



NORWICH City Council

CONTAMINATED LAND STRATEGY

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EXECUTIVE SUMMARY

- The new Contaminated Land provisions contained in Part IIA of the Environmental Protection Act 1990 require each Local Authority to “*cause its area to be inspected from time to time for the purpose of identifying contaminated land*”
- The definition of “*Contaminated Land*” relates to unacceptable risks to human health, and/or the environment in the form of controlled waters, ecosystems or property.
- The legislation sets clear criteria to be met before land can formally be designated as Contaminated Land, and all such land must be detailed in a public register maintained by the Council at its main office.
- The Local Authority is required to publish a Strategy by the end of June 2001, which details how it proposes to implement its inspection duties, the aims and objectives of the Strategy, the consultation and involvement of stakeholders and the review process for the Strategy.
- The general priorities of the Strategy are to:
 - Protect the health of the citizens of Norwich
 - Manage Council controlled land in relation to past, current and future liabilities
 - Continue to maintain the City’s heritage and its natural environment
 - Actively promote land reuse and development for the benefit of the City.
- Norwich City Council is the lead regulator on Contaminated Land for the City, but will work in partnership with other organisations such as the Environment Agency. Detailed consultation will be undertaken with all statutory consultees and stakeholders prior to the publication of the Strategy.
- A seven-year inspection programme will commence following the publication of the Strategy, and this will initially concentrate on Council owned land and land designated for development in the Local Plan, based on the land use history.
- The new Contaminated Land regime gives the Council extensive powers to require the remediation of land formally designated as contaminated. However, the expectation in Government’s guidance to Councils is that the majority of Contaminated Land remediation will be carried out under Planning and Development Control when redevelopment of land takes place, and not Part IIA of the above Act.
- To this extent, the Council will continue to encourage the re-use of “*brownfield sites*”, and where possible support parties wishing to undertake voluntary remediation of land.
- Overall, the aim of the new regime is to identify all Contaminated Land, and this Strategy provides a rational, ordered and efficient approach to address Contaminated Land within the City.

NORWICH CITY COUNCIL

Strategy for the Identification of Contaminated Land

Environmental Protection Act 1990 (Part 11A)

1.0 BACKGROUND

- 1.1 This document details the way in which the City Council ('the council') intends to satisfy its Statutory Duty under Part IIA of the Environmental Protection Act 1990 ('the Act')
"to cause its area to be inspected from time to time for the purpose of identifying contaminated land".
This document has had regard to the Act and to Statutory Guidance issued by the Government, and addresses the prioritisation of contaminated land inspections, how we collect and collate information and its use in decision making.
- 1.2 The council is fully committed to the introduction of this legislation which will complement our existing strategies to both inform and protect the citizens of Norwich.
- 1.3 The areas of land in the city that are likely to fall within the definition of contaminated land are considered to be small. Even so, the resource implications to the council of this legislation are extensive and therefore the procedural content of the strategy has considered the most efficient and effective means of service delivery.
- 1.4 It is the aim of the strategy to enable the council to carry out the complete inspection of the city within 7 years of its implementation on 1st July 2001. The strategy will be reviewed initially in 2002, or if the circumstances dictate at an earlier date.

2.0 INTRODUCTION

2.1 Corporate Aims of the City Council

- 2.1.1 Norwich 21 Steering Group led the city's response to Local Agenda 21 from 1996 to the point where Norwich 21 Ltd was incorporated in March 2000. One of the sustainability indicators created under the Norwich 21 process monitors the development of brownfield sites in favour of greenfield development.
- 2.1.2 The council outlines its approach to environmental matters in its Environmental Protection Strategy [1992]. Environmental policy PC4 states that we will "monitor soil contamination and take action to prevent damage to health". We also have adopted policies to make information available under the Access to Environmental Information Regulations. The progression of our response to this new Contaminated Land duty will be maintained through service plans and the corporate plan.
- 2.1.3 The council has a well-developed mechanism of community involvement and consultation. Our 12 elected Area Fora are directly engaged on matters in their localities and will be informed of land which is found to be contaminated in their area along with the overall contaminated land strategy. The Norwich Environmental Forum will also have an overview of the strategy and be presented with updates on progress.
- 2.1.4 This Strategy has been subject to wide consultation with public bodies, non-Governmental organisations, community groups and commerce. Details of the consultees are given in Appendix 1.
- 2.1.5 A Public Register as required by the Act will be maintained by the Environmental Health Service. This Register details the regulatory activity of the council in relation to contaminated land. It is available for public viewing during office hours at the Planning Service Reception on the 2nd floor of City Hall. It is Council policy to assume that all information in its possession may be open to public access and no information will be withheld unless it has been determined that it should be excluded in the interests of national security or that it is commercially confidential.
- 2.1.6 Information on contaminated land may also be available to the public under the provisions of the Environmental Information Regulations 1992. All enquiries should initially be through the contact officer detailed in Appendix 3

2.2 Regulatory Context

2.2.1 The council has the primary regulatory role for contaminated land. This reflects our existing functions under the statutory nuisance regime and complements the role as the planning authority. The Council's regulatory role is to:

- cause the city to be inspected to identify contaminated land
- determine whether any particular site is contaminated land
- act as the enforcing authority for most areas of contaminated land. However, this is not the case if the following applies:
 - the contaminated land has been designated a Special Site, in which case the Environment Agency is the enforcing authority or;
 - the land has been identified as contaminated land by the local authority for and adjoining or adjacent area, as a result of significant harm or the pollution of controlled waters which might be caused in that local authorities own area.

2.2.2 In undertaking this role the council will:

- establish who is responsible for the remediation of the contaminated land.
- determine the remediation necessary, initially by consultation and voluntary agreement and ultimately if agreement is not reached by the service of a Remediation Notice.
- determine the proportion of the cost of the remediation work to be borne by each of the person(s) responsible.
- maintain details in the Public Register about its regulatory activity.

2.3 Definition of Contaminated Land

2.3.1 Section 78(2) of the Environmental Protection Act 1990 defines contaminated land for the purposes of Part 11A of the Act 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:

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

2.3.2 In consideration of the terms ‘significant harm’ or significant possibility’, the council must have regard to statutory guidance issued by the Secretary of

State. This is given in DETR Circular 02/2000 entitled '*Environmental Protection Act 1990: Part IIA CONTAMINATED LAND*' ('the circular').

Tables A & B from Annex 3, Chapter A of the circular are reproduced in Appendix 4

- 2.3.3 In considering the guidance issued by the Secretary of State on significant harm, the council intends to consider additionally the advice given in PPG16 entitled "*Archaeology and Planning*".

2.4 Determination of Contaminated Land

- 2.4.1 The determination of contaminated land uses the principles of pollutant linkages, that is a link between a contaminant and a receptor by way of a pathway. Before the council can declare a site as 'contaminated land' there must be a significant pollution linkage.

