

Contaminated Land Strategy

North Norfolk District Council

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1.Introduction

This document details how North Norfolk District Council intends to implement its inspection duties regarding Part IIA of the Environmental Protection Act 1990 ⁽¹⁾. It recognises the requirement not only to produce details on inspection arrangements and procedures, but also a justification for, and transparency in the decisions made by the Council on how it will inspect the district for contaminated land.

1.1 General policy of North Norfolk District Council

The regulation of contaminated land within the North Norfolk district will be managed in accordance with contaminated land legislation, and will be guided by objectives of the North Norfolk District Councils Corporate Plan 2015-2019⁽²⁾.



1.2 Regulatory context

1.1.1 The regime

The statutory regime for the identification and remediation of contaminated land came into force on 1 April 2000. The primary legislation is supplemented by the Contaminated Land England Regulations 2012 ⁽³⁾ and by the Contaminated Land Statutory Guidance ⁽⁴⁾.

The Statutory Guidance ⁽⁴⁾ has two functions. Firstly, it introduces the statutory guidelines which are an essential part of the regime; secondly, it sets out the way in which the regime will work by providing:

- A summary of Government Policy in this field.

- A description of the regime.
- A guide to the Regulations.

1.1.2 Regime Objectives

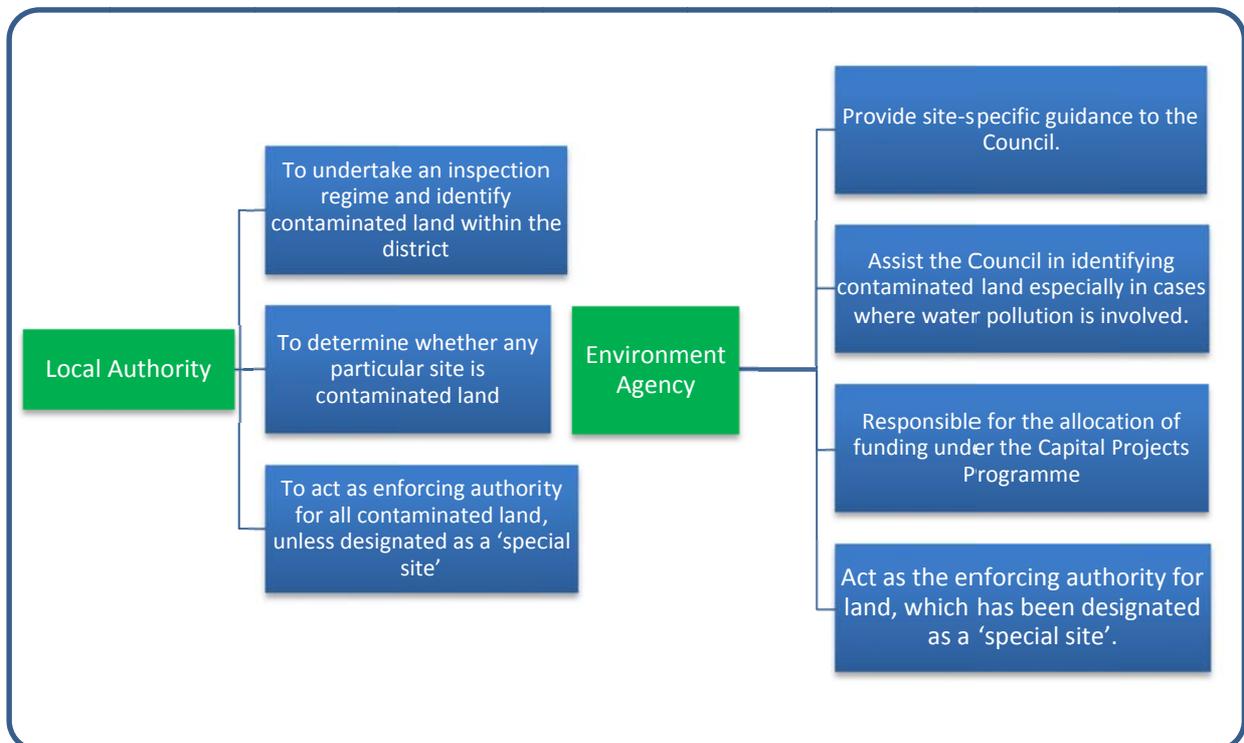
The main purpose of Part 2A legislation is to identify and deal with unacceptable risks posed by land contamination. The key objectives of the regime are:

- To identify and remove unacceptable risks to human health and the environment
- To seek to ensure that contaminated land is made suitable for use
- 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

Under Part 2A the starting point should be that land is not contaminated unless there is reason to consider otherwise and Part 2A should only be invoked in circumstances where no alternative solution exists.

1.1.3 Regulatory roles

Part 2A is primarily regulated by the Local Authority, although a certain degree of responsibility is held by the Environment Agency. Part 2A compliments the Council’s existing functions associated with statutory nuisance and its role as a Planning Authority, while the Environment Agency provides a supportive role and is the primary authority for dealing with special sites and controlled waters. A summary of functions for each authority is detailed below:



1.1.4 Definition of Contaminated Land

Section 78A (2) defines contaminated land for the purposes of Part IIA as:

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

- a) *Significant harm is being caused or there is a significant possibility of such harm being caused; or*
- b) *Pollution of controlled water is being, or is likely to be, caused’.*

1.1.5 Contaminant linkages and risk assessment

The statutory guidance ⁽⁴⁾ document for contaminated land states that in order for land to be contaminated a proven pathway must be first established between a known contamination source and a known receptor. If all three elements of a contaminant linkage exist then a risk assessment will be undertaken to determine the likelihood of the contaminant linkage resulting in any of the following:

- Significant harm being caused to the receptor
- Significant possibility of significant harm being caused to the receptor
- Significant pollution of controlled waters
- Significant possibility of significant pollution of controlled waters

It must be emphasised that if a pathway or linkage cannot be proven, then the level of risk posed to a receptor is deemed to be negligible and the site will not be classed as contaminated land (Figure 1).

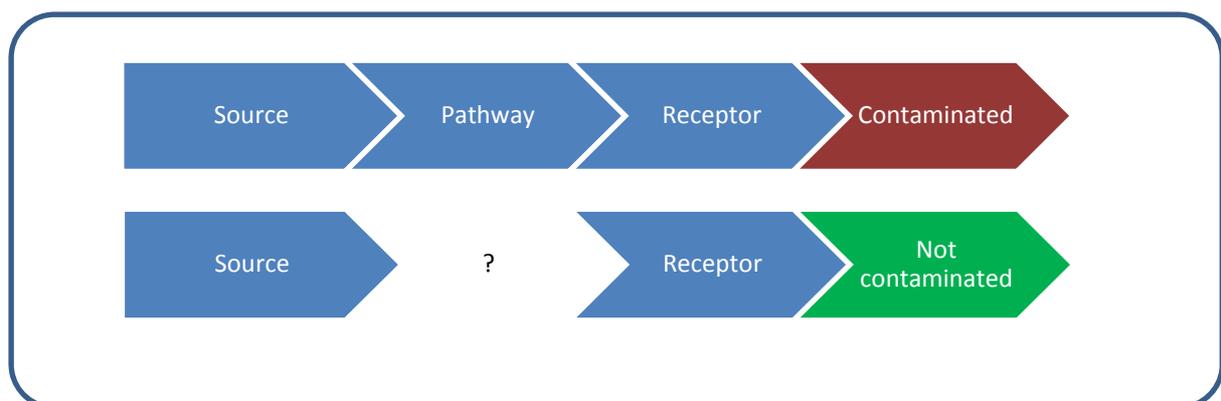


Figure 1. Contaminant linkage

As part of any assessment, receptors will generally include ecological systems, property & infrastructure, controlled waters and human health. A full expansion on these receptors can be examined within Appendix 5

The pathway will be dependent upon the chemical characteristics of the contaminant, and physical environment in which it is found, these two factors are key considerations when quantifying risks within a particular site.

1.16 *The strategic approach*

The statutory guidance ⁽⁴⁾ requires local authorities to take a strategic approach to the inspection and identification of contaminated land. This should be undertaken in accordance with the principles set out below:

- Be rational, ordered and efficient.
- Reflect local circumstances
- Be proportionate in relation to the actual or potential risk.
- Prioritise sites that demonstrate the highest risks first
- Ensure that resources are efficiently used and targeted

1.3 *Development of the strategy*

Statutory Guidance ⁽⁴⁾ requires that the local authority should set out its approach in a written strategy, which should be formally adopted and published to a time scale, set by the authority. In accordance with this, a strategy has been developed to meet these requirements and is structured around the strategic objectives described below:

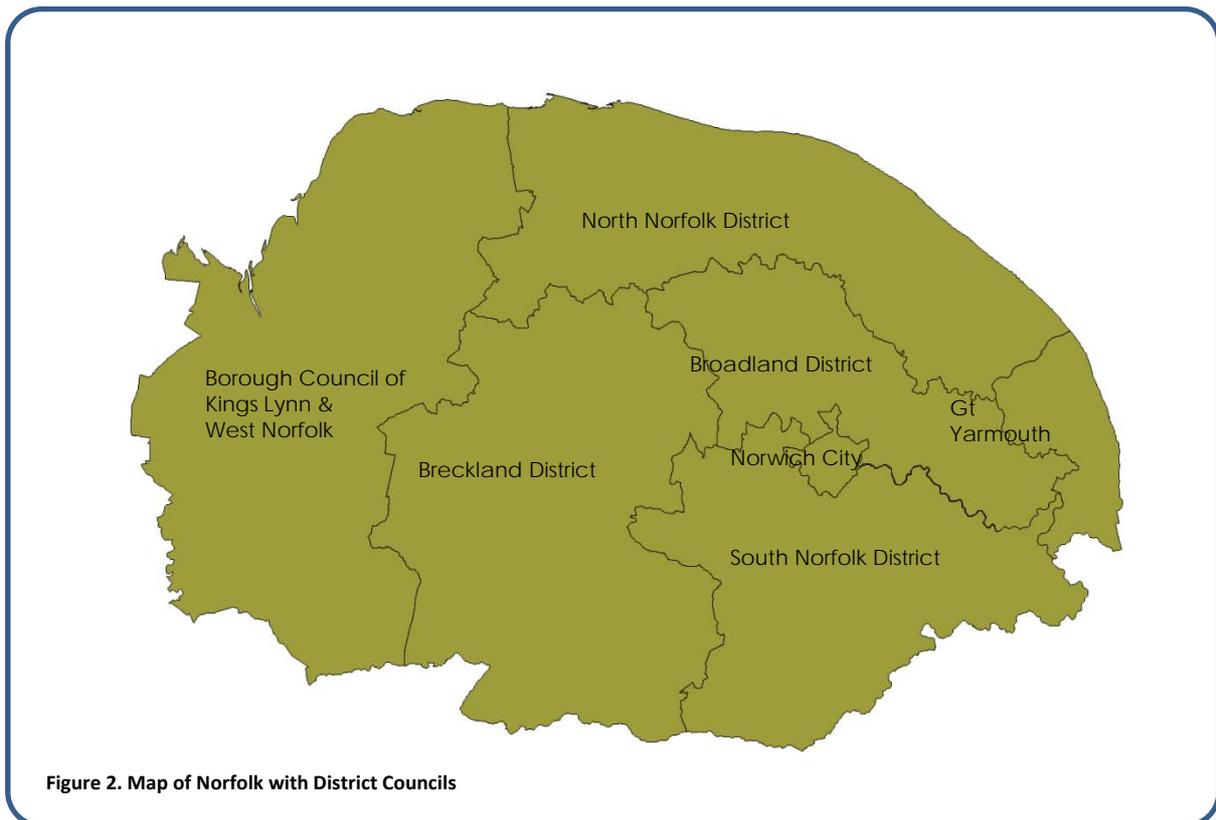
Objectives of the strategy

- Introduce the Councils procedure for the strategic and detailed inspection of contaminated land.
- To introduce the relevant aspects of the North Norfolk geographical area.
- To inform all the stakeholders of the authority's intentions, policies and procedures.
- To identify liability issues on existing land for land owners, including those areas currently owned by North Norfolk District Council. Clarification of these issues can be examined within Appendix 1.

2. Characteristics of the North Norfolk District

2.1 Geographical location

The North Norfolk District Council area covers 96,547 ha (965.5 km²) in the northern part of the county of Norfolk (figure 2). The district is bounded by 73 km of North Sea coastline between Holkham in the west and Horsey in the south-east.



2.2 Description and history

2.2.1 Description of North Norfolk

In a national context, North Norfolk is considered to be outstanding for both its geology and its landforms. The low-lying coast, the coastal cliff sections and the inland landforms are some of the finest of their kind in the British Isles.

Much of the area along the North Norfolk coastline from Holkham to Cley is designated as being of international and national importance for nature conservation. A large part of this area is salt marsh with some areas of freshwater marsh. The highest land of East Anglia (92 m) is the 14 km long Cromer Ridge, which when viewed from the north, the steep wooded slopes form an impressive feature behind the low lying coast, while the widespread cover of bracken and gorse contrasts markedly with the cultivated fields of the surrounding lowlands. The central area consists of a rolling

landform with small rounded hills and shallow valleys. Open arable farmland is the main landscape type of this area.

The western area is dominated by arable landscapes with some small areas of woodland. To the south of the west the River Wensum has cut a distinctive valley through the chalk which has produced the Wensum Valley character area. The valley floor has permanent and improved pasture and marshland with scattered woodlands. Walsham Plain lies between the rolling landform of the western parts of North Norfolk and the very low-lying areas around the Norfolk Broads. This landscape is dominated by open arable farmland with very few hedgerows. Fenland Levels are mainly characterised by permanent pasture with some fenland and areas of heathland.

2.2.2 History of North Norfolk

It is thought that the first humans inhabited Norfolk during the Palaeolithic period before the advent of the first major glaciation, but there is no definite evidence. During the long span of time between the first glaciation and the last cold period, small groups of people have intermittently occupied the area that is now Norfolk, evidence of this being substantiated by the unearthing of stone tools. During this time, a land connection with the continent existed, except at times of very high sea level. The humans living in Norfolk during the Mesolithic period were small groups of hunter gatherers. Kelling Heath near the North Norfolk coast is one of the richest sites of this time in terms of the amount of flint work that is found there. It is thought that the clear view across the wide plain that is now sea allowed the hunters to spot herds of animals grazing there. When much of the polar ice sheet melted, the sea level rose. By about 6500 BC, Britain was an island and the coastline of Norfolk was little different from that of today. From about 4500 BC, during the Neolithic period, there were more settled communities partly or fully dependent on arable farming or stock-raising. Their flint and stone axes have been found all over North Norfolk.

Information from pollen records of the Bronze Age show that woodland was being extensively cleared as arable farming and pasture were expanded to provide for an increasing population. During the Iron Age, British Blacksmiths learnt how to work iron but because of rust few iron objects survive. Iron Age people lived in a tribal society with most people living in round houses. They kept cattle, sheep, pigs and horses and grew cereals, particularly spelt (wheat) and barley. The area under cultivation expanded during this period, leading to the permanent clearance of woodland. There is evidence also of woodland management.

The Roman period started with the conquest of Britain in 43AD, which saw the absorption of southeast England into the Roman Empire. The principal Roman roads formed the infrastructure for the development of a more comprehensive road network linking the major towns and larger villages. Most of the population of Roman Norfolk lived in the countryside with an economy based on agriculture and animal husbandry. During the Anglo-Saxon period, North and West Norfolk had a lower population than South and East Norfolk. By Medieval times, much of Northern Norfolk was relatively treeless. It is thought that during this time there was an increase in the percentage of arable land compared to grassland.

