

REPORT

CONTAMINATED LAND INSPECTION STRATEGY

Carried out for : Warwick District Council

June 2001

Report No : 271040

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WARWICK DISTRICT COUNCIL

CONTAMINATED LAND INSPECTION STRATEGY

SUMMARY

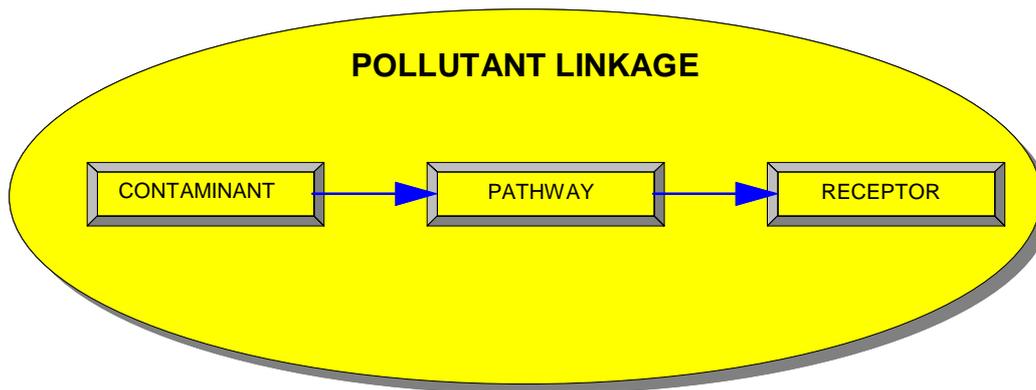
Regulations under Part IIA of the Environmental Protection Act 1990 require Warwick District Council to produce a strategy to identify, inspect and remediate contaminated land within its area. The strategy covers all land within the district including that owned, previously owned or occupied by the Council. The strategy explains how the Council will take a rational, systematic and efficient approach to inspection; having regard to information and comments from statutory consultees (such as the Environment Agency) and other interested parties.

Apart from the need to comply with the legislation the Council's priorities in dealing with contaminated land are :

- To protect human health
- To protect controlled waters
- To protect designated ecosystems
- To prevent damage to property
- To encourage re-use of brownfield land
- To encourage voluntary remediation

The Council's power to act applies only to "contaminated land" as defined by statute and may not therefore apply to every site which the public or even the Council may otherwise consider to be contaminated. The principle employed in the regulations is that land must be 'suitable for use'. This means that each site will have to be assessed separately to see whether a significant pollutant linkage is present.

A 'pollutant linkage' means that a site has not only **contaminants** (ie a **source** of pollution) but also a means for those substances to move (ie a **pathway**) to a **receptor** (ie someone or something which can be harmed by the contaminants – eg people).



The Council will only intervene when sites satisfy the criteria for determination as 'contaminated land' and when suitable voluntary action cannot be agreed.

It is proposed that a five year inspection programme beginning in July 2001 will be undertaken. These inspections will be carried out over the following five years, concentrating at first on the urban areas (reflecting the higher population densities in those areas).

It is recognised that some sites may be identified outside of this general approach to inspection that will require urgent attention. These sites will be dealt with as they arise.

The programme for inspection outlined in the strategy will be subject to annual review in the light of progress achieved, resource implications and the extent to which contaminated land sites are identified.

The Council is the lead regulator for the implementation of Part IIA and will work in partnership with other organisations, particularly the Environment Agency, in carrying out its duties. Consultation has already been undertaken with all statutory consultees prior to the adoption of the strategy. In certain rare cases the nature of a site may cause it to be defined as a "special site" in which case the Environment Agency will become responsible for implementation of Part IIA.

Contaminated land issues affect many aspects of the Council's activities and so a corporate approach will be adopted to such matters. However all the Council's work will be co-ordinated by the Head of the Environmental Health Department.

CONTAMINATED LAND INSPECTION STRATEGY

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CONTAMINATED LAND INSPECTION STRATEGY

1 INTRODUCTION

Warwick District Council is required to inspect land in its District for contamination under regulations which came into force on 1 April 2000. This strategy has been prepared in collaboration with CL Associates and sets out the background to this requirement and details how it will be undertaken.

Owing to the nature of the issues involved a number of technical terms are used in this document. Such terms are marked with an * at their first point of use and are defined in the glossary at Appendix B.

1.1 Overview

1.1.1 General Background

Warwick District Council is conscious of its obligation for responsible stewardship of the environment and seeks to put that into effect throughout its provision of services to the community and by the active encouragement of other individuals and organisations in the District to follow a similar approach.

1.1.2 WDC Corporate Aims

As part of its Environmental Corporate Strategy Warwick District Council will seek :

"to improve the quality of air, land and water in the district and to reduce harmful pollutants by influencing the behaviour of residents and commerce"

In its recently adopted Community Plan the vision for the future is :

"We want Warwick District to be Safe, Fair, Prosperous and Healthy. Now and into the future. "

The implementation of the Contaminated Land Inspection Strategy is one of many means which the District Council will use to help achieve these aims.

The Council's approach to the Strategy is to use an open and accountable process throughout its implementation of the Part IIA Contaminated Land Regime. This document was originally presented as a draft and made available for consultation. Although this document has to fulfil a statutory obligation it has been drafted in a manner to minimise or explain the use of technical terms (however a glossary of technical terms is included as Appendix B). Comments on the strategy received by the council before 25 June 2001 were considered before this version of the strategy was finalised and submitted to the Environment Agency. The deadline for this submission was July 2001.

1.2 Regulatory Context

1.2.1 Background

The Environmental Protection Act 1990 (EPA) contained provisions for addressing the issue of contaminated land. Following lengthy consultation processes the government subsequently amended these provisions through The Environment Act 1995 which inserted a new section (Part IIA) into the EPA. Again following lengthy consultation processes, the government subsequently produced regulations to implement these provisions. These regulations came into force in April 2000 (accompanied by Statutory Guidance on the implementation of this legislation - Circular 02/2000). It is the introduction of this new regulatory regime, generally referred to as the "Part IIA" regime, that has prompted the production of this strategy document.

1.2.2 The Roles of the District Council and the Environment Agency

Local authorities have been given the primary regulatory role under the Part IIA regime for a number of reasons but, in particular, they have historically had responsibility for dealing with any statutory nuisance caused by land contamination and with land use planning.

Under this regime the local authority has a number of specific duties :

- To prepare a Contaminated Land Inspection Strategy;
- 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;
- To maintain a public Register of Contaminated Land.

The regulations have given the Environment Agency a secondary role in dealing with Contaminated Land – specifically :

- to assist local authorities;
- to provide site-specific local guidance;
- to deal with “special sites” and;
- to publish periodic reports on the state of contaminated land in England and Wales.

1.2.3 Defining Contaminated Land

While various definitions of contaminated land have been used in the past, for the purposes of this regime the legal definition of contaminated land is provided in Section 78A(2) of Part IIA of the Environmental Protection Act 1990.

Contaminated land is 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.

Section 78A(5) requires the regulatory authority to act in accordance with guidance issued by the Secretary of State in determining significance and likelihood.

IT IS IMPORTANT TO REALISE THAT THIS DEFINITION OF CONTAMINATED LAND MEANS THAT IT IS NOT JUST THE PRESENCE OF CONTAMINATING SUBSTANCES ON OR IN LAND THAT RESULTS IN IT BEING IDENTIFIED AS CONTAMINATED BUT THOSE SUBSTANCES HAVE TO HAVE THE POTENTIAL TO CAUSE HARM OR POLLUTION AS DESCRIBED ABOVE.

1.2.4 Identifying Contaminated Land

In order for a site to meet this definition of contaminated land, there must be a location containing one or more contaminating substances a vulnerable target (ie something which can suffer harm or pollution - referred to below as a **receptor**) and a means by which the contaminant can travel from the source to the receptor (referred to below as a **pathway**). When all three of these factors are present this is described as a **pollutant linkage**. A pollutant linkage consists of three parts:



A formal definition of these components is set out below :

- i) A contaminant in, on or under the ground;
- ii) A pathway by which the contaminant is causing significant harm (or which presents a significant possibility of such harm being caused);
- iii) A receptor of a type specified in the regulations.

If any one of the three components is missing, the land, although possibly polluted, cannot be designated as contaminated (under the definition of the Part IIA legislation).

The receptors formally recognised in the statutory guidance as being potentially sensitive are set out in Appendix D but, in summary, they include:

- HUMAN BEINGS
- ECOLOGICAL SYSTEMS or LIVING ORGANISMS forming part of a system within certain protected locations
- PROPERTY (buildings and other forms)
- CONTROLLED WATERS

Once it has been established that a pollutant linkage exists it is necessary to determine whether that pollutant linkage is **significant**. In terms of Part IIA this means demonstrating that it :

- is resulting in significant harm being caused to the receptor in the linkage;
- presents a significant possibility of significant harm being caused to the receptor in the linkage, or;
- is resulting in, or is likely to result in the pollution of controlled waters.

This determination of significance will usually take the form of a risk assessment. Such risk assessments will be undertaken to determine the likelihood of harm being caused and the likely nature and extent of the harm caused if the predicted situation actually occurred. An area of land can only be designated contaminated land if a significant risk has been proven. The process for identifying contaminated land is illustrated in Figure 2 (see overleaf).

