

Bedrock aquifer



- Site Outline**
- Search buffers in metres (m)**
- Principal
 - Secondary A
 - Secondary B
 - Secondary Undifferentiated
 - Unproductive

5.2 Bedrock aquifer

Records within 500m

2

Aquifer status of groundwater held within bedrock geology.

Features are displayed on the Bedrock aquifer map on **page 32**

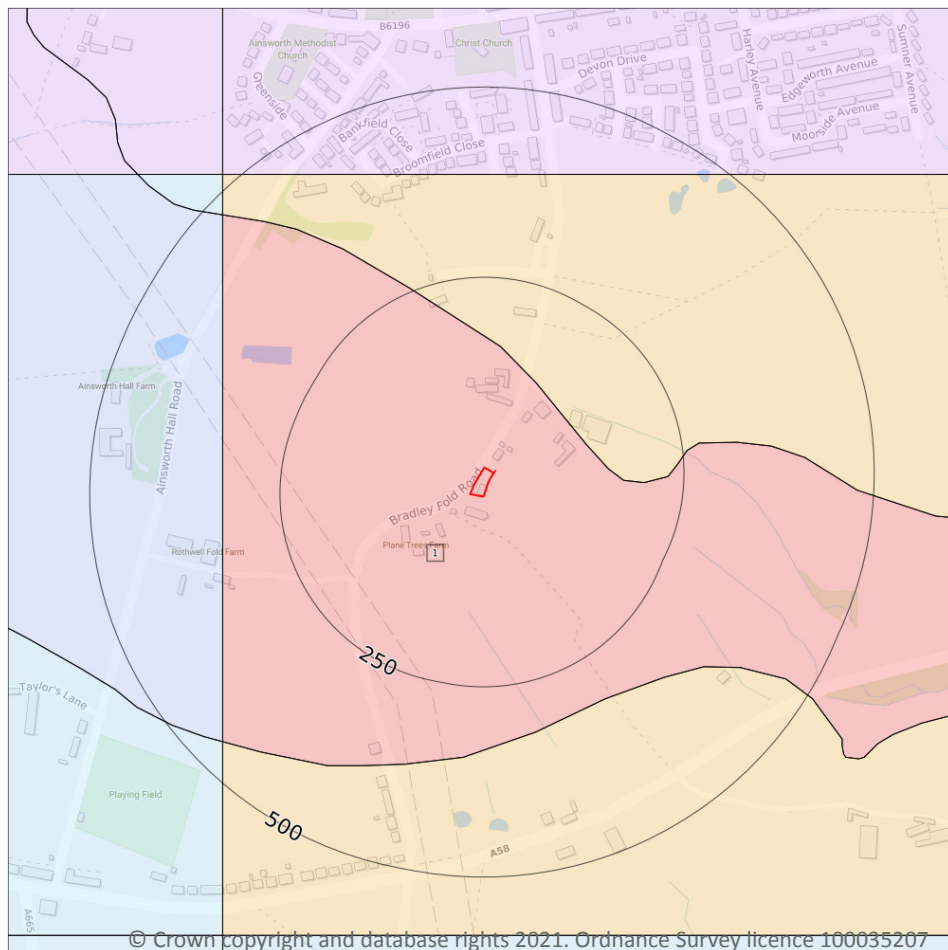
ID	Location	Designation	Description
1	On site	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
2	385m N	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers



This data is sourced from the British Geological Survey, the Environment Agency and Natural Resources Wales.



Groundwater vulnerability



Site Outline

Search buffers in metres (m)

Superficial vulnerability

- Principal superficial aquifer, high vulnerability
- Secondary superficial aquifer, high vulnerability
- Principal superficial aquifer, medium vulnerability
- Secondary superficial aquifer, medium vulnerability
- Principal superficial aquifer, low vulnerability
- Secondary superficial aquifer, low vulnerability

Bedrock vulnerability

- Principal bedrock aquifer, high vulnerability
- Secondary bedrock aquifer, high vulnerability
- Principal bedrock aquifer, medium vulnerability
- Secondary bedrock aquifer, medium vulnerability
- Principal bedrock aquifer, low vulnerability
- Secondary bedrock aquifer, low vulnerability

Other information

- Unproductive aquifer
- Soluble rock risk
- Local information

5.3 Groundwater vulnerability

Records within 50m

1

An assessment of the vulnerability of groundwater to a pollutant discharged at ground level based on the hydrological, geological, hydrogeological and soil properties within a one kilometre square grid. Groundwater vulnerability is described as High, Medium or Low as follows:

- High - Areas able to easily transmit pollution to groundwater. They are likely to be characterised by high leaching soils and the absence of low permeability superficial deposits.
- Medium - Intermediate between high and low vulnerability.
- Low - Areas that provide the greatest protection from pollution. They are likely to be characterised by low leaching soils and/or the presence of superficial deposits characterised by a low permeability.

Features are displayed on the Groundwater vulnerability map on **page 34**

ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
1	On site	Summary Classification: Secondary bedrock aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, No Superficial Aquifer	Leaching class: High Infiltration value: >70% Dilution value: >550mm/year	Vulnerability: - Aquifer type: - Thickness: <3m Patchiness value: <90% Recharge potential: No Data	Vulnerability: High Aquifer type: Secondary Flow mechanism: Well connected fractures

This data is sourced from the British Geological Survey, the Environment Agency and Natural Resources Wales.

5.4 Groundwater vulnerability- soluble rock risk

Records on site	0
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This dataset identifies areas where solution features that enable rapid movement of a pollutant may be present within a 1km grid square.

This data is sourced from the British Geological Survey and the Environment Agency.

5.5 Groundwater vulnerability- local information

Records on site	0
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This dataset identifies areas where additional local information affecting vulnerability is held by the Environment Agency. Further information can be obtained by contacting the Environment Agency local Area groundwater team through the Environment Agency National Customer Call Centre on 03798 506 506 or by email on enquiries@environment-agency.gov.uk.

This data is sourced from the British Geological Survey and the Environment Agency.

