Contaminated Land Inspection Strategy
January 2023

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DISTRICT COUNCIL

Contaminated Land Inspection Strategy
Environmental Protection Act 1990 - Part 2A

Contents

Executive Summary

Throughout the UK there are thousands of sites which have the potential to have been contaminated from previous industrial use. There is a growing necessity for reclamation and redevelopment of these sites. A proportion of this land will be contaminated, requiring a risk-based approach to redevelop any potentially contaminated site.

This 2023 revision of the Council's Contaminated Land Inspection Strategy has been updated to communicate progress made, changes in published guidance and changes to the strategy as a result. It replaces the January 2013 edition.

The document sets out information regarding the legislation and statutory guidance the Council must follow, as well as information surrounding the District in terms of general information about possible sources of contaminates, pathways in terms of geology, and receptors in terms of District layout, population and prevalent industries.

The majority of potentially contaminated land sites within the District have been identified and prioritised in terms of their potential risk. 56 limited investigations have been carried out of the highest prioritised sites. At this time the Council has not formally identified any sites as contaminated land as defined under Part 2A of the Environmental Protection Act 1990.

Given that no significant possibility of significant harm was identified on the highest prioritised sites via the investigations undertaken, and the fact that central government funding for new investigations has been closed, no further investigations are planned. However, this will be reviewed on a case-by-case basis where further evidence of possible contamination becomes apparent, or in the event that further funding becomes available for site investigations.

Given the growing need for housing in the District, many sites are being investigated, and remediated if required via the planning regime. This continues to be the Council's preferred method for dealing with potentially contaminated land sites. The Council will also remain approachable to landowners who may wish to discuss the remediation of sites voluntarily. Both these methods are in line with Defra guidance which seeks to reduce the burden on the taxpayer and avoid formal action where possible.

1 Introduction

Contaminated Land is defined in Section 78A(2) of the Environmental Protection Act 1990 as:

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

(a) *Significant harm is being caused or there is a significant possibility of such harm being caused*

or

(b) *Pollution of controlled waters is being, or is likely to be, caused."*

This definition includes a number of terms that are further defined in the guidance, and these introduce further concepts that must be understood if the definition of contaminated land is to be accurately applied to any particular site. A glossary of terms is available in section 16.5 Glossary.

The definition ensures that only land where contamination is causing unacceptable risks to human health or the wider environment is treated as contaminated land. It does not seek to instigate remedial action against all land where contamination is present.

<u>"Significant Harm"</u>

'Harm' is 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."

"Significant harm" is defined in section 16.1 "Categories of Significant Harm".

The statutory guidance provides that unless significant harm is being caused, or there is significant possibility of significant harm being caused, land is not to be classed as contaminated.

<u>"Significant possibility of significant harm"</u>

In deciding whether the possibility of harm being caused is significant the Council must take into account the following factors

1. The nature and degree of harm

2. The susceptibility of the receptors

3. The timescale in which the harm might occur.

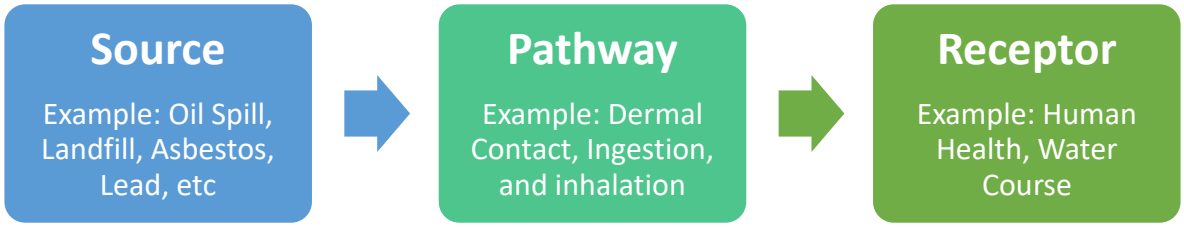
The conditions under which significant possibility of significant harm may occur are outlined in section 16.2 “Significant Possibility of Significant Harm”.

“Suitable for Use”

The legislation takes a pragmatic approach by concentrating on land posing unacceptable risks in its current use, by making land suitable for any likely new use when planning permission is granted, and by limiting remediation work to that necessary to prevent unacceptable risks given such current or future uses. Remediation requirements must make land suitable, not necessarily free of all contamination.

How is Contaminated Land Identified?

When deciding whether land is contaminated, the Council must firstly identify a ‘pollutant linkage’, and secondly, assess whether this is a ‘significant pollution linkage’. A pollutant linkage means a relationship between a contaminant, a pathway and a receptor. If any part of the linkage is missing, then the chain is broken and under the legislation the land cannot be deemed contaminated.



These terms are not defined by statute. The following meanings are set out in statutory guidance:

1. The **contaminant, or source** is a substance which is in, on or under land and which has the potential to cause harm or to cause pollution of controlled waters which includes territorial waters, coastal waters, inland waters and groundwater.

2. The **receptor** is either: a living organism, a group of living organisms, an ecological system or a piece of property which is listed in Section 16.1 “Categories of Significant Harm” and which is being, or could be, harmed by a contaminant; or controlled waters which are being, or could be, polluted by a contaminant.

It should be noted that the Council is advised to disregard any receptor not likely to be present given the current use of any land under investigation. The current use of a site is deemed to include any use currently made, or likely to be made, that is consistent with existing planning permission. However, ‘current use’ does include any likely informal recreational use of the land.

3. The **pathway** is one or more routes or means by, or through, which a receptor is being (or could be) exposed to or affected by a contaminant.

Examples:

Landfill gas (the contaminant) produced in a former unlicensed tip might be causing harm to a nearby dwelling (the receptor) as a result of the gas migrating through fissured chalk (the pathway).

Petrol (the contaminant) that leaked from storage tanks into underlying aquifers used for drinking water extraction. In this example the movement of groundwater represents both the pathway as the means by which petrol is moved from its original site and the receptor.

2 The role of the strategy in relation to the Council's Corporate plan

Mid Sussex District Council has established key priorities in its corporate plan 2022-2023. The following priorities are relevant to the inspection strategy:

Sustainable economic growth

We will work towards encouraging sustained economic growth by looking:

- To prevent any further contamination of land;
- To encourage voluntary remediation;
- To encourage re-use of previously developed land.

Effective and responsive services and strong and resilient communities

We will look to put customers first by looking:

- To protect human health;
- To protect controlled waters;
- To protect designated ecosystems (see Appendix 16.1 for more details);
- To prevent damage to property;

Under the regulations, the Council is required to inspect land in its District for contamination and prepare a strategy for submission to the Environment Agency. This strategy is produced with the Council's objectives at its forefront. It is these objectives, which are reflected in the Council's priorities in dealing with contaminated land.

It is recognised that some sites may be identified outside this general approach to inspection that will require urgent attention. These sites will be dealt with as they arise. The Council will support parties wishing to undertake voluntary remediation and will encourage the re-use of previously developed land for development.

The District Council is the lead regulator on contaminated land (except in the case of Special Sites where the Environment Agency is the enforcing authority) but, wherever necessary, the Council will work in partnership with other organisations, particularly the Environment Agency.

3 Strategy Aims

Under Part 2A of the Environmental Protection Act 1990 (EPA), each authority has a statutory duty to prepare, implement and keep under periodic review its Contaminated Land Inspection Strategy.

The existence of contamination represents a threat to the sustainable development of the country as a whole.

The aim of the strategy is to identify actual and potential contaminated sites within the District by rational, ordered and efficient investigation, to remove unacceptable risk to human health and the environment and prevent the creation of new contaminated sites.

This updated strategy supersedes all previous versions.

4 Scope

The overarching objectives of the government's policy on contaminated land and the Part 2A regime are set out in statutory guidance (DEFRA, 2012):

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; and
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.

