protected Locations and Natural Habitats

Area	Status	Reason For Status	Importance (National or Regional)
South Pennine Moors	SSSI / cSAC	Blanket bog, wet and dry heaths and acid grasslands.	N
	SSSI / SPA	Breeding bird populations	R and N
Withens Clough, Hebden Bridge	SSSI	Vegetation	R
Broadhead Clough, Hebden Bridge	SSSI	Vegetation	R
Colden Clough, Hebden Bridge	SEGI	Broad-leaved Woodland, Heathland, Acid Grassland, running water	R
Turner Wood, Rishworth	SEGI	Broad-Leaved Woodland, Acid Grassland, Bracken, running water	R
Sun Wood, Shelf	SEGI	Broad-leaved Woodland, running water	R
Ogden Reservoir, Woodland and Cloughs, Halifax	SEGI	Mixed Woodland, Acid Grassland, Bracken, Mire, Standing water, Heathland, running water	R
Northdean Wood/ Norland Moor, Greetland	SEGI	Broad-leaved woodland, Mixed Woodland, Coniferous woodland, Heathland, acid grassland, running water	R
Rochdale Canal	SEGI	Linear wetland	R
Calder and Hebble canal	SEGI	Running Water	R
Hardcastle Crags, Hebden Bridge	SEGI	Broad-leaved woodland, Coniferous Woodland, Mixed Woodland, Acid Grassland, Bracken, running water	R
Elland Park Wood, Elland	SEGI	Broad-leaved woodland	R
Wade Wood, Booth	SEGI	Broad-Leaved Woodland, running water, Marshland, standing water	R
Clifton Interchange (M62/ A644)	SEGI	Neutral Grassland, Scrub Woodland, standing water, Marshy Grassland	R
Ramsden Clough, Walsden	SEGI	Running water, Mire, Broad-leaved Woodland, Acid Grassland	R
Strangstry Wood, Rastrick	SEGI	Broad-leaved woodland	R
Cromwell Bottom	SEGI	Scrub, open water, Swamp, Neutral Grassland	R
Wood Hey, Hebden Bridge	SEGI	Running water, Broad-leaved Woodland, Acid grassland, heathland, Marshy Flush	R
Scarbottom Mill Dam	SEGI	Standing Water, Neutral Grassland	R
Gorpley Clough	SEGI		R
Red Lane Dyke	SEGI	Grassland	R
Washer Lane Wetland, Halifax	SEGI	Standing Water	R

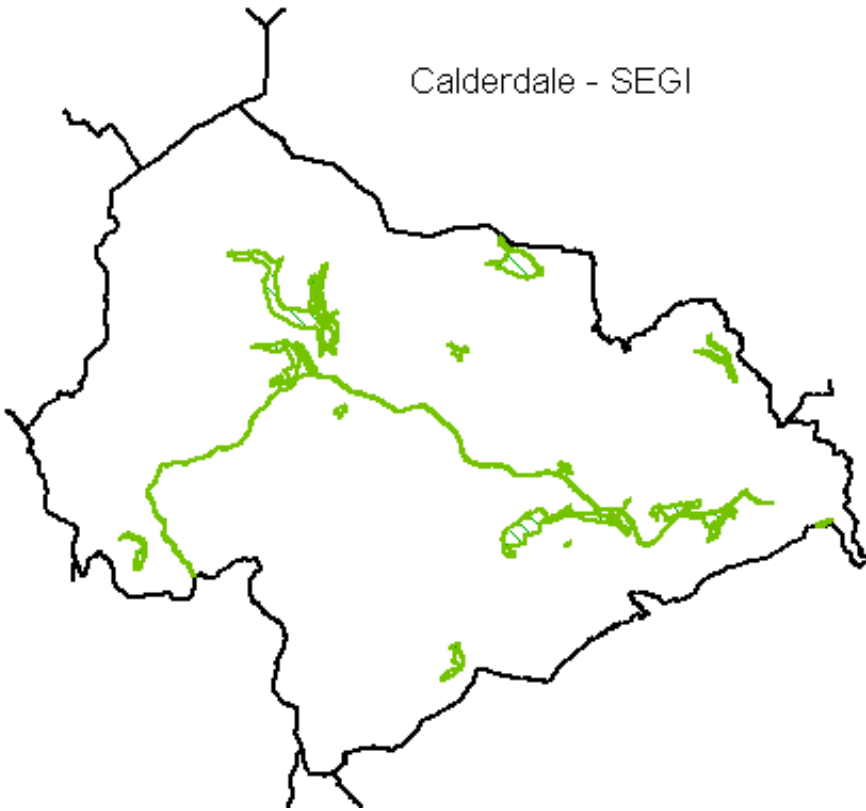
**Map showing SSSI locations in Calderdale (shaded Red)
nb: Most but not all SSSI are also Special Protected Areas
One SSSI is also a candidate SAC**