Abstractions and Source Protection Zones



- Site Outline
- Search buffers in metres (m)**
- Source Protection Zone 1
Inner catchment
- Source Protection Zone 2
Outer catchment
- Source Protection Zone 3
Total catchment
- Source Protection Zone 4
Zone of Special Interest
- Source Protection Zone 1c
Inner catchment - confined aquifer
- Source Protection Zone 2c
Outer catchment - confined aquifer
- Source Protection Zone 3c
Total catchment - confined aquifer
- Drinking water abstraction licences
Polygon features
- Drinking water abstraction licences
Linear features
- Groundwater abstraction licence (point)
- Groundwater abstraction licence (area)
- Groundwater abstraction licence (linear)
- Surface Water Abstractions (point)
- Surface Water Abstractions (area)
- Surface Water Abstractions (linear)

5.6 Groundwater abstractions

Records within 2000m

11

Licensed groundwater abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, between two points (line data) or a larger area.

Features are displayed on the Abstractions and Source Protection Zones map on **page 36**

ID	Location	Details	
-	765m W	Status: Historical Licence No: 2569003042 Details: Process Water Direct Source: Ground Water - North West Region Point: BOREHOLE AT PREMISES, AINSWORTH MILL BREIGHTMET, BOLTON Data Type: Point Name: PNC PROPERTIES LLP Easting: 375560 Northing: 409550	Annual Volume (m ³): 24820 Max Daily Volume (m ³): 436.41 Original Application No: - Original Start Date: 14/02/1966 Expiry Date: 05/08/2010 Issue No: 104 Version Start Date: 15/10/2007 Version End Date: -
-	765m W	Status: Historical Licence No: 2569003042/R1 Details: Process Water Direct Source: Ground Water - North West Region Point: BOREHOLE AT PREMISES, AINSWORTH MILL BREIGHTMET, BOLTON Data Type: Point Name: PCN PROPERTIES LLP Easting: 375560 Northing: 409550	Annual Volume (m ³): 159290 Max Daily Volume (m ³): 436.41 Original Application No: - Original Start Date: 14/02/1966 Expiry Date: - Issue No: 104 Version Start Date: 06/08/2010 Version End Date: -
-	825m W	Status: Historical Licence No: 2569003042 Details: Process water Direct Source: Ground Water - North West Region Point: "BOREHOLE AT PREMISES, AINSWORTH MILLBREIGHTMET, BOLTON" Data Type: Point Name: AINSWORTH FINISHING COMPANY LTD. Easting: 375500 Northing: 409600	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 14/02/1966 Expiry Date: - Issue No: 102 Version Start Date: 23/02/2001 Version End Date: -
-	825m W	Status: Historical Licence No: 2569003042 Details: Process water Direct Source: Ground Water - North West Region Point: BOREHOLE AT PREMISES, AINSWORTH MILLBREIGHTMET, BOLTON Data Type: Point Name: AINSWORTH FINISHING COMPANY LTD Easting: 375500 Northing: 409600	Annual Volume (m ³): 44840 Max Daily Volume (m ³): 486 Original Application No: - Original Start Date: 14/02/1966 Expiry Date: - Issue No: 102 Version Start Date: 23/02/2001 Version End Date: -



ID	Location	Details	
-	908m SW	Status: Historical Licence No: 2569003012 Details: Process water Direct Source: Ground Water - North West Region Point: "BOREHOLE AT PREMISES, AINSWORTH MILLBREIGHTMET, BOLTON" Data Type: Point Name: AINSWORTH FINISHING COMPANY LTD. Easting: 375500 Northing: 409200	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 02/02/1966 Expiry Date: - Issue No: 102 Version Start Date: 23/02/2001 Version End Date: -
-	908m SW	Status: Historical Licence No: 2569003012 Details: Process water Direct Source: Ground Water - North West Region Point: BOREHOLE AT PREMISES, AINSWORTH MILLBREIGHTMET, BOLTON Data Type: Point Name: AINSWORTH FINISHING COMPANY LTD. Easting: 375500 Northing: 409200	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 02/02/1966 Expiry Date: - Issue No: 102 Version Start Date: 23/02/2001 Version End Date: -
-	949m SW	Status: Historical Licence No: 2569003012 Details: Process Water Direct Source: Ground Water - North West Region Point: BOREHOLE AT PREMISES, AINSWORTH MILLBREIGHTMET, BOLTON Data Type: Point Name: PNC PROPERTIES LLP Easting: 375460 Northing: 409190	Annual Volume (m ³): 44840 Max Daily Volume (m ³): 700 Original Application No: - Original Start Date: 02/02/1966 Expiry Date: 05/08/2010 Issue No: 104 Version Start Date: 15/10/2007 Version End Date: -
-	949m SW	Status: Historical Licence No: 2569003012/R1 Details: Process Water Direct Source: Ground Water - North West Region Point: BOREHOLE AT PREMISES, AINSWORTH MILLBREIGHTMET, BOLTON Data Type: Point Name: PCN PROPERTIES LLP Easting: 375460 Northing: 409190	Annual Volume (m ³): 8183 Max Daily Volume (m ³): 27.28 Original Application No: - Original Start Date: 02/02/1966 Expiry Date: - Issue No: 104 Version Start Date: 06/08/2010 Version End Date: -



ID	Location	Details	
-	1290m NW	Status: Historical Licence No: 2569003089 Details: Spray Irrigation - Direct Direct Source: Ground Water - North West Region Point: "BOREHOLE AT ARTHUR LANE NURSERIES, AINSWORTH" Data Type: Point Name: LORD Easting: 375790 Northing: 410780	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 12/10/1992 Expiry Date: - Issue No: 100 Version Start Date: 01/05/1995 Version End Date: -
-	1290m NW	Status: Historical Licence No: 2569003089 Details: Spray Irrigation - Direct Direct Source: Ground Water - North West Region Point: BOREHOLE AT ARTHUR LANE NURSERIES, AINSWORTH Data Type: Point Name: LORD Easting: 375790 Northing: 410780	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 12/10/1992 Expiry Date: - Issue No: 100 Version Start Date: 01/05/1995 Version End Date: -
-	1290m NW	Status: Active Licence No: 2569003089 Details: Spray Irrigation - Direct Direct Source: Ground Water - North West Region Point: BOREHOLE AT ARTHUR LANE NURSERIES AINSWORTH Data Type: Point Name: LORD Easting: 375790 Northing: 410780	Annual Volume (m ³): 9,092 Max Daily Volume (m ³): 110 Original Application No: - Original Start Date: 12/10/1992 Expiry Date: - Issue No: 100 Version Start Date: 01/05/1995 Version End Date: -

This data is sourced from the Environment Agency and Natural Resources Wales.