PROCESS FOR IDENTIFYING CONTAMINATED LAND

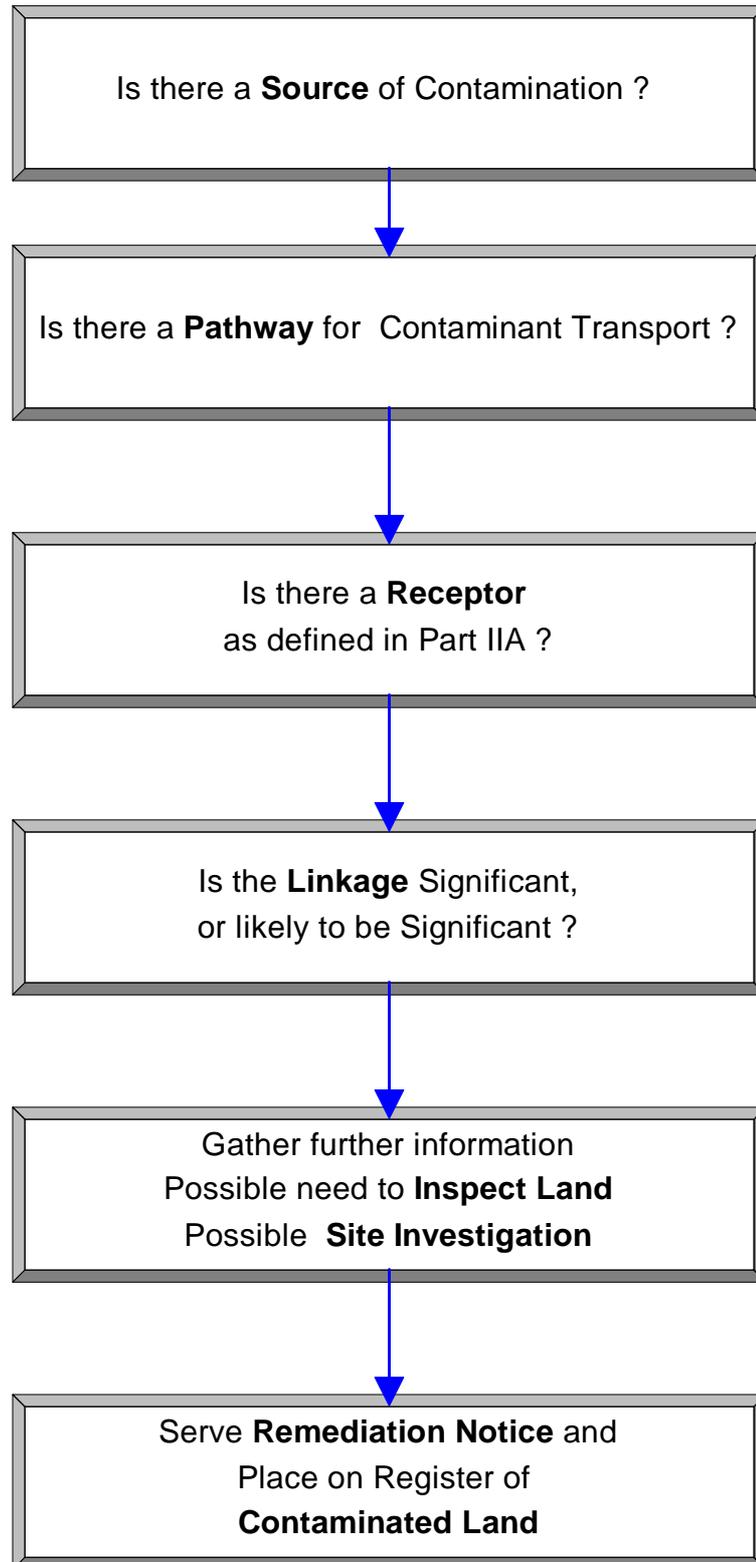


Figure 2

1.2.5 Dealing with Contaminated Land

Where an area of contaminated land has been designated the local authority will firstly consider whether it constitutes a **Special Site** within the meaning of Part IIA (in which case the Environment Agency is the lead regulator). In other cases Warwick District Council will be responsible and will adopt a staged approach to implementing Part IIA requirements by :

- i) Establishing who is the “**appropriate person**” to bear responsibility for the remediation (or “clean-up”) of the land;
- ii) Deciding what remediation is required and ensuring that this occurs, through:
 - Reaching a voluntary agreement;
 - Serving a remediation notice, if agreement cannot be reached;
 - Carrying out work themselves, in certain circumstances;
- iii) Determining who should bear what proportion of the liability for meeting the costs of the work, and;
- iv) Recording certain information about regulatory action on a public register.

1.3 Development of the Inspection Strategy

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

The Statutory Guidance requires that the approach adopted should:

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

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 DETR. The strategy has been prepared in a number of stages:

- i) The Council’s internal Contaminated Land Working Group commented on the consultation draft. This Group is made up of officers from Environmental Health, Planning, Property Services and Legal departments (May 2001).
- ii) Comments were invited on the consultation draft from formal consultees and informal consultees, including other sectors of the community and businesses. Parish Councils are seen as particularly important sources of local information and a pro-active consultation exercise was undertaken to involve them in March 2001.
- iii) This final version of the strategy has been submitted to the Environment Agency.

2 CHARACTERISTICS OF THE WARWICK DISTRICT

This section provides a background description of the area served by Warwick District Council and presents an explanation of how this influences the Council's approach to inspection for contaminated land. It will also enable fair comparison with other authorities.

2.1 Geographical Location, Context, Description

The Warwick District covers an area of 109 square miles or 282 square kilometres, lies in the heart of England and occupies the central part of Warwickshire, bounded by Solihull Borough and Coventry City to the north, Rugby Borough to the east and south-east and by Stratford upon Avon District to the south and west.

The character of the Warwick District is inexorably linked to the character of its land. The District is a predominantly rural area with three main towns, Warwick, Kenilworth and Leamington Spa including Whitnash (see Figure 1).

The District's inhabitants have historically exploited the rich natural soils of the area, growing crops and raising livestock. There are comparatively few sites of historic heavy industrial use and smaller scale sites where minerals have been exploited are scattered throughout the District.

2.2 Broad Geological Characteristics

The geology of the Warwick District may be broadly divided in two:

- i. solid geology, comprising sedimentary rocks ranging from Carboniferous to Jurassic in age;
- ii. superficial drift deposits, comprising glacial and post-glacial clays, sands and gravels.

The broad (solid) geology of the district is illustrated in Figure 3.

The rocks forming the solid geology generally dip at a shallow angle towards the south-east, the older rocks therefore being exposed in the north of the District. The drift deposits occur across most of the District and are generally fairly thin.

The oldest rocks in the District belong to the Carboniferous Upper Coal Measures Tile Hill Mudstone Formation. These are overlain by Permian rocks of the Kenilworth Sandstone and Ashow Formation, although the precise age of the latter formations is uncertain. These rocks are generally found in the north-west of the District around Kenilworth and extend north towards Coventry.

Following the deposition of the Carboniferous and Permian rocks, the region underwent a period of folding and faulting, resulting in the formation of a syncline, gently plunging south-eastwards. A period of erosion followed, before the deposition of the Triassic and Jurassic rocks.

The Triassic rocks underlie the majority of the District and comprise the Sherwood Sandstone, Mercia Mudstone and Penarth Groups. The Jurassic rocks of the District comprise rocks of the Lower Lias, and are only found as an isolated fault bound block just to the south-east of Whitnash.

The general distribution of superficial deposits consists of boulder clays predominating on higher ground and sands and gravels, river gravels and alluviums in the river valleys.

Permission will be obtained from the British Geological Survey to use their maps as one of the data sources in the process of identifying contaminated land.

2.3 Broad Hydrological and Hydrogeological Characteristics

The Warwick District lies almost wholly within the catchment of the River Avon, which ultimately drains into the River Severn. Only the extreme north-western part of the District drains to the River Blythe, a tributary of the River Tame. The River Leam drains the eastern part of the District, whilst the remainder is drained by the River Avon and numerous small tributaries.

From sampling carried out by the Environment Agency, the river quality of the Leam and the Avon is predominantly categorised as “very good” or “good”. Protection of these high standards of river quality from contamination is therefore a major objective of the inspection strategy.

The Environment Agencies Groundwater Vulnerability Map for the area provides information on the groundwater beneath the District (see Section 2.9.3). This indicates that the majority of the District is underlain by non-aquifers, with much of the remainder of the District classified as a minor aquifer with low to high vulnerability. There are, however, two small areas with major aquifer status within the District. Both of these comprise the exposed Triassic Sherwood Sandstone, just west of Kenilworth, and a strip running north-east from Warwick to Bubbenhall and then north through Baginton towards Coventry.

2.4 General History of Area

Warwick, the District's county town is thought to have been founded as a market in the 8th Century and had developed into a fortified town by 916, guarding a crossing point of the River Avon. During this period, the majority of the surrounding District comprised woodland, which was slowly cleared, allowing cultivation and the development of small settlements. The 11th Century Domesday Book suggests a population of Warwick of between 1,500 and 2,000, whilst the rest of the District is estimated to have had a population density in the order of 9 to 60 persons per square mile. Warwick was incorporated as a town in the 16th Century.