Population change in the first half of the 19th century was characterised by rapid growth, continuing a trend that had been taking place since about 1740. At this time, the seaside was becoming an important factor, with Cromer beginning to function as a holiday resort and continuing to develop. Fishing and maritime trade boosted population growth in some coastal villages. Between 1851 and 1951, there was a general decline in the population of rural North Norfolk. This was due mainly to the loss of jobs in agriculture, but many villages also lost some of the trades which had made them more self-sufficient in the mid-19th century. Many of the towns experienced an increase in

population and the expansion in holidays and tourism also brought population growth to many coastal areas. This pattern of population increase and decrease remained similar during the time period 1951 - 1981.

From the earliest times, man has had a growing influence on the appearance and condition of the area by clearing and farming land, building dwellings and making routes through the countryside to link towns and villages and industrial works.

2.3 Geological and soil characteristics

The rocks that outcrop above sea level, and moulded to make the present landscape, were all formed 'recently' within the last 135 million years. Mostly soft and sedimentary, they were laid down in the great prehistoric seas, which once covered East Anglia.

2.3.1 Solid geology

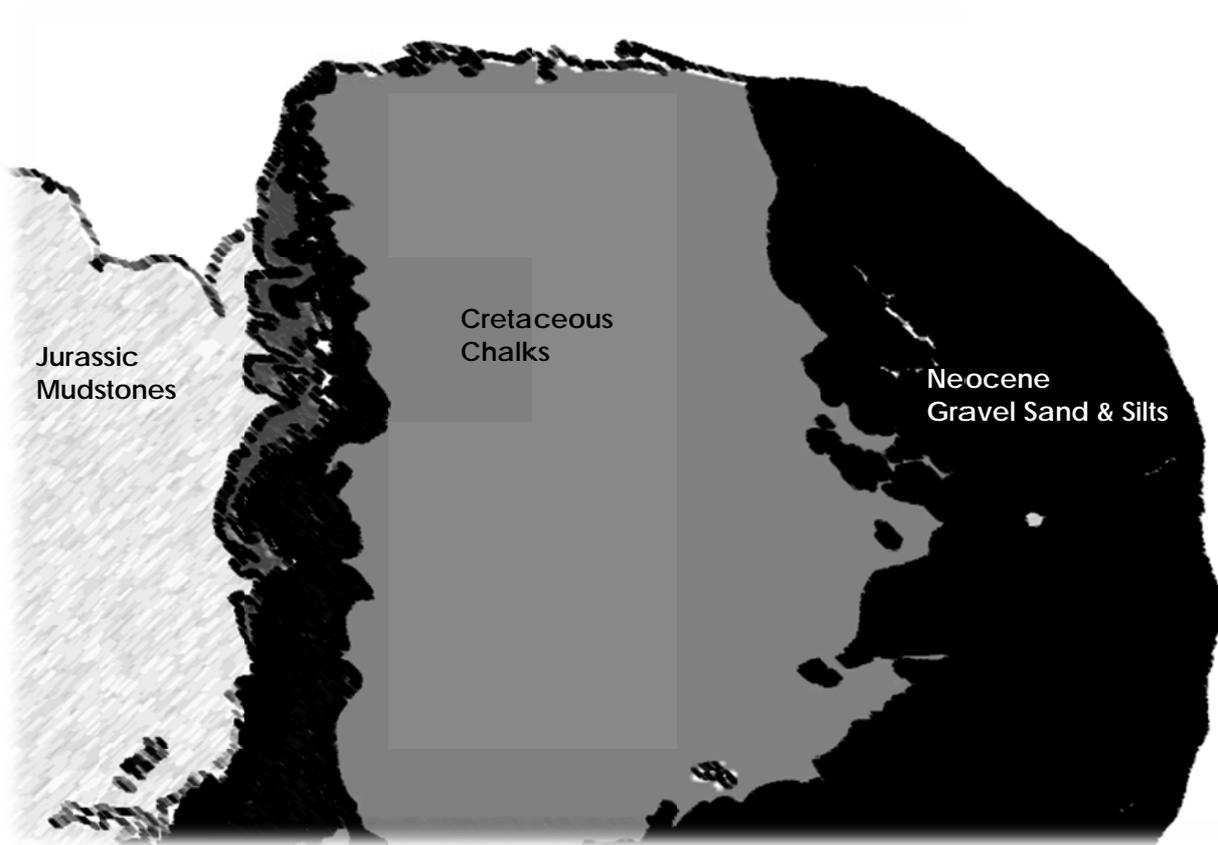


Figure 5 Solid Geology Map of Norfolk

The geology of North Norfolk generally comprises of glacial and post-glacial sediment, overlying much older rocks of the Crag Group and Chalks from the cretaceous period (Figure 5). Chalk underlies the Crag and glacial deposits across the entire North Norfolk area. Flint nodules are found in the Upper Chalk layer. See 2.5.1 for hydrogeology aquifer details.

The rocks of the Crag Group were laid down on top of the Chalk, but only to the east of a north-south line through Weybourne. These rocks were formed in marine, estuarine and river environments, depositing sands, gravels, silts and clays.

North Norfolk glacial deposits consist mainly of sands, gravels, till, clays and silts related to various glacial events which have occurred in the last 500,000 years. The water melting from the ice sheets deposited the glacial-fluvial sands and gravels. Direct glacial deposits laid down beneath the ice sheets or dropped from the surface of the ice sheet as the ice melted produced till which has a variety of sized particles randomly distributed throughout it. In some area of still water clays and silts were laid down.

The elevated topographic feature referred to as 'Cromer Ridge' formed where two ice sheets met and pushed up and contorted deposits. Melt water carried material south away from these ice sheets to produce a massive area of sands and gravels stretching from Cromer southwards towards the River Bure area.

Since glacial deposits cover much of North Norfolk, they have exerted a strong influence on the soils and have significantly influenced both the early colonisations of the area and subsequent agricultural development.

Post-glacial deposits in North Norfolk include river terrace deposits which are composed of river deposited fluvial sands and gravels, alluvium which are deposits of sand, silt or clay on river flood plains and peat which is also generally found associated with river valleys.

Head was produced near to ice sheets through the passage of time since the last ice age. It formed as a result of the slow movement down slopes of surface material, which was due to the alternate freezing and thawing of the water, contained in it. In places it blankets valley sides and bottoms. Its components include sand, gravel, silt and clay and can be important conduits for fluids.

Wind-transported sands and silts cover much of the district. These deposits are called loess. The sand and silt were derived from the vegetation free areas around ice sheets. The loess is not of uniform thickness due to the strength of the wind and the topography at the time of deposition. It forms a blanket of 4-5 m in some valleys and 0.5 m on some crests. This loess is the parent material of soils in many places.

2.3.2 Soils



Contamination affects soil quality and can prevent soil from carrying out its functions effectively. In particular, it may affect soil fertility, reduce crop yields, damage the ecosystems dependent upon soil and reduce its ability to filter substances from water and the atmosphere. Contaminants may be transferred to the food chain with implications for human and animal health, and may lead to other forms of pollution, such as water pollution and odour nuisance.

The Ground Water Vulnerability maps ⁽⁵⁾ have grouped soils into three soil vulnerability classes High, Intermediate and Low leaching potential based on the soil's physical and chemical properties which affect the downward passage of water and contaminants. Descriptions of these soils can be examined in Table 1 below:

Table 1 Soil Vulnerability Classifications: Soil survey for England and Wales 1983 ⁽⁶⁾

High Leaching Potential

“soils with little ability to attenuate diffuse source pollutants and in which non-adsorbed diffuse source pollutants and liquid discharges have the potential to move rapidly to underlying strata or to shallow groundwater”

Association	ID	Location	Description
Newchurch 2	814c	River Thurne in the far south east of the district	deep, stoneless, mainly calcareous, clayey soils
Newmarket 1 & 2	343f,g	Around the river Stiffkey in the north west of the district	well drained calcareous sandy and coarse loamy soil over chalk
Newport 4	551g	Sheringham stretch of the coast	glacial-fluvial deposits and is described as deep well-drained sandy soils
Sandwich	361	Blakeney Spit and the coastline running between Waxham & Horsey	deep well drained calcareous and non-calcareous sandy soils
Barrow	581	Letheringsett, Wiverton and Langham	coarse loamy, coarse loamy over clayey and sandy soils
Wick 2 & 3	541	East of the district	well-drained, coarse, loamy, often stoneless soils

Intermediate Leaching Potential

“Soils of intermediate leaching potential have a moderate ability to attenuate diffuse source pollutants or in which it is possible that some non-adsorbed diffuse source pollutant and liquid discharges could penetrate the soil layer”

Association	ID	Location	Description
Altcar 2	1022 b	around the Broads where the water level is often high	Deep peat soils
Burlingham 1 & 3	572 n, p	found in the west of the district	Chalky till and glacial-fluvial drift deposits
Hanworth	871 c	around the river valleys in the east of the district	Peaty or humose surface Horizon and some associated peat soils

Low Leaching Potential

“Soils of low leaching potential are soils in which pollutants are unlikely to penetrate the soil layer because either water movement is largely horizontal, or they have the ability to attenuate diffuse pollutants”

Association	ID	Location	Description
Beccles 1 & 2	711 r, s, v	south west of the district and around the Broads area	Seasonally waterlogged, loamy soils over clayey soils.
Wallasea 1 & 2	813 f, g	situated around the mouth of the Stiffkey River and Blakeney Marshes	Deep stoneless non calcareous and calcareous clayey soils. Soils locally have humose or peaty surface horizons

2.4 Hydrogeological characteristics and key water resource/protection issues

2.4.1 Groundwater

Groundwater is contained within underground strata (aquifers) of various types. The information on the Groundwater Vulnerability Maps states that groundwater is usually of high quality and often

requires little treatment prior to use. It is, however, vulnerable to contamination from both diffuse and point source pollutants, from direct discharges into groundwater and from indirect discharges into or onto land. Aquifer remediation is difficult, prolonged and expensive and therefore the prevention of pollution is important to protect drinking water supplies and water resources.

It is North Norfolk District Council's view, in consultation with the Environment Agency, that when relating to contaminated land investigations, groundwater will be defined as only the saturated zone of the underground strata. Above that, contamination will be considered as being within the soil only.

Referring to the Groundwater Vulnerability map, the entire district has a geological class of Principle Aquifer. The Chalk and the Crag Formations (excluding mudstones) are the main aquifers in the district. These aquifers are highly permeable formations that support large abstractions for public and private supplies as well as industrial and agricultural use.

These Groundwater Vulnerability maps assess the vulnerability of groundwater to contamination by overlaying an assessment of the overlying physical and chemical properties of the soils onto the underlying geological information including rock type and permeability characteristics. The majority of the east of the district is classed as high vulnerability. The river valleys and the Broads area are classed as being intermediate to low vulnerability. Most of the west of the district has a class of intermediate and low vulnerability with some areas of high vulnerability around the coastal area.

2.4.2 Special sites and controlled water

Regulation 2 of the Contaminated Land (England) Regulations (2012), defines land which should be designated as a Special site. This includes situations where controlled waters are at greater risk due to underlying geology. For full details of the various types of Special site please see chapter 5 Liaison and Communication.

The pollution of controlled waters relating to the underlying geology is defined in regulation 3(c)(ii) as:-

'land, where controlled waters are being affected by the land and the waters, or any part of the waters, are contained within underground strata which comprise wholly or partly any of the formations of rocks listed in paragraph 2 of Schedule 1'.

The Upper Cretaceous Chalk and the Pleistocene Norwich Crag are listed in paragraph 2 of Schedule 1. Therefore, if any of the groundwater in these aquifers in North Norfolk District Council area are contaminated, this is classified as 'pollution of controlled waters' and should be designated a 'special site'. The Environment Agency does enforce special sites but NNDC is required to declare them to the Environment Agency. Please refer to chapter 5 Liaison and Communication for full details of liaison between local authorities and the Environment Agency.

2.4.3 Public water supply

The water company Anglian Water supplies the mains water to the district. Anglian Water has 13 source points spread over the district.

2.4.4 Abstraction licenses

All abstractions of surface or underground water normally require a licence issued by the Environment Agency. However, there are a number of exceptions that include abstractions up to 20 cubic metres per day. The Environment Agency has informed us that there are over 100 abstraction points. These licences mainly cover abstractions used for industry, agriculture and larger private water supplies.

2.4.5 Private water supplies

There are approximately 420 private water supplies situated within the district. These serve a residential population of approximately 1,700 people. The water is mainly supplied from boreholes or wells at varying depths. The Private Water Supplies Regulations 2009 ⁽⁷⁾ regulate these supplies.

2.4.6 Groundwater Source Protection Zones

The Environment Agency has defined Source Protection Zones (SPZ) for groundwater sources used for public drinking water supply and larger licensed groundwater abstractions used in breweries and for food processing etc.

According to information from the Environment Agency Internet site ⁽⁸⁾, there are 15 complete or partially complete groundwater source catchments located within the district. Most of the source catchments in the district are subdivided into three zones, which the Environment Agency defines as follows:

The *Inner Protection Zone* is defined by a travel time of 50 days or less from any point within the zone at, or below, the water table. Additionally, the zone has as a minimum, a 50-metre radius. It is based principally on biological decay criteria and is designed to protect against the transmission of toxic chemicals and water-borne disease.

The *Outer Protection Zone* is defined by the 400 day travel time, or 25% of the source catchment area, whichever is larger. The travel time is derived from consideration of the minimum time required to provide delay, dilution and attenuation of slowly degrading pollutants.

The *Total Catchment Zone* is defined, as the total area needed to support the abstraction or discharge from the protected groundwater source. The shape and size of the zones is controlled by many factors. Some of these reflect natural hydrogeological conditions, other environmental factors and the operation of the groundwater abstraction.

The SPZ relates purely to groundwater flow below the water table and does not take into account the depth to groundwater and the nature of the overlying soils and rock. It is therefore useful to use the Groundwater Vulnerability maps as these take into account the influence of the overlying rocks and soils on the groundwater vulnerability.

2.4.7 Surface waters

The district also has many areas of environmentally sensitive surface waters such as the rivers, streams and coastal waters. Base flow discharges to streams from the saturated zone of the underground strata thus maintaining the flow during dry weather. Streams are a sensitive receptor of

contamination and those supplied with base flow could be affected by contaminated land some distance away.

Due to the geology, soil and hydrology characteristics of the North Norfolk District Council area, the threat of contamination to the groundwater is potentially very serious.

2.5 Protected ecological systems

2.5.1 Sites of International importance

The UK is a contracting party to the Convention on Wetlands of International Importance, which it ratified in 1982. The first conference of the Convention was held in Ramsar, Iran in 1971. Consequently, Ramsar is the term by which sites identified under the Convention have become known. Ramsar sites include rare wetlands of international importance with particular reference to wildfowl populations. Special Protection Areas (SPAs), designated by member states under Article 4 of the European Community Wild Birds Directive, are designed to conserve the habitat of rare or endangered birds, or birds whose habitat is threatened, by protecting habitats from pollution, disturbance or deterioration. The North Norfolk Coast Ramsar Site and SPA covers eight parishes and the Broadland Ramsar Site and SPA covers part of the parish of Potter Heigham on the edge of the district. Some of Great Yarmouth North Denes SPA is within the North Norfolk District Council area.

Special Areas of Conservation (SACs) are European designated sites and include species and/or habitats of European importance. The sites will also already be SSSIs. There are currently eight SACs within the North Norfolk District (Appendix 2). There is a category called candidate SACs, which are SACs that have not yet been ratified. SPAs and SACs together make Natura 2000, which is an overall network of protected areas throughout Europe.

2.5.2 Sites of National importance

The Wildlife and Countryside Act 1981⁽⁹⁾, Section 35, gives Natural England the power to designate areas of land that contain flora, fauna, geological or physiographical attributes of national interest as National Nature Reserves. There are 7 National Nature Reserves in the district listed in Appendix 2.

There are currently 44 Sites of Special Scientific Interest (SSSIs) in the North Norfolk District. These are areas of land which Natural England has deemed to be of special interest by reason of their flora, fauna or geological or physiographical features (Listed in Appendix 2). These sites are notified under Sections 28 or 29 of the Wildlife and Countryside Act 1981.

