

**ST ALBANS CITY AND DISTRICT COUNCIL
CONTAMINATED LAND INSPECTION
STRATEGY**

4th Edition

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ST ALBANS CITY AND DISTRICT COUNCIL
CONTAMINATED LAND
INSPECTION STRATEGY

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SECTION 1: INTRODUCTION

- 1.1: In its report 'Contaminated Land' published in 1993, the Parliamentary Office of Science and Technology referred to expert estimates of between 50,000 and 100,000 potentially contaminated sites across the UK ⁽¹⁰⁾. In January 2009, the Environment Agency published a report entitled 'Dealing with contaminated land in England and Wales', the Agency estimated that there could be in the region of 325,000 (300,000 hectares) potentially contaminated sites across England and Wales.
- 1.2: A range of specific clean up powers exist to deal with cases where contamination is the result of offences against, or breaches of, pollution prevention regimes. The Environment Act 1995, however, has created a new framework for the identification and remediation of contaminated land in circumstances where there has not been any identifiable breach of a pollution prevention regime.
- 1.3: The Environment Act 1995 established a new regime for the clean-up of Contaminated Land which came into force on 1st April 2000. The provisions were set out in Section 57 of the Environment Act 1995 which inserted a new Part IIA into the Environmental Protection Act 1990 (Sections 78A through to 78YC). Under these Contaminated Land provisions, each local authority has to "cause its area to be inspected from time to time for the purpose of identifying Contaminated Land". When contaminated land is identified, they must ensure that it is managed in an appropriate manner.
- 1.4: This regime deals with the legacy of contaminated land from a wide range of industrial, mining and waste disposal activities.
- 1.5: Land formerly used for such purposes can be contaminated by substances that pose immediate or long term hazards to the environment or to health, or which may damage any buildings erected on such sites. Contaminants may also escape from the site to cause air and water pollution or pollution of nearby land.
- 1.6: The overarching objectives of the Government's policy on contaminated land and the Part IIA regime are:
 - (a) To identify and remove unacceptable risks to human health and the environment;
 - (b) To seek to ensure that contaminated land is made suitable for its current use;
 - (c) To ensure that the burdens faced by individuals, companies and society as a whole are proportionate, manageable and compatible with the principles of sustainable development.
- 1.7: Responsibility for paying for remediation will, where feasible, follow this 'polluter pays' principle. In the first instance, any persons who caused or knowingly permitted the contaminating substances to be in, on or under the land will be the appropriate person to undertake the remediation and meet its costs. However, if it is not possible to find any such person, responsibility will pass to the current owner or occupier of the land

(except where the problem caused by the contamination is solely one of water pollution). Responsibility will also be subject to limitations, such as where hardship might be caused.

- 1.8: The principal regulators for Part IIA are the local authorities, however the Environment Agency (EA) has an important complementary regulatory role with specific responsibilities. The legislation allows local authorities and the Environment Agency to proactively deal with land that is posing unacceptable risks to humans, controlled waters or the wider environment where that land is not being actively redeveloped.
- 1.9: In April 2012, the Secretary of State for Environment, Food and Rural Affairs issued updated Statutory Guidance to local authorities on the implementation of Part IIA in England. Part B of this Guidance requires that local authorities take a 'strategic approach' to inspecting their areas and to describe and publish this approach in a written strategy.
- 1.10: The strategy should provide not only the inspection arrangements and procedures, but a justification for, and transparency in, the local authority's decisions on how they will inspect their areas for contaminated land.
- 1.11: The government hopes that by taking a strategic approach a local authority will be able to identify, in a rational, ordered and efficient manner, the land within its district which merits detailed individual inspection, identifying the most pressing and serious problems first and concentrating resources on the areas where contaminated land is most likely to be found.
- 1.12: The St Albans City and District Council Contaminated Land Inspection Strategy sets out the way in which the Council proposes to implement its inspection duties under Part IIA. It is not intended as a site by site description of remediation techniques.

Background to the legislation

- 1.13: Section 143 of the Environmental Protection Act 1990 placed a duty on local authorities to compile and maintain a public register of land which might have been contaminated due to its past or present use. They were to be compiled mainly from local knowledge and historic archives of past land use and were intended to indicate where a potential for contamination existed. However, the requirement to do so was withdrawn before the regulations came into force due to concerns about land blight. A list of the contaminative uses that were to be included in contaminated land registers can be found in Appendix 1.
- 1.14: Under the Town and Country Planning Act 1990, local authorities have powers to control the development of land, which includes sites that may be contaminated. Where it is known or suspected that a site is contaminated, the local planning authority can require an investigation to be undertaken prior to the development commencing. A scheme for the decontamination of the site, approved by the local planning authority must then be implemented and completed before the development permitted is occupied⁽¹⁸⁾.

1.15: Until the implementation of the Environment Act 1995, the statutory nuisance system under Part III of the Environmental Protection Act 1990 was the main regulatory mechanism for enforcing the remediation of contaminated land not being dealt with through the planning processes described above. However, from entry into force of the new regime, most such land contamination issues are removed from the scope of the statutory nuisance regime. Therefore any matter which would otherwise have been a statutory nuisance will no longer be treated as such to the extent that it consists of, or is caused by, land “being in a contaminated state” (i.e. land where there are substances in, on or under the land which are causing harm, or where there is a possibility of harm being caused).

1.1: THE GENERAL POLICY OF ST ALBANS CITY AND DISTRICT COUNCIL

1.1.1: The Regulatory Services Department has the responsibility for producing this Strategy because of the role of the department in the protection and improvement of people’s health and the environment.

1.1.2: The Council’s vision is to ‘contribute to a high quality life for all residents by delivering excellent services, by working with the community, county, town and parish councils’.

The Council has made several commitments to help deliver this vision. Some of these commitments may relate to contaminated land, to which the Regulatory Services Department works towards, these include:

- Protecting the vulnerable;
- Planning for the future;
- Delivering for young people and families;
- Keeping the District cleaner, greener, healthier and safer;
- Ensuring value for money and excellent customer service.

1.1.3: At the Earth Summit held in Rio de Janeiro in 1992, world leaders signed a global environment and development action plan called Agenda 21. The aim of this plan was to promote the idea of a sustainable future. To reflect this, the community and Council of SADC formed their own Local Agenda 21 Forum which has produced a Local Agenda 21 Strategy setting benchmarks for existing and future environmental policies. The purpose of the Local Agenda 21 Strategy is to allow SADC to express clearly its objectives, programmes and priorities for sustainable actions and development.

1.1.4: One of the ways in which a sustainable future can be achieved is by the reuse of brownfield sites. This means that, where practicable, brownfield sites, including those affected by contamination, should be recycled into new uses and the pressures thereby reduced for green field sites to be converted to urban, industrial or commercial uses. Such recycling also provides an opportunity to deal with the threats posed by contamination to health or the environment.

1.1.5: SADC’s District Local Plan Review 1994 shows proposals for the development and other use of land in the area and provides a detailed

basis for development control and the co-ordination of development ⁽¹²⁾. The plan comprises of a Written Statement which sets out policies and land use proposals and a Proposals Map which defines specific land use changes and areas in which certain policies will apply. The plan therefore provides an opportunity to set out policies for the reclamation and possible use of contaminated land.

- 1.1.6: It is expected that the planning and development control process will continue to be the main mechanism for dealing with land contamination. In addition, it is likely that a number of cases where remediation is effected through the Part IIA regime will also require planning permission for the necessary works. Close liaison must therefore be maintained between the Regulatory Services and Planning Departments.
- 1.1.7: SADC has also signed up to the Cabinet Office Enforcement Concordat, which sets out good enforcement policies and procedures. The concordat recognises the primary role of local government which is “to protect the public, environment, etc; in an equitable, practical and consistent manner ... to promote a thriving national and local economy”. The adoption of this concordat is a commitment towards clear standards, openness and consistency in approach.
- 1.1.8: SADC will, in accordance with this strategy, enforce the remediation of contaminated land. The strategy should be viewed, alongside similar strategies such as the LA21 strategy, as a demonstration of how SADC will help to ensure that sustainable development occurs.

1.2: REGULATORY CONTEXT

- 1.2.1: The *Environment Act 1995* established a new regime for the clean-up of Contaminated Land which came into force on 1 April 2000. The provisions are set out in Section 57 of the Environment Act 1995 which inserts a new Part IIA into the Environmental Protection Act 1990 (EPA90) - Sections 78A through to 78YC.
- 1.2.2: The *Contaminated Land (England) (Amendment) Regulations 2012* made under the above legislation set out further requirements, particularly in respect of:
- categories of land which are to be designated as Special Sites;
 - the content of remediation notices;
 - appeals;
 - compensation for rights of entry etc;
 - public registers.
- 1.2.3: The legislation is also complimented by a Department for Environment, Food and Rural Affairs (Defra) Circular 04/2012 *Environmental Protection Act 1990: Part IIA: Contaminated Land Statutory Guidance*. This circular lays out the Statutory Guidance to the legislation and it sets out the way in which the regime is expected to work by providing a summary of Government policy in this field, a description of the new regime and a guide to the Contaminated Land Regulations. It covers

five distinct aspects of the regime:

- i) the definition of contaminated land;
- ii) the identification of contaminated land;
- iii) the remediation of contaminated land;
- iv) exclusion from and apportionment of liabilities of the cost of remediation;
- v) recovery of the cost of remediation.

1.2.4: This Strategy is not intended as a full and complete interpretation of the above items of legislation. For further detailed information and interpretation of the legislation, reference should, in all instances, be made to the legislation and guidance described above.

1.2.5: Until the implementation of the Part IIA regime, the statutory nuisance system under Part III of the EPA90 was the main regulatory mechanism for enforcing the remediation of contaminated land. However, from the entry into force of the new contaminated land regime, most land contamination issues have been removed from the scope of the Statutory Nuisance regime. Thus, any matter which would otherwise have been a Statutory Nuisance will no longer be treated as such to the extent that it consists of, or is caused by, land 'being in a contaminated state'.

The Role of the Local Authority

1.2.6: The primary regulatory role under Part IIA rests with local authorities, thus reflecting their existing functions under the statutory nuisance regime, and also complementing their roles as planning authorities.

1.2.7: Section 78B of Part IIA provides that every local authority shall "cause its area to be inspected from time to time for the purpose of identifying Contaminated Land". It further provides that in performing these functions, a local authority shall act in accordance with any guidance issued for the purpose by the Secretary of State for Environment, Food and Rural Affairs (i.e. the Statutory Guidance).

1.2.8: The Statutory Guidance states that, in inspecting their areas, local authorities should take a strategic approach to the identification of land that merits further detailed inspection and that this approach should:

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

1.2.9: Local authorities have the sole responsibility for designating sites as Contaminated Land sites – this responsibility *cannot* be delegated to another body.

1.2.10: The role of SADC is therefore:

- to cause the district to be inspected to identify contaminated land;
- to determine whether any particular site meets the statutory definition of contaminated land; and
- to act as the Enforcing Authority for all contaminated land that is not designated as a Special Site.

The Role of the Environment Agency

1.2.11: The Environment Agency (EA) has four principal roles with respect to contaminated land under Part IIA. It will:

- assist local authorities in identifying contaminated land, particularly in cases where water pollution is involved;
- provide site-specific guidance to local authorities on contaminated land;
- act as the enforcing authority for any land designated as a special site; and
- publish periodic reports on contaminated land.

1.2.12: In addition, the EA will carry out technical research into contaminated land issues and, in conjunction with Defra, publish scientific and technical advice.

Contaminated Land

1.2.13: Under Section 78A(2) of Part IIA EPA90, 'Contaminated Land' is defined 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) significant pollution of controlled waters is being caused, or there is a significant possibility of such pollution being caused”.

1.2.14: “Harm” means 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.

1.2.15: This definition of contaminated land reflects the intended role of the regime – i.e. to enable the identification and remediation of land on which contamination is causing unacceptable risks to human health or the wider environment. The regime reflects the ‘suitable for use’ approach that focuses on the risks caused by land contamination. It recognises that the risks presented by any given level of contamination vary greatly according to the use of the land and a wide range of other factors, such as the site’s underlying geology (1). Risks must therefore be assessed on a site-by-site basis to:

- i) ensure that land is suitable for its current use;
- ii) ensure that land is made suitable for any new use as planning permission is given for that new use; and

iii) limit the requirements for remediation to the work necessary to prevent unacceptable risks to human health or the environment in relation to the current use or future use of the land for which planning permission is being sought.

1.2.16: Thus, the regime does not cover *all* land on which contamination is present - if there is no risk to human health or the environment, the land cannot be designated as contaminated land.

1.2.17: “Risk” means the combination of: (a) the likelihood that harm, or pollution of water, will occur as a result of contaminants in, on or under the land; and (b) the scale and seriousness of such harm or pollution if it did occur.

Special Sites

1.2.18: Part IIA EPA90 creates a particular category of contaminated land called ‘Special Sites’. For any Special Site, the Environment Agency, rather than the local authority, is the enforcing authority for the purposes of the regime. The descriptions of the types of land which are required to be designated as special sites are set out in the Contaminated Land (England) (Amendment) Regulations 2012 (see Appendix 2).

1.2.19: The classes of land listed as Special Sites do not imply that land of that type is more likely to constitute contaminated land. Instead, they identify cases where the EA is best placed to be the enforcing authority. This is usually because the EA is already regulating the site through other regimes; therefore its involvement is likely to lead to greater consistency - for example on Ministry of Defence land; or where it has specific expertise in certain instances involving the pollution of Controlled Waters.

1.2.20: It should be noted that the land must first be identified by SADC as being Contaminated Land before it can be further designated as a Special Site and responsibility for dealing with its contamination passes to the EA.

Significant Pollutant Linkages

1.2.21: The statutory guidance introduces the concept of a “contaminant linkage” – that is, a linkage between a contaminant and a receptor by means of a pathway. The guidance also sets out:-

- the type of receptor to which significant harm can be caused (harm to any other type of receptor can never be regarded as significant harm)(see Appendix 3);
- the degree or nature of harm to each of these receptors which constitutes significant harm (see Appendix 4a);
- for each receptor, the degree of possibility of the significant harm being caused which will amount to a significant possibility (see Appendix 4b).

1.2.22: Before SADC can determine that any land appears to it to be contaminated land, we must be satisfied that each of the following three elements have been identified with respect to that land:

(a) A “contaminant” is a substance which is in, on or under the land and which has the potential to cause significant harm to a relevant receptor, or to cause significant pollution of controlled waters.

(b) A “receptor” is something that could be adversely affected by a contaminant, for example a person, an organism, an ecosystem, property, or controlled waters. The various types of receptors that are relevant under the Part 2A regime are explained in later sections.

(c) A “pathway” is a route by which a receptor is or might be affected by a contaminant.

1.2.23: Thus, an identified pathway must be capable of exposing a specified receptor to a contaminant and that particular contaminant must be capable of harming or, in the case of controlled waters polluting, that particular receptor before land can be considered to be contaminated land. It should be noted that only harm being caused to the receptors specified in the guidance can be taken into account. If contamination on a site is only affecting a receptor, or group of receptors, that is not listed in the guidance, then the site cannot be deemed to be contaminated land.

1.2.24: This relationship between a contaminant, a pathway and a receptor is termed a “contaminant linkage”. Without the identification of all three elements of a pollutant linkage, land *cannot* be considered to be contaminated under this new regime. Therefore, to remediate the land so that it is no longer contaminated, the regime only requires that one element of the contaminant linkage be removed.



1.2.25: Furthermore, in order for land to be formally identified as Contaminated Land under this new regime, the local authority must then be satisfied that both:

a) a pollutant linkage, as described above, exists; and

b) that pollutant linkage either:

i) is resulting in *significant* harm to the receptor or presents a *significant possibility* of significant harm being caused to the receptor (see Appendix 4); or

ii) is resulting in the pollution of the controlled waters which constitute the receptor, or is likely to result in such pollution.

A pollutant linkage which forms the basis for such a determination is referred to as a “significant contaminant linkage”.

1.2.26: Thus, a determination that a particular area of land appears to be Contaminated Land is made on one or more of the following bases:

- Significant harm to human health;
- Significant possibility of significant harm to human health;
- Significant harm and significant possibility of such harm (non-human receptors);
- Significant pollution of controlled waters and significant possibility of such pollution.

Role of the Enforcing Authority

1.2.27: Once an area of contaminated land has been identified, the enforcing authority (i.e. either SADC or the EA) roles are:

- to establish who is the ‘appropriate person’ to bear responsibility for the remediation of the land;
- to decide what remediation is required and to ensure that such remediation takes place;
- to determine who should bear what proportion of the liability for meeting the costs of the work; and
- to record certain information about regulatory action on a public register.

Appropriate Persons

1.2.28: The appropriate person is defined as “any person who is an appropriate person, determined in accordance with section 78F..., to bear responsibility for anything which is to be done by way of remediation in any particular case.” Part IIA defines two different categories of Appropriate Person and sets out the circumstances in which persons in these categories might be liable for remediation.

1.2.29: Class A persons are further defined as “any person, or any of the persons, who caused or knowingly permitted the substances, or any of the substances, by reason of which the contaminated land in question is such land to be in, on or under that land”.

1.2.30: A Class A person will be the appropriate person only in respect of any remediation which is referable to the particular substances which he caused or knowingly permitted to be in, on or under the land. This means that each identified significant pollutant linkage has to be considered separately.

1.2.31: If no such Class A person can be found and the significant pollutant linkage in question relates solely to the pollution of controlled waters rather than to any significant harm, then there will be no liability group for that particular significant pollutant linkage and it will be treated as an ‘orphan linkage’.

1.2.32: The second category arises in cases where it has not been possible to find

a Class A person for any particular significant pollutant linkage which relates to significant harm or the significant possibility of significant harm – in these circumstances, the legislation states that “if no person has, after reasonable inquiry, been found who is an appropriate person to bear responsibility for the things which are to be done by way of remediation, the owner or occupier for the time being of the land in question is an appropriate person”. Such people are known as Class B Persons.

1.2.33: It must be noted therefore that there might be instances in which the Class A person cannot be identified in respect of an area of contaminated land. In these instances, providing that the significant pollutant linkage does not relate solely to the pollution of controlled waters, the responsibility for remediation will fall onto the current owners and occupiers of the land.

