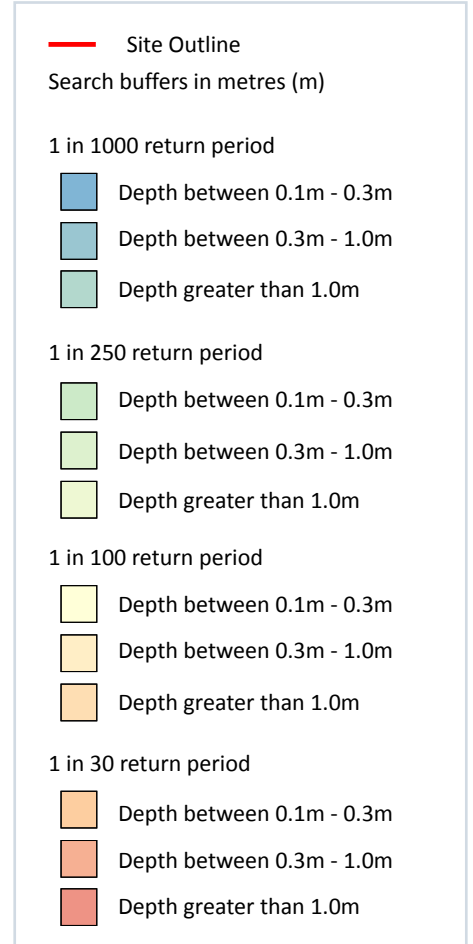
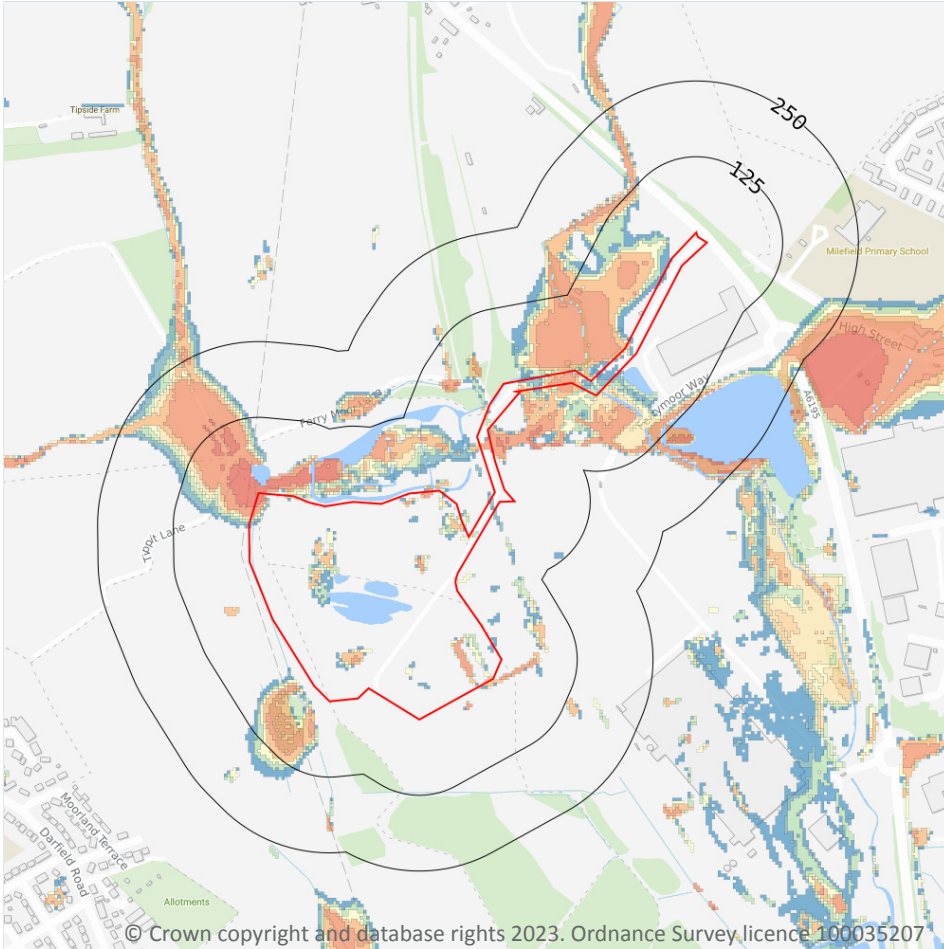


8 Surface water flooding



8.1 Surface water flooding

Highest risk on site

1 in 30 year, Greater than 1.0m

Highest risk within 50m

1 in 30 year, Greater than 1.0m

Ambiental Risk Analytics surface water (pluvial) FloodMap identifies areas likely to flood as a result of extreme rainfall events, i.e. land naturally vulnerable to surface water ponding or flooding. This data set was produced by simulating 1 in 30 year, 1 in 100 year, 1 in 250 year and 1 in 1,000 year rainfall events. Modern urban drainage systems are typically built to cope with rainfall events between 1 in 20 and 1 in 30 years, though some older ones may flood in a 1 in 5 year rainfall event.

Features are displayed on the Surface water flooding map on [page 78 >](#)

The data shown on the map and in the table above shows the highest likelihood of flood events happening at the site. Lower likelihood events may have greater flood depths and hence a greater potential impact on a site.

The table below shows the maximum flood depths for a range of return periods for the site.

Return period	Maximum modelled depth
1 in 1000 year	Greater than 1.0m
1 in 250 year	Greater than 1.0m
1 in 100 year	Greater than 1.0m
1 in 30 year	Greater than 1.0m

This data is sourced from Ambiental Risk Analytics.

9 Groundwater flooding



9.1 Groundwater flooding

Highest risk on site

Negligible

Highest risk within 50m

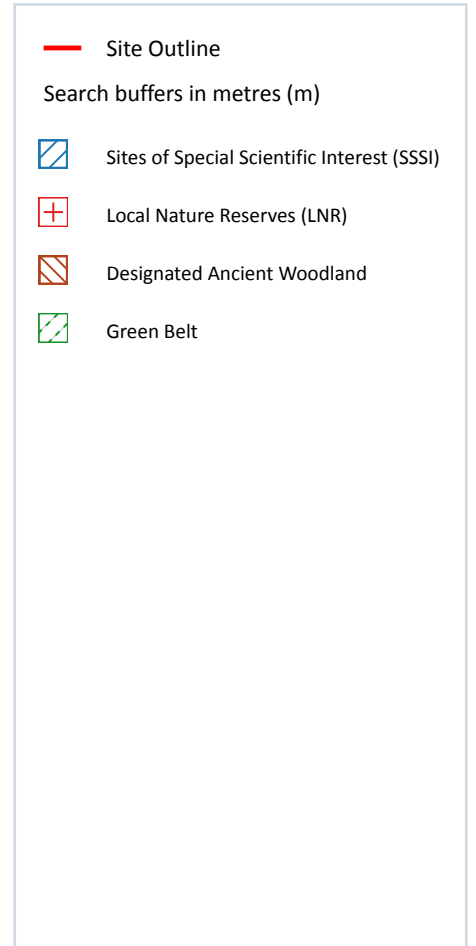
Negligible

Groundwater flooding is caused by unusually high groundwater levels. It occurs when the water table rises above the ground surface or within underground structures such as basements or cellars. Groundwater flooding tends to exhibit a longer duration than surface water flooding, possibly lasting for weeks or months, and as a result it can cause significant damage to property. This risk assessment is based on a 1 in 100 year return period and a 5m Digital Terrain Model (DTM).

Features are displayed on the Groundwater flooding map on [page 80](#) >

This data is sourced from Ambiantal Risk Analytics.

10 Environmental designations



10.1 Sites of Special Scientific Interest (SSSI)

Records within 2000m

3

Sites providing statutory protection for the best examples of UK flora, fauna, or geological or physiographical features. Originally notified under the National Parks and Access to the Countryside Act 1949, SSSIs were re-notified under the Wildlife and Countryside Act 1981. Improved provisions for the protection and management of SSSIs were introduced by the Countryside and Rights of Way Act 2000 (in England and Wales) and (in Scotland) by the Nature Conservation (Scotland) Act 2004 and the Wildlife and Natural Environment (Scotland) Act 2010.

Features are displayed on the Environmental designations map on [page 81](#) >

ID	Location	Name	Data source
2	792m S	Dearne Valley Wetlands	Natural England

ID	Location	Name	Data source
3	891m SE	Carlton Main Brickworks	Natural England
-	1645m W	Dearne Valley Wetlands	Natural England

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.2 Conserved wetland sites (Ramsar sites)

Records within 2000m **0**

Ramsar sites are designated under the Convention on Wetlands of International Importance, agreed in Ramsar, Iran, in 1971. They cover all aspects of wetland conservation and wise use, recognizing wetlands as ecosystems that are extremely important for biodiversity conservation in general and for the well-being of human communities. These sites cover a broad definition of wetland; marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, and even some marine areas.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.3 Special Areas of Conservation (SAC)

Records within 2000m **0**

Areas which have been identified as best representing the range and variety within the European Union of habitats and (non-bird) species listed on Annexes I and II to the Directive. SACs are designated under the EC Habitats Directive.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.4 Special Protection Areas (SPA)

Records within 2000m **0**

Sites classified by the UK Government under the EC Birds Directive, SPAs are areas of the most important habitat for rare (listed on Annex I to the Directive) and migratory birds within the European Union.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.5 National Nature Reserves (NNR)

Records within 2000m **0**

Sites containing examples of some of the most important natural and semi-natural terrestrial and coastal ecosystems in Great Britain. They are managed to conserve their habitats, provide special opportunities for scientific study or to provide public recreation compatible with natural heritage interests.



This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.6 Local Nature Reserves (LNR)

Records within 2000m

2

Sites managed for nature conservation, and to provide opportunities for research and education, or simply enjoying and having contact with nature. They are declared by local authorities under the National Parks and Access to the Countryside Act 1949 after consultation with the relevant statutory nature conservation agency.

Features are displayed on the Environmental designations map on [page 81 >](#)

ID	Location	Name	Data source
-	1759m W	Carlton Marsh (mapped boundary not verified)	Natural England
-	1839m E	West haigh Wood	Natural England

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.7 Designated Ancient Woodland

Records within 2000m

6

Ancient woodlands are classified as areas which have been wooded continuously since at least 1600 AD. This includes semi-natural woodland and plantations on ancient woodland sites. 'Wooded continuously' does not mean there is or has previously been continuous tree cover across the whole site, and not all trees within the woodland have to be old.

Features are displayed on the Environmental designations map on [page 81 >](#)

ID	Location	Name	Woodland Type
-	1411m E	West Haigh Wood	Ancient Replanted Woodland
-	1427m S	Storrs Wood	Ancient & Semi-Natural Woodland
-	1817m SW	Unknown	Ancient & Semi-Natural Woodland
-	1828m E	West Haigh Wood	Ancient & Semi-Natural Woodland
-	1832m S	Unknown	Ancient & Semi-Natural Woodland
-	1905m SW	Unknown	Ancient & Semi-Natural Woodland

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.



10.8 Biosphere Reserves

Records within 2000m

0

Biosphere Reserves are internationally recognised by UNESCO as sites of excellence to balance conservation and socioeconomic development between nature and people. They are recognised under the Man and the Biosphere (MAB) Programme with the aim of promoting sustainable development founded on the work of the local community.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.9 Forest Parks

Records within 2000m

0

These are areas managed by the Forestry Commission designated on the basis of recreational, conservation or scenic interest.

This data is sourced from the Forestry Commission.

10.10 Marine Conservation Zones

Records within 2000m

0

A type of marine nature reserve in UK waters established under the Marine and Coastal Access Act (2009). They are designated with the aim to protect nationally important, rare or threatened habitats and species.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.11 Green Belt

Records within 2000m

2

Areas designated to prevent urban sprawl by keeping land permanently open.

Features are displayed on the Environmental designations map on [page 81 >](#)

ID	Location	Name	Local Authority name
1	On site	South and West Yorkshire	Barnsley
4	1200m NE	South and West Yorkshire	Barnsley

This data is sourced from the Ministry of Housing, Communities and Local Government.



10.12 Proposed Ramsar sites

Records within 2000m

0

Ramsar sites are areas listed as a Wetland of International Importance under the Convention on Wetlands of International Importance especially as Waterfowl Habitat (the Ramsar Convention) 1971. The sites here supplied have a status of 'Proposed' having been identified for potential adoption under the framework.

This data is sourced from Natural England.

10.13 Possible Special Areas of Conservation (pSAC)

Records within 2000m

0

Special Areas of Conservation are areas which have been identified as best representing the range and variety within the European Union of habitats and (non-bird) species listed on Annexes I and II to the Directive. SACs are designated under the EC Habitats Directive. Those sites supplied here are those with a status of 'Possible' having been identified for potential adoption under the framework.

This data is sourced from Natural England and Natural Resources Wales.

10.14 Potential Special Protection Areas (pSPA)

Records within 2000m

0

Special Protection Areas (SPAs) are areas designated (or 'classified') under the European Union Wild Birds Directive for the protection of nationally and internationally important populations of wild birds. Those sites supplied here are those with a status of 'Potential' having been identified for potential adoption under the framework.

This data is sourced from Natural England.

10.15 Nitrate Sensitive Areas

Records within 2000m

0

Areas where nitrate concentrations in drinking water sources exceeded or was at risk of exceeding the limit of 50 mg/l set by the 1980 EC Drinking Water Directive. Voluntary agricultural measures as a means of reducing the levels of nitrate were introduced by DEFRA as MAFF, with payments being made to farmers who complied. The scheme was started as a pilot in 1990 in ten areas, later implemented within 32 areas. The scheme was closed to further new entrants in 1998, although existing agreements continued for their full term. All Nitrate Sensitive Areas fell within the areas designated as Nitrate Vulnerable Zones (NVZs) in 1996 under the EC Nitrate Directive (91/676/EEC).

This data is sourced from Natural England.



10.16 Nitrate Vulnerable Zones

Records within 2000m

1

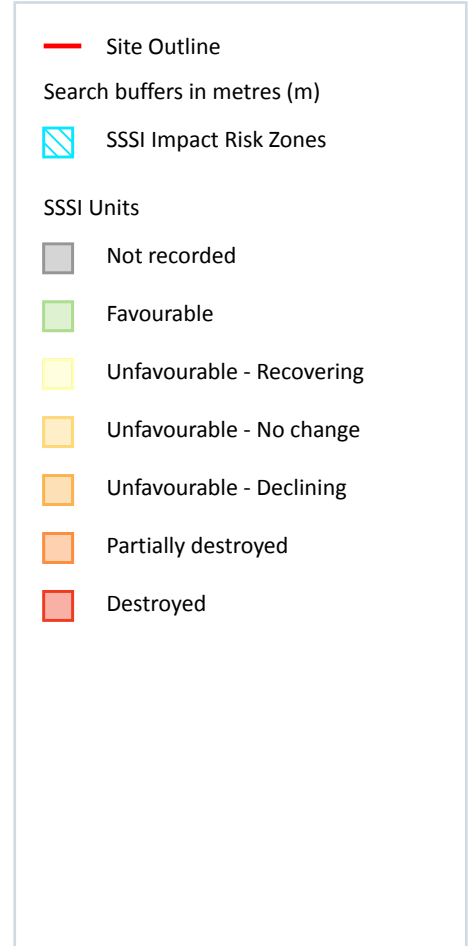
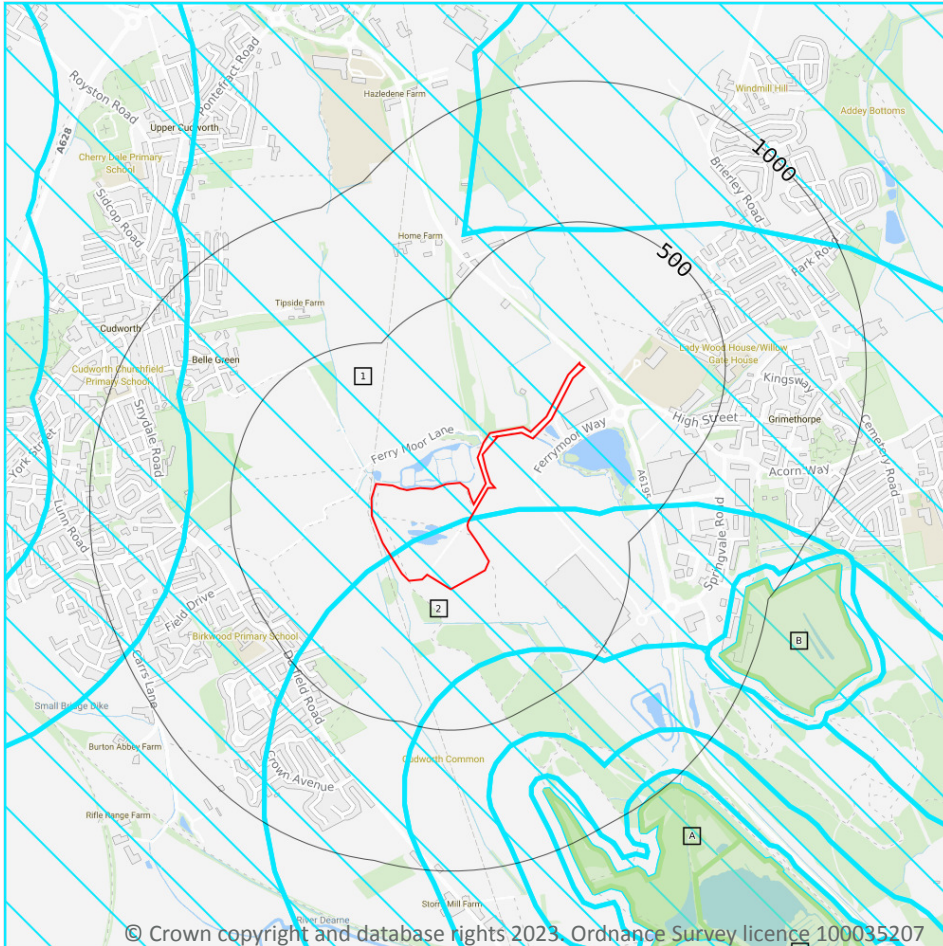
Areas at risk from agricultural nitrate pollution designated under the EC Nitrate Directive (91/676/EEC). These are areas of land that drain into waters polluted by nitrates. Farmers operating within these areas have to follow mandatory rules to tackle nitrate loss from agriculture.

