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A Strategy for the Identification of Contaminated Land

June 2001- Issue 1

EXECUTIVE SUMMARY.

Under legislation introduced on 1st April, 2000, Stroud District Council was placed under a statutory duty to inspect its District to identify contaminated land. A formal strategy was to be published by July, 2001 which would detail how the Authority intended to undertake its inspection duties. This document is that strategy.

The District Council is the lead Authority with regard to contaminated land but, wherever necessary, it undertakes to work in partnership with other organisations, particularly the Environment Agency. Detailed consultation regarding this strategy was undertaken with both statutory and non-statutory consultees up to April, 2001. Publication of this final version occurred on 30th June, 2001, in line with legislative requirements.

The Council's priorities in dealing with contaminated land will be:

1. To protect human health
2. To protect controlled waters
3. To protect specified ecosystems
4. To prevent damage to property

In dealing with these priorities the Council also aims to prevent any further contamination of land, to encourage voluntary remediation of contaminated land and to encourage re-use of brownfield land.

A five-year programme of inspection will be undertaken with a target date for completion of April, 2005. A prioritised inspection programme is proposed, with Priority Investigation Areas being inspected first, followed by other areas later in the programme. Among the Priority Investigation Areas identified are major population centres, the Five Valleys, controlled waters are land owned by the Council itself.

It is recognised that the inspection programme will need to be extremely flexible as some sites may be identified that require urgent attention. Such sites will, by necessity, be dealt with as they arise.

The new contaminated land legislation (usually referred to as Part IIA) sets clear criteria that must be met before any land may be formally designated as contaminated land. It is important to note that the expectations of some members of the public may not be met by the powers local authorities can exercise under this new contaminated land legislative regime.

Additionally, the Council must maintain a Public Register of contaminated land, the contents of which are specified in the legislation.

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1. INTRODUCTION.

1.1 GENERAL POLICY OF STROUD DISTRICT COUNCIL.

Stroud District Council's overriding purpose is defined in its Performance Plan 2000–2001 as:-

"to make the Stroud District a better place to live and work for everyone."

The Council has developed a number of corporate aims to guide its continuous development as an organisation. One such corporate aim is :-

"to protect and improve the environment."

Particular to the environmental commitment of Stroud District Council, accreditation to the voluntary Eco-Management and Audit Scheme was achieved in March, 1999. This scheme is designed to allow local authorities to manage their environmental impact in a systematic and considered way. The objective of the scheme is to promote continuous improvements in the environmental performance of local authority activities. Objectives for the year 2000/2001 include the minimising of land pollution within the District through monitoring, education and enforcement and also ensuring the protection and enhancement of the local natural environment.

It is within this framework that a strategy to deal with Part IIA of the Environmental Protection Act, 1990 is to be implemented. The lead Directorate for the implementation of Part IIA will be the Directorate of Housing and Environmental Services. Within that Directorate the implementation will be undertaken by the Pollution Control section.

1.2 REGULATORY CONTEXT.

Contaminated land legislation has been under development since the early 1990s. Following consultation on a 1993 White Paper entitled "Paying For Our Past", the Environment Act, 1995 inserted a new section (Part IIA) into the Environmental Protection Act, 1990. Another protracted period of consultation followed this enabling legislation until, on April 1st, 2000, Part IIA of the Environmental Protection Act, 1990 came into force as the new statutory regime for the identification and remediation of contaminated land. It is the introduction of this new regulatory regime, usually referred to as the Part IIA regime, that has prompted the formulation of this strategy document.

1.3 DEFINING CONTAMINATED LAND.

Section 78A(2) of Part IIA of the Environmental Protection Act, 1990 defines contaminated land as: "any land which appears to the local authority in whose area it is situated to be in such a condition, by reason of substances in, on or under the land, that-

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 determining whether specific land is contaminated, the local authority must carry out an appropriate, scientific and technical assessment of the circumstances of that land, using all relevant and available evidence. Where the land is determined to be contaminated the local authority shall

prepare a written record of the determination summarising the basis on which the land has been identified as contaminated.

1.3.1 Pollutant Linkages and Risk Assessment.

In order for a specific site to meet the above definition of contaminated land it is first necessary to establish the existence of a "pollutant linkage". A pollutant linkage may only exist in cases where the three constituent elements of such a linkage are present, namely:

a) A source of contamination in, on or under the ground;

b) A receptor of a type specified in the guidance accompanying the Part IIA regime;

c) A pathway linking the source of contamination to the specified receptor.

Where these three components of a pollutant linkage exist, a risk assessment must be undertaken to determine the likelihood of harm being caused via that linkage and the likely nature and extent of the harm that would be caused. Land may only be designated as contaminated where such an assessment proves that the pollutant linkage either:

a) is resulting in significant harm being caused to the receptor in the pollutant linkage,

b) presents a significant possibility of significant harm being caused to that receptor,

c) is resulting in the pollution of the controlled waters which constitute the receptor, or

d) is likely to result in such pollution.

Where a risk assessment proves that the pollutant linkage in question meets one of the above four criteria the land is designated as contaminated land and the pollutant linkage is referred to as a significant pollutant linkage.

1.3.2 Specified Receptors.

Guidance to the Part IIA regime specifies those receptors that may be taken into account in determining contaminated land. These specified receptors are shown below:

1. **Human beings.**

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

    - Sites of Special Scientific Interest (SSSIs)
    - National Nature Reserves (NNRs)
    - Potential and designated Special Protection Areas (for birds) (SPAs)
    - Local Nature Reserves (LNRs)
    - Possible, candidate and designated Special Areas of Conservation (SACs)
    - Key Wildlife Sites (identified by Gloucestershire Wildlife Trust)
    - RAMSAR sites
    - Marine Nature Reserves

3. **Property in the form of buildings, including:**

   - Scheduled Ancient Monuments

4. **Property in the form of:**

   - Crops, including timber
   - Home-grown produce for consumption
   - Livestock
   - Other owned or domesticated animals (e.g. pets)
   - Wild animals subject to shooting or fishing rights

5. **Controlled waters, including:**

   - Surface waters (e.g. rivers, lakes, streams)
   - Drinking water abstractions
   - Groundwater Source Protection Zones
   - Groundwater – private abstractions
   - Groundwater - aquifers

1.4 THE ROLE OF LOCAL AUTHORITIES.

The primary regulatory role under Part IIA of the Environmental Protection Act, 1990 rests with local authorities. This reflects their existing functions under the statutory nuisance regime and also complements their roles as planning authorities. In outline the roles of local authorities are:

a) to cause their areas to be inspected from time to time for the purpose of identifying contaminated land;

b) to determine whether any particular site is contaminated land;

c) to act as an enforcing authority for all contaminated land which is not designated as a "special site".

With regard to enforcement under the Part IIA regime, the local authority has four main tasks:

a) to establish who should bear responsibility for remediation of contaminated land i.e. the appropriate person(s).

b) to decide, after consultation, what remediation is required in any individual case and to ensure that such remediation occurs, either through agreement with the appropriate persons(s), or by serving a Remediation Notice on the appropriate persons(s) if agreement is not possible or, in certain circumstances, through carrying out the work itself.

c) where a Remediation Notice is served, or the authority itself carries out the work, to determine who should bear what proportion of the liability for meeting the costs of the work; and

d) to record certain prescribed information about its regulatory actions on a public register.

1.5 THE ROLE OF THE ENVIRONMENT AGENCY.

The Environment Agency has four principal roles with respect to contaminated land under Part IIA of the Environmental Protection Act, 1990. It should:

a) assist local authorities in identifying contaminated land, particularly in cases where water pollution is involved;

b) provide, where appropriate, site-specific guidance to local authorities on contaminated land;

c) act as the "enforcing authority" for any land designated as a "special site"; and

d) publish periodic reports on contaminated land.

Ultimately, however, the responsibility to designate contaminated land lies with the Local Authority.

1.5.1 Land Required to be Designated as a Special Site.

Contaminated land of the following descriptions is prescribed as land required to be designated as a special site:

a) land affecting controlled waters which are, or are intended to be, used for the supply of drinking water for human consumption such as to render the drinking water unwholesome;
b) land affecting controlled waters to the extent that they 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;

c) land affecting controlled waters where:

   i. the polluting substance falls within any of the families or groups of substances listed in paragraph 1 of Schedule 1 of the Contaminated Land (England) Regulations, 2000 (See Appendix A); and

   ii. the controlled waters, or any part of them, are contained within underground strata which comprise wholly or partially any of the formations of rocks listed in paragraph 2 of Schedule 1 of the Contaminated Land (England) Regulations, 2000 (see Appendix A).

d) land which is contaminated land by reason of waste acid tars in, on or under the ground;

e) land on which any of the following activities have been carried out 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;

f) land on which a prescribed process has been or is being carried on under an authorisation where that process does not comprise solely of things being done which are required by remediation;

g) land within a nuclear site;

h) 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 purposes;

i) 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; or

   iii. any weapon, equipment or means of delivery which falls within section 1(1)(b) of the Biological Weapons Act, 1974,

   has been carried on at any time;

j) 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;

k) land to which section 30 of the Armed Forces Act, 1996 applies.

In all of these above cases, contaminated land areas would be designated as "special sites" and thus the Environment Agency would act as the enforcing authority.

1.6 REQUIREMENTS FOR A STRATEGIC APPROACH.

Under section 78B(1) of Part IIA of the Environmental Protection Act, 1990, each local authority has to "cause its areas to be inspected from time to time for the purpose of identifying contaminated land".

The Secretary of State has issued Statutory Guidance to local authorities on the implementation of Part IIA in England. This Statutory Guidance requires local authorities to take a "strategic approach" to inspecting their areas and to describe and publish this approach in a written strategy.

1.7 DEVELOPMENT OF THE STRATEGY.

Within Stroud District Council the responsibility for preparation of a strategy for identification of contaminated land was that of the Pollution Control section. An existing Environmental Health Technician was seconded to lead the work on the strategy.

An important aspect of the preparation of the strategy was the need for internal and external consultation regarding its contents. Within Stroud District Council liaison was set up with the Planning, Estates, Building Control, Housing and Legal sections at an early stage through formal points of contact. Externally, consultation was undertaken with a number of interested parties. A full list of external consultees is attached as Appendix B of this document.

1.8 OBJECTIVES OF THE STRATEGY.

Thus, in conclusion, Stroud District Council is required by statute to produce a strategy for the identification of contaminated land within its area. This document details how it is intended to carry out such inspection. It is intended that the strategy should:

a) be rational, ordered and efficient;

b) be proportionate to the seriousness of any actual or potential risk;

c) seek to ensure that the most pressing and serious problems are located first;

d) ensure that resources are concentrated on investigating in areas where the authority is most likely to identify contaminated land; and

e) ensure that the local authority efficiently identifies requirements for the detailed inspection of particular areas of land.

f) inform all stakeholders of the Authority's intentions with regard to identification of contaminated land.

2. CHARACTERISTICS OF THE DISTRICT.

This section provides background to the Stroud District and an explanation of how this influences the Council's approach to inspection for contaminated land.

2.1 LOCATION.

Stroud District covers an area of around 175 square miles (approximately 453 square kilometres) in the south of Gloucestershire. Its western boundary is formed by the Severn Estuary. The District is predominantly rural in character.

2.2 POPULATION/BUILT ENVIRONMENT.

The population of the District was 109,300 in 2000 with the settlements of the Stroud Valleys and those of Cam, Dursley and Wotton-under-Edge containing approximately three-quarters of that total. The population distribution for the District is shown in Figure 1 on the following page.

The town of Stroud is the main commercial centre serving the District while Dursley and Cam provide the main focus for industrial and commercial activities in the southern part of the District. The towns of Painswick, Minchinhampton, Nailsworth, Stonehouse, Wotton-under-Edge and Berkeley provide facilities and services for wider local needs, whilst a number of villages provide a range of local facilities to serve community needs.

2.3 NATURAL ENVIRONMENT.

The eastern half of the District is part of the Cotswold Hills, which is designated as an Area of Outstanding Natural Beauty (AONB). Land covering over 2,800 hectares is designated as Sites of Special Scientific Interest (SSSI), some of which are also National Nature Reserves (NNR). These sites, protected for their nature conservation and geological value and designated by English Nature under the Wildlife and Countryside Act, 1981, represent a wide range of habitat types from beech woodlands to semi-natural limestone grasslands. Some of them are Common land, the largest of which are Rodborough, Minchinhampton and Selsley Commons. In the western half of the District, the Severn Estuary and much of its foreshore is designated as SSSI as well as being a protected wildlife habitat under the RAMSAR convention and a possible Special Area of Conservation (pSAC). Additionally, the District also contains a network of Key Wildlife Sites, these being locally important sites identified by Gloucestershire Wildlife Trust. A complete list of Nature Conservation sites within the District appears in Appendix C of this document.

Water also plays an important role in the natural environment of the District. With the Severn Estuary to the west, the District contains approximately 42 kilometres of coastline and is accessible to the open sea via Sharpness Docks. The Vale formed by the River Severn is very low-lying and there are extensive areas susceptible to flooding. The catchment of the Severn includes the Rivers Frome, Cam and Little Avon within the District.

2.4 BASIC GEOLOGY, HYDROGEOLOGY AND HYDROLOGY.

Stroud District comprises two main areas of relief – the Cotswold Escarpment (in the eastern half) and the flood plain of the River Severn (in the western half). The Cotswold Escarpment is composed

FIGURE 1: STROUD DISTRICT POPULATION BY PARISH (MID-YEAR ESTIMATES 1997).

largely of Jurassic oolitic limestones and Cotteswold sands while the flood plain is dominated by softer clays and mudstones.

This underlying geology results in two distinct areas in the District with respect to groundwater resources. In the area of the Cotswold escarpment, groundwater-fed springs issue from the base of the Jurassic limestone and Cotteswold sands. These strata are designated as major aquifers from which resources are available provided base flows are not affected and there are no local derogation problems. Reference to the National Rivers Authority Groundwater Vulnerability Map for the area indicates that a large area of the District (east of lines joining the settlements of Cranham, Stonehouse, Dursley, Wotton-under-Edge and Hillesley) is classified as a major aquifer of high vulnerability.

In the flood plain, however, the low permeability of the clays and mudstones has led largely to the classification of non-aquifer. Nevertheless, some small pockets within this area are classified as minor aquifers of high vulnerability.

Also within the District there are areas of protected groundwater classified by the Environment Agency as Groundwater Source Protection Zones (SPZs). Three sub-categories of Source Protection Zone are defined – Inner Zones, Outer Zones and Total Catchment Zones. Within Stroud District there are four Inner Source Protection Zones, four Outer Source Protection Zones and two Total Catchment Source Protection Zones. All of these Zones are in the southern half of the District.

The water companies Severn Trent Water and Bristol Water supply the majority of the District's drinking water. Additionally, Stroud District Council regularly inspects the quality of 197 private water supplies in the area.