Land may have become contaminated as a result of a current or historic land use. Examples of potentially contaminating land uses include industrial and waste disposal sites. Spills and leakages of substances may also lead to contamination. Part 2A regime provides a risk-based approach to defining and identifying contaminated land and a means to remediate land that poses a significant risk to human health or the environment. This regime also works closely with planning and development control processes to ensure that potentially contaminated land is identified, and risks do not arise from redevelopment through monitoring of applications and changes of land use.

The purpose of this strategy is to ensure a rational, ordered, and efficient approach to dealing with potentially contaminated sites within the Mid Sussex District.

5 Characteristics of the local area

Across the United Kingdom there are marked differences in geography, industrial activity and prevalence of vulnerable ‘receptors’ such as protected wildlife and water resources. The manner in which contaminants have been deposited, have moved and have affected (or threatened) vulnerable receptors can vary even between localities a few miles apart. The Council has considered the character of the District when developing priorities and objectives for inspecting land that may be contaminated.

Mid Sussex District is one of seven Districts and Boroughs within the County of West Sussex. The Council’s jurisdiction covers a total area of approximately 130 square miles lying on the eastern edge of West Sussex, adjoining the County boundaries with East Sussex to the south and east and Surrey to the north. The District stretches from the boundary with Brighton and Hove City Council at the South Downs northwards to the southern edge of Crawley Borough Council. To the north, east and west are the boundaries with the District Councils of Lewes, Horsham, Wealden, and Tandridge.

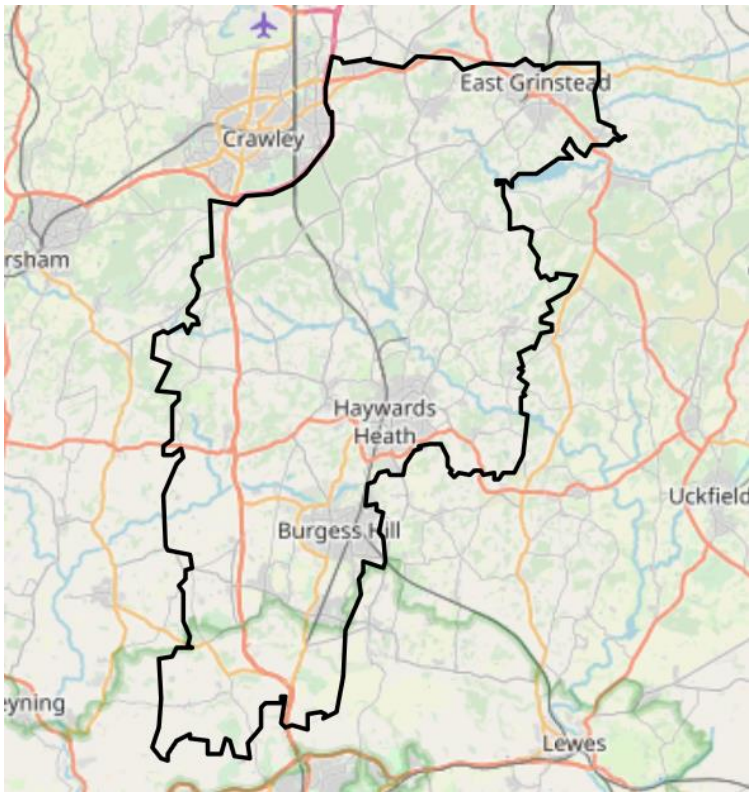


Figure 5.1: Mid Sussex District Map (© OpenStreetMap)

5.1 Population Distribution

Mid Sussex is home to approximately 152,600 people (Office for National Statistics, 2021). Within the District there are a number of villages of various sizes, however, approximately 60% of the population live in one of the three towns of Burgess Hill, Haywards Heath and East Grinstead each having a population of approximately 30,500 (Office for National Statistics, 2021).

5.2 History/Description of Mid Sussex

Mid Sussex is a rural District with around 60% of its area within designated landscapes. Nearly 50% of the District is within the High Weald Area of Outstanding Natural Beauty (AONB); a historic landscape characterised by a deeply incised, ridged and faulted landform of clays and sandstone, with numerous gill streams and woodlands. Approximately 11% of the District is within the South Downs National Park; a lowland landscape with the chalk ridge of the South Downs.

Between the 13th and 17th centuries the Weald was one of the country's pioneering iron industry areas, containing many iron smelting furnaces. The legacy of the iron industry has created added interest with many man-made ponds remaining in the area.

5.2.1 Burgess Hill

Burgess Hill is located in the south of the District. The town began to grow in the 1840s after the opening of the railway and became a centre of the brick making industry in the 19th century supplying bricks and tiles to the coastal towns via the railway. There was a rapid growth in the town in the 1950s when the population rose by 64%. It continues to expand, with the Brookleigh development, bringing 3000 new homes to the north of the town.

5.2.2 Haywards Heath

Haywards Heath is located in the centre of the District. This town also owes much of its growth to the railway. Initially developed as a market centre in the late 19th century, the growth of the town, particularly after the 1930s when the railway was electrified, resulted in its merging with the historic village of Lindfield, though the village has retained its own distinct character.

5.2.3 East Grinstead

East Grinstead is located on the northern edge of the District and has a long history dating back to the 13th century, being one of the oldest towns in the County. It contains a number of historic buildings including many dating from the medieval period. Whilst East Grinstead also has rail links to London, unlike Burgess Hill and Haywards Heath, the town is not on the main London to Brighton line.

To the south and east of the town is part of the High Weald Area of Outstanding

Natural Beauty. The town has been developed on a flat-topped ridge, which extends from Ashurst Wood in the southeast to Imberhorne Lane in the west. A ridge also extends along Holtye Road to the northeast, and southwards towards Saint Hill Green. Steep-sided wooded river valleys to the south of the town dissect these ridges. This physical form has given the town a distinctive character and setting in relation to the surrounding area.

5.2.4 The Rural Areas

The Southern Villages and Surroundings

The southern part of the District lies within the South Downs National Park, and the northern part within the High Weald AONB. Lying between these two areas is the Low Weald plain, which whilst not designated as a protected landscape, is of high landscape importance. This area is based on clay and is generally flatter than the High Weald to the north. The farmland is divided into fields by hedgerows and woodland copses.

The villages of the Low Weald are generally small and attractively integrated into the landscape. The largest settlements are at Hassocks and Hurstpierpoint. The South Downs National Park lies directly south of both villages conserving and enhancing the natural beauty, wildlife and cultural heritage.

Originally two separate settlements, the village of Keymer and Hassocks grew considerably after the opening of the railway line in the 19th century. Lying very close to the South Downs there are magnificent views of the undulating agricultural land to the south with the village clearly visible from vantage points on the Downs. A major ridgeline runs to the north, where the countryside is predominant in views from the railway.

The oldest part of the village is around Keymer where several buildings are listed, of which the Manor House, now divided into two properties and dating from the 15th century, is the oldest. Oldland Mill, dating from the 17th century, lies to the northeast of the village and is one of the few remaining Post Mills still standing in the southeast.

Hurstpierpoint lies to the west of Hassocks. The oldest part of the settlement is the linear High Street with a number of listed buildings. Residential development has extended the settlement northwards at either end of the village along Cuckfield Road and College Lane, the latter linking to the hamlet of Hurst Wickham.

There are a number of smaller villages and hamlets spread across the remainder of the southern area.

The Central Villages and Surroundings

The Central Mid Sussex area is predominately rural in character. It comprises a number of villages and hamlets set in the countryside, of which all but three small areas fall within the High Weald AONB.

The geology of the High Weald comprises mostly sands and soft sandstones intermingled with clays, giving rise to a distinctive landscape comprising a hilly country of ridges and valleys. The main ridges run east to west and are dissected by secondary streams giving rise to a close network of smaller ridges and valleys or ghylls.

