# **Contaminated Land Strategy**

# Part IIA of the Environmental Protection Act 1990

# **Rugby Borough Council**



**June 2001** 

# **CONTAMINATED LAND INSPECTION STRATEGY**

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#### **EXECUTIVE SUMMARY**

Rugby Borough Council has produced a strategy for the identification, inspection and remediation of contaminated land in accordance with its enforcement responsibilities under Part IIA of the Environmental Protection Act 1990 (Part IIA). It also sets down how the Council will address its liability under Part IIA by virtue of its current or previous ownership or occupation of land that may be contaminated.

The Council has already made progress in preparing for its responsibilities. The strategy details how the Council will take a rational, ordered and efficient approach.

The Council's priorities in dealing with contaminated land are:

- 1. To protect human health
- 2. To protect controlled waters
- 3. To protect designated ecosystems
- 4. To prevent damage to property.
- 5. To prevent further contamination of land
- 6. To encourage voluntary remediation

A five-year programme of identification and remediation will be undertaken, running from July 2001.

#### July 2001 to July 2006

An inspection programme based on population-density is proposed. Priority will be given to inspecting land with a significant known history of potential contamination which could be a risk to human health.

It is recognised that some sites may be identified outside this general approach to inspection that will require urgent attention. These sites will be dealt with as they arise. The Council will support parties wishing to undertake voluntary remediation.

The Council is the lead regulator on contaminated land but, wherever necessary, the Council will work in partnership with other organisations particularly the Environment Agency. Consultation with all statutory consultees was taken between April 2001 and June 2001.

Upon completion of the identification of all known potentially contaminated sites, a final prioritisation exercise will be undertaken to establish the order in which problem sites will be cleaned up.

The regulations set clear criteria that must be met before land can be formally designated as contaminated land. The Council must also maintain a public register that must contain only certain information.

#### 1.0 INTRODUCTION

# 1.1 Background

Under Part IIA of the Environmental Protection Act 1990 (Part IIA) local authorities must adopt and publish a strategy for the inspection of contaminated land, having regard to statutory guidance.

In the past industrial activities have allowed land to become contaminated in various ways over many years. This land includes industrial and waste disposal sites. Landfilling of waste sometimes took place without adequate precautions against leaching or the escape of landfill gases. Land in this condition, if not dealt with adequately, can pose a serious threat to health or the environment, including pollution of the water environment. Land contamination may also occur naturally.

Land contamination can cause economic and financial damage. Uncertainties about remediation requirements and liability for them can cause blight, deterring development of land and adding to pressures on greenfield sites. Much of the past contamination has already been found and dealt with, particularly during new development on previously used land using the planning process and statutory nuisance provisions.

Part IIA provides an improved system for the identification, inspection and remediation of contaminated land, where the contamination is causing unacceptable risk to human health or the wider environment, and to prevent future contamination from occurring. The extent of any risk will be assessed in the context of the current use and circumstances of the land.

The strategy will contribute to the Government commitment to sustainable development.

Rugby Borough Council `aims to promote a high quality, safe and sustainable physical and social environment.

The Council is committed to the principles of the Enforcement Concordat, prepared by the Cabinet Office, which we have formally adopted. This model of good practice applies to enforcement procedures and will, therefore, be applicable to the Council's regulation of Part IIA.

Part IIA primarily aims to protect human health and is, therefore, a key activity for the Environmental Health Division.

#### 1.2 Regulatory context

On the 1st April 2000 the Government enacted section 57 of the Environment Act 1995, implementing Part IIA of the Environmental Protection Act 1990. It requires

local authorities to inspect their areas periodically for the purpose of identifying contaminated land and have regard to statutory guidance issued by the Secretary of State. Current statutory guidance is found in Department of the Environment, Transport & Regions (DETR) Circular 2/2000.

# 1.2.1 Contaminated Land Regime

The national objectives of the new regime (Part IIA) are:

- Identifying and dealing with unacceptable risks
- Bringing land back into beneficial use
- Keeping cost burden proportionate manageable and economically sustainable
- Suitable for current use and circumstances
- Integrates human health and groundwater controls and thus streamlining regulation

The emphasis is on stimulating voluntary action, which the Council supports. Intervention will only occur when necessary and when informal approaches have been exhausted.

The Part IIA role complements the Council's existing role as planning authority. There are three principal functions under the regime, as follows:

- To periodically inspect the area to identify contaminated land
- To determine whether any site is contaminated land
- To act as enforcing authority for all contaminated land which is not designated as a 'special site' (the Environment Agency will be the enforcing authority for special sites, which are defined in the Regulations and Appendix 1)

A strategic approach is advocated, and as such by July 2001 each relevant local authority must adopt and publish an inspection strategy.

When land is identified as contaminated there is a legal process that must be followed to ensure the site is made safe and the appropriate person(s) pay for the work.

Enforcing authorities have four main tasks in exercising their powers under Part IIA.

- To establish who is responsible for the remediation of the land (the appropriate person(s))
- To decide, after consultation, what remediation is necessary and to ensure that it is carried out, either voluntarily, or by serving a remediation notice or through carrying out the work themselves

- 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
- To record certain regulatory actions on a public register.

# 1.2.2 Other regulatory regimes

Part IIA has a very specific purpose and is not the only regulatory regime that relates to contaminated land. Part IIA addresses sites that are causing unacceptable risks, having regard to the current use of the land. Part IIA should only be applied when no other regulatory regime is available. These are summarised below, and the Council has some responsibility under these regimes also.

It is important to recognise that under Part IIA 'contaminated land' is specifically defined (see s1.2.3). The other regimes are complementary to Part IIA but the meaning of 'contaminated land' may be very different.

# Planning/Development Control

The Council is made aware of the majority of contaminated land through the planning regime, where contamination is a material consideration. While the introduction of Part IIA will undoubtedly identify contaminated land, it is anticipated that the redevelopment of brownfield sites, and the associated planning controls, will remain the primary mechanism for dealing with contaminated land. Any remediation agreed as a planning condition will be dealt with under planning controls and not under Part IIA.

Planning law controls the use of land and as such a change of use will normally require planning permission. The 'suitable for use' (i.e. remediation of the land to make it safe for its current or proposed use) approach adopted under Part IIA is applied here too. The level of risk to human health posed by contaminated land depends on the types of contaminants, their concentrations and the likelihood of persons coming into contact with the contaminants. The 'sensitivity' of the proposed use will dictate the extent of remediation necessary.

#### Water pollution

The Water Resources Act 1991 gives the Environment Agency powers to deal with harm to controlled waters (see Appendix 1) being caused by contaminated land. While Part IIA legislation does not revoke these powers, DETR have indicated that such problems should now be dealt with under the new contaminated land regime.

The Groundwater Regulations 1998 enable the Environment Agency to protect groundwater from potential sources of contamination such as fuel tanks, rather than land itself.

The Council will maintain its close working relationship with the area and regional offices with the Environment Agency. In designating any contaminated land as a result of risk to controlled waters the Council will take into account any comments made by the Environment Agency with respect to remediation.

# **Integrated Pollution Prevention & Control (IPPC)**

IPPC will gradually replace the integrated pollution control regime (IPC) and is, like Part IIA, enforced either by the local authority or the Environment Agency, depending upon the nature of the site.

Certain processes must be authorised to operate under controlled conditions. The regime restricts emissions to air, water and land. The purpose of this legislation is to prevent pollution in the future. Site operators are required to undertake a site condition survey prior to receiving a license to operate. If the site condition is such that areas of land meet the definition of contaminated land, then submission of a site survey may trigger action under Part IIA. In the event of contamination the operator must return the site to its original condition before surrendering the permit. In certain circumstances, action to remediate contaminated land must be taken under IPPC rather than Part IIA. Existing processes will be brought under this legislation in stages over the next seven years, although it will apply to any new processes or any substantial change to an existing process.

The Environment Agency and Local Authorities are joint regulators of both Contaminated Land and IPPC. In order to preserve continuity, the DETR has therefore stated that if an enforcing authority regulates a particular IPPC process, it should also carry out any necessary duties under Part IIA.

#### **Waste Management Licensing**

Since the 1970's landfill sites and activities involving the processing of waste, such as scrap metal recyclers, have required a waste management licence. This regime is being absorbed into IPPC. Many such sites were abandoned before the licensing was introduced and it is these sites that are likely to be potentially contaminated land for the purposes of Part IIA.

# **Statutory Nuisance**

Previously, under Part III of the Environmental Protection Act 1990 action to deal with 'nuisance' caused by contamination could be taken by the local authority. Such action must now be dealt with under the Part IIA regime. However, odour nuisance, including from remediation works, can be addressed through Part III.

# Radioactivity

Part IIA currently does not apply to radioactively contaminated land although DETR have indicated that its scope may be broadened to include such land. The regime does not apply to naturally-occurring radon gas either. Areas of the Borough are currently designated radon-affected areas by the National Radiological Protection Board.

# **Building Regulations 1991**

The Building Regulations 1991 give the Building Control Officers authority to address contamination and landfill gas issues within the building footprint. Where a site is known to be on or adjacent to a gassing landfill Building Control Approval will only be granted subject to the design of the building(s) incorporating adequate gas control measures.

Consequently, a multi-disciplinary approach to approval of remediation schemes is required involving Building Control, Planning and Environmental Health.

#### 1.2.3 Definition of Contaminated Land

For the first time there is a legal definition of Contaminated Land; given in section 78A(2) of Environmental Protection Act 1990

'Any land which appears to the Local Authority in whose area it is situated to be in such a condition, by reason of substances in, on or under the land, that-SIGNIFICANT HARM is being caused or there is a SIGNIFICANT POSSIBILITY of such harm being caused; or

POLLUTION OF CONTROLLED WATERS is being, or is likely to be, caused.'

Thus land may be polluted but unless it presents a significant risk to a receptor such as a human being or an aquifer used to supply water the mere presence of a former contaminative use does not require immediate action by the Local Authority. Contamination may be natural or artificial.

Biological agents are currently not included but are being reviewed by the DETR. As a precaution, in this strategy, contaminated land will include land which may be contaminated by biological agents. However, any action will be limited to that permitted by the legislation.

Significant harm is further defined in relation to specified receptors including human beings, ecological systems, buildings, property and protected waters.