As stated previously, the catchment of the Severn Estuary includes the Rivers Frome, Cam and Little Avon within the District. Under the General Water Quality Assessment Scheme administered by the Environment Agency these rivers were graded as follows:

River	Chemical Quality Grades	Biological Quality Grades
Frome	D (Fair) to A (Very Good)	D (Fair) to B (Good)
Cam	D (Fair) to B (Good)	E (Poor) to B (Good)
Little Avon	C (Fairly Good) to B (Good)	C (Fairly Good) to B (Good)

The Severn Vale is susceptible to flooding. Extensive flood defence structures exist along the Estuary shoreline within the District. Additionally, flood defence embankments exist on some reaches of the Rivers Frome, Cam and Little Avon. The Cam and Wicksters Brook pumping station at Ryall's Lane in Cam returns flood waters from the triangular storage area bounded by the River Cam, Wicksters Brook and the A38 to the River Cam when the river level has receded.

2.5 INDUSTRY, PAST AND PRESENT.

The basis of the industrial heritage of the Stroud District was the wool and textile industry, along with associated processes, for example the manufacture and use of dyes. The Gloucestershire woollen industry was organised on an essentially capitalist basis from the later Middle Ages until its decline in the nineteenth century.
The scope of the wool and textile industry within Gloucestershire as a whole is relatively well documented from approximately 1550, when the industry was predominantly a rural one. Many woollen mills were built in the District, most following the course of the Stroud Valleys. By 1840, though, the wool and textile industry had begun to decline and of the approximately 140 mills still in use at that time, only about 80 were still used for textile manufacture. Many mill owners had diversified into the manufacture of sticks and pins and in succeeding years this process of diversification continued into many other areas of industry, particularly the general engineering sector.

In addition to the woollen and textile industries the District was host to a wide variety of other industrial uses including brickworks, gasworks, lime burning, quarrying, wire manufacture, fellmongery and tanning, board manufacture and even the manufacture of such diverse products as fireworks and "artificial manure".

Today, the Stroud economy shares many of the key features of the wider area of Gloucestershire. The manufacturing sector remains the backbone of the local economy, well supported by the public administration, distribution, hotels and banking and finance sectors. These sectors account for over 80% of employment in the District. The Stroud Valleys remain the "engine room" of the District's economy, with the majority of the main manufacturing and service sector businesses located there. There is also a strong industrial presence in the south of the District with major employers at Dursley, Wotton-under-Edge and Berkeley.

With regard to current industry within the District there are a number of sites subject to authorisation by either the Environment Agency under IPC or by Stroud District Council under Part 1 of the Environmental Protection Act, 1990. These sites are listed in Appendix D.

2.6 ARCHAEOLOGICAL SITES OF NATIONAL IMPORTANCE.

At present, some 65 Archaeological Sites of National Importance within Stroud District are scheduled as Ancient Monuments under the terms of the Ancient Monuments and Archaeological Areas Act, 1979, as amended by the National Heritage Act, 1983. These sites are set out in Appendix E.

2.7 LAND OWNED BY STROUD DISTRICT COUNCIL.

Stroud District Council does have some land holdings within its District. All such land holdings are detailed in "terrier records" held by the Council. Additionally the Council owns almost 6,000 Council houses and their associated communal land as

well as a number of workplaces, including the main Council Office, itself situated in a renovated woollen mill.

2.8 KNOWN INFORMATION ON CONTAMINATION.

Stroud District Council holds some information regarding contamination within the District. Such information has usually been submitted as part of the development control process in the form of site investigations which have been requested as part of a planning condition. Where development has proceeded on such sites, remedial works will often have been carried out. Thus, planning records will form a valuable resource during the investigation process.

2.9 ADDITIONAL LOCAL FEATURES.

Two further local features are particularly pertinent to this contaminated land strategy:

a) It has been noted that, in general terms, natural arsenic levels in soils within the District tend to exceed the threshold trigger concentration of 10 mg/kg set down in ICRCL Guidance Note 59/83.

b) From the mid-1940s to the early 1970s the village of Chalford was home to a company called Fibrecrete Ltd which manufactured asbestos cement products. The process produced a great deal of waste asbestos cement material and the primary disposal route for this waste was to use it as in-fill material or hardcore. Thus, it is common to find that, in the parishes surrounding Chalford, a great deal of made-up ground comprises asbestos cement waste, often overlain with a surfacing material.

2.10 PREVIOUS CONTROL OF CONTAMINATED LAND.

Prior to the introduction of Part IIA of the Environmental Protection Act, 1990, contaminated land issues have been dealt with in two main ways:

a) Proposals for development of all sites within the District are dealt with through the planning process. All proposals are presented to the Planning Liaison Officer within the Environmental Health Department for an environmental viewpoint. At this stage any sites which are believed to present a risk of contamination are highlighted and a contaminated land survey and report are requested from the developer for assessment. Remediation schemes proposed by developers are appraised in advance and, in most cases, post-remediation reports are demanded prior to the signing off of the relevant Planning Conditions.

b) Where contaminated land has previously come to the attention of Stroud District Council, the issue has been dealt with by the Environmental Health Department. Contaminated land has largely been dealt with using the statutory

nuisance provisions of the Environmental Protection Act, 1990 or, prior to that date, the Public Health Act, 1936.

3. OVERALL AIMS.

3.1 AIMS OF THE STRATEGY.

As described previously, this Authority is required to take a strategic approach to its Duty to inspect its District for the purpose of identifying contaminated land. The key to this approach must be the effective identification of land which merits detailed individual inspection.

To identify those areas of land requiring detailed inspection will require a step-wise approach. The necessary steps have been identified as follows:

1. Identification of Priority Investigation Areas within the District.

2. Identification of potential pollutant linkages within those Areas, leading to

3. Identification of actual pollutant linkages, leading to

4. Identification of significant pollutant linkages.

At all stages decisions must be based on a qualitative or quantitative assessment of risk.

In this way the inspection process should proceed in a structured, efficient manner. Identification of Priority Investigation Areas will ensure that resources are concentrated efficiently on those areas where contaminated land is most likely to be located. Within those Areas the structured pollutant linkage approach will ensure that the most pressing and serious problems are located, and dealt with, first.

3.1.1 Priority Investigation Areas.

The identification of Priority Investigation Areas within the District will, by necessity, be evolutionary in nature as investigations produce additional information. However, it is important to establish a preliminary list of such Areas. The Priority Investigation Areas are listed below and the justification for their designation is detailed in Appendix F of this strategy:

1. The major commercial and industrial areas of the District (past and present):

a) The parishes of :

Berkeley
Cam
Chalford
Dursley
Kingswood
Minchinhampton
Nailsworth
Painswick
Stonehouse
Stroud
Thrupp
Wotton-under-Edge

b) The 5 major industrial valleys:

   Golden Valley (Stroud to Chalford)
   Nailsworth Valley (Stroud to Nailsworth via Woodchester)
   Painswick Valley (Stroud to Painswick)
   Slad Valley (Stroud to Slad)
   Stroud Valley (Stroud to Ryeford)

c) Authorised Process sites, both IPC and Part 1 Environmental Protection Act, 1990.

d) Sharpness Docks.

e) Mill sites (past and present)

2. Landfills, waste transfer and waste disposal sites.

3. Public rights of way in the parishes of Chalford, Bisley, Minchinhampton and Thrupp.

4. Land for which Stroud District Council may be the "appropriate person".

5. Land within Zone I (Inner) Groundwater Source Protection Zones.

6. Sites brought to the attention of Stroud District Council by external persons or organisations.

3.1.2 **Potential Pollutant Linkages.**

At this preliminary stage it is impossible to predict the number of significant pollutant linkages likely to be identified in the District following investigations in the Priority Investigation Areas. However, it is safe to assume that a large number of potential pollutant linkages will be identified by this means. At that stage, it will be necessary to prioritise those sites before proceeding to the investigation stage to assess the actual existence of pollutant linkages.

A system to calculate this prioritisation has thus been produced. It is considered by this Authority to be rational to prioritise on the basis of both receptor susceptibility and the perceived risk represented by likely contaminative land use.

In the case of perceived risk from contaminative land use, a list of 39 land use categories has been adopted, these uses having been identified as being those most likely to result in contamination of the ground or watercourses at, or adjacent to, the location of the activity. Essentially, therefore, the list provides a perceived hierarchy of the likelihood of finding contamination on a site. The list in question is produced in Appendix G of this strategy. Categories for the perceived risk have been produced and a simple scoring system assigned to them i.e. HIGH = 3, MEDIUM = 2, LOW = 1.

With regard to receptor susceptibility, categories have been produced which reflect the Council's priorities in dealing with contaminated land (see Appendix G for a full description of the categories). The Council's priorities will be, in order of priority:

- To protect human health
- To protect controlled waters
- To protect specified ecosystems
- To prevent damage to property, including scheduled Ancient Monuments

Categories for receptor susceptibility have been produced and a simple scoring system assigned to them i.e. HIGH = 3, MEDIUM = 2, LOW = 1.

Having assigned "scores" for the perceived risk from the land use and for the receptor susceptibility the two category scores for an individual site can then be multiplied in a Pollutant Linkage Probability Matrix to produce a prioritisation ranking. The matrix to be used is also shown in Appendix G.

Thus, each site will receive a priority rating score ranging from 1 (for low priority sites) up to 9 (for high priority sites). In this way it is possible for this Authority to ensure that its approach is proportionate to the seriousness of the potential risk and that the most pressing and serious problems are located and investigated first.

3.1.3 **Actual Pollutant Linkages.**

Following the procedures outlined above it will then be necessary to consider those sites where potential pollutant linkages exist (in order of priority) and establish whether an actual pollutant linkage is present. It is at this point that a detailed inspection of the site becomes imperative where it is considered that there is a reasonable possibility that an actual pollutant linkage exists on the land. Arrangements for carrying out such detailed inspections of sites are considered in Chapter 6 of this strategy.

At the conclusion of this stage it should be possible to determine whether an actual pollutant linkage exists. Only where such an assessment yields a positive result shall this Authority move on to the final stage of the identification process.

3.1.4 **Significant Pollutant Linkages.**

Where an actual pollutant linkage has been shown to exist it then becomes necessary to establish whether that linkage is significant as defined in the Statutory Guidance. This determination will be carried out by expansion of the detailed inspection process to produce a formal, written risk assessment. It may be that previous desk studies, site visits and non-intrusive sampling have elicited sufficient information to allow such a determination. Equally, it may be necessary to obtain further information by intrusive investigation of the site. However, such intrusive investigation will require justification. It should be limited to those occurrences where there is a reasonable possibility of the existence of a significant pollutant linkage but where there is still insufficient information to make the determination. Also, the scope of such intrusive

investigation should be limited to that necessary to make the determination. These issues are considered in detail in sections 6.1.2 and 6.1.3 of this strategy.

Where a significant pollutant linkage is found to exist, the statutory enforcement regime will commence immediately.

3.2 **OBJECTIVES AND TIMESCALES.**

In order to achieve the aims of the inspection strategy outlined above it is important to define Authority objectives and set realistic target dates for meeting them.

The setting of specific objectives does, however, require some qualification. The meeting of target dates will always be conditional on the availability of the necessary resources. In this instance the work involved will require financial resources in terms of equipment, training and manpower and the financial situation of any Local Authority is seldom entirely predictable. Also, timescales will be dependent on the number of sites requiring further high priority investigation and risk assessment, perhaps leading to designation as contaminated land. Where such designation occurs, it is expected that the enforcement process will be both lengthy and complex. The objectives outlined as follows are believed to be both realistic and achievable but are, by necessity, based on unvalidated predictions for the future of the Authority:

Objective Number	Objective	Target Date For Completion
1	Efficient liaison and information exchange established with both internal departments and external bodies.	01/06/2001
2	Guidance-specified receptors (Table A –Categories of Significant Harm) identified for the whole District.	01/06/2001
3	Evidence of actual harm or water pollution in the District collated and evaluated.	01/08/2001
4	Identification of land for which Stroud District Council may be the “appropriate person”.	01/09/2001
5	Identification of potential contaminants in Priority Investigation Areas.	01/12/2001
6	Identification of potential pollutant linkages in Priority Investigation Areas.	01/04/2002
7	Prioritisation of those potential pollutant linkages using probability matrix.	01/05/2002

Objective Number	Objective	Target Date For Completion
8	Identification of actual pollutant linkages in Priority Investigation Areas in order of priority.	01/11/2002
9	Identification of significant pollutant linkages in Priority Investigation Areas in order of priority.	01/04/2003
10	Identification of potential contaminants outside the Priority Investigation Areas.	01/12/2003
11	Identification of potential pollutant linkages outside the Priority Investigation Areas.	01/04/2004
12	Prioritisation of those potential pollutant linkages using probability matrix.	01/05/2004
13	Identification of actual pollutant linkages outside the Priority Investigation Areas in order of priority.	01/10/2004
14	Identification of significant pollutant linkages outside the Priority Investigation Areas in order of priority.	01/04/2005
15	Formal review of inspection priorities.	Every 6 Months

4. PROCEDURES.

4.1 INTERNAL MANAGEMENT.

Within Stroud District Council the responsibility for inspection and identification of contaminated land lies with the Directorate of Housing and Environmental Services. Within that Directorate, responsibility for the formulation and implementation of this strategy lies with the Pollution Control Section. Within that section the lead officer in relation to Part IIA will be the Contaminated Land Technician, reporting to the Principal Environmental Health Officer and the Head of Environmental Health.

4.2 LOCAL AUTHORITY INTERESTS IN LAND.

Details of current local authority owned and leased land is held by the Estates Management Section of Stroud District Council. "Historical" local authority land interests are detailed in "terrier" records held by the Legal Section of the Council. Terrier records are incomplete for just two parishes of the District at present, Cam and Stonehouse. It is anticipated, though, that records for these two parishes will be completed by mid-2001.

Land for which Stroud District Council may be the "appropriate person" has been identified as a Priority Investigation Area (see Appendix F). Thus, all current and historical land holdings will be subjected to the step-wise assessment procedure detailed in Chapter 3 of this strategy as a priority. In this way all land for which the Council is responsible will be identified, assessed, inspected and appropriately dealt with. Elected members will be informed at the earliest opportunity of any plans to designate as contaminated an area of land for which the Council may be the "appropriate person".

4.3 INFORMATION COLLECTION.

The identification and inspection of contaminated land will necessitate the collection of a large amount of information from many diverse sources. The information relates to sources of potential contamination, potential receptors and potential pathways. Additionally, valuable baseline information is available and will provide an indication of "background levels" of potential contaminants. Such additional information could, if used with care, be vital in assessment of the significance of a pollutant linkage.