Superimposed on this natural background are the man-made features of the landscape. There is a close patchwork of small fields, hedges and areas of woodland patterning the ridges and valleys. Whilst much of the earlier dense forest has now gone, areas of ancient woodland can still be found there. However, there are still abundant areas of woodland, predominately broadleaved, with oak and ash the dominant species, although more recently planted areas comprise predominantly conifers.

Remnants of the earlier Wealden iron industry, such as hammer ponds are still in evidence. The variable topography and geology of the area has also given rise to a variety of wildlife habitats. These have been supplemented by the creation of more recent man-made features such as Ardingly Reservoir.

The largest settlements in the central area are Cuckfield and Lindfield, lying to the west and north of the main town of Haywards Heath respectively.

The village of Cuckfield, is bounded to the north and west by the High Weald AONB. Land to the south slopes away giving fine views across the Weald to the South Downs. This area is characterised by small fields broken up by blocks of woodland and small streams that have created steep ghylls in the undulating landscape.

The historic part of the village centres around the narrow winding streets leading from South Street rising northwards through the High Street towards Whitemans Green. There are a number of Listed Buildings in the village including the Grade I Listed Church, constructed circa 1250 on the foundations of a twelfth century church.

Lindfield, lying immediately to the north of Haywards Heath, is famous for its picturesque High Street and village pond. The village Church dates from the 13th century and there are a number of buildings dating from the 15th and 16th centuries. The Common, lying to the south of the High Street, is an open space with tree-lined roads and a variety of recreational uses

The Northern Villages and Surroundings

The northern part of the District contains extensive areas of forest and large tracts of agricultural land comprising small fields bounded by hedgerows and tree lines. The area also includes parts of the gathering grounds of the reservoirs at Ardingly and Weir Wood. In terms of past industrial use, the area contains evidence of the past importance of the iron industry through the existence of many ancient hammer and

furnace ponds.

The main villages in the northern part of the District are Copthorne and Crawley Down, with a combined population of approximately 10,000.

Copthorne is located in the Central Weald to the east of Crawley. The area rises from south to north forming a shallow escarpment along what is known as Copthorne Bank. Copthorne Common, dating back to the medieval period is divided into the Upper and Lower Common. Early growth of the village dates back to the nineteenth century around The Green with further development taking place in the post war period.

Crawley Down is located on a plateau, on a broad ridge running northwards from Turners Hill. The village really established itself at the end of the nineteenth century.

5.3 Details of authority ownership of land

Sites owned by the Council which are potentially contaminated as a result of the former activities have been identified.

The Council's existing land holdings were prioritised internally in accordance with this strategy.

In general, the Council's interests in land have been considered along with all other potentially contaminated sites, the justification for inspection of any Council owned/leased land being in accordance with the inspection strategy.

5.4 Current land use characteristics

Mid Sussex is characterised by a number of towns, villages and hamlets set in extensive countryside with large expanses of woodland. Agriculture remains the predominant land use, although only a small number of people are still actually employed in farming. Within the built-up areas housing and employment uses prevail with a large number of people employed in wholesale and retail trade, human health and social work activities, as well as education (Nomis Labour Market Profile, 2021).

5.5 Protected locations (natural habitats, etc.)

Ashdown Forest

Increased recreational activity arising from new recreational development and related population growth is likely to disturb the protected near-ground and ground nesting birds on Ashdown Forest. Mitigation measures are necessary to counteract the effects of potential increasing recreational pressure on the Ashdown Forest Special Protection Area (SPA) and Special Area of Conservation (SAC) arising from new residential development within a 7km zone of influence around the Ashdown Forest SPA. Mitigation measures will help to ensure that the conservation objectives for the Ashdown Forest SPA and SAC are met which will prevent a deterioration of the conservation status of qualifying species for which the SPA has been classified and the qualifying habitats and species for which the SAC has been designated.

Ashdown Forest itself is located within Wealden District, however the 7km zone of influence affects a significant area of northeast Mid Sussex, including East Grinstead, Turners Hill, Ardingly and Horsted Keynes. The strategic solution for recreational disturbance on the Ashdown Forest SPA and required mitigation is set out in planning policy and ensures the requirements of the Habitats Regulations are met with regard to the in combination effects of increased recreational pressure on the Ashdown Forest SPA arising from new residential development.

Within the District there are many areas that are afforded special protection:

South Downs National Park

On 31st March 2010, the South Downs became the 10th National Park to be designated in England. The South Downs National Park is over 1,600 square kilometres and stretches 100 miles from the edge of Winchester to Beachy Head, including the southernmost area of the Mid Sussex District. The South Downs is characterised by chalk hills, which gently dip to the south with a north-facing escarpment, which rears above the lowlands to the north comprising a mosaic of fields and woods.

Area of Outstanding Natural Beauty (AONB)

Much of the District is countryside with nearly 50% of its area designated as an Area of Outstanding Natural Beauty.

The High Weald Area of Outstanding Natural Beauty designated in 1983 covers most of the northern half of the District. The Weald is a complex landscape comprising hills, ridges and valleys. The area is also characterised by large expanses of woodland.

Sites of Special Scientific Interest (SSSIs)

SSSIs are designated by Natural England as the best examples of the nation's heritage of biodiversity, wildlife habitats, geological features and landforms. There are 13 SSSIs within Mid Sussex.

Local Nature Reserves (LNRs)

These are areas that have been established by the District Council in consultation with Natural England, where it was considered that a habitat of local significance will make a useful contribution both to nature conservation as the principal function of the site and to education. There are six LNRs in the District.

Local Wildlife Sites (LWSs)

Local Wildlife Sites are non-statutory sites, designated by local authorities on account of the special interest in their flora/fauna. There are currently 50 LWS in Mid Sussex District. LWSs were previously known as Sites of Nature Conservation Importance (SNCIs).

Historic Parks and Gardens

There are ten registered Parks and Gardens of Special Historic Interest in Mid Sussex.

Key property types, e.g. ancient monuments

Within the District there are over 1000 Listed Buildings, of which the majority are Grade II.

There are over 1000 sites of archaeological interests within the District of which 25 are Scheduled Ancient Monuments.

Key surface water resource/protection issues

Mid Sussex is located in a relatively high geographical position. The District largely drains southwards into the English Channel via the Rivers Adur and Ouse. The area east of Burgess Hill and Hassocks drains westwards into the water system of the River Adur.

The Haywards Heath/Cuckfield area drains eastwards and joins the River Ouse. This is the most important river within the District, canalised to enable the building of the Balcombe viaduct. This river rises from Ardingly Reservoir to the north, which balances the River Ouse water system.

The north of the District, around East Grinstead and Ashurst Wood, drains to the River Medway that rises at Turners Hill to the southwest of East Grinstead. The upper reaches of the river system are managed by the Weir Wood Reservoir.

The remainder of the northern part of the District drains into the headwaters of one of the tributaries of the River Mole, which rises at Copthorne Common.

Both the River Medway and the River Mole drain into the River Thames.

5.6 Industrial Land Uses

Between the 13th and 17th centuries the Weald was one of the country's pioneering iron industry areas, containing many iron smelting furnaces. The legacy of the iron industry has created added interest with many man-made ponds remaining in the area.

In addition, there are several industrial estates within the District; the largest and most notable being the Victoria Industrial Estate built on the former pleasure gardens in Burgess Hill. Other sizeable industrial estates include The Birches Industrial Estate and Charlwoods in East Grinstead, Burrell Road and Bridge Road in Haywards Heath, and Sheddingdean in Burgess Hill. In addition to these, there are a significant number of smaller industrial estates providing a valuable source of local employment.

5.7 Geology

The geological make up of Mid Sussex changes across the District. Travelling from north to south, the Hastings Beds in the north stretch from Copthorne through East Grinstead to Haywards Heath. Further south, Burgess Hill is built over Weald Clay. Thin strips of Lower Greensand and Upper Greensand cover the area around Hassocks and Hurstpierpoint before reaching the chalk at the foot of the South Downs.