Agriculture was the District's main employer, but fishing was briefly important with eels being caught at mills built on the Avon. Wool production became important in the 14th Century and continued to be of significance until the late 19th Century.

The Black Death and the poor harvests and famines which proceeded it in the early 14th Century were the precursors to the abandonment of a large number of rural villages and the start of land enclosures, ultimately resulting in the growth of more intensive farming, which supported the growing cloth and tanning industries.

Leamington Spa, a small village in 1801 with a population of less than 500, expanded rapidly in the 1830's as a fashionable spa resort and by 1850 had a population nearing 3,000. Leamington was given a borough status in 1875 and by 1901 was a town with a population of 23,000. Heavy industry developed close to the canal and railway, but has declined in recent years.

Whitnash developed along the Fosse Road and the parish church dates to the 15th Century. The village and surrounding area were dominated by open fields in the mid 19th Century. In 1935 the village population was approximately 600, but considerable housing development caused the population to expand to approximately 9000 in 1959. Today the new residential developments on the south-east suburbs of Leamington, around Tachbrook border directly on Whitnash.

Kenilworth was mentioned in the Domesday Book and the castle and abbey both date from the 12th Century. Kenilworth grew in the middle ages as two villages, Abbey Manor (to the north) and Castle Manor (to the south), separated by Abbey Fields. The abbey was dissolved during the 16th Century reformation and the castle was sacked during the Civil War in the mid 17th Century.

Through the 20th Century the populations of Warwick, Leamington Spa and Kenilworth continued to increase:

	Early 19th Century	1991 Census
Warwick	12,000	22,400
Leamington Spa	23,000	53,500 †
Kenilworth	4,500	21,200

† Including Whitnash

2.5 Current and Past Industrial History

GENERAL

The main use of land in the District, other than for residential use is for agriculture. Current industrial activity is described in Section 2.7 while the more significant past industrial activities are described under specific headings below.

A preliminary examination of the historical land use data for the area (as supplied by Landmark see Section 3.2) indicates that less than 200 sites (per epoch) have been subject to potentially contaminating land uses in the past and less than six hundred sites have been subject to raising of ground levels.

AGRICULTURE

Agriculture dominates the District, although since the 1950's cereals and vegetables have become increasingly important compared to meat and wool production. The importance of agriculture to the District is reinforced by the development of the Royal Agricultural Society's permanent show ground at Stoneleigh.

TOURISM

Tourism became one of the most important industries of the District with the development of the spa in Leamington in the 19th Century and later with the promotion of the motte and bailey castle at Warwick, recently becoming one of the most visited of all English country houses.

CANALS AND RAILWAYS

The Grand Union Canal was completed in 1800 whilst the Stratford Upon Avon Canal was finalised some years later (1816) during the Napoleonic Wars. The canals were built for two reasons, for the transport of heavy goods and the linking of the midlands manufacturing centres with deep water ports. Principal cargoes comprised coal, limestone, manure and road construction materials.

The Oxford Railway Line, opened in 1852 linked Oxford and Leamington Spa to Birmingham and in the second half of the 19th Century further lines were opened through the more rural parts of the District.

The construction of the canals and later the railways provided the catalyst for the development of other local industries such as the Leamington foundries and town gasworks, allowing the relatively cheap import of raw materials.

2.6 Population Distribution

As of 1991, the population of the District was estimated at 114,800 with approximately 85% of the inhabitants living in the three major towns:

Location	Population (1991)
Warwick Town	22,400
Leamington Spa Town	53,500 †
Kenilworth Town	21,200
Other Settlements and Rural Area	17,700
Total in Warwick District	114,800

† Including Whitnash

2.7 Current Land Use Characteristics

The main use of land in the District, other than for residential use, is for agriculture. Current industrial activity is generally restricted to a number of small-medium size industrial estates, with only a handful of large manufacturing operations. The major employers are now the service industries and newer 'technology' industries.

Forty industrial processes prescribed under Part I of the Environmental Protection Act 1990 operate in the area, of which one is authorised by the Environment Agency (Part A processes), and around 39 (many of which are petrol stations) by the District Council (Part B processes). The Council holds the public register, which contains information about the nature of these processes. The Council is also aware of six operational and eighteen closed landfill sites within the Warwick District area.

Many uses of land are the responsibility of the Council, such as housing (approximately 6,500 properties) and open spaces. Under Part IIA it is the current use that determines what receptors are at risk. The Council will, therefore, have regard to the specific uses of potentially contaminated sites as well as the occupation of neighbouring land that may also be affected.

2.8 Land Owned by the District Council

The District Council has limited land holdings in the District including housing, parks & recreational facilities, cemeteries & a crematorium, Council premises used by the authority and some Council premises rented to third parties

The County Council also has certain land holdings in the District.

2.9 Designated Areas and Locations

2.9.1 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 Warwick District there are many listed buildings, scheduled ancient monuments and protected ecosystems, and a summary is provided below. 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.

The biodiversity of the District is one of its major natural assets. The District boasts:

- Six Sites of Special Scientific Interest (SSSI's), four for reasons of geological interest and two for ecological importance;
- Eleven Local Nature Reserves (LNRs);
- Eight Regionally Important Geological Sites (RIGS).

In addition to these sites that have received statutory designations, Warwickshire Wildlife Trust is in the process of creating a list of key wildlife sites, known as SINC's (Sites of Interest for Nature Conservation). At present only 1 or 2 SINC's have been formally designated, but 194 potential SINC's have been identified, and this number may well increase as the work progresses.

2.9.2 Key Property Types

As well as its high quality natural environment, the District has a rich historic environment with over 2,000 Listed Buildings (27 of which are listed as Grade I), 41 Ancient Monuments and 19 designated Conservation Areas. The Warwickshire Museum Field Services Record contains information on over 8,000 entries of archaeological interest in the Warwick District and there are also a number of historic parks and gardens.

2.9.3 Key Water Resource and Water Protection Issues

The Severn-Trent Water Company supplies the majority of the District's drinking water.

The District Council regularly inspects the quality of about 50 private drinking water supplies in its area.

Two series of maps have been produced by the Environment Agency to assist in broadly defining areas relevant to the protection of groundwaters. These maps are referred to in the Environment Agency document entitled Policy and Practice for the Protection of Groundwater (1998). The approach adopted is twofold and considers firstly the vulnerability of the groundwater resources as a whole (the groundwater vulnerability maps), and secondly the specific importance of those areas which form the catchments to the main sources of supply (the Source Protection Zone (SPZ) maps).

The resources are assigned vulnerability classes subdivided into major, minor and non-aquifers, soil classification at the surface and the presence, if any, of low permeability drift deposits. These are indicated on the groundwater vulnerability maps. Boundaries on these maps are based on published geological and soil survey mapping and are therefore relatively fixed, subject to future re-mapping. The Groundwater Vulnerability Maps are useful for a broad appraisal of where groundwater resources may be vulnerable from surface land use activities. Other information (eg. the thickness and type of overlying cover and depth to groundwater) will always be required in order to refine interpretation of these maps at a site specific level.

The parts of the aquifers which are considered to form the catchments to public water supplies and certain other private supplies have been defined as SPZs. These relate purely to groundwater flow below the water table and do not take account either of the nature and thickness of the overlying unsaturated zone or cover which may have an important influence on groundwater vulnerability. SPZs are presented on source protection maps. SPZs have only been derived by the Environment Agency for the above types of source, whereas there are many thousands of other licensed and unlicensed abstractions supporting industrial, agricultural, domestic and other uses which would be a local consideration. SPZs depend on variables such as the current local abstraction regime and various physical parameters which may not be well defined. SPZs are therefore not fixed and they require both ongoing management and periodic review.

2.10 Known Information on Contamination

The Council holds some information on contamination in the District, primarily data submitted as part of the planning process (but also records of some old landfill sites). 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 inspection process.

2.11 Areas of Naturally Metal Enriched Soils

The Soil Survey and Land Research Centre based at Cranfield University have undertaken a national soil survey. There are unlikely to be any areas of naturally metal enriched soils due to the nature of the solid geology underlying the District.

3 WARWICK DISTRICT COUNCIL STRATEGY : OVERALL IMPLEMENTATION

The reasons for writing this strategy were described above. A detailed breakdown of how the Council will meet its objectives is given in this section, prioritising actions and laying down milestones.

3.1 The Council's Priorities

Dealing with contaminated land constantly throws up complex issues, often where limited amounts of information are available. For each site, the importance of these issues must be balanced in order to move forward in dealing with the problem. A prioritised list of the Council's aims has therefore been devised to aid decision-making.

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

- To protect human health;
- To protect controlled waters ;
- To protect designated ecosystems ;
- To prevent damage to property;
- To encourage re-use of brownfield land;
- To encourage voluntary remediation.

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

As mentioned above the Council's approach in achieving these is to develop an effective, transparent and fair process for implementing the strategy. In order to meet these requirements the Council will adopt a systematic approach to implementation and will have due regard to relevant legislation and government advice. In particular, it will rely on the acquisition of a district wide database of old maps (and land use information gleaned from them) augmented by information already held by the Council and information supplied by consultees (Listed in Appendix C).

3.2 Strategy Preparation

The task of inspecting the District for contaminated land is quite onerous, will require significant resources and the exercise will need to be carried out over a realistic

timescale. The process is illustrated in Figure 2, described as a series of stages below and the proposed programme of implementation is shown in the form of a preliminary timetable in Appendix A.