5.7 Surface water abstractions

Records within 2000m

11

Licensed surface water abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, a stretch of watercourse or a larger area.

Features are displayed on the Abstractions and Source Protection Zones map on **page 36**



ID	Location	Details	
-	819m W	Status: Historical Licence No: 2569003043 Details: Process Water Direct Source: Surface, Non-Tidal - North West Region Point: RESERVOIR FED BY SURFACE DRAINAGE AT PREMISES AINSWORTH MILL Data Type: Point Name: AINSWORTH FINISHING COMPANY LTD Easting: 375520 Northing: 409430	Annual Volume (m ³): 200000 Max Daily Volume (m ³): 1600 Original Application No: - Original Start Date: 21/01/1966 Expiry Date: - Issue No: 104 Version Start Date: 05/08/2005 Version End Date: -
-	829m W	Status: Historical Licence No: 2569003043 Details: Process water Direct Source: "Surface, Non-Tidal - North West Region" Point: "RESERVOIR FED BY SURFACE DRAINAGE ATPREMISES, AINSWORTH MILL" Data Type: Point Name: AINSWORTH FINISHING COMPANY LTD. Easting: 375500 Northing: 409500	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 21/01/1966 Expiry Date: - Issue No: 102 Version Start Date: 23/02/2001 Version End Date: -
-	829m W	Status: Historical Licence No: 2569003043 Details: Process water Direct Source: Surface, Non-Tidal - North West Region Point: RESERVOIR FED BY SURFACE DRAINAGE ATPREMISES, AINSWORTH MILL Data Type: Point Name: AINSWORTH FINISHING COMPANY LTD Easting: 375500 Northing: 409500	Annual Volume (m ³): 365000 Max Daily Volume (m ³): 1980 Original Application No: - Original Start Date: 21/01/1966 Expiry Date: - Issue No: 103 Version Start Date: 23/02/2001 Version End Date: -
-	1152m NW	Status: Historical Licence No: 2569003051 Details: Process water Direct Source: Surface, Non-Tidal - North West Region Point: CHERRY TREE & PIMHOLE R/VOIRS FED BY SURFACE DRAINAGE114 Data Type: Point Name: REXHAM CFP LTD. Easting: 375500 Northing: 410400	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 04/03/1966 Expiry Date: - Issue No: 101 Version Start Date: 01/06/1999 Version End Date: -



ID	Location	Details	
-	1152m NW	Status: Historical Licence No: 2569003051 Details: Process water Direct Source: Surface, Non-Tidal - North West Region Point: CHERRY TREE & PIMHOLE R/VOIRS FED BY SURFACE DRAINAGE \$114 Data Type: Point Name: FIBERMARK RED BRIDGE INTERNATIONAL LTD Easting: 375500 Northing: 410400	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 04/03/1966 Expiry Date: - Issue No: 101 Version Start Date: 18/04/2001 Version End Date: -
-	1152m NW	Status: Active Licence No: 2569003051 Details: Process Water Direct Source: Surface, Non-Tidal - North West Region Point: CHERRY TREE & PIMHOLE R/VOIRS FED BY SURFACE DRAINAGE Data Type: Point Name: FIBERMARK RED BRIDGE INTERNATIONAL LTD Easting: 375500 Northing: 410400	Annual Volume (m ³): 13,500 Max Daily Volume (m ³): 54 Original Application No: - Original Start Date: 04/03/1966 Expiry Date: - Issue No: 102 Version Start Date: 25/06/2012 Version End Date: -
-	1335m NW	Status: Historical Licence No: 2569003098 Details: Spray Irrigation - Direct Direct Source: Surface, Non-Tidal - North West Region Point: PIMHOLE RESERVOIR AT REDBRIDGE, BOLTON Data Type: Point Name: BREIGHTMET GOLF CLUB LIMITED Easting: 375400 Northing: 410560	Annual Volume (m ³): 3660 Max Daily Volume (m ³): 59 Original Application No: - Original Start Date: 08/12/2003 Expiry Date: 31/03/2015 Issue No: 1 Version Start Date: 01/04/2008 Version End Date: -
-	1364m NW	Status: Historical Licence No: 2569003051 Details: Process water Direct Source: Surface, Non-Tidal - North West Region Point: CHERRY TREE AND PIMHOLE RESERVOIRS FED BY SURFACE DRAINAGE Data Type: Point Name: FIBERMARK RED BRIDGE INTERNATIONAL LTD Easting: 375400 Northing: 410600	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 04/03/1966 Expiry Date: - Issue No: 101 Version Start Date: 18/04/2001 Version End Date: -

ID	Location	Details	
-	1364m NW	Status: Active Licence No: 2569003051 Details: Process Water Direct Source: Surface, Non-Tidal - North West Region Point: CHERRY TREE AND PIMHOLE RESERVOIRS FED BY SURFACE DRAINAGE Data Type: Point Name: FIBERMARK RED BRIDGE INTERNATIONAL LTD Easting: 375400 Northing: 410600	Annual Volume (m ³): 13,500 Max Daily Volume (m ³): 54 Original Application No: - Original Start Date: 04/03/1966 Expiry Date: - Issue No: 102 Version Start Date: 25/06/2012 Version End Date: -
-	1725m NE	Status: Historical Licence No: 2569001160 Details: Process water Direct Source: Surface, Non-Tidal - North West Region Point: RESERVOIRS FED BY ELTON BRK AT BURY Data Type: Point Name: THE ELTON COP DYEING CO LTD Easting: 377500 Northing: 410900	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 10/03/1966 Expiry Date: - Issue No: 100 Version Start Date: 25/02/1975 Version End Date: -
-	1804m N	Status: Historical Licence No: 2569003078 Details: Spray Irrigation - Direct Direct Source: Surface, Non-Tidal - North West Region Point: UNNAMED TRIB OF BLACKSHAW BRK AT HARWOOD GOLF CLUB AND RE Data Type: Point Name: HARWOOD GOLF CLUB Easting: 375700 Northing: 411300	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 25/04/1980 Expiry Date: - Issue No: 100 Version Start Date: 25/04/1980 Version End Date: -

This data is sourced from the Environment Agency and Natural Resources Wales.

