



**South Hams
District Council**

**Environmental Protection Act 1990,
Part IIA**

**Strategy for the Investigation and Remediation of Contaminated
Land**

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**Prepared By
South Hams District Council**

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Follaton House, Plymouth Road, Totnes, Devon.

Telephone: 01803 861234

Facsimile: 01803 861294

E-mail: environmental-health@southhams.gov.uk

All our publications are available in alternative formats, such as large print or a language other than English. Please contact us on 01803 861123 or e-mail enquiries@southhams.gov.uk.

An Equality Impact Assessment of this Strategy was completed on 27 February 2008.

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Executive Summary

On 1st April 2000, the Contaminated Land Regulations came into force, implementing Part IIA of the Environmental Protection Act 1990. The regulations place a duty on the local authorities to identify any contaminated land in their areas, and bring about its remediation. The regulations give the council (and in some cases the Environment Agency) powers to serve remediation notices requiring such remediation to be carried out.

South Hams District Council adopted its strategy for identifying contaminated land on 21st June 2001.

It is our aim to bring about the identification, investigation and (where necessary) the remediation of such land in a systematic and efficient fashion, in co-operation with all interested parties, using our powers of enforcement only as a last resort.

South Hams Council policy on contaminated land is summarised as follows: *“To ensure the protection of the land environment by the pro-active identification and management of contaminated land, through the adoption of a rational and transparent strategy implemented (where possible) in partnership with landowners, developers and other relevant parties”.*

An implementation timetable is included as Appendix A. The authority aimed to be in a position of completing the inspection process and identification of sites which require remediation by end of 2004. Certain aspects of the timetable were difficult to predict. It is considered that it may need to be substantially revised as information about the nature and extent of contaminated land in the district emerges.

The strategy is intended to identify land which is currently unsuitable for use by virtue of contamination in, on or under that land, and bring about its remediation to a condition which no longer presents a risk of significant harm to human health or the environment.

Mechanisms are proposed for improving the overlap with, and effectiveness of, other relevant regulatory regimes (e.g. planning) and for improving the flow of information between the relevant Council Departments and other interested parties.

The South Hams District has some unusual characteristics which are addressed by the strategy:

- The district is largely rural, with no major centres of heavy industrial activity, but contains a large number of sensitive environmental receptors for contamination such as streams, rivers, estuaries, SSSI's and other protected habitats.
- The area includes part of the Dartmoor National Park.
- Parts of the district are underlain by geology which may contain significant concentrations of naturally occurring “contamination”, such as arsenic and lead.
- Any comments relating to the Strategy should be forwarded to the Contaminated Land Officer, Environmental Health Department, Follaton House, Plymouth Road, Totnes, TQ9 5NE during office hours.

1.0 Introduction

The Council's vision, is "To work toward a safer, cleaner, healthier and distinctive environment", from this four key objectives have been developed:

- Well Being - Secure a safe, clean, healthy way of life;
- Prosperity - Maintain and enhance the prosperity of business, communities and individuals.
- Environment - Maintain and enhance the distinctive quality of the environment and secure long-term environmental gains.
- Sustainability - Secure sustainability in all things – communities, development, business and the environment

Maintaining a healthy and safe environment is a key part of improving the quality of life for the people in the South Hams District. However, there are many pressures on the environment, and environmental issues are becoming increasingly important. The challenge will be to balance the need for employment and demands of business with protecting and enhancing the environment for future generations.

South Hams District Council, in support of its commitment to sustainable development, has adopted an objective to protect and enhance the district's environment and deal with competing pressures in a balanced way. The South Hams face a particular challenge in relation to the provision of land for new housing. The Devon Structure Plan identifies the need to allocate 11,500 dwellings within the South Hams between 1995 and 2011, and The Department of the Environment, Transport and the Regions (DETR) has set a target of concentrating more than 60% of new housing development on Brownfield sites. The development of Brownfield sites will generally be regulated via the Development Control process and not the contaminated land regime. However, the guidance assisting with the implementation of the contaminated land regime will be used to ensure that these sites are brought into safe use.

1.1 Enforcement

As the principal regulators under Part IIA of the EPA, the Council will play the lead role in enforcement. The Environment Agency (EA) has an important complementary regulatory role to play with specific responsibilities. The EA takes the lead role in situations where sites are designated as SPECIAL SITES (see Schedule 1, Table 2, Appendix D).

South Hams District Council has adopted the Cabinet Office Enforcement Concordat, which commits the authority to good enforcement policies and procedures. Part IIA of the Environmental Protection Act 1990 (EPA 1990) is enforced in an equitable, practical and consistent manner to meet the principles set out in the Enforcement Concordat.

It is the approach of South Hams Council when dealing with contaminated land to seek "voluntary" remediation of sites before enforcement action is considered. This approach follows the guidance laid out in the regulations and it is proving to be the most effective way of achieving remediation.

As the enforcing authority we will, where appropriate, serve [remediation] notices as a means of achieving the remediation of land. REMEDIATION NOTICES will specify the action needed in order to achieve the appropriate standard of clean-up.

1.2 Public Access to Information

The management and release of information on contaminated land is a very difficult issue to handle appropriately. Much information is currently available through commercial environmental searches. However, if the process is not undertaken carefully it can cause property blight. South Hams District Council is committed to a policy of openness, and our aim is to publish verified information on our web site as soon as is practicable.

It will be particularly difficult to manage the provision of information on sites which are under investigation as **potentially** contaminated, but have not yet been determined to be CONTAMINATED LAND.

The Environmental Health Department will continue to respond to specific written requests for historic land uses and investigation data held by the Department. A disclaimer is added to any written response making it clear that the information provided is that which is available to the Authority at that time. The approach will be consistent with the requirements of access to information legislation. The Contaminated Land Officer is the lead officer and primary point of contact within the Council on contaminated land issues.

Where information or reports on sites are provided by a third party, the status of the information (i.e. whether it is considered confidential or subject to national security consideration) will be determined and confirmed at the outset where possible. Third party information will be made publicly available where it is appropriate to release the information in accordance with the above regulations.

The authority expects to collect and organise a considerable volume of information in the process of inspecting its area. Storing, cataloguing and managing the appropriate release of this information only effectively achieved by the use of computer technology. A prime objective of the project was to establish a Geographical Information System (GIS) to fulfil this objective.

Part IIA of the EPA 1990 requires that a public register is created and made publicly accessible, recording information on sites where REMEDIATION NOTICES have been issued or a formal REMEDIATION STATEMENT has been prepared in line with the Act.

1.3 Consultation

The draft strategy was circulated to the statutory consultees as detailed in the Department of the Environment, Transport and the Regions (DETR) guidance (listed in Appendix C). The document is published on the Council's website in order to encourage and enable public comment.

2.0 Legislative Background

Part IIA of the Environmental Protection Act 1990 (EPA 1990), which is introduced by section 57 of the Environment Act 1995, requires an overall risk-based approach to dealing with contaminated sites. This is consistent with the general good practice approach to managing land contamination. The regulatory regime set out in Part IIA is based on the following:

- identify the problem
- assess the risks
- determine the appropriate remediation requirements
- consider the costs
- establish who should pay
- secure remediation

Section 78A(2) of the Act defines Contaminated Land for the purpose of Part IIA as:

