



THE COUNTY COUNCIL OF THE CITY & COUNTY OF CARDIFF



CONTAMINATED LAND INSPECTION STRATEGY

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Part I – The Contaminated Land Regime

EXECUTIVE SUMMARY

On the 1st July 2001, the National Assembly for Wales enacted Section 57 of the Environment Act 1995, implementing Part 2A of the Environmental Protection Act 1990. Part 2A empowers Local Authorities to inspect their land for contamination. The legislation was introduced to improve the current system nationally and encourage identification and remediation of contaminated land.

Cardiff Councils original strategy was produced in view of the government guidance “Contaminated Land Inspection Strategies – Technical Advice for Local Authorities” (DETR) and was first published in October 2002 following statutory consultation with all relevant bodies. Due to changes in legislation and timescales the strategy has been updated and also details the progress that Cardiff Council has made in inspecting and assessing contaminated land to date.

Local Authorities act as the lead regulator in land inspections except for prescribed cases where certain land is considered to be classed as “Special”. Sites identified as special sites are regulated by Environment Agency Wales with support from the local authority.

Contaminated land is broadly land that causes or is likely to cause unacceptable harm to human health or the wider environment in its current use. For such land to be identified as likely to cause harm, it must firstly be identified as having a “pollutant linkage”. A linkage possesses a contaminant source, a designated receptor, and a pathway for the contaminant from one to the other. This could, for example, include a gassing former landfill site in permeable ground adjacent to unprotected residential properties.

The revised strategy details how the Council implements its statutory duties with regard to:-

- Inspecting its area,
- identifying potentially contaminated land,
- prioritising those sites,
- investigating and assessing land to determine its’ status,
- identifying appropriate persons liable for remediation costs,
- securing remediation and
- maintaining a public register.

Potentially contaminated sites are ranked in order of their perceived risk to cause harm using a standard template. The risk assessment tool allocates a slight prioritisation to Council owned or occupied sites to reduce the liabilities towards the council. The investigation and subsequent assessment of contaminated land uses government produced models and relevant guideline values to assess the possibility of risk of each individual site. Remediation is works or processes that are required to permit the site to be suitable for use, in line with Government philosophy. Ordinarily this will remove the pollutant linkage or sufficiently minimise the effect of such a linkage ensuring that the land in question is suitable for use.

A public register is maintained by Cardiff Council and contains information on all land which has formally been determined as contaminated land, remediation notices, remediation statements and any appropriate persons identified.

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CRYNODEB GWEITHREDOL

Ar 1 Gorffennaf 2001, cyflawnodd Cynulliad Cenedlaethol Cymru Adran 57 Ddeddf yr Amgylchedd 1995, gan weithredu Rhan 2A Deddf Diogelu'r Amgylchedd 1990. Mae Rhan 2A yn rhoi'r grym i Awdurdodau Lleol i archwilio eu tiroedd am lygriad. Cyflwynwyd y ddeddfwriaeth i wella'r system bresennol yn genedlaethol ac annog adnabod a gwella tir llygredig.

Cynhyrchwyd strategaeth wreiddiol Cyngor Caerdydd yn sgîl canllaw'r llywodraeth "Strategaethau Arolygu Tir Llygredig - Cyngor Technegol ar gyfer Awdurdodau Lleol" (DETR) ac fe'i cyhoeddwyd am y tro cyntaf ym mis Hydref 2002 yn dilyn ymgynghoriad statudol gyda phob corff perthnasol. Oherwydd newidiadau mewn deddfwriaeth a therfynau amser, mae'r strategaeth wedi'i diweddarau ac mae hefyd yn manylu ar y cynnydd y mae Cyngor Caerdydd wedi'i wneud wrth arolygu ac asesu tir llygredig hyd yn hyn.

Awdurdodau Lleol yw'r prif reoleiddiwr mewn arolygiadau tir, ar wahân i mewn achosion penodedig lle nodir tir yn "Arbennig". Rheoleiddir safleoedd sy'n arbennig gan Asiantaeth yr Amgylchedd gyda chefnogaeth yr awdurdod lleol.

Mae tir llygredig yn dir sy'n achosi neu'n gallu achosi niwed annerbyniol i iechyd dynol neu'r amgylchedd ehangach yn ei ddefnydd presennol. I dir o'r fath gael ei nodi ei fod yn debygol o achosi niwed, mae'n rhaid nodi yn gyntaf fod ganddo "gysylltedd llygrydd". Mae gan gysylltedd ffynhonnell halogi, derbynnydd dynodedig, a llwybr ar gyfer yr halogwr o un i'r llall. Gallai hyn, er enghraifft, gynnwys safle tirlenwi blaenorol yn gadael nwy allan mewn tir athraidd ger eiddo preswyl diamddiffyn.

Mae'r strategaeth ddiwygiedig yn manylu ar sut mae'r Cyngor yn gweithredu ei ddyletswyddau statudol mewn perthynas â:-

- Arolygu'r ardal,
- nodi tir a allai fod yn llygredig,
- blaenoriaethu'r safleoedd hynny,
- ymchwilio ac asesu tir i bennu ei statws,
- nodi pobl briodol sy'n atebol i gostau adfer,
- sicrhau adferiad a
- chynnal cofrestr gyhoeddus.

Trefnir safleoedd llygredig yn eu trefn yn ôl pa mor debygol maent o achosi niwed gan ddefnyddio templed safonol. Mae'r teclyn asesu risg yn clustnodi blaenoriaeth fechan i safleoedd sy'n perthyn i neu a feddiannir gan y Cyngor i leihau'r atebolrwyddau i'r Cyngor. Mae'r arolygu a'r asesiad dilynol o dir llygredig yn defnyddio modelau a gynhyrchir gan y llywodraeth a gwerthoedd canllaw perthnasol i asesu posibilrwydd risg pob safle unigol. Adferiad yw gwaith neu brosesau sydd yn ofynnol i ganiatáu i'r safle fod yn addas i'w ddefnyddio, yn unol ag athroniaeth y Llywodraeth. Yn gyffredinol, bydd hyn yn tynnu'r cysylltedd llygrydd neu'n lleihau'r effaith yn ddigonol gan sicrhau bod y tir yn addas i'w ddefnyddio.

Cynhelir cofrestr gyhoeddus gan Gyngor Caerdydd ac mae'n cynnwys gwybodaeth ar yr holl dir sydd wedi'i bennu fel tir llygredig, hysbysiadau adfer, datganiadau adfer ac unrhyw bobl briodol a nodwyd.

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1.0 INTRODUCTION

1.1 Background to the Legislation

Part 2A of the Environmental Protection Act 1990 (Part 2A) aims to address contamination issues on land which has become contaminated through historical uses. This is achieved via primary legislation, Regulation and Statutory Guidance. Part 2A provides a proactive system for the identification, inspection and remediation of contaminated land, where the contamination is causing or is likely to cause an unacceptable risk to human health or the wider environment. The extent of any risk will be assessed in the context of the current use.

Part 2A was implemented in Wales via the Contaminated Land Regulations (Wales) 2001 and subsequently extended to cover contamination from radioactivity with the Contaminated Land Regulations (Wales) 2006. The extended regime provides a system for the identification and remediation of contaminated land where such land is causing lasting exposure of radiation to any person where there is a significant possibility of such exposure. It applies only to radioactivity arising from substances which have been processed as part of a past practice or work activity. This would include substances containing artificial radionuclides or processed natural radionuclides

Where land has been identified as meeting the Statutory definition as being contaminated Part 2A considers that such land, where it is reasonable and practical to do so, should be remediated to ensure that is suitable for its current use and no longer represents an unacceptable risk.

In the past industrial activities have allowed land to become contaminated in various ways over many years. This land includes industrial, mining and quarrying, dockland and former waste disposal sites.

Undeveloped greenfield sites are a finite and valuable resource. Central Government has stipulated that 60% of all new housing developments in England must be built on brownfield sites, i.e. sustainability through the promotion of redevelopment. Between 1991 and 2008 almost 74% (18,152) of new dwellings completed were constructed on brownfield land. Between 2001 and 2008 this figure rose to 90%. The current draft Local Development Plan published by Cardiff Council states that the 'housing and employment requirement for Cardiff up to 2021 can be met generally on previously developed land, without the need to allocate significant areas of greenfield land for such development'. The advantages of this approach include reduced pressures on greenfield sites and rural areas, as well as the restoration of contaminated land to beneficial use.

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The Council owns land which will need to be assessed under the Part 2A process. The Council's approach to contaminated land will be open and transparent. The Council will be accountable for its' actions.

1.2 Roles and Responsibilities Under Part 2A

1.2.1 Role of the Local Authority

Local authorities have the primary regulatory role under Part 2A. The role of local authorities under Part 2A is to undertake the following:

- inspect their areas to identify potentially contaminated land
- conclude whether any particular site can be determined as contaminated land
- confer with statutory consultees and interested parties
- act as the Enforcing Authority for all contaminated land not designated as a 'special site'
- collate and manage contaminated land data
- maintain a public register of enforcement action taken

1.2.2 Role of Environment Agency Wales

The EAW has the following responsibilities under Part 2A legislation

- provide information or specific advice where it has particular expertise (ie in relation to the pollution of controlled waters)
- Inspect land on behalf of The Council if land is anticipated to be, or designated as a special site.
- act as the Enforcing Authority for any land designated as a 'special site'
- publish periodic reports on Contaminated Land
- comment upon and accept the local authority strategy once it is complete, then forward it to the Welsh Assembly Government (WAG) as part of a contaminated land report

When a site has been determined as contaminated the enforcing authority will have four main tasks:

- to establish who should bear the responsibility for the remediation of the land and to apportion liability for meeting the costs of the work

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- to decide what remediation is required and to ensure that this is undertaken, through either;
 - reaching a voluntary agreement
 - serving a remediation notice
 - carrying out the work itself in certain circumstances.
- to take enforcement action in cases of non compliance with remediation notices and
- to record prescribed information about its regulatory actions on a public register

1.3 Regulatory Context and Interaction with Other Regimes

There are a number of other regimes that also retain control on contaminated land or potentially contaminated land.

1.3.1 Planning and Development Control

A Planning Authority considers the potential implications of contaminated land when developing a local development structure, local plans or new applications. Accordingly, developments are properly assessed and incorporate any necessary assessment and remediation. Sites are assessed in accordance with a suitable for use approach, having consideration for the current and proposed uses. Planning Policy Wales (March 2002) provides the basis for land contamination and development control in Wales and further guidance to planning authorities is available in Planning Policy Guidance. This information is found in Planning and Pollution Control (PPG23) There is currently no Welsh Government equivalent of Technical Advice Notes (TAN) document.

The Welsh Local Government Association, Environment Agency and Welsh Assembly Government jointly produced a guidance document in July 2006 entitled 'Land Contamination: A Guide for Developers'. This aims to help maintain consistency throughout Wales in dealing with land contamination through the planning process. It will remain the policy of the Authority to control development of potentially contaminated land on a suitable for use basis.

Building Control requirements following the Building Regulations (1991) may also necessitate remedial measures to protect the building and its users. For example with gas protection measures or the installation of the water supply.

1.3.2 Environmental Permitting Regulations (EPR)

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The Environmental Protection Act 1990, Part I is the legislative tool to control polluting processes to land, air and water. Integrated Pollution Prevention and Control (IPPC) came into force in 1999, and introduced controls which required that certain new and existing process operators, must be responsible for the conditions of the land both during and following the closure of the process.

In 2007 the Environmental Permitting (England and Wales) Regulations came into force and replaced and revoked the IPPC Regulations, as well as other Regulations covering industrial emissions and waste management; the 1994 Waste Management Regulations have been amended to reflect the fact that waste operations-including exemptions and licensing- are now regulated under the new Regulations.