1.2.34: Where other appropriate persons are identified at a later date, SADC will notify them that they appear to be an appropriate person with respect to land which has been identified as contaminated land.

1.2.35: An Orphan Linkage arises in the following situations:

- a significant contaminant linkage is identified which relates to the pollution of controlled waters and no Class A person can be found;
- no Class A or Class B persons can be found; or
- those who would otherwise be liable are exempted.

For any remediation action which is referable to an orphan linkage, the enforcing authority must bear the cost of carrying out that action.

Exemptions to Contaminated Land legislation

1.2.36: The contaminated land regime does not apply in the following situations⁽¹⁰⁾:

- Any harm, or pollution of controlled waters, which is attributable to any radioactivity possessed by any substance (a separate Statutory Guidance document explaining how the enforcing authority should implement the radioactive contaminated land regime was issued in April 2012).
- Where new development is taking place:– land contamination, or the possibility of it, is a material consideration for the purposes of town and country planning. This means that the planning authority should satisfy itself that the potential for contamination is properly assessed and the development incorporates any necessary remediation; where necessary, the planning permission should include appropriate site investigation and remediation conditions.
- Licensed landfills and waste disposal sites:– action to deal with pollution problems in such cases would normally be enforced through a condition attached to the site’s Waste Management licence.
- Contamination arising from illegal deposits of controlled waste:– in

these circumstances, the EA and the waste disposal authority have powers to remove the waste and deal with its consequences.

- IPPC sites:– there exists an alternative power under the EPA90 for the EA to take action to remedy harm caused by a breach of IPC controls which precludes a local authority from taking action under the Part IIA regime.
- Situations where only controlled waters are being affected:- i.e. the contaminants are entirely contained within the relevant body of groundwater or surface waters and none remain in the soil – the EA has power to take action to prevent or remedy the pollution of controlled water under the Water Resources Act 1991.
- Contamination by organisms such as bacteria, viruses or protozoa (organisms do not fall within the definition of substances under Part IIA).
- Where significant harm is occurring to the public or employees at business and other premises (Health & Safety at Work etc Act 1974 applies).
- As a result of an accident at a COMAH (Control of Major Accident Hazards Regulations) site. COMAH regulations require operators of establishments handling prescribed dangerous substances to draw up emergency plans which provide for the restoration and clean-up of the environment following a major accident.

1.3: DEVELOPMENT OF SADC STRATEGY

- 1.3.1: The Regulatory Services Department has taken the primary role in the Strategy Development within the Council due to their role in the protection and improvement of people's health and the environment.
- 1.3.2: This strategy was developed in accordance with the Inspection Strategy Advice Note: May 2001 produced by The Department of the Environment, Transport and the Regions (DETR) and the Environment Agency. This set out a procedure for the formulation of the inspection strategy and was intended to assist local authorities in fulfilling their statutory obligations under the Part IIA regime.
- 1.3.3: It is recognised that the issue of land contamination not only interacts with the duties within the Regulatory Services Department, but has a wide reaching impact on the other departments within SADC. Therefore, in order to secure consensus across the council, various other internal departments were consulted in the course of drafting the strategy, such as the planning department, the estates department and legal department.
- 1.3.4: A Draft Contaminated Land Strategy for consultation was prepared by the Senior Environmental Health Officer in charge of producing the strategy and dealing with contaminated land issues generally. Many other internal departments were provided with a copy of the draft strategy and their comments were incorporated into the final version.

1.3.5: Similar consultation was also carried out with external bodies such as the Environment Agency, English Nature, English Heritage, Hertfordshire County Council, Defra and all Parish Councils. Again, any comments received were incorporated into this strategy where appropriate.

1.3.6: A Contaminated Land Forum was formed consisting of officers from local authorities within the Hertfordshire and Bedfordshire area. Regular meetings were held to discuss the development of the strategy and to take forward common sections of the strategy. The Terms of Reference for this forum were agreed as “the Contaminated Land sub-group will develop a flexible framework, which may be applied or used by members of the Herts & Beds Environmental Protection Group in respect of contaminated land; and seek to research, update and communicate any developments, cases or experiences in order to evolve the framework, being mindful of current guidance and legislation”.

1.3.7: The purpose of this forum was to ensure uniformity of enforcement and working standards within the Herts & Beds region. The group is now known as the Hertfordshire and Bedfordshire Contaminated Land Forum. The authorities currently involved are:

Bedford BC	Milton Keynes Council
Broxbourne BC	North Herts DC
Central Bedfordshire Council	St Albans DC
Dacorum BC	Stevenage BC
East Herts DC	Three Rivers DC
Environment Agency	Watford BC
Hertsmere BC	Welwyn & Hatfield DC
Luton BC	

1.3.8: The consultation draft was submitted for approval and adoption by the SADC Cabinet in June 2001 and the final version of the strategy was released in June 2001, taking into account the feedback from the consultation process. A copy of this final version was also submitted to the EA as required by the legislation.

1.3.9: The second edition of the Contaminated Land Inspection Strategy was revised to take into account comments received during the external consultation process. It was given approval by the SADC Cabinet in January 2002. The Inspection Strategy was updated in 2007.

1.3.9a This fourth edition of the Contaminated Land Inspection Strategy was revised to take into account the introduction of the new statutory guidance in 2012 and changes to other guidance and standards.

1.4: OBJECTIVES OF THE STRATEGY DOCUMENT

1.4.1: The Government’s main objective behind the introduction of the contaminated land regime is to provide an improved system for the identification and remediation of land where contamination is causing unacceptable risks to human health or the wider environment. This should be assessed in the context of the current use and circumstances of the land in order to meet the Government’s

'suitable for use' approach (1).

- 1.4.2: The Government considers that the improved clarity and consistency of the new regime is also likely to encourage voluntary remediation. This forms an important secondary objective for the implementation of the Contaminated Land regime.
- 1.4.3: The objective of this strategy therefore is to lay out how SADC intends to inspect its area in order to identify contaminated land sites within its district and to demonstrate how it will prioritise those areas for action. It is not a document intended to list all contaminated land sites within the district, nor is it a document to explain how we intend to remediate any site.

SECTION 2: CHARACTERISTICS OF SADC

Geographical Location

- 2.1: The district has a population of approximately 141,248 and covers an area of some 63 square miles (163 sq km). It is located within Hertfordshire's Green Belt, approximately 22 miles (35 km) north of central London. The main settlements are the historic cathedral city of St Albans and the largely residential town of Harpenden. In addition, the district contains several villages set in a predominantly agricultural landscape⁽¹²⁾.
- 2.2: Geographically, St Albans is in the centre of Hertfordshire, some 20 miles north of London and well served by rail, road and air – for example, First Capital Connect provides rail services from St Albans or Harpenden to London, Gatwick Airport, and the South Coast, whilst Midland Mainline provides rail services from Luton or Bedford that connect St Albans to Derby, Leicester, Nottingham and Sheffield. By road, the District is served by the M25, M1/M10 and A1(M), providing access to the Midlands and the North. London Luton Airport lies some three miles from the edge of Harpenden, while Heathrow, Gatwick and Stansted are all within easy reach via the M25.
- 2.3: Because of these benefits in relation to London and the strategic transport networks, the district experiences considerable development pressures. The Council therefore places a high priority on the need to defend the Green Belt against inappropriate development. This however puts increased pressure on the brownfield sites within the district, which are the sites most likely to require remediation – for example, the Council has agreed a target of 360 new homes to be built per year in the District.
- 2.4: The City and District of St Albans also has a very rich and diverse heritage. St Albans is the major historic city of Hertfordshire, tracing its origins back to before the Romans. The District owes much of its appeal to the presence of the past – the Roman Verulamium, the medieval Abbey and the variety of buildings within it make St Albans a popular place to live and work. The surrounding District also boasts attractive countryside with important geological sites and natural habitats.
- 2.5: There are eighteen Conservation Areas in the District (see Appendix 5) and over 800 Listed Buildings - many in residential use. Despite its proximity to London, the district is very much an area of rural character and the area's identity has been protected by the Green Belt, which has helped to prevent development in the countryside and around St Albans City and its villages.

Brief Description of the District

- 2.6: The City and District's popularity is based on its heritage, attractiveness, location and services. Apart from the important and popular tourist attractions, many historic streets and buildings survive within St Albans, while the adjacent town of Harpenden and the many nearby villages all retain their original character and identity.

- 2.7: The city of St Albans evolved around the Abbey Church as a small Saxon settlement. It is traditionally a coaching and market town. As late as 1885, there was little industrial development in the area, except for the straw plait trade which was then at its peak.
- 2.8: The city is named after Alban – a Roman soldier, the first Christian martyr in Britain – who was executed outside Verulam about A.D. 303. The Abbey stands on the hill which is the true site of the martyrdom. St Albans is one of five towns in Hertfordshire listed by the Council for British Archaeology as being of National Importance.
- 2.9: Harpenden was originally a farming and agricultural community. The advent of railway networks in the 1860s and 1880s and more recent motorway links has seen its population expand to 29,521. The town itself has an attractive shopping centre with many listed buildings of architectural value dating back to the seventeenth and eighteenth centuries. Rothamsted Experimental Station - the world's oldest Agricultural Research Centre - is also based in the town.
- 2.10: Bricket Wood and Park Street are both part of the St Stephen's Parish which also contains Chiswell Green - a large residential area. It is the largest of the rural parishes with over 13,872 residents.
- 2.11: Originally known as 'Coney Heath' - due to an excess number of 'coney' or rabbits - Colney Heath has two separate communities, the village itself and Smallford. Collectively, 5,988 people live in the area, which also contains Oaklands College of Agriculture within the parish boundary.
- 2.12: London Colney is a large village with a population of some 9,559 and is on the old coaching route between London and St Albans. The historic centre of the village - around the River Colne - is a Conservation Area containing the Parish Church of St Peter built in 1825 by the third Earl of Hardwicke, several listed buildings and the village green. West of the village green is an extensive nature reserve – Broad Colney Lakes - owned by the Hertfordshire and Middlesex Trust for Nature Conservation.
- 2.13: Redbourn was a strategically positioned Roman location on Watling Street. During the 17th and 18th centuries, Redbourn was a well-known stagecoach stop. The village name is derived from the little River Red and until the 1880's, most of the High Street properties were owned by the Bowes-Lyon family.
- 2.14: North-east of St Albans - on the St Albans to Wheathampstead Road – lies Sandridge. The parish covers not only the village, but the hamlet of Sandridgebury and parts of the Marshalswick area of St Albans. There is some light industry, but the land is primarily agricultural. The parish also contains the Jersey Farm Housing Development with some 1,500 houses.
- 2.15: One of the District's most attractive villages, Wheathampstead has a well-chronicled history dating back to pre-Roman times. The village has some 6,425 residents and there is some light industry.

Local Authority Owned Land

- 2.16: Records exist, within the Estates Department, of the extent of land owned by SADC. When an area of land owned by SADC is identified as being potentially contaminated, the Estates Department and any other relevant department, will be consulted on all matters relating to its remediation
- 2.17: It should be noted that, for LA owned land, no Enforcing Authority exists (unless the site is identified as a Special Site). This is because a LA cannot take enforcement action against itself. In cases where land owned by SADC may be affected by contamination, we will consult with the EA on all matters relating to it. Land owned by SADC will be dealt with in exactly the same way as any other land.

Current Land Use Characteristics

- 2.18: The predominant land use within SADC is agriculture which accounts for about half of the district's land use. Residential land is the second largest land use and leisure the third. The three land uses covering the least area of the district are minerals, public utilities and industry and warehousing⁽⁸⁾.
- 2.19: Agriculture therefore has had a significant impact in the shaping of the district's landscape and is an important feature of current land use. The majority of agricultural land in SADC is classified as Grade 3, which represents land of reasonable agricultural quality.
- 2.20: Industry and warehousing currently covers about 1% of the district.

Protected Locations and Key Property Types

- 2.21: Whilst there are no truly wild areas in the District, there are areas which have been modified by man's activities over the centuries and form semi-natural habitats – including woodlands, meadows, heaths and marshlands.
- 2.22: Statutory protection is given to Sites of Special Scientific Interest (SSSIs) notified under Section 28 of the Wildlife and Countryside Act, as incorporated by the Countryside and Rights of Way Act 2000. There are two such sites in the District – Bricket Wood Common and Moor Mill Quarry West.
- 2.23: There are no National Nature Reserves in the district, however, but there are four Local Nature Reserves – Batford Springs, Marshalls Heath, The Wick and Colney Heath. In addition, there are two sites managed by the Herts and Middlesex Wildlife Trust as nature reserves – Marshalls Heath, Wheathampstead; and Broad Colney Lakes, London Colney.
- 2.24: The District is rich in archaeological heritage, spanning the whole range of British prehistory and history. The best known sites include the Verulamium Roman Town, Beech Bottom, Devils Dyke and the monastic earthworks of St Albans Abbey.
- 2.25: Sites of national importance, such as Verulamium, are scheduled by the

Secretary of State of the Environment and have statutory protection under the provisions of the Ancient Monuments and Archaeological Areas Act 1979. There are 15 such Ancient Monuments within the District – as listed in Appendix 5.

- 2.26: In addition, there are 5 archaeological sites that have been identified for local preservation and 4 other areas that are subject to a recording condition because of the archaeological significance of the site. Although these sites do not enjoy statutory protection under the Ancient Monuments and Archaeological Areas Act 1979, they are of significant local importance.

Water Resource and Protection Issues

- 2.27: The three main rivers in SADC are the Rivers Ver, Colne and Lee. The River Ver runs through the Chiltern Hills close to the Bedfordshire/Hertfordshire border, skirting the village of Redbourn and passing through St Albans before joining the River Colne. The river Colne runs from Colney Heath, past London Colney, joining the river Ver at Bricket Wood. The river Lee runs north-east of Luton passing through SADC in an easterly direction through Harpenden and Wheathampstead.
- 2.28: Hertfordshire has two main sources of water – rivers and aquifers which feed wells and springs. The majority of the rivers and streams are Bournes (seasonal spring, usually dry in summer and flowing during winter) with predominantly gravel beds.
- 2.29: On the chalk the ground is very permeable. In the past, the rivers have tended to remain stable throughout the year rising in relation to the water table. However, in recent years, over abstraction and prolonged drought conditions have lowered the water table and many rivers have dried up in stretches (e.g. River Ver).

Known Information on contamination

- 2.30: The Regulatory Services Department currently holds limited information on contamination within the district – often as a result of reports submitted as part of the planning process. If development is proposed on an area of land where the past use may have resulted in contamination (many of the brownfield sites), then the Council will request a site investigation be carried out as part of the planning process. These reports are held within the Regulatory Services Department and they will all be reviewed at the appropriate stage of the risk assessment process to ensure that the remediation carried out was adequate by today's standards.

Current and Past Industrial History

- 2.31: Until the middle of the nineteenth century, St Albans was a quiet market town, but the coming of the railways marked the start of development that changed St Albans into an urban and industrial centre.
- 2.32: Although St Albans had been an important coaching point, the area had shown few signs of development as an industrial town until the latter part of the nineteenth century. Agriculture was the principal industry for

centuries and associated with it were the mills which ground the corn.

- 2.33: Brewing, milling and the manufacture of straw hats evolved in St Albans from the agriculture and crafts of the surrounding countryside.
- 2.34: In the Middle Ages, when wool was the basis of Britain's exports, St Albans was the principal centre of the trade in Hertfordshire. In 1266, the Abbots claimed that all cloth made locally had to be "fulled" at the Abbey Mills, but by 1588, the cloth industry had declined locally.
- 2.35: The distinctive industry in St Albans for hundreds of years was based on the straw plait trade. The straw hat industry evolved from the craft of straw plaiting which had been introduced from France in the sixteenth century. The chalk soils in the area were well suited to the growing of special varieties of wheat with long pliable stems. Making hats from the straw plait began as a cottage industry, but in the mid nineteenth century, several factories were set up in St Albans. From about 1870, foreign competition resulted in the St Albans hat trade concentrating on men's straw hats or boaters, but by World War II, boaters had fallen out of fashion and cheaper imports brought about the demise of the hat trade in St Albans ⁽¹⁶⁾.
- 2.36: By this time, however, other industries were growing - in 1815, there were no factories in the town except for the silk and cotton mills, but soon the printing industry began and Fleetville and The Camp grew up by side of the old Midland railway.
- 2.37: Printing became one of the principal industries of St Albans due to its nearness to London without the contamination of its atmosphere and the supply of paper from neighbouring Gade valley.
- 2.38: It is therefore only within the last half century that the greatest development has occurred in local industry – made possible by the advent of electric power. Variety is now the most noteworthy feature of industry within the district – for example carpentry, general manufacture, clothing, food manufacture, rubber manufacture, aircraft manufacture, sand and gravel digging etc ⁽¹⁷⁾.
- 2.39: Industrial development within the district was therefore unplanned and haphazard. Factories were often small and grew up among the houses – a number of which still exist.
- 2.40: The Ver and Colne valleys contain extensive gravel deposits which have been exploited on an increasing scale during the twentieth century. Significant deposits of sand and gravel are therefore worked in an arc in the Green Belt to the south and east of St Albans. Other minerals have been extracted in the past but are no longer worked. These disused pits often provide suitable sites for waste disposal. The long history of mineral workings in the area has produced some relatively large areas of poorly restored land. Although methods continue to improve, there is a legacy of sites restored in the 1960s and 1970s to a mediocre quality ⁽¹⁶⁾.
- 2.41: Gas production from the biological breakdown of deposited wastes is one

of the major effects associated with landfill sites. Gases produced include carbon dioxide, hydrogen sulphide and methane. These may inhibit the growth of vegetation and, under certain conditions, can migrate into buildings and may accumulate to explosive concentrations. Other contaminants may also be present, including metals, acids and alkalis, organic substances and asbestos⁽⁹⁾. In 1991, it was estimated that there were 51 former landfill sites within the district. In 2012, there were two operational registered landfill sites within the district.