In order to determine whether there is the possibility of significant harm being caused, Local Authorities must consider the nature, extent and duration of contamination and assess the susceptibility of nearby receptors. The Statutory Guidance lists several potentially sensitive receptors that can be effected by a contaminant.

Potentially Sensitive Receptors

RECEPTOR	LAND USE TYPES		
Human Beings	Allotments		
Traman Beinge	Residential with gardens		
	Residential without gardens		
	Schools or nurseries		
	Recreational/Parks, Playing Fields, Open		
	Spaces		
	Commercial / Industrial		
Ecological Systems	SSSIs		
Leological Systems	National Nature Reserves		
	Areas of special protection for birds European Sites		
	SAC, SPAs		
	Candidate SACs & SPAs		
	Ramsar sites Nature Reserves		
	Wildlife Sites		
Buildings and historic sites	Scheduled Ancient Monuments		
Banangs and motorio office	Listed Buildings		
	World Heritage Sites		
	Historic parks and gardens		
	Historic battlefields		
	Conservation areas		
Property in other forms:	Agricultural Land		
Crops, livestock, home-	Allotments & Gardens		
grown produce, owned or	Forestry Areas		
domesticated animals, wild			
animals subject to shooting			
or fishing rights			
	Surface Waters		
Water	Drinking Water Abstractions		
	Source Protection Zones		
	Groundwaters – Private Abstractions		
	Groundwaters – Major Aquifers		

# 1.2.4 Pollutant Linkage

The Government has specified the use of a 'Source - Pathway - Receptor' (SPR) model when assessing the risk posed by a contaminated site.

Source + Pathway + Receptor
(eg. a heavy metal in a landfill site)

Pathway + Receptor
(eg. fractured strata) (eg. residential properties)

This is known as a 'Pollutant Linkage'.

The Guidance requires that for land to be identified as contaminated each stage of the Pollutant Linkage must be present. If any one of the three key stages is missing, the land, although possibly polluted, cannot be designated as contaminated.

# 1.2.5 Principles of Risk Assessment

Risk is the combination of (a) the probability, or frequency, of occurrence of a defined hazard (for example, exposure to a substance with the potential to cause harm) and (b) the magnitude (including the seriousness) of the consequences.

The extent of risk is dependent upon a number of factors, including:

- characteristics of the substances in the land
- local geology and hydrogeology
- nature and presence of receptors
- land-use on site
- adjacent land-use(s)
- presence of existing pathways, and the potential to create new ones
- whether or not any measures currently exist to reduce/limit risk

Before it embarks on the 'Risk Assessment' phase, the Council must therefore identify, collate and review all of the following data:

- local knowledge, expertise and information currently held within the Council (Details on closed and operational landfill sites will be checked against records held by the Environment Agency);
- Environment Agency data on actual harm and water pollution;
- Information provided by other statutory consultees;
- historical and current land-use data used to identify and locate highly contaminating activities. Sources of information will include historical maps and OS Landline data;
- the broad geology of the area, including artificial and superficial deposits, solid geology and borehole data;

- the broad hydrogeology and hydrology of the area, including the location of water courses, licensed abstractions, private water supplies and aquifer classification and protection zones;
- baseline geochemical data available from the BGS
- any potential 'pathways' existing in the area, which could transfer pollutants from a contaminated site to a receptor;
- the location of 'potentially sensitive receptors', e.g. schools, playing fields, SSSIs etc, and the likelihood of them being at risk from contamination.

A computer model can be produced. If the model indicates that a pollutant linkage exists, (i.e. Source – Pathway – Receptor), a site walkover is necessary. Should further information on contaminants be required the Council must carry out an intrusive site investigation, the results of which will either confirm or refine the ground model.

# 1.3 Roles and Responsibilities

The Council shares responsibilities for the enforcement of the Part IIA regime with the Environment Agency; the national body responsible for a range of environmental functions. Both organisations have responsibilities in relation to other regulatory regimes, which were outlined in 1.2.2. In view of this complex, sometimes overlapping, enforcement function, it is important to recognise the distinct roles expected under Part IIA, which are outlined below.

# 1.3.1 Role of Rugby Borough Council

Local authorities have been given the primary regulatory role under the Part IIA regime as they have historically had responsibility for dealing with any statutory nuisance caused by land contamination and also address contamination through their land use planning function. The local authority has a duty:

- To cause their areas to be inspected for contaminated land
- To determine whether any particular site meets the statutory definition of contaminated land
- To act as the enforcing authority for all contaminated land, unless the site meets the definition of a "special site" (in which case the Environment Agency will act as the enforcing authority).

As enforcing authority the Council may do any of the following:

- Establish who should be responsible for remediation of the land
- Decide, following consultation with the appropriate person, the landowner and Environment Agency, what level of remediation is required
- Determine who should be liable for the cost of the remediation work, where possible following the principle of 'polluter pays.
- Record certain information about regulatory actions on a public register

# 1.3.2 Role of Environment Agency

The Environment Agency has a secondary regulatory role in relation to Part IIA. Specifically, the Environment Agency has the following responsibilities:

- Provide information to the local authority agreed in the Local Government Association's Memorandum of Understanding.
- Provide site-specific advice upon request
- Enforce the regime where it relates to special sites
- Advise on matters pertaining to water pollution
- Collate information from all Local Authorities in England and Wales, and produce a national report on the 'State of Contaminated Land'.
- Administer the contaminated land research and development programme on behalf of DETR

If an area of contaminated land has been identified, the approach for dealing with it will be the same regardless of whether the local authority or the Environment Agency is the regulator. The initial determination of whether land is contaminated is the responsibility of the local authority and Regulations set down the process for referring special sites to the Environment Agency.

# 1.4 Development of Strategy

The Council recognises that certain stakeholders need to participate in the drafting of the strategy. These arrangements are outlined below.

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

This strategy has been developed to meet these requirements. Particular reference has been made to "Contaminated Land Inspection Strategies - Technical Advice for Local Authorities" issued by the Department of the Environment, Transport and the Regions.

#### 1.4.1. Statutory requirements

The DETR Guidance states that any approach to inspecting land should:

- be rational, ordered and efficient:
- be proportionate to the seriousness of any actual or potential risk;
- seek to ensure that the most pressing and serious problems are identified and dealt with first;
- ensure that resources are concentrated on those areas where the authority is most likely to identify contaminated land; and

 ensure that the Council identifies all the requirements needed to complete a detailed inspection of particular areas of land.

The duties of authority as regulator should be kept clearly separate from it's responsibilities as a landowner or polluter

# 1.4.2 Internal arrangements

Although the Environmental Health Division is responsible for implementing the Councils statutory duties under Part IIA, the multidisciplinary nature of Contaminated Land requires the co-operation and input of several departments within the Authority including Planning Division, Building Control Division, Engineering and Works Division, Financial Services Division, Legal Services Unit, Information Technology Division and Communications and Media.

The Environmental Health Division will be responsible for liaison and consultation within the Council.

A working party will be formed within the Council to ensure effective implementation of the strategy.

Officers who regularly visit sites within the Borough, e.g. Environmental Health, Planning, Highways and Building Control, will be encouraged to report sites which may be contaminated to the Pollution Control Team.

# 1.4.3 External arrangements

The successful completion and implementation of the Councils Contaminated Land Strategy also requires consultation with various external organisations, including MAFF and English Nature.

The other statutory consultees are specified in Appendix 2.

Rugby Borough Council has maintained a well-established working relationship with other local authorities in the region. The Council is a member of the Warwickshire Environmental Protection Council (WEPC) which established a working group of officers in December 2000 to share expertise in developing their individual strategies.

Pollution does not respect administrative boundaries and, therefore, there is a need to ensure arrangements are in place with neighbouring authorities to address sites where contamination has spread into adjoining land or water. This is being carried out through WEPC and consultation with other neighbouring authorities.

# 1.4.4 Objectives of strategy document

The main objective of the strategy document is to describe 'how' the Council intends to implement its statutory duties under Part IIA, and not to name individual sites which it knows to be contaminated.

The Key objectives of the strategy are:

- To meet the statutory requirement to produce a strategy
- To demonstrate how the Council meets the criteria specified by DETR in the statutory guidance
- To provide a strategic approach
- To be rational, ordered and efficient
- To be proportionate to the seriousness of any actual or potential risk
- To ensure that the most serious problems are located first
- To concentrate resources on investigating in areas where contaminated land is most likely to be identified
- To efficiently identify requirements for the detailed inspection of particular areas of land
- To inform stakeholders of the Council's intentions in relation to contaminated land
- To supply the Environment Agency with a strategy to inform their report on contaminated land

#### 2.0 A DESCRIPTION OF THE BOROUGH

The inspection strategy is concerned with identifying contaminated land, as defined under Part IIA. Identification of contaminated land relates to the current use of the land, although the contamination may have occurred many years earlier.

The inspection strategy has to reflect local circumstances and the scope of inspection shall be determined by the past and present use of land in the area.

This section gives the background to the Rugby area and an explanation of how this influences the Council's approach to inspection for contaminated land.

### 2.1 Geographical context

Rugby Borough is situated in the north east corner of Warwickshire and comprises of a central urban development surrounded by a large rural district.

The Councils area covers 35,600 hectares and shares boundaries with the following councils:

Nuneaton & Bedworth Borough Council Warwick District Council Stratford upon Avon District Council Coventry City Council Daventry District Council Harborough District Council Hinckley and Bosworth District Council

#### 2.2 Geology and hydrogeology

#### 2.2.1 Geology

The geology of the Borough is complex. Detailed geological information will be used when determining risk.

In general, the base layers are Merevale Shales, Halesowen Formations, Keele Formation and Mercia Mudstone. The Borough south of Rugby is generally covered by limestone, the central part of the Borough including the town by Dunsmore gravel and the north of the Borough by Wolston Clay.

As the geology of the area influences the movement of contaminants, the Council will have regard to local conditions. The Council will therefore purchase geological maps from the British Geological Survey (BGS) for use on the geographical information system.

# 2.2.2 Hydrogeology and Water resources

The River Avon flows west to east through the Borough. The River Swift flows North South and the River Leam West East. Numerous tributaries and brooks feed these river valleys.

Severn Trent Water Ltd. supply the majority of the Borough's drinking water.

