Borough Council of King's Lynn & West Norfolk



# Contaminated Land Inspection Report

# Former Brickworks, Lamsey Lane Heacham, Norfolk



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#### Executive Summary

The Borough Council of King's Lynn and West Norfolk (BCKLWN) has a statutory duty to inspect its district for potentially contaminated land under Part 2A of the Environmental Protection Act 1990. The Borough Council's Part 2A inspection strategy identified Lamsey Lane (the site) as being of High priority due to the presence of a former brickyard and potential landfill and potentially sensitive receptors on site.

Given the former site usage, an assessment of the site has been undertaken to assess the potential for harm to human health, property, ground/surface water and designated environmental receptors under Part 2A.

To gather information of the site's history a desk study and preliminary risk assessment were carried out by the Environmental Quality Team. From the evidence gathered during the desk study of the site history and a site walkover, the following can be stated:

- The site was historically a brick yard during the late 19th Century.
- The site's present use is as a caravan park, houses with gardens and a horse paddock.
- There was no evidence to suggest that the excavations on the brick works site had been landfilled.
- No visible evidence was noted of process or fuel-ash wastes in residential gardens.

From the contaminated land risk assessment plausible source pathway receptor linkages were identified. A LOW risk was assessed from contamination to human health, LOW risk to property (buildings and horses), VERY LOW risk to the wider ecological systems and VERY LOW risk was identified to surface water and groundwater.

There was no evidence of harm or of a significant possibility of significant harm to the receptors identified in the conceptual site model. As the risk posed is low, the site would be classified as Category 4 as set out in the Statutory Guidance. No evidence was noted of significant pollution of controlled waters or of the significant possibility of such pollution.

The site is not considered to be contaminated land under Part 2A of the Environmental Protection Act 1990.

#### 1 Introduction

This report details a review of information and risk summary about land at Lamsey Lane, Heacham and provides a conclusion on the risk to human health, property, groundwater and the wider environment.

The Contaminated Land Statutory Guidance (DEFRA, 2012) suggests that where the authority has ceased its inspection and assessment of land as there is little or no evidence to suggest that it is contaminated land the authority should issue a written statement to that effect. This report forms that statement.

#### 2 Desk Study Information

#### Location

The site's location is shown in Appendix B. The grid reference for the centre of the site is 567802, 336370. The nearest postcode is PE31 7LA. The site area includes the following addresses:

Meadows Caravan Park Lamsey Lane Heacham King's Lynn PE31 7LA Paddock of Mount Pleasant Equestrian Centre, 25 Lamsey Lane, Heacham King's Lynn PE31 7LE

- 1 Collingwood Close Heacham King's Lynn PE31 7LD
- 3 Collingwood Close Heacham King's Lynn PE31 7LD
- 4 Collingwood Close Heacham King's Lynn PE31 7LD
- 5 Collingwood Close Heacham King's Lynn PE31 7LD
- 6 Collingwood Close Heacham King's Lynn PE31 7LD
- 8 Collingwood Close Heacham King's Lynn PE31 7LD
- 10 Collingwood Close Heacham King's Lynn PE31 7LD
- 12 Collingwood Close Heacham King's Lynn PE31 7LD

#### Previous investigation

The site has not been subject to any previous investigations.

#### **Previous Site Usage**

The site was historically used as a Brick Yard with associated kilns and excavations. The site could also contain some areas of infill material in the historic excavations.

#### Present Site Usage

The site's present use is as a holiday caravan park (Meadows Caravan park), eight houses on Collingwood Close and a paddock associated with Mount Pleasant equestrian centre. Meadows Caravan Park is licensed for holiday use from mid-February to mid-January each year. The site layout plan below (figure 1) below shows these areas. Photographs of the site are in appendix A.



Figure 1: Site layout plan

#### Ownership

Meadows Caravan Park is owned and operated by M.T. McDonnell & Co. Ltd trading as McDonnell Caravans. There is no entry at Land Registry for this land. This report will be made available to the site owner and manager. Houses on Collingwood Close are in private ownership as confirmed by entries at Land Registry. The land at Mount Pleasant is part of a large parcel of land recorded at Land Registry as owned by Mr H C Buscall. This report will be made available to the property owners.