Geological/Hydrogeological characteristics

- 2.42: The landscape of SADC is the result of the interaction between the underlying geology and climate which, through erosion or deposition, create the landform, the soil type, drainage and microclimate that determines the local vegetation. The relatively soft, easily eroded geological deposits have formed an undulating and varied landscape⁽³⁾.
- 2.43: SADC has two main types of landscape character divided by a line running from Coleman Green in the north-east to Chiswell Green in the south-west. To the north-west of this divide lie the Chiltern Hills which are chalk hills with varied landscape quality; whilst to the south-east lies the Vale of St Albans where land is more gently sloping and is overlain by glacial boulder clay drift.
- 2.44: From the 1:50000 geological maps of the district (sheets 238: Aylesbury and 239: Hertford; Drift editions dated 1955 and 1978 respectively), the geology of the area is dominated by the Cretaceous sequence of Upper and Middle Chalk, with a variety of drift deposits overlying these.
- 2.45: The stratigraphic column of the same maps indicate that the Upper Chalk strata is approximately 80 metres thick and the Middle Chalk strata is approximately 70 metres thick.
- 2.46: The Upper Chalk beds are characteristically composed of soft white chalk with many flints, whilst the Middle Chalk beds are of harder chalk with only a few flints. Both have various amounts of fissuring within their composition. The boundary between the Upper and Middle Chalk is marked by a layer of Chalk Rock which can be up to a few metres thick. This is a hard, limestone which may be silicified in parts. The chalk has been extensively quarried and mined since Roman times in order to produce agricultural lime, building stones and, more recently, cement.
- 2.47: In the South-eastern half of the district, the chalk is largely overlain with drift deposits of boulder clay and glacial gravels. The Geological map describes these boulder clay deposits as being clay with chalk and flint fragments. Flint is a very hard mineral which probably came from the remains of marine sponges and diatoms which built their skeletons of silica⁽³⁾.
- 2.48: In the North-Western half of the district, the chalk beds frequently outcrop at the surface, however, there are also some large drift deposits of clay with flints and pebbly clay with sands.

- 2.49: Along the valleys of the Rivers Ver, Lee and Colne alluvial deposits are present. Taplow gravels are also present along the valleys of the Rivers Ver and Colne. These gravels are part of the old River Thames terraces which were laid down when the River Thames used to flow through the Vale of St Albans, prior to the ice ages.
- 2.50: The Regional Appendix of the Environment Agency's 'Policy and Practice for the Protection of Groundwater' for the Thames Region indicates that the chalk is a "principle aquifer of intermediate leaching potential class 1". This is defined as "soils which can possibly transmit a wide range of pollutants" and "soils which can possibly transmit non or weakly adsorbed pollutants and liquid discharges but are unlikely to transmit adsorbed pollutants". Thus, the capacity of the chalk to attenuate the pollution is poor and is limited to dilution and oxygenation.
- 2.51: The Water Table varies greatly in depth across the region from surface spring flows to about 20m below ground level.
- 2.52: The chalk strata dips SE towards the London Basin. This influences the direction of groundwater flow, which generally corresponds to the direction of strata dip although there are local variations near to rivers, where the groundwater flow is towards the rivers.
- 2.53: The Chalk aquifer is often referred to as a dual porosity aquifer, whereby groundwater movement is governed by intergranular (matrix) flow which is predominantly slow (1 metre per year). However, approximately 1% of the aquifer contains fissures whereby groundwater flow is rapidly transmitted via these fissures/fractures.
- 2.54: The river gravels overlying the chalk may also act as minor aquifers, although these are generally not exploited as a potable water source in the region due to the availability of water from the chalk. However, this water may be used as non- potable supplies, for example in industry or agriculture.

Redevelopment History

- 2.55: The Government is committed to maximising the reuse of previously developed land, empty properties and the conversion of non-residential buildings for housing. The national target is that by 2008, 60% of all additional housing should be provided on previously developed land and through conversions of existing buildings.
- 2.56: Within SADC, during the last 2 years, 97% of dwelling increase has been on such sites ⁽¹⁵⁾.
- 2.57: The Hertfordshire County Structure Plan 1986 indicates that there should be an increase in the number of dwellings in the District of 6,400. The Secretary of State has concluded that local authorities should not have to encroach on the Green Belt to achieve this provision.
- 2.58: It is likely that in the period to 2011, about 90% of the total dwelling increase in SADC will be on previously developed land.

2.59: In order to achieve less intensive development in specified settlements and to resist Green Belt development, the majority of new dwellings are concentrated in the towns of St Albans and Harpenden. It can therefore be seen that the pressures on brownfield sites for redevelopment is intense.

SECTION 3: SADC STRATEGY: OVERALL AIMS

3.1: Government guidance states that local authorities should take a **strategic approach** to the identification of land that merits further detailed inspection and that this approach should:

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

3.1: AIMS OF SADC

3.1.1: These aims were generally agreed with the Hertfordshire and Bedfordshire Contaminated Land Forum with the objective of bringing consistency in the approach to the development and application of this inspection strategy throughout the Herts and Beds region. Clearly there are some matters which are specific to individual authorities.

3.1.2: SADC aims are as follows:-

- i) To carry out a risk based approach to identify and manage contaminated land within its area that is causing unacceptable risks to human health or the wider environment. This approach should be systematic and objective and involve the following⁽⁶⁾:
 - a) Risk Assessment – whereby risks are identified, estimated and evaluated through carrying out desk studies, site investigations and interpretation of data to reach decisions on any unacceptable risks.
 - b) Risk Management – which involves evaluating and selecting suitable remedial measures to reduce or control the risks identified as unacceptable and the implementation of the selected remedial action.
- ii) To identify the most urgent sites first by categorising into an order that will ensure the most pressing problems are dealt with first.
- iii) To survey the district thoroughly to identify and record all possible areas of land that may have been subjected to some form of land use that has had the potential to contaminate the land and to actively utilise a Geographical Information System (GIS) as a means of recording this information. It will be necessary to identify all the sites no matter how slight the chance of contamination in order to be comprehensive in the search and ensure that there are no sites accidentally and unknowingly excluded.
- iv) To survey the district to identify all specified receptors and to record this information on the GIS.

- v) To assess the risk of receptors and contamination being linked by looking at the pathways which the potential contaminants may take to the receptors.
- vi) To ensure that an effective network of communication is established both internally and externally.
- vii) To ensure consultation with any interested parties is carried out in a manner that is as open and responsive as possible.
- viii) To be open and transparent concerning land owned by SADC that may be contaminated.
- ix) To pass relevant information concerning identified sites to the Planning Department which, through the planning process, may at a later date be identified for planning permission.
- x) To ensure that any brownfield sites developed through the planning system are subject to the same standards of inspection and remediation as any contaminated land sites.
- xi) To ensure that any previous action that has already been taken to deal with contamination is thoroughly checked to ensure that the previous regime was stringent enough to deal with the contamination to meet with current guidelines.
- xii) To seek effective remediation of land that is determined as being statutorily contaminated in order to:
 - Protect human health;
 - Protect controlled waters;
 - Protect sensitive and valuable ecosystems;
 - Prevent damage to property;
 - Support government aims to assist in the process of returning brownfield sites to beneficial use.
- xiii) To allow and encourage those who are responsible for contaminating the land the opportunity to undertake voluntary remediation.
- xiv) To use legal enforcement powers where necessary.
- xv) To produce and publish a Public Register of the enforcement history of land statutorily designated as contaminated.
- xvi) To review the strategy on a regular basis.

3.2: OBJECTIVES AND MILESTONES

- 3.2.1: When the strategy was being developed, SADC had done little by way of collating the information that the department held – for example, within the department there was a considerable amount of information regarding closed landfill sites, however, this had not been properly recorded. A main objective of SADC was therefore to collate all such information and establish a format for recording the information that would be acquired in the course of

implementing this strategy.

SECTION 4: PRIORITY ACTIONS AND TIMESCALES

4.1: This section sets out the priorities for the activities which SADC consider that we must carry out in order to meet the aims and objectives set out in section 3. It must be noted that the strategy document is a 'living' document, it will therefore be subject to review and these timescales will be subject to change:

Priority Actions	Timescale
Strategy consultation – internal (relevant authority departments)	April 2001
Strategy consultation – external (Environment Agency, County Council, Statutory Regeneration Bodies, English Nature, English Heritage, Food Standards Agency, Defra, parish councils and other interested parties)	May 2001
Cabinet review	June 2001
Strategy adoption and publication	By 1 July 2001
Collection of information regarding the potential existence of contaminants, receptors and pathways – and inputting of these onto GIS	Within 2 years from adoption of the strategy
Stage 1 risk assessment procedure	Within 3 years from the adoption of the strategy
Stage 3 prioritisation/risk assessment procedure	Within 5 years for Initial Group A sites, thereafter, on a rolling programme with annual review, over a period of 10 years
Review Strategy Document	Annually/legislative changes
Commence action on urgent sites	Within 7 days of notification
Consultation with appropriate persons, owner/occupiers	On identification of a potential contaminated land site

Enforcement action	When necessary
Enter information onto Public Register	At appropriate stage if enforcement action is found necessary
Re-inspect area	On completion of the risk assessment process

- 4.2: The above targets and projections are dependent on economic, resource and personnel constraints and may therefore be subject to alteration.
- 4.3: Once a strategy has been adopted, the local authority is required to publish it for inspection. A bound copy of the strategy will be available from this department on application. Copies will also be available for viewing in the main libraries throughout the district.
- 4.4: The strategy was finalised following consultation during May and June 2001 and was formally adopted in June 2001. The risk assessment process then began.

SECTION 5: PROCEDURES

- 5.1: There is currently no guidance for local authorities on how they are to inspect their areas for contaminated land. It is therefore up to each local authority to determine how they intend to identify possible contaminated sites and assess the priorities for further investigation of these sites.
- 5.2: This section therefore outlines the inspection procedures that SADC intends to take in order to identify contaminated land sites. It should be noted that, if at any point in the process, a site is found that poses an immediate and unacceptable risk to a specified receptor, this authority will take immediate action to deal appropriately with the site without reference to the prioritisation procedure.
- 5.3: The detailed risk assessment procedure that it is intended to use can be found in Appendix 6. The procedure developed has been based on the methodology outlined in the Department of the Environment Contaminated Land Research (CLR) Report number 6 'Prioritisation and Categorisation procedure for sites which may be contaminated' (subsequently withdrawn).
- 5.4 The procedure for contaminated land prioritisation can be found in Appendix 8. The prioritisation spreadsheet is found at the file path \\Sadc-vm-fs02\data\EH\Personal Folders\Ben\Contaminated Land. The file name is St Albans Prioritisation of Sites.xls.
- 5.5: The inspection of potentially contaminated land within SADC will be dealt with on a site by site basis, rather than by specific areas.
- 5.6: It is recognised that the data collected from the procedures described below will be subject to many uncertainties which will affect the level of confidence. Subject to resource availability, SADC will take every practicable step to minimise such uncertainties.

5.1: INTERNAL MANAGEMENT ARRANGEMENTS FOR INSPECTION AND IDENTIFICATION

- 5.1.1: The Regulatory Services Department at SADC has taken the primary role in the strategy development within the Council due to their role in the protection and improvement of people's health and the environment.
- 5.1.2: All initial stages in the process and day to day implementation of the strategy will be carried out by the Environmental Compliance Officer (ECO) responsible for regulating Contaminated Land. This includes the initial data collection and collation, the stage 1 initial groupings, the visual inspection of the site and the stage 3 prioritisation process.
- 5.1.3: This work will be overseen by the Environmental Compliance Manager (ECM) of the Environmental Compliance team and liaison will be carried out with other internal departments such as the estates department, legal department, planning teams and economic development department where necessary.
- 5.1.4: The ECO responsible for regulating contaminated land will also carry out

all appropriate consultation with relevant Council departments and other agencies such as the EA, English Nature and English Heritage when necessary.

- 5.1.5: Once a site has been identified that requires a more detailed intrusive site investigation to be carried out, the works will be put out to tender in accordance with the council tender process. For works costing over £25,000 quotes from four consultants will be obtained for the works required and the decision as to which consultant to use will be referred to Cabinet.
- 5.1.6: This department will obtain a shortlist of potential consultants with the ability to carry out such works from the EA and potential contractors will be selected from this list.
- 5.1.7: Where land is found to be posing significant harm, consultation will be made with the Environment Agency and any other relevant bodies. External consultants will be employed for specialist, third party advice and recommendations where necessary.
- 5.1.8: The results of all such site investigations will be reported to the Cabinet and any decision as to whether to designate a site as a contaminated land site will be made by the cabinet members – on recommendation from the ECO.
- 5.1.9: Any further necessary actions – such as the decision of whether to serve a Remediation Notice - will be based upon the willingness of the Appropriate Person to carry out the remediation works necessary. If such a notice is deemed necessary, this will be served a minimum of 3 months after the contaminated land declaration.
- 5.1.10: Approval for such actions will be gained following the protocols outlined in the SADC Scheme of Delegation to Officers and in consultation with the District Secretary and Solicitor.

5.2: CONSIDERING SADC's INTERESTS IN LAND

- 5.2.1: SADC accepts that, not only is the authority a regulator under this legislation, but it may also be a land owner, or the Appropriate Person for remediation. The authority will seek to be open, transparent and consistent in its approach when dealing with the inspection and, where necessary, the remediation of Council owned land that may be statutorily contaminated.
- 5.2.2: All land owned by SADC - whether housing land, recreational, etc - will be assessed in the same way and at the same time as all other land following the procedures outlined in Appendix 6. It is not considered suitable to prioritise action on local authority owned land, since this might result in the assessment of other sites being unnecessarily delayed.
- 5.2.3: Similarly, land which is no longer owned by SADC, but that may be contaminated as a result of activities that occurred on the land whilst under the control of SADC, will be assessed at the same time and

with the same degree of attention as any other site.

5.2.4: In situations where SADC is either the land owner or Appropriate Person for remediation, we shall seek the EA's guidance on advice regarding the particular circumstances of the site in question.

5.2.5: Responsibility for remediation of all such sites will fall to the department responsible for causing the contamination and internal liaison will take place as necessary.

5.3: **INFORMATION COLLECTION**

5.3.1: Information required to carry out the risk assessment process may be obtained from a wide range of sources both within the authority and from external bodies. The table below outlines some of the organisations which can help in this process and summarises the information they can provide⁽¹¹⁾.

Information Source	Information Type
Landmark maps	Information on the location of past contaminative use sites.
Environment Agency	Information regarding water courses. Information regarding features such as flood defence works, sewage treatment works, landfill sites etc. Location of water abstraction points. Location of consents to discharge. Location of sites with waste management licences. Location of closed landfill sites. Location of sites with IPPC authorisations. Location of licensed nuclear sites.
English Nature	Location of protected organisms and ecosystems.
English Heritage	Records of historic/protected buildings. Records of archaeological sites.
Defra & FSA	Use of land, assessment of animal or crop effects.
Health and Safety Executive	Information on potential releases from premises.
Parish Councils	Local knowledge regarding past usage of sites etc.
Internal Local Authority	Population distribution. Planning and Land Use. Known harm to human health. Local authority owned land. Action already taken to deal with contamination.

- 5.3.2: The quality of the data collected is one of the key factors that will affect the outcome of any risk assessment performed. It is therefore anticipated that this stage in the process will take at least two years to perform in order to ensure that the data collected is as accurate and comprehensive as possible.
- 5.3.3: The information collection process will involve large volumes of data. To facilitate this process it is anticipated that the Council's GIS will be a key tool in managing the data collected.
- 5.3.4: It is anticipated that the consultation process and publication of the strategy will result in large quantities of information being provided. All such information will be documented and recorded. It will not be possible to acknowledge the receipt of all such information due to the amount expected to be received.

Receptors

- 5.3.5: It should be noted that only information concerning the receptors specified in the guidance will be sought. If the contamination is only affecting any other type of receptor, then the land cannot be contaminated land under this legislation.
- 5.3.6: A large amount of information has already been provided to SADC by the EA - such as the location and extent of Source Protection Zones, pollution incidents, location of current landfill sites etc. This information has already been incorporated onto the Council's GIS system and will be taken into consideration during the risk assessment process.
- 5.3.7: The location of many of the different types of specified receptors has already been entered onto the GIS system – for example residential areas, recreational land, allotments etc. The ECO responsible for regulating contaminated land will work closely with the IT department to fully identify all receptors and to establish a working database for contaminated land purposes.
- 5.3.8: The District Local Plan Review will be used to identify the different land use types (e.g. green belt areas etc).
- 5.3.9: English Nature has already provided SADC with the location details of protected habitats.

Pathways

- 5.3.10: Drift maps/geological records etc. have already been studied so that a general picture of the geology of the district is known. More detailed research will be needed during stage 3 of the risk assessment procedure in order to determine the detailed geology of each site under investigation. The relevant geological maps of the district are held within the planning department and also at the St Albans museum.
- 5.3.11: The information provided by the EA also includes information relating to pathways – for example, surface water features, groundwater

etc.

Contaminants

- 5.3.12: The primary source of information about contaminative uses that SADC shall use will be the Landmark Historical Landuse Data. Landmark's data has been derived from the systematic analysis of 1:10560 scale County Series mapping and 1:10000 scale National Grid Mapping. Sites of potential contamination have been identified by Landmark and digitally recorded in a format which can be linked with the Council's GIS system.
- 5.3.13: Contaminative uses considered will be those defined in Appendix 1. These are primarily those identified under Section 143 of the Environmental Protection Act 1990 (since withdrawn). However, any other use considered significant will be included initially.
- 5.3.14: Other potential sources of contamination will be identified through various methods such as the use of Landmark Historical Maps, old Trade Directories etc. in order to identify the past industrial use of any particular site.
- 5.3.15: As part of the monitoring of Private Water Supplies that the council has to carry out, various water samples are regularly taken – any abnormal results from these will also be fed into the process.