- 2.4.2 The control of contaminated land therefore follows a risk based approach. The approach is systematic and objective and provides a consistent and defensible basis for considering uncertainties, discussing options and making decisions. Risks are identified, estimated and evaluated through carrying out desk studies, site investigation and interpretation of data to reach decisions on any unacceptable risks. The regime is based on a suitable for use approach and a change of end use may be all that is required to eliminate an unacceptable risk.

Further guidance on the principles of pollutant linkages and risk assessment are given in the circular and Appendices 4 & 5 respectively.

2.5 The Strategic Approach

- 2.5.1 The council will take a strategic approach, in accordance with the circular to satisfy the need for transparency. This strategy identifies how the council intends to address the large number of sites identified by the initial site investigation and characterisation, of which only a small number are likely to meet the statutory definition of contaminated land.

- 2.5.2 The approach will:

- be rational, ordered and efficient,
- be proportionate to the seriousness of any actual or potential risk,
- seek to ensure that the most pressing and serious problems are located first,

- ensure that resources are concentrated on investigating areas where the council is most likely to identify contaminated land, and,
- ensures that the council efficiently identifies requirements for the detailed inspection of particular areas of land.

2.6 The Development of the Strategy

2.6.1 The Head of Environmental Health Services has overall responsibility for environmental issues with the City and has been delegated lead officer by the council for the purposes of the contaminated land regime.

2.6.2 The Contaminated Land Steering Group comprises officers from all sections of the council and has been responsible for the drafting of this strategy.

2.7 Objectives of the Strategy

2.7.1 This objectives of the strategy are to:

- satisfy the council's legal obligation to produce and publish a strategy and to meet the criteria of a stratagem approach to the inspection and identification of contaminated land,
- inform all the stakeholders of the council's strategy for contaminated land,
- provide information to the council on contaminated land and to keep the community and other organisations informed on the implementation of the strategy. In particular there will be close liaison with the Environment Agency who will continually produce a statutory report on contaminated land,
- ensure that where redevelopment of sites takes place in the city that the process deals effectively and efficiently with any land contamination
- build on the existing policy of the redevelopment of brown field sites with the city,
- address the liability issues associated with the council's existing land holdings and avoid any new liability associated with land acquisitions.

3.0 CHARACTERISTICS OF THE CITY COUNCIL'S AREA

3.1 Geographical Location

3.1.1 Norwich covers 39 square kilometres in the heart of Norfolk with a population of approximately 128,000.

3.2 Brief Description/History

3.2.1 Norwich has a skilled workforce, particularly in the professions, education and research and development. Employment is mainly in the service sector but manufacturing, although small in employment terms, is crucial to the local economy and smaller businesses are increasingly important. Services are sited in the centre of Norwich, whilst industrial and trading estates and recently established business parks are sited throughout the city.

3.3 Size

The size of the council's Area is 3,907 hectares.

3.4 Population Distribution

The city's population was 124,000 in 1998. The majority of the area is built-up and residential areas are generally distributed evenly around the city, except for the river valleys of the River Yare and River Wensum. In addition the population of the city centre declined to about 3,000 in the 1960's (from a historic level of nearly 30,000 at the end of the medieval period) but has now increased again to around 7000.

3.5 Land Owned by the council

The council has an extensive portfolio, which comprises of a variety of properties including 19,900 council dwellings (houses and flats) and some 1,495 let properties. The council monitors some 383 hectares of land in which it holds a majority ownership. In this context property is defined as *"each unit of land and / or building let within a separate lease or capable of being let as a single entity"*

3.6 Land Use Characteristics (Current and Historical)

The built up area of the city contains a wide range of land uses. The city centre contains the main concentration of commercial uses such as retail, office and leisure uses, together with mixed residential and some residential industrial uses. The suburban areas are predominantly residential in use, apart from:

- The river valleys of the Yare and Wensum, in which there are pockets of industry together with preserved open spaces and wildlife areas.
- Some modern industrial/commercial estates around the Outer Ring Road area.
- Norwich Airport and the adjoining industrial area
- Mousehold Heath, which is a heathland/woodland area, protected by a special Act of Parliament.

The main industries in the city historically have been food processing, brewing, engineering, chemical manufacture, shoe manufacture and electricity and gas generation.

3.7 Protected Locations

3.7.1 The city hosts a range of designated sites of nature conservation value.

These include 4 Sites of Special Scientific Interest (SSSI), 8 Local Nature Reserves (LNR), and 34 County Wildlife Sites (CWS). These sites are listed in Appendix 7

3.8 Key Property Types

3.8.1 There are 1027 Listed Building entries in the city and these are made up as follows:

- 62 are Grade I;
- 121 are Grade II*;
- 844 are Grade II (10 of which are “Park” sites)

3.8.2 In addition there are 2416 Locally Listed buildings and there are 24 monuments on the Scheduled Monuments Register.

3.9 Key Water Resource Protection Issues

3.9.1 There are a total of 17 licensed abstractions within the city’s administrative area. Ten of these are from groundwater boreholes and seven are from river sources.

3.9.2 Annual abstractions from these sources total 30048110 m³. By volume, groundwater supplies 35% (10471600 m³/yr) of the total, and surfacewater supplies 65% (19576510 m³/yr).

3.9.3 The water is used as follows:

- 0.2% for agriculture;
- 33% for industrial/commercial activities;
- 65% for public water supply;
- 2% for private water supply.

(above information from the Environment Agency)

3.10 Known Information on Contaminated Land

- 3.10.1 Appropriate tests on sites known or suspected to be contaminated have already been undertaken and necessary remediation work has taken place before occupation of the site in question. In many instances potential owners/purchasers are requesting such tests for their own protection.
- 3.10.2 Data currently held “*in house*” has been collated to provide details of sites suspected of being potentially contaminated. These include sites put forward for re-development and those that have been mainly vacant or underused sites.
- 3.10.3 The council has consulted, through its Planning Services officers, on prospective development sites, some of which have been identified by various agencies as potentially contaminated.

3.11 Geological Characteristics

- 3.11.1 Chalk formed during the Cretaceous period underlies the Norwich district. It is soft, white limestone laid down in warm, late Cretaceous seas. The Chalk contains a lot of flint in many levels above the Lower Chalk (which is flintless).
- 3.11.2 Outcrops of the Chalk are confined to the river valleys in the vicinity of Norwich. Around Norwich, the Chalk is overlain by marine, shelly sands, silts and clays of the Norwich Crag, deposited during the Lower Pleistocene, when the area was covered by sea. Later again, during the Middle Pleistocene, there was major climatic change, and East Anglia experienced several periods of extensive glaciation. As ice sheets repeatedly advanced and retreated over the area, they deposited and shaped a series of sediments. These include glacial sands and gravels which now cover much

of Norwich and the surrounding area, and the Lowestoft Till, or “Chalky Boulder Clay”.

