



# **CONTAMINATED LAND STRATEGY REVIEW 2019 - 2024**

ENVIRONMENTAL PROTECTION ACT 1990 – PART 2A

FINAL DRAFT – PRE CONSULTATION

OCTOBER 2019

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## Foreword

*West Lindsey District has a rich agricultural heritage, however there are areas that have been subject to industrial process which has resulted in a legacy of contamination which has the potential to harm the environment and be a risk to human health. West Lindsey District Council has a key role in finding out where contaminated land is, what risk to health or the environment it presents, and, where necessary, making sure the land is made safe. This Strategy sets out how West Lindsey District Council will carry out this role over the next five years, 2019 to 2024, in order to continue protecting the people of the district.*

**Chair of West Lindsey District Council Licensing and Regulatory Committee**  
**Councillor Jessie Milne**  
**West Lindsey District Council**

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## Executive Summary

West Lindsey district has a predominantly agricultural heritage which has been subject to intensive farming. However, the district has been subject to localised industrial past uses which may have left a legacy of land contamination with major industries comprising chalk/limestone quarrying, gravel extraction, brickworks with associated clay pits. In the 19<sup>th</sup> and 20<sup>th</sup> century industrial uses including gasworks, iron works, rail infrastructure and military airfields which are known to have existed within the district.

The Council is the primary regulator for dealing with land contamination and this strategy recognises that there are primarily three mechanisms for reducing both health and the wider environmental impacts associated with land contamination which are:

1. Inspection and remediation of sites when they are re-developed e.g. through the planning regime; and
2. Inspection and remediation of land that has already been developed, using the Council's powers under Part 2A of the Environmental Protection Act 1990; and
3. The voluntary inspection and remediation of land by responsible parties (polluters, landowners etc).

In the interest of transparency the Council will promote the disclosure of information on contaminated land to the laws and regulations governing data protection, freedom of information and the provision of environmental information.

During the inspection and remediation of existing residential properties, which can be a particularly stressful time, a specific communication plan should be adopted in conjunction with the Council's Communications Team.

The Defra Contaminated Land Grant was formally withdrawn by central government in 2013. This was used by Local Authorities to fund remediation works where there was no formally identified polluter and whereby it could be proven that the landowner [normally residents] would suffer undue hardship if they were deemed liable to fund remedial works on their property. Hardship is assessed under the Council's Local Authority Contaminated Land Control & Decision Framework Policy.

This strategy review sets out four priorities to continue the strategic approach to deal with land contamination issues in the district:

1. Prioritisation of Potentially Contaminated Land Sites [PCLS] within the district;
2. Establish an information management system to store and retrieve geographical boundaries of PCLS, their priority score and any associated data/reports;
3. Encouraging, where appropriate, the regeneration and redevelopment of brownfield and contaminated sites;
4. Raising awareness of land contamination issues amongst landowners, conveyancing solicitors and potential polluters and to encourage a willingness to undertake voluntary remediation

This strategy sets out a number of actions under each of the above priorities that are intended to be implemented during the period between 2019 – 2024, and also sets out how these priorities fit into the West Lindsey District Council Corporate Plan 2016-2020; the Central Lincolnshire Local Plan

2017; West Lindsey Brownfield Register 2018 and also the governments key objectives driving the Contaminated Land Regime.

This Strategy should be reviewed five years following its formal adoption by the Council in line with current government guidance.

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## 1.0 Introduction

### 1.1 Background

This strategy is the third review of the original Contaminated Land Strategy which was adopted by West Lindsey District Council in 2001 and is produced in accordance with Part 2A of the Environmental Protection Act 1990<sup>1</sup>. The first review of the Strategy was undertaken in 2004 and further review was undertaken in 2012. This Strategy (“The Review”) is intended to supersede the Contaminated Land Strategy Review [2012].

This review is intended to identify the progress made so far in implementing the Contaminated Strategy since the initial strategy in 2001 and subsequent reviews in 2004 and 2012. Progress up to the last strategy review in 2012 was as follows:

- Identification of all PCLS within the district.

The term “Contaminated Land” and “Land Contamination” referred to herein relates to land contamination issues only i.e. heavy metals/organic contamination in the soils, groundwater contamination and ground gas. The strategy is intended to deal with anthropogenic [man made] sources only and is not intended to deal with natural/background levels of environmental hazards e.g. radon gas, heavy metals in certain geologies or diffuse pollution e.g. from intensive farming. These terms also do not relate to geotechnical risks such as landslip, heave, differential settlement, crown holes, subsidence etc.

A glossary is provided at the rear of this document.

### 1.2 Part 2A Regulatory Context

Part 2A (Section 78) of the Environmental Protection Act 1990 came into force on the 1<sup>st</sup> April 2000. This Act introduced a duty for all authorities to identify and remediate land where contamination is causing unacceptable risks to human health or the wider environment. This document has been written as a continuation to review the Council’s statutory duty whereby:

*“Every local authority shall cause its area to be inspected from time to time for the purpose of:*

*identifying contaminated land*

*...to decide whether land.....is required to be designated as a special site”*

and

*“...where the local authority has identified any contaminated land...the enforcing authority shall...serve a remediation notice...requiring the land to be remediated”*

Where a Remediation Notice is either not appropriate, or in circumstances where it is not complied with, the Council has the powers to carry out remediation works itself i.e. works in default. Costs can be recovered in line with the Council’s Local Authority Contaminated Land Control and Decision Framework Policy<sup>2</sup>.



Under Part 2A of the Environmental Protection Act 1990 the primary regulator for Contaminated Land is the Council with the Environment Agency being the enforcing authority for 'Special Sites'. The conditions for what constitutes a Special Site are set out in the Contaminated Land (England) Regulations 2006<sup>3</sup>

The Contaminated Land (England) Regulations 2006 set out provisions relating to the identification and remediation of contaminated land under Part 2A of the Environmental Protection Act 1990.

The 'Contaminated Land Statutory Guidance' is statutory guidance that came into force on the 6th April 2012<sup>4</sup>, replacing the previous guidance of 2006. The guidance sets out how Councils should decide whether land should be determined as Contaminated Land or not. This review has been undertaken in line with the 2012 statutory guidance requirement to update or replace the strategy to reflect changes in the regime since the last review.

### 1.3 Planning Regulatory Context

Under the Town and Country Planning Act 1990<sup>4</sup> where a contaminated site is undergoing redevelopment, remediation of the land shall be undertaken and implemented. However, where it appears that the remediation works will not be completed to the required standard that would prevent a determination under Part 2A of the Environmental Protection Act 1990, and where the responsible person cannot be persuaded to submit a revised proposal, a remediation notice shall be served under the aforementioned act.

Contaminated Land is a material planning consideration when determining planning applications and Section 178 and 179 of the National Planning Policy Framework 2019<sup>5</sup> sets out the overarching planning policy on Contaminated Land whereby:

*"178. Planning policies and decisions should ensure that:*

- a) a site is suitable for its proposed use taking account of ground conditions and any risks arising from land instability and contamination. This includes risks arising from natural hazards or former activities such as mining, and any proposals for mitigation including land remediation (as well as potential impacts on the natural environment arising from that remediation);*
- b) after remediation, as a minimum, land should not be capable of being determined as contaminated land under Part IIA of the Environmental Protection Act 1990; and*
- c) adequate site investigation information, prepared by a competent person, is available to inform these assessments.*

*179. Where a site is affected by contamination or land stability issues, responsibility for securing a safe development rests with the developer and/or landowner"*

*Annex 2: Glossary defines a Site Investigation Information as:*

*"Includes a risk assessment of land potentially affected by contamination, or ground stability and slope stability reports, as appropriate. All investigations of land potentially affected by contamination should be carried out in accordance with established procedures (such as BS10175 Investigation of Potentially Contaminated Sites – Code of Practice)."*

Whilst the definition of “competence” within the NPPF is not strictly defined, an example of one route to provide evidence of competence within the brownfield sector would be the National Quality Mark Scheme ([www.claire.co.uk/projects-and-initiatives/nqms](http://www.claire.co.uk/projects-and-initiatives/nqms)).