2.5.3 Sites of regional/local importance

The National Parks and Access to the Countryside Act 1949⁽¹⁰⁾, Section 21, empowers local authorities to provide for the establishment of Local Nature Reserves and their management. There are six Local Nature Reserves situated in North Norfolk (Listed in Appendix 2).

Protected ecological systems are potential receptors for contamination and their proximity to contamination or a pathway of contamination will be taken into account when risk assessing potentially contaminated land sites.

2.6 Key property types

Buildings of particular importance are identified as Listed Buildings. There are over 2000 Listed Buildings which are separated into the three grades of I, II* and II.

There are 84 Scheduled Ancient Monuments in the North Norfolk District (Listed in Appendix 2). A Scheduled Ancient Monument may also be a Listed Building. The proximity of Scheduled Ancient Monuments to potentially contaminated land sites will be included as a factor in the risk assessment.

Conservation Areas are areas of special architectural or historic interest, the character or appearance of which is desirable to preserve or enhance. There are 80 Conservation Areas in the district

There are many Archaeological Sites, Historic Parks and Gardens, Buildings at Risk and National Trust sites in the District. The County Sites and Monuments Record contains information on over 3000 entries of archaeological interest in North Norfolk. These include only the known sites and there may be many more as yet undiscovered. There are 33 Historic Parks and Gardens identified in North Norfolk.

2.7 Population and geographical distribution

The District had an estimated resident population of 100,800 taken from the 2007 ONS population. The principal settlements of the District are its seven towns, namely North Walsham, Cromer, Fakenham, Sheringham, Holt, Stalham and Wells Next to the Sea. However, 56% of the District's population lives in the many villages, hamlets and scattered dwellings that are dispersed throughout rural North Norfolk.

2.8 Details of publicly owned land

2.8.1 NNDC currently owned land

The Property and Estates department hold details of the land currently in NNDC ownership on the Council's Geographical Information System (GIS), annotated maps and other systems. The use of this land includes Council housing, car parks, amenity land and Surveyors' Allotments. There are 87 Surveyors' Allotments recorded in North Norfolk. They were historically used to provide material for road building when they became disused they were often used as waste tips. Many of them are unknown filled ground or quarrying of sand and gravel.

2.8.2 NNDC previously owned land

The area of land sold off over the past 100 years is approximately 176.5 ha. Some has been sold for building residential properties, some near to towns for industrial estates and about 4000 council owned properties have been sold under the Right To Buy scheme. Each NNDC owned area of land has a Title Deeds packet held in the Legal Section. New owners of a NNDC previously owned plot of land are written onto the Title Deeds.

2.8.3 Common land

Norfolk County Council (NCC) holds the original copy of the Common Land Register for Norfolk. A copy of the information about common land in the North Norfolk District Area is held in nine files in the Strong Room at the Council Offices in Cromer. Norfolk County Council sends updates of the Register to NNDC when any changes have occurred. NCC, NNDC, Parish Councils, or private owners may own the Common Land. If there is no known owner, NNDC may have responsibility for the land.

2.8.4 NCC owned land

Norfolk Property Services (NPS) is a trading unit of NCC that owns land in the NNDC area. This includes schools, fire stations, highways, depots and libraries. Information about these sites is held in hard copy in the Environmental Health Division at NNDC. NPS do not have a list of land previously owned by NCC, but do have records going back to the 1980s which could be searched for an individual site. NPS also holds records for Rural Estates owned by NCC and leased to tenant farmers in the NNDC area.

2.8.5 Parish and Town Council owned land

North Norfolk District Council does not currently hold information about land owned or previously owned or occupied by Parish and Town Councils. This information will be collated in due course.

2.8.6 Land ownership searches

To find information concerning the ownership of land, the first step is to check if the land is owned by NNDC using the GIS system and liaising with the Property & Estates Dept. In addition, information should be gained from NCC or Parish and Town Councils. If the land is owned by NNDC, the Title Deeds can be used to gain more information. If NNDC or another Council does not own the land, the next step is to undertake a Land Registry search to identify the private landowner. Land Registry searches are generally conducted through an online service for which NNDC has access. There has been a voluntary registration of land since the 1920s: it makes land easier to sell. Norfolk has only had compulsory registration since the early 1990s; hence a great deal of land may not be registered. If the land were not registered then other enquiries would need to be instigated.

2.9 Current land use characteristics

A large proportion of the land within North Norfolk area is utilised for farming & agricultural activity. Wheat and barley production occupies the largest percentage of agricultural land, with sugar beet, potatoes, and field beans and livestock production representing a smaller proportion of the total agricultural land. Good agricultural practice is important to ensure diffuse inputs of pollution are minimised.

Other non-agricultural land includes ten sites of Ministry of Defence currently owned land, areas of woodland and Heathland and properties and gardens in and around the villages.

Urban land is associated with the seven main towns in the district.

2.10 Current and past industrial history

2.10.1 Textiles

The manufacture of textiles was for many centuries the most important industry in Norfolk. There are records of Worstead and linen weavers in North Norfolk between 1370 and 1800.

2.10.2 Tanning

Tanners and tanning are recorded in North Norfolk during the 17th century until around 1850. We are aware of a site believed to be used for leather tanning and dressing with a date of 1905. The numbers recorded are low but there may have been smaller businesses not recorded. Tanning needed oak bark for the tar pits, fresh water for washing the hides in the pits and lime for slaking the raw hides. They were mainly situated away from houses due to the unpleasant smell. The chemicals, such as the tanning agents, biocides, metal compounds and methods used in the tanning process, have implications for contaminated land. As most of this type of industry were in operation earlier than current records, data research into their locations needs to be undertaken.

2.10.3 Brewing

In the 18th century, brewing and malting consisted of many small-scale operations but at the end of that century the numbers had decreased until only a few larger businesses supplied public houses. This trend has continued until the present day. There are three brewing and malting sites dated between 1888 and 1958, one of which was recorded in 1985. One is still in operation at Great Ryburgh.

2.10.4 Metal industry

Iron founders and agricultural engineers were important industries in North Norfolk in the 19th century, especially due to the manufacture of agricultural implements. As the products were difficult to transport, the foundries were initially small and supplied products such as fire grates, drain covers and gateposts to the local community. As transport improved, the number of foundries reduced. There are currently no operating foundries in North Norfolk. There are two 'heavy product manufacture' sites and four 'metal casting/foundry' known between the dates of 1888 and 1952.

2.10.5 Timber manufacture

There are nine sites of sawmills and timber treatment dating from 1889 to 1990.

2.10.6 Railways

Railway building started in North Norfolk in the 1850s. Some of the lines and freight yards and depots are now disused. The railway land in North Norfolk is classed as potentially contaminated land.

2.10.7 Extraction industries

Chalk has been quarried for lime production to use as blocks for building, for road building and to extract flint. Historically lime was manufactured in North Norfolk by burning chalk in lime kilns. The main uses of lime were in agriculture, to increase the pH of the soil, in making mortar and lime wash and also in the tanning process. Lime was difficult to transport so it was produced close to where it was required, therefore the kilns were often near to the chalk pits. Flint was the most commonly used building material in North Norfolk due to the lack of hard rock in the area.

Gravel was historically quarried from small pits for a village to use for road making and mending, known as Surveyors' Allotments. Currently there are six active mineral workings in the district. Five sites are extracting sand/gravel and one is extracting chalk.

Brick making reached its peak in Norfolk around the middle of the 19th century. Brick earth was excavated and fired in temporary clamps or permanent kilns. There are records of some parishes in North Norfolk having up to three brickyards and Wells is recorded as having four or five. There are up to 48 sites of clay brick and tile manufacture, but none are known to be in operation in the present day.

Some of the agricultural land in North Norfolk is acidic sandy soil which was historically improved by spreading on chalky clay called marl. Marl had been used as far back as the 13th century and its increased use in the late 18th and 19th centuries led to pits being dug on most farms where it was found.

2.10.7 Landfill

Information on active landfill sites is taken from the current Norfolk County Council list. There is only one designated household waste landfill site within the district (Edgefield). There are no facilities for disposing of liquid, clinical and/or special waste, but there are five household waste recycling centres in the district. Active waste handling sites do not come under the Contaminated Land regulations ⁽³⁾ as the Environment Agency already regulates them.

There are a large number of closed landfill sites currently within North Norfolk, some are still undergoing monitoring by either NCC or NNDC, while the remaining sites are distributed across the district. The current Norfolk County Council data base indicates that approximately 28 closed land fill sites currently exist, a number that is likely to increase.

2.10.8 Brownfield sites

A Brownfield Site has been defined as 'any land or premises which has previously been used or developed and is not currently in use, although it may be partially occupied or utilised. It may also be vacant, derelict or contaminated'. The National Land Use Database (NLUD) includes a National Brownfield Sites Survey. Identified sites in NNDC have been collated and are held as paper copies in the Forward Plans Department.

2.10.9 Factory or works

There are about 27 Factory or works, use not specified sites dated between 1950 to 1993. These sites will require further investigation to identify their past and current uses.

2.11 Known information on potential contamination and specific local features

Natural levels of arsenic within North Norfolk soils have been known to exceed screening values associated with contaminated land assessment criteria, including the CLEA guidance values. In the event that this situation were to arise, reference can be made to the British Geological Society who have published a range of geochemical maps providing data on background concentrations of Arsenic⁽¹²⁾

The large number of extraction pits in the district have an important implication for the contaminated land investigation due to the possibility of uncontrolled infilling and dumping of rubbish in these pits. Most of these sites are quarrying of sand and clay or unknown filled ground.

The large area of intensively farmed land in North Norfolk and hence the large number of farmyards need to be taken into consideration with relation to potential land contamination by chemical and fuel storage, pesticide application etc.

All sites currently owned by the Ministry of Defence will be classed as 'Special Sites'. However a number of former military sites have been disposed of by the Ministry of Defence in recent years, including airfields and radar installations etc.

2.12 Redevelopment history and controls

Planning conditions have been attached to planning consents where there have been concerns that land may have been potentially contaminated. Such conditions will have required a site investigation and remediation measures as appropriate. These sites will be risk assessed and inspected as part of our contaminated land programme. This is to ensure that sites are suitable for their current or consented use and that any remediation undertaken is appropriate. In addition advisory notes have been attached where conditions are not appropriate e.g. non-invasive works as such as change of use.

The Environmental Health Department has provided advice and information on contaminated land for Local Plan allocations and development briefs produced by the Planning Departments Forward Plans section.

Building control consents may have requested investigation and remediation measures for potentially contaminated land. Liaison has occurred with Environmental Health on this issue.

2.13 Action already taken to deal with land contamination

The purchase of data for the GIS system (as described in chapter 8 Information Management) has been very useful in highlighting potentially contaminated land to NNDC. This has enabled automatic consultation requests to be produced by the Planning Department's Development Control section in connection with 2.12 above. In addition, the database stored on GIS has been utilised by Land charges to answer the new Land Charges questions and provide information on known previous or current land uses.

In recent years, following reports from the public, the Environmental Health Department has been involved in case studies and investigations of alleged statutory nuisance, involving contamination or possible contamination of land. These have been dealt with as necessary to resolve the urgent issues at the time. They may not have addressed any underlying contamination issue.

3. Priority Actions

3.1 Priorities

It is recognised that dealing with inspection and remediation of land will be a progressive activity. One of the primary purposes of this strategy document is to set out how sites are to be dealt with in an appropriate order and to identify those sites representing the greatest risks. While undertaking this process we recognise the dangers associated with creating 'land blight' and we will seek to minimise the potential for this to occur as far as possible.

The setting of priorities for an inspection programme is influenced by the following:

- Knowledge of former land use and the potential for contamination in the District as a whole.
- The need for preliminary inspection of the District.
- The need to address individual contaminated land problems currently in hand which are known to the authority or have arisen through the planning process.
- The resources available to undertake inspections.

The underlying theme for any prioritisation scheme must be to address those issues posing the greatest risk to health or the environment. For any given contaminated site the key threats are posed by:

1. Physical exposure to the contaminants on the site by current occupiers/users of the site.
2. Physical exposure to the contaminants on the site not currently a problem but likely to become a problem in the future to occupiers/users of the site in any redevelopment of the site (change in pathway/receptor).
3. Physical exposure to the contaminants on a site by current occupiers/users of neighbouring sites.
4. Physical exposure to the contaminants on the site not currently a problem but likely to become a problem in the future to occupiers/users of neighbouring sites in any redevelopment of the site (change in pathway/receptor).
5. Contaminants from a given site migrating to other land (primarily through leachate) currently affecting occupiers/users of the other land.
6. Contaminants from a given site migrating to other land (primarily through leachate) affecting occupiers/users of the other land at some future date.

It is recognised that the factors above are likely to change overtime for any given site. In view of this the Council recognises the need to reassess each site as an when changes occur (see section 7). The initial prioritisation process for each site will be via the NNRAPP procedure, which is fully described in Appendix 3.

The priorities and timescales for dealing with land once it has been identified as contaminated are a separate issue outside the scope of this document. It is essential that the scheme of land inspection and the timescale involved is not adversely influenced by the need to allocate resources to deal with or remediate known contaminated land.

4. Procedures

4.1 Internal management

The NNDC Contaminated Land Officer is responsible for inspecting the district and identifying contaminated land. This initially consists of conducting a 'desk based' generic risk assessment of each identified site, followed by a site inspection to corroborate conclusions of the desk based assessment. Once inspected, sites will be categorised according to a perceived level of risk and entered into the risk assessment prioritisation tool (CLAND software).

4.2 Local authority interest in land

In terms of council ownership, there will be no biased distinction when dealing with land as a whole and an even-handed approach will be maintained for all land within the district. The initial risk assessment and site prioritisation process will be adhered to, thus allowing both external bodies and the general public to have confidence in the Council's decisions regarding contaminated land.

The Council will act in accordance with the DEFRA advice that 'The duties of an authority as a regulator should be kept clearly separate from the responsibilities which arise as a landowner or polluter'. As such, it is believed that the Estates and Property department should have the responsibility for undertaking any site investigations and remedial works as is required after the site specific risk assessment has been conducted by the Contaminated Land Officer.

When the Council is to purchase or lease land the appropriate department will contact the Contaminated Land Officer who can provide further details as to the history of the site and advise on any contamination issues, thus reducing the Council's liabilities to a minimum.

It is also essential that the Contaminated Land Officer is consulted prior to any development or groundwork that is to be conducted on any land that the Council currently owns, so that any potential contamination issues can be dealt with.

4.3 Information collection

During the identification of potential sources and receptors, a large amount of information is required from many different sources. As a guide many of these sources are listed in Table 2.

This information is used to form the basis of the Councils own risk assessment, NNRAPP. The initial risk assessment form and the hazard score sheet for NNRAPP are set out in Appendix 3.

4.4 Information and reports of alleged contamination

It is likely that the Council will receive reports or enquiries regarding areas of contaminated land from members of the public, businesses and community groups. These reports or enquiries could possibly impact on the strategic approach to inspection thus the following procedures are to be adopted to minimise this affect.

Table 2 Sources of Information on Potential Contaminated Land

Information Source	Details	Used to identify
North Norfolk District Council	Private Water Supplies	Potential pathways and receptors
	Local Plan	Potential receptors
	Planning Records	Potential sources & receptors
	Part B Process	Potential sources
	Site Investigation Reports	Potential sources & pathways
	Corporate GIS (e.g. ecological systems)	Potential sources & receptors
	Council owned land details	Potential sources & receptors
Environment Agency	Location of abstraction licence points (groundwater & surface water)	Potential pathways & receptors
	Source Protection Zones	Potential pathways & receptors
	Known water pollution incidents	Potential pathways & receptors
	LA-IPPC Register	Potential sources
	Waste Management Licences	Potential sources
	Hydrogeological Information	Potential pathways & receptors
Norfolk County Council	Landfill data (closed & open)	Potential sources
Landmark	Previous land use data	Potential sources
British Geological Survey (BGS)	Geological Information (drift & solid)	Potential sources & pathways
Ministry of Defence	List of current and previously owned land	Potential sources & receptors

4.4.1 Reports of alleged contamination

All reports received by the Environmental Protection Team will be passed on to the Contaminated Land Officer for further inspection. Details of the report will be recorded on the Protection Team M3 computer system.