- 3.11.3 A brief chronological outline of the main past geological events that have contributed to the formation and shaping of the present-day topography of Norwich and its district is given in Appendix 8

3.12 Hydrogeographical Characteristics

- 3.12.1 The groundwater located under Norwich contributes significantly to the drinking water supply of the district, accounting for approximately one-third of total licensed abstractions. The Cretaceous Chalk aquifer and Pleistocene Norwich Crag formations are classed by the Environment Agency as a major aquifer, highly permeable. The groundwater also supports the baseflow of local rivers, including the River Wensum which provides the balance of water supply for Norwich. Therefore, the importance of groundwater for local water supply is two-fold.
- 3.12.2 The region’s principal aquifer is the Cretaceous Chalk, which extends across most of the County. Groundwater levels within the aquifer are highest to the west and north-west of Norwich (where they generally exceed 40m AOD), and lower to the east (falling to around sea level at the coast). Groundwater flow predominantly occurs through fissures in the Chalk, and generally in an eastern direction.
- 3.12.3 Throughout Norwich, the Chalk is principally covered by glacial sands and gravels, with some areas of Lowestoft Till and Norwich Crag. The glacial sand and gravels are highly permeable, and permit most residual rainfall to infiltrate the underlying aquifer, where no Till intervenes (BGS, 1989). However, recharge of the aquifer principally occurs to the north of Norwich, and in areas where the Chalk is exposed, for example on the edges of the river valleys.
- 3.12.4 The chemical quality of the groundwater within the Chalk aquifer is generally satisfactory for most purposes, although the water is hard and locally has a high iron content.

- 3.12.5 The majority of the land surrounding Norwich is given the classification of H2 by the Environment Agency. This applies to soils with a coarse texture and deep permeability that readily transmit a wide range of pollutants.
- 3.12.6 When investigating contaminated land consideration will be given to the aquifer and the rivers Wensum and Yare where there is a hydraulic continuity from the surrounding land.

4.0 CITY COUNCIL'S AIMS, OBJECTIVES, PRIORITIES AND TIMESCALES

4.1 Aims

- 4.1.1 The principal aim of this strategy is to identify all areas of contaminated or potentially contaminated land, both under public and private control.
- 4.1.2 Any land identified above will be subjected to a risk assessment and prioritised for further investigation.
- 4.1.3 Areas of redevelopment will be revisited to ascertain the likelihood of previous contaminative uses, the extent of works carried out and the degree to which potential or actual contamination was dealt with. On a site-specific basis, the council will need to satisfy itself about the confidence of any remediation undertaken.
- 4.1.4 To record the above data on a Geographical Information System (GIS).

4.2 Objectives

- 4.2.1 To collate existing information on contaminated sites known to the council through the Town and Country Planning or Environmental Health functions. In addition, site information has been received from outside organisations such as the Environment Agency.
- 4.2.2 To identify all potentially contaminated sites. In addition to carrying out a desk top studies, operational officers of the council will complete a contaminated land notification form during routine site visits. A copy of this form is attached as Appendix 9
- 4.2.3 The council owns and is responsible for substantial areas of land within the city. The Head of Property Services will develop a work programme within nine months of the adoption of the strategy.
- 4.2.4 The council will prioritise its investigations to look initially at land which is now used as nursery schools, schools playing fields, residential accommodation, gardens and allotments. Priority will also be given to sites where local knowledge identifies this land as adjacent to controlled waters.
- 4.2.5 To develop internal procedures for the efficient handling of contaminated land issues.
- 4.2.5 The council will look to complete the inspection of the city within 7 years of its adoption. The Strategy will be reviewed at the end of the first year, or sooner if circumstances dictate.

4.3 Priorities

- 4.3.1 The council recognises that not only is it the principal regulator for the city, it is also a major stakeholder in large areas of land. The council recognises the fact that it must be seen to deal effectively with issues surrounding its own land in exactly the same way as land in private ownership.
- 4.3.2 Section 3 states the principal aim to be the identification of all potentially contaminated sites. The council acknowledges that other agencies and organisations also hold substantial information concerning the condition of land and these are detailed in Appendix 1. The council will collect and collate this information as a matter of urgency.
- 4.3.3 The preliminary inspection of the council area will commence by concentration on areas of risk to:
- likely human receptors:- where potentially contaminated sites are either lived on or frequented or located close to land detailed in 4.2.4.
 - controlled waters:- includes water used for human consumption and surface waters.
 - ecology:- in particular specifically designated ecosystems.
 - buildings:- priority given to scheduled ancient monuments and sites of historic interest.

4.4 Timescales

- 4.4.1 The Head of Property Services will ensure that all sites in which the council is a stakeholder are initially screened, looking at the site history and possible contaminants, together with potential receptors on a rolling programme.
- 4.4.2 The aim is for the preliminary survey of the city as a whole to be completed with 1 year of the commencement of the Strategy, identifying specific areas where the contaminant-pathway-receptor scenario is most likely to exist.
- 4.4.3 Further in-depth study of each area identified in 4.3.3 above will allow individual sites to be categorised for insertion into the inspection programme. detailed in the procedures in section 5 below.

5.0 PROCEDURES

5.1 Internal Management Arrangements for Inspection and Identification

- 5.1.1 This section outlines the procedure to be applied by the council in inspecting and dealing with contaminated land, including the level of service the business community and members of the public can expect from the council in dealing with these matters
- 5.1.2 The opportunity has been taken to look at the way in which the council deals with contaminated land generally and land in which the council has an interest. It is anticipated that this section and associated appendices will be used as an internal code of good practice.
- 5.1.3 As part of the preliminary inspection of the area, operational officers of the council will refer sites to the Head of Environmental Services (the lead officer for contaminated land) for investigation based on an assessment of whether they need to be looked at on a low, medium or high risk basis.
- 5.1.4 All contaminated land or land considered to be potentially contaminated, whether council or privately owned will be prioritised for further investigation based on the risk assessment system.
- 5.1.5 Elected members will be regularly updated with the progress of the strategy and in particular where there are plans to designate an area of land, or where the council is the “appropriate” person and may be liable for remediation costs.
- 5.1.5 The budget provision for the contaminated land regime will be reviewed annually by the Head of Environmental Health Services.

5.2 Inspection and identification: where the council has no interest in the land.

- 5.2.1 The key officers for the programme of inspection and identification of contaminated land are detailed in Appendix 2. The contaminated land contact officers for the council's Service Centres are detailed in Appendix 3.
- 5.2.2 Each of these key service areas will collect information on land within the City by utilising the existing expertise of operational officers to supplement the survey work of Environmental Health Officers. The information will be collected using of “in-house contaminated land notification forms”

(Appendix 9). In the above context, operational officers are defined as “officers who regularly inspect land or buildings in the course of their employment”.