The framework for the site assessment is in principle be based on the identification and consideration of a contamination source, pathway and receptor. In this respect, the information collected through previous IPPC and any new EPR applications will add to the database of information concerning the condition of land within Cardiff Council. Should a breach of any permit cause contamination, the appropriate regulator (either the Agency or the Council) has powers to remedy the situation. Environmental permitted sites may be assessed against the background condition reports and the inventory of substances used on site. This legislation does provide that where a contaminant is already subject to environmental permit control, it cannot also constitute contaminated land under Part 2A.

1.3.3 Waste Management Licensing

Under the EPR detailed above in Section 1.3.2, licensed waste management activities are now regulated under the EPR. Existing waste management licenses issued prior to 6th April 2008, automatically became environmental permits with out the need for new applications being made. Waste management functions of the Authority include the disposal of municipal wastes, recycling initiatives, the provision of civic amenity sites and the strategic management of waste minimisation initiatives.

As previously detailed the legislation does provide that where a contaminant is already subject to environmental permit control, it cannot also constitute contaminated land under Part 2A,

An illegal deposit of waste is dealt with by way of alternative legislation to Part 2A.

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1.3.4 Environmental Damage Regulations

The Environmental Damage Regulations (EDRs) implement the European Directive 2004/35 on environmental liability with regard to the prevention and remedying of environmental damage, and are based upon the ‘polluter pays principle’ so those responsible prevent and remediate environmental damage, rather than the taxpayer paying. These regulations came into force on May 6th 2009.

Enforcing authorities must decide whether environmental damage (as defined by the regulations) has occurred and if so notify the responsible. The regulations enable the enforcing authority to ultimately decide on appropriate remedial measures although there is scope for the operator to first submit their proposals.

The regulations unlike Part 2A are not retrospective and therefore only cover incidents that have occurred after 6th May 2009.

1.3.5 Statutory Nuisance

Until the introduction of Part 2A legislation, the statutory nuisance provisions of Part III of the Environmental Protection Act 1990 were the traditional means of achieving remediation of any risk of pollution arising on premises. Land that is determined as contaminated under Part 2A is no longer dealt with as a statutory nuisance.

1.3.6 Water Resources Act

The Agency has powers under section 161 to 161D of the Water Resources Act 1991 to take action to prevent the pollution of controlled waters. The mechanism to apply the powers is via a works notice. If the Water Resources Act is applicable then Part 2A should not be used.

1.3.7 Food Safety

The FSA has powers to prohibit certain agricultural practices in designated areas to protect consumers from exposure to contaminated food.

1.3.8 Health and Safety

The Health and Safety at Work Act 1974 and Construction (Design and Management) Regulations 2007 can apply controls to protect the public or employees from land contamination in certain cases. For example, at a redevelopment site grossly contaminated with aggressive chemicals.

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1.4 Definition of Contaminated Land

The legal definition of contaminated land is given in Section 78A (2) of Part 2A of the Environmental Protection Act 1990:

"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; ..."

In order to determine whether there is the possibility of significant harm being caused, Local Authorities must consider the nature, extent and duration of contamination and assess the susceptibility of nearby receptors.

'Significant harm' and 'Receptors' are also defined in the statutory guidance (see Chapter 3).

1.4.1 Pollutant Linkages

In every case, for land to be legally determined as contaminated, then a significant pollutant linkage must be identified and thus the following components must all be present:

- A **source of contamination** (which is capable of causing significant harm or there is a significant possibility of significant harm as detailed in Tables A and B in the Statutory Guidance);
- A **pathway** by which the contaminant is causing significant harm to the receptor, or that there is a significant possibility that the contaminant is causing harm to the receptor, and
- A **receptor** (as detailed in Chapter 3.2)

Contaminant +

Pathway +

Receptor =

Contaminated Land

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eg. Petrol leakage at filling station + underground service ducts + residential neighbour being exposed to potentially harmful vapours.

Unless all three components are present the land cannot be determined as ‘Contaminated Land’ under Part 2A.

1.4.2 Risk Assessment

The definition of contaminated land is based on the principle of risk assessment. For the purpose of this legislation, Risk is defined as the combination of:

- 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
- magnitude (including the seriousness) of the consequences (**DETR Circular 02/2001**)

The guidance follows established approaches to risk assessment, including the concept of contaminant-pathway-receptor.

Desktop studies, site walkovers and where necessary, intrusive site investigations must be undertaken. If and when a pollutant linkage is identified (as described in Section 1.4.1) any significant risks, including the likely nature and extent of harm, must be evaluated through risk assessment and cost/benefit analysis and the appropriate measures taken.

1.5 Potential Special Sites

Once a site has been determined as contaminated land, if it falls within the scope of Regulations 2 and 3 of the Contaminated Land (Wales) Regulations 2006, it may be further designated as a special site. If a contaminated site falls into the category of a special site, the responsibility of enforcement of the site will pass to the Environment Agency rather than the local authority.

Regulation 2 of the Contaminated Land (Wales) Regulations 2006 sets out the categories of land by way of its use, ownership or occupation which are required for it to be designated as a special site. The full list of the categories of land within this definition is shown in Appendix I, but examples include land where activities such as oil and petroleum purification has taken place and the manufacture of chemical weapons has occurred.

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Regulation 3 of the Contaminated Land (Wales) Regulations 2006 expands on Regulation 2 (1)(a) and defines certain categories of water pollution that regardless of land use, ownership or occupation will cause contaminated land to be a special site. The main focus of Regulation 3 applies to the protection of controlled waters. Reference should be made to the document 'Environment Agency technical advice to third parties on Pollution of Controlled Water for Part 2A of the Environmental protection Act 1990' for clarification of definitions.

1.6 The Need for a Strategic Approach

A strategic approach is required to ensure resources are targeted at areas of greatest need in accordance with a consistent and transparent policy.

This Inspection Strategy is based on the statutory guidance published by the National Assembly Government in 2006. A tiered approach has been adopted to ensure cost effective investigation. In accordance with the statutory guidance the approach to the inspection procedure shall be:

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

For an explanation of Risk Assessment refer to Section 5.6

The Council shall formally adopt this written strategy, subject to consultation, which sets out how it intends to implement its statutory duties, including validation of all procedures.

1.7 Enforcement Policy

The Council has adopted the Enforcement Concordat which was prepared by the Cabinet Office and Local Government Association which sets out principles of good enforcement and has published an Enforcement Policy that includes Contaminated Land functions within its scope.

The Council encourages voluntary remediation of contaminated land. However, it is prepared to take enforcement action where necessary having regard to its Enforcement Policy and the Enforcement Concordat.

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1.8 Hardship

The Council recognises the potential financial liability which may be incurred by individuals or companies through the introduction of this legislation. Whilst the legislation does require the clean up of sites by those deemed responsible if significant harm has been identified, the Council will not place a financial burden upon anyone where it is not appropriate or duty bound to do so.

- The person responsible for the liability of any remediation costs will be identified wherever possible
- The Council will seek to minimise the costs of compliance, by acting in accordance with the guidance and ensure any remedial action specified, is proportionate to the risks. Remedial action will permit land to be considered suitable for use by The Council.

The Enforcement Concordat as described above also covers issues relating to hardship and fair enforcement.

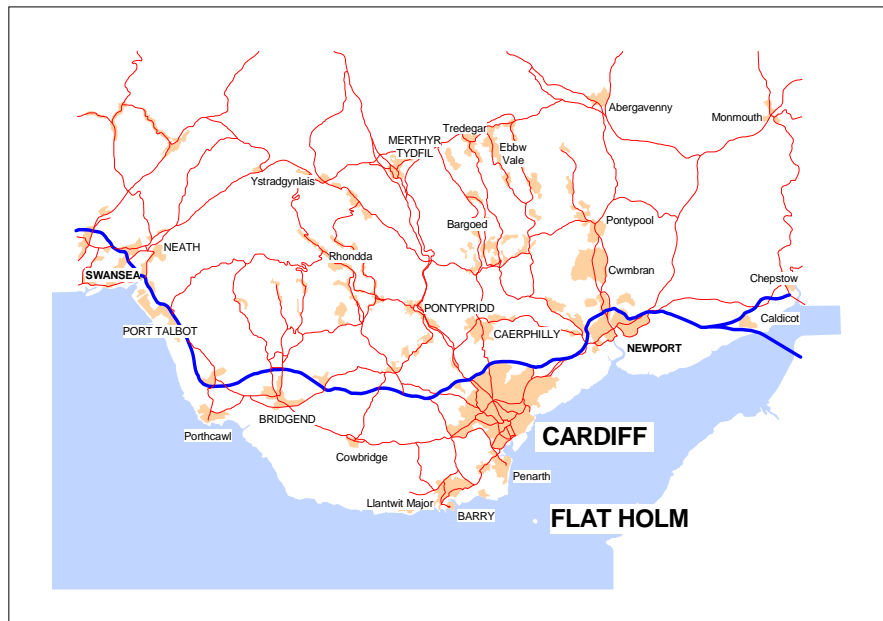
Part II – The Features of the County and City of Cardiff

2.0 Introduction and Location of Cardiff Council

The County is located on the South Wales coastline facing the Bristol Channel. It is situated between the councils of Newport to the east and Vale of Glamorgan to the west and the councils of Rhondda Cynon Taff and Caerphilly to the north. The M4 passes east to west through the north of the county between London and Swansea and the A470 extends northwards from the centre to Merthyr Tydfil and on to North Wales. The county is also served by the London (Paddington) to Swansea rail link.

Three rivers pass through the county, the Rhymney to the east which flows directly into the Bristol Channel and the River Taff and River Ely in the west which flow into Cardiff Bay where the water level is controlled by the Cardiff Bay Barrage.

Figure 2.1: Location Map: Cardiff & Environs



2.1 Description and History of Cardiff

The centre of Cardiff and the coastal strip to the north east, known as the Wentloog Levels, are low lying and flat. The 'Levels' were prone to inundation by high tides but are now protected by a sea wall and drained by a system of reens and a balancing lake that empties at low tide. To the west a fault developed scarp provides a relatively steep natural boundary between Cardiff and the Vale of Glamorgan. To the north and northwest, the land raises fairly gently producing undulating terrain that is bisected by the main river valleys.

Part II – The Features of the County and City of Cardiff

The Romans established a fort on the site of Cardiff Castle in 75 AD. Haematite mining around Taffs Well Quarry was established around the same period. Until about 1790 Cardiff was a small town and port. The industrial revolution saw the expansion of the coal industry, the deep water of the Bristol Channel and the large tidal range made Cardiff an ideal port for importing timber, used as pit props, and iron ore and for exporting coal, iron and steel to all parts of the world. In 1794 the Glamorganshire Canal was completed, linking Cardiff with Merthyr Tydfil, its main purpose was for transporting pit props, to the deep coal mines of the Rhondda Valleys and iron ore to the Crawshay Works at Merthyr Tydfil.



Image of Bute West Dock circa 1900's

In 1839 the Bute West Dock was opened, followed by the construction of the larger Bute East Dock. Cardiff became a major, thriving port and heavy industry flourished as a result.

The decline in world demand for iron and steel in the mid twentieth century and the recession of the late

1970's and 1980's heralded a gradual decline in industry, particularly around the docks of Cardiff. The decline resulted in a great number of derelict sites. In April 1987 Cardiff Bay Development Corporation (CBDC) was formed to effect the clean-up, redevelopment and revitalisation of the area around the bay where most of the problem sites were concentrated. CBDC was dissolved in March 2000, their responsibilities and assets were distributed amongst The Council, The Agency, and WDA.

In 1905 King Edward VII granted Cardiff city status and in 1955 Cardiff became the capital of Wales.