Location	Name	Type	NVZ ID	Status
On site	River Dearne NVZ	Surface Water	278	Existing

This data is sourced from Natural England and Natural Resources Wales.



SSSI Impact Zones and Units



10.17 SSSI Impact Risk Zones

Records on site

2

Developed to allow rapid initial assessment of the potential risks to SSSIs posed by development proposals. They define zones around each SSSI which reflect the particular sensitivities of the features for which it is notified and indicate the types of development proposal which could potentially have adverse impacts.

Features are displayed on the SSSI Impact Zones and Units map on [page 87](#) >

ID	Location	Type of developments requiring consultation
1	On site	<p>Infrastructure - Pipelines and underground cables, pylons and overhead cables. Any transport proposal including road, rail and by water (excluding routine maintenance). Airports, helipads and other aviation proposals.</p> <p>Minerals, Oil and Gas - Planning applications for quarries, including: new proposals, Review of Minerals Permissions (ROMP), extensions, variations to conditions etc. Oil & gas exploration/extraction.</p> <p>Rural non-residential - Large non residential developments outside existing settlements/urban areas where footprint exceeds 1ha.</p> <p>Rural residential - Any residential development of 100 or more houses outside existing settlements/urban areas.</p> <p>Air pollution - Any industrial/agricultural development that could cause AIR POLLUTION (incl: industrial processes, livestock & poultry units with floorspace > 500m², slurry lagoons & digestate stores > 200m², manure stores > 250t).</p> <p>Combustion - General combustion processes >20MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion</p> <p>Waste - Landfill. Incl: inert landfill, non-hazardous landfill, hazardous landfill.</p> <p>Composting - Any composting proposal with more than 75000 tonnes maximum annual operational throughput. Incl: open windrow composting, in-vessel composting, anaerobic digestion, other waste management</p> <p>Discharges - Any discharge of water or liquid waste of more than 5m³/day to ground (ie to seep away) or to surface water, such as a beck or stream.</p> <p>Water supply - Large infrastructure such as warehousing / industry where total net additional gross internal floorspace following development is 1,000m² or more.</p>
2	On site	<p>Infrastructure - Pipelines and underground cables, pylons and overhead cables. Any transport proposal including road, rail and by water (excluding routine maintenance). Airports, helipads and other aviation proposals.</p> <p>Wind and Solar - Wind turbines.</p> <p>Minerals, Oil and Gas - Planning applications for quarries, including: new proposals, Review of Minerals Permissions (ROMP), extensions, variations to conditions etc. Oil & gas exploration/extraction.</p> <p>Rural non-residential - Large non residential developments outside existing settlements/urban areas where net additional gross internal floorspace is > 1,000m² or footprint exceeds 0.2ha</p> <p>Residential - Residential development of 100 units or more.</p> <p>Rural residential - Any residential development of 50 or more houses outside existing settlements/urban areas.</p> <p>Air pollution - Any industrial/agricultural development that could cause AIR POLLUTION (incl: industrial processes, livestock & poultry units with floorspace > 500m², slurry lagoons & digestate stores > 200m², manure stores > 250t).</p> <p>Combustion - General combustion processes >20MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion</p> <p>Waste - Landfill. Incl: inert landfill, non-hazardous landfill, hazardous landfill.</p> <p>Composting - Any composting proposal with more than 500 tonnes maximum annual operational throughput. Incl: open windrow composting, in-vessel composting, anaerobic digestion, other waste management.</p> <p>Discharges - Any discharge of water or liquid waste of more than 2m³/day to ground (ie to seep away) or to surface water, such as a beck or stream.</p> <p>Water supply - Large infrastructure such as warehousing / industry where net additional gross internal floorspace is > 1,000m² or any development needing its own water supply</p>

This data is sourced from Natural England.



10.18 SSSI Units

Records within 2000m

5

Divisions of SSSIs used to record management and condition details. Units are the smallest areas for which Natural England gives a condition assessment, however, the size of units varies greatly depending on the types of management and the conservation interest.

Features are displayed on the SSSI Impact Zones and Units map on [page 87 >](#)

ID: A
 Location: 792m S
 SSSI name: Dearne Valley Wetlands
 Unit name: Cudworth Common
 Broad habitat: Broadleaved, Mixed And Yew Woodland - Lowland
 Condition: Favourable
 Reportable features:

Feature name	Feature condition	Date of assessment
Aggregations of breeding birds - Willow Tit, Poecile montanus	Favourable	01/03/2021
Assemblages of breeding birds - Scrub	Favourable	01/03/2021

ID: B
 Location: 891m SE
 SSSI name: Carlton Main Brickworks
 Unit name: Carlton Main Brickworks
 Broad habitat: Earth Heritage
 Condition: Favourable
 Reportable features:

Feature name	Feature condition	Date of assessment
EA - Westphalian	Favourable	04/10/2010

ID: 8
 Location: 1314m SE
 SSSI name: Dearne Valley Wetlands
 Unit name: Edderthorpe Flash
 Broad habitat: Standing Open Water And Canals
 Condition: Favourable
 Reportable features:



Feature name	Feature condition	Date of assessment
Aggregations of breeding birds - Gadwall, Mareca strepera	Favourable	01/03/2021
Aggregations of breeding birds - Shoveler, Anas clypeata	Favourable	01/03/2021
Aggregations of non-breeding birds - Gadwall, Mareca strepera	Favourable	01/03/2021
Aggregations of non-breeding birds - Shoveler, Anas clypeata	Favourable	01/03/2021
Assemblages of breeding birds - Lowland damp grasslands	Favourable	01/03/2021
Assemblages of breeding birds - Mixed	Favourable	01/03/2021

ID: -
 Location: 1645m W
 SSSI name: Dearne Valley Wetlands
 Unit name: Carlton Marsh
 Broad habitat: Standing Open Water And Canals
 Condition: Favourable
 Reportable features:

Feature name	Feature condition	Date of assessment
Aggregations of breeding birds - Gadwall, Mareca strepera	Favourable	01/03/2021
Aggregations of breeding birds - Willow Tit, Poecile montanus	Favourable	01/03/2021
Aggregations of non-breeding birds - Gadwall, Mareca strepera	Favourable	01/03/2021
Aggregations of non-breeding birds - Shoveler, Anas clypeata	Favourable	01/03/2021
Assemblages of breeding birds - Lowland damp grasslands	Favourable	01/03/2021
Assemblages of breeding birds - Mixed	Favourable	01/03/2021
Assemblages of breeding birds - Scrub	Favourable	01/03/2021

ID: 10
 Location: 1829m SE
 SSSI name: Dearne Valley Wetlands
 Unit name: Edderthorpe Woodland
 Broad habitat: Broadleaved, Mixed And Yew Woodland - Lowland
 Condition: Favourable
 Reportable features:

Feature name	Feature condition	Date of assessment
Aggregations of breeding birds - Willow Tit, Poecile montanus	Favourable	01/03/2021



Feature name	Feature condition	Date of assessment
Assemblages of breeding birds - Scrub	Favourable	01/03/2021

This data is sourced from Natural England and Natural Resources Wales.



11 Visual and cultural designations

11.1 World Heritage Sites

Records within 250m

0

Sites designated for their globally important cultural or natural interest requiring appropriate management and protection measures. World Heritage Sites are designated to meet the UK's commitments under the World Heritage Convention.

This data is sourced from Historic England, Cadw and Historic Environment Scotland.

11.2 Area of Outstanding Natural Beauty

Records within 250m

0

Areas of Outstanding Natural Beauty (AONB) are conservation areas, chosen because they represent 18% of the finest countryside. Each AONB has been designated for special attention because of the quality of their flora, fauna, historical and cultural associations, and/or scenic views. The National Parks and Access to the Countryside Act of 1949 created AONBs and the Countryside and Rights of Way Act, 2000 added further regulation and protection. There are likely to be restrictions to some developments within these areas.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

11.3 National Parks

Records within 250m

0

In England and Wales, the purpose of National Parks is to conserve and enhance landscapes within the countryside whilst promoting public enjoyment of them and having regard for the social and economic well-being of those living within them. In Scotland National Parks have the additional purpose of promoting the sustainable use of the natural resources of the area and the sustainable social and economic development of its communities. The National Parks and Access to the Countryside Act 1949 established the National Park designation in England and Wales, and The National Parks (Scotland) Act 2000 in Scotland.

This data is sourced from Natural England, Natural Resources Wales and the Scottish Government.

11.4 Listed Buildings

Records within 250m

0

Buildings listed for their special architectural or historical interest. Building control in the form of 'listed building consent' is required in order to make any changes to that building which might affect its special interest. Listed buildings are graded to indicate their relative importance, however building controls apply to all buildings equally, irrespective of their grade, and apply to the interior and exterior of the building in its entirety, together with any curtilage structures.



This data is sourced from Historic England, Cadw and Historic Environment Scotland.

11.5 Conservation Areas

Records within 250m

0

Local planning authorities are obliged to designate as conservation areas any parts of their own area that are of special architectural or historic interest, the character and appearance of which it is desirable to preserve or enhance. Designation of a conservation area gives broader protection than the listing of individual buildings. All the features within the area, listed or otherwise, are recognised as part of its character. Conservation area designation is the means of recognising the importance of all factors and of ensuring that planning decisions address the quality of the landscape in its broadest sense.

This data is sourced from Historic England, Cadw and Historic Environment Scotland.

11.6 Scheduled Ancient Monuments

Records within 250m

0

A scheduled monument is an historic building or site that is included in the Schedule of Monuments kept by the Secretary of State for Digital, Culture, Media and Sport. The regime is set out in the Ancient Monuments and Archaeological Areas Act 1979. The Schedule of Monuments has c.20,000 entries and includes sites such as Roman remains, burial mounds, castles, bridges, earthworks, the remains of deserted villages and industrial sites. Monuments are not graded, but all are, by definition, considered to be of national importance.

This data is sourced from Historic England, Cadw and Historic Environment Scotland.

11.7 Registered Parks and Gardens

Records within 250m

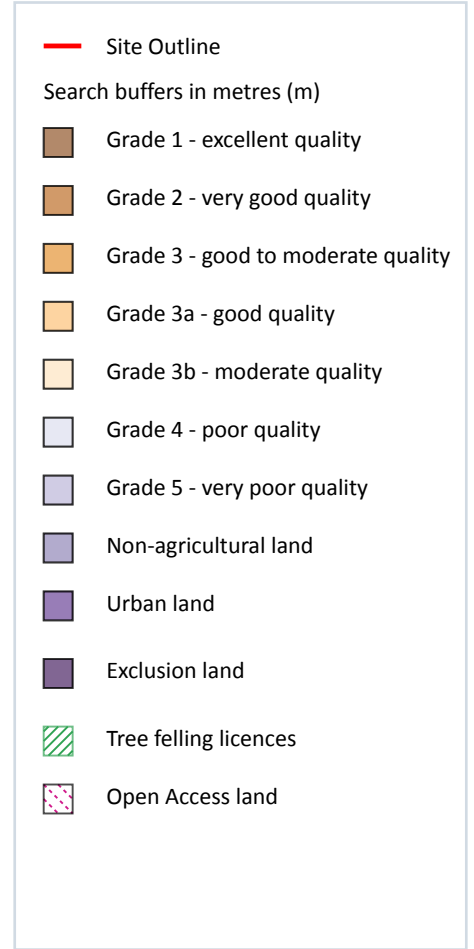
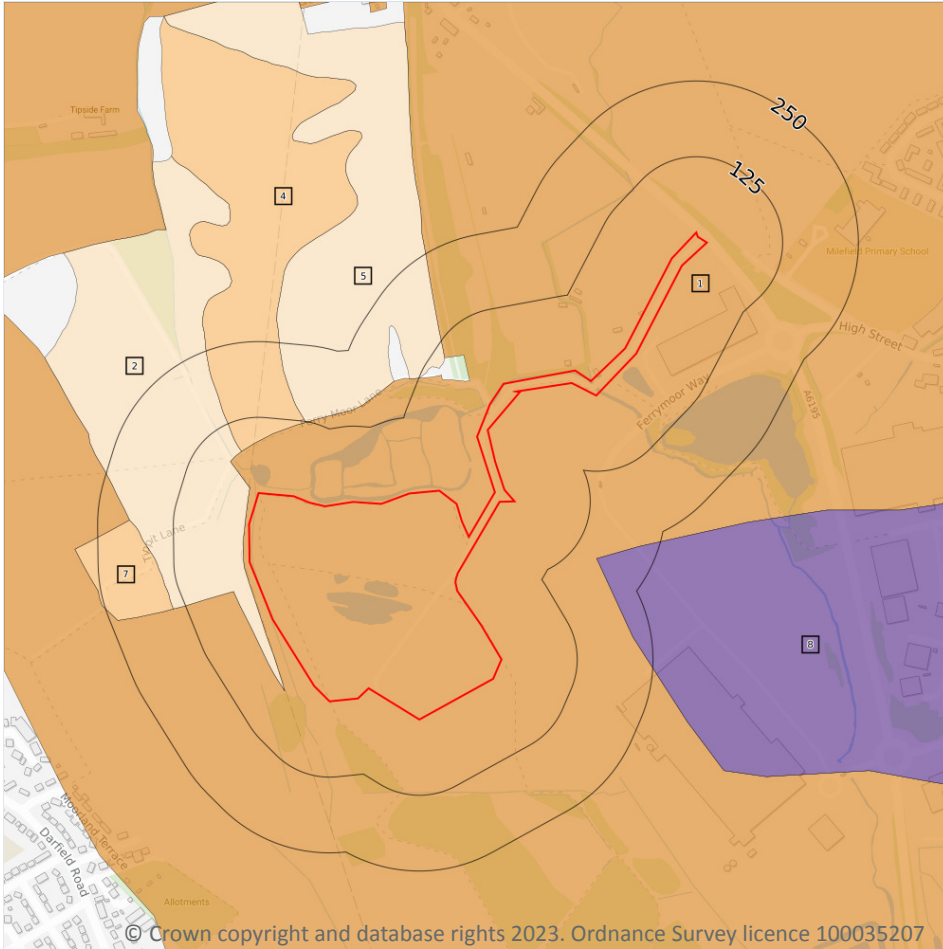
0

Parks and gardens assessed to be of particular interest and of special historic interest. The emphasis being on 'designed' landscapes, rather than on planting or botanical importance. Registration is a 'material consideration' in the planning process, meaning that planning authorities must consider the impact of any proposed development on the special character of the landscape.

This data is sourced from Historic England, Cadw and Historic Environment Scotland.



12 Agricultural designations



12.1 Agricultural Land Classification

Records within 250m

6

Classification of the quality of agricultural land taking into consideration multiple factors including climate, physical geography and soil properties. It should be noted that the categories for the grading of agricultural land are not consistent across England, Wales and Scotland.

Features are displayed on the Agricultural designations map on [page 94](#) >

ID	Location	Classification	Description
1	On site	Grade 3	Good to moderate quality agricultural land. Land with moderate limitations which affect the choice of crops, timing and type of cultivation, harvesting or the level of yield. Where more demanding crops are grown yields are generally lower or more variable than on land in Grades 1 and 2.