5.2.3 This information will be passed to the lead officer who will co-ordinate corporately the carrying out a desk top study to assess whether the land is in contaminated in accordance with Appendices 3, 4 & 5.

5.2.4 A Geographical Information System (GIS) will be used to carry out the preliminary desk top study as an aid in the decision making process to identify potentially contaminate sites, sensitive receptors and possible pathways. Information will be collated from other agencies and organisations (Appendix 1) and historical data for example from maps, records, registers, local plan, and county archive. (Appendix 10) The desk top study may be supplemented by site visits and sampling.

5.3 Inspection and identification: where the Council has an interest in the land.

5.3.1 The Head of Property Services holds details of all council owned land and land in which the council has an interest

5.3.2 This part of the Strategy seeks to deal with:

- Contamination associated with existing land holdings,
- Ensures that the council does not unwittingly purchase any additional contaminated land without appreciating the long-term implications of such a purchase, with the price of the land reflecting the condition of the site.
- Contamination caused by persons/companies who occupy our land.

5.3.2 The Head of Property Services will arrange for each of the council's existing landholdings to be inspected and assessed in accordance with the procedure set out in 5.2 above.

5.4 Land Purchase and Acquisitions

5.4.1 Where land, such as public open space, is to pass to the council as part of a planning agreement (section 106 agreements) the Director of Spatial Planning with European and Economic Development will obtain from the developer:

- full site history information on the land to transfer

- an appropriate level of site investigation data, to be agreed with the Head of Environmental Health Services.

5.4.2 Prior to committing the council to any new land purchase or acquisitions, the Head of Property Services needs to ensure that the full site history is known, to include:

- a search of all available historic maps
- a review of all historic property use details held on file in all council departments
- detailed enquiries from the vendor as to the form of activities at the site, location of storage tanks, details of materials, fuels, wastes, etc., and information on any spillage.

5.4.3 Only when the full implications of any contamination is known to the Environmental Health Services and consideration has been given to the potential long term cost implications, and whether this has been reflected in the sale price, will the transaction continue.

5.5 Leasing Property

Many of the commercial organisations to which the council lets property or land will undertake potentially contaminating activities that may result in the land becoming contaminated. Under the terms of Part 11A of the Environmental Protection Act 1990, if the original polluter cannot be found, the landowner becomes the person liable. In order to protect the value of its land holdings and to prevent the council becoming liable for any contamination by tenants, the Head of Property Services, in conjunction with other officers of the council, will ensure the steps detailed below are followed.

5.5.1 Prior to Leasing/Letting Property in the Future:

5.5.1.1 Ensure that the council has information on the quality of the site. If it is a greenfield site with no former potentially contaminative uses, ensure this is documented along with some background soil data to provide a baseline which can form the basis of any future claim.

5.5.1.2 If it is a brownfield site, establish if potentially contaminating uses may have taken place through a fully documented site survey. This is considered necessary to protect the council's interest and also to comply with the obligation of disclosure to new occupiers.

5.5.1.3 Ensure that there are conditions in the lease/tenancy agreement requiring new occupiers to comply with all appropriate environmental legislation to minimise the potential for future contamination and to require them to clean up spillage which may occur during their occupation.

5.5.1.4 Ensure that it is clear in the contract documents that prior to relinquishing the lease/tenancy, the onus will be on them to return the land to a condition which is suitable for its existing use, and prove they have not caused any new contamination by showing that the original data obtained prior to the commencement of the lease is still valid.

5.5.1.5 The tenant/lessee shall provide the council with:

- details of the location/nature of fuel storage,
- plans showing where chemicals or waste are stored,
- plans showing where services and fuel lines etc. are,
- a copy of any Health and Safety files created in compliance with the Construction, Design and Management Regulations,
- details of any accidents or spillage.

5.5.1.6 Where locations are moved, the council must be advised in writing of the new details.

5.5.2 Termination of a Tenancy/Lease Agreement

5.5.2.1 Prior to the determination of a lease/tenancy agreement for any reason, the tenant/lessee shall provide site investigation data to prove the site remains in the same condition as when the background data was obtained at the commencement of the lease, or to prove the extent of any contamination present.

5.5.2.2 In the event of any contamination having occurred during their occupation, where contamination is present, the tenant/lessee shall be required to remediate the contamination to the standard which is identified by the background site investigation, or provide financial compensation to the council so that it may undertake the remediation works.

5.5.2.3 Where a Health and Safety file has been generated during the life of a tenancy or lease pursuant to the Construction, Design and

Management Regulations, a copy will be provided to the council and held with a copy of the lease.

5.5.3 Financial Implications

5.5.3.1 The proposed obligations on the lessee will affect the premium or rental values of sites. The actual cost will vary from lease to lease but will need to be considered as each lease comes up for renewal or at a rent review.

5.5.3.2 The costs incurred in clearing a site will be determined in advance by a background site investigation report identifying the level of contamination when the lease period commenced.

5.5.3.3 The Head of Property Services will consult with other Heads of Service as necessary, and Members of the council with regard to a contingency sum in order to fund necessary site investigations when it is not reasonable to pass this cost on to a new or existing tenant.

5.5.4 Marketing Sites

5.5.4.1 All land owned by the council will include the following where available:

- site history information
- geotechnical and contamination site investigation reports
- desk top study reports
- details of the location of fuel tanks, waste disposal areas etc.

5.5.4.2 If any site is suspected to be contaminated then the potential purchaser must be given the opportunity to undertake their own site investigation to establish the extent of any problem.

5.5.4.3 The council may also find itself as the appropriate person in respect of former local authority holdings now found to be contaminated. The Head of Property Services will co-ordinate a corporate review of all council records for details of such land. Where identified, the council will negotiate with the current owners to achieve remediation.

5.6 Information Management

- 5.6.1 Primarily the council will use a Geographical Information System (GIS) and hardcopy system to record all information in relation to the site including contamination and the historic environment. The Head of Environmental Health Services will hold this information.
- 5.6.2 The Public Register of Contaminated Land will be held in a paper format. Members of the public can view the contents at any time during normal office hours at the Planning Services Reception, 2nd Floor, City Hall, Norwich.
- 5.6.3 Wider 'Inspection Information' obtained by the council as it seeks to identify specific pollution linkages will be available to the public during office hours in accordance with the Access to Environmental Information Regulations 1992.
- 5.6.4 The council will make copies of the above information available to the public, for which a reasonable charge will be made.
- 5.6.5 Due to the nature of the database linked to the GIS, it will contain elements of a commercially sensitive nature and therefore access to the information will be limited to authorised personnel only through a password protected system.