The majority of the Borough's drinking water comes from surface water, which is stored and treated at Draycote Water.

Hydrogeology is concerned with the relationship between geological conditions and the presence of water. Beds of rock that can store water are known as aquifers. This 'groundwater' is a valuable resource and the Council is committed to preserving the quality of this water so that future generations can use it. Once contaminated it can take many years for the water to resume its natural quality and is very costly to purify.

The Environment Agency has designated Source Protection Zones (SPZ) around nearly 2000 major groundwater sources, boreholes and springs to protect major groundwater sources which are used for drinking water. There are no SPZs within the Borough.

There are 30 properties which use private water supplies, all in the rural area. The protection of these groundwater sources will be important for human health.

# 2.2.3 Areas of naturally metal enriched soils

Soil samples taken during investigations for planning applications have indicated naturally elevated levels of arsenic in the Borough.

### 2.3 Protected Locations

People and water are not the only receptors that can be adversely affected by the presence of contaminants in the environment. Some chemicals can attack building services such as water supply pipes and cause irreversible damage to structures. In Rugby Borough there are many listed buildings, scheduled ancient monuments and protected ecosystems. Ironically, the presence of certain contaminants can actually promote the presence of rare species, and the removal of contaminated soil from around historic buildings could cause more harm than the contamination itself. The Council aims to protect all such locations and will seek expert advice on resolving such dilemmas.

# **Ecosystems**

There are two types of statutory nature conservation sites. There are a limited number of Sites of Special Scientific Interest (SSSIs) notified by English Nature. These are Brandon Marsh, Coombe Pool, Draycote Meadows, Ryton and Brandon Gravel Pits, Ryton Wood, Stockton Railway Cutting and Wolston Gravel Pit. These have been designated to safeguard a representative series of the nation's most valuable natural history resources. Secondly, there are currently three Local Nature Reserves (LNRs). These are Stockton Railway Cutting, Great Central Walk and Newbold Quarry Park. LNRs may not necessarily have a particularly high scientific value, but have special nature conservation and educational qualities. Warwickshire Wildlife Trust also has reserves at Cock Robin Wood and Windmill Spinney.

It is important to note that "post-industrial" sites are important sites for nature conservation.

Great care will be taken during site investigation and remediation to ensure that statutory and non-statutory ecosystems are protected. Liaison with English Nature will be used to ensure that for land where investigation is required any action taken during the investigation and any subsequent remediation is sensitive to ecosystems.

All actions under Part IIA will be carried out with due regard to the Council's responsibilities under the Conservation (Natural Habitats, &c.) Regulations 1994, the Wildlife and Countryside Act 1981 (and amendments), the Countryside and Rights of Way Act 2000, the UK Biodiversity Actions Plan 1994 and in accordance with the guidance in DETR Planning Policy Guidance note 9 Nature Conservation.

#### Archaeological and historic sites

It is important to stress that the historical legacy of sites and structures may have resulted in contamination of land, but the conservation and recording of such buildings is also important.

Scheduled Ancient Monuments are specifically mentioned in the DETR guidance, but other types of historic areas, e.g. conservation areas, will also need protection. There are currently 26 Scheduled Ancient Monuments in the Borough including Brandon and Brinklow castles, the deserted villages of Upper and Lower Smite and Stretton Baskerville, the Roman town of Tripontium, the priory at Wolston, pre-historic pit alignments at Ryton on Dunsmore and Marton bridge. There are 19 conservation areas.

Great care will be taken during site investigation and remediation to ensure that known and unknown historic sites are protected. Liaison with the County

Archaeologist, the Sites and Monuments Record Officer, Warwickshire County Council, and English Heritage will be used to ensure that for land where investigation is required any action taken during the investigation and any subsequent remediation is sensitive to historical.

All actions under Part IIA will be carried out with due regard to the Council's responsibilities under the Ancient Monuments and Archaeological Areas Act 1979 and in accordance with the guidance in DETR Planning Policy Guidance note 16 Archaeology and Planning.

#### 2.4 Historical Land Use

The town of Rugby grew significantly in population from 1820 when the population was 2000. Prior to this date it was primarily a market town although the canals network was used to transport quarried material excavated locally. The area of New Bilton was quarried around this time and Limeworks were developed. The quarrying has resulted in excavation which were latterly used for Landfill.

Post 1820 Rugby developed industrially as a result of the development of a major railway junction at Rugby.

Industrial development in the later part of nineteenth century and early twentieth century included heavy engineering, gas works and foundries.

#### 2.5 Current land use

The majority of the rural area of the Borough is agricultural land, with only two major manufacturers in the rural area (PSA Peugeot Citroen and Rolls-Royce).

There has been a gradual decline in the manufacturing base in the urban area of Rugby, typical of the whole country. There is now a more diverse employment base, with a significant increase in warehousing and distribution. The traditional heavy industries and large industrial complexes have potentially caused contamination of the land.

A number of industrial Prescribed Processes also operate in the area, two (Rugby Cement and Transco) authorised by the Environment Agency (Part A), and 32 (of which 14 are petrol stations) authorised by the Council (Part B). The Council is also aware of 1 operational (Ling Hall) and 50 closed landfill sites within the Borough which require further investigation under the new regime.

#### 2.6 Available Council information on contamination

The Council holds some information on contamination in the Borough, primarily submitted as part of the development control process. If development is proposed on an area of land where past use may have resulted in contamination, the Council will often request a site investigation as part of a planning condition. If development proceeds on these sites, remedial works will often have been carried out to improve the site conditions. Planning records will therefore form a valuable resource during the investigation process.

A limited contaminated land register was produced in the early 1990s in response to a contaminative use register which the government at that time was proposing to introduce.

# 3.0 INSPECTION STRATEGY AIMS, OBJECTIVES AND IMPLEMENTATION

#### 3.1 Aim

The overall aim of the strategy is to describe in an ordered and rational manner, exactly how the Council intends to ensure that no land within its district will give rise to significant harm (to either human health or the environment) due to contamination.

# 3.2 Objectives

# The main objectives of the Council are

- To ensure compliance with and enforcement of statute.
- To ensure that where redevelopment of sites take place in the area that the process deals effectively with any land contamination.
- To ensure that procedures are in place for the open provision of information to the public, developers/property surveyor's etc.
- To encourage market confidence in the redevelopment of brownfield sites in the Borough
- To address the liability issues associated with the Council's existing land holdings and avoid any new liability associated with land acquisitions.
- To prevent any further contamination of land
- To encourage voluntary remediation
- To protect ecosystems
- To protect historic sites and the historic environment

#### 3.3 Implementation

The Council intends to inspect its area after the strategy document is published in June 2001. However, if any sites are brought to our attention before that date, (either internally, through external bodies or by members of the public) they will be dealt with in accordance with the Part IIA regime.

The Council will prioritise sites for further investigation and concentrate resources on those areas where problems may exist.

A risk-based approach will be used to prioritise areas for further investigation. Whilst every tract of land must be dealt with on an individual basis, the Council will generally give priority to sites which pose an unacceptable risk to human health. The Council will also take into account information provided by the Environment Agency on the known areas of vulnerability of controlled waters.

Following the adoption of the strategy document, the Council will inspect the whole of its area, including land in its ownership, in order to identify, inspect and remediate any sites it designates as contaminated. Where information on a particular site is already available internally, the data will be reviewed and the land re-assessed

Implementation of the strategy document will also:

- result in the development of close working relationships between neighbouring Local Authorities, internal sections of the Council and external regulatory bodies. This in turn should allow the efficient exchange of information between all interested parties.
- ensure that where remediation is required, it is carried out to an appropriate standard, based on relevant scientific and technical advice.
- enable the open provision of information to the public in accordance with the 'Environmental Information Regulations 1992'.

In remediation of contaminated land the Council will

- encourage voluntary remediation, where practical
- use the most appropriate and cost effective method of remediation.
- ensure that all land is brought back to a condition that is 'Suitable for Use'.

Following implementation of the strategy, the Council will have to review its procedures. Practical experience, legislative changes and new information will all be used to update the Councils policy. This will ensure that the Authority's resources are utilised effectively and that it is carrying out its statutory duties in an appropriate manner.

This is the first contaminated land inspection strategy for Rugby and reflects the available information and state of knowledge at the end of 2000. The strategy sets down an indicative work programme for the next five years. In accordance with the Council's performance management procedures, the progress and appropriateness of the strategy will be regularly reviewed. Part IIA requires Councils to do this and the Guidance lists seven triggers for reviewing inspection decisions, further details on which can be found in Chapter 7.

#### 4.0 PRIORITY ACTIONS AND TIMESCALES

# 4.1 Proposed Work Programme

# Stage 1 – Draft consultation strategy (April 2001)

A first version of the strategy has been drawn up in accordance with DETR technical guidance.

# Stage 2 - Consultation (April -June 2001)

The data sources cited later may not identify all potentially contaminated sites. It is feasible that an area of land might be used for a high-risk contaminative activity (e.g. waste disposal) without ever being recorded on a map. Local consultation will therefore play a major role in identifying the gaps in this database.

Parish Councils will be asked to provide any relevant information or local knowledge they may possess on potentially contaminative land uses that have occurred within their parishes.

Local history societies will be contacted as another potential source of information. Consultation on the Strategy will also be publicised in the local press and it is anticipated that a number of interested residents will come forward with information on past land uses.

#### Stage 3 – Publish final inspection strategy (June 2001)

Provided the consultation stage runs smoothly, the strategy will be finalised during June 2001 and two copies of the final strategy will be submitted to the Environment Agency who will then pass one copy to the DETR.

# Stage 4 – Purchase Landmark database (June 2001)

To begin the process of investigation, the Council has a Geographical Information System (GIS) from Innogistics and is proposing to purchase historic maps and a database of historic land use.

# Stage 5 – Dealing with urgent sites (April 2001 – April 2002 and ongoing)

If there is any verifiable report of sites causing significant harm that are identified through consultation, the general approach to inspection will be secondary to dealing with such sites. Indeed, if there is a critical need, investigative work may have to begin before completion of final draft of the inspection strategy. The regulations recognise this scenario is realistic and the proposed approach is in line with the guidance.

This stage may include declaring some "special sites" and passing the lead regulatory role for these sites to the Environment Agency.