5.4: INFORMATION AND COMPLAINTS

- 5.4.1: Although anonymous complaints are not generally dealt with, exceptions will be made in certain circumstances at the discretion of the receiving officer. Each complaint received will be evaluated on its individual merits.
- 5.4.2: Where personal information about an individual or group of individuals must appear on a public register – i.e. Where land is designated as Contaminated Land and the persons have been identified as Appropriate Persons – written notice will be given stating that their details will be published.
- 5.4.3: If information is received by this department as to a possible area of contamination (e.g. from member of public/statutory authority), we will first check whether we are already aware of the site. If this is the case, then no further action will be taken at this stage, since the site will already be due to be assessed in the normal risk assessment fashion described below.
- 5.4.4: If, however, the site is not known to us, then further information may be sought from the informant until we are satisfied that we have sufficient to allocate the site into an Initial Grouping category.

5.5: INFORMATION EVALUATION

- 5.5.1: The purpose of the identification of areas for inspection is to allow SADC to move efficiently from the situation where it is considering its

entire land area to a situation where it is able to consider individual sites.

- 5.5.2: This method will begin by comparing the location of areas of potential contamination with areas where there are sensitive receptors. The geological coincidence of these two will confirm that two parts of a potential pollutant linkage are in place. This will therefore allow SADC to define areas of its district for further inspection.
- 5.5.3: Dealing with the inspection and remediation of land will be a progressive activity. It will therefore be necessary to carry out a risk assessment to determine how sites are to be dealt with in an appropriate order to try and ensure that site posing the greatest risk are dealt with first.
- 5.5.4: Throughout the process of risk assessment, the aim is to progressively better define each pollutant linkage until a point is reached at which confident decisions can be made about the nature and significance of the risks arising out of the linkage.

SECTION 6: GENERAL LIAISON AND COMMUNICATION STRATEGIES

Internal Liaison

- 6.1: As part of the consultation process, all relevant Council departments were given the opportunity to comment on the draft strategy and their comments have been incorporated into the final version.
- 6.2: Due to the large number of sites of archaeological significance in the district, the Council's District Archaeological Section will be notified whenever it appears that a site under investigation is on, or near, one of the archaeological sites identified in the Local Plan. In this way, the Archaeological Section can ensure that any archaeological issues are properly addressed. Similarly, the Council's Conservation and Design team will be consulted whenever a site is within a Conservation Area.
- 6.3: The ECO responsible for regulating contaminated land will also consult with the Head of Legal, Democratic and Regulatory Services at an early stage with regard to any legal issues that may arise in respect of any site where a pollutant linkage has been identified.

Statutory Bodies

- 6.4: Statutory bodies, such as the Environment Agency, English Nature and English Heritage have already been consulted in order to establish the correct contact points for contaminated land issues. Similarly, the contact details for the ECO responsible for regulating Contaminated Land has been provided to them.
- 6.5: Each of these organisations has also been invited to comment on the consultation draft of this strategy.
- 6.6: In order to ensure that SADC adopts an approach that is consistent with that adopted by other regulatory bodies and benefits from the experience and expertise available within those bodies, if it appears that a site may have an impact upon specified receptors such as Controlled Waters, Areas of Outstanding Natural Beauty, SSSIs etc, then the relevant statutory body will be consulted. The consultation will include details of all the available information regarding that site and their comments and advice will be sought regarding the susceptibility of that site in relation to the potential contaminants

The Environment Agency

- 6.7: Both the EA and local authorities have regulatory responsibilities under other environmental pollution regimes apart from Part IIA. Thus, in order to ensure effective and appropriate regulatory effort, SADC will consult with the EA at an early stage and subsequently on a regular basis, on which regulatory regime is most applicable to deal with individual instances of land contamination. The EA has nominated Area Contacts who will be its main channel of communication with Local Authorities in their respective areas. SADC falls within the NE Thames Region of the EA

whose offices are based in Hatfield.

- 6.8: In many cases where remediation of contaminated sites is proposed, the remediation activity will be the subject of an environmental licence, such as a waste management licence. Full and timely consultation and cooperation between SADC and the EA will therefore help to ensure that appropriate and proportionate regulatory control is maintained, whilst minimising perception amongst third parties of regulatory obstacles to the remediation of contaminated sites ⁽¹⁴⁾.
- 6.9: SADC is also required to notify the EA, in writing, of the fact that any land has been identified as being contaminated land. This notification enables the EA to decide whether it considers that the land should be designated as a Special Site.

Owners, occupiers and other interested parties

- 6.10: SADC's approach to dealing with contaminated land will be to seek voluntary action before taking enforcement action. In many cases as much, or more effective, remediation can be achieved by agreement rather than enforcement. This approach therefore requires effective communication with owners, occupiers and Appropriate Persons. The ECO will be the central contact point in SADC for all contaminated land issues and will work to keep all interested parties informed on each stage of an investigation.
- 6.11: Owners and occupiers of any potential contaminated land site will be contacted at an appropriate time in order to advise them on the situation and ask for their comments. If, as a result of these initial contacts, other interested parties come to light, then they will be contacted as soon as that information is available.
- 6.12: The Appropriate Person for the site's remediation may not be the current owner or occupier of the land. Again, this authority will attempt to contact such persons as soon as is considered necessary. If any other appropriate person comes to light during the course of our investigations, they will be contacted as soon as possible.
- 6.13: At every stage, SADC will try to resolve issues on an informal basis, but owners and occupiers of a site should note the powers of entry onto land that are available to this Council. If access is denied, these powers will be enforced if considered necessary.

The Wider Community

- 6.14: Contamination can take on a variety of forms and the distribution of contaminants in the UK is such that, in many cases, it will not be isolated from the community. It may arise close to homes and school, places of work or recreation, water supplies or wildlife habitats, roads and footpaths ⁽⁶⁾.
- 6.15: Decisions about contaminated land are not made on a purely technical basis – there will be a variety of regulatory, commercial, financial, legal

and societal factors which also affect how any particular site should be dealt with. Therefore, decisions about contaminated land can be complex, often including the need to resolve conflicting points of view. ⁽⁶⁾

- 6.16: This authority recognises the need for effective communication with all involved and will do its best to keep all interested parties up to date with any situation. However, it must be recognised that much will depend on confidentiality and data protection issues – the contaminated land status of a particular site is not entered onto the public register document until subsequent regulatory action is taken, such as the service of a Remediation Notice or the receipt of a Remediation Statement etc.
- 6.17: Any queries regarding this strategy and contaminated land in general by the public or other statutory bodies should be directed to the specified contact points within the authority, as detailed in Appendix 10.
- 6.18: SADC recognises that the data sources that we intend to use may not identify all areas of potential contamination. Local consultation will therefore play a major role in the identification of gaps in the database and SADC will welcome relevant information and knowledge on potential contaminative uses from local parish councils and residents.
- 6.19: It is recognised that members of the public, businesses and voluntary organisations have an important role in identifying and providing information on potential contaminated land sites. We therefore encourage their participation in the process of identifying and investigating contaminated land.
- 6.20: However, due to the number of sites that it is anticipated will undergo some form of investigation, it will not be possible to keep informants updated about any one site.
- 6.21: It should be noted that SADC will not generally deal with anonymous complaints from members of the public regarding contaminated land matters. This is because contact details are needed in case further information is required regarding the notification, or the information provided needs to be verified in some way. It should however be noted that, under no circumstances, will any of the complainant's details be disclosed to anyone other than those dealing with contaminated land at the authority without their prior permission.
- 6.22: 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.
- 6.23: It is important to appreciate that the expectations of some members of the public will not be met by the powers that local authorities may exercise under contaminated land legislation.

SECTION 7: PROGRAMME FOR INSPECTION

- 7.1: SADC intend to have entered the location of all identified human or environmental receptors and sources of contamination onto the GIS system within 2 years of the publication of this document. Once these have been entered onto the GIS system, then the risk assessment process, as described in appendix 6, can be started. This will serve to prioritise sites for progression to individual attention. Hence sites will be selected for further attention according to their priority across the whole district, rather than on an area by area basis.
- 7.2: Regardless of the risk assessment process outlined in Appendix 6, if, in relation to any site, it appears to SADC that there is an imminent danger of serious harm or serious pollution of Controlled Waters being caused as a result of an identified Significant Contaminant Linkage, we will ensure that urgent remediation is carried out. The terms 'imminent' and 'serious' are not defined in Part IIA. Each case will therefore be judged on the normal meaning of these words and the facts of the case.
- 7.3: S108 of the Environment Act 1995 gives a local authority the power to authorise a person to exercise specific powers of entry. These powers include:

- the right to enter at any reasonable time (or, in an emergency, at any time and, if need be, by force) any premises which he has reason to believe it is necessary for him to enter;
- to take with him any other person or any equipment or materials required for any purpose for which the power of entry is being exercised;
- to make any examination and investigation as may be necessary;
- to direct that the premises or any part of them, or anything in them, shall be left undisturbed for so long as is reasonably necessary for the purpose of any examination or investigation;
- to take such measurements and photographs and make such recordings as he considers necessary for the purpose of any examination or investigation;
- to take samples, or cause samples to be taken, of any articles or substances found in or on any premises which he has power to enter, and of the air, water or land in, on, or in the vicinity of, the premises;
- to cause any such articles or substances to be dismantled or subjected to any process or test;
- to take possession of any such articles or substances and detain it for so long as is necessary in order to examine it, to ensure that it is not tampered with before examination, or to ensure that it is available for use as evidence in any proceedings for an offence under this legislation;
- to require any person to answer such questions as is necessary and to sign a declaration of the truth of his answer;
- to require the production of any records which are required to be kept, or which it is necessary to see for the purposes of an examination or investigation.

- 7.4: These powers specifically include the power to carry out experimental borings or other works on premises and to install, keep or maintain monitoring and other apparatus there.
- 7.5: Detailed inspection may include any or all of the following:
- the collation and assessment of documentary information, or other information from other bodies;
 - a visit to the particular area for the purposes of visual inspection and, in some cases, limited sampling (e.g. of surface deposits); or
 - intrusive investigation of the land (e.g. by exploratory excavations).
- 7.6: If the premises to be inspected are used for residential purposes, or if the inspection will necessitate taking heavy equipment onto the premises, SADC is obliged to give the occupier at least 7 days' notice of their proposed entry. If consent is not forthcoming, SADC can obtain a warrant for entry from the magistrate's court.
- 7.7: Applying this strategy will result in the identification of particular areas of land where it is possible that a pollutant linkage exists. SADC will then carry out a detailed inspection of all such areas, using these powers of entry when necessary, to obtain sufficient information to:
- a) determine whether that land appears to be contaminated land; and
 - b) to decide whether any such land falls within the definition of a Special Site and is therefore required to be designated as such.
- 7.8: It should be noted however, that before SADC can carry out any inspection using its statutory powers of entry, the guidance dictates that we must be satisfied, on the basis of any information already obtained that:
- a) in all cases, there is a reasonable possibility that a contaminant *linkage* exists on the land; and
 - b) in cases involving an intrusive investigation, that it is likely that the contaminant is actually present and, given the current use of the land, that the receptor is actually present or is likely to be present.
- 7.9: Thus, where sufficient information relating to any particular site is already available, or will become available, SADC will consider whether it provides a sufficient basis for deciding whether or not the land is contaminated. If the information meets this test, no further investigation of the land will be undertaken and a determination will be made as to whether to designate the site as a contaminated land site or not based on this evidence.

7.1: SITE SPECIFIC LIAISON

Owners, Occupiers and Appropriate Persons

- 7.1.1: For any piece of land identified as being contaminated land, SADC need to establish:
- Who the owner of the land is;
 - Who appears to be in occupation of all or part of the land; and

- Who appears to be an appropriate person to bear responsibility for any remediation action that might be necessary.
- 7.1.2: SADC may already have detailed information concerning the condition of the land in question – provided by the EA or other persons such as the owner of the land – or these persons may offer to provide such information within a reasonable time. It is therefore helpful to consult with the owner of land and any other such persons in order to find out whether such information already exists, or could be made available to the authority.
- 7.1.3: The owners, occupiers and appropriate persons of each site will therefore be contacted by SADC at the earliest opportunity, once it has been established that their site may be a contaminated land site and that further investigations are considered necessary, in order that they can provide as much information as possible to help us in our determinations.

Internal Liaison

- 7.1.4: Due to the large number of sites of archaeological significance in the district, the Council's District Archaeological Section will be notified whenever it appears that a site under investigation is on, or near, one of the archaeological sites identified in the Local Plan. In this way, the Archaeological Section can ensure that any archaeological issues are properly addressed. Similarly, the Council's Conservation and Design team will be consulted whenever a site is within a Conservation Area.
- 7.1.5: The EHO responsible for regulating contaminated land will also consult with the Head of Legal, Democratic and Regulatory Services at an early stage with regard to any legal issues that may arise in respect of any site where a contaminant linkage has been identified.

Other Statutory Bodies

- 7.1.6: As already mentioned, SADC will consult with the EA at an early stage and subsequently on a regular basis, on which regulatory regime is most applicable to deal with individual instances of land contamination. This notification to the EA also enables the EA to decide whether it considers that the land should be designated as a Special Site, or whether they wish to provide site specific guidance to SADC, for example on what remediation might be required.
- 7.1.7: SADC will also consult with the EA on individual sites if it is apparent that the determination of contaminated land will be based on pollution of controlled waters. SADC will have regard to any advice provided by the EA.
- 7.1.8: For any site under investigation, the GIS will also be consulted in order to check for the presence of natural features of historical interest, watercourses, SSSIs etc nearby. If any such feature is noted, we shall consult with the appropriate body as to possible harm, water pollution or any other damage that might occur and all reasonable precautions to avoid them will be taken. In addition, English Nature will be consulted to assess whether a consent is required under S28 of the Wildlife

and Countryside Act 1981.

7.1.9: If it is considered appropriate to contact any other body, they will also be contacted at the relevant time – e.g. Food Standards Agency, Water Company etc.

7.2 METHODS OF INSPECTION

7.2.1: The investigation of any land for the purposes of this Strategy will, as far as possible, be conducted in accordance with British Standard BS 10175:2011 Investigation of potentially contaminated sites – Code of Practice.

7.2.2: Detailed inspection may include any or all of the following:

- the collation and assessment of documentary information, or other information from other bodies;
- a visit to the particular area for the purposes of visual inspection and, in some cases, limited sampling (e.g. of surface deposits); or
- intrusive investigation of the land (e.g. by exploratory excavations).

7.2.3: If SADC has already been provided with detailed information on the condition of the land – whether by the EA or some other person such as the owner of the land – which provides an appropriate basis upon which SADC can determine whether the land is contaminated land, then we shall not carry out any inspection which takes the form of intrusive investigation. Similarly, if a person offers to provide such information within a reasonable time and does so, then we shall not carry out any inspection which takes the form of intrusive investigation.

7.2.4: However, where we do not have sufficient information, we will consider whether to make an intrusive investigation of the land. Such an investigation will only be carried out where there is a likely that a contaminant linkage actually exists on the land.

7.2.5: Any intrusive investigations that are necessary will be carried out by qualified and competent consultants who are employed and authorised by the Council for that purpose.

7.2.6: The primary objective in inspecting land is to enable SADC to obtain the information needed to decide whether or not the land appears to be contaminated land. It is not necessary to produce a complete characterisation of the nature and extent of contaminants, pathways and receptors on the land. SADC may be able to identify, in accordance with the guidance, one or more significant pollutant linkages, enabling a decision to be made on a less than complete characterisation. Once the land has been identified as contaminated land, a fuller investigation can form part of the assessment action required by notice.

7.2.7: Thus, once SADC has sufficient information on which we can determine whether or not the land is contaminated, a scientific and technical assessment using all of the relevant and available evidence will be

conducted and a decision made as to whether the land should be designated as contaminated land or not. In such instances, SADC will not carry out any further investigations on the land.

- 7.2.8: For a detailed step-by-step process that it is anticipated that the investigation of any one site will follow, please refer to Appendix 7.

7.3: HEALTH AND SAFETY PROCEDURES

- 7.3.1: Health and safety considerations will be made at every stage during the investigation of a site. The initial desk top survey will give an indication of the contaminants likely to be present and a health and safety assessment can be made of the likely risks posed by them.
- 7.3.2: Regardless of the type of premises it is intended to enter, consultation with the occupier will be carried out prior to entry onto any premises so that any necessary health and safety precautions can be identified and incorporated into the inspection requirements.
- 7.3.3: The Health and Safety policy of any consultant employed by the Council to carry out site investigation works will be checked prior to their employment and we will ensure that they have public liability insurance indemnifying the council against any losses arising from the contractor's actions. In addition, all consultants employed by this Council will be required to provide a site specific risk assessment in order to comply with their responsibilities under Health and Safety legislation.

7.4: POTENTIAL SPECIAL SITES

- 7.4.1: Part IIA EPA90 creates a particular category of contaminated land called 'Special Sites'. For any Special Site, the Environment Agency, rather than the local authority, is the enforcing authority for the purposes of the regime. The descriptions of the types of land which are required to be designated as special sites are set out in the Contaminated Land (England) (Amendment) Regulations 2012 (see Appendix 2).
- 7.4.2: There are three main groups of cases where land is designated as a Special Site:
1. Water pollution cases;
 2. Industrial cases; and
 3. Defence cases.
- These are further defined within Regulations 2 and 3 of the Contaminated Land (England) (Amendment) Regulations 2012.
- 7.4.3: The guidance states that once the local authority has identified a contaminated land site, they must consider whether the land also meets any of the descriptions which would require it to be designated as a Special site. If the local authority concludes that it should designate any land as a Special Site, they should notify the EA at the earliest opportunity.

- 7.4.4: Therefore, where land that falls within one of these designations is being considered as potentially contaminated land, SADC will contact the Environment Agency in order to seek their views on whether the site would be a Special Site at the earliest opportunity and in all cases before the contaminated land designation is made.
- 7.4.5: For this purpose, SADC will contact the Groundwater and Contaminated Land Technical Specialist in the Groundwater, Hydrology & Contaminated Land Team at the EA – in the first instance by telephone. If discussions suggest that the site may be a special site, SADC will then write, enclosing full details of why it is considered that the site may be a Special Site were it to be designated as contaminated land and will ask for the EA's consideration on the matter.
- 7.4.6: It must be remembered that the designation of a Special Site cannot take place until the land in question has been formally identified as Contaminated Land by SADC. The work of the EA as enforcing authority only starts once that determination is made.
- 7.4.7: If the EA agrees that the site would fall to be designated as a Special Site, then further consultations will take place to determine whether any further investigations are required before the land can be designated as contaminated land. If further investigations are required, then the EA will be formally requested to carry these out on behalf of SADC.
- 7.4.8: SADC will authorise any persons employed by the EA so as to comply with the powers of entry detailed above. The owners and occupiers of the land will also be informed of the situation.