#### Environmental Setting

The site varies between 10 and 16 metres above ordnance datum (m AOD). The site is at the south of Heacham Village in a semi-rural area.

#### Geology

Geological map indicates that bedrock geology is the Snettisham Clay Member (Clay and Silt Sedimentary Bedrock) with no superficial geology recorded. The north western corner is shown as being at the boundary with the Dersingham Formation (Mudstone). The Carstone Formation (Sandstone) lies directly to the south and south east.

#### Hydrogeology

The Snettisham Clay Member deposits covering the majority of the site is designated by the Environment Agency as a non-aquifer. A secondary Aquifer is noted to the northwest beneath the residential dwellings of the housing estate and denoted on Environment Agency maps as falling beneath a number of the houses to the West of Collingwood Close. A secondary aquifer is described by the EA as '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.'

There are no known licensed water abstractions within 1km of the site.

#### Hydrology

The nearest major water feature is the Heacham River approximately 1.2km to the northeast.

#### Local Authority Pollution Prevention and Control Regulations

No processes exist on site or within 500m.

#### The Environment Agency Web site records

The Environment Agency Web site records the following:

- Priority Water under the Farmers Assessment Tool. (Priority Waters).
- Nitrate Vulnerable Zone G718.

#### MAGIC website records

MAGIC website records the following

- Part of the eastern half of the site is a Site of Special Scientific Interest (SSSI)
- Part of the site is covered by the Woodland Spatial Network (High and Lower Priority)
- Part of the site is covered by the Woodland Improvement (England) (Higher Spatial Priority)
- Part of the site is covered by Priority Habitat Inventory Deciduous Woodland (England).
- Part of the site is covered by the National Forest Inventory (Broadleaved).
- The site is part of a Farm Wildlife Package Area (England).
- Part of the site is covered by Woodland Water Quality (Lower Spatial Priority)
- Nitrate Vulnerable Zones 2017 Designations (England) (Groundwater)

The reason given for the classification of the SSSI is: 'Heacham Brick Pit is a locality which affords the only opportunity to examine the Lower Cretaceous Snettisham Clay. This has yielded distinctive Lower Barremian ammonite faunas. A key site in the assessment of regional stratigraphy and in correlations of Lower Cretaceous strata showing a facies rarely exposed and of limited areal extent.'<sup>1</sup> A statement of Views About Management was prepared by Natural England in 2004 setting out how to preserve and allow access to the geology of interest.

<sup>&</sup>lt;sup>1</sup> <u>https://designatedsites.naturalengland.org.uk/PDFsForWeb/Citation/1002558.pdf</u>

#### Historic Maps

E-map Explorer Enclosure Map 1800 – 1850 – Not Available

Tithe map circa 1840 –.The site forms part of field 194, 195, 196 and 197. Some structures can be seen in fields 194 and 195 but their use is unknown.

Ordnance Survey 1st Ed. 1879-1886 – The site is labelled as a Brick Yard with Kiln. Two buildings are noted on site in the centre of the site, the larger of which is assumed to be the kiln. Two ponds are shown in the centre and north of the site. A building labelled Mount Present is adjacent to the site to the East. The site and house are surrounded by fields.

Historic Maps on file at the Borough Council of King's Lynn and West Norfolk Historic maps are presented in Appendix B and summarised below.

1843 – 1893: The site is as depicted on the ordnance survey 1<sup>st</sup> edition.

1891 – 1912: The site has expanded significantly. Fifteen buildings are noted in the centre of the site, three of which are labelled as kilns and one a chimney. Five depressions are noted on site and two tracks are noted leading from the largest depression towards the cluster of buildings. Four of the buildings are circular but their use is not stated. Mount Pleasant has not changed appreciably and a new buildings been constructed to the northwest of the site.

1904 – 1939: Not Available.

1919 – 1943: Only two buildings remain in the centre of the site. The excavations remain present and do not appear to have been infilled. The surrounding area remains as described above.

1945 – 1970: One building remains in site and three ponds are depicted as well as an area of woodland. The building to the northwest of the site is no longer present, while a housing estate has been constructed to the north and northwest of the site in an area away from the principal brickyard buildings.

1970 – 1996: Not Available.