The Low Weald is a broad low-lying clay vale, which runs around three sides of the High Weald through Kent, Sussex and Surrey, bounded for much of its length by the Wealden Greensand. Topography and soils vary with higher drier pockets of land on the outcrops of limestone or sandstone - which are commonly the sites of settlements - within the often flat and wet soils of the vale. The area is well wooded, with many of the fields created by woodland clearance. It is also rich in ponds and small streams. Ponds are also evidence of a history of brick making, marl pits and the iron industry.

The Low Weald area coincides with the outcrop of the Weald Clay, lying below the irregular escarpment of the Greensand belt and the Chalk. It gives rise to a broad vale that is typically low-lying and undulating, rarely exceedingly more than 30 m - 40 m AOD with many areas as low as 15 metres. Towards the south, the undulations become rolling and larger in scale.

Localised deposits of limestone and sandstone form gentle ridges and high points throughout the Low Weald. In many places, these are the sites of farmsteads, hamlets or larger settlements. The Weald Clay produces heavy, poorly drained soils, which are nutrient-poor and are largely used as pastureland, with use for arable crops less common.

From 1st April 2010 the Environment Agency's Groundwater Protection Policy started using new aquifer designations that are consistent with the Water Framework Directive. These designations reflect the importance of aquifers in terms of groundwater as a resource (drinking water supply) but also their role in supporting surface water flows and wetland ecosystems.

The aquifer designation data is based on geological mapping provided by the British Geological Survey. The maps display the following aquifer designations:

Principal Aquifers: (highly permeable).

These are aquifers important for public drinking water supply and other purposes due to the rate at which the particular geological formation will yield water during abstraction. Within Mid Sussex, the Lower and Upper Greensand and Cretaceous Chalk are the principal aquifers. In terms of location, one principal aquifer is based in an east-west belt stretching from the District boundaries and covering Hassocks and Hurstpierpoint. A section of this aquifer includes a section extending from Poynings Crossways west along the Henfield Road and south to Fulking and across to the District Boundary at Edburton. A further principal aquifer is located from Clayton southwards, including the South Downs and stretching to the coast. In most cases, principal aquifers are aquifers previously designated as major aquifer.

Secondary Aquifers: (variably permeable).

These include a wide range of rock layers or drift deposits with an equally wide range of water permeability and storage. Secondary aquifers are subdivided into two types:

Secondary A - permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers. The majority of the District north of Burgess Hill is classified as a secondary A aquifer lying on Tunbridge Wells Sand and Ashdown Beds.

Secondary B - predominantly lower permeability layers which may store and yield limited amounts of groundwater due to localised features such as fissures, thin permeable horizons and weathering. These are generally the water-bearing parts of the former non-aquifers.

Secondary Undifferentiated - has been assigned in cases where it has not been possible to attribute either category A or B to a rock type. In most cases, this means that the layer in question has previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type.

It should be noted that principal aquifers can occur beneath secondary aquifers.

Unproductive Strata: (negligibly permeable).

These are rock layers or drift deposits with low permeability that have negligible significance for water supply or river base flow. Principal or secondary aquifers may be present beneath unproductive strata.

6 Regulatory Context

Section 57 of the Environment Act 1995 created Part 2A of the EPA and together with the Contaminated Land (England) Regulations 2006 is the legislative framework for the contaminated land regime. The regime places responsibility on Mid Sussex District Council (MSDC) as a regulator to:

- Identify any contaminated land within its boundaries,
- Require remediation of contaminated land unless deemed a “special site”, in which case the Environment Agency (EA) becomes the enforcing authority.
- Establish responsibility, in line with current guidance, for the remediation of contaminated land;
- Ensure that any necessary remediation action takes place, either by agreement or enforcement action.
- Determine liability for the costs of any remediation; and
- Maintain a public register of contaminated land matters, as may be prescribed.

However, development or a change of land use provides the opportunity to deal with land contamination. Other legislation continues to be applicable and may still be used and take precedence over Part 2A:

- Building Regulations 2010 (as amended);
- Environmental Damage (Prevention and Remediation) Regulations 2009;
- Pollution Prevention and Control Act 1999;
- Water Resources Act 1991;
- Town and Country Planning Act 1990;
- Radiative Substances Act 1993;
- Waste management licensing (Part II of the EPA); and
- Statutory nuisance (Part III of the EPA).

As the Part 2A regime is one of several ways in which land contamination can be addressed, the Contaminated Land Statutory Guidance states that “*enforcing authorities should seek to use Part 2A only where no appropriate alternative solution exists”.*

The guidance explains that Part 2A is concerned with identifying and dealing with land only where there are unacceptable risks posed by land contamination and that the starting point should be that land is not contaminated unless there is reason to consider otherwise. It goes on to explain the “suitable for use” approach. This introduces the concept of risk assessment on a site-by-site basis, where the level of contamination is assessed on the basis of the current use and circumstances of the land, and a wide range of environmental factors.

The most significant change in the guidance is a new four category system to help local authorities determine whether land is or is not contaminated on the basis of a significant possibility of significant harm. More information on this can be found in section 16.3.

A similar system can be used for determining whether or not a significant possibility of significant pollution of controlled waters exists. This is described in detail in the guidance.

The guidance does not apply to radioactive contamination of land, which is now covered by separate statutory guidance published by the Department of Energy and Climate Change in April 2012. Both sets of guidance will apply in the event that land is affected by radioactive and non-radioactive contaminants.

6.1 National Planning Policy Framework (NPPF)

The underlying principle in the NPPF is a presumption in favour of sustainable development. With regard to land contamination, the NPPF (July 2021) states that planning policies and decisions should ensure that new development is appropriate for its location and that developers and/or landowners are responsible for securing the safe development of land. The NPPF encourages the re-use of previously developed (brownfield) land, provided it is not of high environmental value. As a minimum, land should not be capable of being determined as contaminated land under Part 2A after it has been remediated via the planning process.

6.2 Roles of the Environment Agency

When contaminated land is identified, the local authority must ensure it is managed and dealt with in an appropriate manner. Other agencies and authorities can also have a role. In certain cases, the EA will provide site-specific guidance to local authorities on contaminated land and will assist in identifying contaminated land where there is a risk of pollution of controlled waters.

The EA can take over as the enforcing authority where the local authority identifies a “special site”, as defined in the legislation. These can be described as sites which are likely to present the greatest threat to health or the environment.

7 Strategy progress to date

The Council has amassed a large body of information on potentially contaminated land uses within its District, via:

- Historical maps and literature;
- Planning records and District Local Plan;
- Trade Directories;
- Ordnance Survey maps;
- Aerial photographs;
- Environment Agency groundwater vulnerability maps and source protection zones;
- Geological maps;
- Natural England designations;
- Land Registry records;
- Integrated Pollution Control register;
- Other local information/knowledge.

This data is maintained by the Environmental Protection Team using the corporate GIS system, to which information has been added as it becomes available.

The data gathered has enabled an initial assessment of risk to be carried out, based on historic land use and current receptor information. There were approximately 3,000 potential sources of contamination identified for Mid Sussex area, ranging from industrial sites to infilled ponds.

Where information has been collected and verified, all relevant information will be recorded on the register once a site has been designated as contaminated land. Information collected and not placed on the register, because a site has not been deemed contaminated, is available as public information subject to the Environmental Information Regulations 2004. However, information held prior to a designation decision being made, will be treated as ‘work in progress’ and therefore may not be subject to the Environmental Information Regulations 2004.

The data gathered has been compared to receptor information to give a prioritisation list for further assessment, based on the potential for contamination, along with the distance to, and sensitivity of, receptors. The highest priority sites were rated as A and the lowest priority sites were rated as C. For reference when sites were prioritised in 2007, the Council had 56 sites rated as A, 1901 sites rated as B, and 805 sites rated as C.

Where information comes to light that identifies a new potential source of contamination within Mid Sussex District, an initial risk assessment is carried out to ascertain if any further investigation is required at this time, but no priority is assigned to the site if no further investigation is deemed to be immediately necessary.