5.7 Handling of Complaints and other Information

- 5.7.1 Periodically the council will receive complaints regarding contaminated land or volunteered information about such land. This may be from a member of the public, business or community groups. As these complaints or acts of information may impact on the council's approach to contaminated land they will be dealt with as follows.
- 5.7.2 All complaints will be dealt with using the existing procedure for statutory nuisance complaints. All complainants may expect:
- the complaint to be logged and recorded.
 - to be contacted by the investigating officer within 3 days of receipt.
 - to be kept informed as the complaint is investigated.
 - the complaint to be resolved quickly and efficiently.
 - their confidentiality to be maintained except where legal circumstances dictate.

- 5.7.3 Any voluntary information received that does not affect the person offering the information will not be dealt with as a complaint but will be recorded and acted upon as necessary.
- 5.7.4 The council will not normally investigate anonymous complaints or volunteered anecdotal evidence. This information will be recorded and the Head of Environmental Health Services will use knowledge and experience to decide what, if any, further investigation is required.

5.8 Role of Development Planning

- 5.8.1 For the purposes of the Town and Country Planning Act 1990, the potential for contamination is a material planning consideration, to be taken into account during the normal course of development.
- 5.8.2 The Government has indicated that it considers the redevelopment phase as the most appropriate and cost effective stage to deal with contamination issues, stressing that local authorities should make full use of the powers available to them in accordance with Planning Policy Guidance Note 23 (PPG23).
- 5.8.3 It is imperative that potential contamination be identified at an early stage in any planning development. Development or redevelopment on sites where there is known or suspected contamination will be preceded by appropriate testing and reports. Prior to the redevelopment phase the proposals will be considered by the local planning team regarding relevant development policies and by the conservation team in relation to the general historical environment. Planning permission will then be granted subject to conditions or legal agreements requiring the necessary remediation measures to be taken before occupation of the site.

5.9 The Role of Building Control

- 5.9.1 The Building Regulations 1991 give the Director of Environmental and Technical Services the authority to address contamination and landfill gas issues within the building footprint. The provision of gas protection measures within buildings close to former landfills has been a priority for several years.
- 5.9.2 The Director of Environmental and Technical Services is represented on the council's Contaminated Land Steering Group and the existing local liaison arrangements between Planning, Building Control and Environmental Health Services will continue. Building Control officers will be key personnel in the identification of potentially contaminated sites.

5.10 General

- 5.10.1 When the council requests and/or receives information from third parties, the informant will always be asked to confirm whether the information should be confidential. If the informant wishes the information to be confidential, they

will be requested to provide written justification. If no such request is received the council shall treat the information as being open.

- 5.10.2 The council will keep all interested stakeholders informed of the inspection process and contaminated land remediation. For general overall strategy issues the council intends to use press releases, Committee agendas and the Economic, Social and Environmental Forums. The council welcomes feedback on its approach and activity from anyone. It is also proposed to examine the effects of risk communication by involving the Community Power Fora.
- 5.10.3 Any data in the possession of the council will be held in accordance with the provisions of the Data Protection Act.
- 5.10.4 With regard to specific sites, the council will involve all relevant stakeholders when arriving at a decision as to the best way to proceed. All stakeholders will be given the opportunity to comment and will receive responses justifying the council's action where requested.
- 5.10.5 It is imperative that the council is open, honest, fair and transparent in managing information and communicating risk to others.
- 5.10.6 The Environment Agency is required to produce a report on the state of contaminated land from time to time. The council fully supports the Agency's approach and will co-operate fully.
- 5.10.7 All known persons with an interest in the land will be kept informed of any formal action the council intends to take in respect of contaminated land, and there will be the opportunity for those persons to make comment. The council will seek the co-operation of land owners and occupiers in addressing contaminated land.
- 5.10.8 All technical surveys will be carried out in accordance with the technical practice note detailed in Appendix 10

6.0 REVIEW MECHANISMS

- 6.1 The council recognises this Strategy to be a dynamic document and will carry out a full review of the Strategy with one year of its implementation or earlier if circumstances show it to be appropriate.

 - 6.2 In addition to the Strategy's annual review, it may be necessary to review certain inspection decisions should any of the following arise in respect of any land:
 - 6.2.1 proposed changes in the use of surrounding land
 - 6.2.2 unplanned changes in the use of land (e.g. persistent, unauthorised use of the land)
 - 6.2.3 unplanned events, (e.g. localised flooding; accidents, fires, spillage) where the consequences cannot be addressed through other relevant environmental protective legislation
 - 6.2.4 reports of localised health problems which appear to relate to a particular area of land
 - 6.2.5 verifiable reports of unusual or abnormal site conditions received from businesses or members of the public or voluntary organisations.
 - 6.2.6 responding to information from other statutory bodies
 - 6.2.7 responding to information from owners or occupiers of land and other relevant interested parties.
-

Consultees:

Business Groups

Chamber of Commerce

City Centre Management Partnership

Community Power Fora,

Environment Agency,

Environmental Fora

English Heritage,

English Nature,

Local Councils:

- Breckland District Council,
- Broadland District Council,
- Gt Yarmouth Borough Council,
- Kings Lynn and West Norfolk Borough Council,
- Norfolk County Council,
- North Norfolk District Council,
- South Norfolk District Council,

DEFRA,

Food Standards Agency,

Norwich City Council: Key Officers for Contaminated Land

Lead Officer

Head of Environmental Health Service
Norwich City Council Elliot House, 130 Ber Street, Norwich, NR1 3AG
Tel: 01603 212297 Fax 01603 213002

Legal Services:

Head of Legal Services
Norwich City Council City Hall St Peters Street Norwich NR2 1WA
Tel: 01603 212020 Fax: 01603 213000

Planning Services:

Director of Spatial Planning with European & Economic Development
Norwich City Council City Hall St Peters Street Norwich NR2 1WP
Tel: 01603 212519 Fax: 01603 212164

Property Services:

Head of Property Services
Norwich City Council St Giles House 27 St Giles Street Norwich NR2 1UX
Tel: 01603 212364 Fax: 01603 21305

Technical & Environmental Services:

Director of Technical and Environmental Services
Norwich City Council St Giles House 27 St Giles Street Norwich NR2 1UX
Tel: 01603 212225 Fax: 01603 213005

Norwich City Council and Environment Agency contacts:

Norwich City Council

Environmental Health

Environmental Projects Officer

Norwich City Council Elliot House 130 Ber Street Norwich NR1 3AG

Tel: 01603 212298 Fax: 01603 213002

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Legal

Assistant City Clerk

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Land Ownership Enquiries

Terrier Technician

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Housing

Housing Officer

Norwich City Council City Hall St Peters Street Norwich NR2 1NH

Tel: 01603 212874 Fax: 01603 212966

Building Control

Manager – Building Regulatory

Norwich City Council St Giles House 27 St Giles Street Norwich NR2 1UY

Tel: 01603 212344 Fax: 01603 213005

Engineers

Manager – Building Maintenance

Norwich City Council St Giles House 27 St Giles Street Norwich NR2 1UY

Tel: 01603 212334 Fax: 01603 213005

Environment Agency

Environment Agency Cobham Road Ipswich Suffolk IP3 9JE

Tel: 011473 727712

TABLE A : Categories of Significant Harm

TYPE OF RECEPTOR	DESCRIPTION OF HARM TO THAT TYPE OF RECEPTOR THAT IS TO BE REGARDED AS SIGNIFICANT HARM
<p>1 Human beings</p>	<p>Death, disease, serious injury, genetic mutation, birth defects or the impairment of reproductive functions</p> <p>For these purposes, disease is to be taken to mean an unhealthy condition of the body or a part of it and can include cancer, liver dysfunction or skin ailments. Mental dysfunction is included only insofar it is attributable to the effects of a pollutant on the body of the person concerned.</p> <p>In this Chapter, this description of significant harm is referred to as a 'human health effect'.</p>
<p>2. Any ecological system, or living organism forming part of such a system, within a location which is:</p> <ul style="list-style-type: none"> ▪ an area notified as an area of special scientific interest under section 28 of the Wildlife and Countryside Act 1981; ▪ any land declared a national nature reserve under section 35 of that Act; ▪ any area designated as a marine nature reserve under section 36 of that Act; ▪ an area of special protection for bird, established under section 3 of that Act; ▪ any European site within the meaning of regulation 10 of the Conservation (Natural Habitats etc) Regulations 1994 (ie 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 (PPG9) on nature conservation (ie candidate Special Areas of Conservation, potential Special Protection Areas and listed Ramsar sites); or ▪ any nature reserve established under section 21 of the National Parks and Access to the Countryside Act 1949. 	<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, of 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> <p>In determining what constitutes such harm, the local authority should have regard to the advice of English Nature and to the requirements of the Conservation (Natural Habitats etc) Regulations 1994.</p> <p>In this Chapter, this description of significant harm is referred to as an 'ecological system effect'.</p>
<p>3 Property in the form of:</p> <ul style="list-style-type: none"> ▪ 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. 	<p>For crops, a substantial diminution in yield or other substantial loss in their value resulting from death, disease or other physical damage. For domestic pets, death, serious disease or serious physical damage. For other property in this category, a substantial loss in its value resulting from death, disease or other serious physical damage.</p> <p>The local authority should regard a substantial loss in value as occurring only when a substantial proportion of the animals or crops are dead or otherwise no longer fit for their intended purpose. Food should be regarded as being no longer fit for purpose when it fails to comply with the provisions of the Food Safety Act 1990. Where a diminution in yield or loss in value is caused by a pollutant linkage, a 20% diminution or loss should be regarded as a benchmark for what constitutes a substantial diminution or loss.</p> <p>In this Chapter this description of significant harm is referred to as an 'animal or crop effect'.</p>
<p>4 Property in the form of buildings:</p> <p>For this purpose 'building' means 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>	<p>Structural failure, substantial damage or substantial interference with any right of occupation.</p> <p>For this purpose, the local authority should regard substantial damage or substantial interference as occurring when any part of the building ceases to be capable of being used for the purpose for which it is or was intended.</p> <p>Additionally, in the case of a scheduled Ancient Monument, substantial damage should be regarded as occurring when the damage significantly impairs the historic, architectural, traditional, artistic or archaeological interest by reason of which the monument was scheduled.</p> <p>In this Chapter, this description of significant harm is referred to as a 'building effect'</p>

TABLE B : Significant Possibility of Significant Harm

DESCRIPTIONS OF SIGNIFICANT HARM (AS DEFINED IN TABLE A)	CONDITIONS FOR THERE BEING A SIGNIFICANT POSSIBILITY OF SIGNIFICANT HARM
<p>1 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"> ▪ 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>Such an assessment should take into account:</p> <ul style="list-style-type: none"> ▪ the likely total intake of, or exposure to, the substance or substances which form the pollutant, from all sources including that from the pollutant linkage in question; ▪ the relative contribution of the pollutant linkage in question to the likely aggregate intake of, or exposure to, the relevant substance or substances; and ▪ the duration of intake or exposure resulting from the pollutant linkage in question. <p>The question of whether an intake or exposure is unacceptable is independent of the number of people who might experience or be affected by that intake or exposure. Toxocological properties should be taken to include carcinogenic, mutagenic, teratogenic, pathogenic, endocrine-disrupting and other similar properties.</p>
<p>2 All other human health effects (particularly by way of explosion or fire)</p>	<p>If the probability, or frequency, of occurrence of significant harm of that description 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 from other causes. <p>In making such an assessment, the local authority should take into account the levels of risk which have been judged unacceptable in other similar contexts and should give particular weight to cases where the pollutant linkage might cause significant harm which:</p> <ul style="list-style-type: none"> ▪ would be irreversible or incapable of being treated; ▪ would affect a substantial number of people; ▪ would result from a single incident such as a fire or an explosion; or ▪ would be likely to result from a short-term (i.e., less than 24 hour) exposure to the pollutant.
<p>3 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, it 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>Any assessment made for these purposes should take into account relevant information for that type of pollutant linkage, particularly in relation to the ecotoxicological effects of the pollutant.</p>
<p>4 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 ecotoxicological effects of the pollutant.</p>
<p>5 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, in the foreseeable future), taking into account relevant information for that type of pollutant linkage.</p>

Principles of Pollution Linkages

The government guidance for the identification of contaminated land under the new regime utilises the concept of pollution linkages. Therefore, for land to be contaminated there must be a pathway linking the contaminant to the receptor. (Figure: 1)

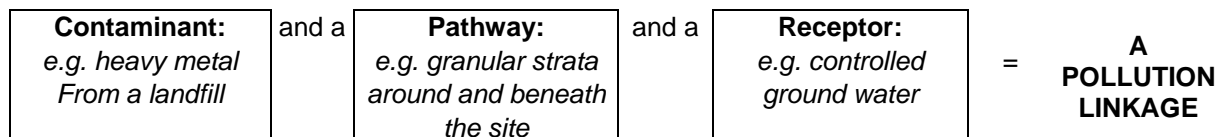


Figure 1: The 'Contaminant : Pathway : Receptor' approach to contaminated land risk

In addition it must be shown that the harm that will be caused to the receptor is significant and whether the possibility of significant harm being caused is significant. (see definition of "pollution of controlled waters" below)

Section 78A(4) of the Act defines "harm" as meaning "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", and;

Section 78A(5) gives guidance as to what harm is significant and the circular gives guidance on "whether the possibility of significant harm being caused is significant". (reproduced in Appendix 4 above)

Section 78A(9) defines the pollution of controlled waters as: "the entry into controlled waters of any poisonous, noxious or polluting matter or any solid waste matter".