Aerial Photographs

Aerial photographs are presented in Appendix B and summarised below.

1945 – 1946 MOD Aerial Photograph: The site has two visible structures in the centre of the site with trees on part of the southern boundary and crossing the southern part of the site. Potential excavations were noted in the south and east of the site. Mount Pleasant and the building to the northwest are visible but with very little detail.

1999 Aerial Photograph: The south/southeast of the site is significantly wooded. The remainder of the site contains caravans and the houses and gardens of Collingwood Close.

#### Planning History

Archived files show that the houses on Collingwood Close were developed under an outline permission from Norfolk County Council (ref DG/443) granted in 1958. Individual plots are recorded as being developed subsequently between 1960-1979 under individual full planning permissions. Post 1970 planning permissions were granted by West Norfolk borough council who were then the local planning authority. Construction types are shown to vary from pre-fabricated types to standard brick construction. The files do not indicate that the development was affected by contamination.

There is 1 application for development of the caravan site:

Year Application ref 2007 07/00212/F Description Variation of condition to allow holiday caravans to be occupied 11 months of the year. 'Not determined as no previous application could be found'.

#### **Environment Agency Records**

Not consulted as no landfill recorded on site.

#### Norfolk County Council Records

No County Councils planning records are recorded for this site.

#### 3 Site Walkover

A site walkover was carried out in January and February 2018. Photographs are presented in Appendix A. The site is in a semi-rural area on the edge of the settlement of Heacham. Topography in the vicinity slopes downwards to the north west.

In the days before the site visit, there had been a period of wet weather. The soils on site were observed to be waterlogged in places and didn't appear free-draining. This suggests the presence of clay geology.

Meadows Caravan Park is accessed from Lamsey Lane via tarmac driveway. The site consists of static caravan pitches with generally grassed soft landscaping and tarmacked access roads (photographs 5, 8 & 9). Site topography is generally sloping downwards to the southeast towards the former areas of clay extraction.

The SSSI in the north east of the site is a low-lying wooded area (photographs 1, 2 and 3). The trees were being maintained at the time of the site walkover. Staff were noted to be wearing appropriate personal protective equipment including work gloves. The higher ground in this area, on the eastern side of the site is used for general and scrap storage. The south-eastern boundary slopes upwards to the adjacent land. This slope is very steep in places (a change of 2-5m elevation) indicating the extent of former excavations (photograph 2). Parts of the north-eastern boundary also slope steeply upwards to adjacent land (photograph 4).

Site boundaries consist of hedges and fences as shown on photographs 6, 7 and 8. There was no perceptible change in topography between the Caravan Park and Collingwood Close. A number of ponds are present in the south and the east of the caravan site, the pond (photograph 9 and 10) contained water and was well vegetated with healthy vegetation and there was evidence of wildfowl inhabiting this area. The Carstone geology was visible in the presumed cut face at the south of the pond.

One brick building is present in the centre of the site (photograph 11). Anecdotal information from the site manager and on the company website is that this building is associated with the former brickworks. Circular structures were noted in the ground to the north and to the west of this building and which could represent infilled wells or chimney bases.

The paddock in the south of the site is used for horse grazing (photograph 12). The ground surface was uneven in places corresponding to excavations on historic maps which indicates that the excavations are unlikely to have been filled. The paddock and hedgerows were well vegetated with grass, brambles and hawthorn.

Visits were made to the houses and gardens within the site on Collingwood Close. Gardens to the east of Collingwood Drive generally slope upwards towards the caravan site. Gardens to the west are fairly level. All the gardens were noted to have thriving lawns and plants. Garden sizes range from 75–200m<sup>2</sup>. One garden was observed to contain a vegetable plot (photograph 13). The majority of garden space is soft landscaped with lawns, borders and shingled areas as shown in photograph 14. Residents to the east of Collingwood Drive, adjacent to the caravan park, reported finding brick fragments in garden soils. A number of gardens had Heacham bricks as garden ornaments (as shown on the cover photograph). However these were reported to have been obtained from a source within the village. The residents of two properties on the east of Collingwood Drive reported that a 'mound' of rubble, including bricks and soil had to be removed from the fence line adjoining the caravan site when they first moved in.