Draft Consultation Strategy

A draft version of the strategy was drawn up in accordance with DETR Draft Technical Guidance. This draft formed the basis of consultation with other organisations involved in the process of inspection. Consultation comments were then taken into account as the final strategy was produced.

Consultation (June 2001)

The draft was published for consultation at the end of May 2001.

The consultation process served a number of purposes :

- Fulfil the statutory obligation;
- Raise general awareness of the impending inspection process;
- Provide an opportunity for third parties to provide relevant information;
- Facilitate constructive debate on the Strategy.

Publish Final Inspection Strategy (June 2001)

Following the consultation process the Strategy was reviewed and modified as necessary. It was subsequently reported to the Executive on 25 June 2001 for formal approval and then submitted to the Environment Agency.

3.3 Strategy Implementation

Data Acquisition

To begin the process of investigation on a systematic basis, the Council will purchase a set of historic ordnance survey maps in a digital format from Landmark Information Group Ltd. (along with a database of historic land use) which can be used with the Council's Geographical Information System (GIS).

The historic ordnance survey maps are from four separate time periods (or epochs), namely:

- 1878-1895;
- 1901-1905;
- 1920-1929;
- 1936.

Mapping technology was not as accurate during these times as it is currently and, therefore, each set of maps has been "geo-rectified" to allow them to be overlain onto current maps.

In addition to the historic maps the Council also have a licence with the Ordnance Survey for current maps for the area and will acquire a complete set of geological maps for the area from the British Geological Survey.

The historic land use database identifies areas of potentially contaminated land from analysis of historic ordnance survey maps, taking account of governmental advice on the identification and classification of potentially contaminative land uses.

It is important to realise that only a small proportion of sites identified as the being subject of potentially contaminated land use are likely to meet the strict definition of contaminated land. Due to the past uses of the land, some 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 also have

both a pathway by which contamination can travel and an appropriate receptor (see Appendix D) on which significant harm can be inflicted. If either the pathway or the receptor is absent the pollutant linkage does not exist and the site cannot be designated as contaminated land for the purposes of Part IIA (although the land may be in a contaminated state).

Dealing with Urgent Sites (July 2001 onwards)

The process of systematically inspecting the entire District will take some time to complete and it would be unreasonable to delay dealing with known problems just to allow the completion of that process. In cases where there is any verifiable report of a site causing significant harm and there is a critical need, investigative work / remediation will have to be carried out in parallel with the completion of the wider inspection process.

This element of the work would apply to all receptors and may include declaring some "Special Sites" and passing the lead regulatory role for these sites to the Environment Agency.

Inspection of Warwick District for Contaminated Land (September 2001 onwards)

Apart from meeting the statutory requirements, the Council's first priority in dealing with contaminated land is to protect human health as clearly stated in Section 3.1. It is therefore, proposed that the inspection of land within the District will take account of population density.

The largest settlements will have the largest number of receptors (humans) given the highest priority by the Council and, due to their urban nature, probably the largest number of potential sources. The three largest towns in the District (Warwick, Leamington Spa and Kenilworth) will therefore be considered first, followed by the town of Whitnash, the District's many villages and smaller settlements and then the rural areas. Generally areas will be prioritised on the basis of population unless information comes to light indicating sources of particular risk.

Council Owned Land (September 2001 Onwards)

The Council has a number of land holdings within the District. There are other areas of land within the District that the Council (or its predecessors) has owned at some stage in the past where potentially contaminative activities may have occurred.

As the inspection strategy proceeds 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 setting a good example in "putting its own house in order" before expecting others to follow suit.

Future Development Land

As the local planning authority for the area, the Council have embarked on the process of updating the Warwick District Local Plan. In common with its predecessor, this plan will identify areas of land which should be used to accommodate future development. As at May 2001 a consultation document has been published and a public participation exercise is underway.

Where specific sites are likely to be identified for future development it is logical to undertake investigation of "proposed allocations" as a priority within the general approach to contaminated land investigation. This land will therefore be specifically considered within the timescale for the preparation of the Local Plan.

Final Prioritisation (July 2006 – December 2006)

The regulations require the remediation of contaminated land to be prioritised. Apart from urgent cases (referred to above) this prioritisation can only take place once the whole District has been considered and all* potential sites have been identified.

* In this context "all" means those sites identified through the initial inspection process – it is to be expected that from time to time further information will come to light which will give rise to the identification of further sites.

4 PROCEDURES

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.

4.1 Internal Management Arrangements for Inspection and Identification

Within the District Council, the Environmental Health Department has responsibility for the implementation of Part IIA of the EPA 1990. The Head of Environmental Health will deal the day-to-day implementation of the strategy once approved by elected members and where appropriate (again subject to approval by elected members) will be able to authorise Suitable Persons to act on the Council's behalf. The Head of Environmental Health will also be responsible for serving remediation notices, subject to consultation with the Council's solicitor. The Inspection Process to identify contaminated land will follow the procedure illustrated in Figure 4 below.

4.2 Consideration of Local Authority Interests in Land

As indicated above, investigation of Council-owned land will be carried out alongside the general investigation of each area of search, and this land will be amongst the first investigated in each area.

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

4.3 Information Collection

Many sources of information will be required to identify potential sources of contamination pathways and potential receptors. The Principal Information Resources are detailed in Appendix E – in some cases information will be passed directly to Warwick District Council and kept in the general database however some categories of

PROCESS FOR INSPECTION

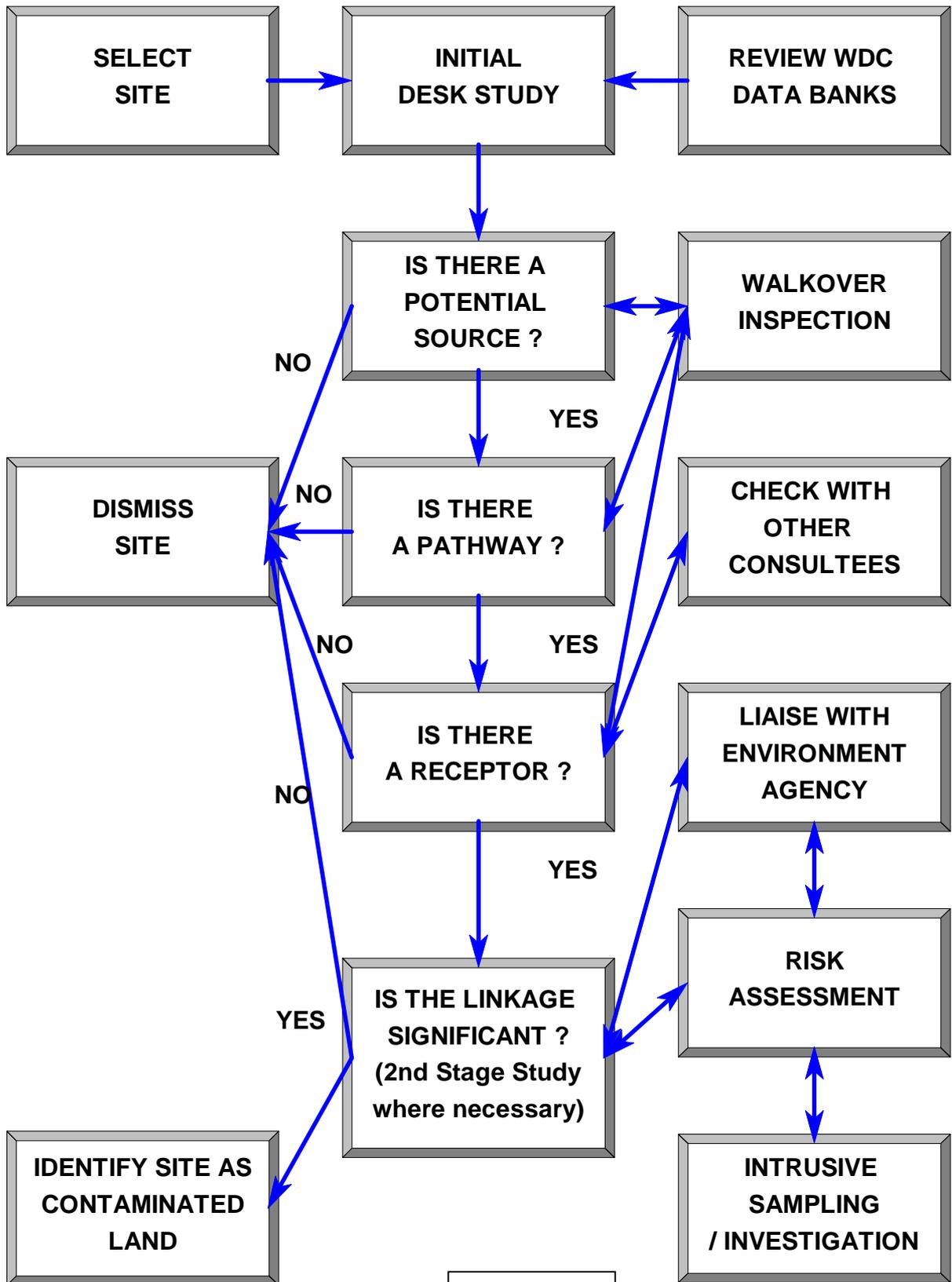


Figure 4

information (particularly those construed by the holders as confidential) will be retained by the original sources.