The island of Flat Holm which is situated approximately 8km to the south of Cardiff, in the Bristol Channel, also constitutes part of the County of Cardiff. The island was invaded by Vikings, deriving its name 'Holm' from a Scandinavian word for 'island in an estuary'. It has been farmed for 700 years, fortified twice and used as the site for a cholera hospital. Marconi broadcast the first radio message across water from here to Lavernock Point. Currently the islands' importance is as a Site of Special Scientific Interest (SSSI) and a Local Nature Reserve (LNR), it is a roost and feeding ground to resident and migratory birds.

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2.2 Size of Cardiff

The County extends approximately 9km radially from a point in the docklands area commencing from the north eastern coastline to a point approximately due west, covering an area of approximately 14,100 Ha.

2.3 Population

The population of Cardiff is approximately 317,500 (2006), living mainly in the suburbs although over recent years residential development has taken place in the docks area as part of the regeneration programme and more recently in the city centre. This has involved building new apartments on brownfield sites and conversion of former industrial buildings in support of Cardiff's' Local Sustainability Strategy.

History, culture, national and international events, corporate vibrancy and leisure facilities have made Cardiff an attractive place to live and work. Within the draft LDP it is stated that there is a forecast increase of 11-22% for housing between 2007-2021, with the vast majority of this increase being accommodated on brownfield sites.

Trends in employment have moved away from the traditional industrial activities towards the service sector. Up to 40% of the 168,000 strong workforce commutes into Cardiff daily.

2.4 Council Ownership of Land

The Council is the largest single owner or occupier of land in the county, owning approximately 35% of land. Land uses fall into several categories.

Table 2.2: Examples of Council Owned Property

Property Type	Approximate Number of Properties
Civic Offices	6
Historic Buildings & Monuments	3
Libraries & Museums	24
Educational Establishments	113
Housing	1500
Allotment Sites	27
Leisure & Sports Facilities	100
Public Open Space	170
Nature Reserves	2
Waste Management Facilities	4

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Property Type	Approximate Number of Properties
Industrial	113
Commercial & Retail	60

The issue of ownership, occupation and potential contamination is a complex one:

- land owned or occupied by others may have been subjected to contaminative use prior to acquisition or occupation by the council
- land owned and subsequently sold or leased by the council may have been subjected to prior contaminative use
- The Council has a freehold interest in a significant number of industrial properties which may have been subjected to contaminative use by subsequent occupiers

Waste management facilities and service depots are the most likely contaminative uses of council owned land although industrial freeholds owned by The Council are relevant.

Land was acquired by CBDC in support of its regeneration programme and on its dissolution passed into ownership of the Council and other statutory bodies. Much of this land would have been subjected to contaminative uses. The Council may find that it falls into Class A or B liability categories for remediation of contaminated land under Part 2A legislation as a result of ownership, occupation and use.

2.5 Current Land Use Characteristics

The County's overall land use pattern has changed significantly from its industrial past to the present day, with emphasis on service industries and residential uses. As in most conurbations, the significant changes have been on the fringe, with farmland switched to housing and industrial/commercial development and redevelopment of inner city brownfield sites for housing.

2.6 Protected Locations

Large areas of the county are of high quality. There are 15 SSSI's, identified for geology, flora, fauna, bird habitat and feeding grounds. Two of which (Severn Estuary and Flat Holm Island) are also designated Special Areas of Conservation (SACs). In addition the Severn Estuary Site is of European and international interest and has been designated a Special Protection Area (SPA) and potential Special Area of Conservation (pSAC) and Ramsar site (the international designation). These designations have wider implications than SSSI as they include marine as well as land interests. Four of the SSSI's are

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also designated Local Nature Reserves (LNR's). In addition there are a total of one 108 designated Sites of Nature Conservation Importance (SNCI).

2.7 Key Property Types

There are 25 Scheduled Ancient Monuments in Cardiff. Although listed buildings, historic parks and gardens and other property types are important, they are not included within the regime. However, these factors will be considered when investigating land.

Where contamination could potentially affect listed buildings or other ancient monuments, Cadw, the Welsh Assembly Governments equivalent of English Heritage, would be consulted as part of the steering group, plus the relevant Service Areas within the Council.

2.8 Geology & Hydrogeology of the Cardiff Area

The full details of the underlying geology of the Cardiff area can be found in the BGS geological sheets or in the original published Inspection Strategy report. Briefly the geology consists of the following;

The oldest strata in the Cardiff area are Silurian in age and consist mainly of mudstones. These progress upwards to the Devonian Old Red sandstone and mudstone series. Laying uncomfortably on these are the Carboniferous Limestone strata, comprising the Mill Stone Grit Series and the south Wales coal measures. The Carboniferous Limestone series is recognised nationally as important strata for water abstraction, and is therefore classed as a major aquifer by the Environment Agency. Following the deposition of these strata, there was much folding and uplifting of the area and then further deposition of the Triassic Mercia Mudstone group and finally the Jurassic Limestone series.

The solid geology of the area is then overlain by drift, or later unconsolidated deposits, from river and glacial deposition. These are Quaternary in age and mainly comprise Gravels and Sands. These deposits are important locally for water abstraction and are classed as minor aquifers.

2.9 Water Resources and Hydrology

Within the County the Taff, Rhymney and Ely are the principle rivers. These provide the main resource for local water abstraction. Groundwater abstraction for potable supply and for industrial usage also occurs. The quantity of local abstraction for potable supplies is minute by comparison; the main source via domestic mains is supplied from Llwyn-on Reservoir north west of Merthyr Tydfil.

The Agency has divided the water resources of the County into two geographical areas, known as LEAPS (Local Environment Agency Plans). See Figure 2.2

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Figure 2.2

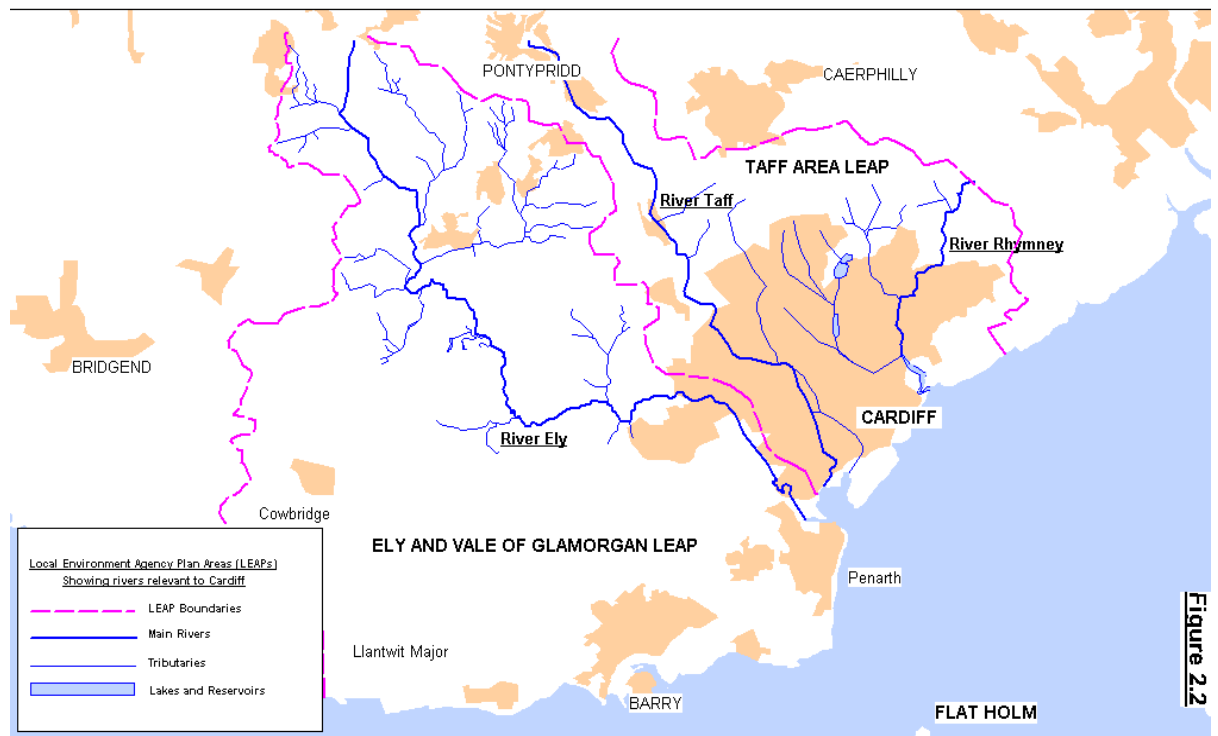


Figure 2.2

The majority of the County falls within the Taff LEAP. As its name implies this covers the catchment area of the River Taff and its tributaries. It also includes the estuary of the River Rhymney and Roath Brook whose tributaries span most of the county. The Taff catchment area is a major contributor to water resources in South East Wales

To the west, in the Ely and Vale of Glamorgan LEAP, the River Ely forms the eastern boundary of Ely and Caerau areas and continues along the western boundary of The County flowing into Cardiff Bay.

A Severn Estuary Strategy has been produced by a steering group, which included The Agency and was adopted in part to act as a LEAP for the Severn Estuary. Some of its policies and proposals therefore will be mirrored in the LEAPs covering Taff Area and Ely and Vale of Glamorgan.

Since the decline of the coal and heavy industries the main demand now is for potable water supply. There is one private and five public surface water abstractions from tributaries of Roath Brook, and two private groundwater abstractions in the north of the county. Private abstractions are monitored by Regulatory Services. There are no public or private abstractions from the Ely catchment area within the county. For industrial purposes there are seven surface water abstractions along the course of the River Taff and one from Roath Brook. There are only two groundwater abstractions, one in the docks area and one in the north west of the county. Likewise there are no industrial

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abstractions from the Ely catchment area within the county. (Taff Area and Ely and Vale of Glamorgan LEAPs, November 1998)

The superficial deposits are also considered to be a minor aquifer. Historical abstraction at Alloy Wheels and Wiggins Teape Paper Mills took place from this aquifer but both facilities have now closed down. Outside the county abstraction is used to supplement supplies for Aberthaw Power Station. Groundwater is important in sustaining flows to surface water. Contamination of the groundwater will have an impact not only on protected locations, but also on surface waters.

As a result of initiatives by The Agency and its' predecessors water quality in both catchment areas has improved. Increasing numbers of migratory fish species have been recorded in the River Taff. However concerns have been expressed about the potential impact of the Cardiff Bay Barrage on migrating species.

The flora and fauna of rivers also support a wide variety of fish, plants, invertebrates and mammals that are of European significance and accordingly Special Areas of Conservation (SAC) have been designated.

The Agency monitor and classify River Ecosystem (RE) quality through a number of 'Directive Monitoring Sites' and 'Impact Assessment Sites' as follows:

Table 2.3: Water Quality within Cardiff's River Catchments

		Taff LEAP	Ely & VoG LEAP
Directive Monitoring Sites		24	7
Impact Assessment Monitoring Sites		28	8
Length of river within ecosystem (R1 - R5)			
RE 1	Very good	117.0km	6.2km
RE 2	Good	30.6km	57.8km
RE 3	Fair (suitable for high class coarse fish)	6.6km	1.4km
RE 4	Fair (suitable for coarse fish)	3.4km	3.6km
RE 5	Poor	3.4km	1.9km

It is noted that within the county the environmental status of water resources is 'low water usage with no known environmental impact' except for:

- lower reach of the River Taff below Blackweir

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In the Cardiff Bay area, a 'protection zone' was declared by CBDC, where properties were most likely to be affected by changes in groundwater levels brought about by impoundment within the Cardiff Bay Barrage. Changes in the hydrogeological regime have resulted in a thinner unsaturated zone, and a number of extraction wells and pumping stations were constructed to maintain an acceptable groundwater level. The Bay is considered as a 'receptor' (Section 1.4.1) and the Harbour Authority monitors the level and quality of the groundwater.