The Council, in its function as the Local Planning Authority must consider the implications of land contamination on development. The Central Lincolnshire Local Plan 2012-2036<sup>6</sup> (Adopted April 2017) sets out policies relating to the development of land potentially affected by land contamination. The following specific policies relating to land contamination are contained within the Local Plan:

### **Policy LP16: Development on Land Affected by Contamination**

*“Development proposals must take into account the potential environmental impacts on people, biodiversity, buildings, land, air and water arising from the development itself and any former use of the site, including, in particular, adverse effects arising from pollution.*

*Where development is proposed on a site which is known to be or has the potential to be affected by contamination, a preliminary risk assessment should be undertaken by the developer and submitted to the relevant Central Lincolnshire Authority as the first stage in assessing the risk of contamination.*

*Proposals will only be permitted if it can be demonstrated that the site is suitable for its proposed use, with layout and drainage taking account of ground conditions, contamination and gas risks arising from previous uses and any proposals for land remediation, with no significant impacts on future users, neighbouring users, groundwater or surface waters.”*

### **Policy LP57: Ministry of Defence Establishments**

#### **Development of MOD land and assets surplus to Defence requirements**

*“The redevelopment or change of use of currently or recently operational MOD land and facilities which are, or are known to shortly become, surplus to MOD requirements, whether for the whole or part of the MOD landholding in that area, will be supported provided that.....*

*Further to policy LP16, an Unexploded Ordnance Certificate and Land Quality Assessment (LQA) may be required (where relevant) as part of a proposal, or required through condition to a grant of permission, in order to assess and identify the necessary remedial action for defence specific contaminants.”*

## **1.4 The National Industrial Legacy**

Nationally it is estimated that approximately 300,000 hectares of land is potentially contaminated. This equates to around 2% of the total area of England and Wales (Environment Agency 2005).

Industrial past activities have resulted in land becoming contaminated in a manner of ways since the onset of the industrial revolution, which in Britain, occurred some 300 years ago. This land includes industrial land such as glass works, dye works, gas works, tanneries, chemical works etc. and also mining and waste disposal sites.

Some of the past contamination has already been found and dealt with, particularly during new development of previously used land, or in preparation for future development. There are very few cases within this country where land cannot be restored to some beneficial use.

## 1.5 Health Risks

Various industrial practices have led to substances being in, on or under land, such as fuel oils or tars; heavy metals; asbestos; organic compounds such as solvents; inorganic compounds; soluble salts, and mining materials that may pose a risk to human health and the wider environment.

In the past, landfilling of waste took place without environmental considerations such as adequate precautions against leachate entering controlled waters or the escape of landfill gases. Land in this condition, if not dealt with adequately, can pose a serious threat to the health of people living in proximity to such features or the environment, including pollution of the water environment.

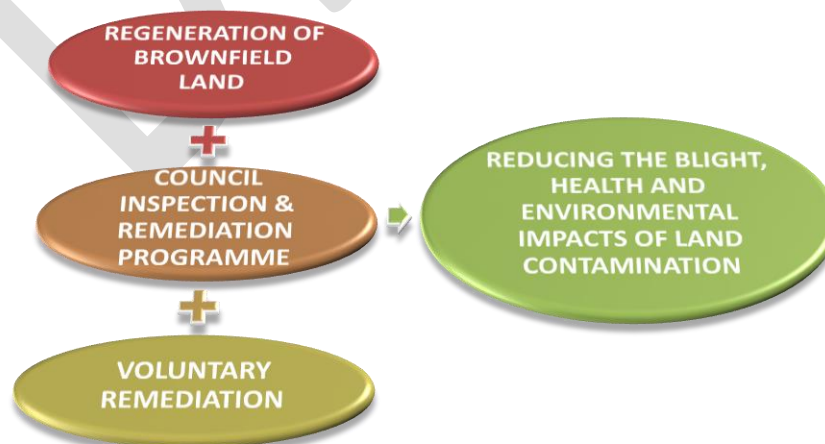
In terms of specific adverse health effects, the following is a non-exhaustive example:

- Heavy metals – carcinogens (cancer causing) and reductions in IQ [lead]
- Polyaromatic hydrocarbons - toxic, carcinogen
- Inorganics [i.e. cyanide] - toxic
- Oils/Fuels - brain disorders, pulmonary lung disorders, carcinogens
- Asbestos – Lung diseases such as Mesothelioma, Asbestosis, Lung Cancer
- Methane/Carbon Dioxide - Asphyxiant/explosive

As well as direct health or environmental problems, land contamination can cause economic and financial damage. Uncertainties about remediation requirements and land contamination liabilities can cause land blight, deterring development of brownfield land which can subsequently increase pressures on the development of Greenfield sites and adversely affect urban regeneration.

## 1.6 Dealing with Contaminated Land

The illustration below demonstrates the three main mechanism's for dealing with land contamination issues from the historic industrial use of land within the district.



## 2.0 Characteristics of West Lindsey District Council

### 2.1 Geographical Location and Size

The District of West Lindsey is in the northwest area of Lincolnshire between the town of Lincoln in the South and Scunthorpe in the north, with the River Trent to the west and the Lincolnshire Wolds to the east. It is a large district, covering 115,357 hectares (445 sq. miles, 1,154 square kilometres). Land use consists of predominantly open countryside, much of which is arable land, with the three major market towns of Gainsborough, Market Rasen and Caistor.

The Lincolnshire Wolds run through the east of the district and contain an Area of Outstanding Natural Beauty (AONB) which we strive to maintain and also promote.



## 2.2 Population Distribution

The 2011 census showed that 89,250 people live in the district, split 49% male and 51% female.

## 2.3 Land Owned by the District Council

The District Council has an Asset Register of approximately 215 council owned sites totalling approximately 100 hectares, held by its Property Services Unit. These assets vary from council offices, accommodation, commercial shops and industrial units to recreational areas, public open space and potential development land, predominately located in and around the town of Gainsborough.

The Council transferred its total housing stock of approximately 4000 properties, including all Council Estates, un-adopted carriageways, footpaths and amenity areas to West Links Housing (now Acis Group) in October 1999.

## 2.4 Current Land Use

Land use within West Lindsey is predominantly agricultural, which is subject to intensive farming. This includes arable farming, intensive livestock units and pasture land. The district's dependency on agriculture is more than five times greater than the national average. The high level of food production is reflected in the service sector, as the area supports a relatively high number of food processing industries.

The service sector also includes a number of engineering businesses, engaged in manufacturing and defence industries. The geographical location of businesses, other than agriculture, local services and self-employment are concentrated in the main urban areas of Gainsborough, Market Rasen, Caistor and the rural centre of Hemswell Cliff. These areas have significantly more industry than the remainder of the district. Many of the villages now support light industrial uses, offices and small businesses. The following table demonstrates the employment by sector within West Lindsey:

Employment by sector (2011)		
Sector	West Lindsey	England
Accommodation and Food Service Activities	4.13%	5.56%
Administrative and Support Service Activities	3.56%	4.93%
Agriculture, Forestry and Fishing	4.11%	0.81%
Arts, Entertainment and Recreation; Other Services	4.08%	4.79%
Construction	8.47%	7.68%
Education	10.8%	9.9%
Financial and Insurance Activities	1.54%	4.39%
Human Health and Social Work Activities	14.1%	12.4%
Information and Communication	1.6%	4.07%
Manufacturing	11.17%	8.85%
Professional, Scientific and Technical Activities	4.77%	6.7%
Public Administration and Defence	7.59%	5.9%
Transport and Storage	4.6%	5.01%
Wholesale and Retail Trade; Repair of Motor Vehicles	15.75%	15.93%

Source: West Lindsey State of the District Report 2018



## 2.5 Key Property Types and Protected Locations

Under the existing Contaminated Land legislation Councils are required to take action to protect important ecological and heritage sites from significant harm resulting from contaminated land. However, action can only be taken by the Council under this legislation for sites which have been afforded particular statutory protection as detailed in the Statutory Guidance (Defra, 2012).