ID	Location	Classification	Description
2	7m W	Grade 3b	Moderate quality agricultural land. Land capable of producing moderate yields of a narrow range of crops, principally cereals and grass or lower yields of a wider range of crops or high yields of grass which can be grazed or harvested over most of the year.
4	74m NW	Grade 3a	Good quality agricultural land. Land capable of consistently producing moderate to high yields of a narrow range of arable crops, especially cereals, or moderate yields of a wide range of crops including cereals, grass, oilseed rape, potatoes, sugar beet and the less demanding horticultural crops.
5	102m N	Grade 3b	Moderate quality agricultural land. Land capable of producing moderate yields of a narrow range of crops, principally cereals and grass or lower yields of a wider range of crops or high yields of grass which can be grazed or harvested over most of the year.
7	144m W	Grade 3a	Good quality agricultural land. Land capable of consistently producing moderate to high yields of a narrow range of arable crops, especially cereals, or moderate yields of a wide range of crops including cereals, grass, oilseed rape, potatoes, sugar beet and the less demanding horticultural crops.
8	165m E	Urban	-

This data is sourced from Natural England.

12.2 Open Access Land

Records within 250m

0

The Countryside and Rights of Way Act 2000 (CROW Act) gives a public right of access to land without having to use paths. Access land includes mountains, moors, heaths and downs that are privately owned. It also includes common land registered with the local council and some land around the England Coast Path. Generally permitted activities on access land are walking, running, watching wildlife and climbing.

This data is sourced from Natural England and Natural Resources Wales.

12.3 Tree Felling Licences

Records within 250m

0

Felling Licence Application (FLA) areas approved by Forestry Commission England. Anyone wishing to fell trees must ensure that a licence or permission under a grant scheme has been issued by the Forestry Commission before any felling is carried out or that one of the exceptions apply.

This data is sourced from the Forestry Commission.



12.4 Environmental Stewardship Schemes

Records within 250m

1

Environmental Stewardship covers a range of schemes that provide financial incentives to farmers, foresters and land managers to look after and improve the environment. The schemes identified may be historical schemes that have now expired, or may still be active.

Location	Reference	Scheme	Start Date	End date
56m SW	AG00413862	Entry Level plus Higher Level Stewardship	01/12/2012	30/11/2022

This data is sourced from Natural England.

12.5 Countryside Stewardship Schemes

Records within 250m

0

Countryside Stewardship covers a range of schemes that provide financial incentives to farmers, foresters and land managers to look after and improve the environment. Main objectives are to improve the farmed environment for wildlife and to reduce diffuse water pollution.

This data is sourced from Natural England.

13 Habitat designations

13.1 Priority Habitat Inventory

Records within 250m

0

Habitats of principal importance as named under Natural Environment and Rural Communities Act (2006) Section 41.

This data is sourced from Natural England.

13.2 Habitat Networks

Records within 250m

0

Habitat networks for 18 priority habitat networks (based primarily, but not exclusively, on the priority habitat inventory) and areas suitable for the expansion of networks through restoration and habitat creation.

This data is sourced from Natural England.

13.3 Open Mosaic Habitat

Records within 250m

0

Sites verified as Open Mosaic Habitat. Mosaic habitats are brownfield sites that are identified under the UK Biodiversity Action Plan as a priority habitat due to the habitat variation within a single site, supporting an array of invertebrates.

This data is sourced from Natural England.

13.4 Limestone Pavement Orders

Records within 250m

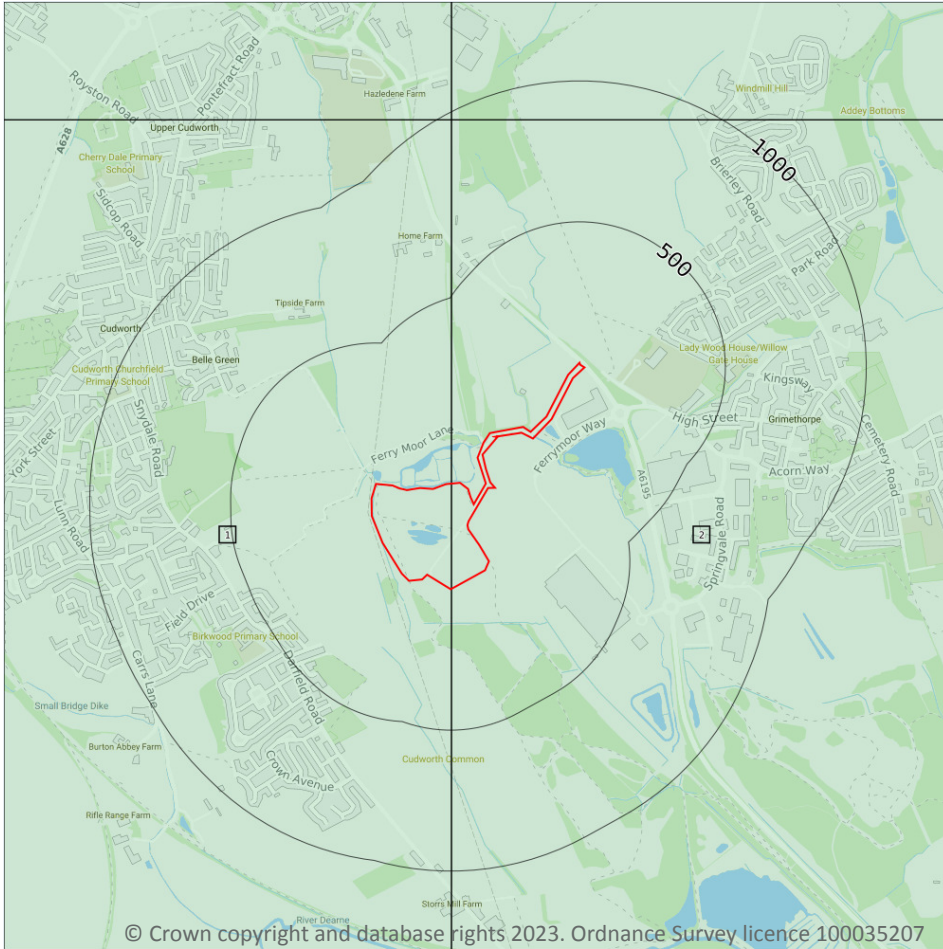
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Limestone pavements are outcrops of limestone where the surface has been worn away by natural means over millennia. These rocks have the appearance of paving blocks, hence their name. Not only do they have geological interest, they also provide valuable habitats for wildlife. These habitats are threatened due to their removal for use in gardens and water features. Many limestone pavements have been designated as SSSIs which affords them some protection. In addition, Section 34 of the Wildlife and Countryside Act 1981 gave them additional protection via the creation of Limestone Pavement Orders, which made it a criminal offence to remove any part of the outcrop. The associated Limestone Pavement Priority Habitat is part of the UK Biodiversity Action Plan priority habitat in England.

This data is sourced from Natural England.



14 Geology 1:10,000 scale - Availability



— Site Outline
 Search buffers in metres (m)

- Full coverage
- Partial coverage
- No coverage

14.1 10k Availability

Records within 500m

2

An indication on the coverage of 1:10,000 scale geology data for the site, the most detailed dataset provided by the British Geological Survey. Either 'Full', 'Partial' or 'No coverage' for each geological theme.

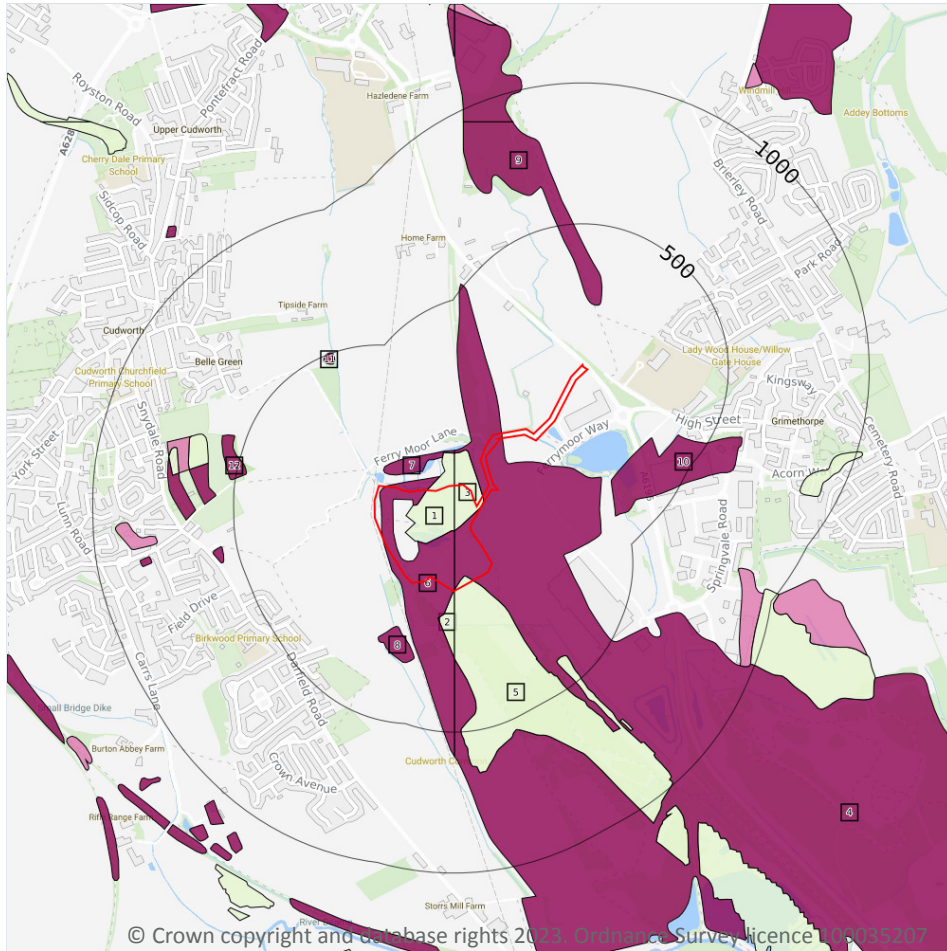
Features are displayed on the Geology 1:10,000 scale - Availability map on [page 98](#) >

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	Full	Full	Full	No coverage	SE30NE
2	On site	Full	Full	Full	No coverage	SE40NW

This data is sourced from the British Geological Survey.



Geology 1:10,000 scale - Artificial and made ground



— Site Outline
 Search buffers in metres (m)

- Reclaimed ground
- Made ground
- Worked ground
- Infilled ground
- Disturbed ground
- Landscaped ground

14.2 Artificial and made ground (10k)

Records within 500m

12

Details of made, worked, infilled, disturbed and landscaped ground at 1:10,000 scale. Artificial ground can be associated with potentially contaminated material, unpredictable engineering conditions and instability.

Features are displayed on the Geology 1:10,000 scale - Artificial and made ground map on [page 99](#) >

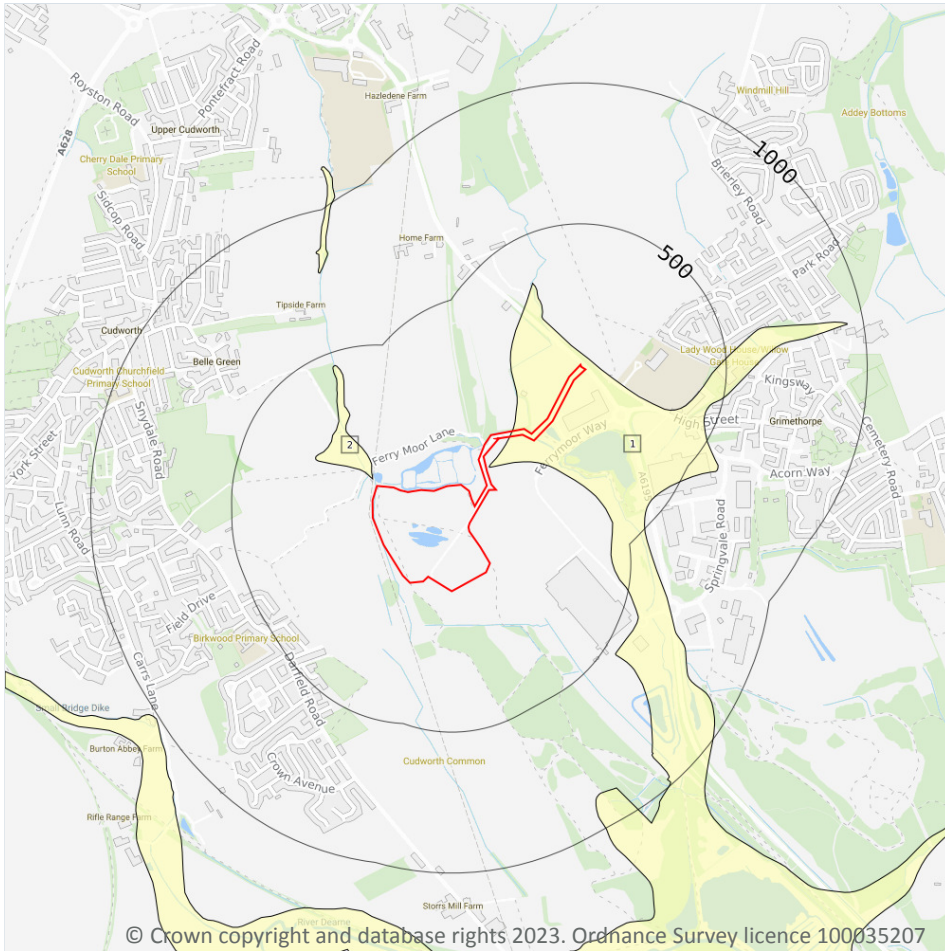
ID	Location	LEX Code	Description	Rock description
1	On site	WMGR-ARTDP	Infilled Ground	Artificial Deposit
2	On site	WMGR-ARTDP	Infilled Ground	Artificial Deposit
3	On site	WMGR-ARTDP	Infilled Ground	Artificial Deposit
4	On site	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit

ID	Location	LEX Code	Description	Rock description
5	On site	WMGR-ARTDP	Infilled Ground	Artificial Deposit
6	On site	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
7	44m NW	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
8	164m SW	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
9	216m NE	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
10	288m E	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
11	462m NW	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
12	465m W	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit

This data is sourced from the British Geological Survey.



Geology 1:10,000 scale - Superficial



- Site Outline
- Search buffers in metres (m)
- Landslip (10k)
- Superficial geology (10k)
Please see table for more details.

14.3 Superficial geology (10k)

Records within 500m

2

Superficial geological deposits at 1:10,000 scale. Also known as 'drift', these are the youngest geological deposits, formed during the Quaternary. They rest on older deposits or rocks referred to as bedrock.

Features are displayed on the Geology 1:10,000 scale - Superficial map on [page 101](#) >

ID	Location	LEX Code	Description	Rock description
1	On site	ALV-XCZ	Alluvium - Clay And Silt	Clay And Silt
2	30m NW	ALV-XCZ	Alluvium - Clay And Silt	Clay And Silt

This data is sourced from the British Geological Survey.



14.4 Landslip (10k)

Records within 500m

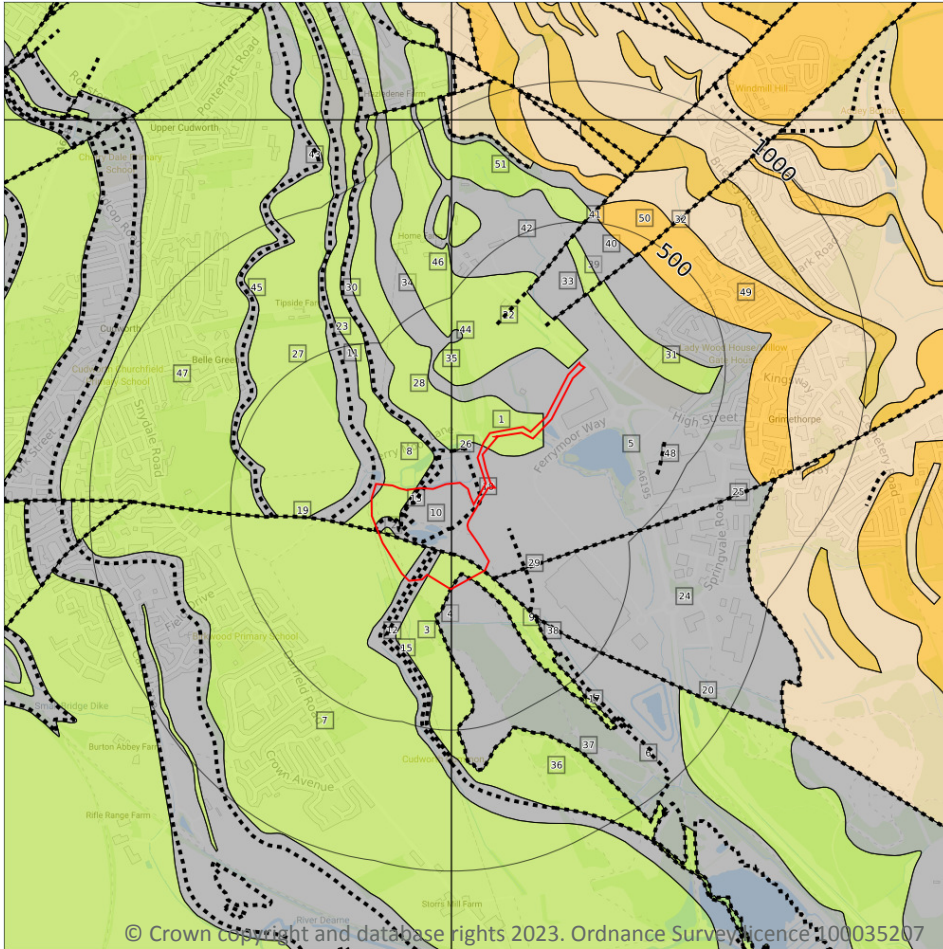
0

Mass movement deposits on BGS geological maps at 1:10,000 scale. Primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground.