2.10 Known Information on Contamination

The Council holds the following information, which will be used in identifying contaminated and potentially contaminated sites.

- Historic Ordnance Survey & Geological Maps.
- Aerial Photography
- Waste management and disposal records.
- Information obtained from The Agency in respect of operational landfill sites.
- Information obtained from The Agency in respect of groundwater, surface water and general water quality issues.
- The Council's own records relating to pollution incidents and reports concerning contaminated land and environmental monitoring.
- The Harbour Authority's groundwater level and gas monitoring borehole database, including the groundwater control system.
- Records of current and disused water supply boreholes.
- Records of petroleum storage sites past and present
- Historic site investigation reports provided as part of the Development Control process.

The Council uses this information to identify potentially contaminated sites.

Sites currently in the occupation or ownership of the Authority that are potential contaminated land sites include former municipal disposal sites at Radyr Quarry, Hadfield Road, Ipswich Road and Hailey Park.

2.11 Specific Local Features

The anticipated instances of metal enriched soils within The County are at a disused lead mine on the island of Flat Holm, at Rudry Hill where further localised lead extraction occurred, around Taffs Well Quarry where haematite mining occurred and around Gwaelod-y-Garth where colliery shales have been deposited.

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2.12 Redevelopment History and Controls

Redevelopment of contaminated sites has been controlled mainly through the planning process. Remediation has been undertaken since the early 1990's on a scientific basis as a result of the Town and Country Planning General Development Order 1989 (GDO1989). Prior to the GDO1989 remediation was based on a more pragmatic approach. However, land developed prior to 1948 would not have been subject to planning legislation and remediation (if any) would have been informal and at the discretion of the developer.

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3. AIMS & OBJECTIVES

Part 1 of this document outlines the Council's policies and statutory functions currently in place and details how the implementation of Part 2A interfaces with the existing controls. In Chapter 2, the Council of Cardiff is described in broad terms with respect to the geographical, industrial and historical information currently known and how these factors influence the inspection strategy development. This chapter draws together these factors and will form the basis of the overall direction of the revised Inspection Strategy.

3.1 Overarching Aims & Objectives

The overall aims and objectives of the Council's Contaminated Land Strategy is to comply with the Part 2A regulations, satisfy Assembly guidance, minimise risk to Council owned or occupied land and progress assessment and remediation of contaminated land to promote its safe and sustainable use.

It is intended that this strategic approach to the inspection of land will be structured, rational and proportionate. The overall aim of the revised strategy is to ensure that no land within the area of Cardiff Council is creating an unacceptable risk to human health or the environment by way of contamination in relation to its current or future use. The use of the risk matrix has permitted sites to be ranked according to the perceived risks. This includes a slight weighting of Council owned or occupied sites.

The reason for an element of preferential weighting is to minimise risks to the Authority, which will have to accommodate costs for assessment and remediation of orphan sites. Orphan sites are those where no appropriate class A or B persons can be identified. The costs of other sites shall be split proportionally between responsible groups. The Authority as a major landowner will in certain circumstances be regarded as a member of a responsible group, dependent on ownership, occupancy or whether it contributed to the contaminant linkage. Accordingly, the legal and financial risks to this Authority as a responsible party presently or when acting as a lessee or vendor of land or property are considered significant.

The weighting emphasises the commitment the Council has to promoting sustainable use of land and will act as a good example to other potential responsible parties. It is also considered a better use of public funding to minimise risks to the citizens, businesses and visitors of Cardiff from land that the Council holds.

Part III – The Inspection Strategy

The principle aims of the *revised* strategy will be to continue to:

Aim 1: Protect Human Health and the Environment within the County

Objective: Ensure that the Inspection Strategy and its implementation meet the legislative requirements of Part 2A;

Objective: Identify and assess those sites where land contamination is presenting unacceptable risks to the identified receptors;

Objective: Identify and apply the most appropriate remediation method where unacceptable risks are identified and land is determined as contaminated land.

Aim 2: Encourage Regeneration and Redevelopment

Objective: Identify contaminated sites where regeneration and redevelopment could effect remediation.

Objective: Expand data sets to enable informed decisions on future land use

3.2 Priorities

The Pollution Control Division will consider all the possible receptors for each site in accordance with the developed matrix. Priorities are assigned within the matrix to the individual receptors. Scores available for each receptor vary dependent on which receptors are considered the most sensitive. This is not seen as an exact science, but one, which permits judgements to be made within a rational and structured approach. Scores for each receptor shall be classified into risk categories, Nil, Low, Medium and High. The assignment of the category will trigger a pre-set score for the receptor (see Section 5.1).

1. All human possibilities
2. Controlled water abstractions and resources
3. Controlled surface waters
4. Ancient monuments and listed buildings
5. Other buildings and structures
6. Livestock and other animals
7. Crops
8. Protected ecological habitats and SSSI's

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3.3 Objectives & Milestones

It is considered inappropriate to suggest performance targets in relation to progressive assessment and remediation of sites. The reasons are varied, but generally down to the many unknown factors relating to the numerous sites within the Councils' area. To a certain degree, it would also be necessary to predict future development too. As previously outlined, land within Cardiff has generally been development led. It is anticipated to continue in this trend, however global economic well being is necessary to fulfil this trend. The prediction of national or global economics is beyond the scope of this document and an inference on how these will affect progressive economic growth within Cardiff is equally ambiguous. Accordingly, rather than prescribing long term performance targets, it is more appropriate to focus on objectives and some defined milestones.

These are:-

- Review previous risk assessments on potentially contaminated sites with a view of re prioritising sites for detailed inspections by March 2010. This will include any land owned/ occupied by Cardiff Council.;
- Undertake Phase 1 Desk Study of revised top 5 ranked sites to assess whether there is the potential for any significant pollutant linkages to be present, by the end of 2010;
- Carry out detailed investigations of sites that are probably or are certainly not suitable for the present use and environmental setting and where action is needed in the short term (high risk sites), by end of 2010-2011 financial year;
- Undertake an annual review of the revised inspection timescales commencing in April 2011;

3.4 Risk Matrix

The procedural method for ranking potential contaminated sites is shown in Table 3.1 This is a method to determine risk scores for a site having consideration of the pollutant source, its mobility, potential receptors, pathways and level of remediation afforded to the site. Many of the scores are prescriptive, however, a number are subjective. In order to ensure consistency in scoring, at least two members of the Contaminated Land section shall agree the scores attributed to the sites. Any scores within the matrix that are considered anomalous and can not be agreed shall be referred to the Group Leader for final arbitration. The Risk Matrix presented has been revised from the one presented in the original inspection strategy published in 2002.

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3.4.1 Consideration of Previous Actions, Other Regimes & Linkages

The scoring within the matrix allows for consideration of effectiveness of previous actions and other regimes in dealing with contamination. This for example may have been via the Planning Process on a particular development or, the subsequent implementation of design criteria via Building Control requirements. Consideration of these facts will help identify whether specific pollutant linkages exist. For example, a building with a validated or maintained gas protection system installed will be considered to have a minimal risk to occupants of the building, and though the potential pollutant linkage will exist, it will not be considered significant for principal landfill gasses. Detailed consideration of the pollutant linkages will be assessed in the Desk Study outlined in Section 5.3.

Other current regimes will also be considered to ensure that Part 2A legislation is relevant (Section 1.3). Waste Management Sites may be assessed, for authorised activities causing harm. IPPC sites may be assessed against background condition reports and substances not currently identified on their inventory. Reference shall also be made to the Water Resources Act 1991, which give The Agency certain powers to take action to prevent the pollution of controlled waters by the use of works notices.

3.4.2 Identification of Sites Using the Matrix

The Contaminated Land Team initially rescored the previously ranked sites in December 2008, and detailed initial site summaries for all sites are being compiled as part of this update to the Contaminated Land Inspection Strategy. The top five sites shall be reviewed by the Contaminated Land Section to agree the final rankings, and progress with detailed inspections starting with appropriate Phase 1 Desk Studies.

3.4.3 Review of Available Information

Once a site has been identified for investigation the Contaminated Land Team shall review the range of information available as part of the Stage 1 assessment, ie the Desk Study, as outlined in Section 5.3. The purpose is to produce a conceptual model of the site and to determine any deficiencies in the range of information and asses whether a more detailed intrusive assessment of the site is required.

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Table 3.1 – Revised Risk Matrix

Question		Score
01. Are there Human Health receptors on site?	Residential with plant uptake	10
	Allotments	10
	Residential without plant uptake	5
	Parks/Playfields/Schools	3
	Commercial/Industrial	1
	None	0
02. Is the receptor(s) protected from direct contact?	Yes	0
	Partial	3-6
	No	7-10
03. Do properties benefit from remedial measures that may sever the potential SPL?	Yes (Post 1990)	0
	Partial (1980-1990)	3-15
	No (Pre 1980)	10-20
04. Does the site potentially have an impact upon PWS abstraction?	Yes	5
	No	0
05. Is the site located in a Source Protection Zone?	SPZ 1	5
	SPZ 2	3
	SPZ 3	1
	None	0
06. What type of aquifer is the site located on?	Major	5
	Intermediate	3
	Minor	1
	Non	0
07. Is the land suspected of containing List 1 substances?	Yes	3
	No	0
08. Does the site benefit from low permeability soil cover?	>1m	0
	0.5-1m	1
	<0.5m	3
09. Is the site within 50m of another CW feature?	Yes	5
	No	0
10. Is a protected habitat/ecosystem on or in close proximity to the site (SSSI, SAC)?	On site	10
	Adjacent	5
	None	0
11. Is land used as pasture for animals in food chains or for growing crops?	Yes	2
	Adjacent	1
	No	0
12. Listed buildings or Ancient monuments?	Yes	2
	Adjacent	1
	No	0
13. Are structures visibly affected by contamination?	Diff Settlement	2
	Chemical Attack	2
14. Site is Council owned/occupied?	Yes	1
	No	0

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Landfill Sites

These question boxes are introduced to ensure the risks from such sites can be considered fully within the matrix.

Q1	Q2	
Is site within 250m of property?	Are migration pathways present that may affect the property?	Y=Go to Q12
Is residential property adjacent to site?	Are migration pathways present that may affect the property?	Y=Go to Q12
Is industrial or commercial property constructed upon land?	Are migration pathways present that may affect the property?	Y=Go to Q12
Is residential property developed on the land?	Are migration pathways present that may affect the property?	Y=Go to Q12
Are dwellings with gardens developed on the land?	Do occupants have the capability to grow vegetables, keep livestock (e.g. chickens) or have domesticated pets that can be affected? Are any other receptors introduced such as outhouses, extensions?	Y=Go to Q9, 10 & 12

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4.0. PROCEDURES & POLICIES

4.1 Internal Responsibilities

The Pollution Control Division of Strategic Planning and Environment is responsible for implementing the requirements of the Inspection Strategy and Contaminated Land Regulations. Officers within the Division will inspect land being considered as potentially “contaminated land” and will determine any land fulfilling the relevant criteria. The determination of sites and service of notices shall be controlled in as much that the Group Leader, Contaminated Land or the Operational Manager (Environment), who are authorised to act on the Council’s behalf under Part 2A of the Environmental Protection Act 1990, shall make the appropriate recommendations having regard to the relevant legislation and guidance. Any notice identifying land as contaminated for the purposes of the Act shall be issued by either the Operational Manager (Environment and Public Protection), or the Chief Strategic Planning and Environment Officer who are authorised to do so under the Environment Protection Act 1990.