There are 25 designated Conservation Areas covering 308 hectares of West Lindsey. These are areas of special architectural or historical interest, the character or appearance of which it is desirable to preserve or enhance. The Council is required to pay special attention to preserving or enhancing these areas under the Planning (Listed Building and Conservation Areas) Act 1990 SI 72 (1)<sup>7</sup>.

Within West Lindsey there are approximately 1,000 buildings, which are on a statutory list as being of special architectural or historic merit in national terms. National policy attributes significant importance to the preservation and protection of listed buildings.

There are many areas of archaeological interest in West Lindsey. Some sites are considered to be of special importance, because they are fine or interesting examples of a particular period. Such sites or structures are scheduled as Ancient Monuments of which West Lindsey has 103 in total. Regional guidance states that the aim should be to protect these sites. The Council also has a 56 historic parks and gardens, of which four have been identified and listed by English Heritage. Whilst these areas are afforded no statutory protection the Council would not wish to see these areas damaged and/or blighted.

The Lincolnshire Wolds were designated an Area of Outstanding Natural Beauty (AONB) in 1973. They cover about 156 square kilometres (60 square miles) of the eastern part of the District to the northeast of Market Rasen and east of Caistor. The main purpose of an AONB is the conservation and enhancement of the landscape, which includes protecting flora, fauna and geological as well as landscape features.

The district also has 156 sites that are designated as Sites of Nature Conservation Importance with 152 of these sites are designated local wildlife sites and four are designated as local geological sites. These areas are protected by virtue of their flora, fauna or geological or physiographical features. In addition West Lindsey has 42 areas of Ancient Woodland, which have had a continuous cover of native trees since 1600 or earlier. They are protected due to the unique habitat they support. English Nature has also designated nine areas of West Lindsey as being Regionally Important Geological/Geomorphological Sites.

## 2.6 History of West Lindsey

### Rivers

At the peak of river trade between 1837 and 1841, approximately 80,000 tons of coal and lime were brought to Gainsborough, from where approximately 30,000 tons were distributed locally and the remainder exported to other UK ports. The storage and distribution of coal and other commodities increased the likelihood of localised contamination from coal dust, sulphur and possibly oils/lubricants/greases from lifting machinery and distribution vehicles. The waterways were also used to convey stone, lime and timber to aid the construction the railways. The cost effectiveness of water borne trade and lower handling charges than larger ports such as Hull, helped to maintain Gainsborough as the distribution centre for West Lindsey and surrounding areas.

## The Railways

The first commercial railway in West Lindsey was the East Lincolnshire Line of the Manchester, Sheffield and Lincolnshire Railway (MS&LR). It was opened in March 1849 and connected Gainsborough and Market Rasen to the coalfields of Sheffield and the manufacturers of Manchester, whilst providing an outlet for local agricultural produce. A second line, The Lincolnshire Loop, was opened in September 1849 by The Great Northern Railway (GNR).

A lack of local sources of raw materials needed for the construction of rail foundations and embankments may have resulted in the use of waste materials such as clinker, slag and ash from local industries such as the iron works. Furthermore, railway depots and goods sheds may have been used to store miscellaneous objects including stocks and supplies of oils, greases, ores, coal, timber, steel and bricks, which may have caused local contamination.

The construction of the railways, on a national and local scale, transformed Gainsborough from a market town to an industrial centre, and also had an effect on the rest of the area. The demand for raw materials for bridge construction and the manufacture of track and rolling stock initiated much mining and quarrying throughout West Lindsey. Much of the ironwork for the railway was manufactured at The Trent Foundry in Gainsborough.

## Industrial Development

Chalk and limestone were quarried in the vicinity of South Witham and gravel was also extracted throughout West Lindsey from gravel pits such as those in Scotter, Bardney and Market Rasen.

Another mineral resource, which supported urban expansion in West Lindsey, was the availability of fire clay for the firing of bricks. During the latter half of the nineteenth century the number of brickworks in the area greatly increased and in Gainsborough clay was mined onsite at a brickworks which contributed over sixteen million bricks to local development. Some of the resulting pits and quarries may have subsequently been used for the disposal of wastes by both the local council and private enterprises.

Historically, oil was extracted from several wells within the district such as those near Sudbrooke, Scothern, Welton Cliff and wells around Gainsborough. It is possible that hydrocarbon contamination may have resulted from leaks and spillages of the oil during the extraction process. Depending on the nature and extent of any oil processing activities carried out, these sites may also contain a variety of additional contaminants.

By the early 19<sup>th</sup> Century Gainsborough had become home to a town gas works. Gasworks have the potential to produce contaminating hydrocarbon by-products and wastes such as coal tar. Other waste products of the gas works include liquids rich in ammonia, coal dust and spent oxide wastes which contain cyanides and metals.

Mineral exploitation in West Lindsey was centred around Claxby, where ironstone was mined. In 1868, Firth and Co. opened an underground pit and employed miners from the nearby towns of Caistor and Market Rasen. The ore was extracted from a 2m thick seam in the Marlstone Rock Bed and although production peaked at 70,000 tons in 1873 it closed twelve years later. The Mid-Lincolnshire Mining Company also owned mines in Claxby and adjacent areas and extracted iron ore from the Northampton Sand Bed until their closure in 1939.

In the 1850s, the local abundance of iron ore led to the construction of Marshall and Sons (later known as Britannia) Iron Works at Gainsborough. The foundry which made portable steam engines, agricultural threshing machines and hot air dryers, increased its workforce from 1500 to 3600 between 1885 and 1904 and covered a 28 acre site between the Central (MS&LR) station and the old town.

The production of iron and steel generates large quantities of waste slag, slurries and dusts, all containing contaminants such as arsenic and lead. Moreover, if the works produced its own coke, a common practice in steel works, waste tars and contaminated waste solids and waters would also have been generated.

The profitability of the iron works dominated the economy of Gainsborough in the latter half of the 19<sup>th</sup> Century and contrasted starkly with the demise of its shipbuilders, who had been so successful in the previous fifty years. These companies, who had previously constructed ships of up to 700 tons fell into decline as the river trade began to diminish, primarily due to competition from the railways, but also as a result of poor river management.

## **The 20<sup>th</sup> Century**

By the turn of the 20<sup>th</sup> Century the demand for iron had peaked, the rail industry no longer needed the quantities previously required for the extensive construction work and a slump in agriculture had reduced the need for the manufacture of agricultural machinery. As a result, many of the smaller rural forges e.g. Market Rasen Forge became disused and a number of brickworks also fell into disuse /disrepair.

The small amount of industrial development that took place throughout the towns of West Lindsey in the early 20th Century frequently occurred in close proximity to the railways. At Bardney, a sewage works, and a gas works were constructed adjacent to the MS & LR line, which also serviced a sugar beet factory.