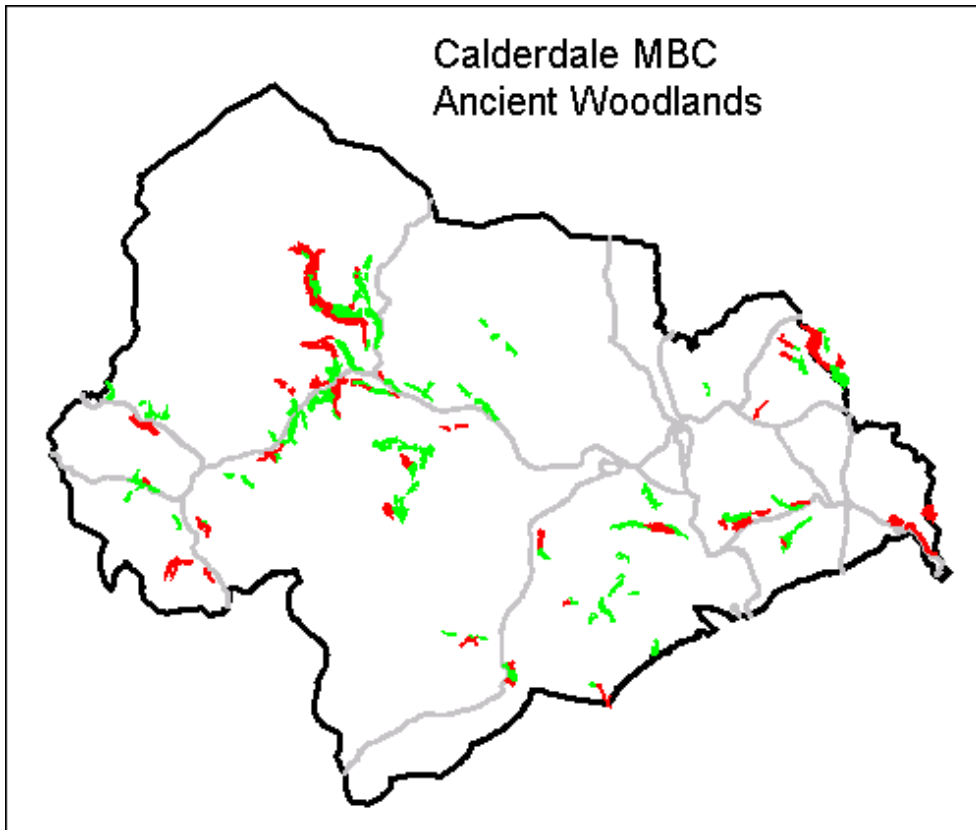
Map Showing Special Protected Areas in Calderdale (Shaded Yellow)
nb: Special Protected areas are also designated SSSI