The priority list is purely based on land use data, and the presence of a site on the list does not mean contamination will have occurred. The data has also not been checked against other records held; we may hold information demonstrating that

sites have already been assessed and remediation undertaken or been identified as not being required.

To date a total of 56 sites have been visited under Part 2A powers by the Environmental Protection Team, and the need for further investigation risk assessed. To date no sites have been found to meet the criteria of “Contaminated Land” as defined under Environmental Protection Act Part 2A.

The planning process has been, and continues to be, the Council’s preferred means of dealing with potentially contaminated sites. As a minimum, land remediated via the planning process, should not be capable of being determined as contaminated land under Part 2A of the EPA. For reference approximately 600 planning applications have looked to address areas of potential contamination within Mid Sussex.

Land contamination risk management (LCRM) has been published to give technical advice for developers, landowners and consultants.

The Councils District Plan makes it clear that development proposals should consider if a site is suitable for its proposed use taking into account ground conditions and any risks from land contamination. Relevant applications for planning consent are scrutinised by officers within Environmental Protection. Where these coincide with data held on potentially contaminated sites, or information within the application indicates contamination is a possibility, appropriate action is taken to ensure the site is assessed, and remediated as necessary, to ensure it is suitable for the intended end use.

Furthermore, review, analysis and comment are made on a substantial amount of data in relation to developments of all sizes throughout the District, including desk study, site investigation, remediation and verification reports. Therefore, a proportion of the prioritised sites have been investigated through the planning system and, where necessary, undergone some form of remediation to make the site “suitable for use”. Notable recent developments include the redevelopment of the former Keymer Tiles site for residential use, and the ongoing Northern Arc Project at Burgess Hill, now known as Brookleigh.

It should be noted that in some cases the remediation undertaken has been limited, for example, residual contamination may well remain at a site intended for commercial use and further remediation would be necessary if the site was to be used for a more sensitive land use, such as housing with gardens.

8 Surveying sites and site inspection

The Council has identified a large set of potentially contaminated sites within its District based on historical data. This data is maintained by the Environmental Protection Team within the corporate GIS system, to which information has been added as it becomes available.

The Council's main priority is to identify actual or potential human health risks via ingestion, skin contact, inhalation or through fire/explosion. We will prioritise those sites with risks that are likely to affect a larger proportion of the population.

The Council prioritised potentially contaminated sites on the basis of pollutant linkages. This enabled sites to be ranked against each other, allowing resources to be directed towards investigating the highest priority sites i.e. those areas where pollutant linkages are mostly likely to be found.

Analysis of data using the prioritisation software indicated that there were 56 high priority sites, 1,900 medium priority sites and 804 low priority sites.

The Council has carried out low level inspection of all 56 high priority sites.

However, further to those inspections being undertaken, Defra has removed grant funding for new cases, though the statutory duty for local authorities to inspect land for land contamination remains. Furthermore, Defra suggests that local authorities seek to minimise unnecessary burdens on the taxpayer.

The detailed inspection of sites through intrusive investigation, analysis of samples (soil, water and gas), risk assessment and remediation are beyond the technical capability of the Environmental Protection Team. Such work would be contracted out to consultants and is expensive. It might commonly cost tens of thousands of pounds, with upper bound cost estimates for site remediation of several hundred thousand pounds not being uncommon.

The Council will only seek to characterise and remediate sites if there is the potential that they will present significant risk. Funding will usually be sought from relevant landowners or from government grants. In exceptional circumstances the Council will allocate funds to undertake the works where this is deemed to be in the public interest. These cases will be reviewed and authorised on an individual basis.

As sites are investigated and remediated via the planning process, these will be recorded on the GIS system, and the planning reference recorded so that the data can be retrieved and referred to as needed. As the reports themselves are held by the Council on the public planning register, they will not be held in duplicate by the Environmental Health Department.

Given "the suitable for use" nature of remediation it is important to keep both the records and the previous use on the systems as well as any investigation or remediation that took place, as future changes or uses may still require further works.

In order to achieve the aims of this strategy in identifying actual and potential

contaminated sites by rational, ordered and efficient investigation and remove unacceptable risk to human health and the environment as well as prevent the creation of new contaminated sites, the Council will:

- Reinforce a "suitable for use" approach enabling developers to design and implement appropriate and cost-effective remediation schemes as part of their redevelopment project of contaminated sites to bring brown field land back into beneficial use;

- Identify sites which do not come under the EPA, Part 2A but could still be contaminated, to ensure that the land is suitable for its current use or can be made suitable for its intended future development use, where a receptor may be introduced;

- Record information on a public register stored as part of the corporate geographical information system (GIS), showing the sites identified under Part 2A of the EPA; and

- Continue to provide specialised knowledge and guidance when requested as part of the established formal review mechanism in place between Environmental Health, Planning Development Management and Building Control departments. This review mechanism is intended to enable effective monitoring of contaminated land sites undergoing redevelopment or with permission for redevelopment

9 Information and complaints

Information provided in the form of a complaint from a member of the public, business or community group will be dealt with in the following procedure.

All complainants may expect:

• Their complaint to be logged and recorded;
• A response within 5 working days or within 24 hours in a deemed emergency;
• To be kept informed of progress towards resolution of the problem.

Every effort will be made to resolve complaints quickly, but legislative requirements related to contaminated land will make resolution a slow process due to:

• Proof of a pollution linkage(s) before formal designation as contaminated land is possible, which may involve a detailed site investigation;
• Prior consultation with interested parties before designation as contaminated land;
• A statutory minimum of a three-month period between designation and serving of a remediation notice.

9.1 Information evaluation

The aim of the Council is to verify and evaluate all information that may be used in support of a contaminated land designation to ensure that the Council is in the best position to make a decision. Where further information is required to enable a satisfactory evaluation, the Council will take any necessary action available under its statutory powers. To assist in the evaluation of information, the Council will adopt all relevant and authoritative guidance such as Defra and Environment Agency technical guidance and other good practice publications.

Land contamination risk management (LCRM) was published by the Environment Agency in October 2020 to provide the technical framework for applying a risk management process when dealing with land affected by contamination. The process involves identifying, making decisions on, and taking appropriate action to deal with land contamination in a way that is consistent with government policies and legislation within the UK.

The technical approach presented in the Model Procedures is designed to be applicable to non-regulatory and regulatory contexts that include:

• Development or redevelopment of land under the planning regime;
• Regulatory intervention under Part 2A of the Environment Protection Act 1990 or Part III of the Waste & Contaminated Land (Northern Ireland) Order 1997;
• Voluntary investigation and remediation;
• Managing potential liabilities of those responsible for individual sites or a portfolio of sites.

When evaluating information as part of the inspection process, the Council will place a high value on factual data or events. For example, information obtained from

Ordnance Survey maps will be assumed to be correct unless an alternative source confirms otherwise. Sites known to have had a former potentially contaminative use will be assumed by the Council to have some degree of relevant contaminants present. Whilst a proportion of these sites will have undergone some form of remediation in the past, they will initially be prioritised assuming no remediation has been carried out, thus ensuring that sites where remediation works were not implemented to current standards are identified.

9.1.1 Evaluating Information on Actual Harm or Pollution of Controlled Waters

In evaluating information relating to actual harm occurring to the health of a living organism, ecosystem or property, the Council must be satisfied that the harm occurring is 'significant', in accordance with the statutory guidance. The Council will therefore not take account of harm to receptors other than that shown in section 16.1

When evaluating the degree of significant harm or pollution of controlled waters for the purposes of assessing the nature and degree of remediation, the Council will consider:

• Whether significant harm or pollution of controlled waters is already being caused
• The risk of the possibility of significant harm being caused or the likelihood of pollution of controlled waters
• The nature and importance of the receptor or controlled water
• The number of receptors which may be affected
• The nature and extent of the significant harm affecting the receptor(s) or the pollution of controlled water
• Whether the effects of the significant harm or water pollution would be irreversible.