If required, an initial site investigation will be undertaken by the Contaminated Land Officer, allowing the site to be allocated a risk category. The overall process is schematically described below (Figure 6). It is quite possible that the final risk assessment of a site will not be carried out until a number of years after the initial risk assessment has been undertaken. If circumstances change within that time then the initial risk assessment will be undertaken again to see if the site priority changes.

4.4.2 Information received by internal notifications

Information that is passed to the Contaminated Land Officer via internal notification will not be dealt with as a reported case. The information will be filed in the case file and a GIS polygon generated if there is one not currently on the system. This information will then be used as part of the initial generic risk assessment to be undertaken on the site. (See chapter 7 Review Mechanisms)

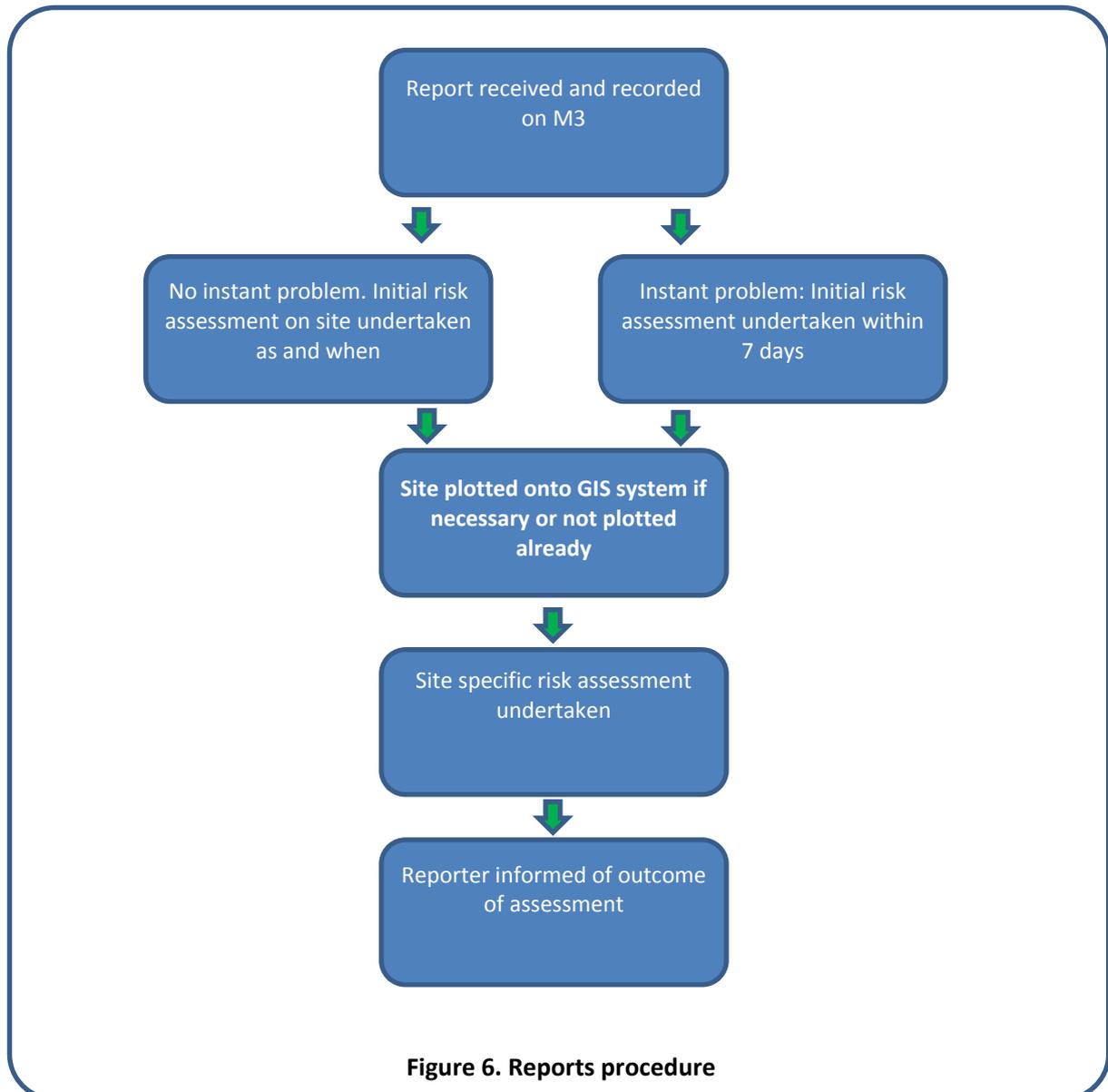


Figure 6. Reports procedure

If the information provided deems the site an urgent problem then the fast track procedure within Figure 7 should be used. This will be down to the Contaminated Land Officers' discretion.

The individual who provided the information will only be informed of the outcome of the risk assessment and any further actions if they express so on the original notification form.

4.4.3 Confidentiality

In line with the Council's current procedures all reporters' identities shall be kept confidential. The only circumstance where the information might be made public is where a remediation notice has

been appealed in a court of law and the main reason for the designation of the land was its adverse effect on the reporters’ health. When any report is received all reporters will be made aware of this fact.

In some circumstances, information may be deemed too commercially sensitive or will affect national security. This information will be assessed and if the Council agrees then it will be kept confidential, in line with the statutory guidance ⁽⁴⁾.

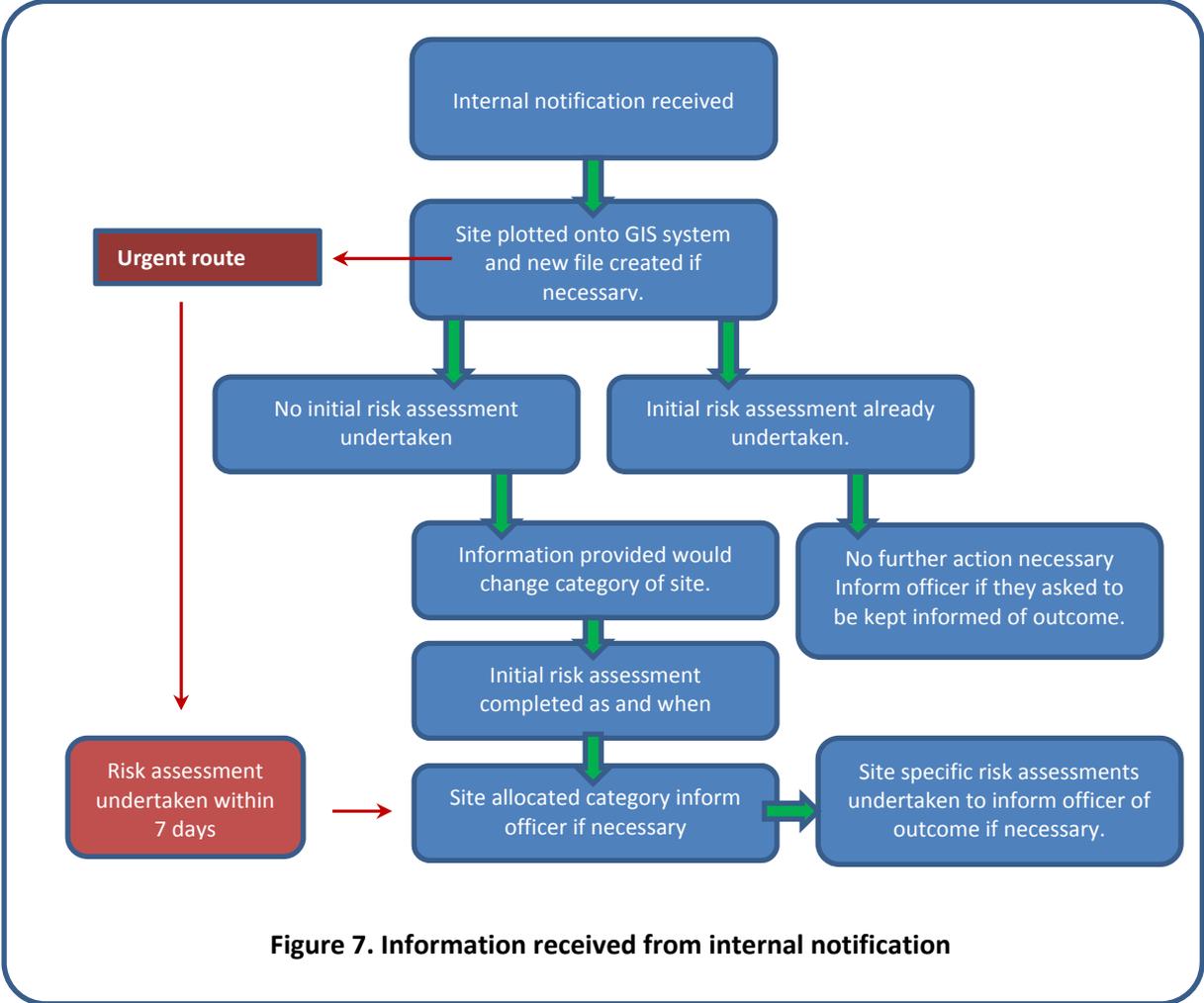


Figure 7. Information received from internal notification

4.4.4 Information (voluntary)

If information that is passed to the Council from an individual or organisation about contaminated land does not directly affect the latter, this is not dealt with as described in the procedure outlined in Figure 6, but will follow the procedure as outlined in Figure 7 above. The information provided will be filed on the case file and a GIS polygon will be generated if one is not already on the system for that site. This information may then be acted upon when the initial risk assessment is undertaken. The Council will inform the provider of the information with the outcomes of the risk assessment but only if the provider expresses an interest in knowing when providing the information.

4.4.5 Information (anonymously)

It is general practice within the Council that investigations based on anonymously supplied information are not undertaken. This will be adopted for the contaminated land regime. The information will be filed on the case file and may be acted upon after initial investigations have

confirmed this information. This does not rule out investigation of anonymous information in exceptional circumstances. This would normally be on the severity of the claims made.

Again this information will be recorded on the case file. A GIS polygon will be generated if deemed necessary and the information will be used during the risk assessment of the site.

4.5 Information evaluation

The information provided on substances that may cause significant harm or pollution will be evaluated against current government guidelines and other appropriate information. Current guidelines are issued by DEFRA and form the basis of contaminated land exposure assessment (CLEA). The focus of current guidance is specifically directed towards human health.

When it is not appropriate to use or the substances in question are not covered by the CLEA guidelines then the Council will make reference to other guideline values issued by other professional bodies and organisations such as CLAIRE, LQM and ATKINS. When using these alternative values the Council will have to bear in mind how these values are derived and provide valid justification for their use.

When risk assessing information on pollution to controlled waters primarily advice will be sought from the Environment Agency. The information will be evaluated in accordance with Environment Agency guidance document – ‘Methodology for the derivation of Remedial Targets for Soil and Groundwater to protect Water Sources’⁽¹³⁾.

4.6 Details of previous remediation

When the Council receives information on previous remedial action on a site, it must satisfy itself that the land in question is in a condition that is ‘SUITABLE FOR USE’. As the standards of clean up and the industrial practices of the past may be subject to lesser controls, it is possible that the remediation may not be up to today’s standards. Information on the date and type of remedial action will be recorded and subsequent site investigations taken into account.

4.7 Interaction with other regulatory regimes

There is a certain degree of overlap between existing environmental regulations and Part 2A, this is schematically described in Figure 8 below and further described in the following sub sections:

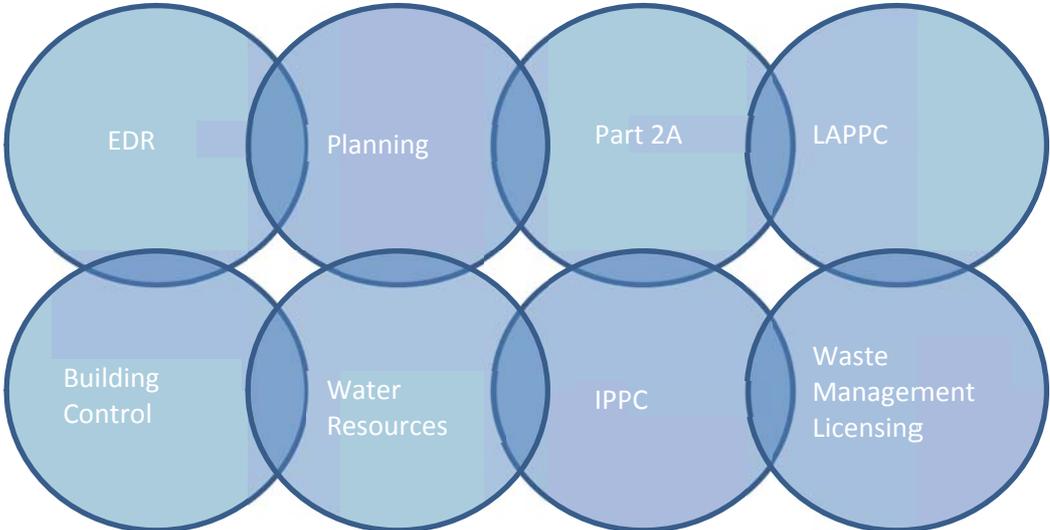


Figure 8. Regulation overlap

4.7.1 Planning

Contaminated land is a material planning consideration. It is expected that for the redevelopment of Brownfield sites the primary mechanism for dealing with contaminated land will be the planning process, not part IIA. The Councils GIS system will allow any areas of potential contamination (which are plotted on it as polygons) to be seen by the development control officers within the planning section. The system will produce an automatic consultation for these sites so that the Environmental Protection Team can attach appropriate conditions or notes.

4.7.2 Building control

The Building Regulations 2010 ⁽¹⁴⁾ (made under the Building Act 1984) can require measures to be taken to protect the fabric of new buildings and their future occupants from the effects of contamination found on or under the ground. Approved Document Part C: Site Preparation and Resistance to Moisture ⁽¹⁵⁾ gives guidance on these requirements. The Environmental Protection team will liaise with Building Control on issues relevant to Contaminated Land. Arrangements have been made for Building Control to access the GIS system to view any areas of potential contamination which are plotted as polygons.

4.7.3 Water Resources

The Environment Agency has powers to deal with pollution of controlled waters caused by contaminated land under the Water Resources Act 1991 ⁽¹⁶⁾. Part IIA does not actually revoke these powers but will work in tandem with them.

In cases where pollution of controlled waters is being caused, irrespective of which Authority identifies the problem, full cooperation and notification between the Local Authority and Environment Agency shall ensue. This will ensure that the appropriate remediation is undertaken and the correct entries are recorded within the contaminated land register.

4.7.4 Integrated Pollution Prevention Control (IPPC)

IPPC is concerned with controlling the environmental impact of installations which carry out any activities listed under the heading "Part A (2)" in Part 2 of Schedule 1 to the Environmental Permitting (England & Wales) Regulations 2010 ⁽¹⁷⁾.

Within the district there has been only a small amount of large-scale industrial development. There are currently 25 Integrated Pollution Prevention & Control (IPPC) Processes. There are 33 at Bacton gas terminal where North Sea gas is processed, and 19 which are predominantly pig and poultry farms and landfill sites. These sites are permitted by the Environment Agency.

Current and new sites where breaches of conditions have occurred which have affected the quality of the land will be dealt with under the IPPC regime, however clean up relating to a site will only be to the standard it was prior to the commencement of operation on the site. It will not go as far as the suitable-for-use approach to be used under Part IIA.

4.7.5 LAPPC Sites

LAPPC is concerned with controlling the environmental impact arising from pollution emitted into air from installations listed under the heading “Part B” in Part 2 of Schedule 1 to the Environmental Permitting (England & Wales) Regulations 2010.