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

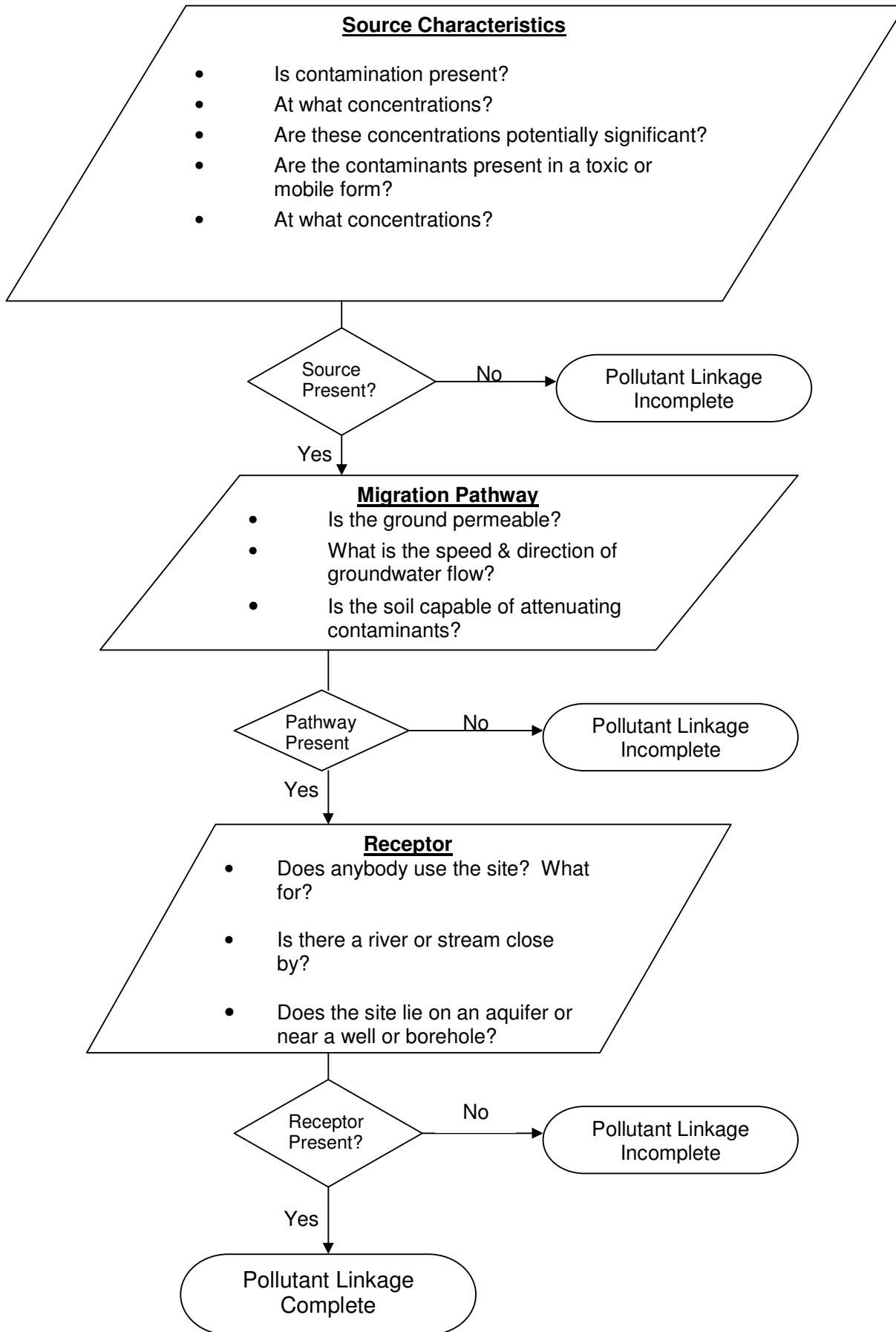
(a) significant harm is being caused or there is a significant possibility of such harm being caused; or

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

The basis of the definition is complex and incorporates the concept of risk assessment. This involves identification of a contaminant source, pathway and receptor with the essential establishment of pollutant linkages by which the contaminant issuing from the source can reach the receptor via the identified pathway with the possibility to cause SIGNIFICANT HARM or the POLLUTION OF CONTROLLED WATERS.

The Source | Pathway | Receptor risk assessment procedure for the determination POLLUTANT LINKAGES is illustrated in Figure 1. It should be noted that the possible linkages shown are for example only and that other receptors and pathways are possible under the definitions set out in Part IIA.

Figure 1 Contaminant Linkages



In addition to the primary legislation, the Part IIA regime is implemented through Regulations and through Statutory Guidance which covers:

- local authority inspection strategies
- identification and designation of contaminated land
- remediation requirements
- exclusion from, and apportionment of, liability
- measures for cost recovery

The Contaminated Land (England) Regulations 2000 set out further requirements, particularly in respect of:

- categories of land which are to be designated as SPECIAL SITES
- the form and content of REMEDIATION NOTICES
- appeals
- compensation for access
- public REMEDIATION REGISTERS

The principal regulators for Part IIA are the local authorities (District and Unitary Councils) whose role has been defined as follows:

- Prepare and publish an INSPECTION STRATEGY.
- Inspect their area to identify and where appropriate determine CONTAMINATED LAND.
- Consult the Environment Agency (EA) on areas where the Environment Agency has particular expertise, in particular with respect to the POLLUTION OF CONTROLLED WATERS.
- Ensure remediation of land identified as CONTAMINATED LAND.
- Transfer SPECIAL SITES to the EA.
- Maintain REMEDIATION REGISTERS.
- Provide information to the EA for inclusion in the State of Contaminated Land report.

The EA has a complementary regulatory role under the regime including:

- Provision of relevant information, held by the EA, to local authorities.
- Regulation of SPECIAL SITES.
- To ensure remediation of SPECIAL SITES.
- Maintenance of a PUBLIC REGISTER of regulatory action for SPECIAL SITES.
- Preparation of a national report on the state of contaminated land.
- Provision of advice to local authorities on identifying and dealing with POLLUTION OF CONTROLLED WATERS.
- Provision of site-specific advice to local authorities on the remediation of contaminated land.

2.1 Relationship between Part IIA and Other Controls

2.1.1 Planning and Development Control

It is recognised that the key to successful implementation of the strategy is the establishment and maintenance of a good database. This will enable the Development Control process to be used effectively to address contamination issues prior to development, to a high standard, and usually at no cost to the public purse.

Part IIA will not normally apply where land is being managed within the normal cycle of land redevelopment and regeneration, where the planning and development control regime will continue to be the primary means of control.

Land contamination, or the possibility of it, is a material consideration for the purposes of town and country planning. Current planning control on contaminated land is set out in Planning Policy Guidance: Planning and Pollution Control (PPG 23).

It is convenient to consider the two regulatory regimes in the following way:

- The Planning & Development process is intended to ensure that at any appropriate point (such as the construction of new buildings, or at change of land use), the land is assessed for contamination, and that it is judged to be “fit for [the proposed] use”.
- The Part IIA regime is intended to identify that land which is a significant risk (within the terms of the legislation).
- The standard to be expected of a new development will be much higher than the enforcement standard.

In addition to the planning system, the Building Regulations (made under the Building Act 1984) may require measures to be taken to protect the fabric of new buildings, and their future occupants, from the effects of contamination. Approved Document Part C of Schedule 1 to the Building Regulations 2000 (Site Preparation and Resistance to Moisture) gives guidance on these requirements.

In any case where new development is taking place, it will be the responsibility of the developer to carry out the necessary remediation. In most cases, the enforcement of any remediation requirements will be through planning conditions and building control, rather than through a remediation notice issued under Part IIA.

2.1.2 Environmental Protection Act 1990 Part III – Statutory Nuisance

Statutory nuisance provisions do not apply where the nuisance arises in relation to land being in a ‘contaminated state’. However, nuisance provisions could still apply where land gives rise to a nuisance (such as an odour) that is an offence to human senses but which is not covered under the various categories of harm set out in the Contaminated Land Statutory Guidance.

2.1.3 Integrated Pollution Control (IPC) and Pollution Prevention and Control (PPC)

Part IIA does not apply where the Environment Agency powers under IPC provisions of the EPA 1990, which can be used to take action to remedy contamination resulting from the breach of a process authorisation. Similar arrangements will apply to processes authorised under PPC.

2.1.4 Waste Management Licensing (Part II of EPA 1990)

Part IIA does not normally apply where contamination has resulted from land subject to a waste management licence, although it may apply where adverse effects arise from causes other than a breach of licence conditions or from activities that are permitted under the licence. Licences are regulated and issued by the Environment Agency. Former landfill sites, for which the site licence was surrendered prior to May 1994, are not covered by the waste management licensing regime and will therefore fall under the terms of Part IIA.

2.1.5 Water Resources Act (WRA) 1991

The WRA 1991 gives the Environment Agency powers to take action to prevent or remedy the pollution of controlled waters. Decisions about the most appropriate regime in any particular case will be handled through consultation between the Council and the Environment Agency.

2.2 Principles of Pollutant Linkage and Risk Assessment

In the context of land contamination, the definition of significant harm is based on a pollutant linkage being present. There are three essential elements to a pollutant linkage:

- A CONTAMINANT - a substance that is in, on or under the land and has the potential to cause harm or to cause pollution of controlled waters.
- A RECEPTOR – in general terms, something that could be adversely affected by a contaminant, such as people, an ecological system, property, or a water body (a receptor is specified in the DETR guidance below); and
- A PATHWAY - a route or means by which a receptor can be exposed to, or affected by, a contaminant.

Receptors recognised as being potentially sensitive are:

- **Human beings**
- **Ecological systems or living organisms forming part of a system within certain protected locations including:**
 - Sites of Special Scientific Interest (SSSI's)
 - National Nature Reserves
 - Marine Nature Reserves
 - Special Areas of Conservation (SAC's)
 - Special Protection Areas (SPA's)
 - Candidate SAC's
 - RAMSAR sites
 - Areas of special protection for birds

- **Property in the form of buildings**

- **Property in other forms:**
 - Livestock
 - Crops
 - Home-grown produce
 - Owned or domesticated animals
 - Wild animals subject to shooting or fishing rights

- **Controlled waters:**
 - Drinking water abstractions
 - Surface waters (e.g. rivers, lakes, streams)
 - Source protection zones
 - Groundwater* – private abstractions
 - Groundwater* – major aquifers

* The statutory definition of groundwater (Water Resources Act 1991) covers all water below the water table, and not just the examples shown above.

If the three elements (contaminant – pathway – receptor) are present for the pollutant linkage, a risk assessment must be undertaken to determine the likelihood of significant harm being caused to one of the specified receptors. Having identified the pollutant linkage and undertaken a risk assessment which indicates that significant harm is being caused, or is likely to be caused to a receptor, the land can then be classified as CONTAMINATED LAND.