Calderdale - SEGI



Calderdale MBC
Ancient Woodlands

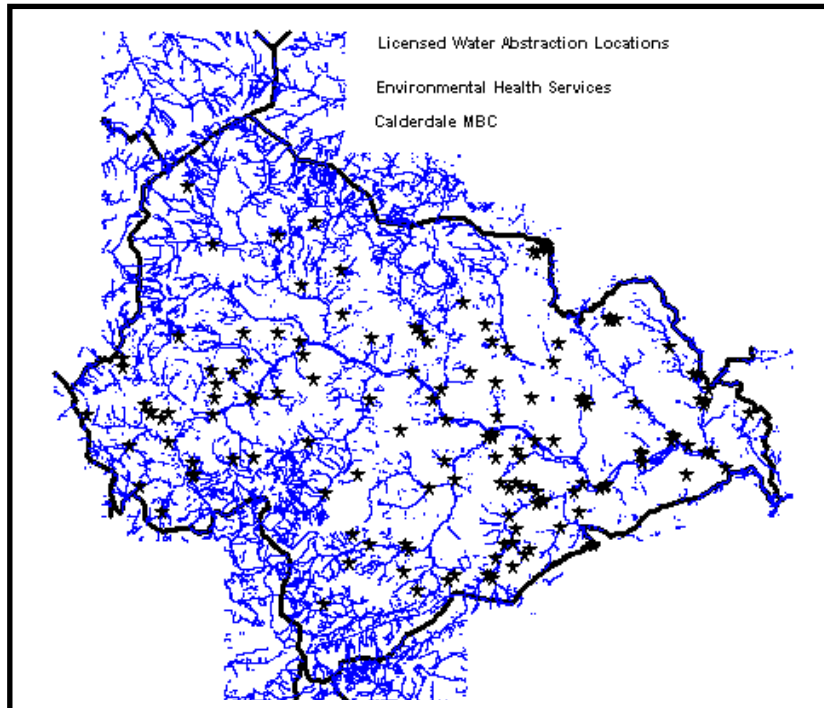


Appendix 4 – Scheduled Ancient Monuments

English Heritage Reference (s)	Feature (* indicates multiple features at this site)	Location
32, 1029, 2258,	Blackstone Edge Roman Road *	Ripponden
142, 1541,	Oxygrains Packhorse Bridge *	Ripponden
215, 1644	Ripponden (or Waterloo) Bridge *	Ripponden
53, 1131	Old bridge over Hebden Water	Hebden Royd
131, 1490	The Gibbet Platform *	Calderdale
253, 1695	Camp at Kirklees Park *	Calderdale
23359	“Mount Cross” wayside cross	Todmorden
23360	“Abel Cross” wayside cross	Wadsworth
23376	Anglican high cross fragment, St.Matthews Church, Rastrick	Rastrick
23382	“Tinker Cross” wayside cross	Heptonstall
23383	“Reaps Cross” wayside cross	Heptonstall
23384	Wayside cross on Slate Pit Hill	Ripponden
29129	“Churn Milk Joan” stone, Crow Hill	Wadsworth
29907	Brow Pit Mine Shaft, gin circle, spoil heap and tramway, near Catherine Slack farm	Calderdale
29952	Castle Hill motte castle near Rosemary Hall	Calderdale
29954	St Thomas Becket church	Heptonstall
30960	Ventilation chimney and furnace house near Park Farm	Calderdale
31482	Bronze Age urnfield, west of Overgreen Royd farm	Mixenden
31483	Bronze Age urnfield near Rough Bottom	Midgeley Moor
31484	Prehistoric settlement, Hunter Hill	Ovenden
31485	Prehistoric settlement, Goose Clough	Ovenden Moor
31486	“Millers Grave” cairn	Midgeley Moor
31492	Bronze age urnfield near Hanging Field Farm	Todmorden
31493	“Beacon Hill” barrow	Ripponden
31508	“Ring of Stones” cairn	Ringstone Edge Moor
31509	Cairnfield	Ringstone Edge Moor
31523, 31524, 31525	Cairns *	Midgeley Moor
31526	Meg Dike	Ripponden