A variety of other information sources will be utilised depending on site specific circumstances. Information obtained through third party sources will be verified wherever possible.

4.4 Information Management

The Council's Geographical Information System (GIS*) will be the primary tool used to manage contaminated land information. The Council is currently in the process of adopting the "GGP" GIS system as a corporate system and this will allow efficient information exchange between departments.

This system will be used to correlate all information and amongst other things determine the proximity of potential receptors (residents, controlled waters etc.) to sources of contamination. The GIS will be linked to an Oracle database, which will allow statistical information to be drawn together for reporting and comparison with other authorities.

The Council will maintain a Public Contaminated Land Register which will be held by the Environmental Health Department at the Council's main office at Riverside House, Milverton Hill, Leamington Spa (see Section 5.5 below).

4.5 Complaints and Voluntary Information Provision

From time to time, the Council may receive a complaint regarding contaminated land from a member of the public, business or community group. Interested parties may also voluntarily supply information relating to land contamination that is not directly affecting themselves, their businesses, 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.

4.5.1 Complaints

A complaint regarding contaminated land will be dealt with following the same procedure as currently used by the Environmental Health Department 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 three working days of receipt;
- in the case of an urgent contamination issue response will be within one working day;
- to be kept informed of progress towards resolution of the issue.

Every effort will be made to make an initial assessment of the complaint as quickly and efficiently as possible, however progress towards remediation if required will have to take account of the significance of the problem and its relationship to the Councils overall priorities. Also the legislative framework presents a number of obstacles to speedy resolution of problems :

- i) proof of a viable pollutant linkage before any formal designation as contaminated land is permissible, which might only be possible with detailed investigation;
- ii) prior consultation with interested parties before designation as contaminated land;
- iii) a minimum of a three month period between designation and serving of a remediation notice;
- iv) the requirement for the enforcing authority to make every effort to identify the original polluter of the land (or "Class A" person).

The regulations allow conditions (ii) and (iii) to be waived in extreme cases, but not conditions (i) and (iv).

4.5.2 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 may need to be made public is if legal action ensued. The complainant's wishes would be taken into account in this situation.

4.5.3 Voluntary Provision of Information

If a person or organisation provides information relating to contaminated land that is not directly affecting their own health, the health of their families or their property, this will not be treated as a complaint. The information will be recorded and may be acted upon. There will, however, be no obligation for the Council to keep the person or organisation informed of progress towards resolution, although it may choose to do so as general good practice.

4.5.4 Anonymously Supplied Information

The Council does not normally undertake any investigation based on anonymously supplied information, and this general policy will be adopted for contaminated land issues. This policy does not, however, preclude investigation of an anonymous complaint in exceptional circumstances.

4.5.5 Anecdotal Evidence

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 Environmental Co-ordinator (nominated by the Head of Environmental Health) will use knowledge and experience to decide what, if any, further investigation is required following a complaint or a provision of information.

4.6 Inspection Process

In order to gain access to any site in order to undertake an inspection or intrusive investigation, the Council will in the first instance, seek consent from the current site owner and/or occupier, who will be sent written confirmation detailing :

- the agreed date of inspection/investigation;
- what the inspection/investigation will involve;
- who will undertake the inspection/investigation, and;
- if appropriate, who may be required to be present for interview during the course of the visit.

If the owner/occupier does not grant consent for the visit, the Council will seek to obtain a Magistrate's warrant in order to gain access.

4.6.1 Powers of Entry

Under Section 108(6) of the Environment Act 1995, the Council has been granted statutory powers of entry to carry out inspection/investigation. 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.

Before conducting intrusive investigations the Council must have gathered enough information during the desk-top phase to suggest that there is a 'reasonable possibility' of a pollutant linkage existing on the site, i.e. there is likely to be a 'contaminant' and 'receptor' present. If information on the condition of the site already exists elsewhere, e.g. Environment Agency archives, the Council cannot instigate an intrusive investigation, without examining this information first. The same also applies if the landowner/occupier offers to provide the Council with the required information, and does so within a reasonable and specified time.

4.6.2 Site Inspections

The Environmental Health Department has responsibility for implementing Part IIA in Warwick District. Within the department the day-to-day implementation of the Inspection Strategy will be managed by the Head of Environmental Health or his nominee.

The desk study and site visit aspects of detailed inspection will be the responsibility of the Head of Environmental Health. Assistance will be sought where necessary from other statutory bodies and other "suitable persons" for these tasks.

The purpose of the site visit is to gather further information about already identified potential pollutant linkages. This may be to determine the likelihood that contaminants and receptors are present, and/or to gather further information about the relevant pathways. In some cases the site visit will allow clarification and verification of desk study information and in particular, to consider in more detail the site boundaries. Also, the site visit may be used to assist in the planning of any intrusive investigation which may be required.

In the majority of cases the site visit will be limited to a visual inspection of the site carried out as a walkover exercise. A standard checklist will be developed for this purpose. During the walkover a site plan will be drawn up and annotated, and photographs taken. Where possible, inspection will also be carried out on adjacent land.

On some sites it may be appropriate or necessary (e.g. on operational sites) to be accompanied by the site owner, occupier or another representative during the reconnaissance. Such persons will be interviewed to gain additional information and, if necessary, to discuss access issues and practicalities for any potential future intrusive site investigation.

4.6.3 Sampling - General

Limited manual sampling of near-surface soils, vegetation and on-site or adjacent surface waters may be undertaken during the site visit. Samples would then be submitted for chemical laboratory analysis. Sampling will only usually be carried out if the information generated is likely to provide positive evidence of the presence or

absence of a suspected contaminant, a pathway or an impact on a receptor within a suspected pollutant linkage.

4.6.4 Intrusive Sampling

Although it will depend on the nature and extent of any required intrusive investigation, it is considered likely that where this work becomes a Council responsibility (ie cannot be achieved by voluntary means) it will be contracted out to a "suitable person" who will report directly to the Head of Environmental Health. While the Council may seek the advice of such parties, it will not rely on them to make decisions regarding the existence of pollutant linkages or determination of a site as Contaminated Land.

The Council will seek help on intrusive sampling and the analysis of samples obtained together with advice from consultants in certain cases in relation to both the technical aspects of investigation and the interpretation of results. In appointing any consultants or contractors the Council will have regard to its policy on "Good Financial Practice" and any other appropriate guidance to ensure open and fair processes are employed in their appointment.

Generally, the methods adopted will follow industry standards such as the Code of Practice for the Investigation of Potentially Contaminated Sites (BS 10175, 2001). The precise methodology adopted will, however, depend largely on the degree of information required, the number and nature of the pollution linkages present, the level of confidence required, and the prevailing conditions at the site, including suspected ground conditions and form of access.

During intrusive investigations, the Council will take all reasonable precautions to avoid pollution or damage to natural resources or features of archaeological or historical interest and will liaise with all relevant bodies as appropriate. All sites will be returned to their former state where necessary.

4.7 Risk Assessment

All information on substances in, on or under the ground that may cause significant harm or pollution will be evaluated against current Governmental Guidelines. This will allow, in conjunction with an assessment of the proven and potential pathways and receptors, for an assessment of the risks to the receptors to be made. As more information becomes available for any particular site, the risk assessment for that site may be refined, allowing a better understanding of the problems at the site and helping in the formulation of further investigation, monitoring or remediation options.

Traditionally, in Britain, standards for individual contaminants have been used to determine whether chemical testing results are acceptable for any proposed land use, i.e. they are end land-use driven. Unfortunately there has never been a comprehensive set of standards that are universally acceptable. The Council has relied upon a mixture of guideline values (not necessarily formal standards) in use in the UK, Europe and the USA.

The adopted values have to be used with care, with corrections applied for local soil conditions where appropriate. Nevertheless, these values are effective at screening and prioritising selected sites. It should be recognised that generic values have not been derived for all of the contaminants likely to be encountered in Warwick District.

The most appropriate guidelines should be used for the particular site circumstances. Where results suggest that contamination exists at levels in excess of the adopted guideline values, the site will still not be considered contaminated land unless a significant pollution linkage is identified. If a linkage is identified, then it is likely that further investigation followed by a site-specific risk assessment will be required.

Site-specific risk assessments use models (often computer-based) to calculate acceptable levels of contamination, having regard to the local circumstances. These models may be costly and complex to conduct but this can usually be offset by the savings made in carrying out a more efficient clean up of the site.

All models have a number of limitations and may not be appropriate for assessing particular categories of site. The Environmental Health Department will therefore have regard to the nature of the site to determine the suitability of the model(s) used.

4.7.1 CLEA and ICRCL Guidelines

The guidelines which have so far been most widely used in the UK are those published by the Interdepartmental Committee on Redevelopment of Contaminated Land (ICRCL). These are end land-use driven, and have been widely used since their publication in 1987. The Government (DETR) has more recently commissioned the development of a new generic model for human health risk assessment, which will replace the ICRCL values. The Contaminated Land Exposure Assessment (CLEA) model 'focuses on pathways that could lead to direct risks to human health from particular future site uses'. The model proposes a number of routes by which humans may be exposed to soil contaminants, the importance of which will depend on the contaminant and on the proposed end use which, in CLEA, is assumed to fall into one of five categories:

- Allotments;
- Residential with gardens;
- Residential without gardens;
- Parks and open spaces;
- Commercial and industrial uses.