5.8 Potable abstractions

Records within 2000m	0
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Licensed potable water abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, a stretch of watercourse or a larger area.

This data is sourced from the Environment Agency and Natural Resources Wales.

5.9 Source Protection Zones

Records within 500m

0

Source Protection Zones define the sensitivity of an area around a potable abstraction site to contamination.

This data is sourced from the Environment Agency and Natural Resources Wales.

5.10 Source Protection Zones (confined aquifer)

Records within 500m

0

Source Protection Zones in the confined aquifer define the sensitivity around a deep groundwater abstraction to contamination. A confined aquifer would normally be protected from contamination by overlying geology and is only considered a sensitive resource if deep excavation/drilling is taking place.

This data is sourced from the Environment Agency and Natural Resources Wales.



6 Hydrology



- Site Outline
- Search buffers in metres (m)
- Water Network (OS MasterMap)
- Surface water features (wider than 5m)
- Surface water features (narrower than 5m)
- ⋯ WFD River, canal and surface water transfer water bodies
- WFD Lake water bodies
- WFD Transitional and coastal water bodies
- WFD Surface water body catchments boundaries
- WFD Groundwater body boundaries

6.1 Water Network (OS MasterMap)

Records within 250m

2

Detailed water network of Great Britain showing the flow and precise central course of every river, stream, lake and canal.

Features are displayed on the Hydrology map on **page 44**

ID	Location	Type of water feature	Ground level	Permanence	Name
A	136m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-

ID	Location	Type of water feature	Ground level	Permanence	Name
B	153m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-

This data is sourced from the Ordnance Survey.

6.2 Surface water features

Records within 250m

2

Covering rivers, streams and lakes (some overlap with OS MasterMap Water Network data in previous section) but additionally covers smaller features such as ponds. Rivers and streams narrower than 5m are represented as a single line. Lakes, ponds and rivers or streams wider than 5m are represented as polygons.

Features are displayed on the Hydrology map on **page 44**

This data is sourced from the Ordnance Survey.

6.3 WFD Surface water body catchments

Records on site

1

The Water Framework Directive is an EU-led framework for the protection of inland surface waters, estuaries, coastal waters and groundwater through river basin-level management planning. In terms of surface water, these basins are broken down into smaller units known as management, operational and water body catchments.

Features are displayed on the Hydrology map on **page 44**

ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
2	On site	River WB catchment	Irwell (Roch to Croal)	GB112069060840	Croal Irwell	Irwell

This data is sourced from the Environment Agency and Natural Resources Wales.

6.4 WFD Surface water bodies

Records identified

1

Surface water bodies under the Directive may be rivers, lakes, estuary or coastal. To achieve the purpose of the Directive, environmental objectives have been set and are reported on for each water body. The progress towards delivery of the objectives is then reported on by the relevant competent authorities at the end of each six-year cycle. The river water body directly associated with the catchment listed in the previous section is detailed below, along with any lake, canal, coastal or artificial water body within 250m of the site. Click on the

water body ID in the table to visit the EA Catchment Explorer to find out more about each water body listed. Features are displayed on the Hydrology map on **page 44**

ID	Location	Type	Name	Water body ID	Overall rating	Chemical rating	Ecological rating	Year
-	2846m S	River	Irwell (Roch to Croal)	GB112069060840	Moderate	Good	Moderate	2016

This data is sourced from the Environment Agency and Natural Resources Wales.

6.5 WFD Groundwater bodies

Records on site	1
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Groundwater bodies are also covered by the Directive and the same regime of objectives and reporting detailed in the previous section is in place. Click on the water body ID in the table to visit the EA Catchment Explorer to find out more about each groundwater body listed.

Features are displayed on the Hydrology map on **page 44**

ID	Location	Name	Water body ID	Overall rating	Chemical rating	Quantitative	Year
1	On site	Northern Manchester Carboniferous Aquifers	GB41202G101800	Poor	Poor	Good	2015

This data is sourced from the Environment Agency and Natural Resources Wales.

7 River and coastal flooding

7.1 Risk of flooding from rivers and the sea

Records within 50m

0

The chance of flooding from rivers and/or the sea in any given year, based on cells of 50m within the Risk of Flooding from Rivers and Sea (RoFRaS)/Flood Risk Assessment Wales (FRAW) models. Each cell is allocated one of four flood risk categories, taking into account flood defences and their condition. The risk categories for RoFRaS for rivers and the sea and FRAW for rivers are; Very low (less than 1 in 1000 chance in any given year), Low (less than 1 in 100 but greater than or equal to 1 in 1000 chance), Medium (less than 1 in 30 but greater than or equal to 1 in 100 chance) or High (greater than or equal to 1 in 30 chance). The risk categories for FRAW for the sea are; Very low (less than 1 in 1000 chance in any given year), Low (less than 1 in 200 but greater than or equal to 1 in 1000 chance), Medium (less than 1 in 30 but greater than or equal to 1 in 200 chance) or High (greater than or equal to 1 in 30 chance).

This data is sourced from the Environment Agency and Natural Resources Wales.

7.2 Historical Flood Events

Records within 250m

0

Records of historic flooding from rivers, the sea, groundwater and surface water. Records began in 1946 when predecessor bodies started collecting detailed information about flooding incidents, although limited details may be included on flooding incidents prior to this date. Takes into account the presence of defences, structures, and other infrastructure where they existed at the time of flooding, and includes flood extents that may have been affected by overtopping, breaches or blockages.

This data is sourced from the Environment Agency and Natural Resources Wales.

7.3 Flood Defences

Records within 250m

0

Records of flood defences owned, managed or inspected by the Environment Agency and Natural Resources Wales. Flood defences can be structures, buildings or parts of buildings. Typically these are earth banks, stone and concrete walls, or sheet-piling that is used to prevent or control the extent of flooding.