The table overleaf identifies both the types of information to be collected and the likely sources of that information:

Type of Information	Source of Information
Receptors	a) An Address Point database associated with the in-house MapInfo GIS system will provide information on housing, commercial/industrial activity and recreational usage of land within the District. This will provide information regarding human and property in the form of buildings receptors. b) A list of protected outdoor play spaces has been included within the provisions of the Stroud District Council Local Plan (see Appendix H). This will provide valuable information regarding potential human receptors. c) Details of public rights of way within the District are held by the Public Rights of Way Section of Gloucestershire County Council. This information will provide details relevant to human, animal and possibly ecosystem receptors. d) Details of allotments within the District held in-house will provide information regarding potential human receptors and property in the form of domestic produce receptors. e) Biological records available from English Nature and the Gloucestershire Environmental Data Unit will provide information regarding potential ecological receptors (see Appendix C). f) Scheduled Ancient Monument information available from English Heritage will provide information regarding potential property in the form of buildings receptors (see Appendix E). g) Gloucestershire Sites and Monuments Records detail all known archaeological sites in the County. h) Information held by the Environment Agency and in-house provides details of controlled water and human receptors. Such information includes water abstraction points, private water supply locations, water-course locations, catchment management plans and locations of groundwater Source Protection Zones.
Sources	a) Historic contaminative land uses may be ascertained from the study of historic Ordnance Survey maps, particularly 1st – 4th Edition County Series and the First National Grid Edition maps. Some historic Ordnance Survey maps are available in-house, at the Gloucestershire County Records Office, for viewing on the internet and commercially. Also, older local maps are available for viewing at Gloucestershire County Records Office.

	b) Historic contaminative land uses may be ascertained from the study of Trade Directories available for viewing at Gloucestershire County Records Office and Stroud Library. c) Current potentially contaminative land use information is available from registers held by enforcing Authorities. This information includes details and locations of authorised processes, waste transfer sites, licensed waste disposal sites, closed landfill sites and dedicated sites for sewage sludge disposal. d) Current land use information is available in-house in the Planning and Building Controls Sections. e) Actions taken to deal with previously contaminated land are recorded on files held in-house by both the Planning and Environmental Health Sections. f) An Address Point database associated with the in-house MapInfo GIS system and with the ProActive database provides information on current commercial and industrial activity within the District. This will provide information regarding potential sources of contamination. g) Further information regarding potential contamination sources is available throughout the District in the form of the collective knowledge of the people living there. Within Stroud District Council there are several long-serving Officers who are able to remember potentially contaminating undertakings, records for which may not readily be available.
Pathways	a) Information on potential contamination pathways is available in the form of detailed geological maps for the area held in-house. b) Information on potential contamination pathways is available in the form of groundwater vulnerability maps for the area held in-house. c) Information regarding flood defence works is available from the Environment Agency.
Baseline Data	a) Baseline water quality data is available from the Environment Agency. b) A wide range of baseline geological and hydrogeological data is available from the British Geological Survey. c) Baseline geochemical data for Gloucestershire is available from the Soil Survey and Land Research Centre.

4.4 INFORMATION AND COMPLAINTS.

It is anticipated that information and complaints related to the contamination of land will be received from external sources, such as members of the public, businesses and organisations. Such complaints have been designated as a Priority Investigation Area and will be dealt with as such when they are received (see Appendix F). Thus, all sites that are the subject of external complaint will be subjected to the step-wise assessment procedure detailed in Chapter 3 of this strategy as a priority.

As with all such complaints received within the Environmental Health Department the identity of the complainant will remain confidential. The only circumstance in which this information might become public knowledge would be in a case where a Remediation Notice was being appealed in a Magistrates' Court and an adverse effect on the health of the complainant was an important factor in the original contaminated land designation.

All complainants may expect:

a) their complaint to be logged and recorded on the ProActive complaints system;

b) to be contacted by an officer about their complaint within three working days of receipt of that complaint; and

c) to be kept informed of progress towards resolution of the problem.

Where a complainant chooses to remain anonymous, the complaint will still be dealt with in the usual prompt manner but, of course, it will not be possible to feed back progress to the complainant.

4.5 INFORMATION EVALUATION.

Given the sheer volume of information likely to be gathered during the process of identification and inspection of contaminated land it will clearly be important that all information is evaluated in a methodical, precise manner. In order to ensure that information evaluation is carried out in an appropriate and consistent fashion, the responsibility for evaluation has been placed with a specified, trained Officer, hereafter referred to as the Contaminated Land Technician. This Contaminated Land Technician will, therefore, be responsible for the collection, evaluation and storage of all contaminated land information. Additionally, that same person will carry out the step-wise assessment procedure detailed in Chapter 3 of this strategy.

It is recognised that the process of information collection and evaluation will, by necessity, be a progressive one. It follows, therefore, that the list of designated Priority Investigation Areas is unlikely to be an exhaustive one. Thus, it will also be the responsibility of the Contaminated Land Technician to constantly evaluate incoming information with a view to how it might affect the list of Priority Investigation Areas.

A large proportion of its current incoming information on contaminated land is received by Stroud District Council through the existing Planning and Development process, usually in the form of contaminated land reports carried out by consultants. Such information is currently circulated to the Environmental Health Planning Liaison Officer in all cases as part of the planning consultation process. It is felt that this current system has been extremely effective in dealing with such contamination issues. It is proposed, therefore, to retain the system while ensuring that evaluation of contaminated land reports is carried out by both the Environmental Health Planning Liaison Officer and the Contaminated Land Technician.

4.6 **RISK ASSESSMENT.**

All information received regarding substances in, on or under the ground that may cause significant harm will be evaluated against the government guidelines available at that time.

4.6.1 **ICRCL and CLEA Guidelines.**

A new set of guidelines known as the Contaminated Land Exposure Assessment (CLEA) guidelines is expected to be published by DETR in the near future. However, until these new guidelines become available this Council will evaluate information against the guidelines issued by the Interdepartmental Committee on Redevelopment of Contaminated Land (ICRCL). ICRCL Guidance Note 59/83 – "Guidance on the Assessment and Redevelopment of Contaminated Land" – outlines a widely used set of trigger and action levels for a range of relatively common contaminants.

4.6.2 **Risk Assessment for Substances Not Addressed by ICRCL or CLEA.**

It is possible that risk assessments will be required for substances not addressed by either ICRCL or CLEA guidelines. In such cases it is envisaged that reference may be made to Health and Safety Executive data relating to occupational exposure as well as to other authoritative information sources, perhaps including guidelines adopted in other countries.

4.6.3 **Risk Assessment for Controlled Waters.**

Where controlled waters form the receptor in a pollutant linkage then advice will be sought from the Environment Agency with regard to risk assessment. It is anticipated that risk assessments will be carried out in accordance with Environment Agency guidance detailed in the publication "Methodology for the Derivation of Remedial Targets for Soil and Groundwater to Protect Water Resources."

4.7 **INTERACTION WITH OTHER REGULATORY REGIMES.**

It is important to be aware that there remain other regulatory actions that may be carried out to deal with contaminated land which stand outside the Part IIA regime. The more important of these are considered below.

4.7.1 **Planning and Development Control.**

Prior to the implementation of the Part IIA regime, the majority of contaminated land issues were dealt with through the planning process, where contamination is a material consideration. It is anticipated that redevelopment of brownfield sites will continue to be dealt with through the existing planning and development process. Any remediation actions agreed as a planning condition will be dealt with using planning controls, not the Part IIA regime.

4.7.2 **Integrated Pollution Control (IPC) and Pollution Prevention and Control (PPC).**

Under these regulatory regimes, site operators are required to undertake a site condition survey prior to receiving a licence to operate. If the site is in such a condition that areas of land meet the definition of contaminated land, then submission of the survey may trigger actions under Part IIA. This legislation will extend to cover existing processes over the next seven years but will apply immediately to any new processes or to substantial changes to existing processes.

Section 27 of the Environmental Protection Act, 1990 gives the Environment Agency the power to take action to remedy harm caused by a breach of IPC controls. This could apply to cases of land contamination arising from such breaches. Where this Council, acting under Part IIA, considers that the section 27 power is exercisable, it is precluded from serving a Remediation Notice to remedy the same harm.

4.7.3 **Waste Management Licensing.**

Where there is significant harm or pollution of controlled waters arising from land for which a Waste Management Licence is in force under Part II of the Environmental Protection Act, 1990, the enforcement route will be dependent on the source of the contamination.

Where the harm or pollution is attributable to either a breach of the site licence, or the carrying on of an activity authorised by the licence in accordance with its terms and conditions, then this will be enforced through conditions attached to the site licence. However, where the harm or pollution is attributable to another cause, then the Part IIA regime will apply.

Additionally, under section 78YB(3) of the Environmental Protection Act, 1990, an enforcing authority acting under the Part IIA regime cannot serve a Remediation Notice in any case where contamination results from an illegal deposit of controlled waste. In such circumstances the Environment Agency have powers to remove the waste and to deal with the consequences of its having been present.

4.7.4 **Water Pollution.**

The Water Resources Act, 1991 gives the Environment Agency powers to prevent or remedy the pollution of controlled waters. While Part IIA does not revoke these

powers there is obviously some overlap. The DETR has provided guidance on this subject to the effect that:

a) a local authority, acting under Part IIA, should consult the Environment Agency before determining that land is contaminated land in respect of the pollution of controlled waters;

b) where a local authority has identified contaminated land which is potentially affecting controlled waters, that authority should consult the Environment Agency and take into account its comments with respect to remediation requirements;

c) where the Environment Agency identifies any case where actual or potential controlled water pollution is arising from land affected by contamination, the Agency should notify the relevant local authority to enable it to formally identify the land as contaminated land for the purposes of the Part IIA regime;

d) in any case where land has been identified as contaminated land under the part IIA regime, then the Part IIA mechanisms would normally be used.

4.7.5 **Radioactivity.**

Under section 78YC of the Environmental Protection Act, 1990, the normal Part IIA regime does not apply with respect to harm, or water pollution, which is attributable to any radioactivity possessed by any substance.

5. LIAISON AND COMMUNICATION.

Much of the work proposed in this strategy will, by necessity, be collaborative and require effective liaison and communication with many parties.

Within Stroud District Council itself the contact point with respect to contaminated land will be the Contaminated Land Technician. In the absence of this Officer the contact point will be the Principal Environmental Health Officer of the Pollution Control Section.

5.1 STATUTORY CONSULTEES.

Liaison mechanisms with external bodies are listed in Appendix B of this strategy. Each of these organisations was a statutory consultee for this Contaminated Land Inspection Strategy and thus was invited to comment on it at the consultation draft stage.

5.2 INTERNAL LIAISON.

Internal liaison mechanisms within Stroud District Council are listed in Appendix I of this strategy.

5.3 COMMUNICATION WITH OWNERS, OCCUPIERS AND OTHER INTERESTED PARTIES.

With regard to liaison with owners and occupiers of specific sites and, indeed, other interested parties, the point of contact will again be the Contaminated Land Technician, unless the enquiry is made by the press/media. In the latter circumstances the enquiry will be dealt with by the Head of Environmental Health or, *in absentia*, the Principal Environmental Health Officer of the Pollution Control Section.

This Council's approach to its enforcement duties is, in line with statutory guidance, to seek voluntary action before taking formal enforcement action. The legislation does provide an important incentive to undertake voluntary actions in that excavated contaminated soils from such actions may be exempt from landfill tax, following a pre-application submitted to Customs and Excise. Such an exemption does not apply to materials generated as a result of the service of a Remediation Notice.

The voluntary approach requires extremely effective communication with all affected parties. The Contaminated Land Technician will, therefore, work to ensure that all affected parties are kept informed of progress during an investigation.

Where a formal designation of contaminated land becomes necessary the following actions will be taken:

a) the designation of the contaminated land will be notified to all affected parties (specifying the capacity in which that party has been notified) in writing;

b) that notification will be accompanied by a copy of the risk assessment carried out to determine that the land was contaminated; and

c) the notification will be accompanied by a copy of the statutory guidance relating to exclusions from liability.

d) a copy of the notification and the risk assessment along with a completed SOCL/LA/FORM 1 (Standard Form prepared by the Environment Agency) will be sent to the Environment Agency as required by legislation.

5.4 RISK COMMUNICATION.

This strategy commits Stroud District Council to a risk-based approach to identification of contaminated land. It is anticipated that communication of such risk will be required to a very wide spectrum of individuals and organisations, from landowners and industry through to Council members, other regulatory bodies and members of the public. It is also important to appreciate that the expectations of some members of the public may not be met by the powers available to local authorities under the Part IIA regime. Thus, the communication of risk will be of great import.

It is clear that any decisions taken with regard to the communication of risk to external persons will, by necessity, be governed by the individual circumstances of the contaminated land in question. However, it is considered appropriate to set down at this time the criteria upon which risk communication decisions are to be judged.

The process is essentially one comprising four main stages:

Step 1 - When to Communicate.

The basic principle shall be that risk communication shall commence at the earliest practicable time in order to maximise stakeholder involvement and trust. A specific contact point within the Authority will be identified at that time in order that stakeholders may easily and effectively contribute to the decision-making process. Risk communication will not be regarded as a "one-off" occurrence but rather as a continuous process.

Step 2 – With Whom to Communicate.

It is of vital importance to identify all stakeholders who have a valid interest in any specific area of contaminated land at the earliest possible time. The huge diversity of persons or organisations that could potentially be regarded as stakeholders may make it necessary to prioritise within the stakeholder group. In such instances it is clear that the focus must remain on those persons who are, or may be, directly affected by any contaminated land i.e. receptors, responsible persons and, in some instances, the wider local community. Such stakeholders shall be referred to as "primary stakeholders".

Step 3 – What to Communicate.

A key objective within the risk communication process will be to share understanding of the risk assessment process with stakeholders, allowing them to raise concerns and thus contribute to the formulation of resolutions. Where a written risk assessment has been produced, a copy of that assessment will be forwarded, where logistically possible, to all primary stakeholders. Where the sheer number of primary stakeholders renders this impractical, general information will be released directing stakeholders to a named contact within the Authority.

In general terms it is the objective of this Authority to communicate the elements of risk in an open, specific manner and to provide, where necessary, the data used to carry out risk assessments.

Step 4 – How to Communicate.

A key concern of this Authority is to ensure that risk communication is a two-way process. Thus, it is key that Officers are open, understanding, responsive, accessible and consistent. Decisions as to the appropriate way to disseminate essential information (e.g. media briefings, public meetings, etc) will be taken on a site-by-site basis as it is clear that individual site circumstances may differ widely.

6. INSPECTION ARRANGEMENTS.

6.1 DETAILED INSPECTION ARRANGEMENTS.

Following the step-wise procedures outlined in Chapter 3 of this strategy a stage will be reached when it will become necessary to consider those sites where potential pollutant linkages exist (in order of priority) and establish whether an actual pollutant linkage is present. It is at this point that detailed inspection of specific sites becomes imperative in cases where there is a reasonable possibility that an actual pollutant linkage exists on the site.

A detailed inspection of a site where a potential pollutant linkage exists is intended to provide sufficient appropriate information to:

a) determine whether an actual pollutant linkage exists, and

b) where an actual pollutant linkage does exist, to enable a determination to be made as to whether that linkage is significant.

6.1.1 Elements of a Detailed Inspection.

Detailed inspections will, by necessity, differ according to the nature of both the site and potential pollutant linkage in question. However, in general terms it is expected that a detailed inspection may include the following elements:

a) the collation and evaluation of documentary and other information relating to the site in question;

b) liaison/consultation with, where appropriate, owners or occupiers, appropriate persons, the Environment Agency, English Nature, English Heritage or other sources of information or expertise;

c) a visit to the site for the purposes of visual inspection;

d) where appropriate, limited sampling of the site (e.g. for surface deposits);

e) where appropriate, intrusive investigation of the site.

This Authority must always seek to ensure that it complies with current best practice with regard to the carrying out of detailed inspections. Key guidance to be consulted in this regard is listed in Appendix J of this strategy.