The development of the aeroplane and its use in combat, led to the construction of many airfields across the relatively flat land of the district between 1910 and 1940. The following Second World War Airfields were operated within the district:

- Binbrook
- Bardney
- Blyton Waltham
- Caistor
- Dunholme Lodge
- Faldingworth
- Fiskerton
- Hemswell
- Ingham
- North Coates
- Scampton
- Sturgate
- Wickenby

In 1916 RAF Hemswell was used by The Royal Flying Corps. Although closed in 1919, it was redeveloped in 1936 and used by bomber command during World War II for the construction and flying of Lancaster Bombers. After the war the airfield continued to be used for military purposes including the housing and installation of "Thor" missiles prior to its closure in 1975. Ordnance survey maps of West Lindsey suggest that RAF Hemswell was one of the last airfields to close.

Airfield activities, such as aircraft construction and maintenance, require the storage and use of many potentially contaminating substances such as fuels solvents and lubricants. Resulting wastes may



have been disposed of within the airfield grounds. Exposure to unexplosive ordnance and harmful substances (including low level radioactive residues) may have occurred as a result of munitions storage, disposal or from hostile fire.

Up until the 1960's and 1970's when there was considerable expansion of some communities such as Dunholme, Welton and Caistor, many of West Lindsey's towns and settlements had changed very little in size since the turn of the century.

## 2.7 Local Geology

Superficial deposits alluvium and glacial till deposits overlie the bedrock geology in many areas which were formed within the last 2 million years up to the present day. The underlying bedrock geology of West Lindsey is mainly sedimentary Cretaceous, Jurassic and Triassic formations laid down between 65 and 225 million years ago.

The geological strata beneath the district were formed in the following order (the youngest at the top to oldest at the bottom):

Geological Period	Formations	Comments
Superficial Deposits	River Alluvium Terrace Deposits (Clays, Sands & Gravels)	Deposits of River Alluvium and River Terrace Deposits are present in association with the river systems. For example, significant deposits of alluvium and terrace deposits are present in the southwest of the district as a consequence of the River Till and ancient watercourses, and also in association with the Rivers Rase, Ancholme and Barlings Eau. Alluvial deposits can comprise clay, silt, sand or gravel, or a combination.
	Glacial Till Deposits (Clays, Sands & Gravels)	The most widespread superficial deposits present over the district are of glacial origin. These are frequently present over the much of the eastern and western areas of the district. The Glacial deposit most frequently encountered is Glacial Till, which typically comprises clay, often with chalk and flint. Glacial deposits comprising sand and gravel are also present in certain areas of the district, particularly along its south-western margin. Both clay and sand and gravel deposits are likely to have been extracted within the district.
	Blown Sand	Deposits of Blown Sand (wind transported fine particles) are present within the district with the largest deposit at Market Rasen in the South and extends to Caistor Moor in the North.
Cretaceous Rocks	Flamborough, Burnham, Welton and Ferriby Chalks	The youngest bedrock in the area are of the Cretaceous age which consist predominantly of Chalks. They underlie the Far East and north-east of the district. Chalk has been quarried within the district and Lime pits are recorded in Grasby. Toward the base of the Cretaceous sequence of deposits lays the Claxby Ironstone, which has been mined between Normanby-le-Wold and Nettleton.
	Claxby Ironstone Formation	

Jurassic Rocks	Kimmeridge Clay Snitterby Limestone Lincolnshire Limestone Northampton Sand Marlstone Rock	Jurassic rocks underlie the majority of the district. These underlie the area between Laughton Hall and Kettlethorpe in the west, and Grasby and Tealby in the east. Both the Marlstone Rock and Northampton Sand Formations have been historically mined for iron. The Jurassic deposits predominantly consist of mudstone and limestone deposits, but also contain sandstone's, ironstone beds, shale's, and an oil shale is present in the Kimmeridge Clay Formation. The Jurassic clay/mudstone deposits have also been used in the brick and tile industry.
Triassic Rocks	Mercia and Penarth Mudstones	Triassic rocks are present along the district's western margin, extending approximately as far east as Laughton Hall and Kettlethorpe. They consist generally of mudstones, limestones and siltstones.
Permian Rocks		Beneath the Triassic Rocks and completely covered (concealed) in the West Lindsey area, lie the Permian deposits (225 to 280 million years old).
Carboniferous Rocks		The Carboniferous rocks which were deposited between 280 and 345 million years ago. The Carboniferous rocks are present beneath the district at considerable depth. However, oil with variable amounts of gas has been extracted from Carboniferous sandstones beneath the Gainsborough area, and oil wells are recorded at locations near Sudbrooke, Scothern and Welton cliff.

The layers of rock generally slope gently, towards the north-east or east, and as a consequence, the oldest rocks (Triassic 195-225million years old) are present in the west of the district and the youngest rocks (Cretaceous 65-135million years old) are present in the east.

## 2.8 Water Resources & Protection

Legislation defines the water environment (groundwater in aquifers, rivers streams etc) as Controlled Waters. In the UK approximately 35% of the nation's public water supply is provided by groundwater. In West Lindsey the groundwater forms the region's principal source of water as much of the district is underlain by principal aquifers. Approximately 50% of the Anglian region's water supply as a whole comes from the groundwater, and all the major supplies within Lincolnshire are obtained from this source. Anglian Water Services takes water for public supply from several locations, including locations near Waddingham, Glenthams, Welton and Newton-on-Trent. Groundwater is also used extensively for agricultural purposes. The Environment Agency licenses both public and commercial abstractions.

Some domestic properties are also supplied directly by groundwater, rather than public mains. West Lindsey District Council is responsible for monitoring the quality of these supplies in compliance with the Private Water Supplies (England) (Amendment) Regulations 2018<sup>8</sup>. Records of the locations of all private water abstractions are retained by West Lindsey District Council.

Water is also obtained from many of the rivers, streams, becks, dykes and drains within the district, including the rivers Trent, Eau, Rase and Ancholme. However, none of the licensed surface water

abstractions are used for public drinking water supply with most of the water obtained from surface watercourses within the district being used for agricultural purposes such as irrigation.

Controlled waters are clearly a significant resource that requires protection and the main act relating to this is the Water Framework Directive, 2000<sup>9</sup> with the main regulatory guidance document being the Environment Agencies Approach to Groundwater Protection<sup>10</sup>

### Hydrogeology

West Lindsey's hydrogeology is dominated by the chalk deposits located in the northeast of the district, and by limestones which are present at shallow depth between Lincoln to the South and Kirton in Lindsey to the north. These deposits form the Principal Aquifers within the district.

Many areas of the district are underlain by Secondary Aquifers. An extensive Secondary Aquifer is formed from sand deposits between Market Rasen and Caistor Moor. Others are frequently formed by sands and gravels deposited by rivers, and by glacial processes. The main flow of the groundwater beneath the district is generally towards the east. Groundwater will often be affected by the local topography, and will locally flow broadly in the direction of the surface water flow.

### Groundwater Vulnerability

The vulnerability of the groundwater to pollution is dependent on the permeability of the geological strata that overlie the aquifer. These materials may allow the movement of pollution towards the aquifer (if they are highly permeable like sands and gravels) or form a barrier (if they are of low permeability for example clay) between the potential pollutants at shallow depths and an underlying aquifer, and hence provide some level of protection.

The areas where the groundwater is most vulnerable are the areas where no protective clay deposits exist above the aquifer. These are primarily located in the far northeast and east of the district, in the central area between Kirton in Lindsey and Lincoln, around Market Rasen, and in the vicinity of the major rivers of the district. Where these areas coincide with land contamination or pollution the groundwater is likely to be most at risk.

The areas most likely to contain sources of pollution include the industrialised areas of urban developments such as those in and around Gainsborough. Furthermore, some of the district's pits and quarries (such as chalk quarries) may have been filled with potentially polluting materials/wastes.