7.5: MAKING ARRANGEMENTS FOR EXTERNAL APPOINTMENTS OF CONSULTANTS

- 7.5.1: Once a site has been identified that requires an intrusive site investigation to be carried out, the works will be put out to tender in accordance with the council's tender process. For works costing over £25,000 quotes from four consultants will be obtained for the works required and the decision as to which consultant to use will be referred to Cabinet.
- 7.5.2: Before consultants are approached, a detailed description of the works required will be produced, including all relevant information obtained so far in the site's investigation. Any restrictions on the work will be included (e.g. if there are access problems which would exclude the use of certain machinery etc).
- 7.5.3: This department will obtain a shortlist of potential consultants with the ability to carry out such works from the EA and potential contractors will be selected from this list.
- 7.5.4: The results of such investigations will be reported to the Cabinet and any decision as to whether to designate a site as a contaminated land site will

be made by the cabinet members – on advice from the ECO.

7.6: RISK COMMUNICATION

- 7.6.1: For all contaminated land not identified as a Special Site, SADC will:
- Establish who is responsible for the remediation of the land (the Appropriate Person)
 - Consult and decide what type of remediation is required in each case;
 - Ensure that this remediation is carried out, either by the appropriate person agreeing voluntarily to do this, or by serving a formal remediation notice requiring the work to be undertaken. In certain circumstances, SADC may undertake the work itself.
 - Where a remediation notice has been served, determine the proportion of costs each of the appropriate persons should pay.
 - Keep details of the remediation on a public register of regulatory action.
- 7.6.2: SADC will make reasonable attempts to consult with the following persons:
- All Appropriate persons;
 - The owner of the land to which the notice would relate; and
 - Any other person who appears to be in occupation of the whole, or any part of, the land.
- 7.6.3: Once land has been identified as Contaminated Land, SADC will prepare a written record of the determination, providing a summary of the basis on which the land has been identified as such. This will include information on the specific significant pollutant linkage, or linkages, found.
- 7.6.4: SADC will then notify the above persons and the EA, in writing, of the fact that the land has been identified as being potentially contaminated land and specify in which capacity they are being informed (e.g. owner or appropriate person).
- 7.6.5: The issuing of such a notice has the effect of starting the process of consultation on what remediation might be appropriate. SADC will therefore supply the following information to recipients of such notifications to facilitate this consultation:
- Copy of the record of determination;
 - Information on the availability of site investigation reports, with copies of the full reports being available on request;
 - An indication of the reason why persons appear to SADC to be appropriate persons; and
 - The names and addresses of other persons notified at the same time or previously, indicating the capacity in which they were notified.
- 7.6.6: SADC will also inform each appropriate person about the test of exclusion from, and apportionment of, liabilities.
- 7.6.7: SADC recognises that decisions about contaminated land (e.g. whether to take remedial action and how best to implement the remediation) can affect many people. It is therefore important that any decisions about

contaminated land are defensible and transparent.

7.6.8: SADC will make every effort to keep the wider community informed about any risks which are thought to exist in relation to any contaminated land site. Such communication will seek to ensure that all interested parties understand and support the process and results of the risk assessment process.

7.7: REMEDIATION

7.7.1: It is not intended to describe all the circumstances relating to remedial actions in this strategy as this is a highly complex area and each individual Significant Pollutant Linkage identified must be considered separately.

7.7.2: The term Remediation has a wide meaning for the purposes of Part IIA. It includes assessment action, remedial treatment action and monitoring action.

7.7.3: The overall process of remediation may well be phased, with different remediation actions being required at different times. For example, assessment action may be needed in order to establish what remedial treatment action would be effective. Once remedial action has been carried out, monitoring actions will be needed to ensure that it has been effective.

7.7.4: It is the Government's intention that, wherever practicable, remediation should proceed by agreement rather than by formal action. Therefore, SADC will attempt to identify by mutual agreement the particular Remediation Actions what would achieve remediation to the necessary standard.

7.7.5: The standard to which a site should be remediated must be established by considering each identified significant pollutant linkage separately. For each such linkage, the remediation should:

- ensure that the linkage is no longer a significant pollutant linkage (e.g. remove or treat the pollutant; break the pathway; or protect or remove the receptor); and
- remedy the effect of any significant harm or pollution of controlled waters which has resulted from that significant pollutant linkage.

7.7.6: The suitable for use approach described in Section 1 consists of identifying land where contamination is causing unacceptable risks to human health and the environment assessed on the basis of the current use and circumstances of the land and returning such land to a condition where such risks no longer arise. This may therefore give rise to a situation where the same contaminant may be present at the same concentrations at two different sites, but, because the two sites are being used for different purposes, only one may be deemed contaminated – for example, higher levels of contamination will be tolerated on land used as a car park than on land used for residential purposes. However, if that land used as a car park were to be developed for housing, then it would become contaminated under the regime. Within this approach, it is

always open to the person responsible for a site to do more in the way of remediation than can be enforced through regulatory action.

- 7.7.7: Having identified the appropriate remediation scheme for the land, SADC will not serve a Remediation notice where it considers that the remediation required is being, or will be, carried out without such a notice being served.
- 7.7.8: If SADC are informed before or during the course of consultation that the Appropriate person or some other person already intends, or now intends, to carry out particular remediation action on a voluntary basis, a remediation notice will not be served if we are satisfied that the proposed remediation action will achieve an appropriate standard of remediation.
- 7.7.9: In such cases, the person responsible for the remediation will be required to prepare and publish a remediation statement which must include the following information:
1. The things which are being, have been, or are expected to be done by way of remediation in the particular case;
 2. The name and address of the person who is doing, has done, or is expected to do, each of those things; and
 3. The periods within which each of those things is being, or is expected to be done.
- 7.7.10: Details of all such Remediation Statements will be entered onto the Public Register.
- 7.7.11: Where SADC considers that there are remediation actions required which have not been, are not being, and will not be carried out without the service of a remediation notice, and we are satisfied that we have made all reasonable endeavours to consult the Appropriate Person and all other relevant persons on the nature of the remediation which is to be carried out, they will serve a Remediation Notice.
- 7.7.12: At least three months must elapse between the date of notification of each Appropriate Person that they appear to be such a person and the service of a Remediation Notice on that person.
- 7.7.13: Any person who receives a remediation notice has 21 days within which to appeal against the notice. If such an appeal is made, the notice is suspended until final determination or abandonment of the appeal.
- 7.7.14: During this period, SADC may carry out the remediation if it considers that the remediation required is urgent.
- 7.7.15: Although the objective of any remediation is to ameliorate the environment, the process of carrying out the remediation may, in some circumstances, create adverse environmental impacts. If SADC considers that there is some risk that the remediation might damage the environment, it will consider whether to adopt an alternative approach to remediation which may not fully achieve the objectives for the remediation. In such instances, reference will also be made to the EA.

- 7.7.16: Where it appears that there is an imminent danger of serious harm or serious pollution of controlled waters being caused as a result of a significant contaminant linkage that has been identified, we will consider whether or not to ensure that urgent remediation is carried out.
- 7.7.17: Where such urgent remediation is required, the requirement for prior consultation and the three month interval between the notification to the appropriate person and the service of the remediation notice will not be applied.
- 7.7.18: In general, where there is a need for urgent remediation action, SADC will serve a remediation notice on an urgent basis – i.e. without consulting or waiting for the end of the three month period. However, if SADC consider that serving a notice in this way would not result in remediation happening soon enough, we can carry out the remediation ourselves – if such urgent remediation action is taken, SADC must prepare and publish a Remediation Statement describing the action we have carried out.

Landfill tax benefits

- 7.7.19: The Finance Act 1996 introduced a tax on the disposal of wastes, including those arising from the remediation of land. However, an exemption from this tax can be obtained where material is being removed from contaminated land in order to prevent harm or to facilitate the development of land for particular purposes.
- 7.7.20: No exemption will be granted however where the material is being removed in order to comply with the requirements of a remediation notice served under the contaminated land regime. This therefore provides an incentive to those responsible for carrying out remediation under Part IIA to do so by agreement, rather than waiting for the service of a remediation notice.

Costs of Remediation

- 7.7.21: Where the history of the site is complex – for example due to a succession of different industries having been located on the site – numerous separate remediation actions may be required, which may not correlate neatly with those who are to bear responsibility for costs. Determining liability for the costs of each remedial action may therefore be extremely complex.
- 7.7.22: The Statutory Guidance outlines the procedures for determining liabilities in respect of each Significant Contaminant Linkage identified in relation to a site. In each case where remedial action is to be taken, reference will be made to the guidance in order to determine the correct liabilities and advice will be sought from the Head of Legal, Democratic and Regulatory Services.
- 7.7.23: Similarly, there are various guidelines to be taken into consideration relating to the procedures for the exclusion from, apportionment and attribution of the costs of carrying out any remediation action.

7.7.24: In determining whether to serve a Remediation Notice on any particular appropriate person, the enforcing authority must have regard to any hardship which the costs of remediation may cause to the person on whom the notice is to be served. There is provision for the authority not to serve a remediation notice on a person in cases of extreme hardship. The costs of the remediation for that significant pollutant linkage would then have to be borne by the enforcing authority.

SECTION 8: REVIEW MECHANISMS

- 8.1: The production of the Strategy is the start of an on-going process of contaminated land identification and remediation that is expected to last for many years. It is therefore inevitable that, over time, changes will be required to this strategy. Such changes may be necessary as a result of experiences learned through the implementation of the strategy, as a result of legislative changes and so on.
- 8.2: The Risk Assessment procedure outlined in this strategy has been developed in conjunction with the other authorities from the Herts & Beds area (as described in Section 1). In addition, as part of the consultation process, the EA and other statutory bodies were consulted and their comments regarding the inspection procedures were incorporated into the Strategy. It is therefore considered that the procedures developed in this strategy are robust and will withstand scrutiny.
- 8.3: However, the Statutory Guidance states that the local authority should keep its strategy under periodic review. The strategy is therefore intended as a 'living' document – as legislation and knowledge surrounding contaminated land issues alters, so the strategy will require amendment. Also, as the procedures outlined here are used, problems may come to light which require minor procedural amendments. It will therefore be necessary to review the inspection procedure on a regular basis to ensure that they are effective in meeting the requirements of the legislation.

Re-inspection of the district

- 8.4: Part IIA requires that Local Authorities inspect their areas from 'time to time' for the purpose of identifying land which may fall within the statutory definition of contaminated land. The frequency at which such re-inspection takes place is not prescribed because appropriate inspection frequencies will vary depending on local circumstances.
- 8.5: Factors affecting the frequency of re-inspection of the district are as follows:

- 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 SADC has already identified that land which is most likely to be of concern.

Review of assumptions and information

- 8.6: Many of the sites identified will, in the course of time, be redeveloped and remediation works may therefore be required as part of their redevelopment programme. The Priority Category Rating of the site will also be reviewed at this time.

- 8.7: In any case, once the risk assessment process has been completed, all sites will be reviewed to identify whether any sites need to be moved into a different Priority Category. This is because each area of land will have been classified on the basis of its situation at the time. If the situation of the land changes, then the contaminated status of the land may also change and remediation may now be needed – for example, there may now be unauthorised access to the land or SADC may have received information from other statutory bodies indicating abnormal site conditions etc.
- 8.8: In addition to the routine review of inspection findings, there are likely to be situations when changes in the condition or circumstances of the land or its surrounding environment prompt SADC to revisit its inspection findings for particular areas of land. The following are examples of situations that would require a review of assumptions made and could lead to the reassessment of the contaminated land status of a site:

- proposed changes in the use of surrounding land – e.g. new housing developments;
- unplanned changes in the use of the land - e.g. persistent, unauthorised use of the land by children;
- unplanned events – e.g. localised flooding/landslides; accidents, fires or spillages 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;
- revision of guideline values for exposure assessment to certain contaminants;
- Voluntary remediation of land by a potentially liable party.

Review of Strategy Document

- 8.9: In addition to the timescales outlined in Section 4, it will be necessary to audit and review the Strategy Document from time to time to ensure that it represents an efficient use of resources and is effective in meeting the requirements of the legislation. It will therefore be reviewed at appropriate timescales and at any time if the supporting legislation alters or a significant case law or other precedent is established.

Audit of the Inspection Procedure

- 8.10: Various new documents relating to the contaminated land determination process are anticipated to come out shortly – such as guidance on the levels of contamination to be achieved, an approved risk assessment process etc. On the production of these documents, the strategy will be reviewed to see if any alterations are warranted.

8.11: The local authorities within the counties of Herts & Beds meet regularly to discuss matters relating to Contaminated Land. Thus all inspection procedures are subjected to a form of peer review on a regular basis. If any major problems are identified, this group can look into such matters if necessary.

SECTION 9: INFORMATION MANAGEMENT

9.1: In the course of preparing the strategy and undertaking the subsequent inspection work, SADC will obtain a great deal of information from a wide variety of different sources. It is therefore important that this information is collated and managed efficiently.

General Principles

9.2: In order to carry out our duties under this new contaminated land regime, SADC will gather large amounts of information relating to land which may be contaminated. Such information will often be highly sensitive. The Access to Environmental Information Regulations 2004 require public bodies, including local authorities, to make available to any person who requires it information relating to the environment within two months of the request. The definition of 'information relating to the environment' clearly covers information about land contamination, as well as measures taken by the local authority in relation to contaminated land ⁽²⁾. Exclusions apply however where there is commercial or national security implications.

9.3: These regulations also set out a number of categories of 'confidential' information which need not be disclosed. For example, a local authority may refuse access where disclosure would affect legal proceedings or any inquiry, where disclosure would affect the confidentiality of the deliberations of the local authority or another public body, where the documents requested are still in the course of completion, or where the documents requested are internal communications.

9.4: Information obtained will be kept in accordance with the provisions of The Data Protection Act 1998. There are eight principles of good practice – these principles state that the data collected must:

- be processed fairly and lawfully;
- be obtained only for one or more specified and lawful purposes, and not be further processed in any manner incompatible with that purpose or those purposes;
- be adequate, relevant and not excessive in relation to the purpose or purposes for which they are processed;
- be accurate and, where necessary, kept up to date;
- not be kept for longer than is necessary for the purpose;
- be processed in accordance with the rights of data subjects under this Act;
- be protected against unauthorised or unlawful processing and against accidental loss or destruction of, or damage to, personal data;
- not be transferred to other countries without adequate levels of protection for the rights and freedoms of data subjects in relation to the processing of personal data.

9.5: All requests to SADC for information regarding contaminated land will be assessed under the guidelines laid down in these two pieces of

legislation prior to information being released. If uncertainties arise over the availability of information, the matter will be referred to the Council's Legal Department for assistance. It should be noted that such requests for information may also relate to areas of land that have not been formally identified as contaminated land. The Council may make a 'reasonable charge' for the provision such information.

- 9.6: The Council's GIS will be the primary tool used to manage the information produced as a result of this strategy. The Council's corporate GIS system is 'Cadcorp'. This system will be used to correlate all information and determine the proximity of potential receptors to sources of contamination. The GIS is linked to an Access Database.

Public Registers

- 9.7: Section 78R of Part IIA EPA90 requires each enforcing authority to keep a public register. This register is intended to act as a full and permanent record, open for public inspection, of all *regulatory* action taken by the enforcing authority in respect of the remediation of contaminated land and will include information about the condition of the land. Thus, where land has been identified as Contaminated Land and subsequent action has been taken, specified details about the condition of the land and the remediation actions that have been carried out will be entered onto the public register.
- 9.8: It should also be noted that, once information has been entered onto the Register, it *cannot* be removed at any future date, even after successful remediation has deemed the site to be suitable for its current use.
- 9.9: The Register will include full particulars of the following matters (as specified by the regulations):
- i) Remediation Notices served by SADC containing the following details:
 - a) name and address of person on whom the notice is served;
 - b) location and extent of the contaminated land to which the notice relates;
 - c) the significant harm or pollution of controlled waters by reason of which the land in question is contaminated land;
 - d) the substances by reason of which the land in question is contaminated land and, if any of the substances have escaped from other land, the location of that other land;
 - e) the current use of the land
 - f) 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; and
 - g) the date of the notice.
 - ii) Appeals against Remediation Notices served by SADC and details of any decision reached on such an appeal.
 - iii) Any Remediation Declaration prepared and published by SADC - including details of the location and extent of the land and the matters referred to in sub-paragraphs c), d) and e) of paragraph i) above.

- iv) Any Remediation Statement prepared and published by either the responsible person or by the enforcing authority – including details of the location and extent of the land and the matters referred to in sub-paragraphs c), d) and e) of paragraph i) above.
 - v) Appeals against Charging Notices and details of any decision reached on such an appeal.
 - vi) Any notice given by SADC or by the Secretary of State which has the effect of designating any land as a Special Site and the reasons for that designation.
 - vii) Any Notice given by or to SADC terminating the designation of any land as a Special Site.
 - viii) Notifications given to SADC of what has been done by way of remediation by a person served with a remediation notice or who is required to publish a remediation statement.
 - ix) Notifications given to SADC by owners or occupiers of a contaminated land site of what has been done on the land by way of remediation.
 - x) Any conviction of a person for any offence of failure to comply with a Remediation Notice served by the authority, including the name of the offender, the date of conviction, the penalty imposed and the name of the Court.
 - xi) The date of any guidance issued to SADC by the EA in relation to any particular contaminated land site.
 - xii) Any other matters relating to contaminated land as may be prescribed by the Secretary of State.
- 9.10: Information will be added to the register as soon as is reasonably practicable after its generation. The register will be paper based, not electronic.
- 9.11: The register will be maintained and updated by the ECO responsible for regulating contaminated land. It will not include details of historic land use or other records used in the investigation process. These are research documents and, as such, will not be made available to the public.