4.7.2 Risk Assessment for Other Substances

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

4.7.3 Risk Assessment for Groundwater

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).

4.8 Interaction with Other Regulatory Regimes

There are a number of other regulatory regimes already in place that routinely deal with contamination on land. Overlaps with planning, water pollution and IPPC/Waste Management Licensing legislation are considered the most important and are addressed below. Any issues of land contamination that may previously have been dealt with under the statutory nuisance regime will now be dealt with through Part IIA processes.

4.8.1 Planning

The vast majority of contaminated land issues are currently addressed through the Town & Country Planning regime, where contamination is viewed as a material consideration when assessing planning applications. While the introduction of Part IIA will undoubtedly lead to the problems of additional sites being addressed, it is anticipated that 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.

The Environmental Health Department works closely with Development Control and Building Control on all issues relating to pollution and the current arrangements for inter-departmental consultation are believed to be sufficiently robust to encompass contaminated land issues.

4.8.2 Water Pollution

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

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

4.8.3 Integrated Pollution Prevention and Control (IPPC) and Waste Management Licensing

Under new IPPC legislation to regulate pollution from industrial processes, site operators seeking a permit are required to prepare a site report to submit with their application. If the site condition is such that areas of land have the potential to meet the definition of contaminated land, then this may trigger action under Part IIA. Existing permitted processes will be brought under this legislation in stages over the next seven years, although it will apply directly to any new processes or any substantial change to an existing process on already permitted sites.

The Part IIA regime does not normally apply to sites where a Waste Management Licence is in force (unless action is required to deal with harm or pollution not attributable to a breach of the licence).

4.9 Identification of General Remedial Requirements

Risk assessments will be used to select the most appropriate remedial actions. The risk assessment process and the relevant standards/guidance are discussed in Section 4.7 above. Warwick District Council will seek the advice of the Environment Agency and other bodies, where relevant, and may utilise "suitable persons" to carry out the risk assessment, however, it will remain the responsibility of the Council to determine appropriate remedial measures.

It is the intention of the Council to make the process of determining the appropriate remedial actions both transparent and practical. Wherever possible, agreement on the remedial measures necessary will be sought with the relevant parties.

4.10 Enforcement Action

In cases where voluntary remediation cannot be achieved the Council will take the appropriate enforcement action to ensure the proper remediation of contaminated land.

5 LIAISON AND COMMUNICATION

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

5.1 Statutory Consultees

Contacts have already been established with officers of all statutory consultees.

Statutory consultees for the Contaminated Land Inspection Strategy are:

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

Each organisation will be invited to comment on the consultation draft of the strategy.

As Environment Agency operational boundaries are defined by river catchments, the West Midlands regional office deals the Warwick District. Following discussion with the Environment Agency, initial liaison will be carried out through the West Midlands region office.

5.2 Non-Statutory Consultees

Warwick District Council recognise the importance of liaison with members of the public, businesses and voluntary organisations in dealing with contaminated land in the District. The Parish Councils have already been consulted and will continue to be involved. Efforts will be made to encourage participation in the process of identifying and

investigating contaminated land, recognising the valuable contribution which can be made by all of these sectors.

5.3 Communicating with Owners, Occupiers and Other Interested Parties

The District Council's approach to its regulatory duties is to seek voluntary action before taking enforcement action. This approach will also be adopted for issues of land contamination. The regulations provide an incentive to undertake voluntary action, in that any materials that require disposal as a result of voluntary remediation may 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 Head of Environmental Health will be the central contact point within the authority on contaminated land issues and as such will keep owners, occupiers and other interested parties (eg English Nature, English Heritage, etc.) informed at each stage of an investigation, regardless of whether there is a formal designation of contaminated land.

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

Designating an area of contaminated land

- Write to the appropriate person (eg owner and / or the occupier of the land) and the Environment Agency indicating the Council's intention to designate the site, explaining in summary the reason for designation.
- Write to the appropriate person and the Environment Agency 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 appropriate person 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.

Serving a remediation notice

The Council will normally * only serve a Remediation Notice (after a period of three months) where it appears to the Council that the appropriate person is either unwilling or unable to agree and implement the remedial measures within an appropriate time scale. In which case it will :

- Provide a written Remediation Notice to the appropriate person specifying action required,
- Write to the owner / occupier of neighbouring properties and / or the complainant within 5 working days of notice being served.

* Certain exclusion tests apply

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.

5.4 Communication with the Public

Contaminated land issues are often technical and complicated and as such do not lend themselves to easy explanation to the layperson. In communicating with the public Warwick District Council will endeavour to use plain English, minimise the use of technical jargon and explain risk related issues as simply as possible. In particular in their communications the Council will seek to address :

- Public concern over the unfamiliar;
- The need to put issues identified in perspective (ie provide an indication of the scale of a problem/risk);
- Identify the time scale and area potentially affected.

In addition it will be important to remind the public that the regulations grant only limited powers to local authorities to deal with materials present in, on or under the ground. The common belief that any material that is not naturally present in the ground should be removed is not correct and it will be important to explain this can only be done where this is a risk of significant harm.

5.5 The 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 Department at the Council's main office at Riverside House, Milverton Hill, Leamington Spa. It will be accessible on request by members of the public during office hours, Monday to Friday.

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 Notices 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.

5.6 Provision of Information to the Environment Agency

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

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

As local authorities are the lead regulators on contaminated land (the Environment Agency only being responsible for "Special Sites"), the national survey will clearly be reliant on information provided by local authorities. A memorandum of understanding

has been drawn up between the Environment Agency and the Local Government Association that describes how information will be exchanged between the local authority and the Environment Agency. The Council will therefore provide information to the Environment Agency following the guidelines agreed through this national forum.

The local authority must also provide information to the Environment Agency whenever a site is 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.

6 REVIEW MECHANISMS

This strategy outlines the general approach to be taken in inspecting land in the District for contamination. As the strategy is implemented over the proposed timetable the Council will annually review progress and if necessary revise the strategy (see Section 6.3 below).

In addition, the strategy recognises that circumstances could arise during the implementation period which will necessitate bringing forward the inspection of a particular site - the section below describes such instances.

6.1 Triggers for Undertaking Inspection

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

Triggers for undertaking non-routine inspection will include:

- **Identification of New Sources** – e.g. where new sources of contamination come to light;
- **Creation of New Pathways** – e.g. if operations carried out on land inadvertently provide a means by which contamination may travel from a source to a receptor;
- **Accidents / Unplanned events** – e.g. if an incident such as a spill has occurred;
- **Introduction of new receptors** – e.g. the designation of a new protected ecosystem, persistent trespass onto a site by young people;
- **Supporting voluntary remediation** – e.g. a potentially liable party wishing to undertake clean-up before their land has been inspected by the local authority;
- **Identification of localised health effects** which appear to relate to a particular area of land;
- **Responding to information** from other statutory bodies, owners, occupiers, or other interested parties;

While these occurrences may trigger non-routine inspections, if this strategy is to prove effective, they must not be allowed to significantly interfere with the milestones laid down

in the general inspection framework. It will be important to consider this issue in all strategy reviews.

6.2 Triggers for Reviewing Inspection Decisions

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

- New information about site conditions becomes available;
- Significant changes in legislation occur;
- Significant case law or other precedent is established;
- Guideline values for exposure assessment are revised.

It is important therefore that all decisions are made and recorded in a consistent manner that will allow efficient review.

6.3 Reviewing the Strategy

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

The strategy was finalised following consultation during May/June 2001 and work will then begin in earnest on the site inspection process in September. It will be important to review progress on an annual basis. The first review will therefore take place in July 2002 and the findings will be reported to the Council's Environment Executive Committee. The review will also consider the need to make any significant changes to the strategy.