This data is sourced from the British Geological Survey.



Geology 1:10,000 scale - Bedrock



- Site Outline
- Search buffers in metres (m)
- Bedrock faults and other linear features (10k)
- Bedrock geology (10k)
Please see table for more details.

14.5 Bedrock geology (10k)

Records within 500m

31

Bedrock geology at 1:10,000 scale. The main mass of rocks forming the Earth and present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

Features are displayed on the Geology 1:10,000 scale - Bedrock map on [page 103](#) >

ID	Location	LEX Code	Description	Rock age
1	On site	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovia Sub-age - Duckmantian Sub-age
2	On site	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovia Sub-age - Duckmantian Sub-age

ID	Location	LEX Code	Description	Rock age
3	On site	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovia Sub-age - Duckmantian Sub-age
4	On site	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovia Sub-age - Duckmantian Sub-age
5	On site	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovia Sub-age - Duckmantian Sub-age
6	On site	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovia Sub-age - Duckmantian Sub-age
7	On site	MXR-SDST	Mexborough Rock - Sandstone	Bolsovia Sub-age
8	On site	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovia Sub-age - Duckmantian Sub-age
9	On site	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovia Sub-age - Duckmantian Sub-age
10	On site	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovia Sub-age - Duckmantian Sub-age
11	On site	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovia Sub-age - Duckmantian Sub-age
12	On site	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovia Sub-age - Duckmantian Sub-age
22	13m NE	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovia Sub-age - Duckmantian Sub-age
24	42m SE	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovia Sub-age - Duckmantian Sub-age
27	72m NW	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovia Sub-age - Duckmantian Sub-age
28	96m N	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovia Sub-age - Duckmantian Sub-age
31	167m NE	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovia Sub-age - Duckmantian Sub-age
33	180m NE	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovia Sub-age - Duckmantian Sub-age
34	188m N	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovia Sub-age - Duckmantian Sub-age
35	223m N	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovia Sub-age - Duckmantian Sub-age
36	239m S	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovia Sub-age - Duckmantian Sub-age



ID	Location	LEX Code	Description	Rock age
39	239m NE	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovia Sub-age - Duckmantian Sub-age
40	293m NE	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovia Sub-age - Duckmantian Sub-age
42	333m N	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovia Sub-age - Duckmantian Sub-age
43	334m W	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovia Sub-age - Duckmantian Sub-age
44	346m N	PMCM-MDSS	Pennine Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovia Sub-age - Duckmantian Sub-age
46	371m N	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovia Sub-age - Duckmantian Sub-age
47	378m W	MXR-SDST	Mexborough Rock - Sandstone	Bolsovia Sub-age
49	417m NE	AR-SDST	Ackworth Rock - Sandstone	Bolsovia Sub-age
50	426m NE	AR-SDST	Ackworth Rock - Sandstone	Bolsovia Sub-age
51	493m NE	PMCM-SDST	Pennine Middle Coal Measures Formation - Sandstone	Bolsovia Sub-age - Duckmantian Sub-age

This data is sourced from the British Geological Survey.

14.6 Bedrock faults and other linear features (10k)

Records within 500m

20

Linear features at the ground or bedrock surface at 1:10,000 scale of six main types; rock, fault, fold axis, mineral vein, alteration area or landform. Features are either observed or inferred, and relate primarily to bedrock.

Features are displayed on the Geology 1:10,000 scale - Bedrock map on [page 103](#) >

ID	Location	Category	Description
13	On site	ROCK	Coal seam, observed
14	On site	ROCK	Coal seam, observed
15	On site	ROCK	Coal seam, inferred
16	On site	ROCK	Coal seam, observed
17	On site	ROCK	Coal seam, observed
18	On site	ROCK	Coal seam, observed

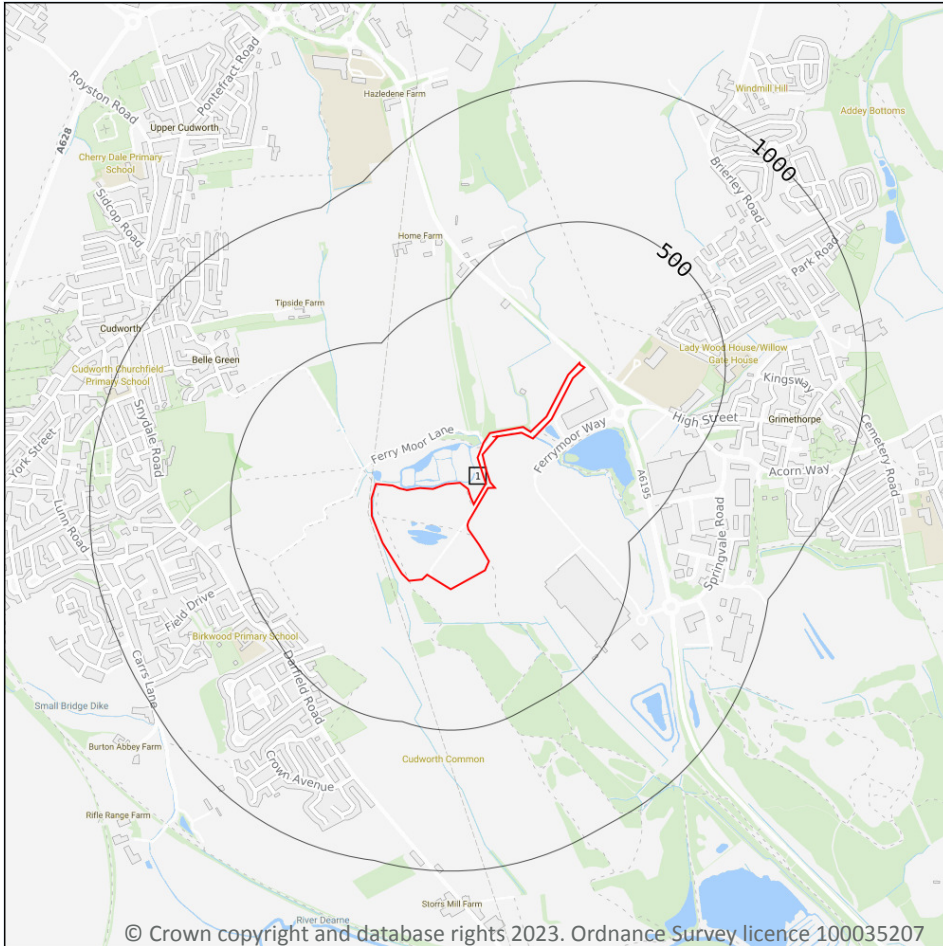


ID	Location	Category	Description
19	On site	FAULT	Normal fault, inferred
20	On site	FAULT	Normal fault, inferred
21	On site	FOSSIL_HORIZON	Fossil horizon, marine band
23	17m NW	FOSSIL_HORIZON	Fossil horizon, marine band
25	42m SE	FAULT	Normal fault, inferred
26	64m N	ROCK	Coal seam, observed
29	108m E	ROCK	Coal seam, observed
30	153m N	ROCK	Coal seam, inferred
32	178m NE	FAULT	Normal fault, inferred
37	239m S	ROCK	Coal seam, observed
38	239m SE	ROCK	Coal seam, inferred
41	307m N	FAULT	Normal fault, inferred
45	351m W	ROCK	Coal seam, inferred
48	388m E	ROCK	Coal seam, inferred

This data is sourced from the British Geological Survey.



15 Geology 1:50,000 scale - Availability



- Site Outline
- Search buffers in metres (m)
- Geological map tile

15.1 50k Availability

Records within 500m

1

An indication on the coverage of 1:50,000 scale geology data for the site. Either 'Full' or 'No coverage' for each geological theme.

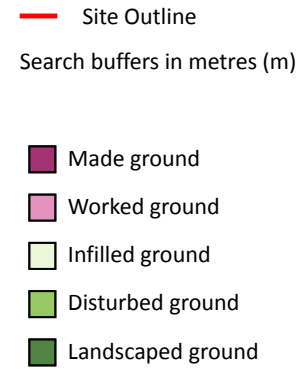
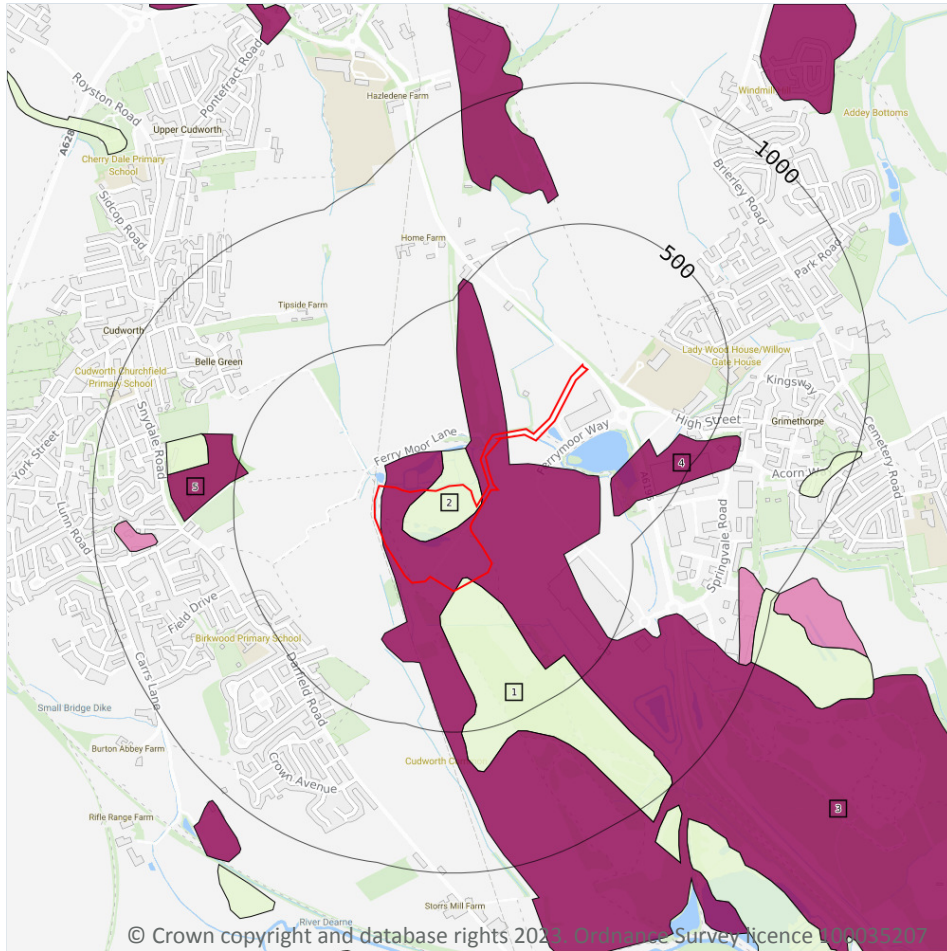
Features are displayed on the Geology 1:50,000 scale - Availability map on [page 107](#) >

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	No coverage	Full	Full	Full	EW087_barnsley_v4

This data is sourced from the British Geological Survey.



Geology 1:50,000 scale - Artificial and made ground



15.2 Artificial and made ground (50k)

Records within 500m

5

Details of made, worked, infilled, disturbed and landscaped ground at 1:50,000 scale. Artificial ground can be associated with potentially contaminated material, unpredictable engineering conditions and instability.

Features are displayed on the Geology 1:50,000 scale - Artificial and made ground map on [page 108 >](#)

ID	Location	LEX Code	Description	Rock description
1	On site	WMGR-ARTDP	INFILLED GROUND	ARTIFICIAL DEPOSIT
2	On site	WMGR-ARTDP	INFILLED GROUND	ARTIFICIAL DEPOSIT
3	On site	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
4	286m E	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT

ID	Location	LEX Code	Description	Rock description
5	459m W	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT

This data is sourced from the British Geological Survey.

15.3 Artificial ground permeability (50k)

Records within 50m	6
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A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any artificial deposits (the zone between the land surface and the water table).

Location	Flow type	Maximum permeability	Minimum permeability
On site	Mixed	Very High	Low
On site	Mixed	Very High	Low
On site	Mixed	Very High	Low
On site	Mixed	Very High	Low
On site	Mixed	Very High	Low
2m S	Mixed	Very High	Low

This data is sourced from the British Geological Survey.

Geology 1:50,000 scale - Superficial



- Site Outline
- Search buffers in metres (m)
- Landslip (50k)
- Superficial geology (50k)
Please see table for more details.

15.4 Superficial geology (50k)

Records within 500m

2

Superficial geological deposits at 1:50,000 scale. Also known as 'drift', these are the youngest geological deposits, formed during the Quaternary. They rest on older deposits or rocks referred to as bedrock.

Features are displayed on the Geology 1:50,000 scale - Superficial map on [page 110 >](#)

ID	Location	LEX Code	Description	Rock description
1	On site	ALV-XCZSV	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL
2	37m NW	ALV-XCZ	ALLUVIUM	CLAY AND SILT

This data is sourced from the British Geological Survey.



15.5 Superficial permeability (50k)

Records within 50m	2
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A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any superficial deposits (the zone between the land surface and the water table).

Location	Flow type	Maximum permeability	Minimum permeability
On site	Intergranular	High	Very Low
37m NW	Intergranular	Low	Very Low

This data is sourced from the British Geological Survey.

15.6 Landslip (50k)

Records within 500m	0
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Mass movement deposits on BGS geological maps at 1:50,000 scale. Primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground.

This data is sourced from the British Geological Survey.

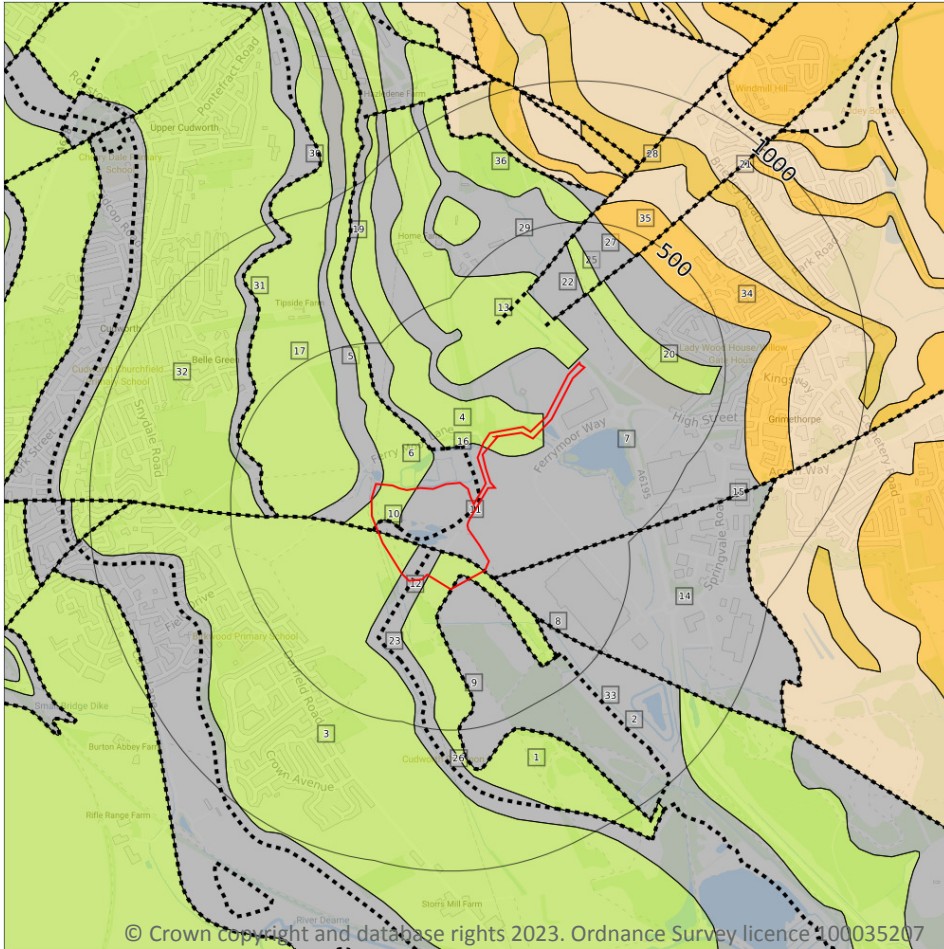
15.7 Landslip permeability (50k)

Records within 50m	0
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A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any landslip deposits (the zone between the land surface and the water table).