Senior Technical Officers within the Contaminated Land team will manage investigations on sites and determine the necessary remediation for each significant pollutant linkage. In consultation with relevant parties, officers will identify appropriate persons for each significant linkage, attribute responsibilities and apportion liabilities. Officers will prepare and/or agree remediation statements and notices.

The regulatory role of the Division shall remain independent of other Service Areas where exercising enforcement and will be undertaken having regard to the Pollution Control Division’s Enforcement Policy. However, close liaison with the Chief Legal Services Officer shall be maintained to ensure enforcement is proportionate, reasonable and necessary. Liaison with the Chief Development & European Affairs Officer (the land owning Service Area of the Council) shall be effected for land where The Council is identified as an Appropriate Person or when it is responsible for an orphan site. Liaison will occur on commencement and closure of the inspection stages. Communications will continue during the determination process to ensure both Operational Managers for Strategic Planning and the Environment and Development & European Affairs can be informed, to ensure land is either determined or appropriate funding for remediation can be realised.

4.2 Land for which The Council has Responsibility

4.2.1 Inspection of Council Owned Land

The inspection of land which the Council owns or occupies shall be afforded an element of bias. The Guidance requires that the more serious and pressing

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sites are prioritised; hence any weighting advantage should only be afforded to sites of equivalent nature. In the use of the Risk Matrix identified in Section 3.4.2, Council owned or occupied land is therefore weighted with one point. As explained previously in Section 2.4, The Council has large land assets and may find itself liable for some significant remediation costs. In such a proactive manner, it is intended to minimise long term financial risks to the citizens of Cardiff from the council being identified as an appropriate person.

It is intended that the slight bias will be recognised by other landowners as a commitment from The Council to implement the Regulations.

Former landholdings of the Authority shall also be considered and officers of Development & European Affairs shall advise, where possible, Pollution Control Division of The Council's previous involvement. This will not apply to every previous landholding, but only to parcels of land which the Division has highlighted as having previous potentially contaminating uses.

Land that could be an orphan site may not necessarily be recognised until it is actually inspected. In such cases no bias will be afforded to such sites, and they will be ranked solely dependent on risk of harm to health or pollution of the environment.

4.2.2 Council Policies Regarding Contamination with Sales & Acquisitions

Whilst the Council does not currently have any policies with regards to this matter, Development & European Affairs are looking to develop policies which encompass the following issues.

- a) contamination associated with its existing portfolio;
- b) ensuring that due consideration is exercised for contaminative issues when acquiring future holdings, including the provision of desktop studies and investigations where appropriate;
- c) assessments of contamination to Council owned or occupied land caused by tenants or its own practices;
- d) the disposal/leasing of land in Council ownership, to ensure contaminative issues are addressed.

4.2.3 Council Leased Property

The Council leases a number of properties to commercial tenants. Occupancy by some tenants may lead to contamination of the ground. Under the provisions of Part 2A, if the original polluter cannot be traced, the landowner(s) become the appropriate person at the site.

Accordingly, The Council when developing its policy on leasing should ensure

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that land and buildings in its ownership have not and will not become contaminated by current activities. In tenancy agreements the Council requires the tenants to seek consent for the storage of chemicals, fuel or wastes. The consent for such storage is subject to suitable storage facilities, the recording of such locations, accidents and health and safety documentation.

On termination of tenancies, to limit liabilities and ensure sustainability, it will be necessary that the tenant provides the Council independent confirmation that the quality of the land has not deteriorated significantly.

Where the Council leases land that is potentially contaminated or determined contaminated, leases shall be varied on renewal to ones greater than 21 years where possible. The lessee shall be informed of the land status and provided with a desktop study. They will be afforded powers to undertake any action or work to overcome contamination or pollution. In this manner The Council will limit its' liabilities.

4.3 Information Collection

A number of sources of information have been used for identifying potential sites, possible pathways and receptors. Such sources may help identify any part or combination of the pollutant linkage and include the following:-

- Historic Ordnance Survey maps,
- British Geological Survey maps,
- Soil Survey maps,
- Hydrogeological & Groundwater Vulnerability Maps,
- Environment Agency Source Protection Zones
- Environment Agency Wales Public Registers on IPC, IPPC & Waste Management Sites,
- Environment Agency Wales abstraction licences and river water quality sampling locations,
- County Council and WAG archives relating to maps, land use and aerial photographs
- National Museums & Antiquities of Wales Archives
- Closed landfill site records
- Reclamation records, Planning & Building Control records

Externally sourced information shall, where possible, be sourced in electronic format to assist in storage, accurate determination of spatial areas and risks. Historical information is transferred to an electronic format when applicable, and linked or referenced to the GIS system.

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4.4 Information from Other Sources

Pollution Control Division receives enquiries regarding quality of land and provides responses under the Environment Information Regulations 2004 for specific requests. Information may also be received from time to time from members of the public or the business community in relation to activities at a site. These can be received as complaints, though some times this may be provided as anecdotal evidence when a customer makes an enquiry. Some information may also be received through Development Control in the planning process. This information may be as comprehensive as a Geotechnical consultants report on a neighbouring plot of land.

For any new information received the source and details are recorded. The source identity is treated confidentially. The type of information being provided will also be assessed to ensure it is suitable for disclosure under the Environmental Information Regulations 2004.

Information provided anonymously may be accepted; however it will not be treated as reliable until verified, or as needing an urgent response. Information received will be acknowledged if required and any subsequent response regarding actions taken shall be provided in writing or electronically if requested.

All complaints received are logged and recorded on the Pollution Control Database and will be treated confidentially. Confidentiality will be protected unless a court of law instructs otherwise. All such enquiries shall be responded to in accordance with the Pollution Control Divisions' Response Procedures.

It is intended that urgent enquires shall be responded to within 1 day and routine enquiries within five working days. Anonymous complaints within 28 days. An initial assessment shall be made to determine if the enquiry should be dealt with through the Contaminated Land Regime or through other relevant legislation such as Part I or Part III of the Environment Protection Act 1990 or via the Water Resources Act 1991.

Where it appears that there is imminent danger of serious harm or serious pollution of controlled waters, the aim is to respond to such incidents within 24 hours. Other relevant organisations shall be advised of our activities and it is intended that an assessment of the risks shall be completed within two working days. An action plan identifying follow up work shall be produced and forwarded to other organisations with responsibilities, shared or otherwise.

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5.0 INSPECTION PROGRAMME

5.1 Prioritisation for Selecting Individual Sites

As detailed in Section 3.4 the procedural method used by the Contaminated Land Team to prioritise sites for further assessment is in the in house based Risk Matrix Tool (table 3.1) Proximity of potentially contaminated land to pathways and receptors will be considered when identifying areas for inspection.

Sites for detailed inspection will be prioritised using the risk-based assessment procedure as described in Section 3.4

5.2 Arrangements for Carrying out a Detailed Inspection

5.2.1 Ensuring Compliance

All inspection procedures will comply with paragraphs B.19 - B.25 of the Statutory Guidance (NAW 2006).

5.2.2 Site Specific Liaison

All on site activities will be notified in writing and agreed, where appropriate with

- Owners
- Occupiers
- Appropriate persons (Class A and Class B)
- The Agency
- CCW
- CADW
- Other key interested parties such as Health Protection Agency, Bro Taff Health Authority, National Public Health Service.

Once a site has been determined as contaminated land, including land ultimately designated as a special site, the Council will notify all interested parties as above in writing. If subsequent investigations identify additional appropriate persons they will also be notified in writing as soon as possible.

Following notification and commencement of the statutory three month consultation period, the following information will be made available to all interested parties:

- copy of the record of determination
- availability of site investigation reports

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- reasons for identification of appropriate persons
- names, addresses and capacities of all persons notified

They will also be advised of any Council policies which may apply, such as hardship.

All appropriate persons will be advised to seek legal advice

5.3 Methods of Inspection

All phases of inspection will comply with current recognised guidance and good practice. All reasonable precautions will be taken to avoid causing harm to the environment resulting from intrusive investigations. All inspection procedures will comply with paragraphs B.19 – B.25 of the Statutory Guidance (NAW 2006).

Before a site can be determined as contaminated the confirmed presence of a significant pollutant linkage must be identified.

Specific site inspections will take place in three stages:

- Stage 1: Desk Study
- Stage 2: Site Walkover
- Stage 3: Intrusive Investigation

5.3.1 Stage 1 – Desk Study

The initial risk assessment phase for sites will be the completion of a desk study which will entail a **preliminary risk assessment**. The objective of this work is to develop an outline conceptual model and establish whether or not there are any potentially unacceptable risks to the identified receptors, arising from potential contamination at the site.

The main activity at this stage is the collection of information required to identify all possible pollutant linkages at the site and prepare the outline conceptual model. The conceptual model is a representation of the three-dimensional site characteristics and interaction with the surrounding environment. It identifies all possible **receptors**, potential **contamination** and contaminant migration **pathways**, and shows the possible relationships between them (**potential pollutant linkages**), taking into account the current and proposed uses of the site.

The results of the Stage 1 Desk study will enable an assessment as to whether further investigation is then required to determine whether:

- (a) The land is 'contaminated land' as defined in the statutory guidance
- (b) The land falls within the definition of a 'Special Site'.

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5.3.2 Stage 2 – Site Visit and Visual Inspection.

Site walkovers will be undertaken to validate information collected during the desk study. Some samples of soils, waters, herbage and vapours may also be taken. This reconnaissance survey will consider any physical constraints that may affect subsequent intrusive investigations, (e.g. limited access to the site, underground or overhead services, proximity to sensitive uses affecting working hours, etc). Dialogue with local residents may also prove useful as sources of historical knowledge.

5.3.3 Stage 3 – Intrusive Investigations

Following stages 1 and 2 the 'Conceptual Ground Model' will be refined if required. Should the model indicate that a pollutant linkage exists on the site an investigation will be undertaken. The scope of the site investigation will be designed around the conceptual model and meet the requirements of British Standards BS 10175, the code of practice for investigation of potentially contaminated sites. Intrusive investigations are likely to include

- **Surface sampling:** spot samples, surface scrapes
- **Excavations:** trial pits, trial trenches
- **Borings:** probes and augers, percussion drilling, rotary drilling
- **Vapours and gas surveys:** gas spiking, probes/searcher bars, permanent monitoring wells
- **Controlled Waters Sampling:** Sampling of groundwaters from standpipes and piezometers, surface water sampling etc.

In order to obtain sufficient data on which to make a proper assessment of the site following a detailed ground investigation, it may be necessary to carry out either repeat sampling programmes or an extended monitoring exercise. Officers or the Council's term consultants will undertake a planned approach to sampling or monitoring programmes in accordance with the appropriate guidance documents.

Before any intrusive investigation is carried out on or adjacent to a SSSI, the Council will consult with CCW, (Wildlife and Countryside Act 1981).

Due to detailed nature of the assessment requirements the Council will employ an independent environmental consultant to undertake the intrusive investigations in most circumstances. This enables the Contaminated Land Team to focus on other project management issues such as communications with other interested parties, and liaising with other Council sections to ensure that the investigations are effectively completed.

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5.4 Risk Communication

The Council appreciates the potential impacts investigation and determination may have on the public living and working close to a site. There is also a potential to blight any land that is in close proximity to, or identified as, contaminated. It will therefore be essential to explain to all persons, the results of any investigations, assessments, conclusions and recommendations. All likely interested parties will therefore be consulted at all key stages. Risk communication is more fully explained in Chapter 6.