Exclusion of Information

- 9.12: Before including any information on the register SADC must consider whether any information needs to be excluded on the basis that:
- its inclusion would be against the interests of national security: or
 - the information is commercially confidential.
- 9.13: It is the duty of the Secretary of State to issue a direction to enforcing authorities specifying information which is to be excluded from the register or referred to the Secretary of State for his determination on the grounds of *national security*. Information will not be included on the Register if, in

the opinion of the Secretary of State, its inclusion would be against the interests of national security.

- 9.14: Any person who considers that the inclusion of particular information on the Register would be against the interests of national security should notify both the Secretary of State and SADC Regulatory Services Department of this. The Secretary of State will then consider whether, in his opinion, the information should be included or excluded. Until this decision is reached, that information will not be included on the Public Register.
- 9.15: Information is only *commercially confidential* where it is determined to be so by the enforcing authority or by the Secretary of State on appeal. The sort of information that will be considered to be commercially confidential is information that would prejudice, to an unreasonable degree, the commercial interests of the relevant person or business.
- 9.16: SADC will not, without the relevant person's permission, include any information on the Register which relates to the affairs of any individual or business and is commercially confidential to that individual or the person carrying on that business. For these purposes, commercial interests relating to the value of the contaminated land site, or to its ownership or occupation will be disregarded. It should be noted, however, that the Secretary of State can give directions requiring the inclusion of specified information or descriptions of information, notwithstanding any commercial confidentiality, where he considers that the inclusion of that information would be in the public interest.
- 9.17: If SADC considers that any information that it would normally include on the register could be commercially confidential, we will notify the person concerned in writing giving them 28 days to make written representations requesting the exclusion of the information and explaining why that information is commercially confidential. SADC will then determine whether the information is, or is not, commercially confidential.
- 9.18: If the information is determined to be commercially confidential, it will not be included on the register, however, we shall include on the register a statement indicating the existence of the excluded information. Thus, for example, if the details of a Remediation Notice are excluded, the statement will record that the particulars of the notice have been excluded on the grounds of commercial confidentiality.
- 9.19: If SADC determine that the information is not commercially confidential, we will notify the person concerned. That person then has 21 days in which he can appeal to the Secretary of State. While this appeal is pending, the information shall not be included on the register. If the Secretary of State determines that the information is commercially confidential, the information will be excluded with a statement about the exclusion being entered on the register. If the Secretary of State determines that the information is not commercially confidential, or the appeal is withdrawn, then the information will be included on the register after 7 days.
- 9.20: If no such appeal is made within 21 days, that information will be entered onto the register.

- 9.21: Where any information has been excluded from the register on the grounds of commercial confidentiality, the exclusion will generally lapse after 4 years with the information being treated as no longer being commercially confidential. That information will then be included in the register, unless the person who furnished the information applies to SADC for the information to remain excluded. In such a situation, SADC will determine whether the information is still commercially confidential in line with paragraphs 9.15 to 9.20 above.
- 9.22: Information will be added to the register as soon as it is reasonably practicable after it is generated. The register will be maintained and updated by the ECO responsible for the strategy.

Administration Procedures

- 9.23: The main form of information management system that will be used for contaminated land purposes will be the GIS linked to an Access database. This will be supported by a paper and map based system.
- 9.24: It is intended that a copy of the Contaminated Land Strategy of SADC will be kept at the following places:
- i) a copy will be kept at the main Council Offices for public access;
 - ii) copies will be sent to local parish councils;
 - iii) copies will be available at main libraries throughout the district.
- 9.25: All information and data gathered as a result of this Strategy will be stored in files within the Regulatory Services Department, as will written information received from members of the public and other interested parties.
- 9.26: The ECO responsible for regulating contaminated land will update and review all information held by SADC on a regular basis, in line with timescales specified elsewhere in this strategy (e.g. commercially confidential info – 4 year review).
- 9.27: Any queries regarding this strategy and contaminated land in general by the public or other statutory bodies should be directed to the specified contact points within the authority, as detailed in Appendix 10.

Access to Information

- 9.28: A copy of the Public Register will be kept within the Regulatory Services Department at the District Council Civic Centre Offices. The register will also be made available on the SADC website. The register may be used by all other council departments that require the information.
- 9.29: The Register will also be available for free inspection by the public at all reasonable times. Members of the public may also obtain copies of entries on the register, although there will be a reasonable charge for this service.

- 9.30: Written requests for information made to this Council will be responded to within 14 days of receipt of the request. All such information requests will be held on file within the Regulatory Services Department. There will be a charge for providing such information. It must be noted that the information given will be given in accordance with the principles of the Data Protection Act and the Environmental Information Regulations – if data is still only in draft format, or is confidential, it will not be released.

Provision of Information to the Environment Agency

- 9.31: The Environment Agency is a Statutory Consultee for the strategy. They have therefore been sent a draft copy of the strategy for consideration. They will also be sent a final version of the Strategy.
- 9.32: From time to time, the EA is required by the legislation to prepare and publish a report on the state of contaminated land in the country. SADC will, at the written request of the EA, furnish the EA with such information as it requires for the purpose of preparing the report.
- 9.33: A Memorandum of Understanding has been produced outlining the arrangements for sharing information between the EA and local authorities. This agreement will form the basis of all communication between SADC and the EA.

APPENDICES

Appendix 1: Potentially contaminating land uses.

Whilst considering the types of sites that should be identified and placed upon Section 143 registers (proposed as part of previous draft legislation, but never enacted), the Government produced a list of land uses that should be considered with regard to having a potential to contaminate the land. This list still provides a basic guide to the type of site use that should be looked for during our investigation. This list should not be taken as complete and there may be other sites not included on the list that the authority feels warrants attention during investigation.

Waste Disposal: Uncertainty re nature of fill: identified as tip/waste heap
 identified as pit/quarry that has been filled

Domestic/Commercial
Inert/General
Industrial/Hazardous
Dedicated wastes: Coal slag/spoil
 Steel slag
 Alkali wastes
Lagoons: Lime beds
Waste Treatment: Hazardous waste
 Solvent reprocessing

Metaliferous mining: Iron Ore
 Tin
 Lead
 Copper
 Zinc
 Other

Metal Production: General (metal works/foundry)
 Iron works
 Steel works, steel alloy works
 Other ferrous metals
 Lead
 Zinc
 Copper
 Aluminium
 Other non-ferrous (e.g. Bronze, brass)

Metal Products/Engineering Works: Primary processing (wire, tubes, rolling and forming)
 Ferrous
 Aluminium
 Copper Other
 Metal goods manufacture
 Ferrous
 Aluminium
 Copper
 Other

Metal finishing/anodising/surface treatment
 Heat treatment/case hardening
 Engineering works
 Mechanical engineering
 Vehicle manufacture
 Ship building and repair
 Instrument engineering
 General metal working industries
 Blacksmiths
 File and tool works
 Brazier
 Tinplate worker
 Whitesmith Nail maker
 Electrical engineer
 Domestic appliances
 Insulated wire and cable
 Electronic goods
 Batteries

Coal Processing: Coke oven
 Solid fuel manufacture
 Gas works
 Tar distillers
 Coal storage/yards
 Other

Oil Products: Oil refining
 Tank farms
 Fuel storage depots

Bulk chemicals: Chemical works
 Basic inorganic chemicals
 Salt works
 Alkali works
 Fertilisers
 Petrochemicals
 Basic organic chemicals
 Bulk intermediate
 chemicals Polymers and
 plastics Natural and
 synthetic rubber
 Soap and synthetic detergents

Fine chemicals: Pharmaceuticals
 Agrochemicals
 Industrial coatings/adhesives
 Dyestuffs and pigments
 Paints, varnishes and printing inks
 Photographic chemicals Inorganic
 chemical/metal oxides Explosives
 and pyrotechnic products

Mineral works: Glass

Ceramics
Brick/tiles
Asbestos works
Cement/lime/concrete
Asphalt/roadstone
Mineral wool

Sewage farms and works

Animal processing: Slaughterhouses
Tanning and fell mongering
Leather finishing
Wool handling
Animal by-products: animal oils and fats
Glue factories
Bone works
Manure works
Burial grounds for condemned animals
Hospitals/burial grounds for certain human diseases:
Old cemeteries
Plague houses

Transport related activities: Wharves/docks
Road transport/bus depots
Garage/filling stations
Rail yards/depots/sidings

Power generation: Power stations
Electrical substations
Nuclear industry

Miscellaneous works: Textiles
Paper Printing
Wood treatment
Tyre manufacture
Scrap yards

Miscellaneous small trades: Dry cleaning
Boat building
Sail making
Rope makers
Charcoal works
Hatters

Other uses: Military land

Holes in the ground (with current state uncertain): Pit/quarry
Brick field
Reservoir
Water works
Tanks

Appendix 2: Special Sites Categories.

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

- 1) Land affecting controlled waters;
- 2) Land which is contaminated land by reason of waste acid tars in, on or under land;
- 3) Land on which any of the following activities have been carried on at any time – the purification (including refining) of crude petroleum or of oil extracted from petroleum, shale or any other bituminous substance except coal; or the manufacture or processing of explosives;
- 4) Land on which a prescribed process designated for central control has been or is being carried on under an authorisation;
- 5) Land on which an activity has been or is being carried on in a Part A(1) installation or by means of Part A(1) mobile plant under a permit;
- 6) Land within a nuclear site;
- 7) Land owned or occupied by or on behalf of – the Secretary of State for Defence; the Defence Council; an international headquarters or defence organisation; or the service authority of a visiting force;
- 8) Land on which the manufacture, production or disposal of – chemical weapons, any biological agent or toxin, any weapon, equipment or means of delivery;
- 9) Land comprising premises which are or were designated by the Secretary of State by an order made under section 1(1) of the Atomic Weapons Establishment Act 1991 (7);
- 10) Land to which section 30 of the Armed Forces Act 1996 applies.
- 11) Land which is contaminated land wholly or partly by virtue of any radioactivity possessed by any substance in, on or under that land
- 12) Land which is adjacent to land of a description specified in any of the subparagraphs and is contaminated land by virtue of substances which appear to have escaped from land of such a description.

Appendix 3: Categories of Specified Receptors

Category of Receptor	Specification
Human Beings	<p>Allotments Residential with garden Residential without garden Schools or nurseries Recreational/parks, playing fields, open space Commercial/industrial</p>
<p>Ecological Systems, or living organism forming part of such a system, within these specified locations.</p>	<p>Sites of Special Scientific Interest notified under Section 28 of the Wildlife and Countryside Act 1981 (SSSI). Land declared a National Nature Reserve under S35 of the above Act. Any area designated as a Marine Nature Reserve under S36 of that Act. An area of Special Protection for Birds established under S3 of that Act. Any European Site within the meaning of regulation 10 of the Conservation (Natural Habitats etc) Regulations 1994 (i.e. Special Areas of Conservation and Special Protection Areas). Any candidate Special Areas of Conservation or potential Special Protection Areas given equivalent protection. Any habitat or site afforded policy protection under paragraph 13 of Planning Policy Guidance note 9 on nature conservation (i.e. candidate SACs,</p>
Property	<p>Crops, including timber. Produce grown domestically, or on allotments, for consumption. Livestock. Other owned or domesticated animals. Wild animals which are the subject of shooting or fishing rights. Forestry areas. Other open spaces, rivers, lakes.</p>
Buildings	<p>Ancient monuments. Any structure or erection and any part of a building including any part below ground level, but does not include plant or machinery comprised in a building.</p>
Controlled Waters	<p>Bodies of water as defined under Part III (Section 104) of the Water Resources Act 1991: Relevant territorial waters. Coastal waters. Inland freshwaters.</p>

Appendix 4a: Categories of Significant Harm

Type of Receptor	Description of harm to that type of receptor that is to be regarded as significant harm
Human Beings	Death, disease, serious injury, genetic mutation, birth defects or the impairment of reproductive functions.
Any ecological system, or living organism forming part of such a system, within a location which as specified in Appendix 3	<p>For any protected location:</p> <ul style="list-style-type: none"> • Harm which results in an irreversible adverse change, or in some other substantial adverse change, in the functioning of the ecological system within any substantial part of that location; or • Harm which affects any species of special interest within that location and which endangers the long-term maintenance of the population of that species at that location. <p>In addition, in the case of a protected location which is a European Site (or a candidate Special Area of Conservation or a potential Special Protection Area), harm which is incompatible with the favourable conservation status of natural habitats at that location or species typically found there.</p>
Property	<p>For crops, a substantial diminution in yield or other substantial loss in their value resulting from death, disease or other physical damage.</p> <p>For domestic pets, death, serious disease or serious physical damage.</p> <p>For other property in this category, a substantial loss in its value resulting from death, disease or other serious physical damage.</p>
Buildings.	Structural failure, substantial damage or substantial interference with any right of occupation.

(Taken from DETR circular 02/2000)

Appendix 4b: Categories of Significant Possibility of Significant Harm

Descriptions of Significant Harm	Conditions for there being a significant possibility of Significant Harm
<p>Human health effects arising from</p> <ul style="list-style-type: none"> • The intake of a contaminant, or • Other direct bodily contact with a contaminant. 	<p>If the amount of the pollutant in the pollutant linkage in question:</p> <ul style="list-style-type: none"> • To which a human receptor in that linkage might take in, or • To which such a human might otherwise be exposed, <p>As a result of the pathway in that linkage, would represent an unacceptable intake or direct bodily contact, assessed on the basis of relevant information on the toxicological properties of that pollutant.</p>
<p>All other human health effects (particularly by way of explosion or fire)</p>	<p>If the probability, or frequency, of occurrence of significant harm is unacceptable, assessed on the basis of relevant information concerning:</p> <ul style="list-style-type: none"> • That type of pollutant linkage, or • That type of significant harm arising
<p>All ecological system effects.</p>	<p>If either:</p> <ul style="list-style-type: none"> • Significant harm of that description is more likely than not to result from the pollutant linkage in question; or • There is a reasonable possibility of significant harm of that description being caused and if that harm were to occur, would result in such a degree of damage to features of special interest at the location in question that they would be beyond any practicable possibility of restoration.
<p>All animal and crop effects.</p>	<p>If significant harm of that description is more likely than not to result from the pollutant linkage in question, taking into account relevant information for that type of pollutant linkage, particularly in relation to the eco-toxicological</p>
<p>All building effects</p>	<p>If significant harm of that description is more likely than not to result from the pollutant linkage in question during the expected economic life of the building (or, in the case of a scheduled Ancient Monument, the foreseeable future), taking into account relevant information</p>

(Taken from DETR circular 02/2000)

Appendix 5: Conservation Areas and Ancient Monuments within SADC.

List of Conservation Areas (please refer to SADC District Local Plan Review Proposals maps for full details of extent of areas listed)

Conservation Area Ref	Location	Proposals Map
1	Harpenden	1&H
2	Redbourn	1
3	Childwickbury	1&3
4	Gustard Wood	2
5	Mackerye End	2
6	Water End	2
7	Wheathampstead	2
8	Amwell	2
9	Sandridge	2
10	Shafford Mill	3
11	St Albans	3,4,S&F
12	Potters Crouch	3
13	Old Bricket Wood	3
14	Sopwell	4
15	London Colney	L
16	Sleapshyde	4
17	Park Street and Frogmore	3&4
18	Napsbury	

List of Ancient Monuments

Site Reference	Location	Proposals Map
AM1	Romano-British site, Rothamsted	1
AM2	The Aubreys Camp, Redbourn	1
AM3	Wheathampstead Earthwork	2
AM4	Devils Ditch, Gorhambury	3
AM5	Bacon's House, Old Gorhambury	3
AM6	Verulamium, Bacon's Mount	3
AM7	Site of Verulamium	3
AM8	Verulamium, Prae Wood settlement	3
AM9	Beech Bottom Entrenchment, Sandridge	3&4
AM10	The Clock Tower, St Albans	S
AM11	St Albans Abbey Gatehouse	S
AM12	St Albans Abbey, Site of Conventual	S
AM13	Sopwell Nunnery, ruins of Sopwell House	S
AM14	Batch Wood, St Michael	3
AM15	Colne Chapel, London Colney	L

Appendix 6: Risk Assessment Procedure

Risk Assessment is a generic technique that can be applied to any potentially hazardous situation to establish whether there is a need to take action to reduce or control the risk of adverse effects.

In contaminated land applications, if used properly, it should ensure that the available resources are effectively targeted on those sites most in need of action to reduce or control unacceptable risks to health and the environment.

The purpose of carrying out a Risk Assessment is to decide whether or not a site poses actual or potential risks to human health or the environment and to allow a local authority to move efficiently from the situation where it is considering its entire land area to a situation where it is able to consider individual sites.

This is done by collecting data on sources, pathways and receptors and their relationships and then estimating and evaluating the risks associated with each pollutant linkage.

It involves the following activities: desk study, site reconnaissance, development of a conceptual model for the site, exploratory and detailed site investigation, estimation and evaluation of risks.

As a result of the risk assessment process, there are two possible outcomes:

- a) proceed to evaluation and selection of remedial measures;
- b) exit the process if no pollutant linkages or no unacceptable risks exist.

The purpose of the risk assessment procedure outlined here is to provide a justification for which sites are looked at first and which are left till later – i.e. the sites are prioritised so that those that pose the most serious threat can be dealt with first. The method outlined below has been developed to have regard to uncertainties.

The method will begin by comparing the location of areas of potential contamination with areas where there are sensitive receptors. The geographical coincidence of these two will confirm that two parts of a potential pollutant linkage are in place and will therefore allow SADC to define areas for further inspection.

When evaluating this coincidence of receptors with areas of potential contamination, the extent to which action has already been taken to deal with contamination, such as during redevelopment, will be considered as well as the nature and timing of this redevelopment. This is necessary to determine the extent to which contamination was understood and dealt with at the time of the work.

All sites identified as potential contaminated land sites will be processed through the Risk Assessment procedure outlined below in order to establish their prioritisation for action.

The methodology used is based upon the approach set out in the Department of the Environment Contaminated Land Research (CLR) Report number 6 'Prioritisation and Categorisation procedure for sites which may be contaminated.' (subsequently withdrawn).

A methodology is being developed through a research contract for the DETR, but this is yet to be produced and, in any case, is expected to be largely based on this same report. Once this new report is published, it will be assessed and the methodology set out here revised if necessary.