3.0 Development of the Strategy

Local authorities are responsible for preparing Inspection Strategies for their district. The Statutory Guidance requires that the approach adopted should:

- 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 areas where the authority is most likely to identify contaminated land; and
- Ensure that the local authority efficiently identifies requirements for the detailed inspection of particular areas of land

This document has been prepared having regard to the Technical Advice for Local Authorities – Contaminated Land Inspection Strategies (DETR 2001).

The responsibility of managing the process was placed with the Divisional Environmental Health Officer (Environmental Control), and a Contaminated Land Officer has been appointed to undertake the work

The Contaminated Land Officer post was initially a joint appointment with Teignbridge District Council. Efficiency savings were made as a result of a shared common approach, and limited task sharing between the authorities. South Hams now has a part time Contaminated Land Officer.

Although the role of managing the process falls to the Divisional Environmental Health Officer, there are a number of officers within the Council who will have a role in the process of the Strategy development, inspection and enforcement. Much of the information needed for, and resulting from, inspection is pertinent to other local authority functions, for example land use planning and development control, environmental protection and economic development. Therefore an internal Contaminated Land Working Group has been formed.

4.0 Characteristics of the South Hams Area

4.1 General Description

The South Hams District covers an area of 886 km² of predominantly rural south Devon and has approximately 96 km of coastline. The 2001 Census recorded the South Hams having a population of 81,846 inhabitants with approximately 45% living in its six market towns and main commercial centres, Totnes, Dartmouth, Ivybridge, Kingsbridge, Salcombe and Modbury.

The district is traversed by the Rivers Dart, Avon, Erme and Plym and their tributaries, and includes a small section of coastline adjoining the Tamar Estuary. The surface water courses are numerous and generally of a high quality, supporting salmonid fish populations and sensitive ecosystems.

The regional geology is predominantly sedimentary rocks of Devonian, Carboniferous and Permian age, with the granite intrusion of Dartmoor and its metamorphic aureole to the north. The sedimentary rocks are host to a number of groundwater abstractions, licensed by the Environment Agency. Devonian limestones outcrop or subcrop in a broad swath from Plymouth in the south-west, to Totnes in the north-east. These rocks are classified regionally as major aquifers, signifying their status as potential groundwater resources. Soils in the upland areas of Dartmoor will be thin and are unlikely to have significant capacity for the attenuation of contamination. There are approximately 650 private domestic water supplies. These include surface waters, and wells sunk into recent superficial deposits and into both sedimentary and granitic rocks within the District. The Council analyses approximately 300 samples annually from these supplies.

Possible contaminative land uses are set out in Appendix B. There will be a higher incidence of potentially contaminative land uses in urban, industrialised areas, however many potential point sources of contamination may exist in rural areas, possibly in proximity to dwellings and sensitive environmental receptors such as streams, rivers, and groundwater source protection zones.

For a land parcel to be defined as CONTAMINATED LAND, it must represent a source of contamination for which there is an identifiable RECEPTOR, and a proven (or likely) pathway connecting the two. If such a CONTAMINANT LINKAGE can be defined, then the site in question may be defined as CONTAMINATED LAND under Part IIA and any enforcement and remediation actions may be entered on the PUBLIC REGISTER.

It is a primary objective of the strategy to target effort and resources on areas likely to contain contaminated land sites.

The more densely populated settlements are likely to be a focus for industrial activities, with a greater likelihood for potentially contaminative land uses to have been concentrated in these areas. Similarly, these areas have higher population densities with greater development pressure, increasing the likelihood of bringing the public into contact with contaminated land. There is, therefore, a greater

potential for there to be contamination sources present close to human health receptors in these areas.

Conversely, in rural areas, other sensitive environmental receptors (e.g. streams and rivers) are prevalent, although contamination sources may be more widely distributed.

The granite intrusion that underlies and outcrops within the Dartmoor area, adds its own complications; naturally occurring concentrations of substances are in places present in rocks, soil and surface and ground water that may be capable of giving rise to public health effects. These include trace levels of uranium metal, and elements such as arsenic, lead, tin and zinc. Abandoned metal mines are common within the National Park and several are recorded within the South Hams area. Radon gas in the ground is also a feature of many parts of the South Hams District, however this is not addressed by the provisions of Part IIA.

The net risk to any receptor is determined by the potential severity of the harm that may be caused to that receptor, combined with the likelihood that that harm will occur. It may be that the contaminated land parcels which are the most potentially harmful to human health (e.g. arsenic smelters), are located in areas where the probability of human exposure may be low. Conversely, less hazardous sites may be located in areas where the likelihood of public access is much greater.

These factors exert an influence over the preliminary research and screening techniques that the authority employs to quickly focus effort on potentially contaminated sites. It is not possible to eliminate geographical areas from the search for contaminated land, however low-risk land uses are being eliminated at an early stage, so as to focus effort on potential high risk historical land uses.

4.2 Current Land Use Characteristics

The local economy is centred mainly around agriculture, quarrying, commerce, light industry and tourism, with heavy industry being largely confined within the Plymouth City boundaries.

The authority's area includes part of the Dartmoor National Park, and the south Devon Coast including areas of Outstanding Natural Beauty, Great Landscape Value and parts of the South Devon Heritage Coast.

4.2.1 Protected Locations

The South Hams contains a significant proportion of sensitive landscapes and habitats, designated and protected under various legislation. These are summarised in Table 1.

Table 1 Summary of Protected Areas

<i>Designation</i>	<i>Number of Sites/Areas</i>	<i>Approximate Area within South Hams District Council boundary (km²)</i>
Dartmoor National Park	-	165
Sites of Special Scientific Interest (SSSI)	30	80
Special Area of Conservation (SAC)	4	-
Area of Outstanding Natural Beauty (AONB)	2	345
Area of Great Landscape Value (AGLV)	-	219
Urban Conservation Areas	52	-
Coastal Protection Area	-	200
Designated Development Areas	90	20
County Geological Sites	46	-
County Wildlife Sites	245	-
Local Wildlife Sites	270	-

The South Hams contains a rich variety of wildlife habitats, due to the interaction of geology, topography and coastal geography. Protected sites include internationally and nationally recognised RAMSAR sites, Special Protection Areas and SSSIs as well as sites of local interest including County and Local Wildlife Sites.

The Plymouth Sound & estuaries are designated as an internationally important conservation area. There are 30 SSSIs in the South Hams District, and a proliferation of County Wildlife Sites which have nature conservation value at a regional/county level.

Also protected by the local plan are the District's 46 County Geological Sites (CGS).

The South Hams District currently contains 9244 archaeological sites recorded on the Devon County Sites & Monuments Register. Of these 934 enjoy statutory protection as Scheduled Monuments (SMs) designated under the Ancient Monuments and Archaeological Areas Act 1979. Permission for any works within SMs which involves disturbing the ground, tipping on it, or flooding it, requires consent from the Secretary of State for Culture, Media and Sport; a process which can take 3 months. Consent will not generally be granted for works which will damage the monument or its below-ground remains. Within the Area of Archaeological Interest (AAI), there is a legal requirement to give the Council 6 week's prior notice of similar works, including geotechnical site investigations greater than 600mm in depth. Depending on the likely impact on archaeological

remains, an archaeological watching brief may be required. The SMs and AAI are mapped in the Draft Local Plan First Review.

4.3 Details of Local Authority Ownership of Land

The Council owns or has interests in a significant area of land in the district. No specific figures are available at this time, however, the Authority's Asset Register will be consulted at an early stage of the implementation of the Strategy.

4.4 Key Water Resource/Protection Issues

Some of the water for domestic and industrial supplies is taken from several reservoirs within the South Hams District boundary. There are numerous (~650) private water supplies in the South Hams District used for drinking water supply. Many of these supplies serve a single household, and there may be a significant number of other unrecorded single dwelling supplies. Water quality is routinely monitored by South Hams District Council in compliance with its obligations under Section 77 of the Water Industries Act 1991.

4.5 Known Information on Contamination

The Council holds limited information on land contamination within the South Hams, primarily submitted as part of the development control process. Where sites come forward for development and there is concern that the land may be contaminated due to a previous use, a condition is normally attached to any consent requiring a site investigation and any remediation deemed necessary. The planning records are extensively used during the inspection process.

The Council has prior knowledge of some areas of potentially contaminated land, compiled under earlier work undertaken in anticipation of previous legislation (Section 143 of the EPA 1990), which was never enacted.

The Environmental Control Team has previously consulted the Parish Councils within the district to enquire of any known historical contamination sources. The responses are held by the Environmental Control Team, but have not yet been collated or further investigated.

4.6 Past Industrial History

4.6.1 Extractive Industry

The granite intrusion underlying Dartmoor and its surrounding metamorphic aureole has long been mined as a source of minerals. The following extractive industries have at one time or another formed an important part of the local economy:

- Quarrying/mining – stone, china clay, ball clay, metals (arsenic, copper, lead, zinc and tin)
- Smelting

4.6.2 Manufacturing and Processing Industry

There is no strong tradition of heavy manufacturing in this area of South Devon, however, traditional rural trades such as tanning and the wool trade may have resulted in locally significant soil and groundwater contamination. There is evidence of limekilns and metal smelting in parts of the district.