Table A in Appendix 4 details the type of receptor and the description of harm to that type of receptor that is to be regarded as significant harm and, Table B, the descriptions of significant harm and the conditions for there being a significant possibility of significant harm

The receptors recognised as being potentially sensitive are:

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

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

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

Thus, in order for the Council to make a determination as to whether the land is contaminated within the meaning of the Act it must identify a:

- contaminant
- relevant receptor* and,
- the pathway by means of which:
 - significant harm is caused to the receptor by the contaminant; or
 - there is a significant possibility of such harm.

* see pollution of controlled waters

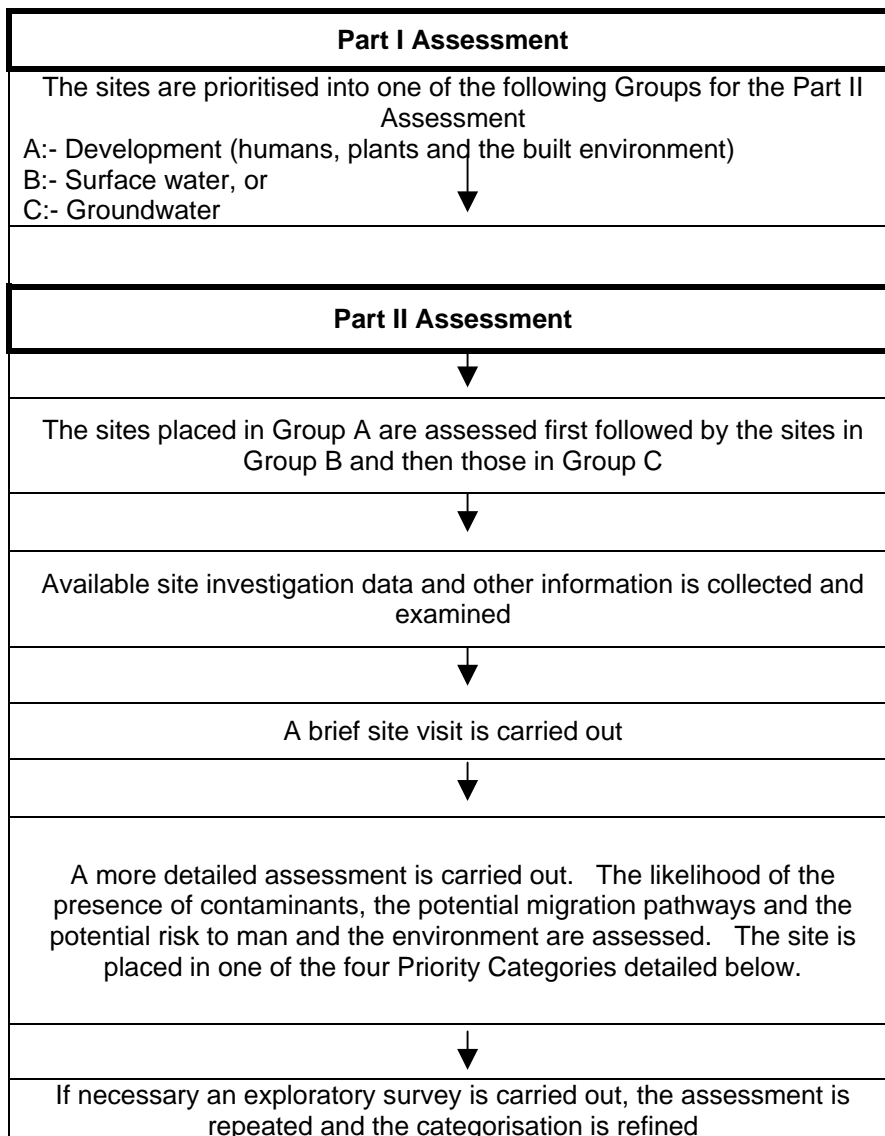
Principles of Risk Assessment

Once it has been determined that there are one or more Significant Pollutant Linkages in existence (Appendix 5), and therefore the land is contaminated within the meaning of the Act, a “Risk Assessment” will then be undertaken.

This will determine what priority to give to the action necessary to ensure that the land is suitable for its existing or proposed use. As the priority given is likely to be based on limited information, any further site investigation or a change in use of adjacent land may result in a revision of the categorisation.

The Department of the Environment Contaminated Land Research Report No 6 entitled “Prioritisation and categorisation procedure for sites which may be contaminated” details a simple but systematic approach to determining the priority. This is represented by figure 2.

(Figure 2)The prioritisation and categorisation procedure



The procedure has two main parts:

Part I:

- This gives a preliminary prioritisation of the site based on an assessment of the proximity of the receptor.
- The receptors are assessed under three headings:
 - *development (humans, plants and the built environment)*
 - *surface water; and*
 - *groundwater*
- Each site is assigned to one of three groups A, B, or C which determines the priority for assessment under Part II

Part II:

- The prioritisation is refined into more specific categories using more detailed information about the hazard likely to occur in the pollution linkage.
- First a desk study is carried out to assemble the information. This will prioritise within the groups and identify the need for a site walkover or exploratory survey.
- Based on the above, the sites are categorised as follows:
 - - **Priority Category 1**
 - Site probably or certainly not suitable for present use and environmental setting.
 - Contaminants probably or certainly present and very likely to have an unacceptable impact on key targets.
 - Urgent action needed in the short term.
 - **Priority Category 2**
 - Site may not suitable for present use and environmental setting.
 - Contaminants probably or certainly present and likely to have an unacceptable impact on key targets.
 - Action 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 targets.
 - Action unlikely to be needed whilst site remains in present use or otherwise remains undisturbed.
 - **Priority Category 4**
 - Site considered suitable for present use and environmental setting.
 - Contaminants may be present but very unlikely to have an unacceptable impact on key targets.
 - No action needed while site remains in present use or otherwise remains undisturbed.

The above is the methodology that the council will use to carry out Risk Assessments of the sites in the City and, until the introduction of the CLEA (Contaminated Land Exposure Assessment) guidelines, expected from DETR shortly, the Council will evaluate all information against the guidelines issued by the Interdepartmental Committee on Redevelopment of Contaminated Land (ICRCL).