It is important to note that if, on the basis of information revealed during a detailed inspection, it is considered that there is no longer a reasonable possibility that a particular pollutant linkage exists on the land, then the Council should not carry out further detailed inspection for that pollutant linkage.

6.1.2 **Statutory Powers of Entry.**

Section 108 of the Environment Act, 1995 gives local authorities the power to authorise persons to exercise specific powers of entry. It is important to clarify the intended use of such powers.

During the course of a detailed inspection the aim of the Council must at all times be to attempt to proceed with the agreement of all affected parties, including owners, occupiers and "appropriate persons". The use of statutory powers of entry should be regarded as the last resort. However, there will inevitably arise circumstances where it is absolutely necessary to inspect land against the expressed wishes of one or more affected parties. It is in these circumstances that statutory powers of entry should be used and, where possible, at least 5 days notice will be given of proposed entry.

Prior to using statutory powers of entry for the purposes of carrying out a detailed inspection the Council must, on the basis of its existing information:

a) be satisfied that there is a reasonable possibility that an actual pollutant linkage exists on the land; and

b) should intrusive investigation be proposed, be satisfied that both the contaminant and receptor are actually present or likely to be present given the current land use.

Furthermore, the Council should not carry out any intrusive investigation on land using its statutory powers of entry if:

a) it has already been provided with detailed information on the condition of the land which provides an appropriate basis upon which it can determine whether the land is contaminated; or

b) a person offers to provide such detailed information within a reasonable and specified time and goes on to provide the information within that time.

Furthermore, the Council must consider prior to the use of statutory powers of entry whether, if the land was eventually determined to be contaminated, it would need to be designated as a special site (see 6.2 below).

6.1.3 **Intrusive Investigations.**

Should the Council carry out any intrusive investigation it undertakes to do so in accordance with appropriate technical procedures for such investigations. Great care will be taken to ensure that all reasonable precautions are taken to avoid harm, water pollution or damage to the natural environment.

There will be cases where intrusive investigation may have implications on particularly sensitive areas of land. In such cases the following actions shall be taken:

a) Where intrusive investigation is intended on an area of land where impact on controlled waters is possible, the Council shall consult the Environment Agency in advance to discuss appropriate actions.

b) Where intrusive investigation is intended on an area notified as a conservation area, the Council will consult English Nature in advance to discuss appropriate actions.

c) Where intrusive investigation is intended on an area of archaeological and historical interest, the Council shall consult English Heritage and the County Archaeologist in advance to discuss appropriate actions.

6.2 **POTENTIAL SPECIAL SITES.**

If land has been determined to be contaminated land and it also falls within one or more of the "special sites" descriptions prescribed in The Contaminated Land (England) Regulations, 2000, then that land must be designated as a special site. At that point the Environment Agency becomes the enforcing authority for that land (see Section 1.2.3 for more details).

It is sensible, therefore, to consider the potential special site aspects of the investigation at the detailed inspection stage of the process.

Prior to authorising or carrying out on any land an inspection using statutory powers of entry, the Council must consider whether, if the land was eventually determined to be contaminated, it would need to be designated as a special site. If this would be the case then the Council must always seek to make arrangements with the Environment Agency for that Agency to carry out the detailed inspection of the land on behalf of the Council. Such a request shall be made to the Area Contaminated Land Officer at the Environment Agency in writing, accompanied by supporting evidence.

Where the Environment Agency agrees to carry out a detailed inspection on behalf of Stroud District Council this Authority will, where necessary, authorise a person nominated by the Agency to exercise the powers of entry conferred by section 108 of the Environment Act, 1995. Prior to issue of such an authorisation, this Council will require that the Agency demonstrates that the conditions for the use of statutory powers of entry, outlined in 6.1.2 above, have been met.

6.3 **EXTERNAL APPOINTMENTS.**

This Authority may choose to make external appointments of, for example, consultants or contractors to carry out specified works as part of the contaminated land regime. Some examples of such appointments could be to:

a) undertake more detailed studies of sites, design of sampling programmes or interpretation of analytical reports;

b) undertake site-specific risk assessments in order to determine whether land is contaminated;

c) provide expert witness services in court;

d) carry out or supervise remediation of contaminated land.

Selection of appropriate consultants or contractors could, therefore, be vital to the outcome of investigation or remediation of contaminated land. The selection procedure to be used by Stroud District Council will concentrate on three major areas:

a) contractors and consultants will be interviewed to assess their capabilities when weighed against relevant selection criteria;

b) a clear and unambiguous specification will be prepared for the work;

c) contractors and consultants will be made aware that they will be responsible for completing the agreed contract accurately and on time.

A checklist to aid this process is produced in Appendix K of this strategy.

7. REVIEW MECHANISMS.

7.1 REVIEW OF INSPECTION STRATEGY.

In line with standard quality management practice it will be necessary to audit the procedures laid down within this strategy for identification of contaminated land. The basic criteria that the strategy is to be audited against will be:

a) its effectiveness in meeting the requirements of legislation and guidance;

b) its accuracy with respect to the information used and assumptions made to formulate the strategy;

c) its effectiveness with respect to the efficient use of available resources;

Therefore, this strategy for identification of contaminated land will be audited against these three criteria at six-monthly intervals. Each audit will be the subject of a written assessment by the Contaminated Land Technician which will detail deficiencies within each of the audit criterion categories and make recommendations for any changes to be made to the Strategy. The report will be produced using the Inspection Strategy Review Form (see Appendix L). The Review Form will then be passed to the Head of Environmental Health who will authorise the changes to be made to the Strategy.

7.2 TRIGGERS FOR REVIEW OF INSPECTION DECISIONS.

The frequency of re-inspection of land previously inspected under the terms of this Strategy is not prescribed in Part IIA of the Environmental Protection Act, 1990. Re-inspection frequencies are likely to vary significantly and so it is not proposed to set a target frequency for such re-inspection.

However, it is recognised that there are likely to be changes in the condition or circumstances of some assessed land which should prompt this Authority to reconsider its previous inspection findings.

The following circumstances have been identified as “triggers” for a prompt review of the inspection findings for specific areas of previously assessed land:

a) proposed changes in the use of the land and its environs;

b) unplanned changes in the use of the land (e.g. persistent, unauthorised use of land by children);

c) unplanned events (e.g. localised flooding, landslides, accidents, fires, spillages, etc) where the consequences cannot be addressed using other legislation;

d) reports of localised health effects which appear to relate to a particular area of land.

e) information received from internal or external sources (e.g. other statutory bodies, owners or occupiers of land, etc);

f) significant changes in the legislation;

g) establishment of significant case law or other precedent;

h) revision of guideline values for exposure assessment.

8. INFORMATION MANAGEMENT.

8.1 DATA STORAGE AND ACCESSIBILITY.

In the course of implementing this Strategy the Authority will obtain a great deal of information in a wide range of formats from many different sources. This information, which may take the form of documents, reports, correspondence, maps or electronic records, needs to be collated and managed efficiently.

The heart of the Council's contaminated land information management system will be the Potentially Contaminated Land Database linked to the MapInfo GIS system. As detailed in Section 3 of this Strategy, the contaminated land assessment process begins with the identification of potential pollutant linkages and, by extension, potentially contaminated sites. All such potentially contaminated sites will be entered onto the Database and at that point assigned a unique reference number. This reference number will remain the key identifier for the site from that time onwards. The sites will be linked to the GIS software via their Ordnance Survey grid reference. The Potentially Contaminated Land Database is intended to serve as a central point of general site-specific information e.g. address details, land use, general potential contaminant, pathway and receptor details, priority classifications, etc. It is anticipated that the Database will develop as experience of operating the identification process increases.

As it is anticipated that a great deal of information will be collected in paper form, it will be necessary to establish a paper-based filing system to run parallel to the Potentially Contaminated Land Database. In order that the two systems are compatible, the paper-based system will utilise the same unique reference numbers assigned to sites on the Database. Both the Database and the paper-based filing system will be situated in the Pollution Control Section of the Council and responsibility for the management and maintenance of both systems will lie with the Contaminated Land Technician.

8.2 CONFIDENTIALITY OF INFORMATION.

All collected information will, by necessity be sub-divided into "Public Register Information" and wider "Inspection Information". For each sub-division it will be necessary to consider whether information should be regarded as confidential.

8.2.1 Confidentiality of Public Register Information.

Enforcing Authorities have a duty to maintain a Public Register. The Public Register will be paper-based and held in the Environmental Health section of Stroud District Council at the Ebley Mill site. It will be available on request for inspection by members of the public between the hours of 9:00 a.m. and 3:00 p.m. on Monday to Friday. The Public Register will include details of Remediation Notices served and other information prescribed in regulation 15 of, and Schedule 3 to, the Contaminated Land (England) Regulation, 2000. Before including any information on the Public

Register this Authority must consider whether that information should be excluded on the basis that:

a) its inclusion would be against the interests of national security; or
b) the information is commercially confidential.

Where this Authority considers that inclusion of information may act contrary to the interests of national security it shall notify the Secretary of State. The information shall not be placed on the Public Register until such time as the Secretary of State has communicated a decision on the matter.

With regard to matters of commercial confidentiality, this Authority must not, without the relevant person's permission, include any information on the Public Register which:

a) relates to the affairs of any individual or business; and

b) is commercially confidential to that individual or the person carrying on that business.

For these purposes, commercial interests relating to the value of the contaminated land, or to its ownership or occupation, are to be disregarded. This ensures that information may not be excluded solely on the basis that its inclusion might provide information to a prospective buyer of the land, thus affecting the sale or sale price.

Where Stroud District Council considers that information which would normally be placed on the Public Register could be commercially confidential then it will notify the appropriate person in writing. The person shall be given an opportunity to make representations requesting exclusion of the information and the basis for the request. This Authority will then, taking into account these representations, determine whether the information is, in fact, commercially confidential.

Where the information is deemed to be commercially confidential it will be excluded from the Public Register. However, a statement indicating the existence of the excluded information will be placed on the Public Register.

Where the information is not deemed to be commercially confidential, the appropriate person will be notified in writing. That person then has 21 days to appeal to the Secretary of State. While any appeal is pending, the information will not be placed on the Public Register. Should the Secretary of State decide that the information is not commercially confidential then this Authority will include it on the Public Register within seven days of receipt of that decision.

Any exclusion from the Public Register on the grounds of commercial confidentiality will lapse four years after the date on which it was originally excluded. At that time this Authority will contact the appropriate person and implement the same system as was used to make the original determination.

8.2.2 **Confidentiality of Wider Inspection Information.**

Detailed information or reports on sites produced for the purposes of Part IIA of the Environmental Protection Act, 1990 will usually fall within the scope of the Environmental Information Regulations, 1992 (as amended). Under these Regulations only information capable of being treated as confidential is not required to be disclosed to enquirers. Thus, all wider inspection information held will be subjected to scrutiny under the terms of the Environmental Information Regulations, 1992 (as amended). Furthermore, where information is provided to this Authority by a third party, its status should be confirmed at that time. Where a third party pursues confidentiality this request must be justified in writing.

8.3 **REQUESTS FOR INFORMATION.**

It is anticipated that formal requests for information regarding contaminated land will be made in several different ways:

8.3.1 **Standard Search Questionnaire (CON29).**

New standard questions relating to contaminated land have been added to the standard search questionnaire (CON29) which conveyancers send to local authorities during land transactions. Each standard search questionnaire will be examined by the Contaminated Land Technician and appropriate answers will be provided.

8.3.2 **Formal Written Enquiries.**

Formal written enquiries regarding potentially contaminated land are already received by the Environmental Health section of Stroud District Council. When such enquiries are received the enquirer is contacted within 3 working days and all reasonable efforts are made to answer the queries raised as fully as is reasonably practicable.

8.3.3 **Informal Enquiries.**

Informal enquiries are, on occasions, received by the Environmental Health section of Stroud District Council regarding potentially contaminated land, usually over the telephone. Wherever reasonably practicable, every effort will be made to answer the queries raised. However, this Council reserves the right to ask the enquirer to formalise the request in writing.

8.4 **PROVISION OF INFORMATION TO THE ENVIRONMENT AGENCY.**

The Environment Agency is required to prepare periodic reports for the government on the state of contaminated land in England and Wales. This report will include:

- a summary of local authority inspection strategies, including progress against the strategy and its effectiveness;

- the amount of contaminated land and the nature of its contamination;

- the measures taken to remediate contaminated land.

Such reports will clearly require a major input of information from local authorities, the lead regulators on contaminated land. A memorandum of understanding has been agreed between the Environment Agency and the Local Government Association to assist in this exchange of information. Stroud District Council undertakes to provide information to the Environment Agency following the guidelines agreed within the memorandum of understanding.

A local authority must also provide information to the Environment Agency whenever a site is designated as contaminated land and whenever a Remediation Notice, Statement or Declaration is issued or agreed. Stroud District Council undertakes to provide such information.

APPENDIX A.

Schedule 1 of the Contaminated Land (England) Regulations, 2000.

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.

APPENDIX B.

External Liaison Bodies and Contacts.

BODY	CONTACT NAME	CONTACT DETAILS
Environment Agency, Riversmeet House, Tewkesbury, Glos.	Mr Michael Hughes Contaminated Land Officer	Tel: (01684) 850951 Direct Dial: (01684) 864447
English Nature, Three Counties Team, Eastnor, Herefordshire.	Mr Paul Hackman	Tel: (01531) 638500
MAFF, Rural and Marine Environment, London.	Mr Gary Beckwith	Tel: (0207) 963 5611
English Heritage, 29, Queen Square, Bristol.	Mr Duncan McCallum Historic Areas Advisor	Tel (direct) : (0117) 975 0685 Tel (general): (0117) 975 0700
Gloucestershire County Council, Shire Hall, Bearland, Gloucester.	Mr David Ball	Tel: (01452) 425500
Farming & Wildlife Advisory Group, Elmbridge Court, Gloucester.	Mr Ben Lambert	Tel: (01452) 316487
Gloucestershire Wildlife Trust, Robinswood Hill Country Park,, Gloucester.	Dr Colin Studholme	Tel: (01452) 383333
Food Standards Agency, Contaminants Division, Room 238, Ergon House, 17, Smith Square, London.	Dr Patrick Miller	Tel: (0207) 238 5751
Farming & Rural Conservation Agency, Nobel House, London.	Mr R. Unwin	Tel: (0207) 238 5432
South West Regional Development Agency, 100, Temple Street, Bristol, BS1 6AE.	Mr Ian Knight	Tel: (0117) 933 0230

APPENDIX C.

Sites of Nature Conservation Interest.

This schedule lists all sites that have been recognised as having nature conservation interest and includes international (RAMSAR), European (SPA and SAC), National (SSSI and NNR) and Local (LNR) designations. It also includes local sites which have been identified by Gloucestershire Wildlife Trust (Key Wildlife Sites).

The different designations can overlap. The sites are listed by parish. Many of the sites cross parish boundaries and, in these cases, all the relevant parishes are listed, although the majority of the site may be in one parish alone. Generally, the first parish listed for a site indicates where the majority of that site is located.