The method described sets out a simple but systematic approach to deciding what priority to give to action on a site which may be contaminated. Although the approach set out here is believed to apply to a wide range of situations, it may need to be adapted to the particular circumstances at some sites and should not therefore be regarded as prescriptive.

The placing of sites in a priority category is not definitive - further site investigation or risk assessment may result in the revision of a site's categorisation.

The Assessment Procedure has three main parts:

Stage 1 leads to a preliminary prioritisation of the site based on an assessment of the proximity of a receptor to the contaminant. The receptors are assessed under the headings:

- development (humans, plants and the built environment);
- surface water; and
- groundwater.

Information for this stage of the assessment is gained from a fairly straightforward, but lengthy, GIS review and desk top survey.

Each site is assigned to one of three groups which then determines its priority for assessment under Stage 3 of the procedure.

NB: No assessment is undertaken unless both pollutants and receptors are known to, or are likely to exist.

At *Stage 2*, each site will be visited to confirm the location and conditions found at the site.

The purpose of *Stage 3* is to refine the prioritisation developed during the Stage 1 assessment and to confirm the plausibility of relevant pollutant linkages and to obtain a preliminary indication of the potential for short term and chronic risks to health and the environment. The prioritisation arrived at from Stage 1 is refined into more specific categories using more detailed information about the hazards likely to be present, the pathways and the receptors.

The procedure is designed to minimise the possibility of a site being placed in too low a priority category as a result of the limited information used. Where there is any doubt about the answer to any of the questions in the procedure, the worst case is assumed and the site is assigned to the higher priority category.

Stage 1 - Initial Prioritisation

The objective of this part of the procedure is to provide a preliminary prioritisation of sites into groups for progression to Stages 2 and 3, based on an assessment of the proximity of a specified receptor to a contaminant.

The purpose of this stage is to obtain sufficient information on each site, including existing use and environmental setting, to gain an understanding of the

possible sources, pathways and receptors.

Information needed for this stage includes:

- what industries operated on the site;
- what processes were involved;
- what contaminants are likely to be present;
- what hazards are posed by the contaminants;
- what is the intended/actual use of the site;
- the location of nearby specified receptors.

This will be gained through such methods as desk-based research, use of the GIS, Landmark data, information received from the EA etc. For guidance on how to carry out a desk top survey, reference will be made to the Department of the Environment Contaminated Land Research Report number 3 'Documentary Research on Industrial Sites'.

Each site will be assessed under each of the following headings using the questions in Appendix 6a:

- Development (humans, plants and built environment)
- Surface Water
- Groundwater

As a result of this assessment, each site will end up with a three letter rating, such as BCB. The letters will then be given a numerical value as follows:

A = 10

B = 4

C = 2

Hence a rating of BCB would become 10. This forms the basis for the site's Initial Group rating.

All the sites will then be ranked in numerical order. Sites with a value of 20 or more will be put into Initial Group A; those with values of between 11 and 19 will be assigned to Initial Group B; and those with a value of 10 or less will be assigned to Initial Group C.

The initial group number then determines at what stage of the process the site is progressed to the second stage of the Assessment.

Stage 2 – Site Visit

This stage of the assessment involves a more detailed desk study review of the site and a site walkover to ensure surface water features etc remain the same.

Each site will be visited to confirm the nature of any development, the present condition of the site and the surrounding areas and to identify any differences from information obtained from maps, historical records and other sources. If it is found to be necessary to walk over the site to identify significant surface features, appropriate Health and Safety precautions will be followed. If the land is privately owned, it shall not be entered without permission from the owner or occupier of the land, unless through the use of appropriate legal powers of entry.

During the site visit, the following points will be noted and considered:

- degree of public accessibility, the presence and condition of fencing or boundary walls and warning notices;
- use of the site – if industrial, type of industry; if agricultural, what use is made of the land; if housing (incl. schools), whether there are areas of exposed soils; if allotments, are they in use; if amenity, what type of use and surface, etc;
- derelict buildings, evidence of demolition, foundations, tanks, drums, pits, pipes and evidence of underground services or covered shafts;
- evidence of the presence of soakaways serving the site;
- land use in the area up to 1km from the site boundary particularly the proximity of housing and differences from information available at Stage 1;
- evidence of ground disturbance – e.g. discoloured soil or coloured water, signs of subsidence, evidence of fill material or fly tipping;
- vegetation type and signs of distress;
- significant odours;
- direction of surface water runoff and the presence of ponding on site;
- discharges of water from the site;
- rivers, streams, ditches, culverts, canals, lakes or any other surface water features within 500m of the site boundary;
- direction and rate of flow of water courses;
- discolouration of surface waters and the bubbling or frothing of surface water which may indicate gaseous emissions from beneath the water.

Stage 3 – Hazard Assessment

This stage refines the conceptual model developed during the stage 1 assessment. It confirms the plausibility of a pollutant linkage and gives an indication of the site's current suitability for use in terms of the timescale for when action will be required.

This stage involves a more detailed site characterisation and assessment on the basis of more detailed desk-based research and/or exploratory site investigation data. The aim is to address the nature, likely location and behaviour of contaminants and their possible interactions with defined receptors.

In Stage 3, the prioritisation is refined into more specific categories using more detailed information about the hazards likely to be present, the pathways and receptors.

Each site is assessed under 3 of the following 4 headings using the questions in Appendix 6b:

- Development: Residential, allotments, agricultural land, commercial or industrial use, public open space or amenity;
- Unoccupied Land;
- Surface Water;
- Groundwater.

(i.e., the site is assessed under *either* Development *or* Unoccupied land *and* both Surface Water and Groundwater).

As a result of this assessment, each site will end up with three priority category

rating scores - such as 134.

It will be the lowest number that decides which Priority Category the site is placed in. For example, if a site scores 134, it will be placed into Priority Category 1. A score of 342, will place the site in Priority Category 2. For sites placed within the same Priority Category, the other scores generated will be taken into account when deciding the order for action within that Priority Category.

A description of these Priority Categories is as follows:

Priority Category 1: Site probably or certainly not suitable for its present use and environmental setting; contaminants probably or certainly present and very likely to have an unacceptable impact on key receptors; Urgent action needed in the short term.

Priority Category 2: Site may not be suitable for its present use and environmental setting; Contaminants probably or certainly present and likely to have an unacceptable impact on key receptors; Action may be needed in the medium term.

Priority Category 3: Site considered suitable for present use and environmental setting; Contaminants may be present but unlikely to have an unacceptable impact on key receptors; Action unlikely to be needed whilst site remains in present use or otherwise remains undisturbed.

Priority Category 4: Site considered suitable for its present use and environmental setting; Contaminants may be present but very unlikely to have an unacceptable impact on key receptors; No action is needed while site remains in present use and remains undisturbed.

Sites will be assessed using information relating to the presence of potential contaminants from the Department of Environment 'Industry Profiles'⁴ and the NHBC/EA Guidance for Safe Development of Housing on Land Affected by Contamination⁵.

Within each Priority Category, it will then be necessary to decide priorities for action between all the sites. This will be decided using professional judgement, taking all relevant factors into consideration.

Priority Category 3 and 4 sites will not need investigation until their use changes. The Planning Department will therefore be advised of all such sites as it is imperative that the Environment and Health Department is consulted on any planning applications received for these sites.

Process of Investigation

The order in which the above process is performed is outlined below. This is by no means a prescriptive methodology and is intended to be used for guidance only.

Actions:

- i) Perform Initial prioritisation (Stage 1) of all sites;

- ii) Obtain results (ABC) and give numerical value to these;
- iii) Carry out Stage 2 walkover survey for sites in Initial Group A;
- iv) Carry out stage 3 assessment for these group A sites – Priority Category rating 1, 2, 3 or 4;
- v) Investigate/remediate sites from PC1;
- vi) Carry out walkover surveys for all sites in Initial Group B;
- vii) Carry out Stage 3 assessment for the Initial Group B sites – Priority Category rating 1, 2, 3 or 4;
- viii) Investigate/remediate sites from PC1;
- ix) Carry out walkover surveys for all sites in Initial Group C;
- x) Carry out Stage 3 assessment for the Initial Group C sites – Priority Category rating 1, 2, 3 or 4;
- xi) Investigate/remediate sites from PC1;
- xii) Investigate/remediate sites from PC2 of all Initial groups A, B and C.

Appendix 6a

Stage 1 Initial Prioritisation Questions

Stage 1 Assessment - Development

- 1) Is there any residential development, school, playground or allotment on the site or within 50m of the site boundary?

Yes = Group A

No = Proceed to Q2

- 2) Is there any industrial or commercial development on the site or within 50m of the site boundary or is there any residential development within 250m of the site boundary?

Yes = Group B

No = Proceed to Q3

- 3) Is the site in agricultural use or amenity use including parks or playground?

Yes = Group B

No = Group C

Stage 1 Assessment - Surface Water

- 1) Are there any surface water features including drains, streams, ponds, canals, lakes and rivers on the site or within 50m of the site boundary?

Yes = Group A

No = Proceed to Q2

- 2) Are there any significant surface water features within 500m of the site boundary?

Yes = Proceed to Q3

No = Group C

- 3) Will run off from the site drain to the surface water features?

Yes = Group B

No = Group C

Stage 1 Assessment - Groundwater

- 1) Is the site located within either a Zone 1 or a Zone 2 Source Protection Zone?

Yes = Group A

No = Proceed to Q2

- 2) Is the site located within a Zone 3 Source Protection Zone?

Yes = Group B

No = Proceed to Q 3

3) Is the site located on a major or minor aquifer?

Yes = Group B

No = Group C

Appendix 6b

Stage 3 Assessment Questions

Stage 3 Assessment - Development; Residential, allotments, agricultural land, commercial or industrial use, public open space or amenity.

- 1) Are there, or is it likely that there are, contaminants in the soil which are toxic by ingestion, inhalation or skin contact in concentrations which exceed relevant action values and/or present an unacceptable risk?

Yes = Proceed to Q2

No = Proceed to Q4

- 2) Are there any areas of exposed soil (e.g. gardens or landscaped areas)?

Yes = Priority Category 1

No = Proceed to Q3

- 3) Are there any suspected health effects as a result of the presence of the contamination?

Yes = Priority Category 1

No = Proceed to Q4

- 4) Are there, or is it likely that there are, toxic, asphyxiant or flammable gases or explosives present in or generated in the site in concentrations which exceed the relevant action values and/or present a risk?

Yes = Priority Category 1

No = Proceed to Q5

- 5) Is the site use agricultural?

Yes = Proceed to Q6

No = Proceed to Q7

- 6) Are there, or is likely that there are, any contaminants in the soil which can accumulate in edible plants in concentrations which exceed relevant action values and/or present an unacceptable risk?

Yes = Priority Category 2

No = Proceed to Q7

- 7) Are there, or is it likely that there are, contaminants in the soil in concentrations which present an unacceptable risk by permeation of water pipes?

Yes = Priority Category 2

No = Proceed to Q8

- 8) Are there, or is it likely that there are, phytotoxic contaminants in the soil in concentrations which present an unacceptable risk?

Yes = Priority Category 3

No = Proceed to Q9

9) Are there, or is likely that there are, contaminants in the soil in concentrations which present an unacceptable risk by attack of building materials?

Yes = Priority Category 3

No = Priority Category 4

Stage 3 Assessment - Unoccupied Land

1) Are there, or is likely that there are, contaminants in the soil which are toxic by ingestion, inhalation or skin contact in concentrations which exceed relevant action values and/or present an unacceptable risk?

Yes = Proceed to Q2

No = Proceed to Q4

2) Are there any suspected health effects as a result of the presence of contamination?

Yes = Priority Category 1

No = Proceed to Q3

3) Is the site unfenced or is access unrestricted?

Yes = Priority Category 1

No = Proceed to Q4

4) Are there, or is it likely that there are, toxic, asphyxiant or flammable gases or explosives present in or generated in the site in concentrations which exceed relevant action values and/or which present an unacceptable risk?

Yes = Proceed to Q5

No = Proceed to Q8

5) Are there any buildings or structures within 50m of the site?

Yes = Priority Category 1

No = Proceed to Q6

6) Are there any buildings or structures within 250m of the site boundary?

Yes = Priority Category 2

No = Proceed to Q7

7) Are there any buildings or structures within 1km of the site boundary?

Yes = Priority Category 3

No = Proceed to Q8

8) Are there, or is it likely that there are, phytotoxic contaminants in the soil in concentrations which present an unacceptable risk?

Yes = Priority Category 3

No = Proceed to Q9

- 9) Are there, or is it likely that there are, contaminants in the soil in concentrations which exceed relevant action values and/or present an unacceptable risk of permeation or attack of services which run through the site?

Yes = Priority Category 3

No = Priority Category 4

Stage 3 Assessment - Surface Water

- 1) Is there any evidence of surface water contamination at concentrations which exceed relevant quality criteria?

Yes = Proceed to Q2

No = Proceed to Q5

- 2) Is the surface water used for potable supply or other sensitive uses within 500m downstream of the site?

Yes = Proceed to Q3

No = Proceed to Q4

(‘Other sensitive uses’ include recreation (bathing/canoeing), salmon fishery and SSSI designation)

- 3) Does the quality of the surface water fall below water standards for the relevant uses?

Yes = Priority Category 1

No = Priority Category 2

- 4) Does the quality of the surface water fall below any other relevant water quality objectives?

Yes = Priority Category 2

No = Priority Category 3

- 5) Is there, or is it likely that there is, contamination present in a form in which it can be mobilised?

Yes = Proceed to Q6

No = Priority Category 4

- 6) Is the surface water on site discharged directly to a water body?

7) Yes = Proceed to Q7

No = Proceed to Q8

- 7) Does the discharge exceed any current Consents to Discharge and/or contain contaminants in concentrations which exceed relevant quality criteria?

Yes = Proceed to Q2

No = Proceed to Q8

8) Is any surface water feature within 500m of the site boundary?

Yes = Proceed to Q9

No = Proceed to Q11

9) Can run-off from the site enter a surface water feature directly or is the site susceptible to flooding?

Yes = Proceed to Q10

No = Proceed to Q11

10) Does, or is it likely that, the run-off or leachate contain contaminants in concentrations which exceed relevant quality criteria?

Yes = Proceed to Q2

No = Priority Category 3

11) Can run-off or leachate enter a surface water feature via permeable strata (i.e. is the groundwater beneath the site in continuity with surface water)?

Yes = Proceed to Q10

No = Priority Category 4

Stage 3 Assessment - Groundwater

1) Is the type of contamination likely to be present regarded as, or likely to be regarded as, significant in relation to the water environment?

Yes = Proceed to Q2

No = Priority Category 4

2) Is the contamination in a form within the soil which can be leached or mobilised?

Yes = Proceed to Q3

No = Priority Category 4

3) Does the site fall within a Zone 1 or Zone 2 Source Protection Zone for an abstraction?

Yes = Proceed to Q4

No = Proceed to Q5

4) Are there, or are there likely to be, contaminants in the groundwater which exceed the Drinking Water Standards?

Yes = Priority Category 1

No = Proceed to Q8

5) Is there a direct discharge to groundwater (e.g. mineshaft, borehole or soakaway)?

Yes = Proceed to Q6
No = Proceed to Q7

6) Is the groundwater used for potable supply or other sensitive uses within 2km of the site?

Yes = Proceed to Q4
No = Proceed to Q14

(‘other sensitive uses’ of groundwater include use in food manufacture, mineral water bottling and brewing)

7) Is the contamination contained within the site (i.e. is the contamination unable to migrate from the site laterally or vertically due to the presence of a significant thickness of impermeable material)?

Yes = Priority Category 4
No = Proceed to Q6

(for the purposes of this assessment, material is defined as permeable if it has a vertical coefficient of permeability equal to or greater than 1×10^{-9} metre/second)

8) Are there, or is it likely that there are, contaminants in the permeate at the site which exceed the relevant quality criteria?

Yes = Priority Category 2
No = Proceed to Q9

9) Is there surface water within 1km of the boundary of the site which is in continuity with the groundwater underlying the site?

Yes = Proceed to Q10
No = Proceed to Q13

10) Is the surface water used for potable supply or other sensitive uses?

Yes = Proceed to Q11
No = Proceed to Q12

(‘other sensitive uses’ of surface water include recreation (bathing/canoeing), salmon fishery and SSSI designation)

11) Are there, or is it likely that there are, contaminants in the surface water which exceed the relevant water standards?

Yes = Priority Category 1
No = Proceed to Q12

12) Are there contaminants in the surface water which exceed other relevant surface water quality objectives?

Yes = Priority Category 2
No = Proceed to Q13

13) Is the site located on a minor aquifer?

Yes = Priority Category 3

No = Priority Category 4

14) Is the site located on a major aquifer?

Yes = Proceed to Q15

No = Proceed to Q17

15) Are there, or is it likely that there are, contaminants in the groundwater which exceed the relevant quality objectives?

Yes = Priority Category 2

No = Proceed to Q16

16) Are there, or is it likely that there are, contaminants in the permeate at the site which exceed the relevant quality criteria?

Yes = Priority Category 3

No = Proceed to Q9

17) Is there an abstraction for industrial supply (including agricultural) within 2km of the site?

Yes = Proceed to Q15

No = Proceed to Q9

NB: The answer 'No' only applies where the data on contamination has been compared with a checklist for the contaminants expected on the site relevant to the particular target and has been evaluated to determine the statistical validity.

Appendix 6c

Example of data sheet for Stage 3 Assessment:

Site X:

History: Airport then Pesticides manufacture.

Key contaminants expected (from DoE Industry Profiles):

Airport:	Cr	Pesticides:	As
	Cu		Cr
	Cn (complex)		Cu
	Asbestos		Pb
	pH		Hg
	glycol		Zn
			Asbestos
			pH
			Specific named pesticides

Risks: (from EA/NHBC guidance)

As: carcinogenic through dermal contact, ingestion and inhalation.

water pollutant: list II substance

may reduce plant growth

uptake in vegetables leads to contamination via ingestion

occurs naturally, affected by pH

Cr: toxic, carcinogenic through dermal contact, ingestion and inhalation

water pollutant: list I and II substance

phytotoxic

occurs naturally

etc

Appendix 7: Suggested format for Step-by-step procedure in the investigation of individual sites.