At the time of writing there are 50 Part B processes in the District, permitted by North Norfolk District Council. These consist of mainly cement batching plants, concrete crushers, waste oil burners and petrol stations. A number of small industrial estates have developed in many of the major towns.

4.7.6 Waste Management Licensing (Part II EPA 1990)

There are three areas where the Part IIA regime and the waste management licensing system could interact:

- Where significant harm or pollution of controlled waters has arisen from land holding a site licence under Part IIA, it cannot be classified as ‘contaminated land’ but would be dealt with through a condition attached to the site licence. However, Part IIA does apply if the harm or pollution has been caused by an activity authorised by the licence or it is attributable to a cause other than a breach of the site licence.
- The enforcing authority acting under Part IIA cannot serve a remediation notice in any case where the contamination has resulted from an illegal deposit of controlled waste. This is investigated by the Environment Agency.
- It is likely that remediation activities that are undertaken on contaminated land may be subject to the licensing requirements of the Waste Management Licensing System.

4.7.7 Environmental Damage Regulations (2009)

EDR regulations 2009 ⁽¹⁸⁾ are designed to deal with and ensure the remediation of sites where environmental damage has occurred. The legislation is applicable to operators of any economic activity (specifically schedule 2 activities), whether public or private and whether or not the activity is carried out for profit. This legislation is not applicable to cases where environmental damage occurred prior to 1st March 2009) and should only be used in circumstances where there is an imminent environmental threat to species & habitats, land, and controlled waters.

5. Liaison and Communication

5.1 Local authority contacts

Identification and enforcement

Environmental Health Service (Environmental Health)

Contact: Contaminated Land Officer

Telephone: (01263) 516372

Building Control

Contact: Building Control Manager

Telephone: (01263) 516132

Development /Planning

Contact: Head of Planning

Telephone: (01263) 516135

Civil Contingencies

Contact: Civil Contingencies Manager

Telephone: (01263) 516269

Landowners

Leisure

Contact: Leisure and Locality Services Manager

Telephone: (01263) 516002

Property Services

Contact: Assets and Property Programme Manager

Telephone: (01263) 516210

Public information/education

Land Charges

Contact: Property Information Team Leader

Telephone: (01263) 516013

Media and Communications

Contact: Communications and PR Manager

Telephone: (01263) 516344

Legal

Contact: Legal Services Manager

Telephone: (01263) 516045

5.2 Consultation with stakeholders

As part of the assessment of potentially contaminated sites, it is preferable to identify all individuals and groups which may have an interest in the site. These are known as stakeholders. They can be people with professional or financial interest. They may also be members of the local community. The stakeholders may not be situated in the local area or within the District Council boundary. They may be a receptor at the destination of a pathway or they may be a national group with a local interest.

5.2.1 Regularly consulted bodies

Liaison between the local authority and other organisations with an interest in a particular site is of key importance. This will prove useful to both sides in obtaining all the relevant information about a potentially contaminated site.

These organisations include:

- **The Environment Agency (EA)**

The Environment Agency is the primary regulatory body for 'special sites'. Special sites are designated if the land is contaminated and they fall within one or more of the following listed within the Table 3 below:

Table 3. Determination process

Site	Examples
<i>Water-pollution cases</i>	-Wholesomeness of drinking water -Surface-water classification criteria -Major aquifers
<i>Industrial cases</i>	-Waste acid tar lagoons -Oil refining -Explosives -IPPC sites -Nuclear sites
<i>Defence cases</i>	-Current military, naval and air force bases -Manufacture, production and disposal of chemical and biological weapons

Adjoining or adjacent land becomes a special site if it receives substances from the original special site. The Environment Agency is responsible for the adjacent land so a split in regulatory control does not occur.

The Environment Agency already has wide powers to regulate land used for waste management. For additional information or any queries please contact the Environment Agency's Waste Licensing Team in Norwich.

Designation of a special site involves liaison between the Environment Agency and the local authority. The first point of contact will be the Contaminated Land Officer. If the local authority finds

a site, which believes to be a special site, it must inform the Environment Agency. Notification allows the Environment Agency to decide whether:

- a) The land should be designated
- b) It wishes to provide site-specific guidance on remediation
- c) It requires further information from the local authority in order to prepare its national report.

If the Environment Agency does not agree with the designation, it must inform the local authority within a period of 21 days after the initial notification. The Environment Agency must also copy the notification and statement to the Secretary of State. The local authority must then refer all decisions to the Secretary of State. However, if the Environment Agency agrees with the decision or does not contact the local authority within 21 days, the area is designated as a special site.

The Environment Agency may also discover potential special sites. These have to be made known to the local authority. If the local authority agrees, the area is designated as a special site. If the local authority disagrees, there is a period of 21 days for the Environment Agency to reaffirm its decision. After this time, the decision is made by the Secretary of State. After a site has been designated, the appropriate people must be contacted and the information placed on the public register.

- ***English Heritage***

This organization is concerned with the historic environment. It exists to protect historic landscapes, buildings and archaeological sites. English Heritage may be aware of any possible contamination on sites, which they protect. They may have uncovered possibly contaminated sites during archaeological digs. Due to the presence of a large number of historical sites in North Norfolk, English Heritage will be an important contact.

- ***Natural England***

Natural England promotes conservation of wildlife and natural features. It is responsible for Sites of Special Scientific Interest (SSSIs), Ramsar sites and National Nature Reserves (NNRs). North Norfolk has many SSSIs and NNRs which cover large areas of land. English Nature is likely to be aware of any contamination present on this land. See Appendix 2 for full detail on these sites.

- ***Norfolk County Council***

The County Council is involved in contaminated land primarily as a landowner. The Council owns fire stations, police stations, schools, libraries, car parks, closed landfill sites and household waste recycling centres. The Council also own rural estates. For more information on the responsibility of the County Council, see Chapter 2, Characteristics of the local authority area.

- ***Victory Housing Trust***

Victory Housing Trust formerly North Norfolk Housing Trust is a charitable registered social landlord which owns and manages over 4,700 properties in the North Norfolk area and has offices located in North Walsham and Fakenham and serve over 10,000 residents.

- ***The Food Standards Agency***

The Food Standards Agency will be contacted if a contaminant is found to be affecting a food source.

- ***Department of Environment, Food and Rural Affairs (DEFRA)***

Under the Food Standards Act 1999, DEFRA may be designated as an enforcement authority to prohibit specified agricultural activities to protect consumers from exposure to contaminated food.

5.2.2 Other consulting bodies

This group includes businesses, voluntary groups and members of the public who may have an interest or an in depth knowledge in a particular site. Any extra information they may have on the history of a site will ensure a fuller picture to be built up and help speed up the investigation.

These groups may be harder to contact. They may not be aware of the contaminated land strategy or the responsibilities of the Council in dealing with the issue.

These include:

The Broads Authority

The eastern part of the district covers the top of the Broads National Park. For this reason, the Broads Authority is an essential consultee. The authority will have extensive knowledge on this section of the district. They will be able to comment on remediation methods for contaminated land within the area. The Broads Authority also has responsibility as the local planning authority for the National Park area.

Health Protection Agency

The Council has direct access to specialist medical advice from the Norfolk Health Authority. They provide the first source of medical information relating to human health issues.

- *The National Farmers Union (NFU)*
- *Trade Bodies*
- *The Ministry of Defence (MoD)*
- *Railways*
- *Town/Parish Councils*
- *The Health and Safety Executive (HSE)*
- *Norfolk Archaeological Society*

5.2.3 Contacting consultees

Communication with some of the consultees mentioned above will occur before a specific site is examined (see appendix 4 for contact details). This is to gain general information about sources of contamination. For instance, contact will be made with the MoD to ascertain historical information.

Relevant consultees will be contacted during site investigations to provide site-specific details. Consultees may be involved in site meetings with the owner/occupier of the land to discuss the contamination problem.

Consultees will also be contacted to find out whether they still own land that is potentially contaminated and if they own any other land of which the Council is unaware.

5.3 Polluter and/or owner/occupier consultation

The Contaminated Land Officer will consult with all known polluters and/or owners/occupiers of sites under investigation. If remediation is required, a notice will be served on the person who is responsible for causing the contamination. This may be a person or a business that has owned the land previously or it may be the current owner. If no polluter can be found, the owner/occupier may become responsible for the remediation. It is preferable that the polluter/landowner undertakes remediation voluntarily. If the work is not carried out, the Council has the authority to take enforcement action. Voluntary remediation has the added incentive that any waste removed will be exempt from landfill tax. If enforcement is necessary, this incentive is withdrawn.

5.3.1 Timescales

Designating an area of contaminated land

The Contaminated Land Officer will communicate openly with owners/occupiers or polluters regarding its investigations/inspections, which will include:

- Write to the polluter and/or owner/occupier of the land at least 7 working days prior to designation, explaining in summary the reason for designation
- Write to the polluter and/or owner/occupier explaining that the land has been designated as contaminated land and appropriate remediation without service of a notice is being sought
- If requested, dispatch a copy of the written risk assessment to the polluter and/or owner/occupier of the land within 7 working days of receipt of a request
- Write to the polluter and/or owner/occupier of neighbouring properties and/or the complainant within 7 working days of designation

Serving a remediation notice

- Provide a written remediation notice to the polluter and/or owner/occupier specifying action required
- Write to the polluter and/or owner/occupier of neighbouring properties and/or the complainant within 7 working days of the notice being served
- Should an urgent designation of contaminated land be required, these steps will be observed as far as practicable although some deviation from the timescales specified is to be expected

5.4 Local community awareness

When a parcel of land is assessed, it is likely to draw attention from the local community. As people are concerned about unfamiliar issues, they may perceive a greater risk than is actually present. Therefore, it is necessary that people become more familiar with the problem so that they feel in control of their individual exposure. To make this possible, the Council will inform and educate quickly and efficiently in a way which will involve the local community.

The Council will produce leaflets and issue press releases in order to inform people about land contamination. If necessary, for site specific cases, the Council will debate any conflicts of interest with relevant parties and to try to resolve arguments through compromise where possible.

The Council aims to maintain a policy of openness through contact with an appointed case officer. The officer will be sympathetic to the concerns of local residents and try to explain any queries they

may have as clearly and transparently as possible. Appropriate advice on health issues will be given with consultation with the Council's health advisors.

The majority of people would expect an unnaturally occurring substance to be removed if it was in close proximity to their property. However, a contaminant will only be removed if there is a significant health, property or ecological risk or financial concern. The public, therefore, have to understand that if the contaminant is inert and there are no pathways to the receptors or no receptors, then no action will be taken as there is no contaminated land.

5.5 The public register

If the public or commercial enquirers wish to enquire about a parcel of land, they may access the Public Register. This contains information relating to each investigation of contaminated land and will be available at the District Council offices in Cromer.

The register will include:

- Remediation notices served by the authority
- Appeals against remediation and charging notices
- Notification from the owner/occupier served with a remediation notice
- Remediation statements/declarations
- Site sampling reports
- Designation/termination of 'special sites'
- Convictions

Also available to the public and commercial enquirers on a site-specific basis is historical land use data stored on the GIS, as described in chapter 8 Information Management.

6. Programme for Inspection

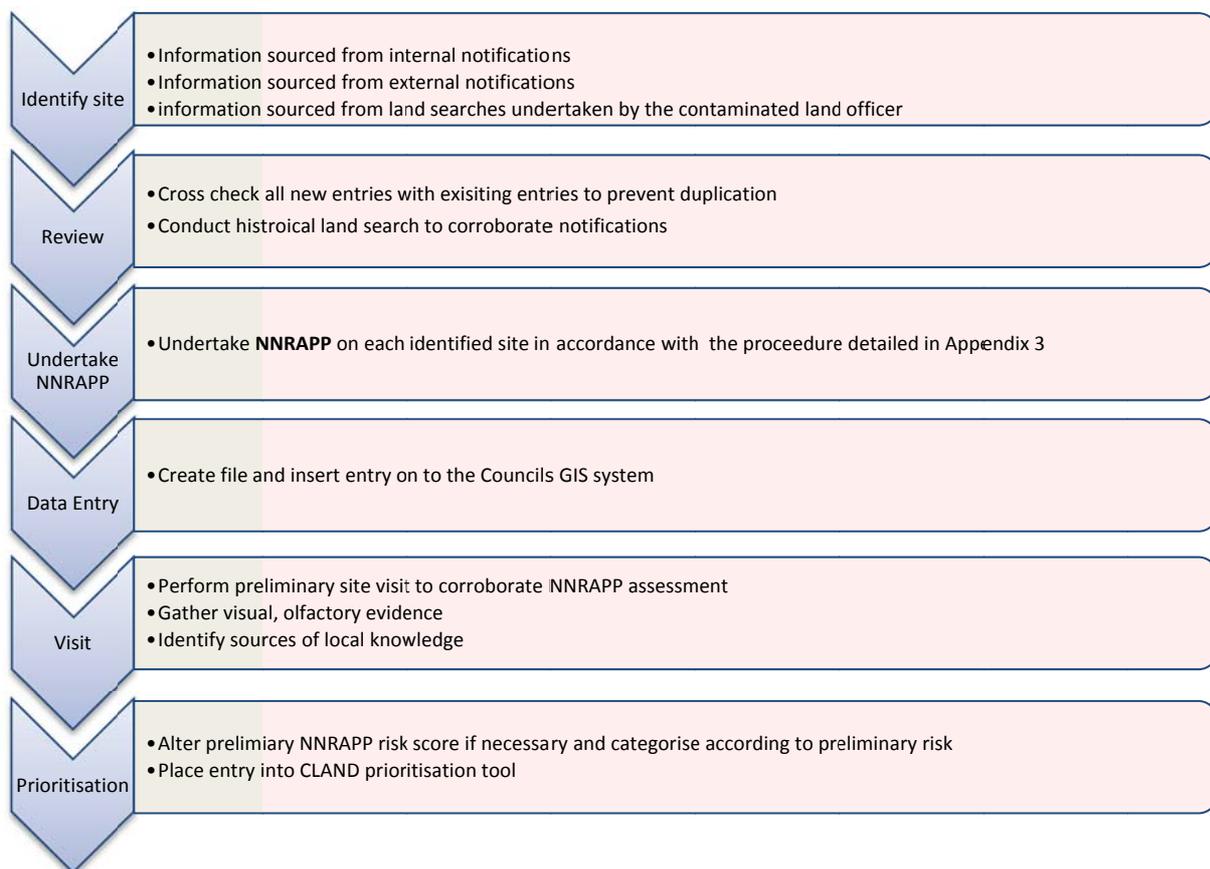
This chapter deals with the criteria for selecting areas and individual sites and the subsequent methods of inspection.

6.1 Methods of inspection

The council will be undertaking two modes of inspection, firstly strategic inspection, which will refer to the district wide identification of potentially contaminated land and subsequent prioritisation and secondly; detailed inspection, which refers to the process whereby prioritised sites are investigated further to demonstrate the presence of contamination.

6.1.1 Strategic Inspection

Strategic inspection precedes the initiation of any detailed inspection of prioritised sites. The general process of strategic inspection is revealed within diagram below:



Full procedures regarding the identification of potential sites are described within section 4.4. It must be emphasised that alongside the identification process officers will be conducting a district wide search for any additional suspect sites as part of their general duties within the district.

- **NNRAPP**

The initial risk assessment, NNRAPP (appendix 3), is in the form of a desktop study and uses all the data set out in Table 1. It identifies any source, pathway or receptor, which when present together may form a contaminant linkage. The assessment also determines the presence of special sites and controlled waters which, if found, will be forwarded to the Environment Agency. Once a site has

been assessed in this way it is given a category according to risk. Category A is the highest risk group, category D is the lowest.

- Site Inspection

The NNDC Contaminated Land Officer will carry out visual site inspections on all sites prior to more invasive methods. These site inspections are designed to add to the information gained from the desktop study and corroborate the conclusions of the NNRAPP assessment. The Officer will work to a list of sites within a parish. They will visit sites which are close to or on the way to planned visits. They will collect as much information as possible from local residents and from their own observation, which may include a walkover the site where possible.