The Council shall also consider in relation to significant harm or pollution of controlled water whether the receptor has already suffered damage or the controlled water has been polluted by other means and if this is the case, whether the additional effects of significant harm or water pollution would materially affect its condition.

When evaluating information relating to the pollution or likelihood of pollution of controlled waters, the Council must be satisfied that a pollutant is continuing to enter controlled waters or is likely to enter controlled waters. The Council will therefore not consider a substance already present in controlled waters where entry into controlled waters of that substance is no longer occurring and it is likely that entry will not recur.

Where the significant harm affects an ecological system, the Council will liaise with Natural England as part of the evaluation process. Similarly, where the receptor concerned is a designated ancient monument, the Council will liaise with Historic England (English Heritage); where it is controlled water, with the Environment Agency; and where it is an agricultural crop or livestock, the Department for the Environment Food and Rural Affairs (Defra).

9.1.2 Effectiveness of Previous Actions or Other Regimes in Preventing or Dealing with Contamination

Evaluation of the effectiveness of previous actions to deal with contamination will be carried out on a site-specific basis. These sites will be identified under the prioritisation procedure described in section 5 above, as there is no central record system of sites having undergone remedial action in the past. Remediation of contaminated sites within Mid Sussex has principally been dealt with through the development control process. However, in some cases, there may be little firm information on which to base a useful assessment.

When evaluating the effectiveness of any past remediation, the following factors will be taken into account:

- The nature and extent of the remediation works carried out;
- Whether the remediation works were completed and validated at the time;
- Whether the remediation works are sufficiently durable given the current use and circumstances of the land in question;
- Where past remediation works required on-going management and maintenance (for example the maintenance of gas venting or alarm systems), whether these systems have been maintained and continue to be effective.

Where other regimes control certain activities or processes on land which require a license or permit (for example Waste Management Licenses under Part II of the EPA 1990 or authorisations under Part I of the EPA 1990), the Council will assume that the licence/permit conditions will provide a suitable level of environmental protection. However, should information suggest otherwise, the Council will liaise with the appropriate regulatory body.

10 Enforcement

Under the EPA, MSDC is the local enforcing authority for contaminated land in the Mid Sussex District.

If land is identified which poses a risk of significant harm or the pollution of controlled waters, MSDC may instigate appropriate enforcement action to clean up the land, to protect residents and the wider environment.

The enforcement role applies only to sites that are identified as contaminated land. When such a site is identified, the authority will:

- Establish who is responsible for the contamination
- Decide what remedial action is required
- Ensure that the remedial action is carried out
- Determine who should bear what proportion of the costs of the remediation
- Record information about the regulatory action on a public register

All enforcement action is taken in accordance with the relevant legalisation and guidance, as well as the MSDC Corporate Enforcement policy.

Every effort will be made to resolve complaints quickly, but legislative requirements related to contaminated land will make resolution a slow process due to:

- Proof of a pollution linkage(s) before formal designation as contaminated land is possible, which may involve a detailed site investigation;
- Prior consultation with interested parties before designation as contaminated land;
- A statutory minimum of a three-month period between designation and serving of a remediation notice.

11 Environmental Information Requests

Concerns about contaminated land have increasingly featured in the standard questions dealt with through the conveyancing process, particularly during the 1990s when the Government was developing the idea of a register of contaminated land.

Section 3.12 of CON29 Part 1, Standard Enquiries of Local Authority, refers to information held on public registers relating to Contaminated Land.

We receive requests for information regarding contaminated land. Such enquiries are generally responded to under the Environmental Information Regulations 2004. Many of these requests are complex, seek a wide range of information and take up a significant amount of officer time. As a consequence, a charge is made for providing this information to offset an element of the cost involved.

Although, at present, the extent of site-specific information available is limited, it is intended that this will be developed and enhanced as more sites are dealt with via the planning process.

11.1 Data Confidentiality

During preparation and implementation of this strategy, large amounts of information on previous land uses and associated contamination issues have been and will continue to be collected covering large areas of the Council. The confidentiality of all information generated or obtained (especially where provided by a third party) must be confirmed without delay and handled accordingly. Any third party involved should justify requests for information to be treated as confidential or subject to national security considerations. Some of this information will be sensitive and ultimately when in the public domain may have the potential to blight properties or areas of land. All information collected will be handled in a responsible and sensitive manner. When responding to specific enquiries about land contamination and associated matters, the Council will seek to respond as fully and promptly as possible and will act in full accordance with the Access to Environmental Information Regulations 2004 as amended.

12 Responsibilities

The Council has assigned the following roles to address its responsibilities for preparing and implementing an Inspection Strategy.

Work Area	Department / Individual	Role
Develop the Inspection Strategy	Assistant Director Communities Environment Health	To assume primary responsibility for coordinating the Council's Inspection Strategy.
	Contaminated Land Officer	To act as the coordinator for the Inspection Strategy.
	Environmental Health Planning Building Control Planning Policy	To support the coordinator in delivering the Council's inspection strategy.
Carry out Part 2A inspection, liaison and enforcement	Contaminated Land Officer	To undertake data management.
		To advise on and supervise the remediation of contaminated land.
	Contaminated Land Officer External Consultants	To undertake detailed inspection of land in accordance with Part 2A where required.
	Assistant Director Legal Services	To provide legal advice and enforcement action.
Resource Implications	Cabinet	To consider financial implications.
Respond to enquiries	Contaminated Land Officer	To co-ordinate all external enquiries made in accordance with the Environmental Information Regulations 2004.
	Local Land Charges	To co-ordinate all land charges enquiries that may involve contaminated land.
	Planning	To co-ordinate all development control activities and relevant external enquiries that may involve contaminated land.
	Building Control	To co-ordinate all building control applications and relevant external enquiries that may involve contaminated land.
Liaison with external organisations	Contaminated Land Officer	To co-ordinate all external liaison concerning contaminated land inspection and enforcement.

This strategy is implemented having regard to the Corporate Enforcement Policy and

Service Standards.

The Council will act in accordance with the guidance and standards set out in this strategy, and in any supplementary policies.

13 Consultation

A consultation of this strategy was undertaken with key stakeholders, partners and the public. Questions and views were incorporated into the final version of the strategy.

14 Communication

The Council's approach to its regulatory duties under Part 2A is always to seek voluntary action in the first instance provided that it is satisfied that the standard of voluntary remediation proposed is of an equivalent or better standard that would be specified in a Remediation Notice. The Council recognises that this approach will require effective communication with owners, occupiers and other interested parties. The Contaminated Land Officer will be the central contact point within the Council on contaminated land issues, and as such will keep owners, occupiers and other interested parties informed at each stage of an investigation.

The Council also recognises that, when communicating with major national landowners or companies, account will need to be taken of their corporate priorities with respect to remediation of contaminated land sites. It is the aim of the Council to work with representatives of such organisations to ensure that a suitable timescale is agreed, taking into account the nature and degree of risk to receptors from the contaminated land in question.

15 Reviewing the Strategy

This strategy will be reviewed every five years. An earlier review will be conducted if:

a) there is any change in the legislation;
b) there is any change in the statutory guidance issued by the Secretary of State;
c) there is any change in key guidance in connection with site investigation;
d) there is any significant or relevant change in proposed land use planning;

The aim will be to conclude reviews within six months of any such change occurring.

Review of Assumptions and Information (Triggers for Inspection)

Assumptions and information used in arriving at decisions as to the status of particular areas of land as contaminated and/or the need for inspection will be reviewed every four years as a minimum. An earlier review will be conducted in the event of:

a) proposed changes in the use of the land or surrounding land;
b) unplanned changes in the use of land (e.g. persistent, unauthorised use of land by children or other members of the public);
c) unplanned events (e.g. localised flooding, accidents, fires, spillages; where consequences cannot be addressed through other relevant environmental protection legislation);
d) reports of localised health effects relating to a particular area of land;
e) reports of unusual or abnormal site conditions from any source which are verified;
f) new information received from any other statutory body;
g) new information from owners or occupiers or other interested parties;
h) new information or guidance on contaminants, pathways, receptors.