This data is sourced from the Environment Agency and Natural Resources Wales.

7.4 Areas Benefiting from Flood Defences

Records within 250m

0

Areas that would benefit from the presence of flood defences in a 1 in 100 (1%) chance of flooding each year from rivers or 1 in 200 (0.5%) chance of flooding each year from the sea.

This data is sourced from the Environment Agency and Natural Resources Wales.

7.5 Flood Storage Areas

Records within 250m

0

Areas that act as a balancing reservoir, storage basin or balancing pond to attenuate an incoming flood peak to a flow level that can be accepted by the downstream channel or to delay the timing of a flood peak so that its volume is discharged over a longer period.

This data is sourced from the Environment Agency and Natural Resources Wales.



River and coastal flooding - Flood Zones

7.6 Flood Zone 2

Records within 50m

0

Areas of land at risk of flooding, when the presence of flood defences are ignored. Covering land between Flood Zone 3 (see next section) and the extent of the flooding from rivers or the sea with a 1 in 1000 (0.1%) chance of flooding each year.

This data is sourced from the Environment Agency and Natural Resources Wales.

7.7 Flood Zone 3

Records within 50m

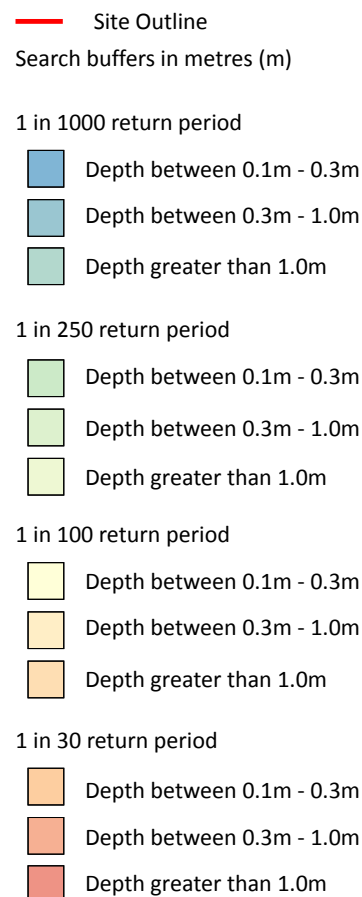
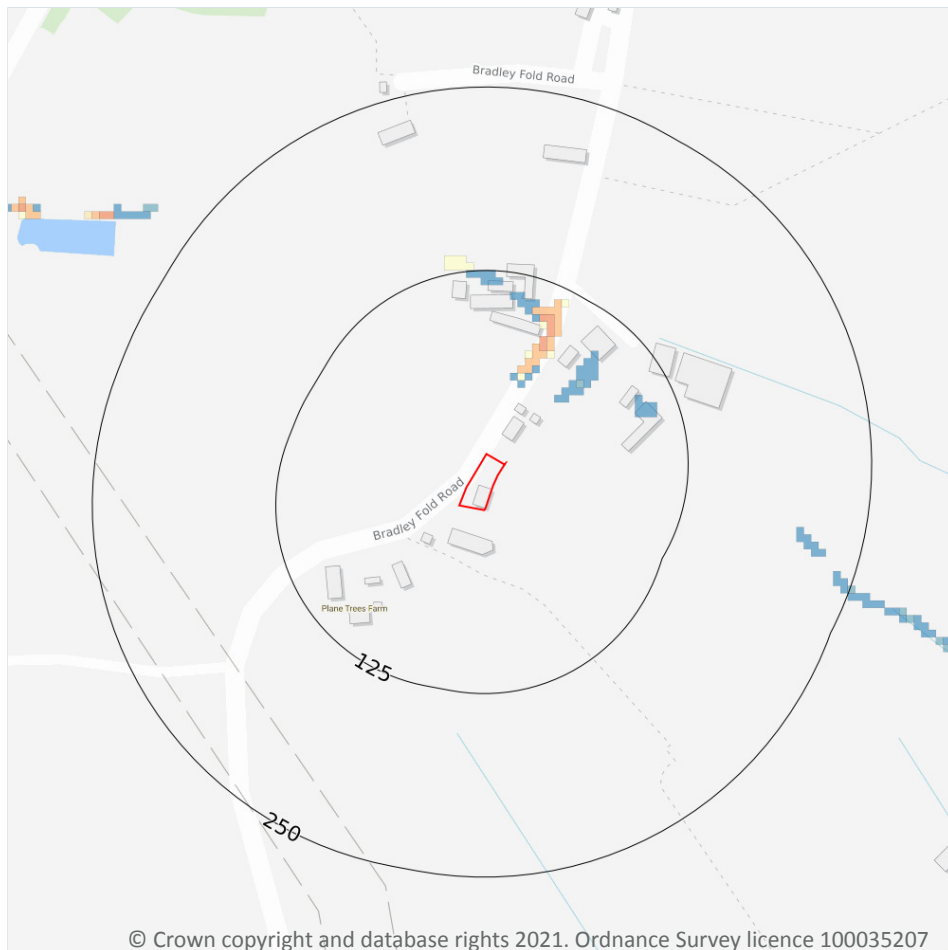
0

Areas of land at risk of flooding, when the presence of flood defences are ignored. Covering land with a 1 in 100 (1%) or greater chance of flooding each year from rivers or a 1 in 200 (0.5%) or greater chance of flooding each year from the sea.

This data is sourced from the Environment Agency and Natural Resources Wales.



8 Surface water flooding



8.1 Surface water flooding

Highest risk on site

Negligible

Highest risk within 50m

1 in 1000 year, 0.1m - 0.3m

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 50**

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.