#### Location of Receptors

#### Humans

The majority of the site is a holiday caravan park and is occupied on a transient intermittent basis. The northwest corner is occupied by 8 houses of a residential housing estate. The households in these properties are comprised of adults. The south west corner is a paddock which is part of Mount Pleasant equestrian centre.

#### Property

There are 8 houses in the former brick yard area as well as 41 holiday homes and a historic brickworks building used as an office and maintenance block. The paddock to the south is associated with Mount Pleasant equestrian centre and was observed to be used for horse grazing

#### Environment

There are no relevant types of ecological receptor as set out in the statutory guidance. The site contains a SSSI. This is a geological receptor and is not an ecological system as stated in Table 1 of the statutory guidance. Therefore this receptor is not relevant within Part 2A.

#### Controlled Water - Groundwater & Surface water

There are two ponds present on site. No other major surface water receptors are noted to be within 1km of the site. The ponds on site are not considered to be classified as controlled water as they are not considered to be a 'relevant' water body as defined in section 104 of the Water Resources Act 1991. Therefore this not considered to be a relevant receptor within Part 2A.

The north-western corner of the site is underlain by an aquifer which is designated as an intermediate aquifer.

#### 4 Contaminated Land Risk Assessment

The Council has used a process adapted from CIRIA C552 (Contaminated Land Risk Assessment, a guide to good practice) to produce the conceptual site model and estimate the risks to defined receptors. This involves the consideration of the probability, nature and extent of exposure and the severity and extent of the effects of the contamination hazard should exposure occur. Further explanation is provided in Appendix C.

#### Assessment of probability of a contamination event

From the information gathered it is considered that there is the potential for a source of contamination to be present on the holiday home site and possibly in residential gardens. The potential source is the former use as a brick yard. No visual signs of contamination were noted during the site walkover and no indication of landfilling of excavations was noted.

#### Human health

The majority of the site is being used as a holiday home caravan site which is occupied only transiently and for short durations. The caravan site management report that the caravans are occupied as holiday homes by retired or semi-retired people. Grounds maintenance is carried out by maintenance staff with PPE appropriate for the task. Therefore the probability of a contamination event occurring on the holiday home site is considered to be UNLIKELY.

Part of the site is occupied by 8 residential dwellings with domestic gardens, predominantly laid to lawn with borders or hard surfaced. Part of one garden contains a vegetable plot which could provide the possibility for prolonged contact with soils and home-grown produce. Some residents reported the presence of brick rubble in gardens. This is considered to be from demolition of brickworks buildings. No visible evidence was noted of brickworks process wastes or fuel ash in garden soils. There is a potential pollution linkage and circumstances are possible under which an event could occur.

Consideration was given to taking soil samples from within the vegetable plot for chemical analysis. However as an examination of historic maps indicates that the brickworks main process areas were not located in the area that is now the garden with a vegetable plot, it is by no means certain that even over a longer period such an event would take place and it is less likely in the short term. The probability of a contamination event occurring on the residential part of the site is considered to be LOW.

The paddock is used for horse grazing and will be visited by humans occasionally with minimal contact with soil. Therefore the probability of a contamination event occurring on the paddock is considered to be UNLIKELY.

#### Property

A limited number of residential properties exist on site. Given the location of the properties away from the main production areas of the sites previous use the likelihood of a contamination event affecting buildings is considered to be UNLIKELY. Horses graze the paddock in the south of the site. This is away from the former brickworks main process areas and does not appear to have been landfilled. The likelihood of a contamination event affecting horses is considered to be UNLIKELY

#### Environment

The site is partially occupied by a SSSI, which is a designated geological formation. This is not an ecological system as described in the statutory guidance. Therefore it is considered UNLIKELY that a contamination event would cause significant harm to a relevant environmental receptor.

#### Controlled water - Groundwater

The site is generally located on bedrock classified as a non-aquifer with only the far north western corner of the site being underlain by an Intermediate Aquifer. The north western area of the site did not contain any of the kilns or other infrastructure of the site with the exception of a chimney. The soils on site were observed to be derived from clay geology and could reduce the infiltration of surface water into the aquifer. Therefore the probability of a contamination event which would affect the aquifer is considered to be UNLIKELY

#### Controlled water - Surface water

Two ponds exist on site and from the topography noted during the site walkover it is considered that the majority of surface water runoff would run towards the ponds. There is no evidence that the ponds connect to any water course and therefore they would not be classed as controlled waters. Therefore it is UNLIKELY that a pollution event would occur which would affect controlled waters.