4.6.3 Military Activity in the South Hams

The City of Plymouth was (and indeed remains) a major maritime centre in the UK, and is home to a significant proportion of the British Fleet. Potential land contamination associated with the dockyards and ancillary storage activities are however, thought to be largely confined within the boundaries of the City of Plymouth. The city was extensively bombed during WWII and it is certain that stray ordnance fell on the South Hams. This is not thought to represent a major source of potential contamination.

Dartmoor remains an important training area for the British Army, and there is a military barracks within the South Hams at Bickleigh. The Royal Naval establishments HMS Cambridge and Britannia College lie within the district. Responsibility for the investigation of these sites (where a pollutant linkage is suspected) falls to the EA under the terms of Regulation 2(f).

A section of coastline at Slapton Sands was historically used as a military training ground during preparations for the Allied invasion of Normandy in 1943. This will be reviewed for potential contaminated land impacts. There may be other historical military sites within the district.

4.7 Geological Characteristics

The South Hams District is underlain by contrasting rock formations which exert a strong influence over land use.

To the north and west, the district is underlain by Devonian and Carboniferous sediments. To the north, the Dartmoor Granite of Carboniferous age intrudes through the sediments giving rise to a local metamorphic aureole and associated mineralisation. The mineralisation is extensive, historically supporting a metaliferous mining industry, recorded on the British Geological Survey (BGS) sheet as “mineral lodes”. Silver, arsenic, copper, lead, and tin were all worked within the South Hams.

Minor igneous (diabase) intrusions, orientated in a north-east to south-west direction are present to the south of Modbury and the Plym estuary. These are associated with local metamorphism and the Dartmouth Slate.

Devonian Limestone outcrops near Plymstock and westwards towards Yealmpton. These are classified locally as Major Aquifers of intermediate or high vulnerability.

4.7.1 Hydrogeology

Groundwater is regarded as all water present below the ground surface. It may be abstracted from boreholes, wells and springs for many uses including public

water supply, river augmentation and also for private uses such as agriculture and commercial purposes. Groundwater is also essential for maintaining the flow of rivers, streams and wetland features and provides a base flow to many rivers throughout the year.

Geological strata containing groundwater that may be exploited by man are termed aquifers. Aquifers vary in their characteristics and can be classified according to their general and hydraulic properties. These properties, particularly in the upper unsaturated zones, form the basis of groundwater vulnerability assessments.

All groundwaters are controlled waters, but for convenience they can be classified into two types:

4.7.2 Major Aquifers

Major Aquifers are highly permeable strata usually with a known or probable presence of significant fracturing. These are usually capable of supporting large abstractions for public supply and other purposes.

4.7.3 Minor Aquifers

Minor Aquifers can be fissured and fractured rocks that usually do not have a high primary permeability or formations of variable permeability including unconsolidated deposits. These seldom yield large quantities for public supply but can be important sources of local supplies and of base flow to rivers.

In the South Hams, both Major and Minor Aquifers are present. There are no areas underlain by rocks classified as non-aquifers in the district. The Dartmoor Granite is recorded as a minor aquifer of variable permeability and low vulnerability.

The granite and its thin superficial soils support approximately 650 private water supplies within the South Hams (see Section 4.4). Water quality is routinely monitored by SHDC in compliance with its obligations under Section 77 of the Water Industries Act 1991.

The Devonian and Carboniferous sediments sub-cropping approximately to the North of the A38 are generally classified as minor aquifers of variable permeability and high to intermediate vulnerability.

To the south of the A38, there are significant areas underlain by Devonian limestone's which are classified regionally as major aquifers of high and intermediate vulnerability. The limestone outcrops or sub-crops in a broad swath from Abbotskerswell, Ipplepen, Totnes, Brixham, Torquay and Paignton. Carboniferous limestone, also classified as a major aquifer, outcrops near Yealmpton and to the south of Plympton.

4.8 Local Background Effects

The South Devon area is well known for the mineralisation associated with the Dartmoor granite intrusion. The local soil and groundwater characteristics are strongly influenced by the chemistry of the underlying rocks. Naturally occurring elevated levels of metals including arsenic and uranium are known to occur in parts of the district due to the underlying geology. (Webb, J.S. and others, 1978; The Wolfson Geochemical Atlas of England and Wales. Oxford: Clarendon Press).

There is currently no specific guidance available on the issue of naturally-occurring contamination, and in particular the apportionment of liability for such land, if it is shown to be CONTAMINATED LAND.

5.0 South Hams District Council Strategy – Overall Aims

The legislation requires a risk-based approach to dealing with contaminated land, which is consistent with the established good practice approach to managing land contamination.

5.1 Policy Statement

The Council's policy on contaminated land is as follows:

“To ensure the protection of the land environment by the pro-active identification and management of contaminated land, through the adoption of a rational and transparent strategy implemented (where possible) in partnership with landowners, developers and other relevant parties”.

5.1.1 Key Strategy Objectives

The key objectives of the strategy are:

- To protect health and the environment;
- To ensure compliance with, and enforcement of, the legislation;
- To encourage voluntary remediation of sites by polluters or other appropriate persons;
- To ensure that procedures are in place for the open provision of information to the public and other interested parties;
- To address the liability issues associated with the Council's existing land holdings and avoid any new liability issues associated with land acquisitions.

In addition to the above objectives that directly address the requirements of Part IIA, the strategy seeks to reinforce the existing planning provisions for the management of contaminated land.

- To deal with the legacy of contaminated land using the “suitable for use” approach in an ordered and prioritised way;
- To ensure that where redevelopment of sites take place the planning process deals effectively with any land contamination;
- To encourage market confidence in the redevelopment of Brownfield sites and therefore promote the use of Brownfield, rather than Greenfield sites.

5.1.2 The Council's Priorities

Dealing with contaminated land is a complex issue and must be dealt with in a consistent manner. It is therefore important to state the Council's objectives clearly and outline the Council's priorities. In relation to contaminated land the Council's order of priorities will be:

1. To protect human health
2. To protect controlled waters

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3. To protect designated ecosystems
 4. To prevent damage to property
 5. To prevent further contamination of land
 6. To encourage voluntary remediation

5.2 Timetable for Implementation

5.2.1 Draft Consultation Strategy and Internal Consultation

Prior to distributing the strategy for formal consultation, a draft of the document was circulated to the Council's working group for comment.

5.2.2 Publication of the Inspection Strategy

The final strategy document was adopted by the Council on 21st June 2001, and a copy forwarded to DEFRA and the EA. The strategy is published on the Council's web site (<http://www.southhams.gov.uk>).

5.2.3 Identify Historical Information Sources

Work is ongoing to identify appropriate sources of relevant historical, land use and other information that may indicate the presence and location of potentially contaminated land. Details of these information sources are listed in Appendix E.

5.2.4 Establish a Database

The initial stage of the project was to search local historical information sources and historical maps to identify land which may have been subject to potentially contaminative use(s). This exercise has identified a large number of **potentially** contaminated sites, which is being refined to a manageable list for further assessment. A subsequent detailed inspection process will then identify a smaller subset of sites which are determined to be CONTAMINATED LAND.

Other information relating to the location and sensitivity of potential receptors will be compiled from sources listed in Appendix E. It is clear that the identification of potentially contaminative historic uses is the most urgent task. The use of the database is an integral part of the Development Control process, which is the most effective way of securing remediation.

The collation and management of this large volume of data is practically accomplished using GIS.

5.2.5 Evaluate Existing Environmental Health Data

In the early 1990's some work was undertaken to identify land on which a "contaminative use" had been undertaken in accordance with draft guidance issued by the then Department of the Environment. This information was placed

on a set of base maps which are held by Planning Services and on a database in Environmental Health. Details of these “contaminative uses” were obtained by consultation with the local Parish Councils. This information was based on previous draft guidance which has been superseded by the current guidance. Sites originally included in the “register” may not meet the current definition of CONTAMINATED LAND, and are based upon solely upon anecdotal information, which will be re-assessed as the inspection of the district is progressed.

5.3 General Approach to Inspection

5.3.1 Prioritisation of Areas for Inspection

The Council’s district is extensive and diverse in nature. It is a primary objective of the strategy to target effort and resources on areas likely to contain contaminated land sites. The Council’s priorities are set out in Section 5.1.2 and the first priority is to protect human health.

The more densely populated communities are likely to be a focus for more industrial activities, with a greater likelihood for potentially contaminative land uses to have been concentrated in these areas. Similarly, these areas have higher population densities, with greater development pressure increasing the likelihood of bringing the public into contact with contaminated land. There is therefore a greater potential for contamination sources to be present close to human health receptors.

In general, former industrialised areas that are now used for residential purposes and areas of open space for example, playing fields, allotments etc. which have a history of a prior “contaminative use” will be included and looked at as a matter of priority. During this period a prioritised list of areas for further, more detailed investigation will be compiled.

Some contaminated land parcels which represent the greatest potential harm to human health (e.g. metal mines and smelters) are located in areas where the probability of human exposure may be low (e.g. in the North of the district on the edge of Dartmoor). It is therefore not possible to eliminate geographical areas from the initial search for contaminated land, but rather to eliminate low-risk land uses at an early stage, and to focus effort on potentially higher-risk historical land uses.