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FIGURES

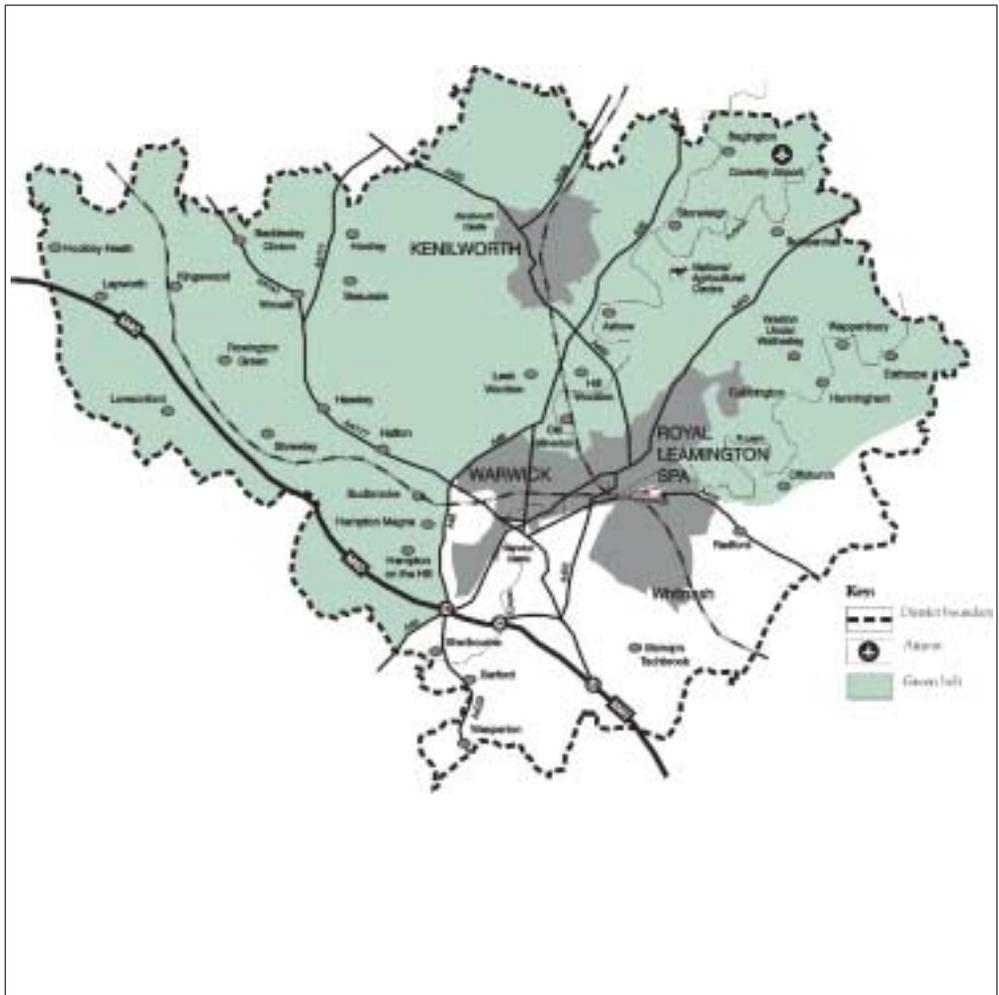
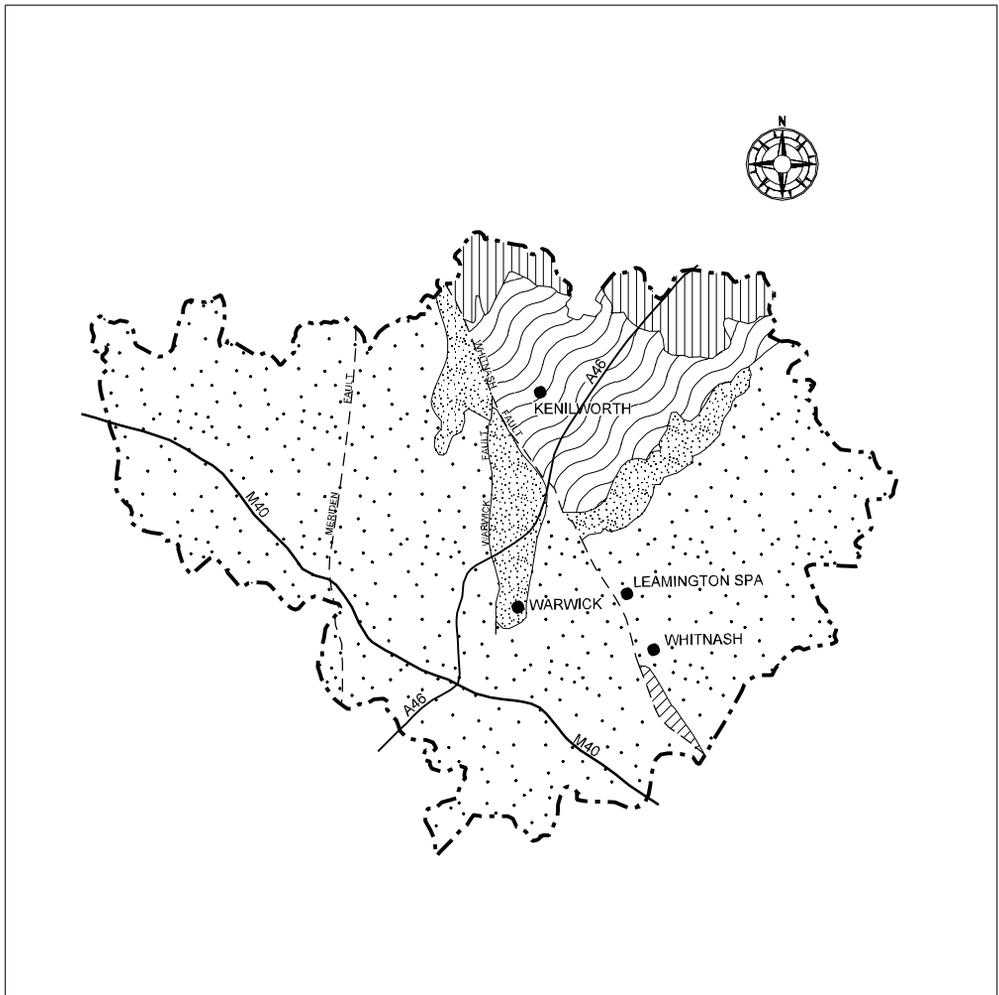


Figure 1
Warwick District Area



Notes:

Solid Geology Shown Only

-  Lower Lias
-  Triassic - Mercia Mudstone Group
-  Triassic - Sherwood Sandstone Group
-  Permian
-  Carboniferous
-  Fault

Not to Scale

Figure 3
Broad Geology of Warwick District

APPENDIX A

INSPECTION TIMETABLE

APPENDIX B

GLOSSARY

APPENDIX B

CONTAMINATED LAND INSPECTION STRATEGY

GLOSSARY

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 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 Brownfield Sites will meet the definition of contaminated 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
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.
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
Eco-System A biological system of interacting organisms and their physical environment.

<p>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.</p>
<p>GIS Geographical Information System. A computer programme that allows digital maps to be overlain and spatial data to be modelled.</p>
<p>Groundwater Any water contained in underground strata, wells or boreholes</p>
<p>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."</p>
<p>Hazard The intrinsic property of a substance with the potential to cause harm.</p>
<p>ICRCL Interdepartmental Committee on Redevelopment of Contaminated Land (now disbanded)</p>
<p>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.</p>
<p>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.</p>
<p>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."</p>
<p>Part IIA Part IIA of the Environmental Protection Act 1990.</p>
<p>Pathway One or more routes by which a receptor can be exposed to a contaminant</p>
<p>Pollutant a contaminant which forms part of a pollutant linkage.</p>
<p>Pollutant linkage the relationship between a contaminant, a pathway and a receptor.</p>
<p>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."</p>
<p>Possibility Of Significant Harm a measure of the probability, or frequency, of the occurrence of circumstances which would lead to significant harm being caused.</p>
<p>Register The public register maintained by the enforcing authority under section 78R of particulars relating to contaminated land.</p>

<p>Receptor Sometimes referred to as "a target ", and includes people, water, ecosystems and properties that could be affected by contamination.</p>
<p>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.</p>
<p>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.</p>
<p>Risk The combination of : <ul style="list-style-type: none"> 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. </p>
<p>Risk Assessment The study of : <ul style="list-style-type: none"> a) the probability, or frequency, of a hazard occurring; and b) the magnitude of the consequences </p>
<p>Source The location of contaminating substances in, on or under the ground with the ability to cause harm.</p>
<p>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.</p>
<p>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).</p>
<p>Special Site The Regulations define "special sites" but an overview is given below. They are any contaminated land designated due to the presence of : <ul style="list-style-type: none"> Waste acid tars Purification or refining of crude petroleum, oil etc Explosives manufacture or processing. <p>Or :</p> <ul style="list-style-type: none"> 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 </p>
<p>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."</p>

APPENDIX C

SCHEDULE OF CONSULTEES

Principal Consultees	Contact Details (WDC if nominated)
Environment Agency	Michael Hughes – Contaminated Land Officer Environment Agency Riversmeet House Newtown Industrial Estate Northway Lane Tewksbury Glos GL20 8JG Tel: 01684 864 447 Fax: 01684 276 033 www.environment-agency.gov.uk
DEFRA	Fiona Reynolds – Rural and Marine Environment Division, Sustainable Agriculture Branch Department of Environment Food & Rural Affairs Room 311/312 16 Palace Street London SW1E 5FF Tel: 0207 963 5420 Fax: 0207 963 5637 fiona.reynolds@maff.gsi.gov.uk www.maff.gov.uk
English Nature	Anton Irving English Nature 10-11 Butchers Row Banbury Oxfordshire OX16 5JH Tel: 01295 257601 Fax: 01295 275180 www.english-nature.org.uk
English Heritage	Ian George (Ancient Monuments Inspector) English Heritage West Midland Region 112 Colmer Row Birmingham B3 3AG Tel: 0121 625 6820 Fax: 0121 625 6821 www.english-heritage.org.uk
Warwickshire County Council	Helen Watson – Senior Development Officer, Development Group Tel: 412934 Debbie Prince – Development Group Tel: 412643 Caroline Lidgett – Ecology Team, Museum Services Tel: 418060 Louise Slack – Ecology Team, Museum Services Tel: 418060 Ed Wilson – County Archaeologist, Museum Services Tel: 412734 David Halsall – Property Services Tel: 412510 Tony Burgess – Property Services Tel: 412127 Jon Radley – Assistant Keeper, Geology, Museum Services Tel: 412481 www.warwickshire.gov.uk