Note Abbreviations used:

RAMSAR	Site designated under the RAMSAR Convention as Wetland of International Importance, especially as waterfowl habitat.
SPA	Special Protection Area designated under the EC Directive on the conservation of wild birds.
SAC	Special Area of Conservation designated under the EC Habitats Directive to protect species and habitats of European importance. Two types of SAC are indicated: • pSAC - Proposed • cSAC - Candidate
NNR	National Nature Reserve designated under the National Parks and Access to the Countryside Act, 1949.
SSSI	Sites of Special Scientific Interest designated under the Wildlife and Countryside Act, 1981 as nationally important wildlife habitats and geological features.
KWS	Key Wildlife Sites designated by the Gloucestershire Wildlife Trust as being of county-wide importance.
LNR	Local Nature Reserves designated by local authorities (in consultation with English Nature) under the National Parks and Access to the Countryside Act, 1949.

	Site	Grid Ref.	Parish	Description	Designation
1	Foxholes Wood	381600 190300	Alderley, Hillesley and Tresham	Ancient Woodland	KWS
2	Alderley Wood	378200 191000	Alderley	Ancient Woodland	KWS
3	Alder Wood	371600 195700	Alkington	Ancient Woodland	KWS
4	Damery Quarry	370500 194500	Alkington	Geological	KWS
5	Furzeground Wood	371100 195100	Alkington	Ancient Woodland	KWS
6	Michaelwood	370500 195000	Alkington	Ancient Woodland	KWS

	Site	Grid Ref.	Parish	Description	Designation
7	Michaelwood Lodge Wood	371900 194700	Alkington	Ancient Woodland	KWS
8	Long Wood, Hock Cliff and Smiths Wood	372700 209200	Arlingham Fretherne with Saul	Ancient Woodland Geological	KWS
9	Abbey Wood and Proud Grove	387500 206200	Bisley with Lypiatt	Ancient Woodland	KWS
10	Baker's Mill Pond	391700 202900	Bisley with Lypiatt	Wetland	KWS
11	Calves Mead Covert	393000 207800	Bisley with Lypiatt	Ancient Woodland	KWS
12	Daneway Banks	394000 203700	Bisley with Lypiatt	Limestone Grassland	SSSI KWS
13	Dorvel Wood	394800 204000	Bisley with Lypiatt	Ancient Woodland	KWS
14	Frith Cottages Wood	392700 204100	Bisley with Lypiatt	Ancient Woodland	KWS
15	Frith Wood	392800 204500	Bisley with Lypiatt	Ancient Woodland	KWS
16	Hawkley Wood	389500 205200	Bisley with Lypiatt	Ancient Woodland	KWS
17	Highmeads and Dagnish Wood	388900 205500	Bisley with Lypiatt	Ancient Woodland	KWS
18	High Wood	390300 208200	Bisley with Lypiatt	Ancient Woodland	KWS
19	Hill House Wood	393300 203700	Bisley with Lypiatt	Ancient Woodland	KWS
20	Keensgrove Wood and Catswood	389400 207600	Bisley with Lypiatt	Ancient Woodland	KWS
21	Litteridge Wood	392100 205800	Bisley with Lypiatt	Ancient Woodland	KWS
22	Lower Daneway Grassland	394200 203400	Bisley with Lypiatt	Limestone Grassland	KWS
23	Nashend Wood	389600 205000	Bisley with Lypiatt	Ancient Woodland	KWS
24	Oakridge Lynch Banks/Strawberry Banks	391000 203200	Bisley with Lypiatt	Limestone Grassland	SSSI KWS
25	Penny Grove	393300 203500	Bisley with Lypiatt	Ancient Woodland	KWS
26	Redding Wood	388100 207700	Bisley with Lypiatt	Ancient Woodland	KWS

	Site	Grid Ref.	Parish	Description	Designation
27	Rough Bank	390700 208800	Bisley with Lypiatt Miserden	Limestone Grassland	SSSI KWS
28	Siccaridge Wood	393300 203300	Bisley with Lypiatt	Ancient Woodland (GWT Reserve)	KWS
29	Tanners Wood	392400 203100	Bisley with Lypiatt	Ancient Woodland	KWS
30	Three Groves Wood	391100 203000	Bisley with Lypiatt	Ancient Woodland (GWT Reserve)	KWS
31	Toadsmoor Wood and Helen's Wood	388300 204500	Bisley with Lypiatt	Ancient Woodland	KWS
32	Tunley Farm Wood and Tunley Farm Bank	393700 204700	Bisley with Lypiatt	Ancient Woodland Limestone Grassland	KWS
33	Cam Peak and Long Down	377200 199400	Cam	Acid, Neutral and Limestone Grasslands and Scrub	KWS
34	Stinchcombe Hill and Sheep Path, Westfield Bownace, Drakestone Woods	374000 198300	Cam, Stinchcombe, Dursley	Limestone Grassland Scrub and Ancient Woodland	SSSI KWS
35	Chalford Lynch Wood	389300 202900	Chalford	Ancient Woodland	KWS
36	Dimmels Dale	390300 202700	Chalford	Limestone Grassland	KWS
37	Frith Wood	388200 203800	Chalford	Ancient Woodland	KWS
38	Parsonage Wood	388200 203200	Chalford	Ancient Woodland	KWS
38A	Chalford Hill Recreation Ground	389900 203200	Chalford	Limestone Grassland	KWS
39	Blackness Banks	388000 202400	Chalford, Thrupp	Limestone Grassland	KWS
40	Coaley Wood, Coaley Peak and Coaley Wood Quarries	378700 199600	Coaley, Uley	Ancient Woodland, Scrub, Limestone Grassland, Geological (Part GWT Reserve)	SSSI KWS

	Site	Grid Ref.	Parish	Description	Designation
41	Cotswold Commons and Beechwoods including: A-Painswick Beacon B-Cranham Common C-Sheepscombe Common D-Buckholt Wood E-Rough Park Wood F-Pope's Wood G-Castle End Wood H-Bailey's Pincott I-Saltridge Wood and Saltridge Common Wood J-Cranham Wood K-Workman's Wood L-Blackstable Wood	SO81/SO91	Cranham, Painswick, Miserden, Upton St.Leonards	Ancient Woodland, Limestone Grasslands (GWT Reserves included)	SSSI cSAC NNR KWS
42	Gravelpits Wood	376000 196800	Dursley	Ancient Woodland	KWS
43	Hermitage Wood	375400 197700	Dursley	Ancient Woodland	KWS
44	Mole Grove	378600 207400	Eastington	Ancient Woodland	KWS
44A	Wickster's Brook	378000 204200 376600 204900	Eastington	Wetland	KWS
45	Church Covert	376600 214700	Elmore	Ancient Woodland	KWS
46	Groundless Pool	379100 216100	Elmore	Wetland	KWS
47	Hockley and St.Martin's Woods	378200 214100	Elmore	Ancient Woodland	KWS
48	Shatford Grove	376900 214100	Elmore	Ancient Woodland	KWS
49	Frampton Pools	375300 207300	Frampton on Severn	Wetland	SSSI KWS
50	Upper Severn Estuary	371500 205500	Frampton on Severn, Slimbridge, Fretherne with Saul	Estuary, Flood Meadows and Dykes	RAMSAR SPA pSAC SSSI KWS

	Site	Grid Ref.	Parish	Description	Designation
51	Lock Meadow	375500 209400	Fretherne with Saul	Neutral Grassland	KWS
52	Saul Gravel Pits	375100 209100	Fretherne with Saul	Wetland	KWS
53	Lower Stone Wood	367300 194500	Ham and Stone	Ancient Woodland	KWS
54	Severn Estuary	363000 198000	Ham and Stone	Estuary, Mud Flats and Saltmarsh	RAMSAR SPA pSAC SSSI KWS
55	Whitcliff Park	366800 197100	Ham and Stone	Grassland, Ponds and Mature Trees	KWS
56	Bengough's Covert	371700 200900	Hamfallow	Ancient Woodland	KWS
57	Brooks Grove	369200 202200	Hamfallow	Ancient Woodland	KWS
58	Bushey Grove	369800 200800	Hamfallow	Ancient Woodland	KWS
59	Butler's Grove	369900 201300	Hamfallow	Ancient Woodland	KWS
60	Red Wood	370700 203000	Hamfallow	Ancient Woodland	KWS
61	Tintock Wood including Pitbrook Brake and Penny Grove	368600 200700	Hamfallow	Ancient Woodland	KWS
62	Wanswell Hay Meadows	369000 201800	Hamfallow	Neutral Grassland	KWS
63	Fisher's Wood	378400 213000	Hardwicke	Ancient Woodland	KWS
64	Hardwicke Farm Covert	378800 213600	Hardwicke	Ancient Woodland	KWS
65	Poolspits Wood	378200 213800	Hardwicke	Ancient Woodland	KWS
66	Cotteswood Farm Meadows	384200 209200	Harescombe	Limestone Grassland	KWS
67	Tump Farm Meadow	383400 209200	Harescombe	Grassland/Wetland	KWS

	Site	Grid Ref.	Parish	Description	Designation
68	Scottsquar and Halliday Woods	384000 208800	Harescombe	Ancient Woodland	KWS
69	Haresfield Hill, The Camp Haresfield Beacon and Cliff Wood	381900 208800	Haresfield, Standish	Limestone Grassland, Ancient Woodland, Scrub, Geological	SSSI KWS
70	Claypits Wood	381800 188300	Hillesley and Tresham	Ancient Woodland	KWS
71	Lizens Wood Fields	378700 189600	Hillesley and Tresham	Limestone Grassland	KWS
72	Midger	379400 189200	Hillesley and Tresham	Limestone Grassland, Ancient Woodland	SSSI KWS
73	Midger Wood Fields	379200 189300	Hillesley and Tresham	Limestone Grassland	KWS
74	Hammouth Hill Wood	378600 189700	Hillesley and Tresham	Ancient Woodland	KWS
75	Lizens Wood	389800 189300	Hillesley and Tresham	Ancient Woodland	KWS
76	Lower Kilcott Woods	380800 189000	Hillesley and Tresham	Ancient Woodland	KWS
77	Stickstey and Miry Woods	378800 188600	Hillesley and Tresham	Ancient Woodland	KWS
78	Withymore Woods	375500 189400	Hillesley and Tresham	Ancient Woodland	KWS
79	Yarley Meadows	375700 188800	Hillesley and Tresham	Limestone Grassland	SSSI KWS
80	Walcroft Wood Grassland	378800 191800	Hillesley and Tresham	Limestone Grassland	KWS
81	Hens Cliff and Holwell Woods	379300 192300	Hillesley and Tresham	Ancient Woodland	KWS
82	Walcroft Wood	378600 191500	Hillesley and Tresham	Ancient Woodland	SSSI KWS
83	Sharpness Docks	367500 202500	Hinton	Rough Grassland/Scrub	KWS

		Grid Ref.	Parish	Description	Designation
83	Purton Ponds	368200 204000	Hinton	Wetland	KWS
84	Purton Passage	368700 204500	Hinton	Geological	SSSI KWS
85	Sealey Wood	382300 198000	Horsley	Ancient Woodland	KWS
86	Horsley Wood	383400 197200	Horsley	Ancient Woodland	SSSI
87	Ledgemore Bottom Pond	386600 197000	Horsley	Wetland	KWS
88	Lutheridge Farm Wood	382200 199200	Horsley	Ancient Woodland	KWS
89	Wickley Wood	383800 197100	Horsley	Ancient Woodland	KWS
90	Hartley Bridge Wood	384100 196900	Horsley	Ancient Woodland	KWS
91	Ledgemore Wood	386100 196900	Horsley	Ancient Woodland	KWS
92	Pen Woods, Buckholt and Stanley Woods	381000 202200	Kings Stanley, Frocester	Ancient Woodland, Geological	KWS
93	Selsley Common	383000 203000	Kings Stanley	Limestone Grassland	SSSI KWS
94	Rabbit Warren Wood	383300 202000	Kings Stanley, Woodchester	Ancient Woodland	KWS
95	Redhill Farm Meadow	381500 204300	Kings Stanley	Marshy Grassland	KWS
96	Woodside Farm Meadow	380600 202100	Kings Stanley	Grassland	KWS
97	Five Acre Grove	379000 204200	Leonard Stanley	Ancient Woodland	KWS
98	Besbury Common	387500 201300	Minchinhampton	Limestone Grassland	KWS
99	Box House Wood	386200 199700	Minchinhampton	Ancient Woodland	KWS

	Site	Grid Ref.	Parish	Description	Designation
100	Box Farm Meadows	386500 199700	Minchinhampton	Limestone Grassland	SSSI KWS
101	Cowcombe Wood	389700 202200	Minchinhampton	Ancient Woodland	KWS
102	Hyde House Wood	388300 202000	Minchinhampton	Ancient Woodland	KWS
103	Knapp Farm Meadows and Alder Grove	388100 202100	Minchinhampton	Limestone Grassland and Alder Coppice	KWS
104	Minchinhampton Common	385500 201000	Minchinhampton	Limestone Grassland	SSSI KWS
105	Neu-Lindsey Meadow	384500 201400	Minchinhampton	Limestone Grassland	KWS
106	Barn Wood	392700 210800	Miserden	Ancient Woodland	KWS
107	Down Wood and Famish Hill Plantation	389900 208900	Miserden, Painswick	Ancient Woodland	KWS
108	Fishcombe Bank Wood	393100 210200	Miserden	Ancient Woodland	KWS
109	New Seal Wood	393000 210500	Miserden	Ancient Woodland	KWS
110	Parson's Hill	394500 207600	Miserden	Grassland	KWS
111	Hazel Wood and Meadows	386200 199200	Nailsworth	Ancient Woodland and Limestone Grassland	KWS
112	High Wood	382500 199800	Nailsworth	Ancient Woodland	KWS
113	Nailsworth Hill and Iron Mills Common	385800 199600	Nailsworth, Minchinhampton	Limestone Grassland	SSSI KWS
114	Ashen Plains and Bowcote Woods	376800 196500	North Nibley	Ancient Woodland	KWS
115	Breakheart Hill Reservoir, Quarry, Grassland and Millend Wood	375700 196600	North Nibley	Geological, Grassland Ancient Woodland	KWS

		Grid Ref.	Parish	Description	Designation
116	Dingle and Tumbley Hill Wood	378000 196700	North Nibley, Wotton-under-Edge	Ancient Woodland	KWS
117	Laycombe Ditch Wood, Ridings Wood and Monkcombe Wood	376900 195600	North Nibley, Wotton-under-Edge	Ancient Woodland	KWS
118	Nibley Knoll and Grass Banks	374500 195500	North Nibley	Geological, Grassland	SSSI KWS
119	Park Wood East	375200 197000	North Nibley, Stinchcombe	Ancient Woodland	KWS
120	Bowlas Wood	382500 199800	Nympsfield	Ancient Woodland	KWS
121	Easter Park Farm Quarry	381000 200900	Nympsfield	Geological	SSSI KWS
122	Nympsfield Valley, Street Farm Banks and Nympsfield Wood	381200 200100	Nympsfield	Limestone Grassland, Marsh, Scrub and Ancient Woodlands	KWS
123	Slidden's Covert	380700 199900	Nympsfield	Ancient Woodland	KWS
124	Hobbs Hole Wood	380500 298800	Owlpen	Ancient Woodland	KWS
125	Owlpen, Dingle and Toney Wood	379900 199800	Owlpen, Uley	Ancient Woodland	KWS
126	Spring Wood	380200 197300	Owlpen	Ancient Woodland	KWS
127	Whitley Wood	379800 197700	Owlpen, Uley	Ancient Woodland	KWS
128	Bull Cross, The Frith and Juniper Hill	387200 208300	Painswick	Ancient Woodland, Limestone Grassland	SSSI KWS
129	Dunkitehill Wood and Trantershill Plantation	388200 207000	Painswick	Ancient Woodland	KWS
130	Edge Common	384700 209200	Painswick	Limestone Grassland, Geological	SSSI KWS