- 1) Receive the initial notification of a possible contaminated land site.

Obtain as much information from the informant as possible – e.g.:
 - Site location;
 - What it is allegedly contaminated with;
 - What evidence they have for this;
 - Any details of land ownership/occupation etc.
- 2) Undertake an informal visit to the site to confirm details about location/current condition of site etc.
- 3) Check GIS system for evidence of possible pollutant linkages –

check for: Receptors – as specified in guidance
Pathways – geology/water features etc
Sources – any others potential sources nearby
- 4) Send S16 Requisition for Information plus short covering letter to any identified owners and occupiers.
- 5) Carry out a search of all Council files to try and obtain as much information regarding the site as possible – environmental health, planning department, local plans, economic development etc
- 6) Carry out stage 1 of the risk assessment procedure to obtain the initial grouping score for the site and develop the conceptual model.
- 7) If consider the site is still a potential contaminated land site, contact site occupiers/owners etc using standard text letter – to include following:
 - Information has been received indicating that the site is potentially contaminated under Part IIA EPA90 – give reasons for this suspicion;
 - A review of the Council's files has indicated the existence of a potential pollutant linkage;
 - At this stage are still interpreting/investigating the information received and no determination has been made yet as to the status of the site
 - Are therefore contacting them to see if they can add anything further to the information – request that they provide you with any information they think might be useful, such as:
 - a) COSHH records/data sheets for all chemicals etc used on site
 - b) Accident records
 - c) Details of any accidental spillages
 - d) Waste disposal methods
 - e) Storage details
 - f) Description of process
 - g) Site layout
 - h) Drainage plans
 - i) Existence of any licences (e.g. IPPC, Discharge consents etc)
 - j) Any other matter consider necessary

- 8) Consult with Head of Legal, Democratic and Regulatory Services regarding any legal issues involved.
- 9) While waiting for the return of this information, carry out a detailed review for Specified Receptors within a 2km radius of the site. This will also serve to flag up whether other agencies need to be contacted – e.g. EA, EN, EH etc – for their input.
- 10) Also carry out the stage 2 site visit.
- 11) Once information obtained, review it with view to proceeding to Stage 3 of the risk assessment – this will identify gaps in knowledge/information needed. Use checklist:
 - What are the potential contaminants?
 - What are the properties of these contaminants e.g. phytotoxic, attacks materials etc
 - What are their effects/actions?
 - What are the likely concentrations of them?
 - Is there any evidence of ill health due to possible existence of contamination?
 - Are gases present (or likely to be?)
 - What is the site's current use?
 - Any water contamination issues
 - Are water supplies nearby used for any other purposes – e.g.: bathing, drinking water (private or public), abstraction licences – check water quality standards as necessary
 - Natural and manmade drainage plans
 - Do they have a discharge consent or waste disposal licence – is it being complied with
 - Geological and hydrogeological details
 - Aquifers
 - Is site within a source protection zone?
- 12) Identify gaps in knowledge and seek to fill them – approach relevant agencies (EN, EH etc.) Start checking out consultants with relevant experience
- 13) Draw up a conceptual model of the site – ref: BS 10175:2001 (p15) – to give an indication of whether the site is potentially contaminated
- 14) Run site through the stage 3 assessment to identify its Priority Category for further action.

Appendix 8: Stage 3 Contaminated Land Prioritisation

1.0 Procedure for Dealing with Contaminated Land

- 1.1 The prioritisation procedure aims to ensure that the most pressing and serious problems are located first. The prioritisation procedure will be based on the fundamental principles of a risk assessment to evaluate the actual and potential risks from the sites which because of the existence of a potential pollutant linkage have been detailed as meriting a more detailed inspection.
- 1.2 Currently a document published by the Department of the Environment (DOE) called CLR 6 'The Prioritisation and Categorisation for Sites which may be Contaminated' outlines a form of methodology for site prioritisation. However St Albans City and District Council believes that this methodology would not provide enough diversity between the risk ratings for each individual site and also as a screening tool it is impracticable to inspect every site as part of the initial prioritisation methodology as suggested in CLR6.
- 1.3 St Albans City and District and District Council has therefore devised the following methodology to prioritise the sites based on the potential risks posed by the site considering issues such as historic and current usages, geology, groundwater vulnerability and a score allocated to each of the risks to give a total score for the source-pathway receptor linkage.
- 1.4 The above mentioned data is to be inputted into a prioritisation spreadsheet. The prioritisation spreadsheet is found at the following file path \\Sadc-vm-fs02\data\EH\Personal Folders\Ben\Contaminated Land. The file name is St Albans Prioritisation of Sites.xls.

2.0 Determining the Source Risk

- 2.1 St Albans City and District Council has reviewed the data collected by the authority and tabulated a list of potentially contaminated sites. This data has then been reviewed and allocated a score based on the associated risks. This ranking has been based on information available to this authority at the time of score from sources such as the DOE industrial profiles. The following risk factors have been allocated to try to provide enough distinction between processes to enable suitable variation for adequate prioritization.

Process Rating	Risk Score Rating
High	20
Medium	10
Low	5

- 2.2 St Albans City and District Council realises that there are deficiencies in using this approach due to the lack of site specific data, however due to the given number of sites it seems impracticable to identify the true characteristics of all contaminants which may be associated with the historical land use. The risk rating therefore identified only relates to the perceived risk and the polluting potential of the activity in question, and is in no way a reflection of the business or management of the site.

2.3 In instances where the particular area of land has been identified as having various historical usages the prioritization will be based on the highest risk activity.

3.0 **Determining the Pathway Characteristic Risk Factors**

3.1 The risk factor is determined by assessing the likely characteristics of the potential pollutant pathways. This process is undertaken by reviewing the risk of contamination to ground water and the risk of the pollutant migrating off site. The information used to establish the pathways characteristics are based on the Environment Agencies ground water vulnerability maps. The ground water vulnerability maps identify the vulnerability of the ground water to contamination across the country in a similar manor. It is based on the distribution of aquifers, the physio-chemical properties of the overlying soils and the characteristics of the strata in the unsaturated zone and in this case will be used as a screening tool to establish the risk of the historical activities.

3.2 Deficiencies in this data are related to the fact that not all properties identified have information directly linking to the Source Protection Zones as not all abstraction points have been mapped depending on the nature and volume of abstraction of groundwater. To try to overcome this authority has tried to evaluate what the best fit classification would be. The approach taken has been to identify the nearest Source Protection Zone and allocate a similar score to the unidentified site. This approach may either under or over predict the risk but is considered to be the most appropriate method for initial screening.

3.3 Risk weightings from the following tables have been added to increase the overall calculation and the diversity of risk. The following tables shows the risks associated with the aquifer type, source protection zones, soil permeability, and transmissibility scores.

Aquifer Type

Aquifer type	Definition	Risk Factor
Major	Highly Permeable Groundwater	10
Minor	Variably Permeable Groundwater	5

Source Protection Zone

Zone Classification	Definition	Risk Factor
Zone 1	Any Pollution that can travel to the borehole within 50 days. This applies at and below the water table. (inner protection zone)	10
Zone 2	Any Pollution that can travel to the borehole within 400 days (Outer protection zone)	5
Zone 3	The total area needed to support the removal of water from the borehole >400days. (total catchment area)	3
Zone 4	Zone 4 is rarely used but is a zone where the local conditions	1

	may enable a risk to groundwater even though they are outside the normal catchment area.	
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Soil Permeability

Permeability Classification	Definition	Risk Factor
High	Ground water with high leaching potential	10
Intermediate	Ground water with intermediate leaching potential	5
Low	Ground water with low leaching potential	3

Transmissibility Score

Transmissibility Classification	Definition	Risk Factor
H1	Soils which readily transmit liquid discharges because they are shallow or susceptible to rapid flow directly to rock, gravel or groundwater	10
H2	Deep, permeable, coarse textured soils which readily transmit a wide range of pollutants because of their rapid drainage and low attenuation potential	5
HU	Soil information for urban areas and restored mineral workings	5
H3	Coarse textured or moderately shallow soils which readily transmit non absorbed pollutants and liquid discharges but have some ability to attenuate absorbed pollutants because of their clay or organic content	3
L1	Soils which can possibly transmit a range of pollutants	1
L2	Soils which can possibly transmit non or weakly adsorbed pollutants and liquid discharges but are unlikely to transmit adsorbed pollutants.	0

4.0 Determining the Receptor Risk Factor.

4.1 The receptor risk factor has been determined by looking at the wide range of receptors which this authority has categorized based on their perceived relative sensitivity. The sensitivity category (current use) is then combined with the proximity score in an attempt to recognize the likelihood and

consequences of an event occurring and also to fit broadly in with other guidance such as the soil guideline value classifications i.e. residential, allotments and commercial/industry. Based on the review of the current usage a risk factor was applied (High/Medium/Low).

- 4.2 The proximity of the source was then calculated using the office based GIS system to measure the approximate distance to the nearest relevant receptor such as residential, schools etc. The distance from the most sensitive receptor was then classified and allocated a risk factor. The table below identifies the receptor risk factors.

Sensitivity of Current Receptor	Risk Factor	Proximity to sensitive receptors (distance in metres)	Risk Factor Applied
High	10	0	20
		<25	10
Medium	5	25-100	5
		100-500	1
Low	1	>500	0

5.0 **Source Pathway Receptor Score.**

- 5.1 In September 2006 Defra issued Circular 01/2006 Environmental Protection Act 1990: Part 2A: Contaminated Land, which includes statutory guidance on contaminated land. This circular states that the definition and assessment of contaminated land in the UK should be based on a 'suitable for use' approach and a risk assessment appraisal method. In order for a contaminant to present a risk, the presence of the following must be established:

- a) a contaminant, defined as a substance with the potential to cause significant harm or pollution of waters
- b) a receptor or target, defined as something which may be adversely affected by the contaminant. This may include humans, animals, plants, building materials and controls waters;
- c) a pathway which may cause the receptor/target to be exposed to the contaminant.

Unless all three elements of the pollutant linkage exist the land should not be identified as contaminated land.

For the purposes of prioritisation and initial screening of the potentially contaminated land sites identified within the district the total score from the above source-pathway-receptor (SPR) risk factors have been combined to give an overall SPR risk rating. The greater the SPR score the higher priority the site has been classified for further investigation. The numeric scoring does not convey a scientifically substantiated assessment and is only to be used as an indicator of risk or potential risk.

Some of the sites identified as contaminated may have been developed with suitable planning conditions and actions taken to remediate the site which should have removed the SPR linkage.

6.0 **Assigning a Risk category**

A method of placing sites into a risk category from the SPR score has been developed. An algorithm was formulated to produce the risk categories; the SPR score now places a site in one of five categories. These range from very low risk to very high risk.

The categories are as follows:

SPR score	Risk category
15-30	Very Low
31-45	Low
46-60	Moderate
61-75	High
76-90	Very High

7.0 **Definitions**

Very High Risk

The presence of contamination on the site is known or considered to be highly likely and there are sensitive receptor(s) present. Assessment of the site shows that it is in such a condition, by reason of substances in, on or under land that significant harm is being caused or there is a significant possibility of such harm being caused; or significant pollution of controlled waters is being caused, or there is a significant possibility of such pollution being caused. Further data collection is required to confirm this.

High Risk

The presence of contamination on the site is considered likely and there are sensitive receptor(s) present. Assessment of the site shows that it is in such a condition, by reason of substances in, on or under land that significant harm is being caused or there is a significant possibility of such harm being caused; or significant pollution of controlled waters is being caused, or there is a significant possibility of such pollution being caused. Further data collection is required to confirm this.

Moderate Risk

The presence of contamination on the site has not been confirmed but is considered possible and there are sensitive receptor(s) present. Assessment of the site shows that it is in such a condition, by reason of substances in, on or under land that significant harm is being caused or there is a significant possibility of such harm being caused; or significant pollution of controlled waters is being caused, or there is a significant possibility of such pollution being caused. Further data collection is required to confirm this.

Low Risk

There is less certainty that a contamination source, pathway and receptor are in place. Assessment of the site shows that it is not in such a condition, by reason of substances in, on or under land that there is a significant possibility of such harm being caused; or there is a significant possibility of such pollution being caused. No Inspection Works Required.

Very Low Risk

There are no source-pathway-receptor linkages identified. Assessment of the site shows that it is not in such a condition, by reason of substances in, on or under land that there is a significant possibility of such harm being caused; or there is a significant possibility of such pollution being caused. No Inspection Works Required.

Appendix 9: Glossary of Terms

The April 2012 Contaminated Land Statutory Guidance supporting the Environmental Protection Act 1990: Part 2A, contains a detailed glossary of terms that provides legal definitions of terms that may be used in this strategy. This glossary provides some of those definitions and also an interpretation of terms used in the strategy.

Aquifer a geological strata that contains groundwater in exploitable quantities.

AONB Area of Outstanding Natural Beauty

Appropriate Person Any person, who is an appropriate person, determined in accordance with section 78F of Environmental Protection Act 1990 Part 2A, to bear responsibility for anything, which is to be done by way of remediation in any particular case.

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

Boulder Clay Deposits of mixed clay, gravel, sand, and boulders transported and deposited by glacial activity. Till, or boulder clay, is unstratified, consisting of disorganized heaps of rocks that range widely in size.

Class A Person A person who is an appropriate person for a significant pollutant linkage in that he/she has caused or knowingly permitted a pollutant to be in, on or under the land

Class B Person A person who is an appropriate person for a significant pollutant linkage in that he/she is the owner or occupier of the land in circumstances where no Class A person can be found with respect to a remediation action

CLEA Contaminated Land Exposure Assessment, a methodology for carrying out a risk assessment.

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

- a) significant harm is being caused or there is a significant possibility of harm being caused; or
- b) significant pollution of controlled waters is being, or there is a significant possibility of significant pollution being caused

Controlled Waters These include:

Inland waters (rivers, streams, underground streams, canals, lakes and reservoirs)
Groundwater (except that ground waters does not include waters contained in underground strata but above the saturation zone)
Coastal Waters

DEFRA Department for Environment, Food and Rural Affairs (formerly DETR)

DETR Department of the Environment, Transport and Regions

DTLR Department of Transport, Local Government and the Regions

Drinking Water Abstraction the taking of water from a source (primarily an underground source) for drinking water.

EA Environment Agency

Eco-System A biological system of interacting organisms and their physical environment

Enforcing Authority defined in section 78A(9) as:

- a) in relation to a special site, the Environment Agency;
- b) in relation to contaminated land other than a special site, the local authority in whose area the land is situated.

Environmental Compliance Team The team within Regulatory Services, within SADC's Legal, Democratic & Regulatory Services Department responsible for the implementation of Part 2A of the Environmental Protection Act 1990.

EPA90 Environmental Protection Act 1990.

FSA The Food Standards Agency.

GIS Geographical Information System

Groundwater Ground water except that ground water does not include waters contained in underground strata but above the saturation zone.

Hardship Where an appropriate person can demonstrate that carrying out a remediation action would cause him/her 'hardship', the council will assess whether it is appropriate to require that person to carry out the remediation. This is covered in Section 8 of the Statutory Guidance.

Harm defined in section 78A(4). 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/her property.

ICRCL Interdepartmental Committee on Remediation of Contaminated Land

Liability Group The persons who are appropriate persons with respect to a particular significant pollutant linkage

LNR Local Nature Reserve

Local Authority defined in section 78A(9) as meaning any unitary authority, district council, the Common Council of the City of London, the Sub-Treasurer of the Inner Temple and the Under-Treasurer of the Middle Temple.

MAFF Ministry of Agriculture, Fisheries and Food.

NNR National Nature Reserve

Orphan site A site that is identified as contaminated land, but where no appropriate person is liable for the remediation of the significant pollutant linkage.

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

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

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.”

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

Receptor: either:

- a) a living organism, a group of living organisms, an ecological system or a piece of property which is in a category listed in Appendix 3 as a type of receptor and is being, or could be, harmed by a contaminant; or
- b) controlled waters which are being, or could be, polluted by a contaminant.

Remediation defined in section 78A(7) as:

- a) the doing of anything for the purpose of assessing the condition of:
 - the contaminated land in question;
 - any controlled waters affected by that land; or
 - any land adjoining or adjacent to that land;
- b) the doing of any works, the carrying out of any operations or the taking of any steps in relation to any such land or waters for the purpose of:
 - preventing or minimising, or remedying or mitigating the effects of any significant harm, or any pollution of controlled waters, by reason of which the contaminated land is such land; or
 - restoring the land or waters to their former state; or
- c) the making of subsequent inspections from time to time for the purpose of keeping under review the condition of the land or waters.

Remediation Declaration defined in section 78H(6) as a document prepared and published by the enforcing authority recording remediation actions which it would have specified in a remediation notice, but which it is precluded from specifying by virtue of sections 78E(4) or (5), the reasons why it would have specified those actions and the grounds on which it is satisfied that it is precluded from specifying them in a notice.

Remediation Statement defined in section 78H(7) as a statement prepared and published by the responsible person detailing the remediation actions which are being, have been, or are expected to be, done as well as the periods within which these things are being done.

Risk the combination of:

- a) the probability, or frequency, or occurrence of a defined hazard; and
- b) the magnitude (including seriousness) of the consequences.

SADC St Albans City and District Council

Significant Harm defined in section 78A(5) as meaning any harm which is determined to be significant in accordance with the statutory guidance in Chapter A.

Significant Pollutant Linkage a pollutant linkage which forms the basis for a determination that a price of land is contaminated land.

Significant Possibility of significant harm a possibility of significant harm being caused which, by virtue of section 78A(5) is determined to be significant in accordance with the statutory guidance in Chapter A.

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.

Special Site defined by section 78A(3) as : “any contaminated land:

- a) which has been designated as such a site by virtue of section 78C(7) or 78D(6)...; and
- b) whose designation as such has not been terminated by the appropriate Agency under section 78Q(4)...”

Special Protection Area (SPA) site of International Importance designated under the EC Directive on the Conservation of Wild Birds.

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”

Appendix 10: References

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- 18: Department of the Environment Circular 11/95: The Use of Conditions in Planning Permissions.

Appendix 11: Contact points for contaminated land matters within Council

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