Other Consultees	Contact Details (WDC if nominated)
Advantage West Midlands	Bernard Hardisty Advantage West Midlands 3 Priestly Wharf Aston Science Park Holt Street Birmingham B7 4BN Tel: 0121 380 3500 Fax: 0121 380 3501 e-mail: messages@advantagewm.co.uk
British Railways Board BRB (Residuary) Ltd	Mr Pat Nolan Whittles House 14 Pentonville Road London N1 9HF Tel: 0207 904 5126 Fax: 0207 904 5094 www.brb.gov.org
British Waterways Board	Paul Beckwith Environmental Scientist Llanthanay Warehouse The Docks Gloucester GL1 2EJ Tel: 01452 318035 Mob: 07711 796404 www.british-waterways.org
Chamber of Commerce	Mr Simon Ashmore – Membership Manager Coventry and Warwickshire C of C, Training and Enterprise Chamber and Business Link Oak Tree Court Binley Business Park Harry Weston Road Coventry CV3 2UN Tel: 02476 654321 Fax: 02476 450242 www.ce-chamber.co.uk
Coventry City Council	Russell Sinclair – Principal EHO City Development Directorate Environmental Services Division Environmental Protection Section Broadgate House Broadgate CV1 1NH Tel: 02476 832661 Fax: 02476 831840 e-mail: Russel.Sinclair@coventry.gov.uk www.coventry.gov.uk
Defence Estates	Mr Stuart Wainwright Defence Estates Blakemore Drive Sutton Coldfield West Midlands B75 7RL Tel: 0121 311 2146 Fax: 0121 311 3602 www.defence-estates.mod.uk
Food Standards Agency	Dr Patrick Miller 7 Floor Aviation House 125 Kingsway London WC2B 6NH Tel: 0207 238 5751 Fax: 0207 238 5331 www.foodstandards.gov.uk
Other Consultees	Contact Details (WDC if nominated)

Land Registry	Warwick Inquiry Section – Shirley Bates Gloucester District Land Registry Twyver House Bruton Way Gloucester GL1 1DQ Tel: 01452 511111 Fax: 01452 510050 www.landreg.gov.uk
National Monuments Records	Alison Rogers Enquiry and Research Services NMR Centre Great Western Village Kemble Drive Swindon SN2 2GZ Tel: 01793 414628 Fax: 01793 420728 www.english-heritage.org.uk
National Trust	Caroline Thackary 33 Sheep Street Cirencester Gloucestershire GL7 1RQ Tel: 01285 651818 Fax: 01285 657935 www.nationaltrust.org.uk Jason Siddell – NMR archaeologist Tel: 01285 884749
Petroleum Licensing Officer	Clive Stephenson Warwickshire Trading Standards 160 Old Budbrook Road Warwick CV35 7DP Tel: 414040 Fax: 414022
Railtrack	Mr Gavin Brind – Environmental Geologist Railtrack Property Railtrack House Euston Square London NW1 2EE Tel: 0207 557 8594 Fax: 0207 557 9084 www.railtrack.co.uk
Rugby Borough Council	David Burrows Rugby Borough Council The Retreat Newbold Road Rugby CV21 2LN Tel: 01788 533858 www.rugby.gov.uk
Solihull District Council	Richard Cobb – Chief Planning Officer S W Lawson – Principal Environmental Health Officer PO Box 19 Council House Solihull West Midlands B91 3QT Tel: 0121 704 6833
Stratford District Council	Mike Yapp Stratford-on-Avon District Council Elizabeth House Church Street Stratford-Upon-Avon Warwickshire CV37 6HA Tel. 01789 267575
Other Consultees	Contact Details (WDC if nominated)

Warwickshire Wildlife Trust

Andrew Thompson – Conservation Manager
Warwickshire Wildlife Trust
Brandon Marsh Nature Centre
Brandon Lane
Coventry
CV3 3GW
Tel: 02476 302912
Fax: 02476 639556
www.wildlifetrust.org.uk

APPENDIX D

RECEPTORS

APPENDIX D

The receptors defined in the statutory guidance (Table A) as being potentially sensitive include:

- HUMAN BEINGS

- ECOLOGICAL SYSTEMS or LIVING ORGANISMS forming part of a system within certain protected locations, including:
 - Sites of Special Scientific Interest (SSSIs) (Wildlife and Countryside Act 1981 S28);
 - National Nature Reserves (NNRs) (Wildlife and Countryside Act 1981 S35);
 - Marine Nature Reserves (MNRs) (Wildlife and Countryside Act 1981 S36);
 - Nature Reserves (National Parks & Access to the Countryside Act 1949 S21);
 - Special Areas of Conservation (SACs) and candidate SACs (Conservation (Natural Habitats etc) Regulations 1994 R10);
 - Special Protection Areas (SPAs);
 - Ramsar sites (PPG9 p13);
 - Areas of special protection for birds (Wildlife and Countryside Act 1981 S3).

- PROPERTY in the form of buildings, including:
 - Ancient Monuments;
 - Listed buildings.

- PROPERTY in other forms, including:
 - Crops;
 - Home-grown produce;
 - Livestock;
 - Other owned or domesticated animals;
 - Wild animals subject to shooting or fishing rights.

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

APPENDIX E

INFORMATION SOURCES

APPENDIX E

The Principal Information Resources are detailed below :

Data Type	Data Sources	Notes	Use
MAPS & PLANS :			
OS Maps : Current	WDC Planning Dept	1:10,000 RASTER GIS	To identify sources and receptors
	County Records Office	Incomplete - see User Guide No. 5	
	Landmark	Full digital coverage available	
OS Maps : Historical	WDC EH Dept	Complete set 1:2,500 (rural) & 1:1250 (urban), 1950's, Warwick Rural District (1:10,000, 1920's), Leam 1:500, 1880's	To identify sources
	Landmark	Full digital coverage available	
Geological Maps & Records	BGS	1:10,000 maps, 8000+ borehole records	To identify sources and pathways
	WCC Museum Services	Near complete 1:10,000 and technical notes; Mineral Assessment Reports	
	WDC EH Dept	One 1:50,000 scale sheet	
Land Use Maps	WDC Planning Dept	1990's National Land Use Database (due for revision April 2001)	To identify sources and receptors
Derelict land Map	WDC Planning Dept	1974 Derelict Land Survey	To identify sources
	WCC Development Group	Responsible for Regeneration Programmes. Possible paper copies	
WATER ENVIRONMENT :			
River Catchments	EA	CD-ROM	To identify receptors & pathways
River Quality	EA	CD-ROM	To identify receptors & pathways
Sewage Treatment Works	EA	CD-ROM, Waste Local Plan (WLP) (1999)	To identify sources
	WDC EH	WLP (1999)	
IPC Sites	EA	CD-ROM	To identify sources
	WDC EH	WLP (1999)	
Abstraction Points	EA	CD-ROM	To identify receptors
Discharge Points	EA	CD-ROM	To identify sources
Aquifer Protection Zones	EA	Hydrogeological Maps / EA web site	To identify receptors & pathways
ECOLOGY :			
Protected Habitats	WCC Museum Services	Habitat Biodiversity Audit, 'Alert Maps'	To identify receptors
	Warwickshire Wildlife Trust	Habitat Biodiversity Audit, 'Alert Maps'	
	WDC Planning Group	Habitat Biodiversity Audit, 'Alert Maps'	
Protected Ecosystems	WCC Museum Services	Habitat Biodiversity Audit, 'Alert Maps'	To identify receptors
	Warwickshire Wildlife Trust	Habitat Biodiversity Audit, 'Alert Maps'	
	WDC Planning Group	Habitat Biodiversity Audit, 'Alert Maps'	
WASTE INDUSTRY :			
Open & Closed Landfill sites	EA	CD-ROM	To identify sources
	WCC Development	WLP (1999), Investigation reports	
	WDC EH	WLP (1999), Investigation reports	
	WDC Planning	WLP (1999)	
Other IPC sites	EA	CD-ROM	To identify sources
	WCC Development	WLP (1999), Investigation reports	
	WDC EH	WLP (1999), Investigation reports	
	WDC Planning	WLP (1999)	

EXTRACTIVE INDUSTRIES :			
Minerals	WCC Development	Draft Minerals Local Plan (1991), MLP (1995)	To identify sources
	WDC Planning	MLP (1995)	
	WCC Museum Services	MLP (1995), MAR, 1:10,000 geological maps	
PROTECTED LAND & BUILDINGS :			
Listed Buildings	WDC Planning	Paper List	To identify receptors
	WDC Development Control	Paper List	
Archaeological Sites	English Heritage	Schedule of Ancient Monuments	To identify receptors
	WCC Museum Services	GIS	
Ancient Monuments	English Heritage	Schedule of Ancient Monuments	To identify receptors
	WCC Museum Services	GIS	
Geological Sites	WCC Museum Services	8 RIGS within WDC	To identify receptors
National Trust		Paper List + plans	To identify receptors
Local Authority Owned Land	WCC Property Services		To identify receptors
	WDC Property Services	TERRIER	To identify receptors
	Land Registry	Database	To identify receptors
OTHER KNOWN CONTAMINATION SOURCES & TREATMENTS			
	EA	Pollution incidents	To identify sources
	WDC EH	Investigation reports	To identify sources
	WCC Development	Investigation reports	To identify sources
	Petroleum Licensing Officer	List of names and addresses of licensees	To identify sources