	Site	Grid Ref.	Parish	Description	Designation
131	Huddingknoll Hill	384700 210700	Painswick	Limestone Grassland	KWS
132	Longridge and Downwood North Bank Woods	388500 208900	Painswick	Ancient Woodland	KWS
133	Swift's Hill	387800 206700	Painswick	Limestone Grassland	SSSI KWS
134	Worgan's Wood	386900 207200	Painswick	Ancient Woodland	KWS
135	Washbrook Meadows	385800 209800	Painswick	Limestone Grassland and Marshland	KWS
136	Pitchcombe Wood	384200 208500	Pitchcombe	Ancient Woodland	KWS
137	Rodborough Common	385100 203500	Rodborough, Minchinhampton	Limestone Grassland	cSAC SSSI KWS
138	Rodborough Fields	384800 204700	Rodborough	Neutral Grassland	KWS
139	Cambridge Old Canal	374900 204000	Slimbridge	Wetland	KWS
140	Standish Wood, Randwick, Scrub and Grassland	383000 207500	Standish, Randwick	Ancient Woodland, Limestone Grassland	KWS
141	The Quarry, Dursley	373500 199400	Stinchcombe	Geological	SSSI KWS
142	Bonds Mill Bank	379500 205200	Stonehouse	Limestone Grassland	KWS
143	Field opposite Stonehouse Court Hotel	380000 205300	Stonehouse	Wetland/Meadow	KWS
144	Stonehouse Brickpits and Verney Meadows	381000 205400	Stonehouse	Geological, Neutral Grassland	KWS
145	Bisley Road Cemetery	386400 203800	Stroud	Limestone Grassland/Scrub/ Woodland	KWS LNR
146	Gannicox Toad Pond	384400 205100	Stroud	Wetland	KWS

	Site	Grid Ref.	Parish	Description	Designation
147	The Horns Wood	387100 204800	Stroud	Ancient Woodland	KWS
148	Claypits Woods~~-~~ North	386500 204100	Thrupp	Ancient Woodland	KWS
149	Hillsdon Meadows	386900 202900	Thrupp	Limestone Grassland	KWS
150	Mackhouse, Lawrenceland Woods and Hales Grove	387700 203800	Thrupp	Ancient Woodland	KWS
151	Park Wood	386800 203200	Thrupp	Ancient Woodland	KWS
152	Stringers Wood	387400 202900	Thrupp	Ancient Woodland	KWS
153	Crawley Cliff Wood	378800 199500	Uley	Ancient Woodland	KWS
154	Folly, Dursley Coopers and Bowcote Knoll Woods	377500 197000	Uley, Wotton-under-Edge, Dursley	Ancient Woodland	KWS
155	Uley Bury	378500 198800	Uley	Woodland and Grassland	KWS
156	Hucclecote Meadows	387200 216300	Upton St Leonards	Neutral Grassland	SSSI KWS
157	Watery Lane Meadows	386500 213700	Upton St Leonards	Neutral Grassland	KWS
158	Ruscombe Farm Meadows	383800 207200	Whiteshill and Ruscombe	Grassland/Wetland/Scrub	KWS
159	Ruscombe Wood	383500 207400	Whiteshill and Ruscombe	Ancient Woodland	KWS
160	The Throat Meadows and Quarry	383800 207600	Whiteshill and Ruscombe	Grassland and Scrub	KWS
161	Atcombe Wood	383500 201500	Woodchester	Ancient Woodland	KWS
162	Dingle Wood and Dark Wood	383000 202300	Woodchester	Ancient Woodland	KWS
163	Woodchester Park and Breakheart Hill	382000 201500	Woodchester, Nympsfield, Nailsworth	Ancient Woodlands, Wetland and Grassland (Part GWT Reserve)	SSSI KWS

	Site	Grid Ref.	Parish	Description	Designation
164	Black Quarries Hill Wood	378000 193600	Wotton-under-Edge	Ancient Woodland	KWS
165	Briery Wood	377900 195200	Wotton-under-Edge	Ancient Woodland	KWS
166	Coombe Hill	376300 194200	Wotton-under-Edge	Limestone Grassland	SSSI KWS
167	Golden Knoll Wood	378500 195000	Wotton-under-Edge	Ancient Woodland	KWS
168	Hentley Wood	376700 193100	Wotton-under-Edge	Ancient Woodland	KWS
169	Sandfields Wood	377600 196300	Wotton-under-Edge North Nibley	Ancient Woodland	KWS
170	Tyley Bottom Millponds	377100 193900	Wotton-under-Edge	Wetland	KWS
171	Tyley Cottages Wood	378700 194900	Wotton-under-Edge	Ancient Woodland	KWS
172	Tyley Long Wood	377100 194100	Wotton-under-Edge	Ancient Woodland	KWS
173	Wotton Hill, Conygre Wood, Westridge Wood	375300 194000	Wotton-under-Edge, North Nibley	Ancient Woodland, Grassland, Geological	SSSI KWS

APPENDIX D.

1) Sites Subject to Authorisation Under IPC Regime.

Authorisation Reference	Company Name	Address	Easting	Northing
AA9539	Purton Carbons Limited	Riddle Street, Purton, Berkeley, Glos, GL13 9HN.	370040	203547
AU7745	Nu-Pro Surface Treatments Ltd	Eagle Works, London Road, Thrupp, Stroud, Glos, GL5 2BA.	385969	203333

2) Sites Subject to Authorisation Under Part 1 of Environmental Protection Act, 1990.

Authorisation Reference	Company Name	Address	Easting	Northing
EPA/2	Silvey Bros Ltd	The Garage, Saul, Stroud, Glos, GL2 7LW	374804	209373
EPA/3	Bymacks Upholsterers Ltd	Long Street, Dursley, Glos, GL11 4LL	375918	198184
EPA/6	Fourways Garage	Chalford Hill, Stroud, Glos, GL6 8BD	389366	203831
EPA/7	Holbrook Garage	Bisley, Stroud, Glos, GL6 7BX	390565	207418
EPA/9	DM Foundries Ltd	Stafford Mill Industrial Estate, London Road, Thrupp, Stroud, Glos, GL5 2AZ	385959	203849
EPA/13	Lister Petter Ltd	Long Street, Dursley, Glos, GL11 4HS	375791	198131
EPA/14	Ready Mixed Concrete Western Ltd	Chestnut Lane Stroud, Glos, GL5 3EW	383948	204971
EPA/16	Hampton Stone Limited	Cirencester Road, Chalford Stroud, Glos, GL8 8PE	389380	201224

Authorisation Reference	Company Name	Address	Easting	Northing
EPA/17	Dragon Alfa Ltd	The Docks, Sharpness, Berkeley, Glos, GL13 9UA	366958	202468
EPA/18	Cullimores Mix Ltd	Netherhills, Whitminster, Glos, GL2 7PD	376517	207083
EPA/20	Olympic Varnish Co. Ltd	The Dockyard, Brimscombe, Glos, GL5 2TQ	387600	202000
EPA/22	Lister Petter Ltd	Long Street, Dursley, Glos, GL11 4HS	375791	198131
EPA/23	Berkshire Gravure Co. Ltd	Brookeside, Wotton-under- Edge, Glos, GL5 2TQ	376096	193393
EPA/24	Sharpness Docks Ltd	Sharpness, Glos, GL13 9UD	366960	202225
EPA/25	Smiths Plant Hire & Contractors (2)	Ponderosa, Eastington, GL5 3EW	376581	206028
EPA/32	Smiths Plant Hire & Contractors (1)	Ponderosa, Eastington, GL5 3EW	376581	206028
EPA/33	Niko Surgical	Unit 13, Stroudwater Business Park, Glos, GL10 3SX	379830	205572
EPA/34	Tamwood (Builders Supplies) Ltd	Old Ryeford Sawmills, Stonehouse, Glos, GL10 3HE	381492	204544
EPA/35	Plasmega (Sharpness) Ltd	Former Streamline Building, Sharpness Docks, Glos, GL13 9UD	366960	202225
EPA/36	Saxon Service Station	Cainscross Road, Stroud, Glos, GL5 4ET	384594	205126
EPA/38	Snax 24 Ltd	London Road, Stroud, Glos, GL5 2AX	385682	204500
EPA/39	Tesco	Stratford Road, Stroud, Glos, GL5 3HG	384634	205394

Authorisation Reference	Company Name	Address	Easting	Northing
EPA/40	Dudbridge Superstop	Dudbridge,Stroud, Glos, GL5 3HF	383596	204506
EPA/41	Bear Street Garage	Bear Street, Wotton-under-Edge, Glos, GL12 7DF	375585	193404
EPA/42	Bristol Street Ford	London Road, Stroud, Glos, GL5 2AX	385567	204631
EPA/43	Cam Motors Ltd	Mill Garage, Cam, Glos, GL11 5DH	374817	201275
EPA/44	Shell Garage	Stroud Road, Nailsworth, Glos GL6 0BE	384671	200136
EPA/45	Gordons (Stroud) Ltd	14, Ebley Road, Stonehouse, Glos, GL10 2LH	381802	204813
EPA/46	Crosskeys Service Station	Bristol Road, Moreton Valence, Glos, GL2 4RQ	380113	211850
EPA/47	Stinchcombe Service Station	Woodfield Road, Cam, Glos, GL11 6HF	374186	199579
EPA/48	Wild Goose Garage	27 Kingshill Road, Dursley, Glos, GL11 4BJ	375351	198394
EPA/49	Moreton Valence Service Station	Bristol Road, Moreton Valence, Glos, GL2 7NG	378971	210614
EPA/50	Oldbury Services	Westend Roundabout, Stonehouse, Glos, GL10 3SJ	378455	206311
EPA/51	Bridge Service Station	2-6 Gloucester Road, Stonehouse, Glos, GL10 2PB	380531	205849
EPA/52	Murco Service Station	Uley Road, Dursley, Glos, GL11 4NH	376229	197932
EPA/53	Berkeley Heath Motors	Berkeley Heath, Berkeley, Glos, GL13 9ET	370743	199418
EPA/54	Fromebridge Garage	Whitminster, Glos, GL12 7PG	376877	206720

Authorisation Reference	Company Name	Address	Easting	Northing
EPA/55	Michaelwood Services Northbound	Lower Wick, Dursley, Glos, GL11 6DD	370320	195415
EPA/56	Michaelwood Services (South)	Lower Wick, Dursley, Glos, GL11 6DD	370498	195405
EPA/57	Spinning Wheel Service Station	Cashes Green Road, Stroud, Glos, GL5 4RA	383067	205455
EPA/58	Stone Services	Glenhaven, Chalford Hill, Stroud, Glos, GL6 8ED	389632	202966

APPENDIX E.

Scheduled Ancient Monuments in Stroud District.

Note: SDC Reference = Reference number of site as found on the Local Plan Proposals Map.
EH No. = The site reference number as given by English Heritage.

SDC Ref:	Parish	EH No.	Monument Title	Grid Ref.
1	Alkington	274	Damery Camp	370700 194400
2	Bisley with Lypiatt	259	Money Tump Round Barrow	390300 204780
3	Bisley with Lypiatt	260	Eastcombe Round Barrows	389600 204700 389700 204800
4	Bisley with Lypiatt	261	Lillyhorn Roman Villa, Bournes Green	391300 204400
5	Bisley with Lypiatt	338	Lypiatt Cross	389200 206600
6	Bisley with Lypiatt	31921	Poor Soul's Light at All Saints Church	390340 205910
7	Cranham/Upton St Leonards	192	High Brotheridge Camp, Buckholt	389300 214000
8	Cranham	193	Buck's Head Round Barrow (SE of Cranham Wood)	391300 212600
9	Cranham	194	Climperwell Round Barrows	391650 211970
10	Dursley	272	Folly Wood Long Barrow	377300 196900
11	Dursley	371	Old Town Hall	375600 198100
12	Frocester	22857	Nympsfield Long Barrow 500m S of Hill Farm Cottage	379380 201320
12a	Hamfallow	32336	Moat and fishpond at Wanswell Court	369030 201000 369030 201140
62	Harescombe	28804	Cross in St John the Baptist's churchyard	383730 210390
13	Harescombe/Haresfield	356	Dyke Camp	383400 208500
14	Haresfield	43	Haresfield Camp and Ring Hill Earthworks	382000 208800 382300 209000
15	Haresfield	430	The Mount Moated Site	381020 210490
16	Hillesley and Tresham	295	Tresham Farbarrow Round Barrows	379300 190200
17	Horsley	281	Lechmore Long Barrow	386000 197800
18	Horsley	282	Lechmore Long Barrows	386000 197500 386000 197200
19	Horsley	357	Barton End Farm Earthworks	384600 197500
20	Kings Stanley	26	The Toots Long Barrow, Selsley Common	382700 203100
21	Kings Stanley/ Woodchester	256	Pen Hill Dyke	381800 202100

SDC Ref:	Parish	EH No.	Monument Title	Grid Ref.
22	Kings Stanley	258	Woodchester Beaker Round Barrow	381100 201970
23	Kingswood	70	Kingswood Abbey Gate	374700 192000
24	Leonard Stanley	31928	Leonard Stanley Priory	380200 203200 380100 203200
25	Minchinhampton	22884	Gatcombe Long Barrow	388400 199700
26	Minchinhampton	18	The Long Stone	388300 199900
27	Minchinhampton	13806	Multi-period site on Minchinhampton Common	385200 201300 385700 200400- 386500 201200 386900 201200- 387500 201100 387600 200600 - 387700 200800
28	Minchinhampton	22886	Bowl Barrow in Gatcombe Wood	387500 199500
29	Minchinhampton	22887	Bowl Barrow (400m) of E of Upper Hyde Farm	389100 201500
31	Minchinhampton	22888	Bowl Barrow (450m) E of Upper Hyde Farm	389100 201300
32	Minchinhampton	440	Round Barrow (91m) S of Windmill Place]	386000 200900
33	Minchinhampton	13922	Whitefields Tump Long Barrow	385400 201700
61	Minchinhampton	28527	Banks and ditch at Glebe Farm	387620 200720
34	Miserden	6	The Camp Long Barrow	391300 209000
35	Miserden	63	Miserden Castle Mound	394400 209200
36	Miserden	238	Miserden Bowl Barrow (460m) N of Miserden Park	394180 209400
37	Miserden	32355	New Seal Wood Round Barrow	392790 210360
37a	Moreton Valence	32335	Moated site at Church Farm	377940 209760
38	Nailsworth	32373	Rugger's Green Barn Round Barrow	385530 198440
39	Nailsworth	439	Collier's Wood Glass House	383300 200500
40	North Nibley	34	Brackenbury Camp	374800 194800
41	Painswick	51	Painswick Hill (or Kimsbury) Camp	386900 212100
42	Painswick	234	Painswick Roman Villa (W of High Fold)	385800 210200
43	Painswick	235	Castle Godwyn	387100 211600
44	Randwick/Standish	237	Randwick Hill Long Barrow, Round Barrows and Dyke	382700 207000 382500 206900 382700 207100
60	Slimbridge	28838	Slimbridge moated site: 70m S of Old Rectory	374080 203560
45	Standish	236	Court Hill Round Barrows	380200 208000 380370 207940
46	Standish	366	Gateway to Almonry	380000 208400

SDC Ref:	Parish	EH No.	Monument Title	Grid Ref.
47	Stinchcombe	64	Drakestone Camp, Stinchcombe Hill	373700 198000
48	Uley	22858	Uley Long Barrow (Hetty Pegler's Tump)	378940 200030
49	Uley	54	Uley Bury Camp	378600 199000
50	Uley	273	Rowden Wood Long Barrow	377800 196900
51	Uley	471	West Hill Romano-Celtic Temple	378900 199800 379000 199700
7	Upton St Leonards/Cranham	192	High Brotheridge Camp, Buckholt	389300 214000
52	Woodchester	5	Bown Hill Long Barrow	382290 201980
53	Woodchester	107	Woodchester Roman Villa	384000 203000
54	Woodchester	257	Bown Hill Round Barrow	382200 201800
55	Wotton-under-Edge	100	Tyley Bottom Ancient Village	378000 194400
56	Wotton-under-Edge	275	Blackquarries Hill Long Barrow	377500 193200
57	Wotton-under-Edge	276	Symonds Hall Long Barrow	379700 195900
58	Wotton-under-Edge	277	Round Barrow (340m) N of Symonds Hall Farm	378890 196350
59	Wotton-under-Edge	376	Bradley Motte	374700 194100

APPENDIX F.