# Stage 6 – General approach to inspection (July 2001 – July 2006)

The Council's first priority in dealing with contaminated land is to protect human health. Land within the Borough will therefore be inspected in order of population density.

# Stage 7 – Council owned land (July 2001 – July 2006)

The Council has some limited land holdings within the Borough. There are other areas of land within the Borough that the Council (or its predecessors) has owned at some stage in the past where potentially contaminative activities (*e.g.* waste disposal) may have occurred. The Council has also been involved in facilitating the acquisition of derelict or "brownfield" land in order to develop this and improve the overall quality of an area. Within the general population-based approach to investigation, it is appropriate that these types of sites are subjected to investigation (and if necessary, remediation) as a priority. This follows the Council's general approach to "putting its own house in order" before expecting others to follow suit.

# Stage 8 – Local plan land (May 2001 – 2006)

As the planning authority for the area, the Council must draw up a Local Plan, specifying which areas of land should be used for which type of development. At the time of writing, a review of the Rugby Borough Local Plan had just commenced and an Urban Capacity Study is being carried out.

If the Council is making recommendations about land use, it is logical to undertake investigation of this "local plan land" as a priority within the general population based approach to contaminated land investigation. This land will therefore be specifically considered.

# Stage 9 – Threats to controlled waters, protected areas of the environment and buildings (July 2005 – July 2006)

It is anticipated that the investigation of the town and villages will bring to light information that would reveal any imminent threats to controlled waters or protected areas of the environment posed by contaminated land. If the evidence demonstrates a need for urgent action, this will be taken as soon as practicable alongside the rolling programme of inspections. If, however, the evidence is not conclusive then these areas will be included in a specific investigation of such threats, to be undertaken once the investigation of the towns and villages is complete.

#### Stage 10 – Final prioritisation (October 2005 – July 2006)

The regulations require the remediation of contaminated land sites to be prioritised. This prioritisation can only take place once all sites have been identified and this will therefore occur at the end of the investigation stage, currently timetabled for October 2005.

It is likely that a proprietary risk assessment packages will be required for this stage but it is not possible to identify a specific package at the time of writing.

# 4.2 Prioritisation principles

The Council's priorities in dealing with contaminated land are:

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

This list is presented in priority order and in all cases will have regard to significance and likelihood, as required by the regulations.

As the Council considers harm to human health as being the worst case scenario, this will be given highest priority. However, the Council appreciates that there will be circumstances where a priority listing, as detailed above will not apply.

# 4.2.1 Prioritisation 'within' receptor categories

The Councils prioritisation programme will also stipulate the sequence in which those sites prioritised are dealt with, taking into account:

- the number of contaminated sites impacting on the receptor in question
- the seriousness of the harm or pollution
- the type and extent of contamination expected to be present at the site
- issues specific to the Local Authority, for example internal political factors
- whether or not the area is/can be dealt with under a different regime
- the likelihood that the relevant person/persons will carry out any action on a voluntary basis.

# 4.3 Inspection programme

# 4.3.1 Identification of key geographical areas

The Councils approach to Part IIA must be ordered, rational and efficient.

Identify data sources and collate all available information

Digitise any potentially sensitive receptors

Digitise areas of potential contamination

U

Overlay relevant layer maps on GIS and identify broad geographical areas which require further investigation

Carry out intrusive site investigations if required

By following this systematic approach, the Council should progress from considering its area as a whole, to looking at sites on an individual basis.

The guidance states that at strategy development stage, Local Authorities need only to have amassed enough information on potential sources and receptors to prioritise further data gathering work so that sites are dealt with in an appropriate order.

The inspection programme is entirely dependent on the availability of resources. Until further information is obtained about the area it is not appropriate to specify a definitive action plan. Therefore, these proposals are speculative and will be revised in accordance with our review programme outlined in section 7.

The Council expects to finish the initial inspection of its area within five years of the strategy being published

#### 5.0 PROCEDURES

The Environmental Health Division is responsible for the regulation of Part IIA and will co-ordinate with other divisions within the Council and external organisations the implementation of the strategy.

Procedures have been drawn up to describe how contaminated land issues will be handled within the Council. This section also details the level of service the business community and members of public can expect from the Council in dealing with these issues.

# 5.1 Arrangements for inspection and identification

Section 78B(1) of the Environmental Protection Act 1990 states that all Local Authorities should periodically inspect their area in order to identify any contaminated land.

The Environmental Health Division has responsibility for the implementation of Part IIA EPA 1990. The Pollution Team will deal with the day-to-day implementation of the strategy. The Director of Housing and Environmental Health or the Head of Environmental Health and Economic Development will be responsible for serving remediation notices, subject to consultation with the Pollution Control Team and the Director of Corporate Services.

# 5.1.1 Appointing consultants

It is recognised that the specialist knowledge and skills of consultants will be needed in implementing the strategy, particularly for intrusive site investigations.

Consultants will be appointed by open competitive tendering.

### 5.1.2 Powers of entry

Under Section 108(6) of the Environment Act 1995, the Council has been granted powers of entry to carry out investigation by authorised officers. At least seven days notice will be given of proposed entry onto any premises, unless there is an immediate risk to human health or the environment.

Should the landowner/occupier obstruct access, the Councils representative will obtain a schedule 18 warrant and gain entry to the site using whatever force is necessary.

Before this power can be exercised, the Council must have gathered enough information during the desk-top phase to suggest that there is a 'reasonable possibility' of a pollutant linkage on the site.

Under these powers, intrusive site investigations may only be undertaken when a 'contaminant' and 'receptor' are likely to be present. The Council cannot instigate an intrusive investigation if information on the condition of the site already exists elsewhere, e.g. Environment Agency archives. The same also applies if the landowner/occupier offers to provide the Council with the required information, and does so within a specified timeframe.

If the Council is relying on information provided by appropriate or other persons, then this will be comprehensively assessed for reliability and project suitability prior to making any decision on carrying out an intrusive investigation.

# 5.1.3 Prioritisation Methodology

For a borough with a complex history like Rugby, it is not practical to evaluate and investigate every potentially contaminated site identified individually. Government guidance indicates that land identified as potentially contaminated due to a former land use can only present a risk to the public where it is actually contaminated, there is a receptor who can be adversely affected by the contamination present, and a pathway exists by which the contamination can reach the receptor.

#### 5.2 Council interests in land

# **5.2.1 Inspection programme**

The Council may have legal obligations under Part IIA by virtue of its current or former ownership or occupation of land. The Council cannot take legal action against itself but must demonstrate that it has discharged its obligations.

Elected members will be informed at the earliest opportunity by reports to the Housing and Environment Panel and the Cabinet of any plans to designate an area of Council owned land, or land where the Council is the "appropriate" person and may be liable for remediation costs. These reports will be public documents and copies will be kept by the Pollution Team.

#### 5.2.2 Minimising liability

The Council can minimise its future liability under Part IIA by taking precautionary measures in the handling of all relevant business affairs.

All land in which the Council has an interest will be treated in exactly the same way as other land within the district. The procedures, will be strictly adhered to, enabling both external bodies and the general public, to have confidence in all of the Councils decisions regarding contaminated land.

In future, when purchasing or leasing land, the Asset Management Working Party should contact the Pollution Control Team, who will confirm whether or not the site is listed on the contaminated land register and give any other known information.

# **Land Purchases/Acquisitions**

Prior to committing the Council to any new land purchases or acquisitions the relevant Department must ensure that the full site history is known. This must include:

- a search of all available historical maps;
- detailed enquiries from the vendor as to the former activities at the site, location of storage tanks, details of materials, fuels, wastes etc. stored and information on any spillages.

If there is any suggestion that the land is on or adjacent to land, which has, the potential to be contaminated consultants shall be appointed to undertake an appropriate site investigation.

Where land such as public open space is to pass to the Borough Council as part of a planning agreement (S106) the Planning Services Division must require the developer to provide

- details of the known history of the land to transfer, and
- an appropriate level of site investigation data to be agreed with the Pollution Control Team

# **Leasing Property**

Some of the commercial organisations to whom we let property or land will undertake potentially contaminating activities, which may result in the land becoming contaminated. Under the provisions of the new Environment Act 1995 if the original polluter cannot be found (for example, because the company no longer exists) the landowner becomes the person liable for the contamination and any site remediation required. If the Council as a landowner does not take steps to prevent the occurrence of further off-site migration of contaminants then the Borough Council can also be found to be liable for the remediation of adjacent land.

In order to protect the value of its land holdings and to prevent the Council becoming liable for tenants contamination it is essential that we have a strategy/policy which will protect the Council's interest in the long term.

Prior to Letting/leasing property in the further

- Ensure the Borough Council has information on the quality of the site. If it is a
  greenfield site with no former potentially contaminative uses, ensure this is
  documented along with some background soil data to provide a baseline
  which can form the basis of any future claim. Where possible the onus should
  be placed on the new tenant to provide this background data.
- If the site has previous uses establish where potentially contaminating uses have taken place. For example, where are or were the fuel tanks, chemical storage tanks etc. Again ensure this information is documented and provide appropriate background soil data. This is necessary not only to protect the Borough Council's interest but also to comply with our obligation in relation to disclosure to the new tenant whose workers or contractors might come into contact with ground contamination.

Note: where new information becomes available to the Council regarding contamination during the term of the lease/tenancy agreement which may require action, then the Council must pass the information onto the tenant/lessee in order that they can make appropriate decisions.

- Ensure there are appropriate conditions in the lease/tenancy agreement requiring the new occupier(s) to comply with all appropriate environmental legislation to minimise the potential for future contamination and to require them to clean up any spills which may occur during their occupation.
- Ensure that it is clear in the contract documents that prior to relinquishing the lease/tenancy the onus will be on them to return the land in a condition, which is suitable for its existing use, and prove that they have not caused any new contamination. Where the occupier's trade is such that there is a high risk of contamination occurring then a site investigation will be necessary to prove the site has not been affected, or if it has to quantify the problem. The results of the investigation can be compared to the original background data obtained prior to the commencement of the lease before agreeing the remediation works necessary under the appropriate level of financial compensation to the Council, which is applicable. The new tenant/lessee will not be liable for contamination caused by a previous tenant/lessee.
- During the course of the lease/tenancy agreement the tenant/lessee must provide the Council with:

- details of the location/nature of fuel storage, documentation to confirm there has been no gradual loss of free product due to leakage,
- plans showing where chemicals or wastes are stored,
- plans showing where services and, fuel lines etc are,
- a copy of any Health and Safety files created in compliance with the Construction, Design and Management Regulations
- details of accidents/spillages etc
- where locations are moved Council must be advised in writing of the new details.