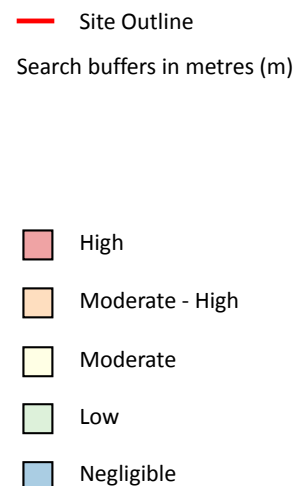
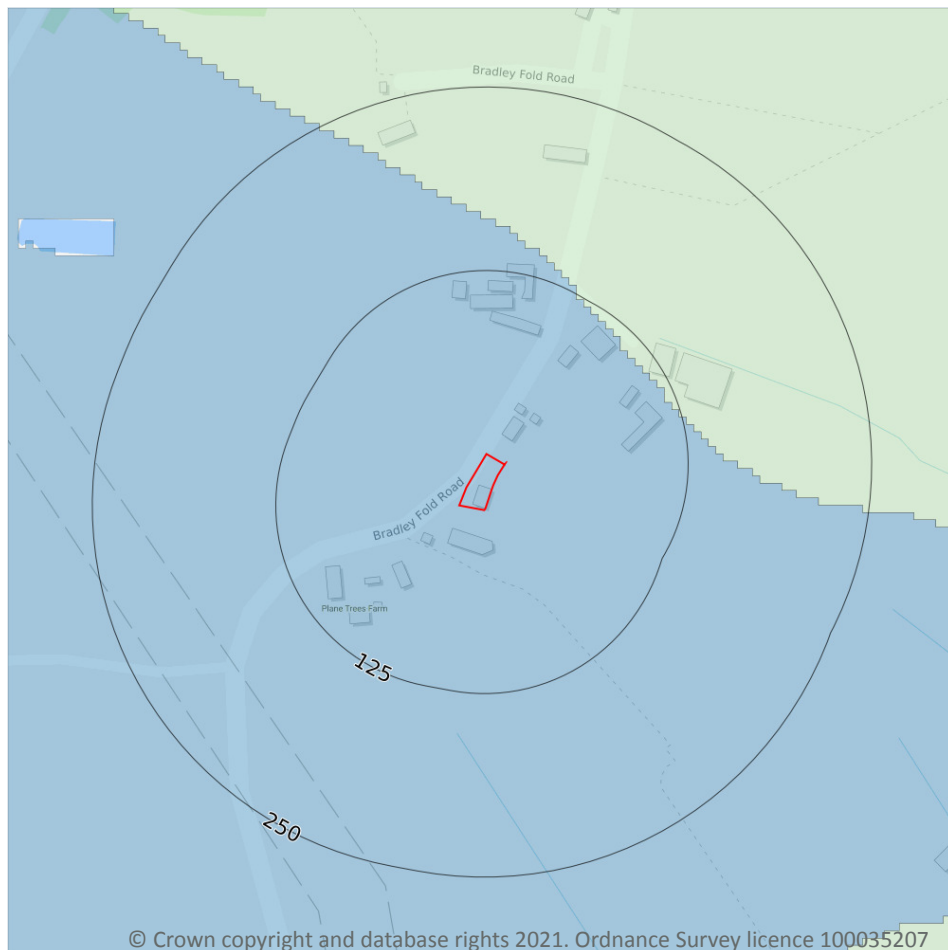
The table below shows the maximum flood depths for a range of return periods for the site.

Return period	Maximum modelled depth
1 in 1000 year	Negligible
1 in 250 year	Negligible
1 in 100 year	Negligible
1 in 30 year	Negligible

This data is sourced from Ambiantal Risk Analytics.



9 Groundwater flooding



9.1 Groundwater flooding

Highest risk on site

Negligible

Highest risk within 50m

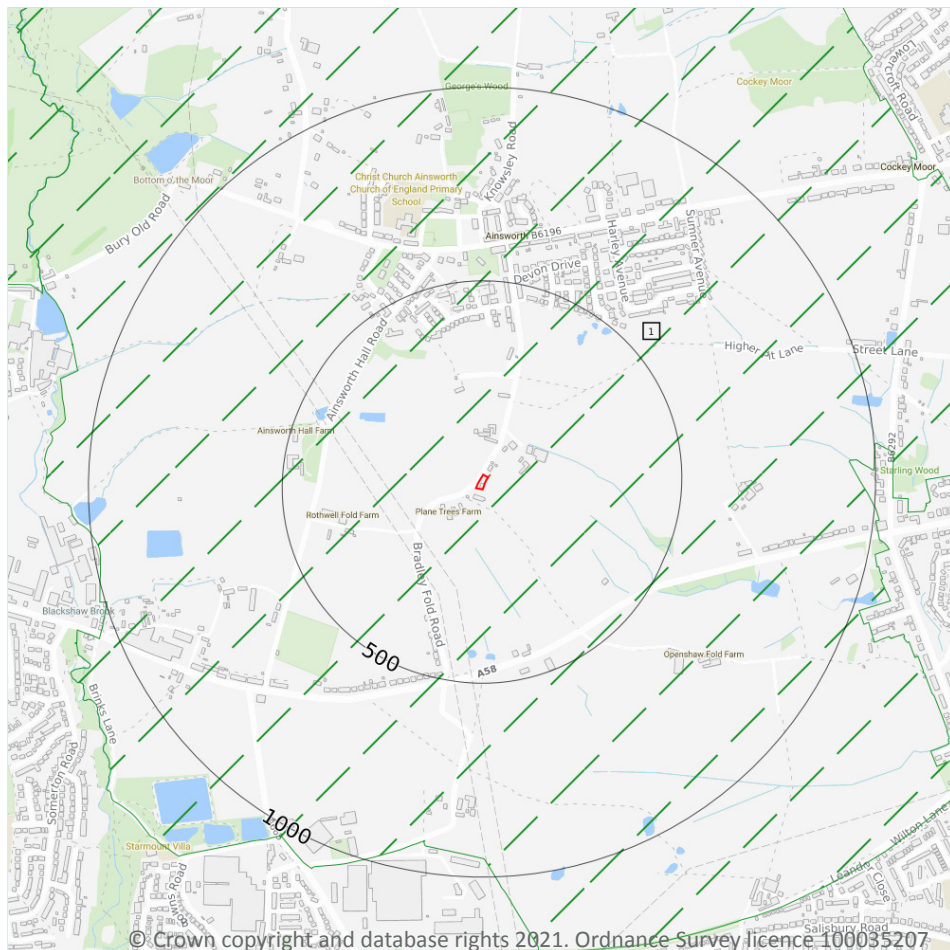
Negligible

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 52**

This data is sourced from Ambiental Risk Analytics.