JUSTIFICATION FOR PRIORITY INVESTIGATION AREAS.

Six Priority Investigation Areas have been identified as a part of this Strategy. A justification for the selection of these Areas is given below:

1. Major Commercial and Industrial Areas (Past and Present)

The Stroud District comprises a number of towns and surrounding areas where commercial and industrial activities have tended to concentrate. Additionally, the town of Stroud itself forms the central point for five valleys which were the focus of the area's historic industries. Indeed these valleys still retain a high proportion of the heavy industry in the area. Within the District's commercial and industrial land use, two further factors have also been considered, namely the potential for both current and past use of specific sites to create significant contamination.

Using these criteria the following Priority Investigation Areas have thus been identified:

a) The parishes of:

Berkeley	Nailsworth
Cam	Painswick
Chalford	Stonehouse
Dursley	Stroud
Kingswood	Thrupp
Minchinhampton	Wotton-under-Edge

b) The five major industrial valleys:

Golden Valley (Stroud to Chalford)
Nailsworth Valley (Stroud to Nailsworth via Woodchester)
Painswick Valley (Stroud to Painswick)
Slad Valley (Stroud to Slad)
Stroud Valley (Stroud to Ryeford)

c) The major potentially polluting industries within the Stroud District are subject to pollution control legislation as Authorised Processes, enforced by either the Environment Agency or Stroud District Council. As, by definition, the processes carried out at these sites are potentially highly polluting, it is deemed appropriate to identify them as Priority Investigation Areas.

d) The Gloucester and Berkeley Canal was opened in 1827 and Sharpness Docks is believed to have been created at that time. Certainly the Docks was enlarged in

1874 and many times subsequent to that. Given the long history of the site and the large number of potentially contaminative activities carried out there, it is deemed appropriate to identify Sharpness Docks as a Priority Investigation Area.

e) The basis of the industrial heritage of the Stroud District was the woollen industry. The scope of the woollen industry within Gloucestershire as a whole is relatively well documented from approximately 1550. Many woollen mills were built within Stroud District and many mill owners diversified over time into the manufacture of, for example, sticks and pins. In succeeding years this process of diversification continued into many other areas of industry, particularly the general engineering sector.

   Although most of the mills in Stroud District are located in the five valleys centred on Stroud itself, it is deemed appropriate that all other mill sites should be designated as Priority Investigation Areas.

2. **Landfills, Waste Transfer and Waste Disposal Sites.**

The disposal of waste (past and present) is clearly an important potential source of land contamination within Stroud District. It is known, for example, that waste asbestos cement from a local factory was widely used to provide in-fill material in some parts of the District. Given the diverse nature of potential waste materials and the widespread distribution of landfill it is deemed appropriate to identify all landfills and waste disposal and transfer sites as Priority Investigation Areas.

3. **Public Rights of Way.**

It is known that two public rights of way, one in Chalford parish and one in Bisley parish, were surfaced using asbestos cement waste and it is understood that this may have been a common occurrence, particularly in the parishes surrounding Chalford. In the light of this information it is deemed appropriate that all public rights of way in the parishes of Chalford, Bisley, Minchinhampton and Thrupp should be designated as Priority Investigation Areas.

4. **Land For Which Stroud District Council May Be The "Appropriate Person".**

Land owned, or previously owned, by Stroud District Council has undoubtedly been used for potentially contaminative activities. Statutory guidance makes clear that local authorities must consider land for which it may itself have responsibilities by virtue of its current or former ownership or occupation. Thus, it is deemed important that Stroud District Council sets an example in this regard by designating its own current and past land holdings as Priority Investigation Areas.

5. Land Within Zone I (Inner) Source Protection Zones.

Controlled waters are specified receptors under the Part IIA regime. Within this category the Environment Agency have designated Groundwater Source Protection Zones for those sources used for public drinking water supply. The Source Protection Zone provides an indication of the risk to groundwater that may result from potentially contaminative activities. Three zones are defined – Inner, Outer and Total Catchment Source Protection Zones. Of these three zones an Inner Source Protection Zone denotes an area of the greatest sensitivity to potential contamination, defined by a travel time of 50 days or less from any point at, or below, the water table. In the light of this sensitivity to potential contamination it is deemed appropriate to identify all land within Zone I (Inner) Groundwater Source Protection Zones as a Priority Investigation Area.

6. Sites Notified to Stroud District Council By External Persons or Organisations.

It is recognised that any systematic inspection approach is unlikely to achieve flawless efficiency. Past experience has shown that many important contamination issues are first identified by those persons living close to the problem. It is recognised, therefore, that contamination issues drawn to the Council's attention by external persons or organisations must be regarded as a priority. Thus, it is deemed appropriate to identify all sites brought to the attention of the Council in this manner as a Priority Investigation Area.

APPENDIX G.

Classifications For Perceived Risk From Land Use.

Hazard Rank	Land Use	Perceived Risk Category
1	Asbestos manufacture, use and disposal of waste	HIGH (3)
2	Organic and inorganic chemicals production not included elsewhere	HIGH (3)
3	Radioactive materials processing and disposal	HIGH (3)
4	Gasworks, coke works, coal carbonisation and similar sites	HIGH (3)
5	Waste disposal sites, including hazardous wastes, landfills, incinerators, sanitary depots, drum and tank cleaning and solvent recovery	HIGH (3)
6	Oil refining, petrochemicals production and storage	HIGH (3)
7	Manufacture of pesticides	HIGH (3)
8	Pharmaceutical industries, including cosmetics and toiletries	HIGH (3)
9	Fine chemicals, dyestuffs and pigments manufacturing	HIGH (3)
10	Paint, varnishes and ink manufacture	HIGH (3)
11	Animal slaughtering and by-products, including soap, candle and bone works Detergent manufacture	HIGH (3)
12	Tanning and leatherworks	HIGH (3)
13	Metal smelting and refining, including furnaces and forges, electroplating, galvanising and anodising	HIGH (3)
14	Explosives industry, including fireworks manufacture	HIGH (3)
15	Iron and steelworks	HIGH (3)
16	Scrap yards	HIGH (3)
17	Engineering (heavy and general)	MEDIUM (2)
18	Rubber products and processing	MEDIUM (2)
19	Tar, bitumen, linoleum, vinyl and asphalt works	MEDIUM (2)
20	Concrete, ceramics, cement and plaster works	MEDIUM (2)
21	Mining and extractive industries	MEDIUM (2)
22	Electricity generating (excluding nuclear power stations)	MEDIUM (2)
23	Film and photographic processing	MEDIUM (2)
24	Manufacture of disinfectants	MEDIUM (2)
25	Paper and printing works, including newsprint (usually excluding “high street” printers)	MEDIUM (2)
26	Glass manufacture	MEDIUM (2)
27	Fertiliser manufacture	MEDIUM (2)
28	Timber treatment works	MEDIUM (2)
29	Sewage treatment works	MEDIUM (2)
30	Garages, including sale of automotive fuel and repair of cars and bikes	MEDIUM (2)
31	Transport depots, road haulage, commercial vehicle fuelling, local authority yards and depots	MEDIUM (2)

32	Railway land, including yards and tracks	MEDIUM (2)
33	Electrical and electronics manufacture, including semi-conductor manufacturing plants	MEDIUM (2)
34	Textiles manufacture and dyeing	MEDIUM (2)
35	Laundries and dry-cleaning (not usually “high street”)	MEDIUM (2)
36	Plastic products manufacture, moulding and extrusion Building materials manufacture Manufacture of fibre glass, fibre glass resins and products	MEDIUM (2)
37	Dockyards and wharves	MEDIUM (2)
38	Food processing, including brewing, malting and spirit distillation	LOW (1)
39	Airports and similar	LOW (1)

Classifications For Receptor Susceptibility.

Type of Receptor	Receptor Susceptibility Category
Human Health	HIGH (3)
Major Aquifer / Zone I Groundwater Source Protection Zone	HIGH (3)
Protected Ecosystems	MEDIUM (2)
Property	MEDIUM (2)
Minor Aquifer / Zone II Groundwater Source Protection Zone / Zone III Groundwater Source Protection Zone	MEDIUM (2)
Non-Aquifer	LOW (1)

Pollutant Linkage Probability Matrix.

	Receptor Susceptibility Category			
Perceived Risk Category		HIGH	MEDIUM	LOW
	HIGH	9	6	3
	MEDIUM	6	4	2
	LOW	3	2	1

APPENDIX H.

Protected Outdoor Play Space Within Stroud District.

The following is a list of sites that has been included within the provisions of Recreation Policy R1 of the Stroud District Council Local Plan:

Grid Reference	**Parish**	**Site Name**	**Site Area (ha)**
376700 179080	Alderley	Rose Hill Preparatory School	2.79
370100 197800	Alkington	Church View Recreation Ground	0.57
369500 196500	Alkington	Stone Cricket Club Ground	1.30
371100 210800	Arlingham	Arlingham Football Ground	1.30
370600 210700	Arlingham	Church Road Play Area	0.05
367900 199200	Berkeley	Park View Play Area	0.32
368500 199800	Berkeley	Berkeley Sports Ground	1.60
368100 199500	Berkeley	Berkeley County Primary School	1.56
390600 206100	Bisley with Lypiatt	King George V Playing Field + Play Area	2.10
389200 204000	Bisley with Lypiatt	Eastcombe Pleasure Ground	3.00
391800 203700	Bisley with Lypiatt	Oakridge Recreation Ground	2.30
389100 203800	Bisley with Lypiatt	Thomas Keble School	4.10
392200 204600	Bisley with Lypiatt	Waterlane Play Area	0.21
383300 213800	Brookthorpe with Whaddon	Wynstones School	2.02
383200 205500	Cainscross	Queens Drive Play Area	0.06
383100 205900	Cainscross	Cashes Green Recreation Ground	1.30
382400 204800	Cainscross	Orchard Road Play Area	0.11
383300 204700	Cainscross	Cope Chat Playing Field	2.43
382900 204900	Cainscross	Victory Park	3.39
382600 205100	Cainscross	Foxmoor County Primary School	2.20
383200 205000	Cainscross	St. Matthews C of E Primary School	0.82
375900 200600	Cam	Cam Green Playing Field	0.89

Grid Reference	Parish	Site Name	Site Area (ha)
374400 199500	Cam	Tilsdown Play Area	0.08
375200 200100	Cam	Cam Mills Bowling Green	0.40
374300 201200	Cam	Dursley & District Athletics Club Ground	2.60
374500 201000	Cam	Jubilee Playing Fields	2.40
375300 199800	Cam	Cam Sports Club Ground	1.40
374700 200900	Cam	Draycott Play Area	0.7
374000 200000	Cam	Woodfield County Infant and Junior School	1.67
374100 199700	Cam	Woodfield Play Area	0.60
374900 199300	Cam	Rednock School (Norman Hill Field)	4.72
375400 199700	Cam	Hopton Endowed C of E Primary School	0.45
376200 198800	Cam	Cam House School	0.81
375200 199600	Cam	Cam Everlands County Primary School	0.55
389900 203200	Chalford	Chalford Allotments for Recreation	2.96
390100 203600	Chalford	Highfield Sports Ground	3.05
390400 202500	Chalford	Chalford Recreation Ground	0.47
388400 203100	Chalford	Chalford Allotments for Recreation	1.96
388800 203700	Chalford	Bussage C of E Primary School	2.18
389900 203400	Chalford	Chalford Hill County Primary School (Highfield Way site)	1.33
377200 201600	Coaley	Coaley Recreation Ground	1.20
377100 201500	Coaley	Betworthy Estate Play Area	0.43
389800 212700	Cranham	Cranham Cricket Ground	3.30
389200 212300	Cranham	Cranham Field + Play Area	1.53
376500 197600	Dursley	Highfields Approach Field + Play Area	1.28
375400 198400	Dursley	Dursley Recreation Ground	4.30
375900 198300	Dursley	Lister's Bowling Green	0.15
375900 197300	Dursley	Cambridge Avenue Play Area	0.01
375300 199100	Dursley	Kingshill House Gardens Play Area	0.08

Grid Reference	Parish	Site Name	Site Area (ha)
375200 199300	Dursley	Maple Close Play Area	0.04
376200 197500	Dursley	Dursley C of E Primary School	1.53
375300 198700	Dursley	Rednock School	5.19
376900 205300	Eastington	Owen Harris Memorial Ground	2.89
377700 205500	Eastington	Eastington County Primary School Field (off Cotswold Avenue)	1.23
375000 208200	Frampton on Severn	Frampton Cricket Field	0.67
375300 208400	Frampton on Severn	Frampton Cricket Club Ground (Whitminster Lane)	1.24
375100 208300	Frampton on Severn	Frampton Football Ground	1.10
375000 208500	Frampton on Severn	Frampton on Severn C of E Primary School	0.87
374600 209300	Fretherne with Saul	Saul Playing Field	2.00
378500 203100	Frocester	Frocester Cricket Ground - Pounds Close	2.30
376900 203200	Frocester	Frocester Cricket Club Ground - Church Field	2.31
366300 199600	Ham and Stone	Nuclear Sports Social Club Ground	2.32
368100 195100	Ham and Stone	Court Mead Play Area	0.40
368400 200800	Hamfallow	Oldlands Cricket Club Ground	1.20
367500 202000	Hamfallow	Jubilee Play Area	0.71
368400 201200	Hamfallow	Berkeley Vale Community School	3.59
367600 201600	Hamfallow	Sharpness County Primary School	0.19
380400 212700	Hardwicke	The Close Playing Field	1.65
380200 212900	Hardwicke	Hardwicke Play Area	0.09
380100 212900	Hardwicke	Hardwicke Parochial Primary School	1.67
380300 212800	Hardwicke	Hardwicke Playing Field	2.12
381500 210100	Haresfield	Merryfields Playing Field	1.20
376800 189600	Hillesley	Jubilee Playing Fields	1.91
383700 197900	Horsley	Horsley Playing Fields	1.27
381300 203500	Kings Stanley	Kings Stanley Sports and social Club Ground	3.80