This data is sourced from the British Geological Survey.

Geology 1:50,000 scale - Bedrock



- Site Outline
- Search buffers in metres (m)
- Bedrock faults and other linear features (50k)
- Bedrock geology (50k)
Please see table for more details.

15.8 Bedrock geology (50k)

Records within 500m

20

Bedrock geology at 1:50,000 scale. The main mass of rocks forming the Earth and present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

Features are displayed on the Geology 1:50,000 scale - Bedrock map on [page 112 >](#)

ID	Location	LEX Code	Description	Rock age
1	On site	PMCM-SDST	PENNINE MIDDLE COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN
2	On site	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
3	On site	MXR-SDST	MEXBOROUGH ROCK - SANDSTONE	WESTPHALIAN



ID	Location	LEX Code	Description	Rock age
4	On site	PMCM-SDST	PENNINE MIDDLE COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN
5	On site	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
6	On site	PMCM-SDST	PENNINE MIDDLE COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN
7	On site	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
13	13m NE	PMCM-SDST	PENNINE MIDDLE COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN
14	41m SE	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
17	69m NW	PMCM-SDST	PENNINE MIDDLE COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN
20	163m NE	PMCM-SDST	PENNINE MIDDLE COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN
22	180m NE	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
25	240m NE	PMCM-SDST	PENNINE MIDDLE COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN
27	293m NE	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
29	333m N	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
30	333m W	PMCM-MDSS	PENNINE MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
32	377m W	MXR-SDST	MEXBOROUGH ROCK - SANDSTONE	WESTPHALIAN
34	416m NE	AR-SDST	ACKWORTH ROCK - SANDSTONE	WESTPHALIAN
35	427m NE	AR-SDST	ACKWORTH ROCK - SANDSTONE	WESTPHALIAN
36	493m NE	PMCM-SDST	PENNINE MIDDLE COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN

This data is sourced from the British Geological Survey.



15.9 Bedrock permeability (50k)

Records within 50m	10
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A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of bedrock (the zone between the land surface and the water table).

Location	Flow type	Maximum permeability	Minimum permeability
On site	Fracture	Moderate	Low
On site	Fracture	Moderate	Low
On site	Fracture	Moderate	Low
On site	Fracture	High	Moderate
On site	Fracture	High	Moderate
On site	Fracture	High	Moderate
On site	Fracture	High	Moderate
On site	Fracture	High	Moderate
2m S	Fracture	Moderate	Low
13m NE	Fracture	High	Moderate

This data is sourced from the British Geological Survey.

15.10 Bedrock faults and other linear features (50k)

Records within 500m	16
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Linear features at the ground or bedrock surface at 1:50,000 scale of six main types; rock, fault, fold axis, mineral vein, alteration area or landform. Features are either observed or inferred, and relate primarily to bedrock.

Features are displayed on the Geology 1:50,000 scale - Bedrock map on [page 112 >](#)

ID	Location	Category	Description
8	On site	FAULT	Fault, inferred
9	On site	ROCK	Coal seam, inferred
10	On site	ROCK	Coal seam, inferred
11	On site	ROCK	Coal seam, inferred
12	On site	ROCK	Coal seam, inferred

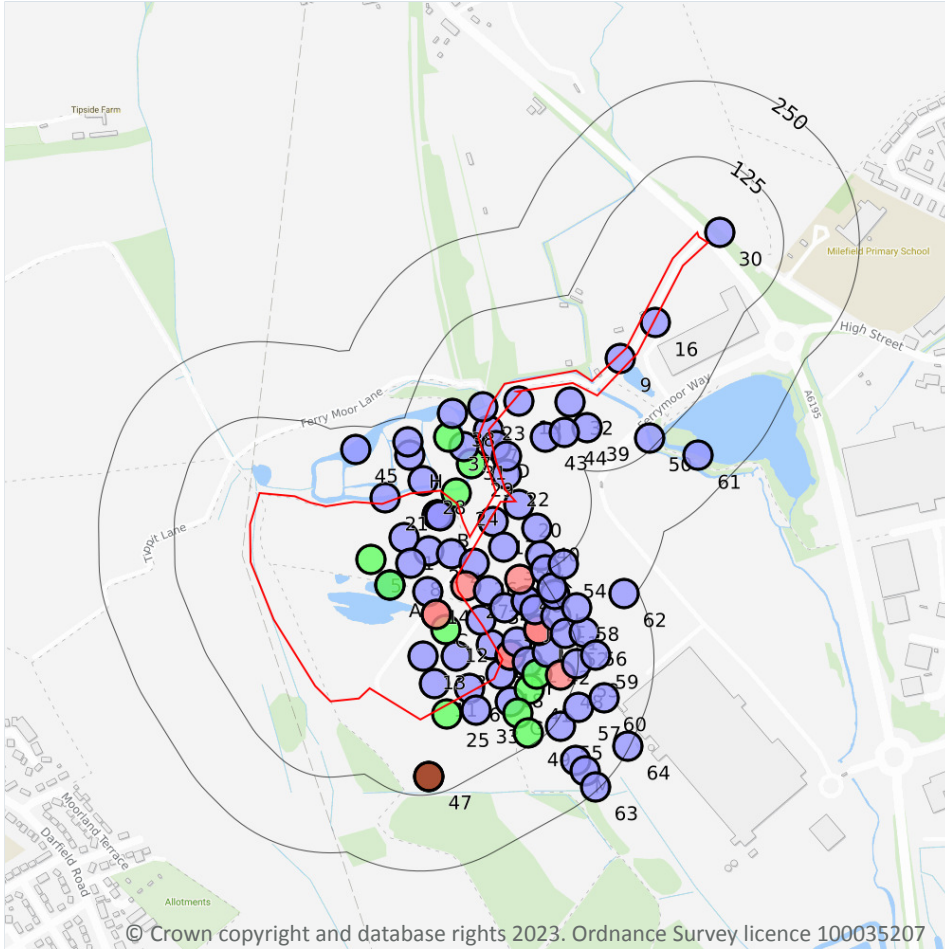


ID	Location	Category	Description
15	41m SE	FAULT	Fault, inferred
16	65m N	ROCK	Coal seam, inferred
18	117m N	ROCK	Coal seam, inferred
19	134m N	ROCK	Coal seam, inferred
21	178m NE	FAULT	Fault, inferred
23	204m SW	ROCK	Coal seam, inferred
24	240m SE	ROCK	Coal seam, inferred
26	282m S	ROCK	Coal seam, inferred
28	308m N	FAULT	Fault, inferred
31	333m W	ROCK	Coal seam, inferred
33	398m SE	ROCK	Coal seam, inferred

This data is sourced from the British Geological Survey.



16 Boreholes



16.1 BGS Boreholes

Records within 250m

94

The Single Onshore Boreholes Index (SOBI); an index of over one million records of boreholes, shafts and wells from all forms of drilling and site investigation work held by the British Geological Survey. Covering onshore and nearshore boreholes dating back to at least 1790 and ranging from one to several thousand metres deep.

Features are displayed on the Boreholes map on [page 116](#) >

ID	Location	Grid reference	Name	Length	Confidential	Web link
1	On site	439970 408635	GRIMETHORPE COLLIERY 34	9.0	N	83736 ↗
2	On site	440012 408613	GRIMETHORPE COLLIERY BH31	4.0	N	105723 ↗
3	On site	440056 408439	GRIMETHORPE COLLIERY BH19	6.0	N	105712 ↗

ID	Location	Grid reference	Name	Length	Confidential	Web link
4	On site	440048 408608	GRIMETHORPE COLLIERY BH32	7.0	N	105724 ↗
5	On site	439916 408599	GRIMETHORPE COLLIERY 129	12.0	N	83738 ↗
6	On site	440079 408386	GRIMETHORPE COLLIERY BH15	8.0	N	105708 ↗
7	On site	440109 408812	GRIMETHORPE COLLIERY BH42	4.0	N	105732 ↗
8	On site	439981 408593	GRIMETHORPE COLLIERY 30	8.0	N	83735 ↗
9	On site	440328 408930	GRIMETHORPE COLLIERY BHSA2	3.0	N	105802 ↗
10	On site	440115 408458	GRIMETHORPE COLLIERY BH20	8.0	N	105713 ↗
11	On site	440021 408393	GRIMETHORPE COLLIERY BH133	5.0	N	105797 ↗
12	On site	440039 408483	GRIMETHORPE COLLIERY BH23	30.0	N	105716 ↗
13	On site	440002 408439	GRIMETHORPE COLLIERY BH132	4.0	N	105796 ↗
14	On site	440009 408546	GRIMETHORPE COLLIERY BH27	5.0	N	105720 ↗
A	On site	439947 408557	GRIMETHORPE COLLIERY 131	8.0	N	83740 ↗
A	On site	439947 408557	GRIMETHORPE COLLIERY 130	12.0	N	83739 ↗
B	On site	440026 408672	GRIMETHORPE COLLIERY BH37	4.0	N	105728 ↗
B	On site	440026 408672	GRIMETHORPE COLLIERY BH36	8.0	N	105727 ↗
B	On site	440030 408670	SOUTHSIDE PROJECT L	8.0	N	105692 ↗
C	On site	440023 408508	GRIMETHORPE COLLIERY BH203	46.0	N	105806 ↗
C	On site	440023 408508	GRIMESTHORPE WASHERY SITE C	46.4	N	12977996 ↗
15	3m SE	440097 408498	GRIMETHORPE COLLIERY BH24	4.0	N	105717 ↗
16	3m NE	440385 408989	GRIMETHORPE COLLIERY BHSA3	3.0	N	105803 ↗
17	6m NE	440118 408661	GRIMETHORPE COLLIERY BH50	4.0	N	105740 ↗
D	7m NE	440123 408787	GRIMETHORPE COLLIERY BH41	3.0	N	105731 ↗
18	7m SE	440130 408409	GRIMETHORPE COLLIERY BH16	7.0	N	105709 ↗
19	7m NE	440160 408860	SOUTHSIDE PROJECT C	2.0	N	105685 ↗
20	7m NE	440160 408690	SOUTHSIDE PROJECT E	4.0	N	105687 ↗
21	7m N	439940 408700	SOUTHSIDE PROJECT Q	4.0	N	83719 ↗
22	11m NE	440140 408740	SOUTHSIDE PROJECT D	3.0	N	105686 ↗
23	11m NE	440100 408850	SOUTHSIDE PROJECT B	2.0	N	105684 ↗



ID	Location	Grid reference	Name	Length	Confidential	Web link
24	12m NE	440056 408708	GRIMETHORPE COLLIERY BH35	11.0	N	105726 ↗
25	13m S	440041 408344	GRIMETHORPE COLLIERY BH134	11.0	N	105798 ↗
26	14m E	440087 408593	GRIMETHORPE COLLIERY BH108	3.0	N	105779 ↗
27	15m E	440073 408555	GRIMETHORPE COLLIERY BH28	52.0	N	105721 ↗
E	15m SE	440146 408441	GRIMETHORPE COLLIERY BH204	36.0	N	105807 ↗
E	15m SE	440146 408441	GRIMESTHORPE WASHERY SITE D	35.2	N	12978006 ↗
D	18m NE	440139 408769	GRIMETHORPE COLLIERY BH51	4.0	N	105741 ↗
28	19m N	440002 408728	GRIMETHORPE COLLIERY BH39	8.0	N	105729 ↗
29	25m NE	440081 408757	GRIMETHORPE COLLIERY BH40	30.0	N	105730 ↗
30	25m NE	440491 409138	GRIMETHORPE COLLIERY BHSA1	3.0	N	105801 ↗
31	27m NE	440069 408785	GRIMETHORPE COLLIERY BH86	5.0	N	105770 ↗
32	29m NE	440245 408859	GRIMETHORPE COLLIERY BH46	5.5	N	105736 ↗
33	31m SE	440090 408350	SOUTHSIDE PROJECT G	6.0	N	105689 ↗
E	34m SE	440156 408462	GRIMETHORPE COLLIERY BH21	8.0	N	105714 ↗
34	41m E	440110 408547	GRIMETHORPE COLLIERY BH107	4.0	N	105778 ↗
F	41m SE	440174 408429	GRIMETHORPE COLLIERY BH17	6.0	N	105710 ↗
35	42m E	440135 408619	GRIMETHORPE COLLIERY BH33	3.0	N	105725 ↗
36	46m E	440136 408518	GRIMETHORPE COLLIERY BH25	5.0	N	105718 ↗
G	46m SE	440146 408364	GRIMETHORPE COLLIERY BH12	10.0	N	105705 ↗
37	49m N	440044 408800	GRIMETHORPE COLLIERY BH54	11.0	N	105743 ↗
38	54m N	440050 408840	SOUTHSIDE PROJECT A	5.0	N	105683 ↗
39	56m NE	440272 408816	GRIMETHORPE COLLIERY BH44	5.5	N	105734 ↗
40	57m E	440190 408650	SOUTHSIDE PROJECT F	9.0	N	105688 ↗
41	60m SE	440177 408384	GRIMETHORPE COLLIERY BH13	13.0	N	105706 ↗
F	62m SE	440190 408410	SOUTHSIDE PROJECT H	11.0	N	105690 ↗
H	62m N	439980 408770	SOUTHSIDE PROJECT K	6.0	N	83717 ↗
G	69m SE	440158 408345	GRIMETHORPE COLLIERY BH10	11.0	N	105704 ↗
42	75m SE	440207 408446	GRIMETHORPE COLLIERY BH18	7.0	N	105711 ↗



ID	Location	Grid reference	Name	Length	Confidential	Web link
I	76m E	440192 408482	GRIMETHORPE COLLIERY BH22	48.0	N	105715 ↗
I	76m E	440192 408483	GRIMETHORPE COLLIERY BH201	38.0	N	105804 ↗
I	76m E	440192 408483	GRIMESTHORPE WASHERY SITE A	37.4	N	12977959 ↗
43	78m NE	440203 408801	GRIMETHORPE COLLIERY BH45	4.0	N	105735 ↗
44	79m NE	440235 408808	GRIMETHORPE COLLIERY BH43	5.0	N	105733 ↗
J	82m E	440172 408529	GRIMETHORPE COLLIERY BH202	7.0	N	105805 ↗
J	83m E	440173 408529	GRIMESTHORPE WASHERY SITE B	7.25	N	12977990 ↗
H	86m N	439977 408793	GRIMETHORPE COLLIERY 53	5.0	N	83737 ↗
45	87m N	439890 408780	SOUTHSIDE PROJECT P	3.0	N	83718 ↗
J	88m E	440186 408516	GRIMETHORPE COLLIERY BH26	6.0	N	105719 ↗
46	92m E	440161 408566	GRIMETHORPE COLLIERY BH29	50.0	N	105722 ↗
47	96m S	440012 408240	GRIMETHORPE COLLIERY SURF DRIFT	-1.0	N	105601 ↗
K	99m E	440196 408605	GRIMETHORPE COLLIERY BH47	5.0	N	105737 ↗
48	100m SE	440229 408407	GRIMETHORPE COLLIERY BH14	39.0	N	105707 ↗
49	106m SE	440175 408312	GRIMETHORPE COLLIERY BH7	13.0	N	105701 ↗
50	110m NE	440375 408799	GRIMETHORPE COLLIERY BH55	5.0	N	105744 ↗
51	112m E	440221 408504	GRIMETHORPE COLLIERY BH104	3.0	N	105775 ↗
52	113m E	440237 408477	GRIMETHORPE COLLIERY BH105	4.0	N	105776 ↗
K	120m E	440203 408581	GRIMETHORPE COLLIERY BH49	5.0	N	105739 ↗
53	122m SE	440255 408426	GRIMETHORPE COLLIERY BH106	6.0	N	105777 ↗
L	129m E	440220 408540	SOUTHSIDE PROJECT M	8.0	N	105693 ↗
L	131m E	440215 408551	GRIMETHORPE COLLIERY BH103	5.0	N	105774 ↗
54	131m E	440234 408590	GRIMETHORPE COLLIERY BH48	7.0	N	105738 ↗
55	134m SE	440228 408323	GRIMETHORPE COLLIERY BH8	8.0	N	105702 ↗
56	142m E	440268 408478	GRIMETHORPE COLLIERY BH101	6.0	N	105772 ↗
57	146m SE	440258 408355	GRIMETHORPE COLLIERY BH9	5.0	N	105703 ↗
58	149m E	440255 408519	GRIMETHORPE COLLIERY BH102	6.0	N	105773 ↗