#### Assessment of Hazard

The Industry Profile<sup>2</sup> states that the structural clay products such as bricks were often manufactured near to a site where the clay was extracted. The

<sup>&</sup>lt;sup>2</sup> Department of the Environment Industry Profile, Ceramics, cement and asphalt manufacturing works, 1996

map review indicates that this site was used both for clay extraction and brick manufacture.

Potential contaminants on the brickworks site would depend on the raw material used there. Many of the raw materials are major constituents of rock and may not be considered to be contaminants. The final products (bricks) are also of low contaminative potential. Brick, kiln ash and workshop wastes may have been disposed of in on-site landfill and dumps. There may have been some fuel storage on site and some structures may have contained asbestos. Potential contaminants are therefore assumed to be: metals, polyaromatic hydrocarbons (PAHs), petroleum hydrocarbons and asbestos containing materials.

The site topography suggests that the clay excavations were not backfilled.

#### Human Health

No visible sources of contamination were noted during the site walkover and excavated areas do not appear to have been landfilled. Residents who dig their gardens did not report finding ashy materials when gardening. No visible evidence of asbestos containing materials was noted in garden soils during the site walkover. The hazard is assessed as LOW

#### Property

The anticipated potential contaminants from the brickyard are not considered to pose a risk to property (buildings). The paddock area is situated away from the former brickworks processing area and does not appear to have been infilled. Therefore the hazard to buildings and horses is assessed as being LOW.

#### Environment

In considering environmental receptors, the statutory guidance states that the authority should only regard certain receptors (described in Table 1 of the Statutory Guidance) as being relevant for the purposes of Part 2A. Harm to an ecological system outside that description should not be considered to be 'significant harm'. No hazards were identified that could cause harm to any relevant ecological systems as set out in the statutory guidance. Therefore the hazard is considered to be LOW.

#### Controlled Water - Groundwater & Surface Water

The anticipated potential contaminants from the brickworks are not considered to be highly leachable in nature as they would generally be derived from combustion by-products. There was no evidence of waste materials being present in excavated areas. The hazard to controlled water is considered to be LOW.

#### Conceptual site model

The conceptual site model (Table 3) shows the sources, pathways and receptors identified and the subsequent risk classification.

Source	Pathway	Receptor	Probability	Hazard	Risk
	Direct contact, ingestion, dust inhalation, plant uptake & consumption of home grown produce on the residential properties	Humans (adults)	Low	Low	Low risk
Metals, polyaromatic hydrocarbons (PAHs), petroleum hydrocarbons and asbestos containing materials from	Direct contact, ingestion, dust inhalation, plant uptake and consumption of wild fruit on the caravan park	Humans (adults)	Unlikely	Low	Very Iow risk
	Direct contact	Property (buildings & horses)	Unlikely	Low	Very Low risk
	Direct contact	Environment*	Unlikely	Low	Very low risk
	Direct contact	Controlled water (surface and groundwater)	Unlikely	Low	Very Iow risk

Table 3: Conceptual site model

Low risk - It is possible that harm could arise to a designated receptor from an identified hazard, but it is likely that this harm, if realised, would at worst normally be mild.

Very low risk - There is a low possibility that harm could arise to a receptor. In the event of such harm being realised it is unlikely to be severe.

\*Ecological systems as set out in Table 1 of the contaminated land statutory guidance

#### **5 Outcome of Preliminary Risk Assessment**

#### Conclusion

Plausible source pathway receptor linkages were identified. A LOW risk from contamination was identified to human health. A VERY LOW risk was identified to property, to designated environmental receptors and to controlled waters.

There was no evidence of harm or of a significant possibility of significant harm to the receptors identified in the conceptual site model. As the risk posed is very low/low, the site would be classified as Category 4 as set out in the Statutory Guidance (Appendix C contains the categorisations from the Statutory Guidance).

No evidence was noted of significant pollution of controlled waters or of the significant possibility of such pollution.