### Groundwater Source Protection Zones (SPZ's)

To protect drinking water supplies from pollution, the Environment Agency has designated Groundwater Source Protection Zones (SPZ) around major abstraction points, for example: the public supply abstraction boreholes near Waddingham, Glentham and Welton. These zones restrict the type of activities and development permitted within their boundaries to protect the groundwater reserves.

Within the district, almost the whole of the area underlain by Cretaceous Chalk (the far eastern and north eastern area) has been designated as a SPZ. This is a consequence of groundwater abstractions within North Lincolnshire and Northeast Lincolnshire. At Waddingham, Welton, Dunholme and Glentham, the SPZs extend westwards, in the direction that the groundwater has come from. In Gainsborough there are three small SPZs in close proximity to the River Trent, and the area to the north of Lincoln also falls within a SPZ.

West Lindsey will treat any land contamination/pollution located within a Groundwater SPZ as a high priority.

### Surface waters

The district is crossed by numerous surface watercourses, ranging in size from large rivers such as the River Trent, to small streams and becks. These surface waters are not used for abstraction for major public drinking water supply within the district, however they form important local sources of water, and they can replenish the groundwater reserves. The quality of the surface waters over the district is therefore important. As is the maintenance and reduction of pollution of rivers is important. West Lindsey will treat any land contamination/ pollution contaminated land identified in proximity to rivers and streams as a high priority.

In West Lindsey springs are common where the base of Cretaceous Chalk outcrops at the surface. These springs contribute water to local streams and rivers and may also form supplies of local importance. As important sources of water, West Lindsey will consider any contaminated land in proximity to the spring lines as a priority. In addition to their vulnerability to pollution from contaminated land, springs may form pathways by which any pollution that has already entered the groundwater could be transported into surface watercourses.

## 3.0 Aims & Objectives

### 3.1 Government

The Governments' key objectives driving the contaminated land regime are as follows:

- 1 • TO IDENTIFY AND REMOVE UNACCEPTABLE RISKS TO HUMAN HEALTH AND THE ENVIRONMENT
- 2 • TO SEEK TO ENSURE THAT CONTAMINATED LAND IS MADE SUITABLE FOR ITS CURRENT USE (PART 2A REGULATION) & PROPOSED USE (PLANNING REGIME).
- 3 • 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.

### 3.2 West Lindsey District Council

The West Lindsey District Council Corporate Plan [2019 - 2023]<sup>11</sup> relevant themes and outcomes are:

- 1 • TO ENSURE THAT ECONOMIC REGENERATION IN WEST LINDSEY IS SUSTAINABLE AND BENEFITS ALL OF OUR COMMUNITIES [STRATEGIC AIM]  
DELIVER HOUSING LED ECONOMIC GROWTH AND INFRASTRUCTURE [STRATEGIC OBJECTIVE]  
• ACCELERATE HOUSING DELIVERY [KEY OUTCOME]
- 2 • TO CREATE A SAFER, CLEANER DISTRICT IN WHICH TO LIVE, WORK AND SOCIALISE [STRATEGIC AIM]  
• USE THE COUNCIL'S STATUTORY FUNCTIONS TO INCREASE PUBLIC SAFETY AND CLEANLINESS IN THE DISTRICT [STRATEGIC OBJECTIVE]  
• HIGH STANDARD OF QUALITY AND COMPLIANCE ACROSS ALL REGULATED AREAS.[KEY OUTCOME]

### 3.3 Land Contamination

In fulfilling West Lindsey District Council's responsibilities with respect to implementing environmental legislation the following priorities have been identified:

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## 4.0 Progress to Date

### 4.1 National

The Environment Agency issued the latest report 'Dealing with Contaminated Land' in 2016<sup>12</sup> which highlighted the following key figures on progress from April 2000 to December 2013 with Part 2A of the Environmental Protection Act 1990:

1. The main priority for local councils' inspection strategies is to assess the risks posed to human health;
2. Since the Part 2A regime was introduced in April 2000, local councils have spent at least £32million on inspecting more than 11,000 sites. This has led to the determination of more than 511 contaminated land sites where remediation was needed;
3. Although significant progress has been made there are at least another 10,000 sites identified by preliminary inspection that need further investigation to establish the risks that they pose;
4. Of the 511 contaminated land sites reported to the survey, the majority were posing unacceptable risks to human health. Arsenic, lead and benzo(a)pyrene are the most common substances causing contamination;
5. Of the reported sites determined as Contaminated Land, remediation has been initiated on at least 493 sites, with work being reported as being complete at 433 of these sites;
6. A variety of remediation options have been used to clean up contaminated land, with the most common techniques reported being excavation and disposal, or capping;
7. The majority of individual remedial actions were completed within a year although a significant number of sites took more than a year to complete all the remedial actions; and
8. More than £52 million has been granted for remediation by the regulators using public monies since the introduction of the regime in 2000. Most of this was spent on making land and water safe for people to use and on cleaning the environment for communities and to support growth.

### 4.2 Part 2A Inspection Programme in West Lindsey District

West Lindsey District Council adopted its first Contaminated Land Strategy in 2001 and subsequently identified the majority of PCLS within the district. This was mainly in the form of capturing former industrial uses from historical maps, minerals planning files, landfill files amongst other information sources. These sites will need to be prioritised and subsequently assessed to ascertain if they meet the statutory requirements of "Contaminated Land". It is extremely likely that only a relatively small percentage of these sites will be contaminated to such a degree that they meet the statutory definitions of 'Contaminated Land'.

The Strategy Review in 2012 advised that West Lindsey District Council had been working towards the timescales contained within the 2005 draft strategy and aimed to complete the priority actions described below by 31 December 2017:

1. Initial survey to identify sites that may be contaminated;
2. Stage 1 Survey Categories complete for initial survey;
3. Stage 2 Inspection Priorities complete for initial survey;
4. Commence detailed inspections on Category A Inspection Priority 1 sites;

5. Commence detailed inspections on Category B Inspection Priority 1 sites;
6. Commence action on Action Priority 1 sites;
7. Commence action on Action Priority 2 sites;
8. Complete detailed inspections of all Category A Inspection Priority 1 sites; and
9. Complete detailed inspections of sites with Inspection Priority B1 A2 B2 and C1.

The above priority actions have not been completed with the main reasons being:

1. Considerable reduction in available resources within Housing and Environmental Enforcement since 2012;
2. The withdrawal of central government contaminated land grant funding programme in 2014 resulting in significant uncertainty in proceeding with Part 2A Site Investigations and remediation of orphan sites by Local Councils; and
3. Over ambitious timescales considering the amount of effort, time and funding involved in investigating and specifically remediating sites under Part 2A.

### **4.3 Regeneration of Brownfield Land in West Lindsey District**

The following major developments in the district have remediated significant contamination issues during the redevelopment works:

Redevelopment of **Gainsborough Gasworks** into residential apartments

Redevelopment of **Gainsborough Steel Works** into residential housing

Redevelopment of **The Old Marshall Factory Site** into retail/office space

Redevelopment of **the Garage** into a food retail outlet

In addition to these major sites many smaller sites with contamination issues have been suitably redeveloped and brought back into beneficial use with appropriate regulation in the same manner to ensure that the end users of the sites are not at risk from contamination.



## 5.0 Access & Provision of Information

### 5.1 Public Register

A 'Contaminated Land Public Register' is held within Housing and Environmental Enforcement to record where notices have been served, or a formal remediation statement has been prepared in line with section 78R of the Act. The register is kept at the Council's West Lindsey District One Office and is available for view, free of charge, during normal office hours.

The public register does not contain information on PCLS.

The charge to be made for providing hard copies of register entries should be in line with the current fees & charges scheme. An electronic copy of the public register is also available free of charge on request.