# **Termination of a Tenancy/Lease Agreement**

Where there is any question that there may have been land contamination the tenant/lessee should be required to provide site investigation data to prove the site remains in the same condition as when the background site investigation was undertaken at the commencement of the lease, and if not to prove the extent of any contamination present.

Where contamination is present the tenant/lessee must be required to remediate the contamination to the standard identified by the background site investigation, or provides financial compensation to the Borough Council in order that it may undertake the remedial works.

### 5.3 Information collection and recording

The government has suggested that Local Authorities should consider focusing their strategies on areas where statutory contaminated land is most likely to exist, or on industries specific to that region.

Many of the areas that may require further study are where ponds, hollows and mineral extractions have been filled in.

The strategy for Rugby focuses on identifying and researching primary sources of information which will provide information on historic land use across the area which will not only enable the identification of contaminated land, but will also enable:

(a) Identification of sites with potentially contaminated land uses

(b) Objective prioritisation of sites based on the principles set out in the statutory guidance

For Rugby there are two primary sources of information on historical land use, the Ordnance Survey historic maps dating back to 1860 and the Trade Directories for Rugby.

A geographical information system (GIS) will be used to mark sites which may be potentially contaminated and to assess the potential risk for the prioritisation of site investigation. Data to be included in the GIS are:

- Record on the GIS the geology and hydrogeology of underlying the borough.
- Recorded on the GIS the land use in all areas of the Borough to distinguish between land which is put to more sensitive uses such as domestic gardens, allotments and sites of special scientific interest etc. Such land is more likely to meet the statutory definition of contaminated land if contaminative uses were historically present. The GIS also provides the ability to directly overlay the current street pattern onto the historic map to determine which properties are most likely to be at risk.
- Using the trades database and historic street directories to pinpoint as accurately as possible onto the GIS the location of the trade premises listed with the greatest potential to be contaminated. The trade premises being transferred are based on the list of industries outlined in the 1991 DoE Consultation Paper and the 1996 list of DoE Industry Profiles.
- Capturing information on all site investigation and site remediation reports held by the Environmental Health and Planning Divisions.
- In addition, any new information provided by the Environment Agency will be evaluated and where appropriate used to update and improve the information held on the GIS.

To begin the process of investigation, the Council has purchased a set of historic ordnance survey maps in a digital format, which can be used with the Council's Geographical Information System (GIS) from Landmark Information Group Ltd. along with a database of historic land use. The historic ordnance survey maps are from four separate time periods (or epochs)

- 1878-95
- 1901-1905
- 1920-29
- 1936.

Mapping technology was not as accurate during these times as it is currently and therefore each set of maps will have to be "geo-rectified" to allow them to be overlain onto current maps. The historic land use database identifies areas of potentially contaminated land from analysis of historic ordnance survey maps, following governmental advice on the identification and classification of potentially contaminative land uses. It should be emphasised that only a small proportion of sites subject potentially contaminated land use will meet the strict definition of contaminated land. Due to the past uses of the land, many of these sites will contain substances in, on, or under the ground, which have the potential to cause harm. However, in order to be designated as contaminated land these sites must have both a pathway by which significant harm may be caused and a receptor on which significant harm can be inflicted. If either the pathway or the receptor is missing from the pollutant linkage, the site may be land in a contaminative state but cannot be designated as contaminated land.

There is a wide range of information which must be identified, collated and reviewed in order to identify:

- actual harm
- pollution of controlled waters
- potentially sensitive receptors
- the possible presence of contaminants
- the location of potential pathways

The table below gives further details on the information required and its sources.

DATA SOURCE	DETAILS	USED TO IDENTIFY
Rugby Borough Council	Historical maps	Potential sources & receptors
	Known pollution incidents	Potential sources
	Landfill data	Potential sources
	Private Water Supplies	Potential pathways & receptors
	Site Investigation Reports	Potential sources & pathways
	Planning Records	Potential sources & receptors
	Local Plan (current & future land use)	Potential receptors

	Authorised processes	
	Public open spaces	
	Allotments	
	Allotments	
	Urban Capacity Study	Potential sources
	Habitat Biodiversity Audit	
	Conservation Areas	Potential pathways & receptors
	Listed Buildings	Potential pathways & receptors
Warwickshire County Council	Scrap metal licences	Potential sources
Environment Agency	Location of licensed water abstraction points	Potential pathways & receptors
	Surface water quality	
	Source Protection Zones	Potential pathways & receptors
Environment Agency	Known water pollution incidents	Potential pathways & receptors
	Integrated Pollution Control register (IPC)	Potential sources
	Waste Management	Potential sources
	Licences	Potential sources
	Register of closed landfill sites	Potential sources & receptors
	Hydrogeological information (Groundwater Vulnerability maps)	
British Geological Survey (BGS)	Broad geology of the area (inc. artificial/superficial deposits, solid geology, borehole data)	Potential (natural) sources & pathways

	Distribution of made ground Geochemical	
Ministry of Agriculture, Fisheries and Food (MAFF)	Agricultural Land Classification (ALC) System	
Other Statutory bodies (English Nature, English Heritage etc)	Location of SSSI's, AONB, Ancient monuments etc	Potential receptors
Other (Parish Councils, local history groups, local nature conservation groups)	Local Knowledge	Potential sources, pathways & receptors
Landmark Information Group Ltd	Historical land use database	
Ordnance Survey	Historical maps	

The data sources cited earlier may not identify all potentially contaminated sites. It is feasible that an area of land might be used for a high-risk contaminative activity (e.g. waste disposal) without ever being recorded on a map. Local consultation will therefore play a major role in identifying the gaps in this database.

#### 5.4 Information Evaluation and Risk Assessment

For the purposes of Contaminated Land, data acquisition occurs in three stages

#### Stage 1 - The collation and evaluation of documentary evidence

The initial Risk Assessment phase will identify areas of land where the Council believes a 'Pollutant Linkage' may exist .

Further investigation is then required to determine categorically whether:

(a) the land is 'Contaminated Land' as defined in the statutory guidance (b) the land falls within the definition of a 'Special Site' (see Appendix 1) Regulations 2 & 3 Contaminated Land (England) Regulations 2000

Following stages 1 a 'conceptual ground model' of the site can be developed. This should identify:

- the underlying soil types and geology of the site
- the presence of any groundwater, including the piezometric levels and flow directions
- surface water either on, or adjacent to, the site
- any other potentially sensitive receptors
- all potential sources of contamination present, including their depths (where available)
- all potential pathways, including dermal contact, leaching, root uptake etc.
- the presence of manmade features, such as service trenches and former foundations, should also be noted as should any other physical feature that may influence the occurrence of contamination or provide a constraint to its investigation.
- the nature conservation interest of the site, including protected species
- the known and potential historic and historic environment interest of the site

#### Stage 2 - Visual Inspection of the site

Site walkovers may be carried out to validate information collated during the desk study. Samples of suspect surface deposits, including soil and water, may also be taken.

In addition, the visit will also allow the Council to determine whether any constraints exist on site, which may effect subsequent intrusive investigations (e.g. limited access to the site, underground services, proximity to sensitive uses effecting working hours, etc). Dialogue with local residents may be combined with the site walkover and could reveal relevant information, for example on the suspected location of contaminants, not available from any other source.

#### Stage 3 -**Exploratory excavations**

Following stages 1 and 2 the 'conceptual ground model' can be refined if required. Should the model indicate that a pollutant linkage exists on the site an intrusive site investigation should be undertaken. These may include boreholes and/or shallow and deep trial pits.

As no ground investigation can guarantee to locate all contaminants that may exist within a site, it is the responsibility of the Council to ensure that the most appropriate technique is used. All soil samples shall be stored and analysed correctly, and preferably by a laboratory with the relevant accreditations (See BS5930 and BS 1377).

Our methods will broadly follow industry standards such as the Code of Practice on the Investigation of Potentially Contaminated Sites (BS 10175). The exact working practices will depend on the particular circumstances relating to the site.

During intrusive investigations the Council will take all reasonable precautions to avoid harm, water pollution or damage to natural resources or features of historical or archaeological interest.

Before any intrusive investigation is carried out on a 'Site of Special Scientific Interest' (SSSI), the Council must also consult with English Nature. The Council will also consult with English Nature for Local Nature Reserves and other sites which may have ecosystem receptors.

Before any intrusive investigation is carried out on a Scheduled Ancient Monument, the Council must also consult with English Heritage and Scheduled Monument Consent approved. The Council will also consult with the County Archaeologist, the Sites and Monuments Records Officer, Warwickshire County Council, and English Heritage for other sites which may have historic site or historic environment receptors.

Upon completion of intrusive investigations, carried out by or on behalf of the Council, the Authority will ensure that all sites are restored to their preinvestigated state.

Risk assessment will be used to aid decision making by evaluating the sourcepathway-receptor linkages to decide whether harm is or could be caused and how the linkages might be broken.

Risk assessment is a staged process

 Hazard identification what are the possible problems Hazard assessment how big might these problems be

what will be their effects Risk estimation

Risk evaluation

do they matter

- Sources assign hazard class high medium low
- Receptor types assign susceptibility class
- Risk rating

The DETR propose to publish a methodology for risk assessment, Handbook of Model Procedures for the Management of Contaminated Land, CLR 11.

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

Establishing pollutant linkage the source of contamination – levels will determine risk to receptor. There is not one authoritative set of standards for determining whether land is contaminated in England. However the move towards risk management principles limits the use of such standards as each site must be considered on its merits.

It should be emphasised that only a small proportion of potentially contaminated sites will meet the strict definition of contaminated land. Due to the past uses of the land, many of these sites will contain substances in, on, or under the ground, which have the potential to cause harm. However, in order to be designated as contaminated land these sites must have both a pathway by which significant harm may be caused and a receptor on which significant harm can be inflicted. If either the pathway or the receptor is missing from the pollutant linkage, the site may be land in a contaminative state but cannot be designated as contaminated land.