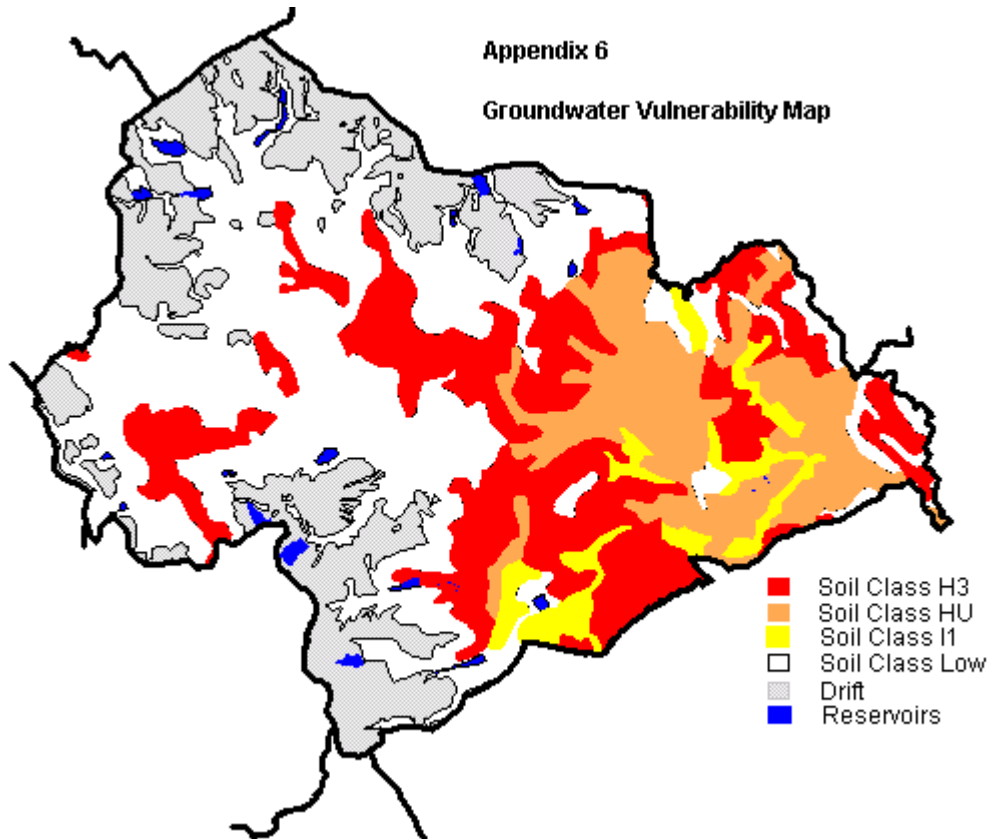
Appendix 5 Licensed Abstractions and Surface Water Locations

(* Denotes abstraction point)



Appendix 6 Groundwater Vulnerability Map

This map is derived from 'Policy and Practice for the Protection of Groundwater – Groundwater Vulnerability 1:100,000 Map Series, Sheet 11, South Pennines



Appendix 7: Industry Groupings for Priority Inspections

Priority Group 1 - Heavy Contaminative Industries

Contaminative Use
Manufacture of gas, coke, or bituminous material from coal.
Manufacture or refining of lead or steel or an alloy of lead or steel.
Manufacture of asbestos or asbestos products.
Manufacture, refining or recovery of petroleum or its derivatives, other than extraction from petroleum bearing ground.
Manufacture, refining or recovery of other chemicals, excluding minerals.
Final deposit in or on land of household, commercial or industrial waste (within the meaning of section 75 of the Act) other than waste consisting of ash, slag, clinker, rock, wood, gypsum, railway ballast, peat, bricks, tiles, concrete, glass, other minerals or dredging spoil; or where the waste is used as a fertiliser or in order to condition the land in some beneficial manner.
Treatment at a fixed installation of household, commercial or industrial waste (within the meaning of section 75 of the Act) by chemical or thermal means.
Use as a scrap metal store, within the meaning of section 9(2) of the Scrap Metal Dealers Act 1964(a).

It should be noted that some sites may have been subjected to more than one contaminative use.

Priority Group 2

Contaminative Use
Extraction/Handling/Storage of Carbonaceous materials
Extraction/Handling/Storage of ores
Cement, lime and gypsum manufacture, brickworks and

associated processes.
Manufacture of glass and glass-based products.
Manufacture of ceramics and ceramic-based products.
Manufacture/repair of electrical and electronic components and equipment.
Manufacture of pet foods or animal feed stuffs
Processing of animal by-products
Making of paper/pulp/board or related products (plus inking/de-inking) including print works
Chemical treatment and Coating of timber and timber products, including timber yards.
Textile Industry (Mills unspecified)
Tanning, dressing, fellmongering or other leather treatment processes.
Fulling, bleaching, dyeing or finishing of fabric or fibres
Manufacture of carpets or other textile floor coverings.
Process of natural or synthetic rubber
Marshalling/dismantling/repairing/ or maintenance of railway rolling stock
Dismantling/repairing or maintenance of marine vessels.
Dismantling/repairing/storage or maintenance of road transport vehicles
Dry Cleaning operations
Laboratories for educational/research purposes.
"Works" unspecified
"Garage" unspecified
Use/keeping of radioactive material.

Priority Group 3

Contaminative Use
Electricity sub station
Mineral workings/quarries
Miscellaneous and Unspecified Groups
Holes in the ground now filled with unidentified material.