A high prioritisation will be given to land in the council’s ownership. It is important that the Council is seen as putting its own house in order first. Where the Council owns CONTAMINATED LAND, the remediation will be publicised in order to promote the voluntary remediation of non designated CONTAMINATED LAND. It will also showcase the Council’s approach to CONTAMINATED LAND as well as build experience within the section on this difficult subject.

5.3.2 Detailed Inspection

The inspection programme will be implemented during this period. Initially a desktop study will be undertaken to determine the likelihood of the land being

contaminated. This will include the risk-ranking of potentially contaminated sites to aid the prioritisation of sites for further investigation.

5.3.3 Threats to Controlled Waters, Protected Areas of the Environment and Buildings

During the initial inspection of the District, sites may be identified which pose potential contamination threats to the above receptors. If information (forthcoming from the EA or other agencies) indicates a need for urgent action, this will be assessed and where necessary action taken as soon as practicable, otherwise these sites will be addressed in their due order of priority (as set out in Section 5.1.2).

5.3.4 Prioritisation of Sites for Remediation

The original strategy stated: "All sites included on the statutory REGISTER OF CONTAMINATED LAND will be allocated a relative priority. This will ensure that a clear order of priority for remediation work is established, and continually updated. This may be important if the process of identifying and assessing the last of the *potentially* contaminated land sites cannot be completed before (for example) funding is allocated for the remediation of the urgent or highest priority sites. Prioritisation will be based on a system of risk assessment and ranking. The risk assessment and ranking procedures have not yet been finalised, and will be kept under periodic review throughout the implementation of the strategy, since research and development in this area, funded by DEFRA, is on-going."

By the time of the 2006 revision, it was apparent that intrusive investigation and enforced remediation would only be used in exceptional circumstances. The enforcement process is complex and requires a high level of legal and technical expertise.

The Council recognises that much more can be achieved by dissemination of information and persuasion. Environmental searches are an integral part of property transactions and therefore early release of information obtained during prioritisation and investigative work will usually be beneficial.

6.0 Responsibilities

6.1 Internal Management Arrangements for Inspection and Identification

Implementation of the Contaminated Land regime is the responsibility of the Environmental Health Department. The Contaminated Land Officer is the lead officer within the department and is responsible for the day-to-day implementation of the strategy. The Head of Environmental Health and Housing Services, and Environmental Control Manager will have delegated powers to sign Remediation Notices. The Notices will be served by the Contaminated Land Officer and other officers after consultation with Legal Services where appropriate. Where the Council is liable for remediation work a report will be presented to the Council's Executive prior to the commencement of any work.

6.1.1 Site Investigation and Inspection

The timetable for undertaking the investigation and inspection of the area is detailed in Appendix A. Due regard is paid to technical guidance issued by DEFRA and Environment Agency and to accepted good practice in the field (See Appendix D for a reference list). It may be considered appropriate to appoint outside contractors or consultants for certain parts of the inspection process. Should there be a need to undertake an intrusive site survey Devon County Council's Archaeology Officer will be consulted where appropriate prior to commencing any work on site.

Key Guidance in Connection with Site Investigation is available from the Environment Agency Website.

6.1.2 Determination of Contaminated Land

The Council has the sole responsibility for determining whether any land appears to be CONTAMINATED LAND. If the three elements required to form a complete POLLUTANT LINKAGE are found to be present, a risk assessment will be undertaken to determine the likelihood of SIGNIFICANT HARM being caused to one of the specified receptors. If this demonstrates that SIGNIFICANT HARM is being caused, or is likely to be caused to a receptor, the land will then be classified as CONTAMINATED LAND. DEFRA guidance will be followed during this process, and other agencies will be consulted as appropriate. Details of the risk assessment tools that will be used to complete this determination have yet to be finalised. Research by the EA is on-going.

The Contaminated Land Officer will prepare a written record of the determination. This record will specify the area of land, identify the components of the pollutant linkage, and summarise the evidence upon which the determination is based and the relevant assessment of this evidence.

During the site investigation and inspection process, attempts will be made to identify the person(s) who might be liable for remediation. When appropriate, advice will be sought from the Head of Legal Services.

The Contaminated Land Officer will be responsible for ensuring that:

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- The Environment Agency is notified that land has been determined as CONTAMINATED LAND.
 - Required information is placed on the PUBLIC REGISTER, which will be maintained on the Council website by the Environmental Control Team.
 - Information for the Environment Agency State of Contaminated Land report is forwarded to the Agency.

6.2 Procedure for Dealing with Special Sites

Where it appears to the Contaminated Land Officer that a piece of land is likely to be determined as contaminated land, discussions will be held with the Environment Agency Contaminated Land Officer for the Devon Area. Discussions will focus on the following:

- What further information the Environment Agency might hold.
- Advice relating to the severity of pollution of controlled waters.
- Site specific advice relating to pollution of controlled waters where appropriate.
- Whether any other powers the Environment Agency hold may be used or may be more appropriate to deal with the site.
- Whether the site should be designated a SPECIAL SITE.

Should the latter be the case, consideration would be given to the need for the Environment Agency to undertake a further investigation of the site. If this is required, the approval of the Council's Executive (unless delegated to senior officers) will be sought to authorise the Environment Agency to exercise the powers of entry conferred by Section 108 of the Environment Act 1995. The scope of any site investigation to be undertaken by the Environment Agency should be agreed with the District Council.

The determination of the land as CONTAMINATED LAND and, if appropriate, as a SPECIAL SITE will follow the procedures detailed in EPA 1990 and the DEFRA guidance.

6.3 Contaminated Land and Development Control

Currently the majority of contaminated land issues are dealt with through the planning and building control regimes. This will continue to be the case as more Brownfield sites come forward for redevelopment. Consultation between the Environmental Health Department and Planning Division already take place in relation to contaminated land issues, however a more formal approach is proposed to ensure that no site falls between the two control regimes. The procedures outlined below will be used to address contamination issues without the need to use the powers set out in Part IIA.

The Contaminated Land Officer screens all South Hams area applications received by South Hams Planning Departments and Dartmoor National Park. Where an application relates to a site which has the potential to be contaminated based on the past use of the land, standard contaminated land conditions are attached to any consent granted. These conditions require the applicant to undertake an appropriate survey to identify possible contamination and remedial works required to deal with any contamination found, thus rendering the site “fit for purpose”. All such proposals are subject to the approval of the planning authority. On completion of the survey and remediation of the site, the applicant is required to submit a REMEDIATION STATEMENT detailing what contamination has been found and how it has been dealt with. The applicant must also submit a statement confirming that the site is in a condition suitable for the proposed use.

There are inter-departmental links between the Contaminated Land Officer and Building Control Team also grouped within the Environment & Development Service Group, although these links need to be strengthened and formalised. Where Building Control Officers are made aware of land contamination the views of the Contaminated Land Officer are sought and acted upon.

6.4 Dealing with Urgent Sites

During the course of the implementation of the strategy, sites may come forward which require urgent attention. Where the APPROPRIATE PERSON is known they will be encouraged to carry out the investigation and remediation of the site if required. It is the Council's aim to encourage voluntary investigation and remediation of sites where possible. Formal action will however be taken if necessary.

Where the APPROPRIATE PERSON cannot be found, the case will be referred to the Head of Environmental Health and Housing Services and the appropriate Committee. No financial provision has been made for the investigation or remediation of potential contaminated land sites. Executive authorisation will be needed for any expenditure.

6.5 Considering Local Authority Interests in Land.

When dealing with Council owned land it is important that there is close liaison between all the relevant Services (for example, Environmental Health, Estates, Legal and Planning) prior to acquisitions, change of use or disposal.

6.5.1 Existing Land Holdings

An initial desktop study will be undertaken (as detailed in Section 5.3) to determine the likelihood of Council-owned land being contaminated. Following these studies decisions will be made to determine whether further intrusive investigations are required. Should remediation be required, this will be progressed as a priority as the Council promotes “putting its own house in order”.

Following the site investigation, a subsequent risk assessment will indicate if there is a need for the remediation of the site to allow the continuation of the current use, or any proposed future use of the site. If the risk assessment

process indicates the need for remediation, a further report will be prepared, seeking approval for the work. If appropriate, funding for the work will be sought from central government (via the Supplementary Credit Approval scheme) or from other funding bodies (e.g. SWRDA) and other possible agencies or partners. The identification of viable, alternative funding sources is an important objective.

6.5.2 Land Acquisitions and Adoption

Prior to acquiring any new land, detailed investigations will be necessary to ensure that the Council is not inheriting a contamination liability. In some cases, specific site investigations will be necessary. Warranties may also be appropriate. There will be a slightly different approach for the adoption of public open space. The planning process, through Section 106 Agreements and planning conditions will need to ensure that an appropriate level of site investigation has taken place prior to adoption. This will be a matter for the Planning Department to agree with the individual developers, with input from the Contaminated Land Officer.

6.5.3 Disposals

The contaminated land review process detailed above enables the Council, as landowner, to make more informed decisions about its land dealings and the steps it needs to take in either disposing of, or letting land in future. Given its role in enforcing legislation related to contaminated land, the authority could be criticised if it did not act in an open and responsible fashion in dealing with contaminated land in its ownership.