### 5.2 Provision of Information

The public, solicitors, consultants, owners, estate agents, developers and any other interested parties will have access to environmental information under the Environmental Information Regulations (2004)<sup>13</sup> which comes under the provision of the Freedom of Information Act (2000)<sup>14</sup>. Exclusions to the provision of such data include where the data or information is deemed commercially confidential or where a report is still to be completed. Charges are levied for the provision of environmental information in accordance with the current fees and charges scheme in Housing and Environmental Enforcement. Any contentious requests should be referred to the Officer responsible for Freedom of Information/Environmental Information Regulation requests to make an assessment on whether information should be disclosed or not. However, the legislation and guidance relating to the provision of information promotes the disclosure of information in the interests of transparency, openness and freedom of information.

Provision of information should be in a timely manner with an aim to provide requested information/data within 10 working days and a strict deadline for a response within 20 working days set out under the Freedom of Information Act.

Information relating to land contamination submitted to the Council as part of a planning application including data, reports etc are generally considered to be within the public domain in line with the requirements of the Town & Country Planning Act 1990.

### 5.3 Communication Plans

Officers of the Council and any appointed consultants / contractors may be carrying out detailed inspection of sites from time to time in order to assess if a site should be determined as Contaminated Land or not. West Lindsey Council recognise that, where this occurs on residential sites it can be a particularly stressful process for residents due to concerns about potential health risks, property value, legal action and potential costs.

Given the recognised potential for adverse impacts on stakeholders, it is recommended that an open and transparent approach should be taken during the investigation of sites, specifically where this is a residential area. In such circumstances a Site-Specific Communication Plan should be produced and adopted in conjunction with the Council's Communication Team/Officer.

## 6.0 Part 2A Inspection & Remediation Programme

### 6.1 General

The investigation and remediation of PCLS should only be undertaken by the Council through the Part 2A regime where there are no other appropriate alternative solutions and/or legislation to effectively deal with the matter. Regulation through other controls should be sought in the first instance such as Environmental Permitting, Planning, Building Control, Environmental Damage Regulations and other regimes for waste and water. The Part 2A regime is also intended to provide regulatory and legislative pressure on commercial landowners to actively clean up their land portfolios.

### 6.2 Remediation

Remediation of contaminated sites resulting from the application of Part 2A regulations, redevelopment through planning or via voluntary means should be steered towards more sustainable methods such as in-situ & ex-situ treatment technologies where reasonable and practical. Excavation and disposal of materials including contaminated waste at landfills should be avoided where appropriate and economically viable. Any statutory notice or voluntary action of remediation of Contaminated Land should be in line with the Joint Municipal Waste Management Strategy (2019) and the policies therein.

### 6.3 Funding

In 2014 Defra withdrew the capital grant funding that was made available to Local Authorities for the remediation of contaminated land where a polluter could not be found or where recovering costs from landowners, usually residents, would cause undue hardship. This left Local Authorities with a statutory duty to deal with contaminated land but with no capital funding to inspect or remediate sites, using the works in default procedures.

### 6.4 Fairness Tests, Cost Recovery & Hardship Policy

In the first instance, the Council will look to ensure the company/person responsible for the contamination or developer of the land [the Class A Liable Person(s)], pays the costs of cleaning up the land under the 'polluter pays principle'. However, in some cases the company has stopped trading and liability for remediation may pass to the present owner/occupier of the land [the Class B Liable Person(s)]. In cases whereby the Council funds the remediation as a works in default the Council has a duty to be reasonable and fair when recovering these costs and the Councils Local Authority Contaminated Land Control and Decision Framework Policy sets out how West Lindsey Council will implement decisions on this matter.

### 6.5 Land Formally or Currently Owned or Occupied by West Lindsey District Council

All PCLS are to be inspected and classified in the same manner. This includes all land in current or former ownership or occupation by West Lindsey District Council, and land where West Lindsey District Council may be responsible for the site's condition (i.e. where West Lindsey District Council may be the appropriate person).

West Lindsey District Council will review its records of land that it owns and/or occupies as part of the initial survey of the whole area. Where the records indicate that such land may have had a potentially contaminative use, the land will be added to the list of PCLS if it has not already been identified as such.

Land in which West Lindsey District Council has an interest will be inspected in the same manner as all other sites in the inspection process. Where such land is found to be Contaminated Land, this will be included in the public register and treated in the same manner as all other Contaminated Land within the area.

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## 7.0 Regeneration of Land

### 7.1 General

Many contaminated sites have already been dealt with through the historical application of planning controls during redevelopment of brownfield/contaminated sites. It is expected that the redevelopment of brownfield and derelict land within the district will remain the primary mechanism for dealing with land that is adversely affected by contamination.

The Planning Development Control Service and the Housing and Environmental Enforcement Service have developed a working relationship to ensure that where redevelopment of land takes place, the planning process will effectively deal with any contamination so that the land is suitable for its intended use. The following have been / will be put into place to help implement this process:

1. The production or adoption of regional guidance for developers;
2. The review of contaminated land information and reports in relation to the redevelopment of a site, which has been sent to Housing and Environmental Enforcement for consultation comments;
3. The use of appropriate standard planning conditions for land contamination;
4. The provision of information, assessments and recommendations for dealing with contaminated land during the consultation on the Local Development Plan proposals.

### 7.2 Brownfield Register

Brownfield land registers are intended to provide up-to-date and reliable information on sites within each Council district that are considered to be appropriate for residential development. The statutory regulations on Brownfield Registers are set out in of the Town and Country Planning (Brownfield Land Register) Regulations 2017<sup>15</sup>. Local planning authorities will be able to trigger a grant of permission in principle for residential development for sites in their registers where developers and their advisors follow the required procedures.

Regulation 3 of the Town and Country Planning (Brownfield Land Register) Regulations 2017 requires local planning authorities in England to prepare, maintain and publish registers of previously developed (brownfield) land by 31 December 2017 and Regulation 17 requires local planning authorities to review their registers at least once a year.

Registers will be in two parts as follows:

- Part 1 - will comprise all brownfield sites that a local planning authority has assessed as appropriate for residential development subsequent to having carried out any required procedures set in the regulations. This will include sites with extant full planning permission, outline planning permission and permission in principle as well as sites without planning permission; and
- Part 2 – This is a subset of Part 2 which will comprise of only those sites in Part 1 that the local planning authority has decided that the land would be suitable for a grant of permission in principle for residential development.

Registers should be published as open data to provide transparent information about suitable and available sites with a Council's district.

West Lindsey Council published their latest Brownfield Register in December 2018 which can be accessed via the following webpage.

<https://www.west-lindsey.gov.uk/my-services/planning-and-building/planning-policy/evidence-base-and-monitoring/brownfield-register/>

Housing and Environmental Enforcement should be proactive in assisting any consultation or information requirements in relation to future updates of this register to allow developers access to up-to-date information on potential land contamination constraints associated with potential development sites.

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## 8.0 Voluntary Remediation of Land

The voluntary remediation of land by responsible landowners was intended to be one of the primary aims of bringing Part 2A of the Environmental Protection Act 1990 into force. Council resources e.g. officer time, should be prioritised to support landowners or polluters who are willing to work with Council and/or Environment Agency to agree and implement remedial measures of contaminated sites within the district.

In line with the Contaminated Land Statutory Guidance 2012 and Section 78H(5)(a) of the Act the enforcing authority should consider not serving a remediation notice if it is satisfied that appropriate measures are being taken by way of remediation.

To date none of the PCLS have been remediated through voluntary remediation.