The aim will be to conclude reviews within three months maximum of any of the above events.

16 Appendices

16.1 Categories of Significant Harm

Type of Receptor	Description of harm to that type of receptor that is to be regarded as significant harm
1 Human beings	Death, disease, serious injury, genetic mutation, birth defects or the impairment of reproductive functions. For these purposes, disease is to be taken to mean an unhealthy condition of the body or a part of it and can include, for example, cancer, liver dysfunction or extensive skin ailments. Mental dysfunction is included only insofar as it is attributable to the effects of a pollutant on the body of the person concerned. In this Chapter, this description of significant harm is referred to as a "human health effect".
2 Any ecological system, or living organism forming part of such a system, within a location which is: ˜ an area notified as an area of special scientific interest under section 28 of the Wildlife and Countryside Act 1981; ˜ any land declared a national nature reserve under section 35 of that Act; ˜ any area designated as a marine nature reserve under section 36 of that Act; ˜ an area of special protection for birds, established under section 3 of that Act; ˜ any European Site within the meaning of regulation 10 of the Conservation (Natural Habitats etc) Regulations 1994 (i.e. Special Areas of Conservation and Special Protection Areas); ˜ any candidate Special Areas of Conservation or potential Special Protection Areas given equivalent	For any protected location: ˜ harm which results in an irreversible adverse change, or in some other substantial adverse change, in the functioning of the ecological system within any substantial part of that location; or ˜ harm which affects any species of special interest within that location and which endangers the long-term maintenance of the population of that species at that location. In addition, in the case of a protected location which is a European Site (or a candidate Special Area of Conservation or a potential Special Protection Area), harm which is incompatible with the favourable conservation status of natural habitats at that location or species typically found there. In determining what constitutes such harm, the local authority should have regard to the advice of Natural England and to the

protection; ˜ any habitat or site afforded policy protection under the Conservation of Habitats and Species Regulations 2017 (i.e. candidate Special Areas of Conservation, potential Special Protection Areas and listed Ramsar sites); or ˜ any nature reserve established under section 21 of the National Parks and Access to the Countryside Act 1949.	requirements of the Conservation (Natural Habitats etc) Regulations 1994. In this Chapter, this description of significant harm is referred to as an "ecological system effect".
3 Property in the form of: ˜ crops, including timber; ˜ produce grown domestically, or on allotments, for consumption; ˜ livestock; ˜ other owned or domesticated animals; ˜ wild animals which are the subject of shooting or fishing rights.	For crops, a substantial diminution in yield or other substantial loss in their value resulting from death, disease or other physical damage. For domestic pets, death, serious disease or serious physical damage. For other property in this category, a substantial loss in its value resulting from death, disease or other serious physical damage. The local authority should regard a substantial loss in value as occurring only when a substantial proportion of the animals or crops are dead or otherwise no longer fit for their intended purpose. Food should be regarded as being no longer fit for purpose when it fails to comply with the provisions of the Food Safety Act 1990. Where a diminution in yield or loss in value is caused by a pollutant linkage, a 20% diminution or loss should be regarded as a benchmark for what constitutes a substantial diminution or loss. In this Chapter, this description of significant harm is referred to as an "animal or crop effect".

4	Property in the form of buildings. For this purpose, "building" means any structure or erection, and any part of a building including any part below ground level but does not include plant or machinery comprised in a building.	Structural failure, substantial damage or substantial interference with any right of occupation. For this purpose, the local authority should regard substantial damage or substantial interference as occurring when any part of the building ceases to be capable of being used for the purpose for which it is or was intended. Additionally, in the case of a scheduled Ancient Monument, substantial damage should be regarded as occurring when the damage significantly impairs the historic, architectural, traditional, artistic or archaeological interest by reason of which the monument was scheduled. In this Chapter, this description of significant harm is referred to as a "building effect".

16.2 Significant Possibility of Significant Harm

Descriptions of significant harm (As Defined In Table 1)	**Conditions for there being a significant possibility of significant Harm**
1 Human health effects arising from ˜ the intake of a contaminant, or ˜ other direct bodily contact with a contaminant	If the amount of the pollutant in the pollutant linkage in question: ˜ which a human receptor in that linkage might take in, or ˜ to which such a human might otherwise be exposed, as a result of the pathway in that linkage, would represent an unacceptable intake or direct bodily contact, assessed on the basis of relevant information on the toxicological properties of that pollutant. Such an assessment should take into account: ˜ the likely total intake of, or exposure to, the substance or substances which form the pollutant, from all sources including that from the pollutant linkage in question; ˜ the relative contribution of the pollutant linkage in question to the likely aggregate intake of, or exposure to, the relevant substance or substances; and ˜ the duration of intake or exposure resulting from the pollutant linkage in question. The question of whether an intake or exposure is unacceptable is independent of the number of people who might experience or be affected by that intake or exposure. Toxicological properties should be taken to include carcinogenic, mutagenic, teratogenic, pathogenic, endocrine-disrupting and other similar properties.
2 All other human health effects (particularly by way of explosion or fire)	If the probability, or frequency, of occurrence of significant harm of that description is unacceptable, assessed on the basis of relevant information concerning: ˜ that type of pollutant linkage, or ˜ that type of significant harm arising from other causes. In making such an assessment, the local authority should take into account the levels of risk which have been judged unacceptable in other similar contexts and should give particular weight to cases where the pollutant linkage might cause significant harm which: ˜ would be irreversible or incapable of being treated;

	˜ would affect a substantial number of people; ˜ would result from a single incident such as a fire or an explosion; or ˜ would be likely to result from a short-term (that is, less than 24-hour) exposure to the pollutant.
3 All ecological system effects	If either: ˜ significant harm of that description is more likely than not to result from the pollutant linkage in question; or ˜ there is a reasonable possibility of significant harm of that description being caused, and if that harm were to occur, it would result in such a degree of damage to features of special interest at the location in question that they would be beyond any practicable possibility of restoration. Any assessment made for these purposes should take into account relevant information for that type of pollutant linkage, particularly in relation to the ecotoxicological effects of the pollutant.
4 All animal and crop effects	If significant harm of that description is more likely than not to result from the pollutant linkage in question, taking into account relevant information for that type of pollutant linkage, particularly in relation to the ecotoxicological effects of the pollutant.
5 All building effects	If significant harm of that description is more likely than not to result from the pollutant linkage in question during the expected economic life of the building (or, in the case of a scheduled Ancient Monument, the foreseeable future), taking into account relevant information for that type of pollutant linkage.

16.3 Categories of possibility of significant harm to human health

A new four category system was introduced in the most recent statutory guidance for Part 2A of the EPA 1990 published by Defra in April 2012. The revised guidance sets out a legal framework for taking decisions on whether land is or is not contaminated in the form of a category-based test, which is summarised below. Categories 1 and 2 would include land that is capable of being determined as contaminated land under Part 2A of the EPA 1990 on the basis of a significant possibility of significant harm to human health. Category 3 and 4 sites would not be capable of being determined on such grounds. A similar system can be used for determining whether or not a significant possibility of significant pollution of controlled waters exists, which is described in detail in the statutory guidance.

Category 1: Human Health
Land that is clearly contaminated and represents a high risk to human health. A significant possibility of significant harm exits or there is an unacceptably high probability, supported by robust scientific evidence, that significant harm would occur if no action is taken to stop it.

Category 2: Human Health
Land where there is little or no evidence that similar land, situations or levels of exposure have previously caused harm, but nevertheless the authority considers there is a strong case for taking action under Part 2A on a precautionary basis, having regard to the statutory guidance.