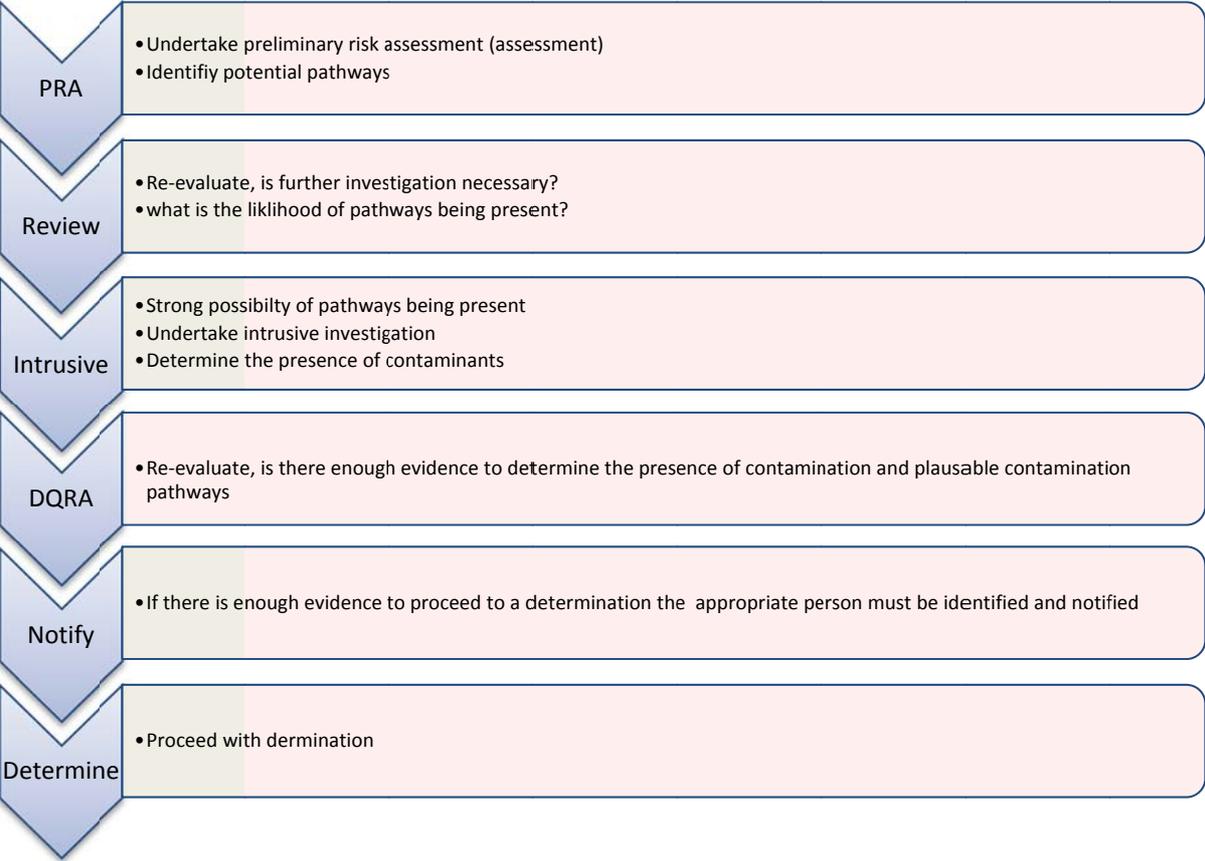
It is NNDC’s policy to inform the landowner/occupier before gaining access to the land in question where possible. However, if this person objects, the Council can use its ‘Statutory Powers of Entry’ under Section 108 of the Environment Act 1995. However there must be enough information gathered to assume that the land is potentially contaminated.

- Prioritisation

Once NNRAPP has been undertaken and site inspection has been completed, details will be entered into the CLAND system which is a risk prioritisation modelling tool. The model will identify sites in descending order of risk, and therefore allow detailed inspection to be focussed upon sites demonstrating the highest level of risk.

6.1.2. Detailed Inspection

The process of detailed inspection is revealed within the diagram below:



- Preliminary Risk Assessment (PRA)

The preliminary risk assessment (PRA) will be conducted in accordance with 'Model Procedures for the Management of Contaminated Land ⁽¹⁹⁾. This assessment will identify potential contamination sources, pathways and receptors that are specific to the inspection site. Emphasis will be placed upon producing a conceptual site model (CSM) to identify potential contamination pathways. In the event that plausible contaminant pathways become identified, further intrusive investigation will be undertaken to establish the likely presence of these pathways.

- Intrusive Investigation

In the event that the required information on the site already exists elsewhere or if the landowner/occupier volunteers the information then the need for intrusive investigation will be reassessed.

Officers of the Council will not undertake a great amount of intrusive sampling. In most cases assistance will be sought from professional contractors to undertake intrusive work in accordance with an agreed scope of works. Further details can be examined within section 6.1.5.

Before a site is accessed, a risk assessment must be completed relating to issues such as hazardous substances (chemicals) and any unsafe features (water, derelict buildings). Machinery taken onto the site must be calibrated where necessary and tested for electrical safety. The results of inspections and maintenance must be recorded. Personal Protective Equipment (PPE) must be worn when appropriate but should not compensate for lack of other safety measures. Officers will comply with the Council's health and safety policy and procedures.

- Quantitative Risk Assessment

Following the intrusive investigation, all the results will be collated and examined in conjunction with the PRA. A quantitative risk assessment (GQRA or DQRA) will be undertaken, the results of which will aid the council in identifying the presence or absence of prominent contamination pathways. The following outcomes are likely to manifest:

- Sufficient evidence exists to conclude that the site is not contaminated
- Sufficient evidence exists to concluded that the site is contaminated
- Existing evidence is insufficient and further investigation will be necessary

It is likely that in order to make an assessment a wider source of knowledge may be required, most likely from scientific journals, research papers, professional bodies and government. In addition the use of generic assessment criteria (GACs) and other technical tools may also be required.

- Determination Decision

At this stage sufficient evidence should be available to make a decision in respect to the site. Statutory guidance ⁽⁴⁾ requires the local authority to place land within 1 of 4 categories depending upon the evidence available (see Table 4).

Table 4 Determination Strategy

Category (Human health)	
1	The local authority should assume that a significant possibility of significant harm exists in any case where it considers there is an unacceptably high probability, supported by robust science based evidence that significant harm would occur if no action is taken to stop it.
2	Land should be placed into Category 2 if the authority concludes, on the basis that there is a strong case for considering that the risks from the land are of sufficient concern, that the land poses a significant possibility of significant harm
3	Land should be placed into Category 3 if the authority concludes that the strong case for contaminated land does not exist, and therefore the legal test for significant possibility of significant harm is not met
4	The local authority should not assume that land poses a significant possibility of significant harm if it considers that there is no risk or that the level of risk posed is low
Category (Controlled waters)	
1	This covers land where the authority considers that there is a strong and compelling case for considering that a significant possibility of significant pollution of controlled waters exists. In particular this would include cases where there is robust science-based evidence for considering that it is likely that high impact pollution would occur if nothing were done to stop it.
2	The authority considers that the strength of evidence to put the land into Category 1 does not exist; but (ii) nonetheless, on the basis of the available scientific evidence and expert opinion, the authority considers that the risks posed by the land are of sufficient concern that the land should be considered to pose a significant possibility of significant pollution of controlled waters on a precautionary basis
3	This covers land where the authority concludes that the risks are such that (whilst the authority and others might prefer they did not exist) the tests set out in Categories 1 and 2 above are not met, and therefore regulatory intervention under Part 2A is not warranted
4	This covers land where the authority concludes that there is no risk, or that the level of risk posed is low

The general procedure adopted by NNDC will follow the flow diagram specified within Figure 9; the conclusion of the process will result in three possible outcomes:

○ **Outcome 1**

The site is identified as a Category 1 site in respect to controlled waters and the environment agency is notified to undertake enforcement action, full details in respect to this process are given in section 7.1.3.

○ **Outcome 2**

The site is identified as a Category 1 site in respect to human health. As specified within statutory guidance ⁽⁴⁾ the appropriate person (polluter) must be identified and informed at least 7 days prior to any announcement. A risk summary must be published to justify the decision to determine and should be scientifically robust, legally defensible and be written clearly so that members of the general public can understand. Upon determination, an entry will be placed within the Contaminated Land Public register. Please note that this decision may be negated under certain circumstances either where the appropriate person undertakes voluntary remediation or the council recognises that a prominent contaminated land linkage would only exist if the land use were to change.

Once recorded the authority can proceed with the remediation notice, details regarding the remediation process and identification of appropriate persons can be examined in appendix 1.

○ **Outcome 3**

If the site is identified as either a Category 2, 3 or 4 site or deemed suitable for use, the land owner should be notified to the decision and a statement will be issued to that effect and also added as a GIS entry (see example below).

“Under the provisions of Part 2A of the EPA, North Norfolk District Council has inspected and risk assessed this site in respect to contaminated land. The findings of this assessment have identified the contamination risk as insignificant. On this basis no further work is justified and the site is deemed suitable for its proposed use”.

6.1.3 Potential special sites

Prior to formal designation of a Special site, the contaminated land officer will liaise with the Environment Agency informally regarding identification of a Special site. The notification process for Special sites is described in chapter 5 Liaison and Communication.

If the site is determined as a special site the Environment Agency will carry out enforcement actions in place of the local authority. The local authority should authorise a person, nominated by the Environment Agency, to exercise powers of entry.

See chapter 5 Liaison and Communication for full details on dialogue between local authorities and the Environment Agency.

Is there direct evidence for significant harm occurring to receptors?

Yes → Category 1 site

↓ No

Is there direct evidence for significant possibility of significant harm?

Yes → Category 1 site

↓ No

The site is not capable of being classified as SPOSH and does not currently meet the legal definition of contaminated land but would be expected to do so if a more sensitive receptor were to arise

Yes → Category 2 site

↓ No

The site is not capable of being classified as SPOSH and does not currently meet the legal definition for contaminated land irrespective of sensitive receptors

Yes → Category 3 site

↓ No

The site risks are identified as being low and no plausible contamination linkages could be identified. SPOSH is unlikely to exist

Yes → Category 4 site

Yes

Is the primary receptor controlled waters

No →

Outcome 2

Produce risk assessment summary

Inform appropriate persons within 7 days

Record entry into contaminated land register

Issue remediation notice

Inform land owners

Make risk assessment and results available to the land owner if requested

Outcome 3
Provide statement regarding Council Decision

Outcome 1

Inform and notify Environment Agency
SPECIAL SITE

Figure 9. Determination process

6.2 Arrangements for external consultants and contractors

In some circumstances during detailed inspection, it is likely that external contractors may be called upon to undertake work on behalf of NNDC, especially in circumstances where the Council does not possess the expertise or appropriate equipment to undertake work effectively. All appointments will be made to ensure that the council obtains best value for money and the following procedures apply:

Up to £5,000.00

£1,000 or less - single supplier sufficient.

£1,001 - £5,000 - 2 verbal quotes, at higher end best practice of 3 verbal quotations.

Shortlisted by the appropriate officer

£5,000.01 - £10,000.00

Best practice to obtain a minimum of 3 written quotations, evidenced by letter, e-mail etc.

Shortlisted by the appropriate officer and Line Manager

£10,000.01 - £50,000.00

Obtain a minimum of 3 written quotations. Must be in writing, to originator and on the supplier's headed notepaper. Formal contract conditions apply. Shortlisted by the appropriate officer and Line Manager

£50,000.01 - EU Threshold

Full tender procedures apply, to be sent out in accordance with Contract Procedure Rules, replies to Legal Services. Shortlisted by the appropriate officer, Line Manager, Legal Services Manager and Procurement Officer

- **Above EU threshold**

EU Procedure or, where this does not apply, Invitation to Tender by Advertisement/List to at least six Candidates. Consult the Legal Services Manager and Procurement Office.

All contractors have a responsibility to ensure the health and safety and welfare of their own employees and the health and safety of any other persons who may be affected by their work. However, the Council will check that the contractor has reasonable procedures in place to provide for their employees on site for the duration of the contract. This duty will also extend to other persons who could be affected by work carried out by the contractor as part of the contract.

To this end, the following procedure will be followed by the Contract Supervising Officer: -

- 1) Reasonable enquiries must be carried out to ascertain that the contractor has taken suitable steps to meet his health and safety duties, as indicated above and has satisfied his legal responsibilities under the Health and Safety at Work Act 1974. In particular, that the contractor has a suitable Health and Safety Policy in place and that duties in relation to Risk Assessment have been met.
- 2) Before the contract commences, the contractor must be advised of any of our procedures which are necessary to ensure the health and safety of the contractors employees whilst they are on site.

The contractors are responsible for the waste they create whilst undertaking the intrusive sampling and also the remediation works. If material is cleaned and replaced in-situ no problems are caused.

However, if material is moved from the site and deposited elsewhere, a licence is required. Waste management licences can be obtained from the Environment Agency. If the Council is responsible for the site then they have a duty to obtain this licence.

6.3 *'Risk communication' strategy*

See chapter 5 Liaison and Communication

6.4 *Frequency of inspection*

See chapter 7 Review Mechanisms

Each site is to be visited once for a preliminary inspection then again depending on the risk category it is placed in. However, the frequency of inspections depends on the individual site. For instance, if land use and therefore receptor is changed, the desktop study will have to be repeated to reassess the risk category.

6.5 *Format of information resulting from inspection*

Data gathered from inspections will be kept in hanging files in parish order and also some details will be recorded on the textual records of the GIS database held by the Environmental Protection Team. Soil or material samples from site investigations may be retained for the appropriate time period. Such samples will be stored and recorded in accordance with a relevant procedure.

7. Review Mechanisms

Assumptions and inspection priorities should be checked and reviewed at intervals according to the statutory guidance ⁽⁴⁾. Strategic inspections are carried out according to the Risk Assessment Procedure (NNRAPP). Sites with the highest initial risk assessment are inspected and investigated first. However, there are circumstances which can influence this process.

7.1 Triggers for Inspection



Figure 10. Triggers for inspection

The mechanism by which these factors may trigger a review of the inspection programme is found in chapter 5 Procedures.

7.2 Triggers for reviewing inspection decisions

The second way in which the inspection programme can be influenced is where inspection decisions have already been undertaken. The factors below fall into this category. These may require as review of previous decisions including regulatory decisions.



Figure 11. Triggers for reviewing inspection decisions

In the event of the factors in Figures 10 and 11 occurring, the Contaminated Land Officer will undertake the procedures in chapter 4, section 4.4 and revise them where necessary.

7.3 Reviewing the strategy

This strategy will be reviewed as required, by officers on an annual basis and reported to the Council’s appropriate committee.

8.Information Management

8.1 General principles

A variety of data will be compiled from each site investigated. These need to be assembled into a format, which can be easily accessed by the general public and anyone else who may have an interest in a particular site.

8.2 Information content/ the public register

The details of the required contents of the public register can be found in chapter 6 Liaison and Communication The public register lists certain regulatory action, e.g. whether a piece of land has been determined contaminated or any specified remediation notices have been served.

8.2.1 The public register

The public register can be accessed in two ways:

- 1) Internally via links to the GIS system. This is how the new Land Charges search question (known as Question 16A) relating to contaminated land will be answered. This is triggered by the existence of certain trail entries, e.g. regulatory actions on the main system. Links with other NNDC colleagues also exist via this system, e.g. development control, building control etc.
- 2) The Environmental Health Department will hold the contaminated land public register. This will exist as a paper and electronic file. Arrangement will be made to ensure that the public register is updated at regular intervals and that it will match the information on the computer based public register 'trail', e.g. updated last note - on file front page. A procedure note to detail how inspection outcomes and decisions will be recorded on the public register will be required. Please see section 8.6 for details on access to requests and/or information.