10 Environmental designations



- Site Outline
- Search buffers in metres (m)
- ▨ Green Belt

10.1 Sites of Special Scientific Interest (SSSI)

Records within 2000m

0

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.

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**0**

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.

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

10.7 Designated Ancient Woodland

Records within 2000m**0**

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.

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

7

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

Features are displayed on the Environmental designations map on **page 53**

ID	Location	Name	Local Authority name
1	On site	Merseyside and Greater Manchester	Bury
2	1226m NW	Merseyside and Greater Manchester	Bolton
-	1479m S	Merseyside and Greater Manchester	Bury
-	1562m S	Merseyside and Greater Manchester	Bolton
5	1678m SW	Merseyside and Greater Manchester	Bolton
-	1737m E	Merseyside and Greater Manchester	Bury
-	1944m E	Merseyside and Greater Manchester	Bury

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

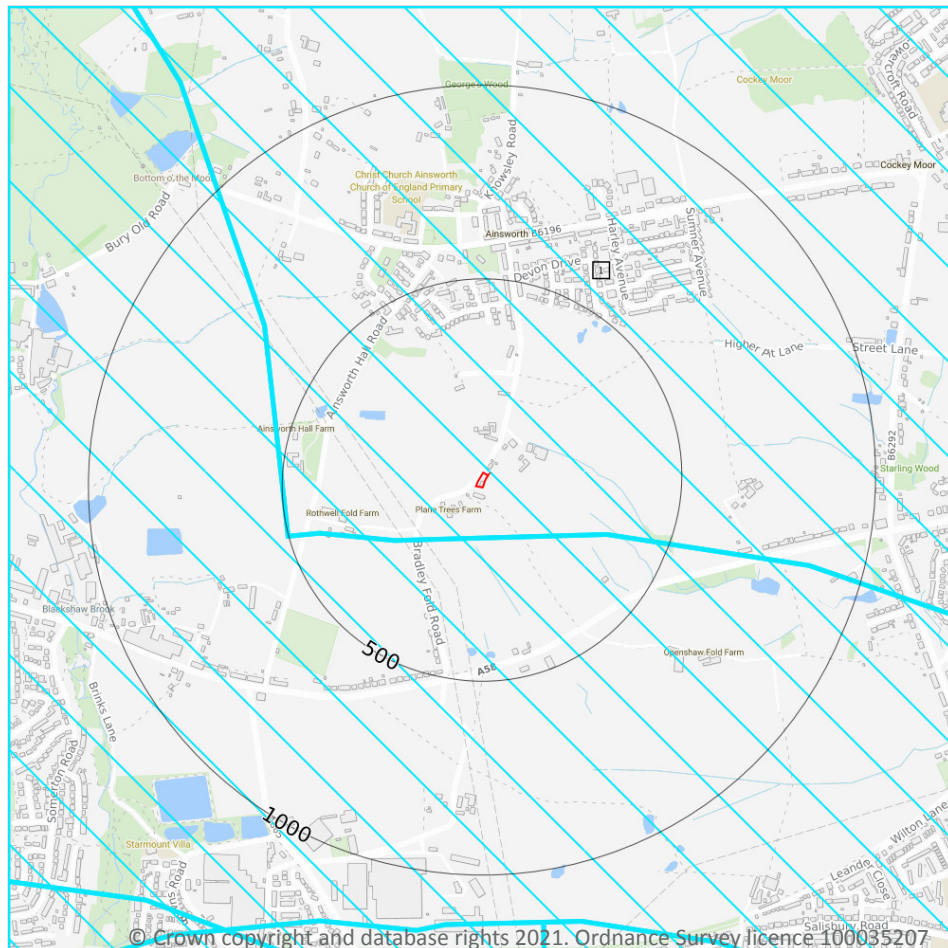
Records within 2000m**0**

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.

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



SSSI Impact Zones and Units



- Site Outline
- Search buffers in metres (m)
- SSSI Impact Risk Zones
- SSSI Units
- Not recorded
- Favourable
- Unfavourable - Recovering
- Unfavourable - No change
- Unfavourable - Declining
- Partially destroyed
- Destroyed

10.17 SSSI Impact Risk Zones

Records on site

1

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 58**

ID	Location	Type of developments requiring consultation
1	On site	Infrastructure - Airports, helipads and other aviation proposals. Air pollution - Livestock & poultry units with floorspace > 500m ² , slurry lagoons > 750m ² & manure stores > 3500t.

This data is sourced from Natural England.



10.18 SSSI Units

Records within 2000m

0

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.