6.5.4 Cross Boundary Contamination

The Council has a very good working relationship with neighbouring authorities and is confident that any cross boundary issues are likely to be given the attention they warrant.

7.0 Information Collection and Management.

A wide range of information sources is being used to assist with the process of the identification of sources of contamination and receptors. Heavy demands will be placed upon the system selected for managing contaminated land information. Some principal requirements are listed below:

- The determination of land as contaminated land will attract scrutiny and possible legal challenge. The geographical and historical data will need to be captured and recorded to an appropriately high degree of accuracy and should record its' provenance.
- Historical information comes from old maps, drawings and photographs, which need to be accurately transformed to overlay the current OS map projection. This is achieved using GIS software.
- The system should be capable of quickly and efficiently retrieving information for a range of purposes including:
 - Responding to planning consultations.
 - Responding to building regulations consultation.
 - Responding to Local Searches received via the Land Charges Service.
 - The service of notices under the Contaminated Land Regulations.
 - Compiling a Public Register of contaminated land as required under the Regulations.
 - Providing information to the Council Members.
 - Providing information to the public and other parties, consistent with the Environmental Information Regulations, 1992.

The complete set of Historical Maps held by Ordnance Survey and the Landmark Information Group Ltd in digital format has been purchased.

Historical land use database – some work had already been undertaken to identify potentially contaminative land uses, however this was undertaken in response to previous guidance and is being reassessed and extended and will be updated on the GIS.

Geological maps – Digital maps have not been purchased due to the substantial increase in the licence fee and limited need for this data.

Environment Agency – information provided by the EA has been evaluated and where appropriate added to GIS.

Council records – a number of Service Centres within the Council have information relating to land contamination surveys – for example Environmental Health, Planning and Development Control and Engineering Services. This data will be reviewed for relevant information on the condition and/or previous remediation of sites. Relevant survey and remediation data will be linked to GIS.

Environmental Protection Act (EPA) 1990, Part 1 – Public Register of Authorised Processes – details of industrial processes authorised in accordance with the EPA

are held on a register by the Council and will soon be transferred to the Councils website.

The GIS record of potentially contaminative land uses will be made available across the Council which will form the hub of the required consultation mechanisms with other service groups and external bodies.

The ultimate aim will be to ensure that all information gathered through the implementation of the Strategy is reviewed and filtered, and relevant data transferred to GIS. This will include such information as:

- The accurate boundaries of potentially and (actually) CONTAMINATED LAND identified;
- Details of survey reports received either through the planning process or because of site investigation or remediation;
- Outline planning conditions or development restrictions for identified contaminated land sites;
- Copies of statutory notices;
- Copies of statutory remediation statements.

Initially this information will be accessible to other Services via the Council's Intranet on a read only basis. As the system evolves, consideration will be given to formally publishing the information on the Internet depending on licensing agreements.

Where information or reports on sites are provided by a third party, the status of the information, i.e. whether it is considered confidential or subject to national security consideration will be determined and confirmed at the outset where possible. Third party information may only be made publicly available provided consent has been obtained to release the information, unless otherwise dictated by the access to environmental information regulations. An appropriately designed database will enable this to be flagged and managed by the database.

7.1.1 Public Register

The PUBLIC REGISTER of CONTAMINATED LAND will be compiled and maintained (on GIS) by the Environmental Health Department.

Schedule 3 of the DETR guidance requires the following information to be placed on the register:

- Remediation notices - including:
 - Name and address of the (appropriate) person on whom the notice has been served;
 - The location and extent of the CONTAMINATED LAND to which the notice relates;
 - The SIGNIFICANT HARM or POLLUTION OF CONTROLLED WATERS by reason of which the CONTAMINATED LAND in question is contaminated;

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- The substances by reason of which the land in question is contaminated and, if any substances have escaped from other land, the location of that other land;
 - The current use of the CONTAMINATED LAND in question;
 - What each APPROPRIATE PERSON is to do by way of remediation and the periods within which they are required to do each of the things;
 - The date of the notice.
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- Appeals against remediation notices including decisions;
 - Remediation declarations;
 - Remediation Statements;
 - Appeals against charging notices;
 - Designation of special sites;
 - Notification of claimed remediation;
 - Convictions for offences under 78M;
 - Guidance issued under section 78V(1);
 - Other environmental controls.

Information may be excluded from the public register on the grounds of national security or commercial confidentiality. The Secretary of State can give directions to the Council specifying information, or descriptions of information, which are to be excluded from the public register or referred to the Secretary of State for his determination.

The enforcing authority determines whether information should be excluded from the public register on the grounds of commercial confidentiality. There is a right of appeal to the Secretary of State if the decision is made that the information is not commercially confidential. The Contaminated Land Officer having regard to government guidance and in consultation with the Heads of Environmental Health and Legal Services as appropriate will determine issues relating to commercial confidentiality. Where information is excluded from the public register the review system proposed in Section 10.0 will be used to ensure that the decision is reviewed after four years as required by the legislation.

7.2 Information and Complaints

Information and complaints may be received from members of the public, businesses, voluntary organisations and other interested parties. This information may influence how the Council progresses the implementation of the Strategy in a given area. The procedures detailing how complaints and information received by the Council will be dealt with are outlined below.

7.2.1 Complaints

Where there is potentially a serious risk of serious harm, complaints relating to contaminated land will be dealt with following the procedure adopted by the Council for dealing with public health nuisances.

7.2.2 Confidentiality

Complainants will be expected to provide details of their name and address and the address of the premises/land which has given rise to the complaint. As is the case with all complaints received by the Council, the identity of the complainant will initially remain confidential. In the event of the Council taking enforcement action, a complainant may be approached to provide a statement in support of the action. Occasionally the Council will be obliged to identify a complainant.

7.2.3 Voluntary Provision of Information

Information may be received from members of the public, business or organisations relating to potentially contaminated land. This may take the form of anecdotal information. In these cases, the information will be recorded and evaluated. The information provider will not automatically be kept informed of action taken by the Council as a result of the receipt of this information.

7.2.4 Anonymously Provided Information

It is Council policy that anonymous complaints will not normally be investigated. However, in the case of contaminated land, information received will be recorded and evaluated by the Contaminated Land Officer to determine the need for further investigation.

8.0 Information evaluation – Risk Assessment.

The main conceptual stages of risk assessment are detailed below – these stages are followed during the investigation and evaluation of each site:

8.1 Phase 1 - Hazard Identification

Identification of contaminant sources, pathways and receptors and the potential for complete pollutant linkages to be present, taking into account the actual or intended use of the site and its environmental setting. This stage relies on desk-based research, including the review of documentary information and consultation with relevant parties (e.g. site owners, operators, and regulatory authorities). It will also involve site reconnaissance (a “walk-over” survey) which can be used to confirm desk-based findings. The information obtained at this stage is used to develop a conceptual model that describes the possible pollutant linkages which may be relevant to the site.

8.2 Phase 2 - Hazard Assessment

Consideration of the plausibility of pollutant linkages and determination of the potential for health and environmental risks. The purpose of this stage is to refine the conceptual model. This will involve additional desk studies and exploratory site investigation.

This stage will address in more detail the nature, likely location and behaviour of contaminants, and possible interactions with defined receptors. The potential for short-term and chronic exposure risks to health and the environment can also be assessed at this stage, assuming some information is available on the nature, concentration and location of contaminants.

In general, the local authority will be obliged to collect this information for itself. The Council will have to bear the costs associated with this investigation. In some circumstances, the landowner or occupier may already hold relevant information. Early dialogue with the relevant parties may reduce the requirement for additional site investigation and thus the financial burden on the Council.

The Council’s general strategy for liaison with land owners or occupiers is set out in Section 9.3.

8.3 Phase 3 - Risk Estimation

Estimation of the risk(s) that identified receptor(s) will suffer adverse effects from contaminant sources. Risk estimation involves consideration of the likelihood, nature and extent of exposure (or of hazardous conditions) and the effects which may occur if exposure takes place, or hazardous conditions develop. The expression of risk may be in narrative (i.e. the risks are low or high) or (more rarely) quantitative terms. At this stage screening criteria, such as Contaminated Land Exposure Assessment (CLEA) and various Environment Agency publications which detail the risk assessment process, will be used to determine the significance of any chemical concentrations detected and whether further action is required. Where specific guidance [to England/UK] is not available,

reference may be made to other screening criteria e.g. HSE/WHO exposure levels or other authoritative sources of information, such as guidance adopted in other countries. Where a quantitative handling of the data is required, it may be appropriate to use risk assessment models and data from other sources (e.g. USEPA).

8.4 Phase 4 - Risk Evaluation

All of the above stages will be weighted and combined to produce a body of evidence upon which the need for risk management action (i.e. remediation) will be determined. This will pay due regard to the nature and scale of risk estimates, and the uncertainties associated with the assessment process. Where further action is required, the objectives, estimated costs and benefits of that remedial action will need to be assessed, before a determination is made.

9.0 GENERAL LIAISON AND COMMUNICATION STRATEGIES

9.1 Statutory Consul tees

The statutory consul tees are listed below, and full contact details are included in Appendix C.