Following the desk-top study, for any sites which require further investigation (whether or not the land is eventually designated as 'contaminated' under Part IIA) an individual site 'record sheet' will be produced. This will make reference to all of the information gathered during:

- the desk-top phase
- the preliminary site walkover, and
- any intrusive investigations carried out (where applicable).

#### 5.5 Determining risk

#### 5.5.1 Risk Assessment

For the purpose of identifying contaminated land, all three stages of the pollutant linkage, i.e. 'source', 'pathway' and 'receptor', must be present. During each stage of data acquisition, any identified risks caused by the possible presence of

a pollutant linkage will be identified and evaluated. This focused process is known as 'Risk Assessment'.

DETR circular 02/2000 defines 'risk' as the combination of:

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

Risk Assessment techniques will be used by the Council in order to prioritise sites for further inspection and to select the most appropriate remediation actions.

The GIS with risk assessment software will be used to assess the potential for sites to be contaminated. If identified as potential contaminated land, site specific risk assessments will be carried out. The Council is currently considering what risk assessment software to purchase and is currently evaluating the CES Contaminated Land Risk Evaluator (CLARE) model.

# 5.5.2 Contaminated Land Exposure Assessment and Interdepartmental Committee on Redevelopment of Contaminated Land guidelines

A new set of guidelines – the Contaminated Land Exposure Assessment or CLEA guidelines – are expected from the DETR shortly. Until these guidelines are available, however, the Council will evaluate all information against the guidelines issued by the Interdepartmental Committee on Redevelopment of Contaminated Land (ICRCL).

ICRCL 59/83 (2nd Edition, July 1987) - "Guidance on the assessment and redevelopment of contaminated land" - gives the most widely used set of trigger and action levels for a range of contaminants and is likely to remain a key reference document, even with the introduction of CLEA.

Risk assessments may also be required for substances not covered by ICRCL or CLEA guidelines. In these cases, reference may be made to occupational exposure levels issued by the Health and Safety Executive or other authoritative sources of information, such as guidelines adopted in other countries, mainly the intervention values issued by the Dutch Ministry of Housing, Spatial Planning and Environment issued in May 1994.

Advice will be sought from the Environment Agency on risk assessment if controlled waters are the receptor in a particular pollutant linkage. It is anticipated that risk assessments and remediation will be carried out in accordance with Environment Agency guidance as laid down in "Methodology for the Derivation of Remedial Targets for Soil and Groundwater to Protect Water Resources" (EA R&D Publication 20, 1999).

If addition information on a site is received which may alter its priority rating, the Council will undertake further assessment.

#### 5.5.3 Investigation Methodology

Site investigations are costly and sometimes cause inconvenience to the existing occupiers. It is essential that investigations are conducted by competent personnel and sampling methods adopt current best practise. The data obtained from such sampling will be used in subsequent risk assessments to determine future actions in relation to the site, such as whether it is suitable for its current use. Sufficient good quality data is critical. There are a number of publications that give guidance on conducting investigations e.g. CIRIA, DETR, BSI and Environment Agency. The following principles apply:

- Good distribution of sampling locations
- Good decontamination procedures during work
- Samples taken in correct containers
- Correct materials analysed
- Correct methods used to identify materials

The DETR manages the Contaminated Land Supplementary Credit Approvals programme. The funds are available for intrusive investigations and remediation where the local authority must pay for the costs.

## 5.6 Designating contaminated land

#### 5.6.1 General

Where a formal designation of contaminated land is required, the following actions will be undertaken:

- Enforcement action. The Council has adopted a cross-departmental enforcement concordat to ensure consistent, fair, and transparent practices are used when taking enforcement action. Contaminated land investigations will be carried out in accordance with this Council-wide policy.
- The 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. The Environment Agency has provided standard forms allowing this information to be provided in a consistent format and the Council will adopt these to fulfil its reporting requirements.
- Add the site to the register unless voluntary action is taken (declarations do not go on the register if voluntary action taken)

 Any person, organisation or business might be liable to remediate contaminated land. This would be if they caused or knowingly permitted the contamination, or if they own or occupy contaminated land in a case where no polluter can be found. There are various criteria for exclusion from liability and benefits for charitable and voluntary organisations, as well as those who would experience hardship. Costs may be waived or reduced in specified circumstances. Readers are directed to the statutory guidance.

Part IIA promotes voluntary remediation and the Council supports the view that enforcement action and intervention should be reserved for those situations where progress is not being made by the relevant parties. The Council, will secure remediation by any of the following means

- Through agreement with those responsible, or if not possible
- By serving a remediation notice or
- In certain cases, carrying out the works themselves or
- In certain cases, through other powers (see regulatory context).

It is not possible to set specific time limits for the remediation of contaminated land voluntarily or by the Council. The Council will assess the risk and the costs and set a schedule for the works which will be monitored by the Council.

## 5.6.2 Council procedures

When an area has been designated contaminated land the Council will

- Write to the owner and / or the occupier of the land at least 5 working days prior to designation, explaining in summary the reason for designation
- Write to the owner and / or the occupier explaining the land has been designated as contaminated land and seeking appropriate remediation without service of a notice
- If requested, dispatch a copy of the written risk assessment to the owner and / or occupier of the land within 5 working days of receipt of a request
- Write to the owner / occupier of neighbouring properties and / or the complainant within 5 working days of designation
- Write to any other person who may be affected by the contaminated land

If the Council serves a remediation notice the Council will

- Provide a written remediation notice to the owner / occupier specifying action required
- Write to the owner / occupier of neighbouring properties and / or the complainant within 5 working days of notice being served

Should an urgent designation of contaminated land be required, these steps will be observed as far as practicable although some deviation from the timescales specified is to be expected.

#### 5.6.3 Council-enforced sites

Site Specific Liaison:

Upon identifying land as contaminated, including land ultimately designated as a special site, the Council must notify all interested parties in writing, including:

- (a) the landowner
- (b) the current occupier
- (c) any other 'appropriate person' who may be liable for the costs of remediation
- (d) the Environment Agency, in order that they may carry out their functions as detailed in \$1.3.2 of this document

The Council will also notify any other person who may be affected by the contaminated land.

Should subsequent information identify additional 'appropriate persons', they will also be informed of our decision in writing.

Following notification a three-month consultation process will begin, during which time the Council may also make available the following information to all 'appropriate persons':

- (a) 'a copy of the written record of determination made by the authority that the land appears to be CONTAMINATED LAND
- (b) information on the availability of site investigation reports, with copies of the full reports being available on request
- (c) an indication of the reason why particular persons appear to the authority to be APPROPRIATE PERSONS; and
- (d) the names and addresses of the other persons notified at the same time or previously, indicating the capacity in which they were notified (e.g. as OWNER or as APPROPRIATE PERSON).'

(Source – DETR Circular 02/2000 p28)

The Council must also inform all 'appropriate persons' of our policies relating to apportionment of, and exclusion from, liability

As receipt of the notice will have financial and legal implications, the written notification will also recommend that each 'appropriate person' seeks advice from an independent professional. This will enable them to make suitable representation to the Council.

#### 5.6.4 Remediation

Remediation is generally accepted as being the carrying out of works to prevent or minimise effects of contamination. In the case of Part IIA the term also

encompasses assessment of the condition of land, and subsequent monitoring of the land.

Remediation must break the pollutant linkage and can therefore be achieved in a variety of ways.

Contaminated land is usually remediated (cleaned-up) by removing the affected soil and disposing of it to an appropriately licensed landfill site. There is limited capacity for this practice to continue and the European Landfill Directive will further restrict the disposal of such material. Various techniques are now becoming readily available and affordable to treat the soil. Physical barriers such as clay liners, bio-remediation and changes to the use of the site may be appropriate.

Rugby Borough Council will encourage the use of sustainable remediation strategies such as bio-remediation, rather than removal and disposal by landfill.

It may be necessary to monitor the remediation actions taken, to determine their effectiveness. This may involve sampling to validate the work carried out. It should be appreciated that the Council is not responsible for guaranteeing the quality of the work undertaken.

Any remediation will be sensitive to the needs of ecosystems. If the initial site investigation, or subsequent investigation, identifies sensitive ecosystems, advice will be taken from English Nature.

Any remediation will be sensitive to the needs of historic sites and historic environments. If the initial site investigation, or subsequent investigation, identifies sensitive historic sites or historic environments, advice will be taken from the County Archaeologist, the Sites and Monuments Records Officer, Warwickshire County Council, and English Heritage.

As a result of land values, it is unlikely that agricultural contamination can be dealt with other than requiring a change of land management or of land use. This may or may not require a change to non-food production activities such as energy crops or forestry.

## 5.6.5 Special sites

There are a number of criteria which, when applied to contaminated land, will result in it being designated as a Special Site (See Regulations 2 and 3 and schedule 1 of the Contaminated Land (England) Regulations 2000).

After designating a site as contaminated land under Part IIA, the Council must compare it against the criteria. Should it meet one or more of the standards, it will:

- designate the land as a special site
- notify the Environment Agency of its decision
- request further advice from the Agency.

All 'appropriate persons' will be notified of the Councils decision in writing.

Following notification of a sites 'Special Site' status, the Environment Agency will have twenty-one days to review the decision and decide whether or not it accepts the Local Authorities conclusions. If the EA disputes the decision, the Secretary of State must make the final judgement.

The Council may request that the Environment Agency undertake an investigation on their behalf in order to confirm that the site meets the criteria that make it special. Until this confirmation, the site would be referred to as a 'potential special site'. The Environment Agency may also inform the Council that they believe that designated Contaminated Land meets Special Site criteria.

## 5.7 Response to Enquiries

From time to time, the Council may receive a complaint or information regarding contaminated land from a member of the public, business or community group. Interested residents may also voluntarily supply information relating to land contamination that is not directly affecting themselves, their families or their property. These complaints or acts of information provision may impact on the approach to inspection and so the procedures to be adopted are detailed here.

A complaint regarding contaminated land will be dealt with following the same procedure as currently used by the Environmental Health Division to deal with statutory nuisance complaints. All complainants may expect:

- their complaint to be logged and recorded
- to be contacted by an officer regarding their complaint within two working days of receipt
- to be kept informed of progress towards resolution of the problem.
- The legislative framework does, however, present a number of obstacles to speedy resolution of problems

Any anecdotal evidence provided to the Council relating to contaminated land will be noted, but no designation of contaminated land will occur without robust scientific evidence. In all cases, the Pollution Control Team Leader will use knowledge and experience to decide what, if any, further investigation is required following a complaint or a provision of information.