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## 9.0 Land Contamination Priorities [2019 to 2024]

### 9.1 General

The following land contamination priorities that have been established for Housing and Environmental Enforcement between 2019 to 2024:

1. Prioritisation of PCLS within the district;
2. Establish an information management system for the digital storage of information relating to PCLS;
3. Encouraging where appropriate the regeneration and redevelopment of brownfield and contaminated sites; and
4. Raising awareness of land contamination issues amongst likely affected landowners, conveyancing solicitors and potential polluters and to encourage a willingness to undertake voluntary remediation.

The above priorities are considered to be SMART (Specific, Measurable, Achievable, Realistic and Time bound) targets.

The following table demonstrates actions that are planned during 2019 to 2024 in order to deliver these priorities.

Contaminated Land Priority	No.	Actions	Completed By
1. Establish an information management system for the digital storage of information relating to PCLS	1.1	<p><u>Identify Existing Systems</u></p> <p>A review of existing systems, software and licenses should be undertaken, and a decision made on the most cost-effective way of storing digital information relating to PCLS.</p>	February 2020
	1.2	<p><u>Implement Agreed Information Management System</u></p> <p>This is likely to consist of storage of polygons, a unique reference number and basic attribute data for each PCLS in the Council's Geographical Information Systems (GIS) and storage of further detailed information within a designated area of the Council's server with files for each specific PCLS.</p>	February 2020
2. Prioritisation of PCLS across the district	2.1	<p><u>Produce Procedural Document</u></p> <p>A procedural document should be produced that details how PCLS will be subject to a Preliminary (desk-based) Risk Assessment to generate a risk score that will allow PCLS to be ranked in order of priority under Part 2A of the EPA 1990.</p>	January 2020
	2.2	<p><u>Decision on Implementation/Staff Training</u></p> <p>Resources will be allocated dependant on availability to implement the actual prioritisation of sites with provision of appropriate training for allocate staff on this procedure.</p>	December 2019



	2.3	<p><u>Allocation of a Unique Reference Number for each PCLS</u></p> <p>A unique reference number should be allocated to each PCLS on the GIS system and a corresponding file set up on the Council's server.</p>	February 2020
	2.4	<p><u>Prioritisation of Sites</u></p> <p>Trained staff to proceed with and complete the prioritisation of all PCLS in line with the procedural document (refer to 2.1).</p>	July 2021
3. Encouraging where appropriate the regeneration and redevelopment of brownfield and contaminated sites	3.1	<p><u>Economic Growth &amp; Strategic Housing</u></p> <p>Opportunities need to be taken to re-use or redevelop vacant, derelict brownfield sites within the district where appropriate. Housing and Environmental Enforcement will support and assist any regeneration initiatives, including any applications for government funding and input into the Brownfield Register and Local Development Plans as a matter of priority over any programmed proactive work which is not currently on-going or urgent.</p>	Ongoing
	3.2	<p><u>Planning Application Consultations</u></p> <p>Engage with Planning Development Control to agree what development planning application types should be consulted on e.g. residential, new builds, conversions etc where land contamination risks should be considered.</p> <p>Housing and Environmental Enforcement to respond to 100% of planning consultation requests from Planning Development Control within a period of 20 twenty working days.</p>	April 2020

	3.3	<p><u>Pre Planning Advice</u></p> <p>Housing and Environmental Enforcement shall provide pre-planning advice including attending meetings wherever possible. The provision of advice on pre planning technical reports will be subject to the discretion of Housing and Environmental Enforcement in conjunction with the site’s risk level and current resources.</p>	Ongoing
	3.4	<p><u>Voluntary Remediation</u></p> <p>To continue to support the voluntary remediation of land in the district and to allocate resources where voluntary remediation is being considered on medium to high risk PCLS.</p>	Ongoing
4. Raising awareness of land quality issues amongst landowners, conveyancing solicitors and potential polluters and to encourage a willingness to undertake voluntary remediation	4.1	<p><u>Regional Planning Guidance</u></p> <p>Regional guidance on the assessment and remediation of potentially contaminated land has been produced by the Yorkshire &amp; Lincolnshire Pollution Advisory Group for developers that are intending to redevelop brownfield land. The continued promotion of this guidance will assist in ensuring that developers and their appointed consultants continue to meet high standards for the redevelopment of contaminated land.</p>	Ongoing

	4.2	<p><u>Conveyancing Solicitors</u></p> <p>A letter should be sent out to all conveyancing solicitors based within the district to advise them that they should be commissioning environmental searches for their clients who are buying properties. If potential purchasers are made aware of any land contamination risks during the conveyancing process, then they should be able to make an informed decision.</p> <p>For residential prospective homeowners mitigation of the risk may include the purchasing of a suitable insurance product to cover any potential claim for remediation costs further down the line under Part 2A of the Environmental Act 1990. This would prevent the need for the local taxpayer and indeed the residents from paying for remediation works.</p>	July 2021
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## 10.0 References

- 1 Part 2A of the Environmental Protection Act 1990  
<https://www.legislation.gov.uk/ukpga/1990/43/part/IIA>
- 2 West Lindsey District Council, 2001, Local Authority Contaminated Land Control and Decision Framework Policy  
<https://www.west-lindsey.gov.uk/my-services/my-community/environment/contaminated-land/contaminated-land-downloads/>
- 3 The Contaminated Land (England) Regulations 2006  
<http://www.legislation.gov.uk/uksi/2006/1380/contents/made>
- 4 Contaminated Land Statutory Guidance 2012  
<https://www.gov.uk/government/publications/contaminated-land-statutory-guidance>
- 5 National Planning Policy Framework 2019  
[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/810507/NPPF\\_Feb\\_2019\\_print\\_revised.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/810507/NPPF_Feb_2019_print_revised.pdf)
- 6 The Central Lincolnshire Local Plan 2012-2036, 2017  
<https://www.n-kesteven.gov.uk/central-lincolnshire/local-plan/>
- 7 The Planning (Listed Building and Conservation Areas) Act 1990  
<http://www.legislation.gov.uk/ukpga/1990/9/contents>
- 8 Private Water Supplies (England) (Amendment) Regulations 2018<sup>8</sup>  
<http://www.legislation.gov.uk/uksi/2018/707/contents/made>
- 9 Water Framework Directive, 2000  
[https://ec.europa.eu/environment/water/water-framework/index\\_en.html](https://ec.europa.eu/environment/water/water-framework/index_en.html)
- 10 Environment Agencies Approach to Groundwater Protection  
<https://www.gov.uk/government/publications/groundwater-protection-position-statements>
- 11 West Lindsey District Council, West Lindsey District Council Corporate Plan [2019 - 2023]  
<https://www.west-lindsey.gov.uk/my-council/how-the-council-works/key-plans-policies-and-strategies/corporate-plan/>
- 12 Environment Agency, 2016, Dealing with Contaminated Land in England  
[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/513158/State\\_of\\_contaminated\\_land\\_report.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/513158/State_of_contaminated_land_report.pdf)
- 13 Environmental Information Regulations, 2004  
<http://www.legislation.gov.uk/uksi/2004/3391/contents/made>
- 14 Freedom of Information Act, 2000  
<https://www.legislation.gov.uk/ukpga/2000/36/contents>
- 15 Town and Country Planning (Brownfield Land Register) Regulations 2017  
<http://www.legislation.gov.uk/uksi/2017/403/contents/made>