- Environment Agency
- English Nature
- MAFF
- English Heritage
- County Council
- Statutory Regeneration Bodies (Regional Development Agencies)

9.2 Non-statutory Consul tees

Contact names and addresses of the non-statutory consul tees are also detailed in Appendix C. Copies will also be made available in the main reception area of Follaton House.

9.3 Communicating With Owners, Occupiers and Other Interested Parties

The Council seeks to encourage voluntary action before initiating enforcement action. It is hoped that by pursuing this approach, effective, sustainable remediation will be achieved.

There can be no hard-and-fast rule concerning the appropriate point(s) in the investigation process at which to enter into discussions with the land owner, occupier, or other relevant parties;

Some land owners (e.g. larger corporate bodies) will hold relevant information that may enable an early determination to be made of the contamination status of the land, thus there may be advantages in entering into discussions with the land owner at an early stage.

Conversely, private householders are unlikely to hold such information, and it may be inappropriate to raise concerns over the contamination status of the land until sufficient information exists to present a coherent case for further investigation.

Thus the Council will maintain a flexible approach, consistent with the objectives of seeking the voluntary investigation and remediation of contaminated land.

The draft timetable included in Appendix A indicates that discussions with relevant parties may be an on-going process, throughout the investigation of each site.

The Contaminated Land Officer is the main point of contact within the Council in relation to contaminated land issues.

9.4 Risk Communication

The following checklist is proposed to ensure that all the key issues are addressed when considering providing information to any audience:

- Who will be interested in this information?
- What will providing this information achieve?
- Which other organisations might be partners?
- How can I create awareness that this information is available?
- How should I present this information?
- How can I make sure people have access to the information?
- Do all people have equal access to the information provided?
- When will be the best time to make this information available?
- How can I monitor the take-up of the information?
- How can I make sure I have achieved my goals?

Issues relating to contaminated land may affect a wide range of people and interests within the community. The risks which are thought to arise from contaminated land need to be clearly identified and communicated to those potentially affected. The above checklist will be referred to during the risk communication process.

In all communications, sufficient information will need to be provided to avoid the misinterpretation of words such as “contamination”, “risk” and “hazard” in order to effectively convey the desired message.

9.5 Provision of Information to the Environment Agency

The Environment Agency is required to prepare and publish reports on the state of contaminated land in England. In order to do this the Agency will need to collate information it holds and gain access to information held by local authorities.

The Council will provide the relevant information using the standard forms produced by the Agency. Consideration will be given to providing information in other forms if requested.

The Contaminated Land Officer will co-ordinate the provision of this information by the Council.

10.0 Review Mechanisms

10.1 Introduction

Part IIA of the EPA (1990) requires local authorities to inspect their areas *from time to time* for the purpose of identifying land which may fall within the statutory definition of contaminated land. This Strategy details how the Council intends to undertake the inspection/identification of contaminated land within the District. In order to meet the re-inspection requirement of the legislation there is a need to identify triggers which will prompt the need for reviewing inspection decisions. Furthermore, as is the case with all strategies, there is always a need for periodic reviews of the Strategy itself.

10.2 Triggers for Reviewing Inspection Decisions

A need to review inspection decisions may arise as a result of the following triggers:

- Significant change in legislation;
- Establishment of significant case law or other precedent;
- Revision of guideline values for exposure assessment;
- Proposed changes in the use of surrounding land;
- Unplanned changes in the use of land (e.g. persistent, unauthorised use of the land);
- Unplanned events (floods, spillages, landslides, fires etc.) which cannot be dealt with by other 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 business, members of the public or voluntary organisations;
- Responding to information from other statutory bodies such as the Environment Agency or Health and Safety Executive;
- Responding to information from owners or occupiers of land, and other relevant interested parties.

Should any of the above occur there may be a need to either bring forward a site for its initial inspection or alternatively prompt a re-inspection of a site. To assist the review process it is essential that all information associated with the inspection of the District is recorded in a consistent manner and that all decisions made and the factors taken into consideration in the decision making process, are clearly documented.

The Contaminated Land Officer is responsible for assessing the implications of any of the above “triggers” and determining if there is a need to re-inspect a site or bring a site forward in the programme. The views of the other agencies or of Members may be sought prior to finalising a decision should this be considered appropriate.

10.3 Review of the Inspection Strategy

The first review of the Inspection Strategy was undertaken in April 2003 with this second review undertaken in December 2006. The Strategy has fallen behind its timeline, due to staff shortages. Staff resources have now been allocated to progress the Strategy and the timeline has been amended accordingly. Once the identification of “potentially contaminated land” has been completed, an assessment will be undertaken to determine if the inspection programme is reasonable and achievable. An assessment of the possible budgetary implications of the process (e.g. the cost of intrusive site investigations) will be undertaken, which may also affect the inspection programme.

The Inspection Strategy will be kept under review by the Environmental Health Manager and will be redrafted when significant change is necessary.

Glossary

AAI Area of Archaeological Importance designated under the Ancient Monuments and Archaeological Areas Act 1979.

Brownfield Site A site that has been generally abandoned or underused where redevelopment is complicated by actual or perceived environmental contamination. Only a small proportion of Brownfield sites will meet the definition of contaminated land.

CLEA Contaminated Land Exposure Assessment; a methodology for carrying out a human health risk assessment.

Contaminated land “Any land which appears to the local authority in whose area it is situated to be in such a condition, by reason of substances, in, on or under the land that:

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

Controlled Waters These include:

- Inland waters (rivers, streams, underground streams, canals, lakes and reservoirs)
- Groundwaters (any water contained in underground strata, wells or boreholes)
- Territorial waters (the sea within three miles of a baseline.
- Coastal waters (the sea within the baseline up to the line of highest tide, and tidal waters up to the fresh water line.

DETR Department for the Environment, Transport and the Regions (to 9th June 2001)

DTLR Department for the Transport, Local Government and the Regions (From 9th June 2001)

DEFRA Department for the Environment, Food and Rural Affairs (From 9th June 2001)

EA The Environment Agency

EPA Environmental Protection Act

GIS Geographical Information System

ICRCL Interdepartmental Committee on the Redevelopment of Contaminated Land

MAFF Ministry of Agriculture, Fisheries and Food

MOD Ministry of Defence

Pathway One or more routes by which a receptor can be exposed to a contaminant

Pollutant linkage The relationship between a contaminant, a pathway and a receptor

RAMSAR Site A site protected under an international convention on protection of wetlands of international importance, especially as habitats for waterfowl, named after the city in Iran where the convention was signed

Receptor Sometimes referred to as a “target” – the health of a person, waters, ecosystem or property type that could be affected by contamination

Remediation The carrying out of works to prevent or minimise effects of contamination. In the case of this legislation the term also encompasses assessment of the condition of land, and subsequent monitoring of the land

RIGS Regionally Important Geological Sites

Risk assessment The study of the probability, or frequency, of a hazard occurring and the magnitude of the consequences

SAC Special area of conservation

SHDC South Hams District Council

SLINCS Sites of local interest for nature conservation

SNCI Sites of nature conservation importance

SNIFFER Scotland & Northern Ireland Forum for Environmental Research

SM Schedule Monument designated under the Ancient Monuments and Archaeological Areas Act 1979.

SPA Special Protection

Special Site Any contaminated land designated due to the presence of:

- waste acid in tar lagoons
- oil refining
- explosives
- integrated pollution control sites
- nuclear sites

Statutory definition is more complete (See Section 78A (3) of the Contaminated Land Regulations 2000)

SSSI Sites of Special Scientific Interest

USEPA United States Environmental Protection Agency

WHO World Health Organisation

References

1. The Environment Act 1995, HMSO (1995)
2. SI 2000/227, Environmental Protection, England, The Contaminated Land (England) Regulations 2000, HMSO (2000)
3. DETR Circular 02/2000, Environmental Protection Act 1990: Part IIA Contaminated Land, HMSO (2000)
4. Contaminated Land Inspection Strategies, Technical Advice For Local Authorities, DETR (Draft April 2000)
5. DEFRA Circular 01/2006, Environmental Protection Act 1990: Part 2A Contaminated Land, DEFRA (2006)

Appendices

Appendix A

Activity	Completed	April – June 07
Bedding-in		
Presentation to “Pt 2(a) Group”		
1 st round of meetings with internal contacts		
EA meeting(s)		
Draft Strategy		
1 st Draft		
Internal Consultation		
Final Draft		
External Consultation & Adoption		
Stage 1		
Review existing “Sc.143” Register		
Data Purchase/Capture		
Preliminary Risk Assessment & Site Ranking		
Further refining of Site Ranking		
Site Ranking using automated software - CLARE		
Establish Register		
Stage 1 Progress Report		
Activity	Commence July 07 – ongoing *	
Stage 2 – Preliminary Site Assessments		
Desk-top study		
Negotiation with “Appropriate Persons”		
Site Walk-overs		
Risk Assessment		
Stage 2 Report		
Stage 3 – Detailed Site Assessment		
Fund Raising		
Site Investigation		
Stage 4 – Remediation & Enforcement		
Negotiation with “Appropriate Persons”		
Fund Raising		
Remediation		

* Commence Stage 2 in July 2007. The findings as Stage 2 progresses will determine as and when Stage 3 and 4 will commence and how long they take.