5.5 Powers of Entry

In carrying out any site investigation, there will be a requirement to visit the site and the surrounding area to investigate the presence of contamination. Where the Council owns the land, Officers will not be required to obtain permission to enter that land, although consultation with the relevant Section will be undertaken prior to the commencement of any works. Where there is a requirement to inspect land in private ownership, the authority has powers of entry under section 108 of the Environment Act 1995. However, before using these powers of entry, the authority will, based on the information already obtained, be satisfied that there is a **reasonable possibility that a pollutant linkage exists on the land.**

The landowner will be notified in writing and given seven days notice that there is a requirement to enter private land where the land involved is used for residential purposes or, the inspection will involve the use of heavy plant and machinery. Where the landowner does not give consent for an authorised person to enter the land, a warrant can be sought from a Magistrate.

The Council will consult with landowners or occupiers where there is a need to carry out a detailed ground investigation. However, there may be cases where in an emergency, it is necessary to take urgent action. In these cases there may not be sufficient time to provide the owner or occupier with the usual notice period of seven days and Officers will use the power of entry provided in section 108 of the Environment Act 1995. It is a requirement of this legislative provision however, that for immediate powers of entry, the officer of the Council must be satisfied that there is either:

- an immediate risk of serious pollution of the environment or serious harm to human health, or,
- that circumstances exist that are likely to endanger life or health.

5.6 Risk Assessment

During each stage of data acquisition, any risks attributed to the possible presence of a pollutant linkage will be identified and evaluated.

Risk assessment is a systematic process consisting of four key stages:

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1. Identification of associated hazards
2. Assessment of the extent of the hazard
3. Risk Estimation
4. Risk Evaluation

NAW Guidance (2006), defines 'risk' as the combination of:

- (a) the probability, or frequency, or 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

5.6.1 Risk Assessment Models

In the UK there is no one single Risk Assessment Model which must be used to assess the risk of contamination in soils to receptors. There are a number of Risk Assessment Models currently available (for example SNIFFER, RBECA, RischHuman 3.0, Consim, Gassim, EA Remedial Targets Methodology and CLEA 1.04). Each model has a number of limitations and may not be suitable for use on particular sites in relation to different receptors. The Pollution Control Division will assess each site investigation report it receives, to ensure that the most appropriate model either has been or is being used.

5.6.2 The CLEA Methodology and Model

In March 2002 Defra and the Environment Agency published the first CLEA framework technical guidance. However following its launch and the publication of a number of Soil Guideline Values (SGVs), Defra has been looking at how the guidance could be amended to provide greater clarity on when land qualifies as contaminated land. In November 2006 Defra published a consultation document entitled Soil Guideline Values: the Way Forward, which presented several possible amendments to the CLEA model and supporting guidance. Following a lengthy period of uncertainty the Environment Agency and Defra published revised technical guidance for the CLEA model In August 2008, the Environment Agency re-launched the CLEA methodology and supporting guidance, in order to provide new guidance to assess the long term risks to human health from possible soils contamination as CLEA beta 1.03. This has now been released as a final version known as CLEA 1.04. Whilst the use of CLEA Guideline Values is not mandatory, the Council intends to utilise the model wherever possible. In certain circumstances, for example in the case of groundwater and ecosystem protection, the CLEA model will not apply and therefore the most appropriate alternative will be used.

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5.7 Health and Safety Procedures

Before any on site investigation takes place, a safety assessment will be undertaken to identify any potentially hazardous substances which may be encountered. Specific Health and Safety advice is available from the Health and Safety Executive document, 'Protection of Workers and the General Public during the Development of Contaminated Land' (1991) and CIRIA Report 132 'A Guide for Safe Working Practices on Contaminated Sites'.

All site work will take account of any health and safety procedures in effect at any specific site as laid down by the site owner or occupier. In addition the Council's own Health and Safety Policy and procedures will be applied.

Where external consultants undertake intrusive investigations on behalf of the Council, they shall produce appropriate Health, Safety and Environment Plans for the site works which will be approved by the Contaminated Land Team and where appropriate the Council's Health and Safety Team.

5.8 Frequency of Inspection

The Statutory Guidance requires Local Authorities to re-inspect their areas from 'time to time', as the frequency required is heavily dependant on local circumstances. i.e.:

- the area of land to be covered
- historical and current land use characteristics
- the extent to which contamination problems have already been tackled in the area
- the nature and timing of any planned redevelopment or land use changes
- informal changes in land use
- the extent to which the local authority has already identified land which is most likely to be of concern, (Contaminated Land Inspection Strategies DETR 2001).

Changes in the legislation, statutory guidance or contamination criteria may necessitate a re-inspection of any site.

After completing the initial inspection of its area, The Council will be able to develop a procedure for periodically re-inspecting the district.

5.9 Format of Information Resulting From Inspection

Following desktop studies on any site that requires further investigation, records will be kept of the findings.

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Should the Council become aware of any changes to the site, for example through the introduction of a new source, pathway or receptor, the information will be updated where necessary.

Information will be recorded in a format compatible with the requirements of reporting information to The Agency and maintaining the statutory public register.

5.10 Potential Special Sites

5.10.1 Identifying Special Sites

There are a number of criteria, which when applied to contaminated land, will result in it being designated as a Special Site (Appendix A). Before the Council determines such land as 'contaminated land' it will consult with The Agency. After determining a site as contaminated land the Council must compare it against the criteria for special sites. Where The Council considers that the land could be a 'special site' it will request the advice of The Agency.

5.10.2 Notifying The Agency

Should the land meet one or more of the criteria for a special site, the Council will:

- advise The Agency formally of its view and seek agreement
- notify all appropriate persons of its decision in writing.

The Agency will have twenty-one days to review the decision and decide whether or not it accepts the Council's conclusions. If The Agency disputes the decision, WAG must make the final determination.

The Contaminated Land section will maintain its liaison with The Agency, so it is kept informed about any potential special sites, to avoid disputes as far as possible.

5.10.3 Making Arrangements for Site Inspections

Where the Council has reason to believe that a site may be a special site it will liaise with The Agency, owners and occupiers. The liaison will be to arrange necessary visits and investigations to avoid duplicity and ensure a cost effective approach is adopted. All site specific data relevant to the determination will be shared between the Council and The Agency. Each will evaluate the data and discuss the outcomes.

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6.0 LIAISON & COMMUNICATION

This section relates to the Council's practice of communicating with all interested parties, or Stakeholders, about parcels of land and specific contaminated land issues. This does not include pre-strategy developmental work or the provision of Information through the Environmental Information Regulations 2004.

6.1 Inspection Progression

The Pollution Control Division will undertake the necessary work to achieve the objectives and milestones identified. It is therefore reasonable to suggest that the site ranked highest at any time using the risk matrix, will be the first site to be inspected. In practice, there may be others, due to developmental pressures, pollution incidents, or information gained from the sale, lease or acquisition of land. This will not affect the mechanisms adopted for the dissemination or provision of information.

6.2 Stakeholder Identification

The preparatory work undertaken often as part of, or in tandem with, the desktop study shall allow planned inspections to progress in an open and transparent manner. This will identify Key Stakeholders, or 3rd parties who have an interest in the land, which may include a varied collection of individuals and groups. These may consist of: residents, home owners, property owners, business, the Council, non governmental organisation, other Government bodies, schools, wildlife trusts, community and conservation groups.

Stakeholders may therefore include internal departments and councillors, statutory consultees, land owners/occupiers and the community. The method or timing of communicating will vary dependant on the group and perceived risk from the land. Generally all will be initiated at the same time.

6.3 Internal and Steering Group Communication

The Statutory consultees are Countryside Council for Wales (CCW), CADW, Welsh Assembly Government, The Environment Agency Wales (EAW), the Food Standards Agency (FSA). Other appropriate consultees include Health Protection Agency (HPA) and National Public Health Service for Wales (NPHS), and Her Majesty's Customs & Excise.

They shall also be consulted if identified as either a key person or body, or ones that can bring particular expertise to assist in directing any proposed investigation, assessment or remediation design. For example CCW shall be consulted by way of explanatory letter and list of available

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information/documents, should there be a perceived risk to a protected ecosystem. Likewise, CADW will be consulted in reference to Ancient Monuments, listed buildings and archaeological sites. All such consultations shall be treated confidentially to ensure current land owners/occupiers interests are not forfeited or blighted unnecessarily.

At the outset of any intrusive investigation Pollution Control will chair a Steering Group meeting detailing to the stakeholders the background to the assessment works and the extent of the works to be undertaken. The Steering Group will then agree the assessment actions required prior to a communication exercise and site works commencing. Pollution Control will keep members of the steering updated. Once the consultation period has passed, rational decisions will be made at all stages to further develop the need for any appropriate remediation. All correspondence shall be retained, as will a record of any decisions.

6.4 Liaising with Land Owners/Occupiers

Once the land owners/occupiers have been identified, their addresses, telephone numbers etc shall be recorded onto a confidential and controlled site specific database. The database will also identify whether they are an appropriate person and the potential category (Class A or Class B) or whether they are a receptor and from what pollutant linkage.

Dependent on the types of risks, i.e., from migrating landfill gasses or vapours, the lead officer in the Pollution Control Division shall determine the appropriate method of communication.

In most cases where the assessment involves the investigation of residential properties officers from Pollution Control will undertake a communication exercise. This will normally involve a doorstep exercise where officers provide a verbal summary of the reasons for the assessment and obtain further information from the residents with regards occupant/owner details. Officers shall, where necessary and requested, spend time with land owners/occupiers explaining, where possible, the nature of the assessment and of the potential impacts, which the investigations are intending to remove. Officers will also provide the residents with an information pack which provides further information on the reasons for the assessment.

Where it is deemed necessary, Pollution Control will hold 'Drop in Centres' where residents/landowners will have access to officers from the Division to enable one on one discussions with officers where potential concerns regarding the works and other issues can be openly discussed. Local councillors would also be invited to attend in order to provide further support to the local community affected by the works. These will be held where possible, within the area of investigation in order to be as readily available to all interested parties as possible.

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All reports shall be made available to those identified as interested party and non technical summary documents will be produced and provided if the original documents are technical or lengthy. The Division will be sensitive to the needs of the owners/occupiers during the inspection/assessment/remediation of a site and shall communicate at times agreed/advised. This may continue to be on a personal basis or via letters, e-mails, or public meetings; whichever is considered the most appropriate to the needs. As part of Pollution Controls commitment to an open and transparent communication policy, residents and stakeholders will be given a name of a designated officer within the division who they will be encouraged to contact at any time should queries emerge between scheduled updates.

6.5 Liaising with the Community

During any part of an inspection by the Pollution Control Division, a view will be taken of whether there is likely to be wider community interest. This may be generated from intrusive investigations or regular sampling rounds. It may be due to the previous history of the site being well known in the community and anecdotal evidence coming to light during the investigation. The site being studied may also include community buildings or open spaces.

Whilst information can be divulged through the Environmental Information Regulations 2004 for a fee as an Environmental Information Request, the publication of factual or interpretive reports generated for the Council shall be made available to view at the offices of Pollution Control in City Hall free of charge. The Council will however be sensitive to confidentiality of the information that may be contained with the Detailed Site Investigation reports which are produced as part of the detailed assessment of individual sites. Where it is deemed that information is confidential then this will not be made available for general review.

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7.0 REVIEW MECHANISMS

As land use changes with time, The Council recognises that the strategy document and any conclusions reached during the Risk Assessment phase will have to be regularly reviewed.

7.1 Review of Assumptions and Information (triggers for inspection)

The 'Contaminated Land Inspection Strategies – Technical Advice for Local Authorities' document lists seven triggers for reviewing inspection decisions, including:

- Proposed changes in the use of land
- Unplanned changes in the use of land
- Unplanned events, e.g. localised flooding; accidents/fires spillage's where consequences cannot be addressed through other relevant environmental protection legislation
- Reports of localised health effects, which appear to relate to a particular area of land
- Verifiable reports of unusual or abnormal site conditions received from customers
- Responding to information from owners or occupiers of land, and other relevant interested parties
- Significant changes in legislation
- The establishment of legal precedents
- The revision of the guideline values

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

This is the first review of the Councils original strategy published in October 2002. The implementation and assessment of sites using the strategy has resulted in the modification of some areas of the inspection process, namely a slightly revised risk matrix tool.