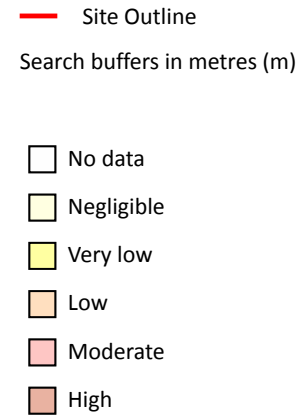
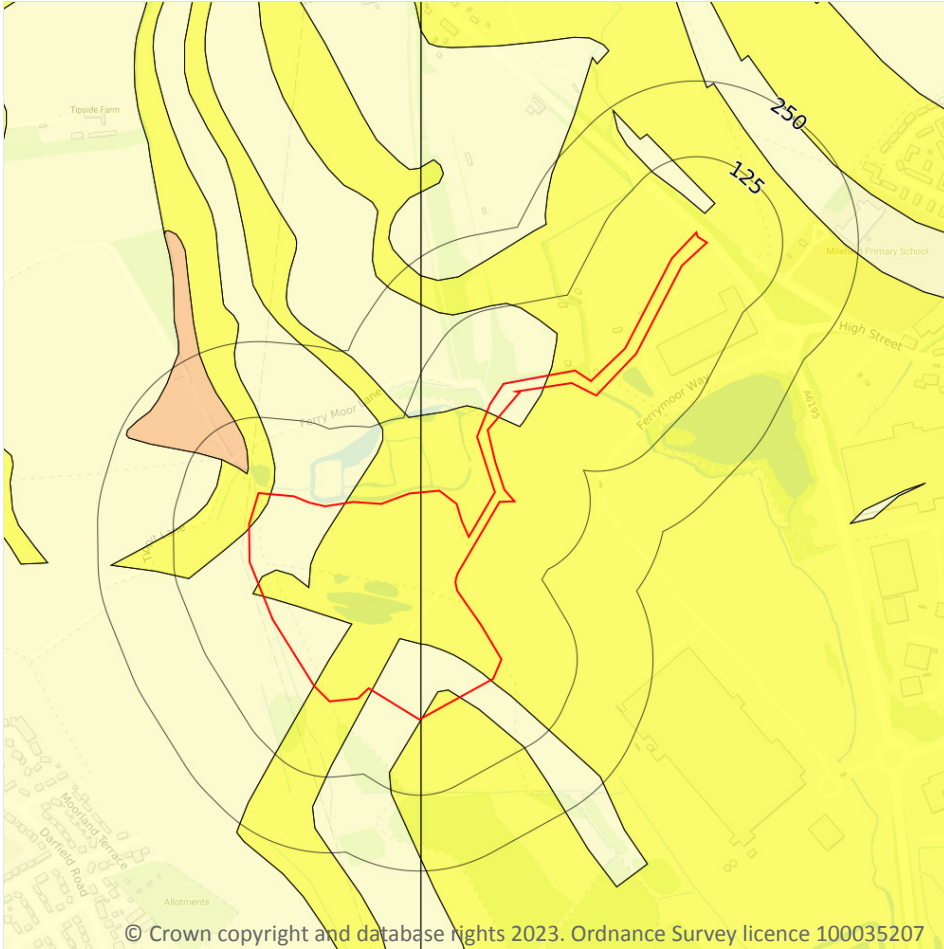


ID	Location	Grid reference	Name	Length	Confidential	Web link
59	154m SE	440287 408440	GRIMETHORPE COLLIERY BH100	7.0	N	105771 ↗
60	179m SE	440300 408370	SOUTHSIDE PROJECT J	6.0	N	105691 ↗
61	189m E	440456 408770	GRIMETHORPE COLLIERY BH56	5.0	N	105745 ↗
M	190m SE	440253 408267	GRIMETHORPE COLLIERY BH2	10.0	N	105698 ↗
M	214m SE	440270 408250	SOUTHSIDE PROJECT N	7.0	N	105694 ↗
62	228m E	440333 408542	GRIMETHORPE COLLIERY BH52	8.0	N	105742 ↗
63	244m SE	440286 408223	GRIMETHORPE COLLIERY BH1	7.0	N	105697 ↗
64	247m SE	440339 408290	GRIMETHORPE COLLIERY BH6	3.0	N	105700 ↗

This data is sourced from the British Geological Survey.



17 Natural ground subsidence - Shrink swell clays



17.1 Shrink swell clays

Records within 50m

5

The potential hazard presented by soils that absorb water when wet (making them swell), and lose water as they dry (making them shrink). This shrink-swell behaviour is controlled by the type and amount of clay in the soil, and by seasonal changes in the soil moisture content (related to rainfall and local drainage).

Features are displayed on the Natural ground subsidence - Shrink swell clays map on [page 121](#) >

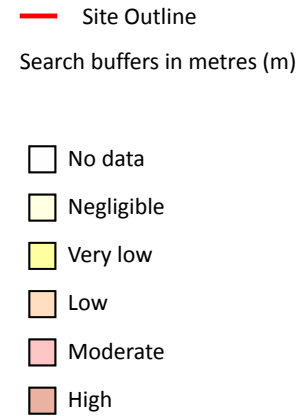
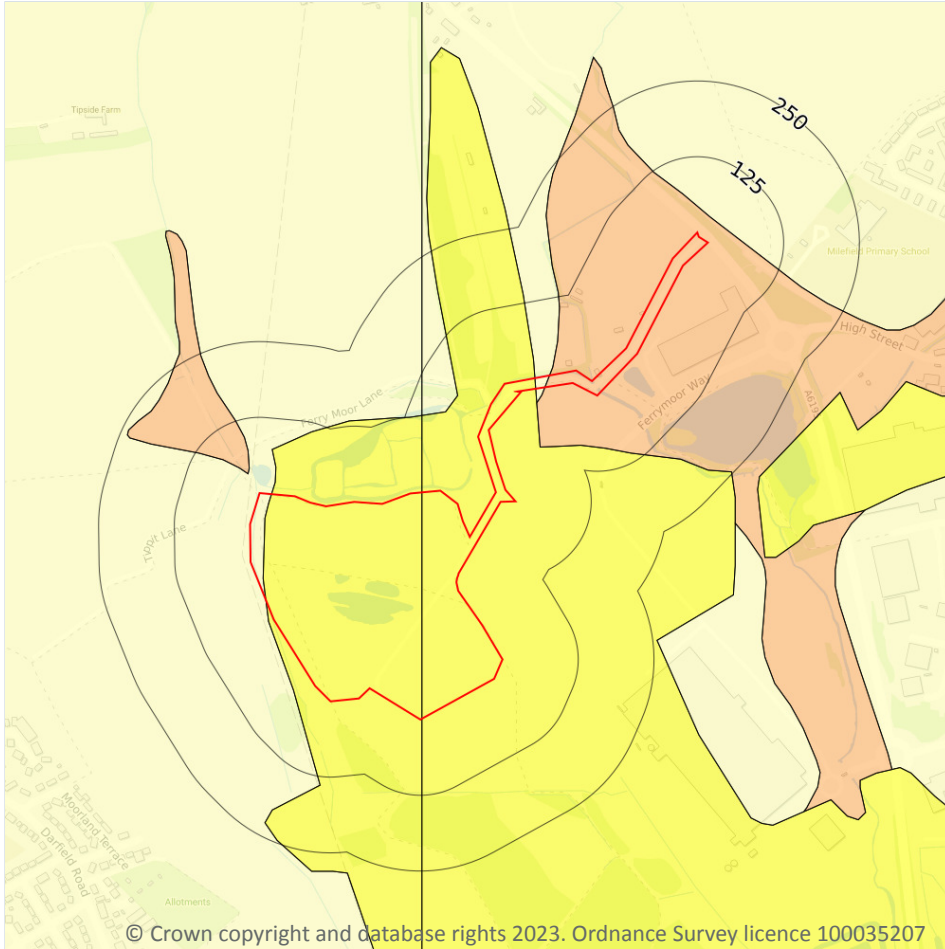
Location	Hazard rating	Details
On site	Negligible	Ground conditions predominantly non-plastic.
On site	Very low	Ground conditions predominantly low plasticity.
2m S	Very low	Ground conditions predominantly low plasticity.

Location	Hazard rating	Details
35m NE	Negligible	Ground conditions predominantly non-plastic.
37m NW	Low	Ground conditions predominantly medium plasticity.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Running sands



17.2 Running sands

Records within 50m

4

The potential hazard presented by rocks that can contain loosely-packed sandy layers that can become fluidised by water flowing through them. Such sands can 'run', removing support from overlying buildings and causing potential damage.

Features are displayed on the Natural ground subsidence - Running sands map on [page 123](#) >

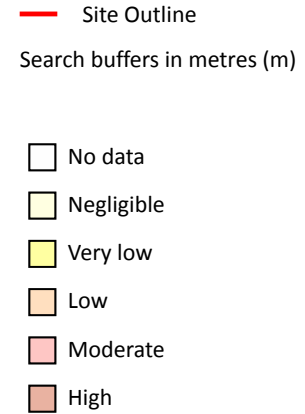
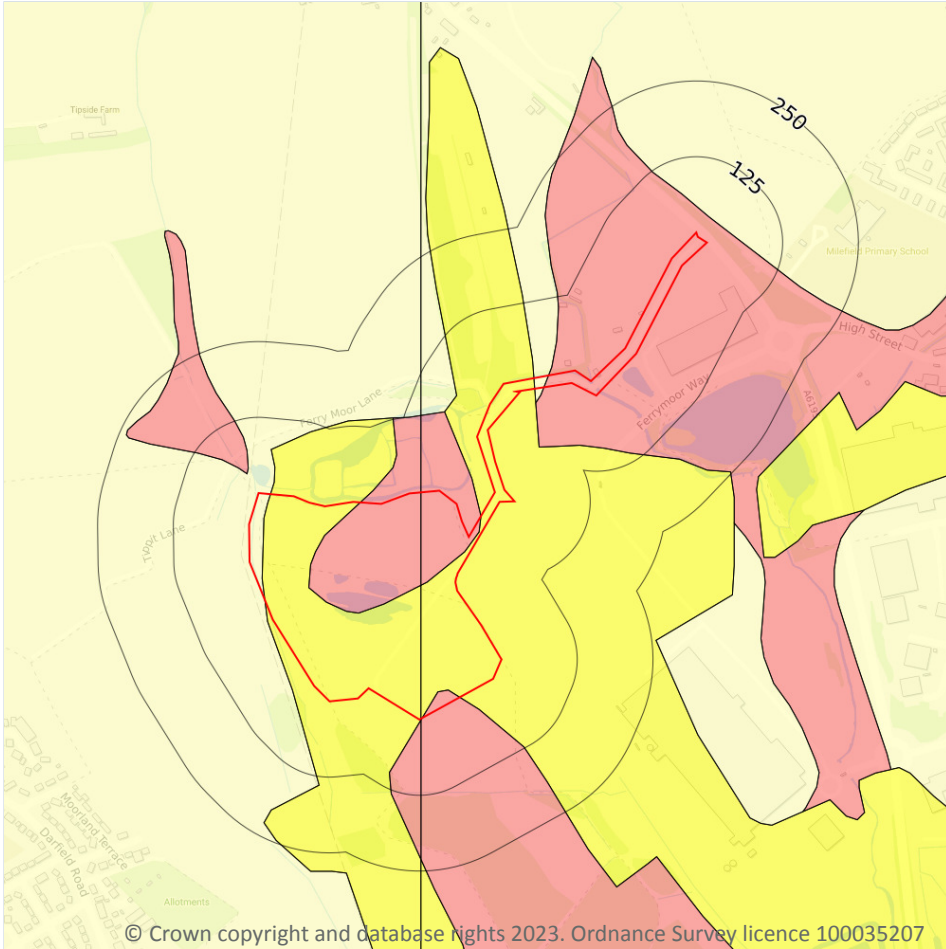
Location	Hazard rating	Details
On site	Negligible	Running sand conditions are not thought to occur whatever the position of the water table. No identified constraints on lands use due to running conditions.

Location	Hazard rating	Details
On site	Very low	Running sand conditions are unlikely. No identified constraints on land use due to running conditions unless water table rises rapidly.
On site	Low	Running sand conditions may be present. Constraints may apply to land uses involving excavation or the addition or removal of water.
37m NW	Low	Running sand conditions may be present. Constraints may apply to land uses involving excavation or the addition or removal of water.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Compressible deposits



17.3 Compressible deposits

Records within 50m

5

The potential hazard presented by types of ground that may contain layers of very soft materials like clay or peat and may compress if loaded by overlying structures, or if the groundwater level changes, potentially resulting in depression of the ground and disturbance of foundations.

Features are displayed on the Natural ground subsidence - Compressible deposits map on [page 125 >](#)

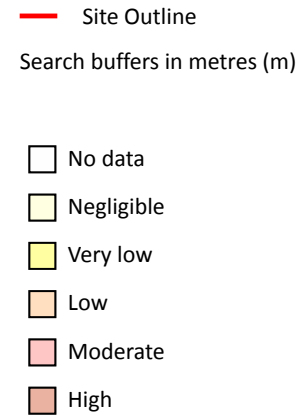
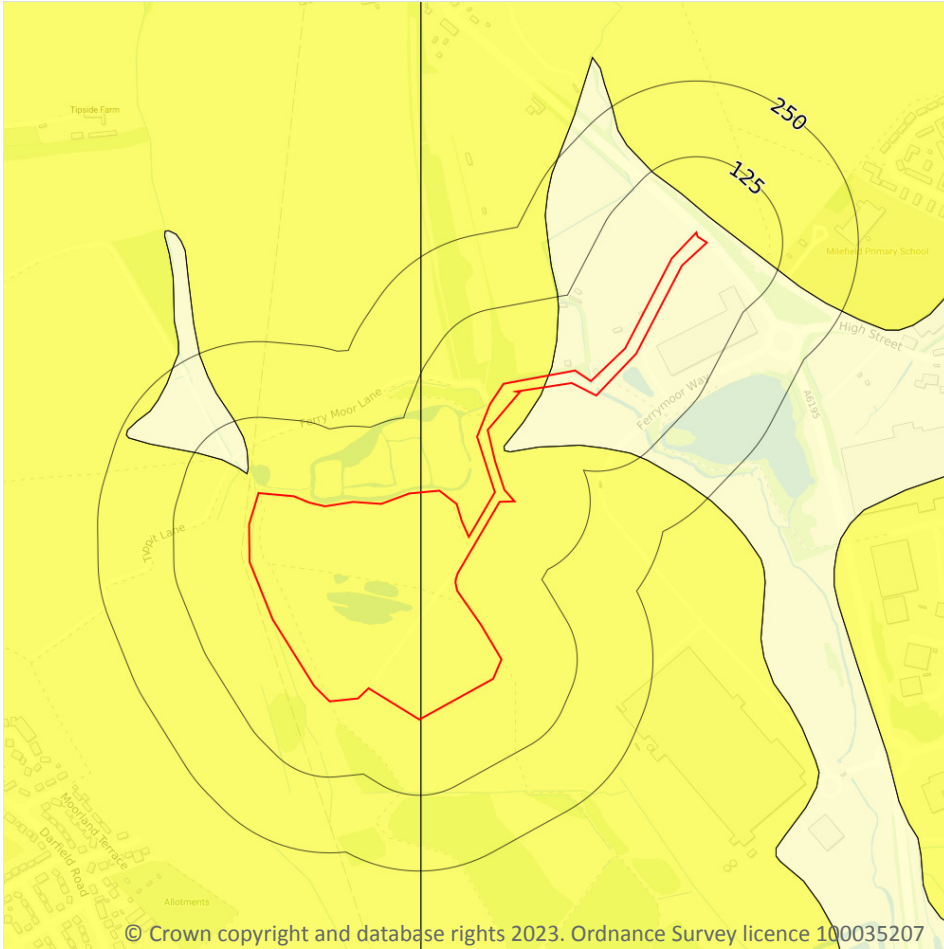
Location	Hazard rating	Details
On site	Negligible	Compressible strata are not thought to occur.
On site	Very low	Compressibility and uneven settlement problems are not likely to be significant on the site for most land uses.