## 5.7.1 Confidentiality

All complainants will be asked to supply their names and addresses and, if appropriate, the address giving rise to the complaint. The identity of the complainant will remain confidential. The only circumstance in which this information might be made public would be in the case of a remediation notice being appealed in a court of law and an adverse effect on the complainant's health was an important reason for the original contaminated land designation.

#### 5.7.2 Anonymous provision of information

Anonymous complaints will be treated in exactly the same way as all other requests for assessment. However, because of a possibility of the complaint being malicious, the information gathering stage will only rely on data obtained from independent sources.

#### 5.7.3 Access to information

Under the 'Environmental Information Regulations 1992', Local Authorities are required to supply any information which they hold on the environment, to anyone who requests it. This will include details on any designated contaminated land within the Councils district.

However, circumstances do exist where information is deemed 'confidential' and will not be disclosed, (for example, if the details requested are part of an unfinished document/investigation or if the release of information will effect national security). The Council will confirm these circumstances with its legal section.

All Departments within the Council which use the corporate GIS system will have access to the record sheets. For those without the corporate GIS system, they will be able to obtain information about sites from the Pollution Control Team.

#### 6. Liaison and communications

The protection of human health and the environment is the responsibility of many agencies. The Government recognised that Councils must consider the implications and potential roles of other agencies in relation to contaminated land. Where land may be designated as contaminated, the case will be considered on an individual basis for its relevance to other bodies.

Effective liaison with other bodies is a key component of the strategy.

The Council must have arrangements and procedures for liaison with, and responding to information from the owners or occupiers of land, and other relevant interested parties

The Council's approach to its regulatory duties is to seek voluntary action before taking enforcement action. This approach will be adopted for issues of land contamination, recognising that in many cases as much or more effective remediation can be achieved by agreement than by enforcement. The regulations provide an incentive to undertake voluntary action, in that any materials that require disposal as a result of voluntary remediation will be exempt from landfill taxes. This exemption does not apply to materials generated as a result of a remediation notice having been served This approach requires effective communication with owners, occupiers and other interested parties. The Pollution Control Team Leader will be the central contact point within the authority on contaminated land issues and as such will keep owners, occupiers and other interested parties informed at each stage of an investigation, regardless of whether there is a formal designation of contaminated land.

The Regulations set down the formal procedures for regulatory action. The regulatory authority must enter into dialogue with relevant parties, and cannot serve a notice for three months, except in urgent cases.

Part IIA follows the polluter-pays principle. The cost of remediation will normally lie with the person who caused or knowingly permitted the contamination.

## 6.1 Key Council contacts

Within the Council, the key contact for general guidance and advice on contaminated land issues is the Pollution Control Team Leader, based in the Housing and Environmental Health Department. Other officers within the Pollution Control Team will also be kept up to date on the implementation of Part IIA in Rugby, and may provide advice in the absence of the Team Leader.

## 6.2 Statutory consultees

The Statutory consultees for the Contaminated Land Inspection Strategy are:

- Environment Agency
- English Nature
- English Heritage
- Ministry of Agriculture, Fisheries and Food
- Food Standards Agency
- Regional Development Agency (Advantage West Midlands)
- Warwickshire County Council

Liaison arrangements will be formally established. An agreed person or job title will be determined as the point of contact to ensure consistent liaison.

MAFF and EA have issued procedural and policy guidance.

Liaison arrangements will also be established with local authorities who share boundaries with Rugby.

## 6.3 Liaison with appropriate persons

The Council will liaise with the owners/occupiers and former owners/occupiers (if relevant) of areas designated as contaminated. This is covered in detail in section 5.6.

## 6.4 Liaison with the Wider Community

The effective communication of information to the wider community can only be accomplished if the Council remains open, accessible, and responsive. Methods of relaying environmental information to the public may include:

- regular press releases;
- updates in the Councils own 'Rugby Borough News' magazine which is distributed to all households within the district;
- Rugby Borough Council website www.rugby.gov.uk a copy of the strategy will be kept on the web pages;
- Reports to the Agenda 21 Group and other groups with interests in environmental issues and sustainability.

#### 6.5 Communicating Risk

The Council is aware of the impact designation will have on the public living and working close to a site. There is also a potential to 'blight' any land that is in

close proximity to, or actually identified as, contaminated. It will therefore be critical to make clear to the public:

- (a) the difference between 'contaminated land' and 'polluted land'.
- (b) the limitations of the Councils powers should a site be designated as 'polluted'.

Representatives from the Authority will therefore consult with stakeholders on a regular basis.

These regulations grant only limited powers to local authorities to deal with materials present in, on or under the ground. Many members of the public believe that any material that is not naturally present in the ground should be removed, especially if it is in the vicinity of their own home. It will be critical to explain this can only be done where this is a risk of significant harm, and it is to be expected that some members of the public will have difficulty accepting this. It is important to appreciate that the expectations of some members of the public will not be met by the powers local authorities may exercise under contaminated land legislation.

## 7.0 Review programme

The statutory guidance only obliges Local Authorities to re-inspect their area from 'time to time', as the frequency required is heavily dependant on local circumstances, i.e

- the area of land to be covered
- historical and current land use characteristics
- the extent to which major contamination problems have already been tackled in the area
- the nature and timing of any planned redevelopment or land use changes in the area
- informal changes in land use
- the extent to which the local authority has already identified that land which is most likely to be of concern

The strategy will be finalised following consultation during April 2001 and work will then begin in earnest on site inspection. It will be appropriate to review the milestones in light of progress after the first full year of operation. This review will therefore take place in April 2002 and the findings will be reported to the Council's Cabinet Member. If there are significant changes to the strategy, it may be appropriate to carry out further annual reviews in following years.

If the strategy is found to be operating satisfactorily throughout the period of the five-year workplan, the next review date will be April 2006 when the first inspection of the Borough has been completed and the remediation of contaminated sites has been prioritised.

Building upon experience gained during the initial inspection of its area, beginning in July 2001, the Council will be able to develop a procedure for periodically re-inspecting the district. Following validation, this procedure will be incorporated into the strategy document when it also comes up for review.

As land use across the district is not static, the Council recognises that the strategy document and any conclusions reached during the Risk Assessment phase will have to be regularly reviewed.

There will need to be a periodic review of assumptions and information used in the course of inspection. Triggers for reviewing inspection decisions include the following:

planning applications for proposed changes in the use of land

- unplanned changes in the use of the land (e.g. persistent, unauthorised use of land by children)
- unplanned events, e.g. localised flooding/landslides; accidents/fires/spillage's where consequences cannot be addressed through other relevant environmental protection legislation
- reports of localised health effects which appear to relate to a particular area of land
- verifiable reports of unusual or abnormal site conditions received from business, members of the public or voluntary organisations
- responding to information from other statutory bodies
- responding to information from owners or occupiers of land, and other relevant interested parties
- significant changes in legislation
- the establishment of legal precedents
- the revision of guideline values

#### 8.0 INFORMATION MANAGEMENT

## 8.1 Public Register

Under the regulations, the Council is required to maintain a public contaminated land register. The register will be held by the Environmental Health division at the Council's principal office at The Retreat, Newbold Road, Rugby, CV21 2LG. It will be paper-based initially with a proposed change to electronic format if found to be justifiable and be accessible on request by members of the public during office hours, Monday to Friday. A summary of the public register will be kept on the Rugby Borough Council website.

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

- remediation notices
- details of site reports obtained by the authority relating to remediation notices
- remediation declarations, remediation statements and notifications of claimed remediation
- designation of sites as "special sites"
- any appeals lodged against remediation and charging notices
- convictions

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

The 'contaminated land register' will be a full and accurate record of all regulatory action taken by Rugby Borough Council in respect of the remediation of contaminated land. The register will contain all or some of the following information, depending on what stage action has been reached.

- site Information i.e. address, National Grid Reference, location
- the degree of significant harm or pollution of controlled waters
- the substances contaminating the land and.
- if any of the substances have escaped from other land, the location of the other land;
- the current use of the land.
- name and address of the person on whom the notice is served;
- What each appropriate person is to do by way of remediation, and the periods within which they are required to do each of the things;
- Reference to details on previous site investigations and remedial activities, accessible under the Environmental Information Regulations;
- Remedial declarations;

- Remediation statements, i.e. the action that has been, is being or will be taken, the timescales for that action and the details of the person who is taking it;
- Notification of claimed remediation, i.e. remediation action that is claimed to have been taken, the timescale of that action and the details of the person who claims to have taken it.
- Appeals against a remediation notice
- Appeals against a charging notice
- Convictions

Land owned by the Council cannot be included in the public register. However, Councillors will be notified of any land which may be contaminated and action needed to remediate it or been taken as detailed in s5.2.1. This information will be kept by the Pollution Team and, as public reports, will be available to the public.

#### Confidentiality

There are certain restrictions on information to be placed on the register due to national security and/or commercial confidentiality.

The Pollution Control Team of Rugby Borough Council is ultimately responsible for producing and updating the contaminated land register.

All information regarding contaminated land must be passed onto the Pollution Control section. The department will examine any new evidence it receives and amend the register as required.

Additional site specific information, including site investigation reports, will also be kept within the Pollution Control section.

The release of information on potentially or actually contaminated land is a difficult issue as it can cause property blight if handled in an uncontrolled manner. The Council is committed to openness in relation to all information provided the information is being provided to an appropriate person for a proper purpose (e.g. the owner or potential purchaser of the land). The Pollution Control Team will liaise with Legal Services to determine guidelines for the release of information.

The Environmental Health Division will continue to respond to specific written requests for information held by the department on historic land uses and investigation data. A disclaimer is added to the written response making it clear that the information provided is only that available to the department at that time and encouraging the requester to make more extensive enquiries. An appropriate charge is made for provision of the information. This is consistent with the Environmental Information Regulations 1992.

Note: Currently no information other than notices served is routinely given in response to land charge enquiries unless a specific additional question is raised regarding landfill or contamination information.