It is anticipated that following the publication of this revised strategy and further progress with the assessment and remediation of contaminated land, that future modifications will be required. The Council will therefore review the strategy and make appropriate changes when necessary or dependent on any changes to legislation, statutory guidance and technical guidance.

7.3 Audit of Inspection Procedures

Pollution Control Division will introduce a Quality Management System to audit procedures relating to the identification and inspection of potentially contaminated land.

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8.0 INFORMATION MANAGEMENT

8.1 General Principles

As a statutory requirement, the 'Contaminated Land Register' will be a full and accurate record of all regulatory action taken by The Council in respect of Part 2A. This will include action taken in respect of The Council's own land.

Pollution Control Division already holds a large amount of data about brownfield sites and expects to receive even greater amounts as a result of implementation of Part 2A. Provision must be made for the efficient and secure management of databases to ensure that maximum benefit is obtained without compromising confidentiality.

8.2 Information Content

The databases will contain the following information.

8.2.1 Public Register

In accordance with Section 78 R of the Environmental Protection Act 1990 the Council is required to maintain a public register of contaminated land. The register serves as a public record of regulatory action taken by the authority to ensure the remediation of any land which has been formally determined as contaminated land. The register, which is in electronic form is available for inspection at the Pollution Control offices Room 204, City Hall, Cardiff, during normal office hours. The Public Register contains copies of the following:

- Remediation Notices where land has been designated as contaminated land;
- Appeals against such notices;
- Remediation statements or declarations;
- Notices declaring a contaminated site as a special site;
- Notices of the termination of the designation of land as a special site;
- Notifications received by the authority of what has been done by them in the way of remediation and what has been done to the land by way of remediation, and;
- Convictions for failing to comply with the requirements of a remediation notice.

The register does not contain information on land being investigated as part of a contaminated land investigation, or information relating to sites where detailed investigations have been carried out and are still being assessed. Information that affects national security or is deemed to be classed as commercially confidential shall be excluded from the public register. There is currently no legal requirement to remove any notice from the public register once it has been entered thereon.

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8.2.2 Other Information

Initially it is intended that a separate database will contain information on brownfield sites that will be utilised in response to:

- Environmental Information Enquiries
- Local Land Charges Searches (CON29)
- Planning Consultations (GDO)
- Desk Studies in respect of Part 2A

8.2.3 Information Storage Systems

Current data storage is in paper and electronic form:

- Most spatial data is stored on The Division's GIS and in paper form
- Numeric data is mostly stored in paper form with some in electronic spreadsheets
- Text is virtually all in paper form, although steps have been made to scan the records held by Pollution Control to make them available electronically.
- Finalised reports produced as part of a detailed intrusive investigation are available in both electronic versions and paper copies within the offices of Pollution Control at City Hall.

It is intended to transfer all historic paper records onto GIS or electronic database as appropriate for ease of access, manipulation and communication. Following evaluation of Data Management Systems it is hoped that the GIS and databases can be linked to:

- enable more efficient manipulation of data
- allow unrestricted access to Public Register Information
- prevent unauthorised access to confidential information
- prevent unauthorised modification of records

8.3 Administration

The GIS and all databases will be held and administered by Pollution Control Division. All input and editing will be actioned by Pollution Control Division in strict accordance with procedures set down to ensure that:

- as far as is reasonably possible all data is accurate
- sources of information are accurately recorded

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- sensitivity of data is correctly identified (confidentiality, national security etc.)
- access is restricted in order to comply with the requirements of 4.4.

8.4 Use by Other Council Service Areas

Information stored by Pollution Control Division will be made available to other service areas to enable discharge of their functions and statutory duties in accordance with Corporate Policies.

8.5 Confidentiality

There are certain restrictions on information to be placed on the Public Register due to national security and/or commercial confidentiality. These are set out in more detail in Annex 2, paragraphs 17.8 to 17.19 in the DETR Circular 02/2000. Confidentiality will be assured through procedures outlined in Section 4.4.. Disclosure of information will also have regard to The Data Protection Act 1998.

8.6 Arrangements for Access to Information

The Public Register is held in electronic form. The Register will be accessible via The Council's internet site allowing easy access to the public, business community and other interested parties and Council Service Areas. The register is available for free inspection by prior appointment contacting the Pollution Control Division at the following:

Pollution Control Division,
Strategic Planning and Environment
Room 206 City Hall
Cardiff.
CF10 3ND

or by contacting by:

Telephone 029-2087-1165
Fax: 029-2082-7431
E-mail: contaminatedland@cardiff.gov.uk

Monday to Thursday 09.00 – 17.00
Friday 09.00 – 16.30

Copies of entries will be available, charged at The Council's standard rates.

8.7 Dealing with Requests for Information

The Environmental Information Regulations 2004 entitle the public to gain access to information (as defined in the Regulations) held by government and local authorities, subject to certain exceptions. The Pollution Control Division of The Councils' Strategic Planning and Environment section provides a service

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concerning information relating to contaminated land and landfill sites. Other information is provided through the standard land charges search.

There will be other information acquired relating to contamination, such as site investigation reports, which will be kept by the Division. Access to this information will also be controlled by the Environmental Information Regulations 2004 and may not necessarily be in the Public Domain.

Local Land Charges Searches and Consultations on Planning Applications will be dealt with in accordance with the standard internal procedures.

8.8 Provision of Information to The Agency

The Agency has a statutory duty to publish a State of Contaminated Land Report on the state of contaminated land in Wales. This will include details on the *'nature, extent and distribution of contaminated land, the level of remediation undertaken and regulatory activity under Part 2A.'* **(DETR 2001)**

The Agency must collate all of the information on contaminated land that it has acquired from Local Authorities under Part 2A. To increase efficiency and guarantee consistency between all Local Authorities, The Agency has issued a number of summary forms (Appendix B) to be completed by each Council when:

- a site is determined as contaminated land (*SOCL/LA/FORM 1*)
- a Remediation Notice, statement or declaration is issued or agreed (*SOCL/LA/FORM 2*)

A summary form (*SOCL/LA/FORM 3*) must also be completed at the end of each financial year. This will detail all regulatory activity carried out by The Council in respect of Contaminated Land during the year.

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References

BGS: 1:50,000 Solid Geology Series. Sheet 249 Newport. 1975

BGS: 1:50,000 Solid Geology Series. Sheet 263 Cardiff. 1986

BGS: 1:125,000. Hydrogeological Map of South Wales.

BGS: Geology of the South Wales Coalfield, Part III, the country around Cardiff. Third Edition. HMSO. 1987

Cardiff Council - Cardiff Deposit Local Development Plan Consultation, April 2009

Cardiff County Council: Local Sustainability Strategy for Cardiff. November 2000

Cardiff Essential Guide 2009, www.visitcardiff.com

DETR: Circular on Contaminated Land. 02/2000

DETR: Technical Advice For Local Authorities “Contaminated Land Inspection Strategies” May 2001

Environment Agency: Groundwater Vulnerability Map. Sheet 36, Gwent, South & Mid Glamorgan. Policy and Practice For The Protection of Groundwater. 1996

Environment Agency: Policy and Practice For The Protection of Groundwater. The Stationary Office. 1998

Environment Agency Wales: Local Environment Agency Plan, Ely and Vale of Glamorgan Consultation Report. November 1998.

Environment Agency Wales: Local Environment Agency Plan, Taff Area Consultation Report. November 1998.

NAW: Guidance to enforcing authorities under Part 2A of the Environmental Protection Act “ Remediation of Contaminated Land” 2006

The Environmental Protection Act 1990

The Environment Act 1995

SNIFFER: Communicating Understanding of Contaminated Land Risks. WRC. 1999

Welsh Statutory Instrument 2001 No. 2197 (W.157) The Contaminated Land (Wales) Regulations 2006.

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Welsh Statutory Instrument 2007 No 3538 Environmental Permitting (England and Wales) Regulations 2007

Welsh Statutory Instrument 2009 No 995 (W.1) The Environmental Damage (Prevention and Remediation) (Wales) Regulations 2009

Photo of Butewest Dock www.gtj.org.uk

Photo of Cardiff Docks www.armed-guard.com/cbdl.html

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LIST of APPENDICES

Appendix A Regulations 2 and 3 and Schedule 1 of the Contaminated Land (Wales) Regulations 2006

Appendix B SOCL Forms

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Appendix A

Regulations 2 and 3 and Schedule 1 of the Contaminated Land (Wales) Regulations 2006.

Land required to be designated as a special site Regulation 2.

(1) **Contaminated land** of the following descriptions is prescribed for the purposes of section 78C(8) as **land** required to be designated as a special site -

(a) **land** to which regulation 3 applies;

(b) **land** which is contaminated **land** by reason of waste acid tars in, on or under the **land**;

(c) **land** on which any of the following activities have been carried on at any time -

(i) the purification (including refining) of crude petroleum or of oil extracted from petroleum, shale or any other bituminous substance except coal; or

(ii) the manufacture or processing of explosives;

(d) **land** on which a prescribed process designated for central control has been or is being carried on under an authorisation where the process does not comprise solely things being done which are required by way of remediation;

(e) **land** within a nuclear site;

(f) **land** owned or occupied by or on behalf of -

(i) the Secretary of State for Defence;

(ii) the Defence Council;

(iii) an international headquarters or defence organisation; or

(iv) the service authority of a visiting force,

being **land** used for naval, military or air force;

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(g) **land** on which the manufacture, production or disposal of -

(i) chemical weapons;

(ii) any biological agent or toxin which falls within section 1(1)(a) of the Biological Weapons Act 1974 (restriction on development of biological agents and toxins)^[2]; or

(iii) any weapon, equipment or means of delivery which falls within section 1(1)(b) of that Act (restriction on development of biological weapons),

has been carried on at any time;

(h) **land** comprising premises which are or were designated by the Secretary of State by an order made under section 1(1) of the Atomic Weapons Establishment Act 1991 (arrangements for development etc of nuclear devices)^[3]; and

(i) **land** which -

(i) is adjoining or adjacent to **land** of a description specified in subparagraphs (b) to (h) above; and

(ii) is contaminated **land** by virtue of substances which appear to have escaped from **land** of such a description.

(2) For the purposes of paragraph (1)(b) above, "waste acid tars" are tars which -

(a) contain sulphuric acid;

(b) were produced as a result of the refining of benzole, used lubricants or petroleum; and

(c) are or were stored on **land** used as a retention basin for the disposal of such tars.

(3) In paragraph (1)(d) above, "authorisation" and "prescribed process" have the same meaning as in Part I of the Environmental Protection Act 1990 (integrated pollution control and air pollution control by local authorities)^[4] and the reference to designation for central control is a reference to designation under section 2(4) (which provides for processes to be designated for central or local control).

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(4) In paragraph (1)(e) above, "nuclear site" means -

(a) any site in respect of which, or part of which, a nuclear site licence is for the time being in force; or

(b) any site in respect of which, or part of which, after the revocation or surrender of a nuclear site licence, the period of responsibility of the licensee has not come to an end;

and "nuclear site licence", "licensee" and "period of responsibility" have the meaning given by the Nuclear Installations Act 1965[5].

(5) For the purposes of paragraph (1)(f) above, **land** used for residential purposes or by the Navy, Army and Air Force Institutes shall be treated as **land** used for naval, military or air force purposes only if the **land** forms part of a base occupied for naval, military or air force purposes.