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

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

Additionally, the Agricultural Land Classification (ALC) system includes provision for the grading of land according to long term limitations which can result from soil contamination. Where land has been classified in accordance with this scheme any indication of contamination will be investigated further

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

Protected Locations

Site	Status		
	Local Nature Reserve	County Wildlife Site	SSSI
Bowthorpe Marshes	√	√	
Danby Wood	√	√	
Eaton Common	√	√	
Lion Wood & Telegraph Plantation	√	√	
Marston Marsh	√	√	
Mile Cross Marsh & Sycamore Wood	√	√	
Mousehold Heath	√	√	
Violet Grove/Heronry/Earlham Woods	√	√	
Bluebell Marsh		√	
Bunkers Hill Wood & Twenty Acre Wood		√	
Butterfly Meadow UEA		√	
Eaton Street Meadow		√	
Fiddle Wood & Night Plantation		√	
Hellesdon Meadow		√	
Hellesdon Mill Meadow		√	
Island, Eaton Marshes		√	
Lodge Farm Marshes		√	
Marsh UEA		√	
Norwich Cemetery, Earlham Road		√	
Railway Walk/Marriots Way		√	
Ryrie Court Pond		√	
The Deal Ground		√	
University Broad		√	
Wensum River		√	
Wensum Woods/Station or Train Woods		√	
Woodlands Park		√	
Yare River		√	
Catton Chalk Pit			√
Eaton Chalk Pit		√	√
St James Pit			√
Sweet Briar Marshes		√	√

Geological Events

Era		Period	Characteristics	Deposits Present in the Norwich Record		Notes
Tertiary 65-0 mya	Quaternary 2-0 mys	Holocene 0.01 mya-present	Post-glacial (present stage)	Post-glacial deposits Alluvium River gravels		Rivers Yare and Wensum are formed, cutting through glacial deposits
		Pleistocene 2-0.01 mya	Period of intermittent glacial and inter-glacial stages	Upper	Interglacial deposits (silts and clays)	
				Middle	Lowestoft Till and outwash Corton Sands Norwich Brickearth	Lowestoft Till also known as Chalky Boulder Clay
	Lower			Fluvial deposits (gravels) Norwich Crag	Norwich Crag comprises shelly sands, silts and clays, laid down under marine environment	
	Pre-Pleistocene 65-2 mya	Variations in climatic conditions, resulting in marine regression and an			"Pre-Pleistocene" = the Palaeocene, Eocene, Oligocene, Miocene and Pliocene stages (earliest first)	
Mesozoic 230-65 mya	Cretaceous 136-65 mya	Upper	Warm, marine environment	Chalk		Principal aquifer. Contains flint in the upper reaches
		Lower		Gault (mudstones) Carstone (pebbly sands)		
	Jurassic 195-136 mya	Shallow marine and estuarine environments	Mudstones and siltstones			
	Triassic 230-195 mya	Continental deposits	Sandstones, siltstones, mudstones			
Palaeozoic 600-230 mya	Devonian	First evidence of terrestrial floras		Mudstones (mid-Devonian?)	Incomplete record for era in the Norwich district, Palaeozoic era comprises the Cambrian, Ordovician, Silurian, Devonian, Carboniferous and Permian stages (earliest first)	

**Norwich City Council
Environmental Protection Act 1990 Part IIA
Contaminated Land: Initial Site Investigation.**

Name of Officer:

Department:

Telephone number:

Date of Inspection:

Purpose of Inspection

Site Address:

Sketch Map of Location:

Current Site Use:

Previous Site Uses:

Is site potentially contaminated due to current or previous site uses:	YES	NO
--	------------	-----------

Details of Contaminants:

Details of Receptors (Humans, Ecological Systems, Animals/Crops or Buildings)

On site receptors:

Off site receptors:
(incl. location & distance)

Return form to Head of Environmental Health Services Elliot House

(e-mail Michael Stephenson)

(For Environmental Health use only)

OVERALL CONTAMINATION RISK:

Sources of information on contaminated land

Resource	Information type/format	Use
Historic maps	OS series map sheets	To identify potential sources
Geographical maps		To identify pathways
Hydrogeological maps	Groundwater Vulnerability Maps (National Rivers Authority)	To identify receptors
Soil maps		To characterise resources and pathways
Source protection zones	Areas of groundwater that receive special protection	To characterise receptors (controlled waters)
Environmental Health Records	Details of complaints and investigations	To identify known information on contaminated land
Planning records	Information on ground conditions	To identify known information on contaminated land
District Local Plan	The Local Plan is under review and the draft will be placed on Deposit in May 2001 and will be a valuable source of information	To identify receptors, particularly historic monuments and sites of special interest
Integrated Pollution Control Register	Public register of authorised industrial processes	To identify sources of contamination
Waste Management Licenses	Public register of sites licensed for waste management	To identify sources of contamination
Register of closed landfill sites	To be provided by Environment Agency by end of 2000	To identify sources of contamination
County Archive	Various sources of land use prior to Planning legislation coming into force	To identify sources of contamination
Trade directories	Historic listings of trade premises	To identify sources of contamination
Aerial photographs	Historic detail of the city	To identify sources of contamination
Sites and Monuments Records	Record of all known archaeological sites including scheduled ancient monuments	To identify receptors

Good Practice Notes

General Good Practice:	<i>Model Procedures for the Management of Contaminated Land (CLR 11) (in preparation)</i> <i>DD175 Draft Code of Practice for the Investigation of Potentially Contaminated Land (BSI) (in preparation)</i>
Desk Studies:	<i>Documentary Research on Industrial Sites, DETR, 1994 (CLR3)</i> <i>Prioritisation and Categorisation Procedure for Sites which may be Contaminated, DETR, 1995 (CLR6)</i>
Site Reconnaissance:	<i>Guidance on Preliminary Site Inspection of Contaminated Land, DETR, 1994 (CLR2)</i>
Intrusive Site Investigation:	<i>Sampling Strategies for Contaminated Land on Groundwater and Surface Water DETR, 1994, (CLR1)</i> <i>A Framework for Assessing the Impact of Contaminated Land on Groundwater and Surface Water, DETR, 1994 (CLR1)</i> <i>Development of Appropriate Soil Sampling Strategies for Land Contamination, Environment Agency R&D Report HOCO 352 (in preparation)</i>

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- Package of Information for Use in Local Authorities' Inspection
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- Contaminated Land Inspection Strategies – Technical Advice for
Local Authorities (Draft) – DETR April 2000
- DETR Circular 02/2000 Contaminated Land – DETR March 2000
- Contaminated Land Strategy – Breckland District Council
- Contaminated Land Strategy – Forest of Dean District Council
- Contaminated Land Strategy – Gt Yarmouth Borough Council
- Contaminated Land Strategy - KEW Environment and Training Consultancy
- Geology of the Country (BGS1989)
- Environment Agency Groundwater Vulnerability Maps