The Agency must collate all of the information on contaminated land that each Local Authority acquires under Part IIA. To increase efficiency and guarantee consistency between all Local Authorities it has issued a number of summary forms to be completed by each Council every time:

- a site is designated as contaminated; and
- a remediation notice, statement or declaration is issued or agreed.

#### 8.2 Land charges

Routine land charges will continue to use the standard CON29 format currently used nationally.

Requests for information about the contaminated land register in question 16A will be directed to the Pollution Control Team.

#### 8.3 Data storage

The information required for the contaminated land regime includes a significant amount of spatial data, the storage and manipulation of which lends itself to the use of a Geographical Information System (GIS).

The Council's Geographical Information System (or GIS) will be the primary tool used to manage contaminated land information. and this will allow efficient information exchange between departments. This system will be used to correlate all information and determine the proximity of potential receptors (residents, controlled waters) to sources of contamination. The GIS will be linked to a database, which will allow statistical information to be drawn together for reporting and comparison with other authorities.

The Council uses Innogistics Cartology as the corporate GIS.

Information gathered during the desk-top phase, including data on land use, the presence of possible pathways and the location of potentially sensitive receptors, will be transferred to GIS.

# **APPENDICES**

# **Appendix 1 – Glossary of Terms**

DETR Circular 02/2000 contains a detailed glossary of terms, which includes the legal terms used in Part IIA. This glossary outlines the key terms used in this document to assist those not familiar with the subject.

**Appropriate person:** defined in section 78A(9) and is any person who is responsible for remediation.

**Aquifer:** Permeable rock that stores groundwater.

Brownfield Land: See 'previously developed land'.

**Caused or knowingly permitted:** test for establishing responsibility for remediation, under section 78F(2);

**CLEA:** Contaminated Land Exposure Assessment, a methodology for carrying out a risk assessment on human health

**Conceptual model:** a pictorial or physical representation of the relationship between the contaminants, pathways and receptors.

**Contaminant:** a substance which is in, on or under the land and which has the potential to cause harm or to cause pollution of controlled waters.

Contaminant (source) A substance in, on or under the ground with the ability to cause harm

#### **Contaminated land:** defined in section 78A(2) as

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

- "(a) significant harm is being caused or there is a significant possibility of such harm being caused, or;
- "(b) pollution of controlled waters is being, or is likely to be, caused."

**Controlled waters**: defined in section 78A(9) by reference to Part III (section 104) of the Water Resources Act 1991; this embraces territorial and coastal waters, inland fresh waters, and ground waters.

**Current use**: any use of the land which is lawful under planning legislation, including temporary activities and any likely informal recreational use of the land, whether authorised or not, (for example, children playing on the land) having regard to measures taken to prevent or restrict access to the land.

However, in the case of agricultural land, the current agricultural use should not be taken to extend beyond the growing or rearing of crops or animals.

**DETR:** Department of the Environment, Transport and the Regions

**Ecosystem:** A biological system of interacting organisms and their physical environment.

**Enforcing authority:** defined in section 78A(9) as:

in relation to a special site, the Environment Agency;

in relation to contaminated land other than a special site, the local authority in whose area the land is situated.

**Geo-rectification:** the geographical correction of the location of data onto the reference GIS data.

**GIS:** Geographical Information System. A computer programme that allows digital maps to be overlain and spatial data to be modelled.

Groundwater: Any water contained in underground strata, wells or boreholes

**Harm:** defined in section 78A(4) as:

"harm to the health of living organisms or other interference with the ecological systems of which they form part and, in the case of man, includes harm to his property."

**Hazard:** The intrinsic property of a substance with the potential to cause harm.

**ICRCL:** Inter Departmental Committee on Redevelopment of Contaminated Land (now disbanded)

**Inspection using statutory powers of entry:** any detailed inspection of land carried out through use of powers of entry given to an enforcing authority by section 108 of the Environment Act 1995.

**Intrusive investigation:** an investigation of land (for example by exploratory excavations) which involves actions going beyond simple visual inspection of the land, limited sampling or assessment of documentary information.

Owner: defined in section 78A(9) as:

"a person (other than a mortgagee not in possession) who, whether in his own right or as trustee for any other person, is entitled to receive the rack rent of the land, or where the land is not let at a rack rent, would be so entitled if it were so let."

Part IIA: Part IIA of the Environmental Protection Act 1990.

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

**Pollutant:** a contaminant which forms part of a pollutant linkage.

**Pollutant linkage:** the relationship between a contaminant, a pathway and a receptor.

**Pollution of controlled waters:** defined in section 78A(9) as:

"the entry into controlled waters of any poisonous, noxious or polluting matter or any solid waste matter."

**Possibility of significant harm:** a measure of the probability, or frequency, of the occurrence of circumstances which would lead to significant harm being caused.

**Previously developed land:** Also known as 'brownfield land' and refers to sites that have been used in the past and are abandoned or in a derelict state. Redevelopment may be hindered by actual or perceived environmental contamination. Only a small proportion of previously developed land sites will meet the definition of contaminated land.

**Register:** The public register maintained by the enforcing authority under section 78R of particulars relating to contaminated land.

**Receptor:** Sometimes referred to as "a target ", and includes people, water, ecosystems and properties that could be affected by contamination.

**Remediation:** Generally accepted as being the carrying out of works to prevent or minimise effects of contamination. In the case of Part IIA the term also encompasses assessment of the condition of land, and subsequent monitoring of the land.

**Remediation notice:** defined in section 78E(1) as a notice specifying what an appropriate person is to do by way of remediation and the periods within which he is required to do each of the things so specified.

**Risk:** The combination of:

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

Risk assessment: The study of

- the probability, or frequency, of a hazard occurring; and
- the magnitude of the consequences

**Source:** The location of contaminating substances in, on or under the ground with the ability to cause harm.

**Source protection zone:** Protection zones around certain sources of groundwater used for public water supply. Within these zones, certain activities and processes are prohibited or restricted.

**Significant harm:** defined in section 78A(5). It means any harm which is determined to be significant in accordance with the statutory guidance in Chapter A (that is, it meets one of the descriptions of types of harm in the second column of Table A of that Chapter).

**Special site:** The Regulations define special sites but an overview is given below. They are any contaminated land designated due to the presence of:

- Waste acid tars
- Purification or refining of crude petroleum, oil etc
- Explosives manufacture or processing.

#### Or:

- Integrated pollution control sites designated for central control
- Land currently owned by MoD
- Land within a nuclear site
- Chemical/biological weapons manufacture, production or disposal
- Land comprising premises designated under AWE Act 1991
- Land to which section 30 of the Armed Forces Act 1996 applies
- Land adjoining the above and affected by escape of substances

Substance: defined in section 78A(9) as:

"any natural or artificial substance, whether in solid or liquid form or in the form of a gas or vapour."

Note: The sections quoted in the glossary refer to the Environmental Protection Act 1990 as amended by the Environment Act 1995.

# **Appendix 2 - Contacts**

## **Statutory Consultees**

Michael Hughes
Area Contaminated Land Officer
Environment Agency
Riversmeet House
Northway Lane
Newtown Industrial estate
Tewkesbury
Gloucestershire GL20 8JG

J A Irving
Conservation Officer
English Nature
West Midlands Team
Warwickshire Office
10-11 Butchers Row
Banbury
Oxon
OX16 8JH

Dr Patrick Miller
Contaminants Division
Food Standards Agency
7<sup>th</sup> Floor
Aviation House
125 Kingsway
London
WC2B 6NH

Ian George
Ancient Monument Inspector
English Heritage
West Midlands Region
112 Colmore Row
Birmingham
B3 3AG

Fiona Reynolds or Gary Beckwith
Sustainable Agriculture Branch
Rural and Marine Environment Division
Ministry of Agriculture, Fisheries and Food (MAFF)
16 Palace Street
London
SW1E 5FF

Mr. Paul Goon Advantage West Midlands 3 Priestley Wharf Holt Street Aston Science Park Birmingham B7 4BN

John Deegan
Director
Department of Planning, Transport and Economic Strategy
Warwickshire County Council
PO Box 43
Shire Hall
Warwick
CV34 4SX

## **Non-Statutory Consultees**

Warwickshire Environmental Protection Council

English Partnerships Jordan House West Hall Court Hall Park Way Telford TF3 4NN

Nuneaton & Bedworth Borough Council

Warwick District Council

Stratford upon Avon District Council

Coventry City Council

**Daventry District Council** 

Harborough District Council

Hinckley and Bosworth District Council

The Rugby Agenda 21 Group

**Parish Councils** 

Warwickshire Agenda 21 Officers Group

Warwickshire Wildlife Trust

Orbit Housing Association

**Touchstone Housing Association** 

Sanctuary Housing Association

The William Sutton Housing Trust

Leicester Housing Association

Mercia Housing

Leigh Hunt Rugby Branch Chamber Sir Frank Whittle Business Centre Great Central Way Rugby CV21 3XH

Martin Furness Severn Trent Water Ltd 2297 Coventry Road Birmingham B26 3PU

## **Other Contacts**

Pollution Control Team
Housing and Environmental Health Department
Rugby Borough Council
The Retreat
Newbold Road
Rugby
Warwickshire
CV21 2LG

rugby.b.c@rugby.gov.uk

Telephone number 01788 533869 Fax number 01788 533866

Website www.rugby.gov.uk

# Appendix 3 - Legislation and guidance

- The Environment Act 1995, HMSO (1995) (Section 57 introduced Part IIA of the Environmental Protection Act 1990) ISBN 0-10-542595-8
- SI 2000/227, Environmental Protection, England, The Contaminated Land (England) Regulations 2000, HMSO (2000) ISBN 0-11-085901-4
- DETR Circular 02/2000, Environmental Protection Act 1990:Part IIA Contaminated Land, HMSO (2000) ISBN 0-11-753544-3
- Contaminated Land Inspection Strategies, Technical Advice for Local Authorities, DETR (Draft for comment April 2000).

These publications are available from the Stationery Office. Telephone Orders 0870 600 5522 or on the Internet: www.detr.gov.uk

#### Other Publications

- Communicating Understanding of Contaminated Land Risks, SNIFFER (2000)
- Methodology for the Derivation of Remedial Targets for Soil and Groundwater to Protect Water Resources, Environment Agency R&D Publication 20 (2000).
- Local Environment Agency Plan