(6) In paragraph (1)(f) above -

"international headquarters" and "defence organisation" mean, respectively, any international headquarters or defence organisation designated for the purposes of the International Headquarters and Defence Organisations Act 1964[6];

"service authority" and "visiting force" have the same meaning as in Part I of the Visiting Forces Act 1952[7].

(7) In paragraph (1)(g) above, "chemical weapon" has the same meaning as in subsection (1) of section 1 of the Chemical Weapons Act 1996[8] disregarding subsection (2) of that section.

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Pollution of controlled waters Regulation 3.

For the purposes of regulation 2(1)(a), this regulation applies to **land** where -

(a) controlled waters which are, or are intended to be, used for the supply of drinking water for human consumption are being affected by the **land**[9] and, as a result, require a treatment process or a change in such a process to be applied to those waters before use, so as to be regarded as wholesome within the meaning of Part III of the Water Industry Act 1991 (water supply)[10];

(b) controlled waters are being affected by the **land** and, as a result, those waters do not meet or are not likely to meet the criterion for classification applying to the relevant description of waters specified in regulations made under section 82 of the Water Resources Act 1991 (classification of quality of waters)[11]; or

(c) controlled waters are being affected by the **land** and -

(i) any of the substances by reason of which the pollution of the waters is being or is likely to be caused falls within any of the families or groups of substances listed in paragraph 1 of Schedule 1 to these **Regulations**;
and

(ii) the waters, or any part of the waters, are contained within underground strata which comprise wholly or partly any of the formations of rocks listed in paragraph 2 of Schedule 1 to these **Regulations**.

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SCHEDULE 1

Regulation 3(c)

SPECIAL SITES

1. The following families and groups of substances are listed for the purposes of regulation 3(c)(i) -

- organohalogen compounds and substances which may form such compounds in the aquatic environment;
- organophosphorus compounds;
- organotin compounds;
- substances which possess carcinogenic, mutagenic or teratogenic properties in or via the aquatic environment;
- mercury and its compounds;
- cadmium and its compounds;
- mineral oil and other hydrocarbons;
- cyanides.

2. The following formations of rocks are listed for the purposes of regulation 3(c)(ii) -

- Pleistocene Norwich Crag;
- Upper Cretaceous Chalk;
- Lower Cretaceous Sandstones;
- Upper Jurassic Corallian;
- Middle Jurassic Limestones;
- Lower Jurassic Cotteswold Sands;
- Permo-Triassic Sherwood Sandstone Group;
- Upper Permian Magnesian Limestone;
- Lower Permian Penrith Sandstone;
- Lower Permian Collyhurst Sandstone;
- Lower Permian Basal Breccias,
Conglomerates and Sandstones;
- Lower Carboniferous Limestones.

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Appendix B

SOCL Forms

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Form For Inspection of potential Special Site by Environment Agency Wales

When the Council requests that the Agency undertake the inspection on their behalf, the following summary sheet should be completed to provide the Agency with information for the state of contaminated land report.

Cardiff County Council		Contact Name:						
Site Name and Address:		Council Unique Reference (if relevant):						
		Grid Reference:						
What date was the request for the inspection received?		What level of information was provided? (desk study, site recon or intrusive investigation)						
What is the approximate Area of Site? (Tick appropriate box)	0-5 ha	5-10ha	10-15ha	15-20ha	>20ha			
Which contaminants was the request based on? (See Note 1 on the reverse of this form). Use more than one if appropriate.	Metals and metalloids	Inorganic compounds	Organic compounds	Gas/vapours	Other			
	Y/N	Y/N	Y/N	Y/N	Y/N			
	If Other, please specify:							
What is the category of Special Site?	MoD Land	Chemical Weapons	Biological Weapons	Petroleum Refineries	Nuclear Sites			
	Y/N	Y/N	Y/N	Y/N	Y/N			
	Disposal of waste acid tars?	Explosives manufacture or processing	Regulation 3a: drinking water supply affected	Regulation 3b: water quality affected	Regulation 3c: listed substances in defined aquifers			
	Y/N	Y/N	Y/N	Y/N	Y/N			
	Authorised prescribed process			Y/N				
Which receptor(s) at risk was the request based on? Use more than one if appropriate.	Human Beings	Controlled waters	Ecological systems	Property in the form of buildings	Other property			
	Y/N	Y/N	Y/N	Y/N	Y/N			
What is the current land use?	Derelict	Housing	Commercial Premises	Industrial Premises	Agriculture	Forestry	Park and recreational	Other
	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N
	If Other, please specify:							
Please add any other information about the site that you think useful for reporting purposes								

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Notes for above form and Form 1.

Note 1 – Key to Contaminant Groupings

Metals and metalloids

Arsenic	Cadmium	Chromium	Copper	
Lead	Mercury	Nickel	Zinc	
Selenium	Beryllium	Silver	Thallium	Vanadium

Inorganic compounds

Ammonium	Chloride	Cyanide
Sulphate	Sulphide	Sulphur

Organic compounds

Fuel/hydrocarbons	PAH	Phenols
Aromatic hydrocarbons	Aliphatic hydrocarbons	Aromatic halocarbons
Chlorinated phenols	Dioxins and Furans	Organometallics
PCBs	Propanone	

Others

Asbestos	Carbon dioxide	Methane
Explosives	Pesticides	Other gases

Note 2 – Key to Industry Groupings

Energy Industry:- Combustion Activities; Gasification, liquefaction and refining activities.

Metal Processing Industry:- Ferrous metals; Non Ferrous metals; Surface treating metals and plastic materials.

Mineral Industry

Production of cement and lime; Production of other mineral fibres; Manufacturing glass and glass fibre; Ceramic production; Activities involving asbestos; Other mineral activities eg crushing & grinding

Chemical Industry

Organic chemicals (see Note 1); Inorganic chemicals (see Note 1); Explosives production; Chemical fertiliser production; Plant health products and biocides; Pharmaceutical production;

Manufacturing activities involving carbon disulphide or ammonia; Storage of chemicals in bulk

Waste management industry

Disposal of waste by incineration; Disposal of waste by landfill; Production of fuel from waste;
Disposal of waste other than by incineration or landfill; Recovery of waste

Paper industry

Any activity associated with making paper, paper pulp or board from wood, grass, straw and similar materials

Textiles, printing and textile industry

Applying or removing a coating material; Treating or dyeing fibres and textiles;
Manufacture of Dyestuffs, Printing Ink and Coating Materials

Timber processing industry

Curing or chemically treating timber or wood; Manufacturing products made wholly or mainly of wood

Food and animal processing industry

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*Tanning of hides and skins;
Slaughtering animals;*

*Processing, storing and drying animal or vegetable matter;
Treating and processing materials for the production of food*

Others. This will include, but not be limited to:

*Agriculture; Forestry; Construction; Transport; Wholesale & Retail Distribution;
Rubber processing; Carbon Production; Tar and bitumen production and processing*

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FORM 1- Form For Exchange Of Information Between Cardiff County Council And Environment Agency Wales When A Site Is Determined As Contaminated Land

Attach this summary to the written record of determination that the Council sends to the Agency (under Section 78C(3)). This summary form does not replace a Section 78C(3) written record. It is part of the Councils' duty (under Section 78U) to provide the Agency with information for the state of contaminated land report.

Cardiff County Council	Contact Name:	
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Site Name and Address:	Council Unique Reference (if relevant):	
	Grid Reference:	

What date was the determination notice issued?		Does the Council consider this site a potential special site?	Y/ N
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What is the approximate Area of Site? (Tick appropriate box)	0-5 ha	5-10ha	10-15ha	15-20ha	>20ha
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Which contaminants was the determination based on? (See Note 1 on the reverse of this form). Use more than one if appropriate.	Metals and metalloids	Inorganic compounds	Organic compounds	Gas/vapours	Other
	Y/N	Y/N	Y/N	Y/N	Y/N
	If Other, please specify:				

Which industry caused the contamination, if known? (See Note 2 on the reverse of this form) Use more than one if appropriate.	Energy Industry	Metal Industry	Mineral Industry	Chemical Industry	Paper Industry
	Y/N	Y/N	Y/N	Y/N	Y/N
	Textiles, printing and coating industry	Waste management Industry	Timber processing industry activities	Food and animal processing industry	Other
	Y/N	Y/N	Y/N	Y/N	Y/N
If Other, please specify:					

Which receptor(s) at risk was the determination based on? Use more than one if appropriate.	Human Beings	Controlled waters	Ecological systems	Property in the form of buildings	Other property
	Y/N	Y/N	Y/N	Y/N	Y/N

What is the current land use?	Derelict	Housing	Commercial Premises	Industrial Premises	Agriculture	Forestry	Park and recreational	Other
	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N
	If Other, please specify:							

Please add any other information about the site that you think useful for reporting purposes	
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Environment Agency Wales Reference Number:	
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FORM 2- Form For Exchange Of Information Between Cardiff County Council And Environment Agency Wales When Remediation Action is Taken for a Site

This summary forms part of the Councils' duty (under Section 78U) to provide the Agency with information for the state of contaminated land report.

Cardiff County Council	Contact name:
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Site Name and Address	Council Unique Reference
	Grid Reference

What date was the: (complete appropriate box)	Remediation Notice Served?	Remediation Statement published?	Remediation Declaration published?

Have previous notices, statements or declarations been produced for this site?	Y/N	If Yes, please give date(s) of issue or publication for		
		Notice:	Statement:	Declaration:

Is remediation being done, or was it done, under a voluntary agreement?	Y/N	Is it an orphan site? (i.e. no appropriate person can be found)

How many appropriate persons have been identified?	In Total	Group A	Group B

Is the Council the appropriate person?	Y/N	If yes, is that solely or with others?

When is remediation expected to start?	<1 year post determination	1-3 years post determination	> 3 years post determination

How long is the remediation expected to take?	<6 months	6months -1 year	1-2 years	>2 years

What action does the notice, statement or declaration referred to in this form cover?	Assessment Action	Remediation Action	Monitoring Action
	Y/N	Y/N	Y/N

Is a change in Land Use intended at the site as part of the remediation process?								Y/N
If YES, what is the intended new land Use?	Derelict	Housing	Commercial Premises	Industrial Premises	Agriculture	Forestry	Park and recreational	Other
	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N
If Other, please specify:								

What type of remediation action is proposed? (See Note 3 on the reverse of this form) Use more than one if appropriate.	
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Note 3: Key to Remediation Technology Types

Possible remediation classes would include, but would not be limited to:

- Containment,
- excavation and off-site disposal
- excavation and use or disposal on-site
- In-situ bioremediation
- Ex-situ bioremediation
- In-situ chemical treatment
- Ex-situ chemical treatment
- In-situ physical treatment
- Ex-situ physical treatment

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FORM 3 -Form For Exchange Of Information Between Cardiff County Council And Environment Agency Wales for Annual Summary of the Councils' Regulatory Activity

This summary forms part of the Councils' duty (under Section 78U) to provide the Agency with information for the state of contaminated land report.

Cardiff County Council	Contact Name	
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Which financial year does this form relate to?	
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How many remediation notices were served in that year?	
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How many remediation statements were issued in that year?	Total	Prepared by Council	Prepared by Appropriate Person

How many remediation declarations were published in that year?	
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How many sites required urgent action in that year?	
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How many sites required emergency action in that year?	
---	--

At how many sites was cost recovery employed in that year?	
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At how many sites was hardship applied in that year?	To all appropriate persons	To some appropriate persons

No. of Appeals	Upheld in full	Upheld in Part	Not Upheld	Not Yet Determined
Referral of special site decision to Secretary of State (78D)				
Appeal against a remediation notice (78L)				
Appeal against a charging notice (78P(8))				
Appeal against local authority decision on commercial confidentiality (78T(3))				

No. of Prosecutions for failure to comply with a remediation notice (Section 78M)	Successful	Unsuccessful	Pending