Location	Hazard rating	Details
On site	Moderate	Compressibility and uneven settlement hazards are probably present. Land use should consider specifically the compressibility and variability of the site.
2m S	Moderate	Compressibility and uneven settlement hazards are probably present. Land use should consider specifically the compressibility and variability of the site.
37m NW	Moderate	Compressibility and uneven settlement hazards are probably present. Land use should consider specifically the compressibility and variability of the site.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Collapsible deposits



17.4 Collapsible deposits

Records within 50m

3

The potential hazard presented by natural deposits that could collapse when a load (such as a building) is placed on them or they become saturated with water.

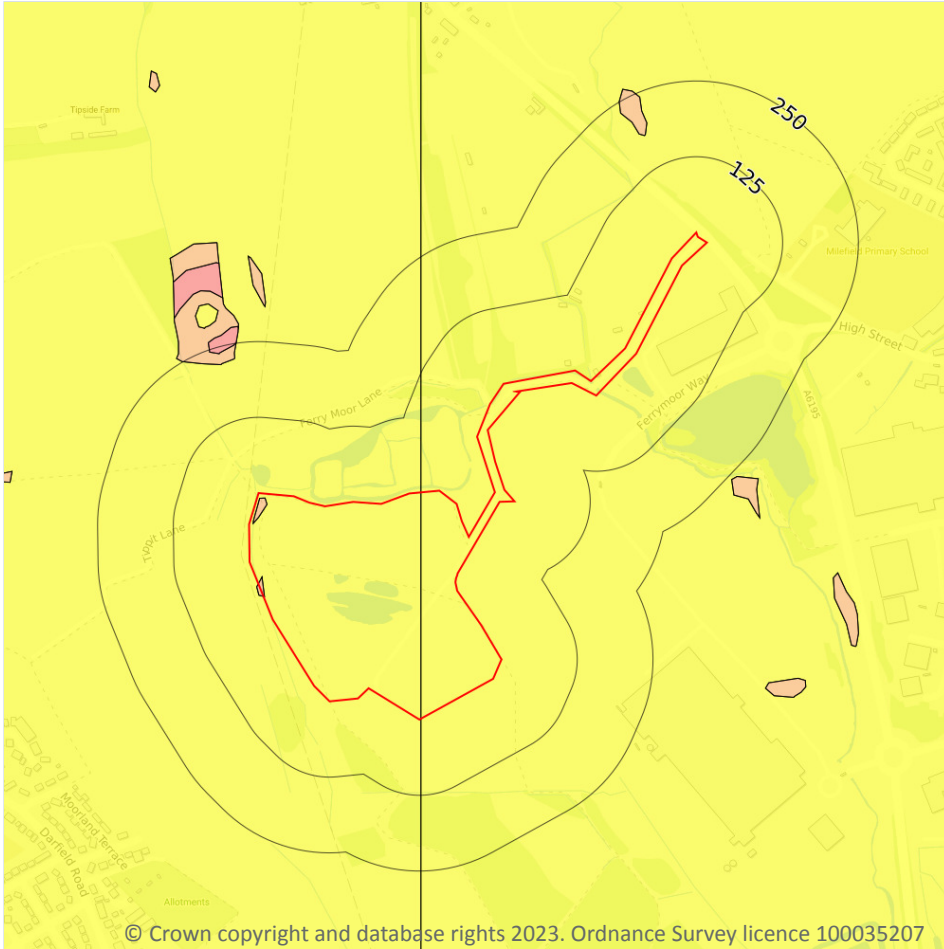
Features are displayed on the Natural ground subsidence - Collapsible deposits map on [page 127 >](#)

Location	Hazard rating	Details
On site	Negligible	Deposits with potential to collapse when loaded and saturated are believed not to be present.
On site	Very low	Deposits with potential to collapse when loaded and saturated are unlikely to be present.
37m NW	Negligible	Deposits with potential to collapse when loaded and saturated are believed not to be present.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Landslides



— Site Outline
Search buffers in metres (m)

- No data
- Negligible
- Very low
- Low
- Moderate
- High

17.5 Landslides

Records within 50m

2

The potential for landsliding (slope instability) to be a hazard assessed using 1:50,000 scale digital maps of superficial and bedrock deposits, combined with information from the BGS National Landslide Database and scientific and engineering reports.

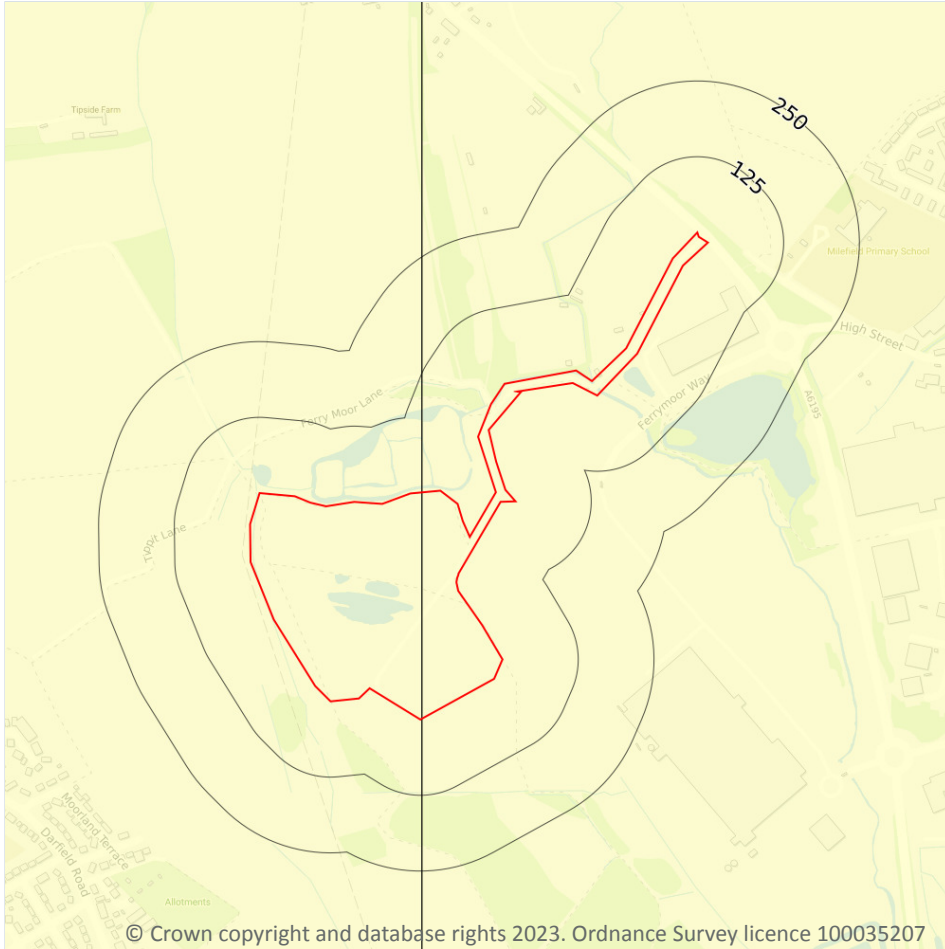
Features are displayed on the Natural ground subsidence - Landslides map on [page 129 >](#)

Location	Hazard rating	Details
On site	Very low	Slope instability problems are not likely to occur but consideration to potential problems of adjacent areas impacting on the site should always be considered.

Location	Hazard rating	Details
On site	Low	Slope instability problems may be present or anticipated. Site investigation should consider specifically the slope stability of the site.

This data is sourced from the British Geological Survey.

Natural ground subsidence - Ground dissolution of soluble rocks



— Site Outline
 Search buffers in metres (m)

- No data
- Negligible
- Very low
- Low
- Moderate
- High

17.6 Ground dissolution of soluble rocks

Records within 50m

1

The potential hazard presented by ground dissolution, which occurs when water passing through soluble rocks produces underground cavities and cave systems. These cavities reduce support to the ground above and can cause localised collapse of the overlying rocks and deposits.

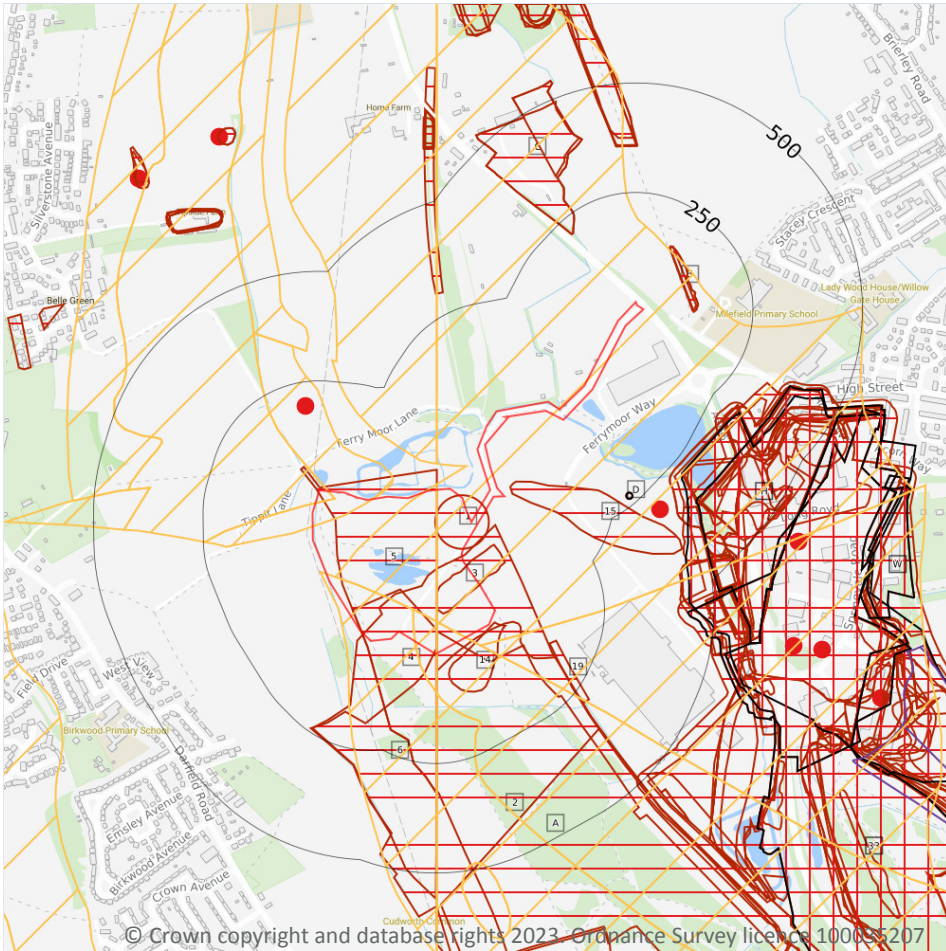
Features are displayed on the Natural ground subsidence - Ground dissolution of soluble rocks map on [page 131](#) >

Location	Hazard rating	Details
On site	Negligible	Soluble rocks are either not thought to be present within the ground, or not prone to dissolution. Dissolution features are unlikely to be present.

This data is sourced from the British Geological Survey.



18 Mining and ground workings



18.1 BritPits

Records within 500m

2

BritPits (an abbreviation of British Pits) is a database maintained by the British Geological Survey of currently active and closed surface and underground mineral workings. Details of major mineral handling sites, such as wharfs and rail depots are also held in the database.

Features are displayed on the Mining and ground workings map on [page 133](#) >

ID	Location	Details	Description
20	194m NW	Name: Ferry Moor Revised OCCS Address: BARNSELY, South Yorkshire Commodity: Coal, Surface Mined Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
24	300m E	Name: Ferry Moor Revised Reclamation Scheme Address: BARNSELY, South Yorkshire Commodity: Coal, Surface Mined Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority

This data is sourced from the British Geological Survey.

18.2 Surface ground workings

Records within 250m	17
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Historical land uses identified from Ordnance Survey mapping that involved ground excavation at the surface. These features may or may not have been subsequently backfilled.

Features are displayed on the Mining and ground workings map on [page 133](#) >

ID	Location	Land Use	Year of mapping	Mapping scale
1	On site	Unspecified Workings	1981	1:10000
2	On site	Opencast Workings	1974	1:10000
3	On site	Slurry Ponds	1981	1:10000
4	On site	Refuse Heap	1992	1:10000
5	On site	Refuse Heap	1982	1:10000
6	On site	Opencast Workings	1966	1:10560
A	On site	Refuse Heap	1988	1:10000
14	6m SE	Refuse Heap	1967	1:10560
A	12m SE	Refuse Heap	1981	1:10000
15	19m NE	Refuse Heap	1955	1:10560
B	104m NE	Refuse Heap	1948	1:10560
B	106m NE	Refuse Heap	1938	1:10560



ID	Location	Land Use	Year of mapping	Mapping scale
B	106m NE	Refuse Heap	1938	1:10560
19	144m SE	Cuttings	1904	1:10560
C	212m NE	Sewage Works	1988	1:10000
C	212m NE	Sewage Works	1981	1:10000
D	222m E	Unspecified Workings	1988	1:10000

This is data is sourced from Ordnance Survey/Groundsure.

18.3 Underground workings

Records within 1000m

6

Historical land uses identified from Ordnance Survey mapping that indicate the presence of underground workings e.g. mine shafts.

Features are displayed on the Mining and ground workings map on [page 133 >](#)

ID	Location	Land Use	Year of mapping	Mapping scale
D	222m E	Unspecified Workings	1988	1:10000
22	280m E	Unspecified Mine	1967	1:10560
H	345m E	Colliery	1948	1:10560
N	440m E	Colliery	1904	1:10560
33	505m E	Colliery	1948	1:10560
W	679m E	Colliery	1981	1:10000

This is data is sourced from Ordnance Survey/Groundsure.

18.4 Underground mining extents

Records within 500m

0

This data identifies underground mine workings that could present a potential risk, including adits and seam workings. These features have been identified from BGS Geological mapping and mine plans sourced from the BGS and various collections and sources.

This data is sourced from Groundsure.



18.5 Historical Mineral Planning Areas

Records within 500m

0

Boundaries of mineral planning permissions for England and Wales. This data was collated between the 1940s (and retrospectively to the 1930s) and the mid 1980s. The data includes permitted, withdrawn and refused permissions.

This data is sourced from the British Geological Survey.

18.6 Non-coal mining

Records within 1000m

18

The potential for historical non-coal mining to have affected an area. The assessment is drawn from expert knowledge and literature in addition to the digital geological map of Britain. Mineral commodities may be divided into seven general categories - vein minerals, chalk, oil shale, building stone, bedded ores, evaporites and 'other' commodities (including ball clay, jet, black marble, graphite and chert).

Features are displayed on the Mining and ground workings map on [page 133](#) >

ID	Location	Name	Commodity	Class	Likelihood
7	On site	Not available	Iron Ore (Bedded)	B	Underground mine workings may have occurred in the past or current mines may be working at significant depth to modern engineering standards. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.
8	On site	Not available	Iron Ore (Bedded)	B	Underground mine workings may have occurred in the past or current mines may be working at significant depth to modern engineering standards. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.
9	On site	Not available	Iron Ore (Bedded)	B	Underground mine workings may have occurred in the past or current mines may be working at significant depth to modern engineering standards. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.
10	On site	Not available	Iron Ore (Bedded)	B	Underground mine workings may have occurred in the past or current mines may be working at significant depth to modern engineering standards. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.
11	On site	Not available	Iron Ore (Bedded)	B	Underground mine workings may have occurred in the past or current mines may be working at significant depth to modern engineering standards. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.