8.3 NNDC Storage systems

8.3.1 The GIS system

The locations of potentially contaminated and contaminated sites will be stored on the NNDC computer based Geographical Information System (GIS), as a 'polygon'. Each of these polygons has a unique reference – a CTML number. This is in the format of CTML/ parish number/site number for parish. Each polygon/site on the GIS has an associated 'textual record' which allows selected written details to be viewed, i.e. former land usage etc. The main computer service acts as a database associated with GIS. Textual records and other details, e.g. photographs can be stored here. The main computer system has a 'trail' facility to record certain actions that are undertaken. It is intended that these will be regulatory actions required for the public register which must be linked to the computerised public register and the Council's land charges service, e.g. the regulatory details that are required for the public register. It is intended that the production of notices will occur using only the main system.

8.3.2 The CLAND System

It is intended that the complete record of actions for each polygon will be recorded in the CLAND system. Each polygon will be allocated a 'location' referred to by its CTML number in the relevant parish general street record. Actions will be recorded on this location, including those relating to complaints and enquiries.

8.3.3 Historical land use

The polygons are based on historical and current land use information. Enquirers will be provided with access to this information on a site specific enquiry basis as detailed in section 9.6. The historical land use data (Landmark) was acquired in spring 2000.

The data is divided into a diverse list of current and historic land use types, which may potentially result in contamination. To enable these plots of land to be recognised by the GIS system, the information has been 'plotted' on the GIS contaminated land layer, as two plotted layers called 'Contaminated Land and Buffer Zone'. (There is small buffer around the polygons; the purpose is to ensure that enquiries regarding land adjacent to plotted sites can be revealed during automatic enquiries.)

Any additional potentially contaminated sites will be plotted as and when their existence is discovered.

8.3.4 Reports of alleged contamination and enquiries.

Records of reports and enquiries will be stored on the M3 system. This is where all requests for service for the Environmental Health Department are stored.

8.3.5 The Inspection programme

The inspection programme is based on the initial risk assessment process detailed in chapter 4 section 4.3, chapter 6 and appendix 3. The Inspection programme will be stored on an NNDC computer database.

8.3.6 Other relevant geographical information

To assist with the Inspection process, the GIS also include other relevant geographical information, such as geology, soils, boreholes, abstraction points etc.

8.4 Administration

8.4.1 The public register and the GIS system.

The Contaminated Land Officer will ensure that any changes and additions to either the register or the GIS system are carried out. Any additional sites requiring inspection will be added at specified intervals, in accordance with the Procedure in chapter 4

8.4.2 Site inspections

Records of site inspections will be kept as part of a working file along with relevant paper work.

8.5 Confidentiality of information

There are restrictions to the information which can go into the public register. The first is the issue of national security. The decision as to what information comes under this heading is made by the Secretary of State. The second restriction is due to commercial confidentiality. Information which relates to the affairs of any individual or business, or is commercially confidential to an individual conducting that business, may not be released in line with specified guidelines.

8.6 Arrangements for giving access to information/ dealing with requests for information

8.6.1 *The public register*

Information on land contamination will be available to the public as an electronic based public register, available at the NNDC Web page, and paper based copies will be provided on request.

8.6.2 *Site specific enquiries*

Site specific enquiries for information regarding suspected or known current or historical land-use will be revealed to public, commercial or internal enquirers. These may be directed by invitation in order to seek further advice during land charge replies or may be direct enquirers with the Environmental Health Department.

Requests for information will be acknowledged with a standard format letter.

This letter will say whether or not:

- 1) There is any land use that may potentially cause contamination on a specific site according to our records stored on GIS. The letter will include a statement that the site investigation has not been completed and that the Council's records may not include all potentially contaminated sites within the District.

Or

- 2) That an inspection of the site has taken place and the resulting outcome.

Arrangements will be made to update the existing procedure, as appropriate.

There is a potential charge for this service; however the introduction of a fee will depend upon the level of detail required for an inquiry.

8.7 Provision of information to the Environment Agency

Please refer back to Liaison and Communication (chapter 5, section 5.21).

9. Glossary of Terms

This Glossary contains terms and phrases associated with this strategy document and other documents relating to the contaminated land regime.

The references in the text can be found in section 57 of the Environment Act 1995 and section 78 of the Environmental Protection Act 1990 ⁽¹⁾. References in the text are to this legislation.

Apportionment:	defined as: 'two or more appropriate persons liable to bear the cost of any particular thing which is to be done by way of remediation, in proportions determined by the enforcing authority'.
Appropriate Person:	defined in section 78A(9) 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'.
Attribution:	the process of apportionment between liability groups. <i>Paragraph D.5(e)</i>
Caused or Knowingly Permitted:	test for establishing responsibility for remediation, under section 78F(2); 'Caused – person concerned was involved in some active operation, to which the presence of the pollutant is attributable'. 'Knowingly Permit – requires both the knowledge that the substances in question were in, on or under the land and the possession of the power to prevent such a substance being there'.
Class A Liability Group:	a liability group consisting of one or more Class A persons. <i>Paragraph D.5(c).</i>
Class A Person:	a person who is an appropriate person by virtue of section 78F(2) (that is, because he has caused or knowingly permitted a pollutant to be in, on or under the land). <i>Paragraph D.5(a).</i>
Class B Liability Group:	A liability group consisting of one or more Class B persons. <i>Paragraph D.5(c).</i>
Class B Person:	A person who is an appropriate person by virtue of section 78F(4) or (5) (that is because he is the owner or occupier of the land in circumstances where no Class A person can be

found with respect to a particular remediation action).
Paragraph D.5(b).

- CLEA:** Contaminated Land Exposure Assessment. A methodology for carrying out a risk assessment.
- Contaminant:** a substance, which is in on or under the land and which has the potential to cause harm or to cause pollution of controlled waters. *Paragraph A12.*
- Contaminated Land:** defined in section 78A(2) as:
- ‘any land which appears to the local authority in whose area it is situated to be in such a condition, by reason of substances in, on or under the land, that-
- (a) significant harm is being caused or there is a significant possibility of such harm being caused, or;
 - (b) pollution of controlled waters in being, or is likely to be, caused’.
- Controlled Waters:** defined in section 78A(9) by reference to Part III of the Water Resources Act 1991. Includes:
- (a) inland waters (streams, rivers, lakes, reservoirs, canals)
 - (b) groundwaters (any water contained in underground strata, wells or boreholes)
 - (c) territorial waters (the sea within three miles of a baseline)
 - (d) coastal waters (the sea within the baseline up to the line of highest tide, and tidal waters up to the fresh water limit)
- Cost Recovery Decision:** any decision by the enforcing authority whether:
- (a) ‘to recover from the appropriate person all the reasonable costs incurred by the authority in carrying out remediation’, or
 - (b) ‘not to recover those costs or to recover only part of those costs’. *Paragraph E.8*
- 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’.

Exclusion:	any determination by the enforcing authority under section 78F(6) (that is, that a person is to be treated as not being an appropriate person). <i>Paragraph D.5(d)</i>
GIS:	Geographical Information System
Hardship:	a factor underlying any cost recovery decision made by an enforcing authority under section 78P(2).
Harm:	defined in section 78A(4) as: 'harm to the health of living organisms or other interference with the ecological systems of which they form part and, in the case of man, includes harm to his property'.
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'.
Orphan Linkage:	'a significant pollutant linkage for which no appropriate person can be found, or where those who would otherwise be liable are exempted by one of the relevant statutory provisions'. <i>Paragraphs D.12, D.14 and D.17</i>
Owner:	defined in section 78A(9) as: 'a person (other than a mortgagee not in possession) who, whether in his own right or as trustee for any other person, is entitled to receive the rack rent of the land, or where the land is not let at a rack rent, would be so entitled if it were so let'.
Part IIA:	Part IIA of the Environmental Protection Act 1990. This deals with contaminated land.
Pathway:	one or more routes or means by, or through, which a receptor: (a) is being exposed to, or affected by, a contaminant, or (b) could be so exposed or affected. <i>Paragraph A.14</i>
Contaminant Linkage:	the relationship between a contaminant, a pathway and a receptor. <i>Paragraph A.17</i>
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'.

Receptor: defined as either:

- (a) 'a living organism, a group of living organisms, an ecological system or a piece of property which:
 - (i) is in a category listed in Table A in Chapter A as a type of receptor, and
 - (ii) is being, or could be, harmed by a contaminant:' or
- (b) 'controlled waters which are being, or could be, polluted by a contaminant'. *Paragraph A.13*

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

Remediation: defined in section 78A(7) as:

- (a) 'the doing of anything for the purpose of assessing the condition of-
 - (i) the contaminated land in question;
 - (ii) any controlled waters affected by that land; or
 - (iii) 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-
 - (i) 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
 - (ii) of 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 by the enforcing authority where:

- (a) 'the enforcing authority is precluded by virtue of section 78E(4) or (5) from specifying in a remediation notice any particular thing by way of remediation which it would otherwise have specified in such a notice'.

Includes:

“(i) the reasons why the authority would have specified that thing; and

(ii) the grounds on which the authority is satisfied that it is precluded from specifying that thing in such a notice.”

Remediation Notice:

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

Remediation Package:

the full set or sequence of remediation actions, within a remediation scheme, which are referable to a particular significant linkage. *Paragraph C.8(b)*.

Remediation Scheme:

the complete set or sequence of remediation actions (referable to one or more significant pollutant linkages) to be carried out with respect to the relevant land or waters. *Paragraph C.8(c)*.

Remediation Statement:

defined in section 78H(7) as a document prepared by the enforcing authority where:

(a) ‘the enforcing authority is precluded by virtue of paragraph (b), (c) or (d) of subsection 78(H)5 from serving a remediation notice’. Includes:

(i) ‘the things which are being, have been, or are expected to be, done by way of remediation in the particular case;

(ii) the name and address of the person who is doing, has done, or is expected to do, each of those things; and

(iii) the periods within which each of those things are being, or is expected to be, done’.

Risk:

defined as the combination of:

(a) ‘the probability, or frequency, of occurrence of a defined hazard (for example, exposure to a property of a substance with the potential to cause harm); and

(b) the magnitude (including the seriousness) of the consequences’. *Paragraph A.9*

Shared Action:

a remediation action, which is referable to the significant pollutant in more than one significant pollutant linkage. *Paragraph D.21(a)*.

Significant Harm:	defined in section 78A(5). Any harm which is determined to be significant in accordance with the statutory guidance ⁽⁴⁾
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:	<p>defined by section 78A(3) as:</p> <p>‘any contaminated land –</p> <p>(a) which has been designated as such a site by virtue of section 78C(7) or 78D(6)...; and</p> <p>(b) whose designation as such has not been terminated by the appropriate Agency under section 78Q(4)...’.</p> <p>The effect of the designation of any contaminated land as a special site is that the Environment Agency, rather than the Local Authority, becomes the enforcing authority for the land.</p>
SSSI:	Site of Special Scientific Interest
Substance:	<p>defined in section 78A(9) as:</p> <p>‘any natural or artificial substance, whether in solid or liquid form or in the form of a gas or vapour’.</p>

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- Mundesley and North Walsham Sheets 132 and 148 Solid and Drift Geology Map*, British Geological Survey
- East Anglia Solid Geology Map*, British Geological Survey
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- 1999 Pesticide Survey Report*, North Norfolk District Council
- North Norfolk Local Environment Agency Plan –April 1998 – June 1999*, Environment Agency
- Broadland Rivers Local Environment Agency Plan – June 2000*, Environment Agency
- North Norfolk the facts – A Demographic Study*, North Norfolk District Council
- Hydrogeological Map of Northern East Anglia, Institute of Geological Sciences

Appendix 1

Liability

Determining Liability

If voluntary remediation is not undertaken, a remediation notice must be served. The enforcing Authority must determine whom, if anyone, is liable for remediation of the contaminated land and therefore, whom the notice should be served against.

Section 78F(2) states that 'any person who caused or knowingly permitted the substance by reason of which the CONTAMINATED LAND in question is such to be in, on or under that land, is an APPROPRIATE PERSON'. An appropriate person who has caused or knowingly permits contamination comes into Class A. There may be more than one person responsible for the contamination. In this instance, these appropriate persons would be known as a Class A liability group. This may occur when there is more than one SIGNIFICANT POLLUTANT LINKAGE or where more than one person is responsible for one pollutant linkage.

If no Class A person is found and the contamination is solely related to the pollution of controlled waters rather than causing significant harm, it is classed as an ORPHAN LINKAGE.

If no Class A person can be found and the contamination is causing significant harm, then liability passes to Class B. Class B is an appropriate person who can bear responsibility for the things which are to be done by way of remediation. The owner or occupier of the land in question is an appropriate person.

If no Class A or Class B can be found, it is classed as an ORPHAN LINKAGE.

Shared Liability

The first stage of determining liability is to attribute responsibility. If there is a single Class A person then they carry the full cost. Where there are two or more, they share the cost. Where no Class A person can be found, the owner/occupier/s pay, i.e a Class B person.

If a party is not responsible for the contamination, according to the exclusion tests set out in the statutory guidance ⁽⁴⁾, then they can be excluded from the liability group. This may occur when a pollutant has found its way from nearby land or if a later addition of another chemical has reacted in such a way as to cause contamination.

Out of the persons remaining, once exclusion of those not responsible has occurred, then the enforcing authority must apportion liability. Liability of Class A persons reflects the relative responsibility of each member for creating or continuing the risk. Liability of Class B persons is by ownership of an area of land or capital invested in the land. If both of these occur, overall liability is apportioned between the different areas of land.

Cost Recovery

In cases where the enforcing authority has had to undertake remediation at a cost to itself (orphan site, quick remediation necessary), it has the right to recover its costs from the appropriate person or persons. In making its decision the authority should:

1) make a fair and equitable decision for all who may have to meet the costs of remediation including taxpayers;

2) take into account the 'polluter pays' principal and look at the degree and nature of responsibility of the appropriate person.

The enforcing authority should seek to recover full reasonable costs. It may defer recovery and bring in land charges for the appropriate person to pay in instalments in cases of hardship.