Grid Reference	Parish	Site Name	Site Area (ha)
383400 203800	Kings Stanley	Manor View Play Area	0.01
383400 204200	Kings Stanley	Selsley and Rodborough Cricket Ground	1.10
381800 203200	Kings Stanley	Daffodils Play Area	0.08
381400 203400	Kings Stanley	Kings Stanley County Infants School	0.56
374400 191700	Kingswood	Kingswood Recreation Ground	2.80
380400 203500	Leonard Stanley	Leonard Stanley Recreation Ground	2.80
380200 203400	Leonard Stanley	Wesley Road Play Area	0.02
380700 203500	Leonard Stanley	Leonard Stanley C of E Primary School	0.90
376200 212400	Longney	Longney C of E Primary School	0.37
387700 200800	Minchinhampton	The Bulwarks Play Area	0.22
387500 200700	Minchinhampton	Stuart Playing Field	2.50
386200 201000	Minchinhampton	Windmill Road Rugby Pitch	0.90
385000 201100	Minchinhampton	Amberley Play Area	0.04
386400 200600	Minchinhampton	Horsfall Playing Field and Play Area	0.77
386500 202400	Minchinhampton	Orchard Road Play Area	0.37
385400 200100	Minchinhampton	Beaudesert School	1.39
386000 200800	Minchinhampton	Beaudesert School Playing Fields	4.42
387000 200900	Minchinhampton	Minchinhampton Primary School	1.11
391900 210600	Miserden	Whiteway Playing Field	0.64
393500 208700	Miserden	Miserden Playing Field	0.50
383500 199300	Nailsworth	Shortwood Football Club Ground	2.66
384000 200300	Nailsworth	Nortonwood Way Play Area	0.10
384700 200100	Nailsworth	Cooper Oil Tennis Court	0.05
385000 199400	Nailsworth	Nailsworth Tennis Club Courts	0.18
385300 199400	Nailsworth	King George V Playing Fields	3.24
383700 200300	Nailsworth	Miles Marling Playing Field	0.88

Grid Reference	Parish	Site Name	Site Area (ha)
383900 199800	Nailsworth	Lawnside Play Area	0.15
384500 199700	Nailsworth	The Tynings	0.23
383900 199900	Nailsworth	Forest Green Football Club Ground	0.70
385400 199500	Nailsworth	Nailsworth Mills Bowling Green	0.20
383700 200000	Nailsworth	Nailsworth C of E Primary School	4.46
373900 195900	North Nibley	Innocks Estate Play Area	0.10
380200 200800	Nympsfield	Nympsfield Sports Ground (King George V)	2.45
380100 200600	Nympsfield	St Joseph's RC Primary School	0.72
389400 210700	Painswick	Sheepscombe Cricket Ground	3.00
389300 210300	Painswick	Sheepscombe Play Area	0.01
386100 209200	Painswick	Broadham Playing Field	6.12
386600 209700	Painswick	Falcon Bowling Green	0.18
386700 209800	Painswick	Painswick Bowling Green	0.33
386900 209800	Painswick	Painswick Recreation Ground	2.25
386400 210000	Painswick	The Croft County Primary School	1.62
383100 206500	Randwick	Randwick Playing Field	1.90
382700 206000	Randwick	Westrip Play Area	0.01
383000 205800	Randwick	Cashes Green County Primary School	0.74
384400 204400	Rodborough	Rectory Gardens Play Area	0.25
384800 204400	Rodborough	Rodborough Playing Field	1.24
384100 204600	Rodborough	Stroud Rugby Club Ground	2.36
385000 203400	Rodborough	Rodborough Common	1.64
384300 203300	Rodborough	Rodborough Play Area	0.12
384400 203600	Rodborough	Gastrells County Primary School	1.00
385600 202500	Rodborough	Bownham Park School	2.67
374100 202900	Slimbridge	Slimbridge Playing Field	2.40
374600 202800	Slimbridge	Slimbridge Football Ground	1.20

Grid Reference	Parish	Site Name	Site Area (ha)
380400 206400	Standish	Stagholt Lane Playing Field	1.01
373400 199500	Stinchcombe	Stragglers Sports Ground Extension	1.80
373500 199200	Stinchcombe	Stragglers Sports Ground	1.80
372800 198800	Stinchcombe	Church Field Play Area	0.27
380300 205500	Stonehouse	Stonehouse Youth Club/Church Hall	0.12
380300 206100	Stonehouse	Perth Play area	0.02
380200 206200	Stonehouse	Oldends Lane Playing Field	6.10
380300 204800	Stonehouse	Wharfdale Road Play Area	0.04
380400 205200	Stonehouse	Laburnum Walk Recreation Ground	1.10
380700 205500	Stonehouse	Meadow Road Play Area	1.28
381000 206100	Stonehouse	Maidenhill School	5.49
380200 205400	Stonehouse	The Park Junior School	1.30
380400 205800	Stonehouse	The Shrubberies School	0.32
380700 204900	Stonehouse	Wycliffe College - Senior	4.14
381300 204800	Stonehouse	Wycliffe College - Junior	6.30
380200 205200	Stonehouse	Wycliffe College - The Berryfield	5.26
385400 206100	Stroud	Uplands Playing Field	1.00
385700 205200	Stroud	Parliament Street Recreation Ground	1.74
386000 204600	Stroud	Highfield Road Play Area	0.13
384500 205800	Stroud	Stratford Park	8.20
386400 205300	Stroud	Summer Crescent Play Area	0.30
384000 205700	Stroud	Archway Gardens Play Area	0.10
386800 205100	Stroud	Mason Road Playing Field	1.80
384500 205400	Stroud	Stratford Court	3.27
384100 205500	Stroud	Stroud Cricket Club Ground	1.40
385300 205500	Stroud	Park Gardens Play Area	0.30
386100 204800	Stroud	Daisy Bank Recreation Ground	1.64

Grid Reference	Parish	Site Name	Site Area (ha)
383500 205800	Stroud	Archway School	5.32
384100 205900	Stroud	Callowell County Primary School	1.86
383700 205000	Stroud	Marling School	11.56
386500 205200	Stroud	Parliament Primary School	1.17
384100 205200	Stroud	Stroud High School	3.13
384700 205300	Stroud	St Roses Special School	0.39
384700 205300	Stroud	The Rosary RC Primary School	0.64
386400 202700	Thrupp	Brimscombe Informal Open Space	0.57
386500 202600	Thrupp	Brimscombe Football Ground	0.90
386400 203200	Thrupp	Yew Tree Way Play Area	0.63
378300 197600	Uley	Shadwell Sports Ground	2.30
378700 198400	Uley	Uley Play Area	0.16
379200 198300	Uley	Uley C of E Primary School	0.37
386100 214800	Upton St Leonards	Upton St Leonards Recreation Ground	3.50
386600 215000	Upton St Leonards	Upton St Leonards C of E Primary School	1.60
383900 206900	Whiteshill	Whiteshill Playing Field	2.60
377200 208200	Whitminster	Whitminster Recreation Ground	1.60
377500 208100	Whitminster	Kidnams Walk Play Area	0.05
377400 208200	Whitminster	Little Holbury Play Area	0.04
384100 202900	Woodchester	Woodchester Playing Field	1.00
384100 201000	Woodchester	St Dominics Primary School	0.29
384100 202600	Woodchester	Woodchester Endowed C of E Primary School	0.32
376400 193500	Wotton-under-Edge	Synwell Playing Field	1.60
374700 192800	Wotton-under-Edge	Wotton Rugby Club Ground	5.40
375500 192800	Wotton-under-Edge	Bluecoat School Playing Field	1.31
376100 192600	Wotton-under-Edge	Shepherd Leaze Play Area	0.06
376200 192800	Wotton-under-Edge	Pitman Place Play Area	0.08

Grid Reference	Parish	Site Name	Site Area (ha)
376200 192400	Wotton-under-Edge	Bearlands Play Area	0.02
375200 193200	Wotton-under-Edge	Dryleaze Bowling Green	0.12
374700 192500	Wotton-under-Edge	Katharine Lady Berkeley's School	8.42
376000 192900	Wotton-under-Edge	The British School	1.79

APPENDIX I.

Internal Liaison and Contacts.

DEPARTMENT	CONTACT NAME	CONTACT DETAILS
Planning Strategy and Control	Andrew Case	Ext: 4442
Building Control	Phil Williams	Ext: 4310
Estates Management	Alison Fisk Jill Thompson	Ext: 4447 Ext: 4431
Legal Services	Tom Clark Giles Pink	Ext: 4369 Ext: 4377
Planning Liaison (Environmental Health)	Derrick Ind	Ext: 4489
Housing Services	Andrew O' Brien	Ext: 4180

APPENDIX J.

Key Guidance in Connection with Detailed Inspections.

Area of Guidance	Publication
General Good Practice	Model Procedures for the Management of Contaminated Land [CLR 11] (in preparation) BS10175:2001 – Investigation of Potentially Contaminated Sites – Code of Practice
Desk Studies	Documentary Research on Industrial Sites (CLR 3) Prioritisation and Categorisation Procedure for Sites Which May be Contaminated (CLR 6)
Site Reconnaisance	Guidance on Preliminary Site Inspection of Contaminated Land (CLR 2)
Intrusive Site Investigation	Sampling Strategies for Contaminated Land (CLR 4) A Framework for Assessing the Impact of Contaminated Land on Groundwater and Surface Water (CLR 1)

APPENDIX K.

A Checklist of Information Requirements for External Appointment of Consultants and Contractors.

Information Requirements	Relevant Responses By Consultant/Contractor
A. GENERAL	
1. Background on company capability.	Demonstrate a reliable pedigree.
2. Numbers and qualifications of staff.	Identify those members of staff with appropriate skills.
3. CV and availability of key staff.	Appropriate information on staff experience and availability.
4. Details of Quality Assurance systems.	Provide details of quality management systems indicating whether accredited by a third party. Identify technical procedures to be used. Indicate which staff will undertake technical review. Demonstrate how the quality of sub-contractors is to be ensured.
5. Management of health and safety.	Identify health and safety management procedures
6. Track record on similar projects.	Demonstrate experience in similar projects.
7. Client references.	Provide on request.
8. Details of insurance cover.	Identify insurance carried for third party liability and professional indemnity. Identify limitations and exclusions.
9. Membership of trade associations.	Provide on request.
10. Compliance with codes of practice.	Supply relevant information.
B. PROJECT SPECIFIC	
1. Technical proposal	Demonstrate clear understanding of the specification.
2. Project management plan.	Demonstrate clear project management procedures.
3. Details of sub-contractors.	Indicate where they will be used and the quality control in place.
4. Details of technical procedures	Specify procedures and demonstrate that allocated staff have ability to undertake them.
5. Reporting	Detail data and information to be provided at each stage.
6. Programme	Provide clear evidence of being able to meet timescale.
7. Financial proposal.	Provide a fixed fee, fee rates and a ceiling cost or open-ended price.
8. Conditions of engagement.	Define responsibilities and liabilities under the contract.

APPENDIX M.

GLOSSARY OF TERMS USED IN PART IIA.

AONB	Area of Outstanding Natural Beauty.
Appropriate person	Any person determined to bear responsibility for any thing to be done by way of remediation in any particular case.
Building	Any structure or erection, and any part of a building including any part below ground, but not including any plant or machinery comprised in a building.
Class A person	A person who is an appropriate person because he/she has caused or knowingly permitted a pollutant to be in, on or under the ground.
Class B person	A person who is an appropriate person because he/she is the owner or occupier of the contaminated land, where no Class A appropriate person can be found with respect to a particular remediation action.
CLEA	Contaminated Land Exposure Assessment – a series of guideline values based on human toxicological information formulated for a range of environmental scenarios.
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 – a) significant harm is being caused or there is a significant possibility of such harm being caused, or; b) pollution of controlled waters is being, or is likely to be, caused.
Controlled waters	Defined in section 104 of the Water Resources Act, 1991, these include: a) inland waters (rivers, streams, underground streams, canals, lakes and reservoirs);

	b) groundwater (any water contained in underground strata, wells or boreholes); c) territorial waters (the sea within 3 miles of a baseline); d) coastal waters (the sea within the baseline up to the line of highest tide, and tidal waters up to the fresh water limit).
DETR	Department of the Environment, Transport and the Regions.
Drinking water abstraction	The taking of water from a source for drinking water.
Eco-system	A biological system of interacting organisms and their physical environment.
Exclusion	Any determination by the enforcing authority that a person is not to be treated as an appropriate person.
GIS	Geographical Information System.
Groundwater	Any water contained in underground strata, wells or boreholes.
Harm	Harm to the health of living organisms or other interference with the ecological systems of which they form part and, in the case of man, includes harm to his property.
ICRCL	Interdepartmental Committee on the Redevelopment of Contaminated Land.
Intrusive investigation	An investigation of land which involves actions going beyond simple visual inspection of the land, limited sampling or assessment of documentary information.
Part IIA	Part IIA of the Environmental Protection Act, 1990
Pathway	One or more routes or means by, or through, which a receptor:

	a) is being exposed to, or affected by, a contaminant, or b) could be so exposed or affected.
Pollutant linkage	The relationship between a contaminant, a pathway and a receptor.
Pollution of controlled waters	The entry into controlled waters of any poisonous, noxious or polluting matter or any solid waste matter.
RAMSAR site	A site protected under an international convention on protection of wetlands of international importance, especially as habitats for waterfowl.
Receptor	Either: a) a living organism, a group of living organisms, an ecological system or a piece of property which is being, or could be, harmed by a contaminant; or b) controlled waters which are being, or could be, polluted by a contaminant.
Remediation	The carrying out of works to prevent or minimise the effects of contamination. In the context of this regime, the term also extends to the prior assessment of the condition of land and to the subsequent monitoring of the land.
Remediation Declaration	A document prepared and published by the enforcing authority recording remediation actions which it would have specified in a Remediation Notice, [but which it is precluded from specifying by virtue of sections 78E(4) or (5)] the reasons why it would have specified those actions and the grounds on which it is satisfied that it is precluded from specifying them in a Notice.
Remediation Notice	A Notice specifying what an appropriate person is to do by way of remediation and the time periods within which he/she is required to do each of the things specified.

Remediation Statement	A Statement prepared and published by the responsible person detailing the remediation actions which are being, have been or are expected to be done, as well as the time periods within which these things are being done.
Risk assessment	The study of: a) the probability, or frequency, of a defined hazard occurring; and b) the magnitude (including the seriousness) of the consequences
Source	A substance in, on or under the ground with the potential to cause harm.
Substance	Any natural or artificial substance, whether in solid or liquid form or in the form of a gas or vapour.