Appendix B

Industry	Remarks
Airports	
Animal & animal processing works	
Asbestos manufacturing works	
Cement, lime and plaster products (manufacture)	
Clay, bricks and tiles (manufacture)	
Charcoal works	
Chemical works	
Cosmetics & toiletries manufacturing works	
Explosives, propellants and pyrotechnics manufacturing	
Fertiliser manufacturing	
Fine chemical manufacturing	
Inorganic chemical manufacturing	
Linoleum, vinyl & bitumen floor covering manufacturing	
Mastic, sealant and adhesive manufacturing	
Organic chemical manufacturing	
Pesticides manufacturing	
Pharmaceuticals manufacturing	
Rubber processing	
Soap & detergent manufacturing	
Disused	
Dockyards & dockland	
Dry cleaners	
Engineering Works	
Aircraft manufacturing	
Electrical & electronic equipment manufacturing	Inc. works manufacturing eqpt. Containing PCB
Mechanical engineering & ordnance works	
Railway engineering works	
Shipbuilding, repair & shipbreaking	
Vehicles	
Factory	
Fibreglass & resins manufacturing works	
Gas works, coke works & coal carbonisation plants	
Metal manufacturing, refining & finishing	

Industry	Remarks
works	
Electroplating & other metal finishing	
Iron and steelworks and nonferrous metals	Excluding lead
Lead works	
Precious metal recovery works	
Oil refineries & crude oil storage	
Power Stations	Exc. nuclear
Pulp & paper manufacturing	
Railway land	
Road vehicle servicing	
Garages & filling stations	
Transport & haulage	
Sewage works & sewage farms	
Textile & dye works	
Timber product manufacturing works	
Timber treatment works	
Waste disposal, treatment & disposal sites	
Drum & tank cleaning & recycling	
Hazardous waste treatment plants	
Landfills	
Metal re-cycling sites	
Solvent recovery works	
Glass manufacturing works	
Photographic processing industry	
Printing & bookbinding works	
Electricity transformer substations	

Appendix C

Statutory Consultees	
Organisation and address	Contact name
Environment Agency Devon Area Exminster House Miller Way Exminster EX6 8AS	Contaminated Land Officer, Devon Area 01392 316190 tim.jenkins@environment-agency.gov.uk
English Heritage Regional Land Use Planner 29 Queen Square Bristol BS1 4ND	0117 975 0700 Fax 0117 975 0701 southwest@english-heritage.org.uk
English Nature (Devon Team) Level 2 Renslade House, Bonhay Road Exeter EX4 3AW	Conservation Officer, 01392 889770 devon@english-nature.org.uk
South West Water Peninsula House Rydon Lane Exeter EX2 7HR	Mr Martin Ross Environmental Manager 01392446688
Department for Environment, Food and Rural Affairs LEP Division Area 3B Nobel House 17 Smith Square London SW1P 3JR	Steven Griffiths 02072382271 steven.griffiths@defra.gsi.gov.uk
South West Regional Development Agency, Sterling House, Dix's Field, EXETER, EX1 1QA	Jonet Waldock Head of Environment South West RDA Tel: 01392 229340 Email: jonet.waldock@southwestrda.org.uk
Devon County Council. County Environment Department, Luscombe House, County Hall, Topsham Road, EXETER, EX2 4QW	

Voluntary (non-statutory) Consul tees	
Organisation and address	Contact name
Torbay District Council, Environment Services Directorate, Roebuck House, Abbey Road, Torquay, Devon. TQ2 5EJ.	Mr. Steven Cox (Senior Environmental Health Officer) Steve.Cox@torbay.gov.uk
Plymouth City Council, Environmental Protection Dept. of Development Plymouth City Council Plymouth PL1 2AA.	Head of Service Department 01752 304147 public.protection@plymouth.gov.uk
Mid Devon District Council, Environmental Health Department, Phoenix House, Phoenix Lane, Tiverton EX16 6PP	Environmental Health Service Manager
West Devon Borough Council, Environmental Health Department, Kilworthy Park, Tavistock, Devon. PL12 0BZ.	Mr. David Banks, Divisional Manager – Environmental Health
Teignbridge District Council, Environmental Control Division, Forde House, Brunel Road Newton Abbot, Devon. TQ12 4XX.	01626 361101 ehhealth@teignbridge.gov.uk
Ministry of Defence, MOD Mount Wise, Devonport, Plymouth. PL1 2AA.	
Friends of the Earth	Stephen Mosbacher, (Regional Organiser) 01803 862123 mosbacher1@aol.com
Chamber of Commerce, 16 Clifton Park, Bristol. BS8 3BY.	
The Institute of Civil Engineers (ICE), 47 Fore Street Ivybridge PL21 9AE	
The Chartered Institute of Water & Environmental Management (CIWEM), Jim Street	Jim Street South West Branch 01872 270283

Voluntary (non-statutory) Consul tees	
Organisation and address	Contact name
Branch Secretary 1 Woodland Court Truro, Cornwall TR1 1XT	jim@jimstreet.wanadoo.co.uk

Appendix D

**SCHEDULE 1
SPECIAL SITES**

Table 2 Families or groups of substances listed for the purposes of regulation 3(c)(i)

<i>Type</i>	<i>Description</i>
1	Organohalogen compounds or substances which may form such compounds in the aquatic environment.
2	Organophosphorus compounds
3	Organotin compounds
4	Substances which possess carcinogenic, mutagenic or teratogenic properties in or via the aquatic environment.
5	Mercury and its compounds
6	Cadmium and its compounds
7	Mineral oil and other hydrocarbons
8	Cyanides

Table 3 Rock Formations listed for the purposes of regulation 3(c) (ii)

<i>Type</i>	<i>Age</i>	<i>Description</i>
1	Pleistocene	Norwich Crag
2	Upper Cretaceous	Chalk
3	Lower Cretaceous	Sandstones
4	Upper Jurassic	Corallian
5	Middle Jurassic	Limestones
6	Lower Jurassic	Cottswold Sands
7	Permo-Triassic	Sherwood Sandstone Group
8	Upper Permian	Magnesian Limestone
9	Lower Permian	Penrith Sandstone
10	Lower Permian	Collyhurst Sandstone
11	Lower Permian	Basal Breccias, Conglomerates and Sandstones
12	Lower Carboniferous	Limestones

**SCHEDULE 2
REFERENCE DOCUMENTS**

<i>Process</i>	<i>Document</i>	<i>Status</i>
<i>General Good Practice</i>	Model Procedures for the Management of Contaminated Land (CLR 11)	Available
	BS 10175:2001 Code of Practice for the Investigation of Potentially Contaminated Land	Available
	CIRIA Special Publication 103, Site Investigation and Assessment (1995)	Available
<i>Desk Studies</i>	Documentary Research on Industrial Sites, DETR, 1994, (CLR3)	Available
	DOE Industry profiles (47 in total)	Available
	Prioritisation and Categorisation Procedure for Sites which may be contaminated, DETR, 1995 (CLR 6)	Available
<i>Site Reconnaissance</i>	Guidance on Preliminary Site Inspection of Contaminated Land, DETR, 1994, (CLR2)	Available
<i>Intrusive Site Investigation</i>	Sampling Strategies for Contaminated Land, DETR, 1994, (CLR 4)	Available
	A Framework for Assessing the Impact of Contaminated Land on Groundwater and Surface Water, DETR, 1994, (CLR1)	Available
	Development of Appropriate Soil Sampling Strategies for Land Contamination, Environment Agency R&D Report HOCO 352	Available
<i>Risk Communication</i>	Communicating Understanding of Contaminated Land Risks, SNIFFER/EA Technical Report No. P142, 1999	Available

Appendix E

Table 4 Information Sources For The Identification Of Potentially Contaminated Land In The South Hams

	<i>Description</i>	<i>Location / Owner / Details</i>
1	Ordnance Survey Maps	
	County Series, 1:10,000 Scale, First Edition 1885-1890	Digital Format for GIS – Supplied by various parties
	County Series, 1:10,000 Scale, Second Edition 1905-1906	
	County Series, 1:10,000 Scale, Third Edition	
	County Series, 1:10,000 Scale, Fourth Edition 1932-1939	
	Ordnance Survey National Grid Series, 1:10,000 Scale, 1945 onwards	
2	Public Register of Licensed Waste Management, Treatment and Disposal, Sites, Part I Environmental Protection Act 1990.	Environment Agency, Exminster
2	Public Register of Authorised Processes, Part I Environmental Protection Act 1990.	Environment Agency, Exminster
3	Premises registered for the storage of Hazardous substances under the Planning (Hazardous Substances) Act 1990.	South Hams District Council
4	Register of Licensed Petroleum Storage Sites	Petroleum Officer
5	British Geological Survey, 1:50k scale map sheets 349, 350, 355, 356 Solid & Drift	
7	Kelly's Trade Directory	
8	Parish Council Circular responses.	
9	Planning (Development Control) Archive – Historical Planning applications & supporting Information	
10	Environmental Health Archives	
11	Local Knowledge	
	Waste Collection Authority Personnel	
	Planning Enforcement Officer	
	Environmental Health Staff	
	Environment Agency Staff	