ID	Location	Name	Commodity	Class	Likelihood
12	On site	Not available	Iron Ore (Bedded)	B	Underground mine workings may have occurred in the past or current mines may be working at significant depth to modern engineering standards. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.
13	On site	Not available	Iron Ore (Bedded)	B	Underground mine workings may have occurred in the past or current mines may be working at significant depth to modern engineering standards. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.
16	32m SE	Not available	Iron Ore (Bedded)	B	Underground mine workings may have occurred in the past or current mines may be working at significant depth to modern engineering standards. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.
17	60m N	Not available	Iron Ore (Bedded)	B	Underground mine workings may have occurred in the past or current mines may be working at significant depth to modern engineering standards. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.
18	89m S	Not available	Iron Ore (Bedded)	B	Underground mine workings may have occurred in the past or current mines may be working at significant depth to modern engineering standards. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.
25	319m NW	Not available	Iron Ore (Bedded)	B	Underground mine workings may have occurred in the past or current mines may be working at significant depth to modern engineering standards. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.
29	376m W	Not available	Iron Ore (Bedded)	B	Underground mine workings may have occurred in the past or current mines may be working at significant depth to modern engineering standards. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.
30	376m W	Not available	Iron Ore (Bedded)	B	Underground mine workings may have occurred in the past or current mines may be working at significant depth to modern engineering standards. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.
31	486m S	Not available	Iron Ore (Bedded)	B	Underground mine workings may have occurred in the past or current mines may be working at significant depth to modern engineering standards. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.



ID	Location	Name	Commodity	Class	Likelihood
38	685m SW	Not available	Iron Ore (Bedded)	B	Underground mine workings may have occurred in the past or current mines may be working at significant depth to modern engineering standards. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.
-	919m N	Not available	Iron Ore (Bedded)	B	Underground mine workings may have occurred in the past or current mines may be working at significant depth to modern engineering standards. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.
-	953m W	Not available	Iron Ore (Bedded)	B	Underground mine workings may have occurred in the past or current mines may be working at significant depth to modern engineering standards. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.
-	974m N	Not available	Iron Ore (Bedded)	B	Underground mine workings may have occurred in the past or current mines may be working at significant depth to modern engineering standards. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.

This data is sourced from the British Geological Survey.

18.7 JPB mining areas

Records on site

0

Areas which could be affected by former coal and other mining. This data includes some mine plans unavailable to the Coal Authority.

This data is sourced from Johnson Poole and Bloomer.

18.8 The Coal Authority non-coal mining

Records within 500m

0

This data provides an indication of the potential zone of influence of recorded underground non-coal mining workings. Any and all analysis and interpretation of Coal Authority Data in this report is made by Groundsure, and is in no way supported, endorsed or authorised by the Coal Authority. The use of the data is restricted to the terms and provisions contained in this report. Data reproduced in this report may be the copyright of the Coal Authority and permission should be sought from Groundsure prior to any re-use.

This data is sourced from The Coal Authority.



18.9 Researched mining

Records within 500m

0

This data indicates areas of potential mining identified from alternative or archival sources, including; BGS Geological paper maps, Lidar data, aerial photographs (from World War II onwards), archaeological data services, websites, Tithe maps, and various text/plans from collected books and reports. Some of this data is approximate and Groundsure have interpreted the resultant risk area and, where possible, specific areas of risk have been captured.

This data is sourced from Groundsure.

18.10 Mining record office plans

Records within 500m

0

This dataset is representative of Mining Record Office and/or plan extents held by Groundsure and should be considered approximate. Where possible, plans have been located and any specific areas of risk they depict have been captured.

This data is sourced from Groundsure.

18.11 BGS mine plans

Records within 500m

0

This dataset is representative of BGS mine plans held by Groundsure and should be considered approximate. Where possible, plans have been located and any specific areas of risk they depict have been captured.

This data is sourced from Groundsure.

18.12 Coal mining

Records on site

1

Areas which could be affected by past, current or future coal mining.

Location	Details
On site	The site is located within a coal mining area as defined by the Coal Authority. A Consultants Coal Mining Report is recommended to further assess coal mining issues at the site. This can be ordered directly through Groundsure or your preferred search provider.

This data is sourced from the Coal Authority.

18.13 Brine areas

Records on site	0
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The Cheshire Brine Compensation District indicates areas that may be affected by salt and brine extraction in Cheshire and where compensation would be available where damage from this mining has occurred. Damage from salt and brine mining can still occur outside this district, but no compensation will be available.

This data is sourced from the Cheshire Brine Subsidence Compensation Board.

18.14 Gypsum areas

Records on site	0
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Generalised areas that may be affected by gypsum extraction.

This data is sourced from British Gypsum.

18.15 Tin mining

Records on site	0
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Generalised areas that may be affected by historical tin mining.

This data is sourced from Groundsure.

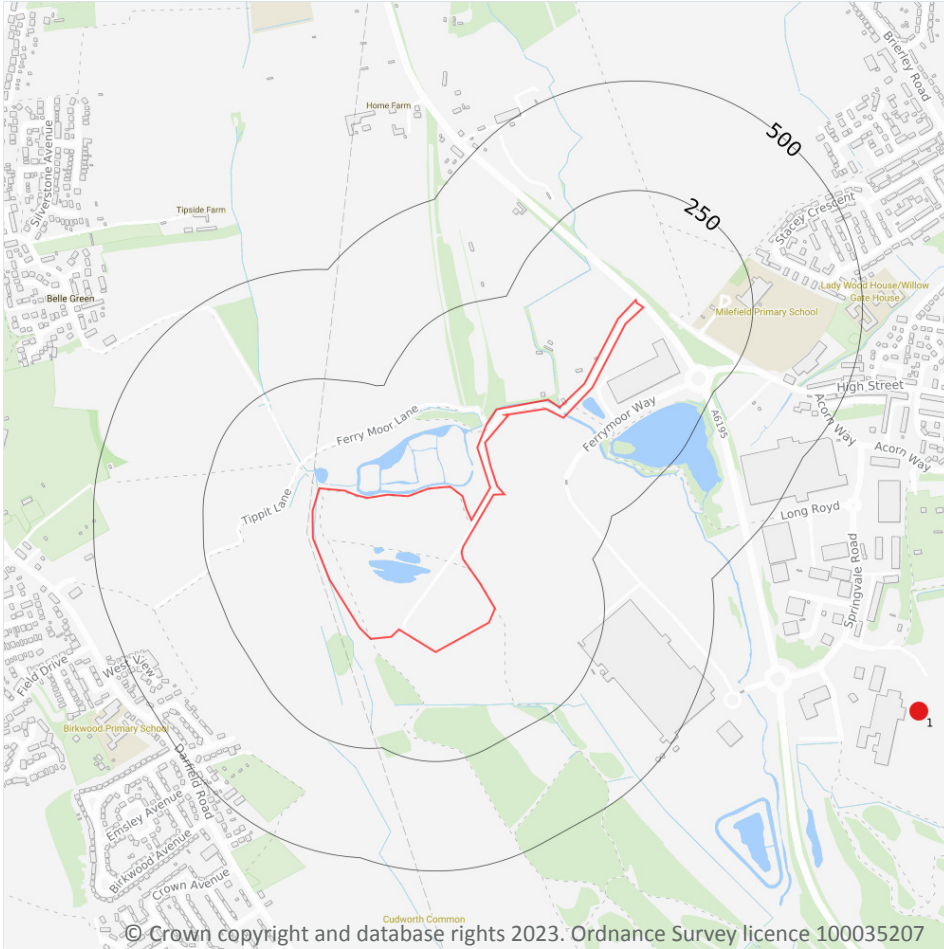
18.16 Clay mining

Records on site	0
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Generalised areas that may be affected by kaolin and ball clay extraction.

This data is sourced from the Kaolin and Ball Clay Association (UK).

19 Ground cavities and sinkholes



- Site Outline
- Search buffers in metres (m)
- Natural cavities (Area)
- Natural cavities (Point)
- Mining cavities
- Reported recent incidents
- Historical incidents
- BGS karst database (Point)
- BGS karst database (Line)
- BGS karst database (Area)

19.1 Natural cavities

Records within 500m

0

Industry recognised national database of natural cavities. Sinkholes and caves are formed by the dissolution of soluble rock, such as chalk and limestone, gulls and fissures by cambering. Ground instability can result from movement of loose material contained within these cavities, often triggered by water.

This data is sourced from Stantec UK Ltd.

19.2 Mining cavities

Records within 1000m

1

Industry recognised national database of mining cavities. Degraded mines may result in hazardous subsidence (crown holes). Climatic conditions and water escape can also trigger subsidence over mine entrances and workings.

Features are displayed on the Ground cavities and sinkholes map on [page 141](#) >

ID	Location	Mine Address	Mineral	Data source	Publisher
1	995m E	Grimethorpe, South Yorkshire	Fireclay	MINERIAL PLANNING RIGHTS APPLICATION RECORDS.	UNPUBLISHED

This data is sourced from Stantec UK Ltd.

19.3 Reported recent incidents

Records within 500m

0

This data identifies sinkhole information gathered from media reports and Groundsure's own records. This data goes back to 2014 and includes relative accuracy ratings for each event and links to the original data sources. The data is updated on a regular basis and should not be considered a comprehensive catalogue of all sinkhole events. The absence of data in this database does not mean a sinkhole definitely has not occurred during this time.

This data is sourced from Groundsure.

19.4 Historical incidents

Records within 500m

0

This dataset comprises an extract of 1:10,560, 1:10,000, 1:2,500 and 1:1,250 scale historical Ordnance Survey maps held by Groundsure, dating back to the 1840s. It shows shakeholes, deneholes and other 'holes' as noted on these maps. Dene holes are medieval chalk extraction pits, usually comprising a narrow shaft with a number of chambers at the base of the shaft. Shakeholes are an alternative name for suffusion sinkholes, most commonly found in the limestone landscapes of North Yorkshire but also extensively noted around the Brecon Beacons National Park.

Not all 'holes' noted on Ordnance Survey mapping will necessarily be present within this dataset.

This data is sourced from Groundsure.



19.5 National karst database

Records within 500m

0

This is a comprehensive database of national karst information gathered from a wide range of sources. BGS have collected data on five main types of karst feature: Sinkholes, stream links, caves, springs, and incidences of associated damage to buildings, roads, bridges and other engineered works.

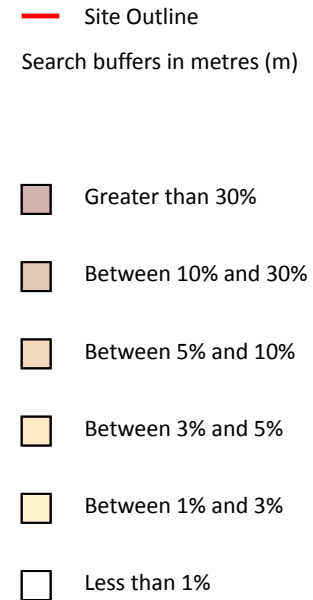
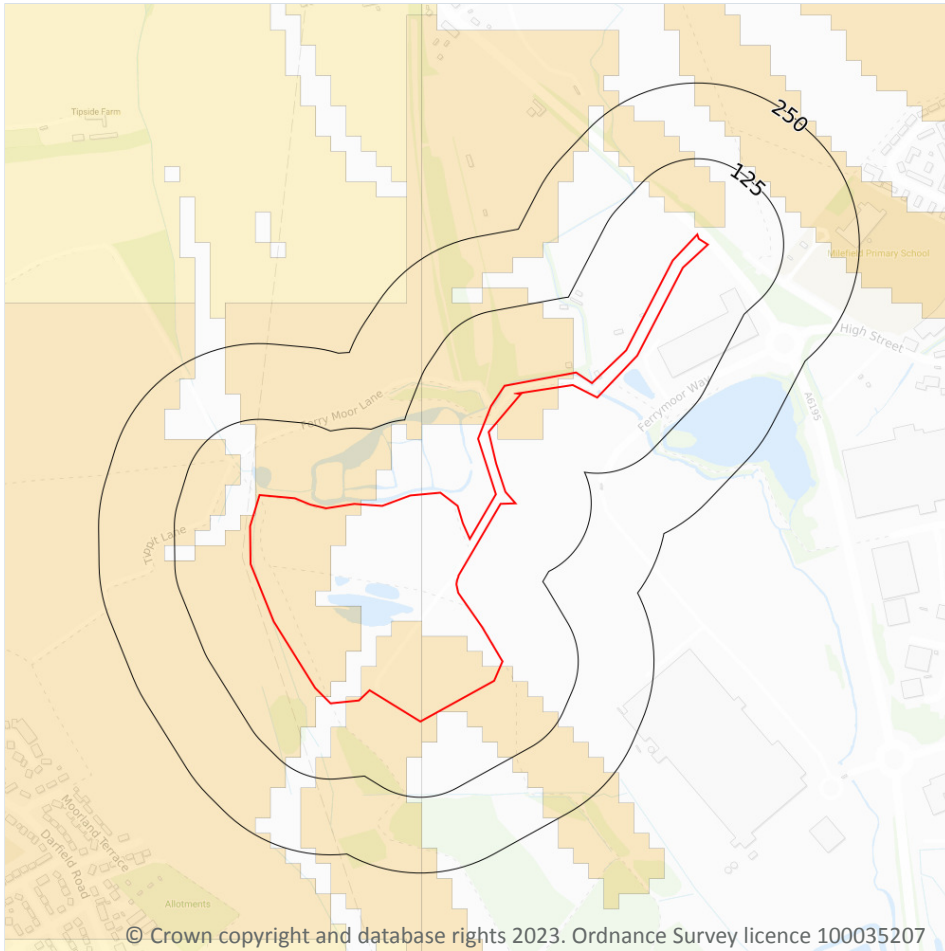
Since the database was set up in 2002 data covering most of the evaporite karst areas of the UK have now been added, along with data covering about 60% of the Chalk, and 35% of the Carboniferous Limestone outcrops. Many of the classic upland karst areas have yet to be included. Recorded so far are: Over 800 caves, 1300 stream sinks, 5600 springs, 10,000 sinkholes.

The database is not yet complete, and not all records have been verified. The absence of data does not mean that karst features are not present at a site. A reliability rating is included with each record.

This data is sourced from the British Geological Survey.



20 Radon



20.1 Radon

Records on site

2

The Radon Potential data classifies areas based on their likelihood of a property having a radon level at or above the Action Level in Great Britain. The dataset is intended for use at 1:50,000 scale and was derived from both geological assessments and indoor radon measurements (more than 560,000 records). A minimum 50m buffer should be considered when searching the maps, as the smallest detectable feature at this scale is 50m. The findings of this section should supersede any estimations derived from the Indicative Atlas of Radon in Great Britain (1:100,000 scale).

Features are displayed on the Radon map on [page 144](#) >

Location	Estimated properties affected	Radon Protection Measures required
On site	Less than 1%	None



Location	Estimated properties affected	Radon Protection Measures required
On site	Between 3% and 5%	Basic

This data is sourced from the British Geological Survey and UK Health Security Agency.



21 Soil chemistry

21.1 BGS Estimated Background Soil Chemistry

Records within 50m

25

The estimated values provide the likely background concentration of the potentially harmful elements Arsenic, Cadmium, Chromium, Lead and Nickel in topsoil. The values are estimated primarily from rural topsoil data collected at a sample density of approximately 1 per 2 km². In areas where rural soil samples are not available, estimation is based on stream sediment data collected from small streams at a sampling density of 1 per 2.5 km²; this is the case for most of Scotland, Wales and southern England. The stream sediment data are converted to soil-equivalent concentrations prior to the estimation.

Location	Arsenic	Bioaccessible Arsenic	Lead	Bioaccessible Lead	Cadmium	Chromium	Nickel
On site	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	40 - 60 mg/kg	15 - 30 mg/kg
On site	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	40 - 60 mg/kg	15 - 30 mg/kg
On site	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	40 - 60 mg/kg	15 - 30 mg/kg
On site	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	40 - 60 mg/kg	15 - 30 mg/kg
On site	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg



Location	Arsenic	Bioaccessible Arsenic	Lead	Bioaccessible Lead	Cadmium	Chromium	Nickel
On site	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	40 - 60 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
9m W	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	40 - 60 mg/kg	15 - 30 mg/kg
10m W	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	40 - 60 mg/kg	15 - 30 mg/kg
13m N	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	40 - 60 mg/kg	15 - 30 mg/kg
13m N	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	40 - 60 mg/kg	15 - 30 mg/kg
28m NE	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
32m SE	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
50m NE	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
50m NE	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg

This data is sourced from the British Geological Survey.

21.2 BGS Estimated Urban Soil Chemistry

Records within 50m

0

Estimated topsoil chemistry of Arsenic, Cadmium, Chromium, Copper, Nickel, Lead, Tin and Zinc and bioaccessible Arsenic and Lead in 23 urban centres across Great Britain. These estimates are derived from interpolation of the measured urban topsoil data referred to above and provide information across each city between the measured sample locations (4 per km²).

This data is sourced from the British Geological Survey.



21.3 BGS Measured Urban Soil Chemistry

Records within 50m

0

The locations and measured total concentrations (mg/kg) of Arsenic, Cadmium, Chromium, Copper, Nickel, Lead, Tin and Zinc in urban topsoil samples from 23 urban centres across Great Britain. These are collected at a sample density of 4 per km².

This data is sourced from the British Geological Survey.