Appendix 2

2.1 Special Areas of Conservation (SACs)

Wash and North Norfolk Coast

North Norfolk Coast and Gibraltar Point Dunes

Winterton and Horsey Dunes

Norfolk Valley Fens	i)	Holt Lowes
	ii)	Sheringham and Beeston Regis Common
	iii)	Southrepps Common

The Broads	i)	Ant Broads and Marshes
	ii)	Broad Fen, Dilham
	iii)	Bure Broads and Marshes
	iv)	Calthorpe Broads
	v)	Ludham to Potter Heigham Marshes
	vi)	Priory Meadow, Hickling
	vii)	Smallburgh Fen
	viii)	Upper Thurne Marshes

Overstrand Cliffs

Paston Great Barn

River Wensum

Total 8

2.2 Sites of Special Scientific Interest (SSSI's)

Alderfen Broad

Ant Broads and Marshes

Beeston Cliffs

Bisley Hills

Britons Lane Gravel Pit

Broad Fen, Dilham

Bryants Heath, Felmingham

Bure Broads and Marshes

Calthorpe Broad

Cockthorpe Common

East Runton Cliffs

East Ruston Common

Edgefield Little Wood

Felbbrigg Woods

Glandford Hurdle Lane

Glandford Letheringsett Road

Gunton Park Lake

Happisburgh Cliffs

Holt Lowes
Kelling Heath
Ludham and Potter Heigham Marshes
Morston Cliffs
Mundesley Cliffs
North Norfolk Coast
Overstrand Cliffs
Paston Barn
Priory Meadows, Hickling
River Wensum
Sheringham and Beeston Regis Common
Sidestrand and Trimmingham Cliffs
Smallburgh Fen
Southrepps Common
Stiffkey Valley
Swanton Novers Wood
Syderstone Common
Upper Thurne Broads and Marshes
Wareham Camp
Wells Chalk Pit
West Runton Cliffs
Westwick Lakes
Weybourne Cliffs
Weybourne Town Pit
Winterton to Horsey Dunes
Wiveton Downs

Total 44

2.3 Local Nature Reserves

Old Railway Cutting, Felmingham

Hindringham Meadow

Old Railway Cutting, Knapton

Sculthorpe Moor

Southrepps Common

Wiveton Downs

Total 6

2.4 Scheduled Ancient Monuments

Aylmerton	Wayside Cross 650m south west of Park Farm
Baconsthorpe	Baconsthorpe Castle moated site with fortified house, gatehouse, courtyards and formal gardens
Bacton	Broomhall Priory
Barsham	Gatehouse at manor house, East Barsham
Beeston	Beeston Priory
Binham	Binham village cross
Binham	Cockthorpe village cross, 200m east of All Saints' Church
Binham	Binham Priory
Blakeney	Medieval undercroft known as the Guildhall
Blakeney	Two bowl barrows on Blakeney Downs
Bodham	Oval barrow in Bodham Wood, 600m ESE of Warren Farm
Briton	Sharrington village cross
Cley	Blakeney Chapel, site of
Cley	Two bowl barrows in Taylor's Wood, 260m north east of Swan Lodge: part of a barrow cemetery on and around Salthouse Heath
Cley	Bowl barrow in Taylor's Wood, 400m north of Swan Lodge: part of a barrow cemetery on and around Salthouse Heath
Cley	Bowl barrow in Taylor's Wood, 350m north east of Swan Lodge: part of a barrow cemetery on and around Salthouse Heath
Cley	Bowl barrow in Taylor's wood, 270m north east of Swan Lodge: part of a barrow cemetery on and around Salthouse Heath
Cley	Bowl barrow on the Hangs
Colby	Cross in St Giles' Churchyard
Dilham	Medieval tower and wall at Dilham Hall
Dunton	Cross in All Saints' Churchyard, Toftrees
Edgefield	Habitation site on Edgefield Heath
Fakenham	Fakenham Gasworks
Field Dalling	Heydon Hall, Saxlingham (near Holt)
Field Dalling	Cross in St Andrew's Churchyard
Fulmodeston	Moated site and medieval earthworks s of Hall Farm
Gresham	Gresham Castle
Gunthorpe	The Carr moated site, Bale
Hempton	Remains of St Stephen's priory
Hickling	Hickling priory
Hindringham	Hindringham hall moated site with adjacent fishponds
Holkham	Iron age fort 900m north east of Dale Hole cottage
Horning	St James's Hospital
Horning	St Benet's Abbey
Hoveton	Wroxham Bridge
Kelling	Gallow Hill bowl barrow and adjacent group of eight bowl barrows: part of a barrow cemetery on and around Salthouse Heath
Kelling	Bowl barrow on Kelling Heath, south of Holgate Hill
Kelling	Bowl barrow on the north side of Muckleburgh Hill
Kettlestone	Ring ditches and enclosures w of the hills
Langham	Langham Airfield dome trainer
North Walsham	Market Cross

North Walsham	Cross 120m south west of Tollgate Farm
North Walsham	Cross 300m North West of Tollbar Cottages
North Walsham	Wayside cross on west side of Norwich road, immediately north east of the water works
Paston	The Great Barn
Potter Heigham	Potter Heigham Barn
Pudding Norton	Deserted village (site of)
Roughton	Tumuli on Roughton Heath including Hare's hill and Two hills
Salthouse	Small bowl barrow 750m north east of Swan Lodge: part of a barrow cemetery on and around Salthouse Heath
Salthouse	Bowl barrow and adjacent group of seven small barrows 550m nne of Swan Lodge: part of a barrow cemetery on and around Salthouse Heath
Salthouse	Bowl barrow 260m nnw of Lowes Farm: part of a barrow cemetery on and around Salthouse Heath
Salthouse	Disc barrow south east of Bard hill: part of a dispersed round barrow cemetery on and around Salthouse Heath
Salthouse	Bowl barrow 450m north west of Lows Farm: part of a barrow cemetery on and around Salthouse Heath
Salthouse	Bowl barrow known as Three Farthing Hill: part of a barrow cemetery on and around Salthouse Heath
Salthouse	Bowl barrow known as Three Halfpenny Hill: part of a barrow cemetery on and around Salthouse Heath
Salthouse	Saucer barrow and adjacent small bowl barrow 630m north east of Swan Lodge: part of a barrow cemetery on and around Salthouse Heath
Salthouse	Bowl barrow 400m east of Swan Lodge: part of a dispersed round barrow cemetery on and around Salthouse Heath
Sea palling	Site of manorial complex, Hall Farm, Waxham
Southrepps	Wayside Cross known as Stump Cross
Stiffkey	Tumulus on Warborough Hill
Stody	Castle Hill medieval ringwork, Hunworth
Sustead	Moated site s of Bessingham Wood
Tattersett	Bowl barrow in Wicken Covert, 100m south east Highfield House
Tattersett	Broomsthorpe deserted medieval village
Upper Sheringham	Oval barrow with superimposed bowl barrow known as Howe's Hill, 500m wsw of Wood Farm
Walsingham	Egmere medieval settlement
Walsingham	Walsingham Abbey
Walsingham	Town pump
Walsingham	Egmere medieval settlement
Walsingham	The Greyfriars
Walsingham	Egmere medieval settlement
Warham	Warham camp small multivallate fort
Warham	Bowl barrow known as Fiddler's Hill, 130m North West of Fiddler's Hill Farm
Warham	Moated site of Hale's manor and associated earthworks
Weybourne	Bowl barrow in hundred acre wood, 330m west of Cherry Trees Farm
Weybourne	Moated site 380m ssw of Rosedale Farm
Weybourne	Weybourne Priory
Wickmere	St Margaret's Church, Wolterton
Wighton	Iron Age ditched enclosure 270m north east of Warham Camp
Wighton	Moated site 240m south west of Whey Curd Farm

Wighton	Medieval settlement 370m north of Grove Farm
Wighton	Remains of a medieval ringwork castle known as Crabb's Castle, 680m north east of Crabb's Castle farm
Wiverton	Wiverton bridge

Total 84

National Nature Reserves (NNR)

Ant Broads & Marshes
Blakeney
Calthorpe
Hickling
Holkham
Ludham
Winterton Dunes

Total 7

Appendix 3

Guidance on initial risk assessment for potentially contaminated sites

Forms needed.....

- Initial Risk Assessment Form –M:\Environmental Health\Quality Assurance\EH QMS\Team Documents\Environmental Protection\Contaminated Land
- Hazard Score Sheet – M:\Environmental Health\Quality Assurance\EH QMS\Team Documents\Environmental Protection\Contaminated Land

Each GIS polygon should be checked using the following instructions, this will produce the initial generic risk assessment for each site. This will put each potentially contaminated site into a category for further assessment.

Contamination (site history)

- The score for previous use of the site should be recorded on the Risk Assessment Form.
- If the reference of the polygon is known this can be found on the GIS system by following the procedure below:

-

Choose reference from the front screen

Highlight Contaminated land from list

Type in reference (eg CTML/11/10) & click accept

- The previous use can be found by clicking on the Contaminated Land layer of the GIS and looking at the database associated with that polygon.
- If the site has more than one previous use then please put the highest score only on the form.
- Please write down the codes for all the previous uses (left hand column of the hazard score sheet) in the space provided.

Pathway

- The following are potential pathways for contamination to use to reach the receptor, please enter all potential pathways:

Inhalation – soil particles/dust/vapours

Ingestion – soil/dust/contaminated food/water

Direct Contact – soil/dust/water

Pollution of controlled waters

Attack on building structure

Attack on services

Receptor (current use of site)

- Each site must be assessed and scored using the scoring system on the hazard score sheets, for all of the receptor categories (Human, Groundwater, Surface Water, Ecological).
- Most of the information can be accurately obtained for the GIS system, however it is likely that a site visit may be needed to confirm some information.
- If the score can not be identified accurately from the GIS leave it blank until a site visit can be arranged.

- **HUMAN – GIS information**

- OS layers for housing
 - Aerial photo layer (towns only)
 - Planning Applications

- **GROUNDWATER - information**

- Groundwater vulnerability maps are on GIS system under contaminated land (unregulated) layer; there are layers for each aquifer type.
 - Also hard copies of the groundwater vulnerability maps are located in the contaminated land filing cabinet.

- Private Water supplies are on the GIS system under contaminated land (regulated), the hard copies are filed in the PWS filing cabinet.

- Source Protection Zone maps can be viewed online via the Environment Agency web page:

- <http://www.environment-agency.gov.uk/homeandleisure/37793.aspx>

- **SURFACE WATER – GIS information**

- OS layers (OS SURVEY RASTER & ORD. SURVEY 1:2500)

- Make sure that the water layers are switched on there are 4 under the ORD. SURVEY 1:2500 layer.

- **ECOLOGICAL – GIS information**

- Check the following layers this will cover all the ecological sites:

- COUNTRYSIDE REGISTERED

- LOCAL NATURE RESERVE*

- NATIONAL NATURE RESERVE*

- RAMSAR SITE*

- SPECIAL AREA OF CONSERVATION (SACs)*

- SSSI*

- SPECIAL PROTECTION AREAS (SPAs)*

- CONSERVATION REGISTERED

- ANCIENT MONUMENT*

Initial Priority Category.....

- The initial priority category of the site is obtained by using the chart at the end of the Hazard Score Sheet.
- The scores that should be used are the **Contamination(former use)** score of the site and the highest score of all of the **receptor groups**.
- The site category can then be obtained.

Former use code	Former Uses	Score
4a 4b 4c 4d 4e 4f 4g 4h 4i 4j	Animal by-products (gelatine, soap, glue) Factory or Works (use not specified) Gas manufacture & distribution Heavy product manufacture (rolling of Iron, Steel and ferrous alloys) Leather tanning & dressing Military Land Oil, petroleum & gas refining & storage Refuse disposal Unknown filled ground (Pit, Quarry etc) Weapons & ammunition (manufacture & storage)	4
3a 3b 3c 3d 3e 3f 3g 3h 3i 3j 3k 3l 3m	Animal slaughtering & basic processing of meat (other than poultry) Electricity production & distribution (inc. large transformers) Hospitals Laundries & dry cleaning Machinery: engines, general machinery production Metal casting & foundries Metals: treatment & coating (inc. electroplating) Outfalls Printing: miscellaneous exc. Newspapers Sawmilling, planing & impregnation (timber treatment) Sewage Technical & environmental testing & analysis Unknown filled ground (Pond, Marsh, River, Stream, dock)	3
2a 2b 2c 2d 2e 2f 2g 2h 2i 2j 2k 2l	Cement, Lime & Plaster products (Manufacture) Cemetery or graveyard Clay bricks & tiles (Manufacture) General quarrying Heap, unknown constituents Motor vehicles: maintenance and repair Quarrying of sand & clay, operation of sand & gravel pits Railways Road Haulage Transport manufacturing and repair Transport support & cargo handling Transport: air and space, cargo and handling and transport support	2
1a 1b 1c	Air Shafts Brewing & Malting Former Marsh	1

Receptor (Human)	Score
Residential with Gardens Schools Allotments Residential without gardens (landfill)	4

Parks Playing Fields Residential without Gardens (non landfill)	3
Open Spaces (inc. unauthorised access) Commercial & Industrial	2
Car Park Agricultural Land	1

Receptor (Groundwater)	Score
Major Aquifer Soil Class High 1 Within Inner Zone of Groundwater Source Protection Zone Private Water Supply or other abstraction on site or within 50m from site boundary	4
Major Aquifer Soil Class High 2, 3 & U Within Outer Zone of Groundwater Source Protection Zone Private Water Supply or other abstraction 50-250m from site boundary	3
Major Aquifer Soil Class Intermediate 1 & 2 Within Total Catchment of Groundwater Source Protection Zone Private Water Supply or other abstraction 250-500m from site boundary	2
Major Aquifer Soil Class Low Private Water Supply or other abstraction greater than 500m from site boundary	1

PLEASE NOTE

If the Groundwater Vulnerability maps shows that an area of low permeable drift deposit is on the site then the receptor score should be reduced by one.

Receptor (Surface Water)	Score
Body of water on site	4
Body of water 0-50m from site boundary	3
Body of water 50-500m from site boundary	2
Body of water greater than 500m from site boundary	1

Receptor (Ecological System)	Score
Conservation area on site or within 50m of site boundary	4
Conservation area 50-250m from site boundary Scheduled Ancient Monument within site boundary	3
Conservation area 250-500m from site boundary	2
Conservation area greater than 500m from site boundary	1

		Potential contamination status (land use)			
		4	3	2	1
Receptor	4	High Risk (Category A)	High Risk (Category A)	Moderate Risk (Category B)	Low Risk (Category C)
	3	High Risk (Category A)	Moderate Risk (Category B)	Low Risk (Category C)	Risk likely to be insignificant (Category D)
	2	Moderate Risk (Category B)	Low Risk (Category C)	Low Risk (Category C)	Risk likely to be insignificant (Category D)
	1	Risk likely to be insignificant (Category D)			

-  High Risk (Category A)
-  Moderate Risk (Category B)
-  Low Risk (Category C)
-  Risk likely to be insignificant (Category D)

CONTAMINATED LAND ASSESSMENT.

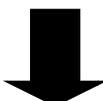
Site	Location
Date	Reference

(STAGE ONE)

CONTAMINATION

Specify (former use)

Score



PATHWAY

Specify



RECEPTOR

Specify (human, controlled waters [groundwater, surface water], ecological system)

Score



Contact EA if controlled waters



Initial priority category

(STAGE TWO)

SIGNIFICANT HARM

Specify (significant harm occurring or likely to occur)

Not contam. land

Contam. Land

Special site (contact EA)

Priority category

Appendix 4

Statutory Consultees

The Environment Agency
Cobham Road
Ipswich
Suffolk
IP3 9JD
(01473) 727712

English Heritage
The Engine House
Firefly Avenue
Swindon
SN2 2EH
Tel. 01793 4154700
Email: customers@english-heritage.org.uk

Natural England
Block B, Government Buildings, Whittington Road
Worcester
WR5 2LQ
Email enquiries@naturalengland.org.uk
Telephone 0300 060 3900

Norfolk County Council
County Hall
Martineau Lane
Norwich
NR1 2DH
Tel. 0344 800 8020

Food Standards Agency
Aviation House
125 Kingsway
London
WC2B 6NH
Tel: 020 7276 8277
Email: helpline@foodstandards.gsi.gov.uk

Government Office for the East of England
Aviation House
Shaftesbury Road
Cambridge
CB2 8DF
Tel. 01233 372500
Email: enquiries.goeast@goeast.gsi.gov.uk

Non Statutory Consultees

Health and Safety Executive
Rosebery Court
2nd Floor
St Andrews Business Park
Norwich
NR7 0HS
Tel. 0845 345 0055

Defence Infrastructure Organisation
Kingston Road
Sutton Coalfield
West Midlands
B75 7RL
Tel. 0800 707 6000

Norfolk Landscape Archaeology
Union House
Gressenhall
Dereham
Norfolk
NR20 4DR

Anglian Water
Customer Services
PO Box 10642
Harlow CM20 9HA
Tel. 0345 60 66 087

Broads Authority
Head Office
Yare House
62-64 Thorpe Road
Norwich
NR1 1RY
Tel (01603) 610734

Appendix 5

Receptors:

- Human beings
- Ecological system, or living organism forming part of a certain system within a location which is:
 - Site of Special Scientific Interest (SSSI)
 - National Nature Reserve
 - Marine Nature Reserve
 - Nature Reserves
 - Areas of special protection for birds
 - Ramsar sites
 - Special Areas of Conservation (SACs)
 - Special Protection Areas (SPAs)
 - Candidate SACs
- Property in the form of:
 - 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, streams)
 - Source Protection Zones
 - Groundwater – major aquifer
 - Drinking water abstractions
- Property in the form of buildings, including:
 - Ancient Monuments