#### Part 2A status

Statutory Guidance states that 'If the authority considers there is little reason to consider that the land might pose an unacceptable risk, inspection activities should stop at that point.' In such cases the authority should issue a written statement to that effect. This report forms that written statement.

On the basis of its assessment, the authority has concluded that the land does not meet the definition of contaminated land under Part 2A and is not considered contaminated land.

#### Further Action

This assessment is based on the site's current use and is valid providing no changes are made to the sites uses, to ground or surface water conditions or to the site's use.

No further assessment of the site is considered necessary under Part 2A unless additional information is discovered or if changes are made to the site.

# Appendices

# Appendix A: Site Photographs







Photograph 5: Overview of site



Photograph 7: Northern boundary with Collingwood Close







Photograph 13: Garden and vegetable plot (caravan site in background)



Photograph 14: Garden, hard surface, laid to lawn with borders & shingle (caravan site in background)

Appendix B: Drawings











## Appendix C: Risk Assessment Methodology

The Model Procedures for the Management of Land Contamination (CLR11<sup>3</sup>) provide the technical framework for applying a risk management process when dealing with contaminated land.

The Borough Council's Contaminated Land Strategy has identified priority sites based on mapping and documentary information. The Contaminated Land Inspection Report collates all the existing information on the site and develops a conceptual site model to identify and assess potential pollutant linkages and to estimate risk.

The risk assessment process focuses on whether there is an unacceptable risk, which will depend on the circumstances of the site and the context of the decision. The Council has used a process adapted from CIRIA C552, Contaminated Land Risk Assessment, a guide to good practice<sup>4</sup> to produce the conceptual site model and estimate the risk of harm to defined receptors. This involves the consideration of the probability, nature and extent of exposure and the severity and extent of the effects of the contamination hazard should exposure occur.

The probability of an event can be classified as follows:

- Highly likely: The event appears very likely in the short term and almost inevitable over the long term, or there is evidence at the receptor of harm or pollution;
- Likely: It is probable that an event will occur, or circumstances are such that the event is not inevitable, but possible in the short term and likely over the long term;
- Low likelihood: Circumstances are possible under which an event could occur, but it is not certain even in the long term that an event would occur and it is less likely in the short term;
- Unlikely: Circumstances are such that it is improbable the event would occur even in the long term.

The severity of the hazard can be classified as follows:

- High: Short term (acute) risk to human health likely to result in 'significant harm' as defined by the Environment Protection Act 1990, Part IIA. Short term risk of pollution of sensitive water resources. Catastrophic damage to buildings or property. Short term risk to an ecosystem or organism forming part of that ecosystem (note definition of ecosystem in 'Contaminated Land Statutory Guidance, April 2012');
- Medium: Chronic damage to human health ('significant harm' as defined in 'Contaminated Land Statutory Guidance, April 2012'), pollution of sensitive water resources, significant change in an ecosystem or organism forming part of that ecosystem (note definition of ecosystem in 'Contaminated Land Statutory Guidance, April 2012');
- Low: Pollution of non-sensitive water resources. Significant damage to crops, buildings, structures and services ('significant harm' as defined in 'Contaminated Land Statutory Guidance, April 2012'). Damage to sensitive buildings, structures or the environment.

<sup>&</sup>lt;sup>3</sup> https://www.gov.uk/guidance/land-contamination-risk-management

<sup>&</sup>lt;sup>4</sup> https://www.brebookshop.com/samples/142102.pdf

Once the probability of an event occurring and hazard severity has been classified, a risk category can be assigned from the table below:

	Hazard				
			High Medium Low		
		High Probability	Very High Risk	High Risk	Moderate Risk
		Likely	High Risk	Moderate Risk	Moderate/Low Risk
	ability	Low Probability	Moderate risk	Moderate/Low Risk	Low Risk
	Probe	Unlikely	Moderate/Low Risk	Low Risk	Very Low Risk
Des	scription of the r	isk categorie:	s and likely actio	n:	
Ver	y High Risk	There is a h a designate there is evic receptor is c This risk, if r liability. Urgent inves remediation	igh probability th d receptor from a lence that severe currently happen realised, is likely stigation (if not u are likely to be r	at severe harm of an identified haze harm to a desig ing to result in a sub ndertaken alread equired.	could arise to ard, OR, gnated ostantial dy) and
Hig	h Risk	Harm is like identified ha Realisation liability. Urgent inves to clarify the Some reme	ly to arise to a de izard. of the risk is likel stigation (if not u e risk and to dete dial work may be	esignated recept by to present a sundertaken alread rmine the potent e required in the	or from an ubstantial dy) if required ial liability. longer term.
Mo	derate risk	It's possible receptor from relatively un if any harm be relatively	that harm could m an identified h likely that any su were to occur it i mild.	arise to a desigr azard. However uch harm would l s more likely tha	nated ; it is pe severe, or t harm would
Moo risk	derate/Low	It is possible receptor from were to occur relatively mi	e that harm could m an identified h ur it is more likely ld.	l arise to a desig azard. However, y that harm woul	nated if any harm d be
Lov	/ Risk	It is possible receptor from harm, if real	e that harm could m an identified h ised, would at w	l arise to a desig azard, but it is lik orst normally be	nated kely that this mild.
Ver	y Low Risk	There is a lo receptor. In unlikely to b	ow possibility tha the event of suc e severe.	t harm could aris h harm being rea	se to a alised it is

### Determination of contaminated land Contaminated Land Statutory Guidance, April 2012

## Human Health

Category	
1	The local authority should assume that a significant possibility of significant harm exists in any case where it considers there is an unacceptably high probability, supported by robust science-based evidence that significant harm would occur if no action is taken to stop it. For the purposes of this Guidance, these are referred to as "Category 1: Human Health" cases. Land should be deemed to be a Category 1: Human Health case where:
	(a) The authority is aware that similar land or situations are known, or are strongly suspected on the basis of robust evidence, to have caused such harm before in the United Kingdom or elsewhere; or
	(b) The authority is aware that similar degrees of exposure (via any medium) to the contaminant(s) in question are known, or strongly suspected on the basis of robust evidence, to have caused such harm before in the United Kingdom or elsewhere;
	(c) The authority considers that significant harm may already have been caused by contaminants in, on or under the land, and that there is an unacceptable risk that it might continue or occur again if no action is taken. Among other things, the authority may decide to determine the land on these grounds if it considers that it is likely that significant harm is being caused, but it considers either: (i) that there is insufficient evidence to be sure of meeting the "balance of probability" test for demonstrating that significant harm is being caused; or (ii) that the time needed to demonstrate such a level of probability would cause unreasonable delay, cost, or disruption and stress to affected people particularly in cases involving residential properties.
2	Land should be placed into Category 2 if the authority concludes, on the basis that there is a strong case for considering that the risks from the land are of sufficient concern, that the land poses a significant possibility of significant harm, with all that this might involve and having regard to Section 1. Category 2 may include land where there is little or no direct evidence that similar land, situations or levels of exposure have caused harm before, but nonetheless the authority considers on the basis of the available evidence, including expert opinion, that there is a strong case for taking action under Part 2A on a precautionary basis.

Category	
3	Land should be placed into Category 3 if the authority concludes that the strong case described in 4.25(a) does not exist, and therefore the legal test for significant possibility of significant harm is not met. Category 3 may include land where the risks are not low, but nonetheless the authority considers that regulatory intervention under Part 2A is not warranted. This recognises that placing land in Category 3 would not stop others, such as the owner or occupier of the land, from taking action to reduce risks outside of the Part 2A regime if they choose. The authority should consider making available the results of its inspection and risk assessment to the owners/occupiers of Category 3 land.
Category	
4	The local authority should consider that the following types of land should be placed into Category 4: Human Health: (a) Land where no relevant contaminant linkage has been astablished
	established.
	(b) Land where there are only normal levels of contaminants in soil, as explained in Section 3 of this Guidance.
	(c) Land that has been excluded from the need for further inspection and assessment because contaminant levels do not exceed relevant generic assessment criteria in accordance with Section 3 of this Guidance, or relevant technical tools or advice that may be developed in accordance with paragraph 3.30 of this Guidance.
	(d) Land 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 anyway through other sources of environmental exposure (e.g. in relation to average estimated national levels of exposure to substances commonly found in the environment, to which receptors are likely to be exposed in the normal course of their lives).