Category 3: Human Health
Land should be placed into Category 3 in the event that the strong case described above does not exist and therefore the legal test for significant possibility of significant harm is not met. The risks are not necessarily low but the authority considers that regulatory intervention under Part 2A is not justified.

Category 4: Human Health
Land that is clearly not contaminated. This includes land where no relevant contaminant linkage has been identified; or where there are only normal levels of contaminants in soil; or where contaminant levels do not exceed relevant generic assessment criteria (GACs), or other relevant technical tools; or where estimated levels of exposure to contaminants in soil are likely to form only a small proportion of what a receptor might be exposed to from other sources.

Defra has commissioned a research project with the aim of developing technical guidance to support the new Part 2A statutory guidance. It is proposed that Category 4 Screening Levels (C4SLs) will be developed to provide a test for deciding that land is suitable for use and definitely not contaminated land in the legal sense. It is intended that the C4SLs will represent a new set of generic screening levels that are precautionary but more pragmatic than existing GACs, soil guideline values (SGVs) and other screening criteria.

Note: The revised Statutory Guidance does not apply to radioactive contamination of land, which is now covered by separate statutory guidance published by the Department of Energy and Climate Change (DECC) in April 2012. Both sets of

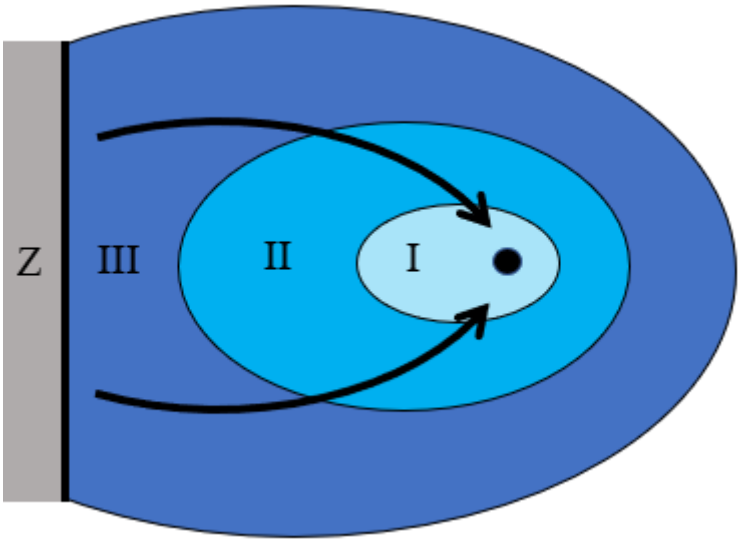
statutory guidance will apply in the event that land is affected by radioactive and non-radioactive contaminants. The enforcing authority should decide on the appropriate course of action having due regard to the relevant primary legislation and advice from the Environment Agency.

16.4 Source Protection Zones

Groundwater plays a fundamental role in the environment. It not only provides over one-third of all our drinking water but it also maintains the flow in many of our rivers. In some areas of southern England up to 80% of drinking water is from groundwater. The protection of groundwater is the duty of the Environment Agency.

There are currently nearly 2000 major groundwater sources for which Source Protection Zones (SPZ) have been defined by the Environment Agency (wells, boreholes and springs) used for public drinking water supply. The SPZ provide an indication of the risk to groundwater supplies, for which SPZ have been defined, that may result from potentially polluting activities and accidental releases of pollutants. Generally the closer the activity or release is to a groundwater source the greater the risk. Three zones (an inner, outer and total catchment) are usually defined although a fourth zone (zone of special interest) is occasionally defined.

The primary use of groundwater SPZ is to signal that within specified areas there are likely to be particular risks posed to the quality of abstracted groundwater at the source(s) to which the SPZ refer should certain activities take place nearby. Used in conjunction with the Environment Agency's Groundwater Protection Policy they offer an initial screening tool for assessing specific activities. The SPZ can also help pollution prevention measures to be more effectively targeted and planned in those areas most at risk.



Source Protection Zones around a borehole

I – Inner Zones (50 day)
II – Outer Zones (400 day)
III – Total Catchment
Z – Zones of Special Interest

Source: Environment Agency

Zone I (Inner Protection Zone) - This 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.

Zone II (Outer Protection Zone) - This 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.

Zone III (Total catchment) - This zone is defined as the total area needed to support the abstraction or discharge from the protected groundwater source.

Zone of Special Interest - For some groundwater sources an additional "Zone of Special Interest" may be defined. These zones highlight areas (mainly on non-aquifers) where known local conditions mean that potentially polluting activities could impact on a groundwater source even though the area is outside the normal catchment of that source.

The shape and size of the zones is controlled by many factors. Some of these reflect natural ground (hydrogeological) conditions, other environmental factors and the operation of the groundwater abstraction.

Zones may be subject to change as additional data become available or when the hydrogeological regime changes, for example, through changes in the amount of water pumped out of the ground. The Environment Agency will update the SPZ data set at an appropriate frequency to ensure that the SPZ remain current.

16.5 Glossary

Appropriate Person(s)	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.
Contaminant	A substance which is in, on or under the land and which has the potential to cause harm or to cause pollution of controlled waters.
Contaminated Land	Any land which appears to the Local Authority in whose area it is situated to be in such a condition, by reason of substances in, on or under the land, that: (a) significant harm is being caused or there is a significant possibility of such harm being caused, or (b) pollution of controlled waters is being, or is likely to be, caused.
Controlled Waters	This embraces territorial and coastal waters, inland fresh waters and ground waters.
Desk Study	Interpretation of historical, archival and current information to establish where previous activities of the land were located, and where areas or zones containing discrete and different types of soil contamination can be expected to occur, and to understand the environmental setting of the site in terms of pathways and receptors
Detailed Investigation	Main stage of on-site investigation involving sampling and analysis to characterize ground conditions for a specified purpose - may be undertaken on a single or a number (*eg* Stage 1 and 2) of successive stages.
Harm	Harm to the health of living organisms or other interference with the ecological systems of which they form part, in the case of man, includes harm to his property.
Hectare	10,000 square metres.
Pathway	The means by which a hazardous substance or agent comes into contact with or otherwise affects a receptor.
Receptor	The entity (*eg* human, animal, water, vegetation, building services etc) which is vulnerable to the adverse effect(s) of a hazardous substance or agent.

Remediation	(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; (c) the making of subsequent inspections from time to time for the purpose of keeping under review the condition of the land or waters.
Risk	The probability that an adverse effect will occur under defined conditions.
Risk Assessment	The process of assessing the hazards and risks associated with a particular site or group of sites
Risk Estimation	A conceptual stage of risk assessment concerned with estimating the likelihood that receptors will suffer adverse effects if they come into contact with, or are otherwise affected by, a hazardous substance or agent under defined conditions.
Risk Evaluation	A conceptual stage of risk assessment concerned with evaluating the acceptability of estimated risks, taking into account the nature and scale of risk estimates, any uncertainties associated with the assessment and the broad costs and benefits of taking action to mitigate risks.
Significant Harm	Any harm which is determined to be significant in accordance with the statutory guidance (that is, it meets one of the descriptions of types of harm in Appendix A, Table 1, second column.
Significant Pollutant Linkage	A pollutant linkage which forms the basis for a determination that a piece of land is contaminated land.
Sites of Nature Conservation Importance - SNCIs	These are locally important sites. "Orders" are made to conserve the nature interests on the land.

Sites of Special Scientific Interest – SSSIs	Sites of Special Scientific Interest (SSSIs) form a nationally important series which contributes to the conservation of our natural heritage of wildlife habitats, geological features and landforms. SSSIs are areas of land that have been notified as being of special interest under the Wildlife and Countryside Act 1981 or the National Parks and Access to the Countryside Act 1949.
Special Site	Any contaminated land: (a) which has been designated as such a site by virtue of Section 78C(7) or 78D(6); (b) whose designation as such has not been terminated by the appropriate Agency under Section 78Q(4). 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.