## 11.0 Relevant Guidance Documents

1. British Standards Institute (2017), BS 10175: 2011 + A2: 2017 'Code of Practice for Investigation of Potentially Contaminated Sites'  
<https://shop.bsigroup.com/ProductDetail?pid=000000000030362551>
2. British Standards Institute (2015), BS 5930: 2015 'Code of Practice for Site Investigation'  
<https://shop.bsigroup.com/ProductDetail?pid=000000000030268443>
3. Environment Agency (2019), Land Contamination: Risk Management  
<https://www.gov.uk/guidance/land-contamination-how-to-manage-the-risks>
4. YALPAG (April 2019) Development of Land Affected by Contamination - Technical Guidance for Developers, Landowners & Consultants, version 10.3
5. CIRIA (2007) Assessing Risks Posed by Hazardous Ground Gases to Buildings (C665)  
<https://www.ciria.org/ItemDetail?iProductCode=C665&Category=BOOK&WebsiteKey=3f18c87a-d62b-4eca-8ef4-9b09309c1c91>
6. British Standards Institute (2015), BS 8485: 2015+A1:2019 'Code of practice for the design of protective measures for methane and carbon dioxide ground gases for new buildings'  
<https://standardsdevelopment.bsigroup.com/projects/2018-01306>

## 12.0 External Contacts

### Environment Agency

Local Office:

Groundwater & Contaminated Land Team

Ceres House

2 Searby Road

Lincoln

LN2 4DT

Tel: 0370 850 6506

### Natural England

Local Office:

2nd Floor, Ceres House

2 Searby Road

Lincoln

LN2 4DW

Tel: 0300 060 3900

Email: [enquiries@naturalengland.org.uk](mailto:enquiries@naturalengland.org.uk)

### English Heritage

The Engine House

37 Tanner Row

Fire Fly Avenue

Swindon

SN2 2EH

Tel: 0370 333 1181

Email: [customers@english-heritage.org.uk](mailto:customers@english-heritage.org.uk)

### Homes & Communities Agency

Local Office:

Arpley House

110 Birchwood Boulevard

Birchwood

Warrington

WA3 7QH

Tel: 0300 1234 500

Email: [mail@homesandcommunities.co.uk](mailto:mail@homesandcommunities.co.uk)

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## 13.0 Consultation

The following organisations were consulted as part of the strategy review consultation process:

Environment Agency

Attn: Land Contaminated Team

Ceres House

2 Searby Road

Lincoln

LN2 4DT

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## Glossary

The 'Act'	The Environmental Protection Act, 1990
The 'Regulations'	The Contaminated Land (England) Regulations, 2000
The 'Guidance'	Contaminated Land Statutory Guidance (Defra, April 2012)
Apportionment	As defined by the Act, means:-  Any determination by the enforcing authority under section 78F(7) (that is, a division of the costs of carrying out any remediation action between two or more appropriate persons).
Appropriate Person	As defined by section 78A(9) of the Act, means:-  Any person who is an appropriate person, determined in accordance with section 78F of the Act, to bear responsibility for anything which is to be done by way of remediation in any particular case.
Class A Person	As defined by paragraph 7.3 of the Guidance, is 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).
Class B Person	As defined by paragraph 7.3 of the Guidance, is 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).
Contaminant	As defined by paragraph 6 of the Introduction of the Guidance, is a substance that is in, on or under the land and which has the potential to cause significant harm to a relevant receptor, or to cause significant pollution of controlled waters.
Controlled Waters	As defined by section 78A(9) by reference to Part III (section 104) of the Water Resources Act 1991, which includes territorial and coastal waters, inland fresh waters, and ground waters.
Determination/ Determined	This is a statutory legal process whereby where there is a contaminant linkage found on a site that is causing or threatening significant harm or significant possibility of significant harm of human health or controlled water, then that site should to be 'determined' as contaminated land.
Enforcing Authority	For land not designated as being a 'special site', the enforcing authority within West Lindsey District Metropolitan District is the Local Authority.  For land designated as being a 'special site', the enforcing authority is the Environment Agency.

LFG	Landfill Gas - a product of the degradation of biodegradable waste (any organic matter that can be broken down by micro-organisms such as paper, wood or food stuffs.) which normally comprises of methane, carbon dioxide and other trace gases.
Local Authority/Council	West Lindsey District Metropolitan District Council
LDP	The 'Local Development Plan' is a series of documents, which contain development and land use policies that will fulfil the Council's community, economic, environmental and social aims for the district in the future.
Owner	As defined by section 78A(9) of the Act as being: "a person (other than the 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 2A	Part 2A of the Environmental Protection Act, 1990
Pathway	As defined by paragraph 3.8 of the Guidance, is a route by which a receptor is or might be affected by a contaminant.
PCLS	A 'Potentially Contaminated Land Site' (PCLS) is any area of land that is known or believed to have been used for an industrial activity either at present or at some point in the past.
Precautionary Principle	Article 130 of the "Treaty on European Union" places the basis for environmental protection upon the 'Precautionary Principle'. Where, in the absence of firm scientific evidence regarding the effects of a particular substance or activity, the protection of the environment should be the first concern. Furthermore, there is no need for scientific proof before preventative action is taken. In summary, the reduction of risks to the environment by taking avoiding action before any serious problem arises.
Polluter	Although a 'Polluter' is not officially defined in legislation it is considered to be a person or thing responsible for contaminating the environment with harmful or poisonous substances.
The Polluter Pays Principle	Article 130 of the "Treaty on European Union" looks to ensure that the costs of environmental damage caused by polluting activities are borne in full by the person responsible for such pollution (the polluter).  The principle accepts that (i) the polluter should pay for the administration of the pollution control system, UNLESS they are no longer in business; and (ii) the polluter should pay for the consequences of the pollution (e.g. compensation and remediation).

Receptor	As defined by paragraph 3.8 of the Guidance, is something that could be adversely affected by a contaminant, for example a person, an organism, an ecosystem, property or controlled waters.
Register	The public register maintained by the Council under section 78R of the Environmental Protection Act, 1990.
Remediation	As defined by section 78A(7) of the Act, means:- <ul style="list-style-type: none"> <li>• The doing of anything for the purpose of assessing the condition of <ul style="list-style-type: none"> <li>(i) the contaminated land in question;</li> <li>(ii) any controlled waters affected by that land; or</li> <li>(iii) any land adjoining or adjacent to that land;</li> </ul> </li> <li>• 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: <ul style="list-style-type: none"> <li>(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</li> <li>(ii) of restoring the land or waters to their former state; or</li> </ul> </li> <li>• The making of subsequent inspections from time to time for the purpose of keeping under review the condition of the land or waters.</li> </ul>
Risk	As defined by paragraph 3.1 of the Guidance, means the combination of: <p>(a) the likelihood that harm, or pollution of water, will occur as a result of contaminants in, on or under the land; and</p> <p>(b) the scale and seriousness of such harm or pollution if it did occur.</p>
Site Inspection	This normally incorporates a Preliminary Risk Assessment & Desktop Study, Site Walkover Survey and potentially limited sampling of a site.
Site Investigation	This normally would include an extensive investigation of the ground conditions at a site i.e. boreholes, trail pits etc and a subsequent risk assessment based on the findings of the investigation
Special Site	Land that has been designated as such by virtue of sections 78C(7) and 78D(6) of the Act, and that further defined within regulations (2), (3), and schedule (1) of the Regulations.
Substance	As defined by section 78A(9) of the Act, means any natural or artificial substance, whether in solid or liquid form or in the form of a gas or vapour.

Suitable for Use

The 'suitable for use' approach consists of:

1. Ensuring that land is suitable for its current use through the identification of land where contamination is causing unacceptable risks to human health and the environment, assessed on the basis of the current use and circumstances of the land, and returning the land to a condition where such risks no longer arise. The new contaminated land regime provides the mechanism to achieve this;

2. Ensuring that land is made suitable for any new use, as planning permission is given for that new use. This is achieved by assessing the potential risks from contamination, on the basis of the proposed future use and the circumstances and remediating the land before the new use commences. The Town and Country Planning and Building Control statutory provisions afford the mechanism to achieve this.

YALPAG

Yorkshire & Lincolnshire Pollution Advisory Group – Land Sub Committee is a collection of Local Authority contaminated land representatives.