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

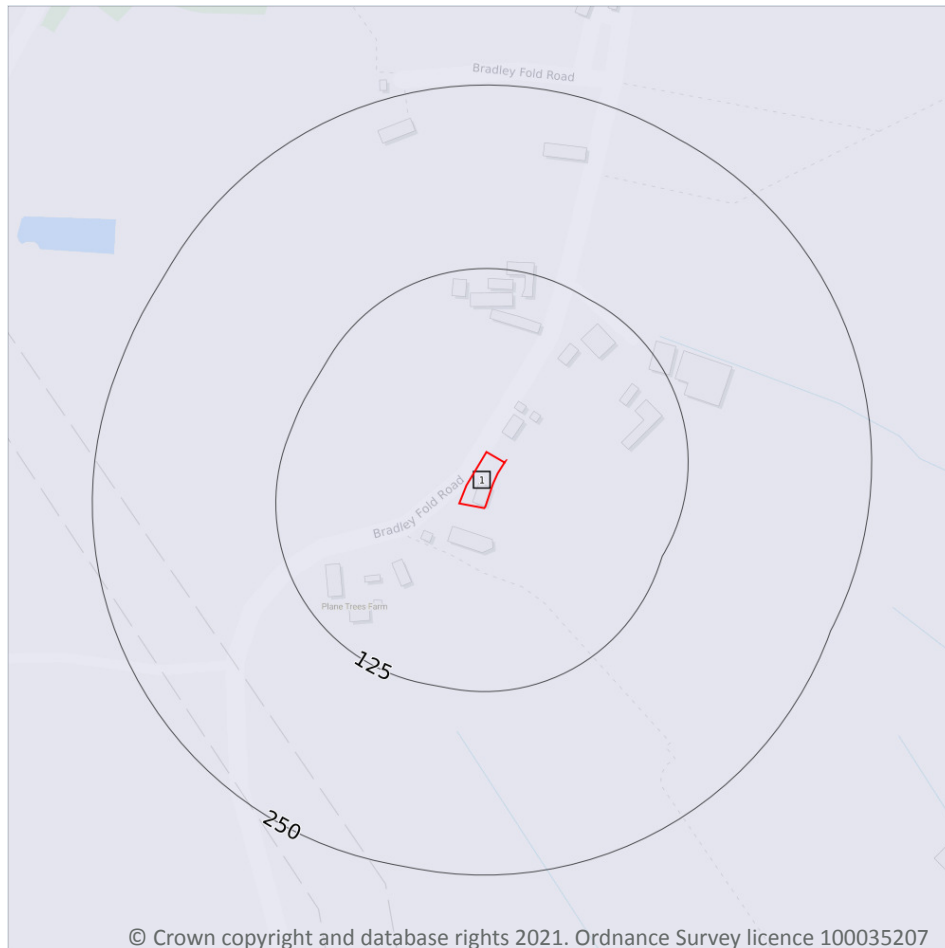
0

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



- Site Outline
- Search buffers in metres (m)
- Grade 1 - excellent quality
- Grade 2 - very good quality
- Grade 3 - good to moderate quality
- Grade 3a - good quality
- Grade 3b - moderate quality
- Grade 4 - poor quality
- Grade 5 - very poor quality
- Non-agricultural land
- Urban land
- Exclusion land
- Tree felling licences
- Open Access land

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12.1 Agricultural Land Classification

Records within 250m

1

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 62**

ID	Location	Classification	Description
1	On site	Grade 4	Poor quality agricultural land. Land with severe limitations which significantly restrict the range of crops and/or level of yields. It is mainly suited to grass with occasional arable crops (e.g. cereals and forage crops) the yields of which are variable. In moist climates, yields of grass may be moderate to high but there may be difficulties in utilisation. The grade also includes very droughty arable land.



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

0

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.

This data is sourced from Natural England.

12.5 Countryside Stewardship Schemes

Records within 250m

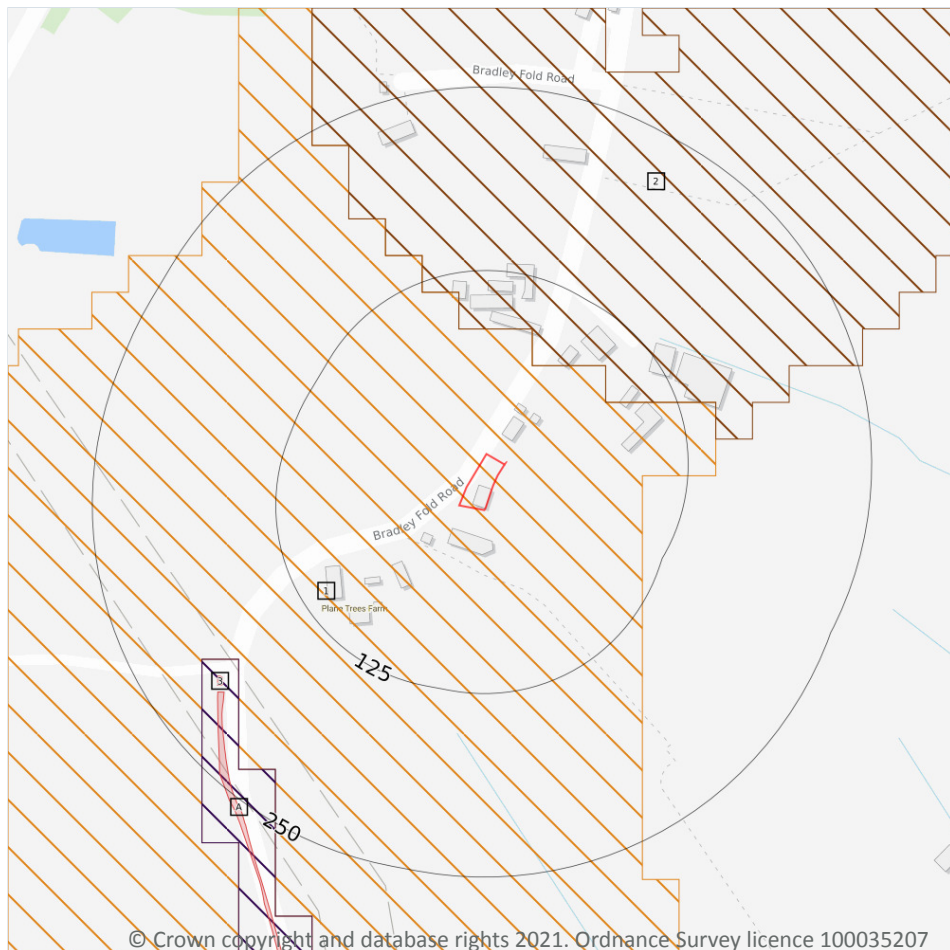
0

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



- Site Outline
- Search buffers in metres (m)
- Priority Habitat Inventory
- Open Mosaic Habitat
- Limestone Pavement Orders
- Habitat Networks
- Primary Habitat
- Restorable Habitat
- Associated Habitats
- Habitat Restoration-Creation
- Network Enhancement Zone 1
- Network Enhancement Zone 2

13.1 Priority Habitat Inventory

Records within 250m

2

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

Features are displayed on the Habitat designations map on **page 64**

ID	Location	Main Habitat	Other habitats
3	200m SW	Lowland dry acid grassland	Main habitat: LDAGR (INV > 50%)
A	205m SW	Lowland dry acid grassland	Main habitat: LDAGR (INV > 50%)

This data is sourced from Natural England.



13.2 Habitat Networks

Records within 250m

3

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.

Features are displayed on the Habitat designations map on **page 64**

ID	Location	Type	Habitat
1	On site	Network Enhancement Zone 1	Not specified
2	68m NE	Network Enhancement Zone 2	Not specified
A	183m SW	Primary Habitat	Lowland dry acid grassland

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

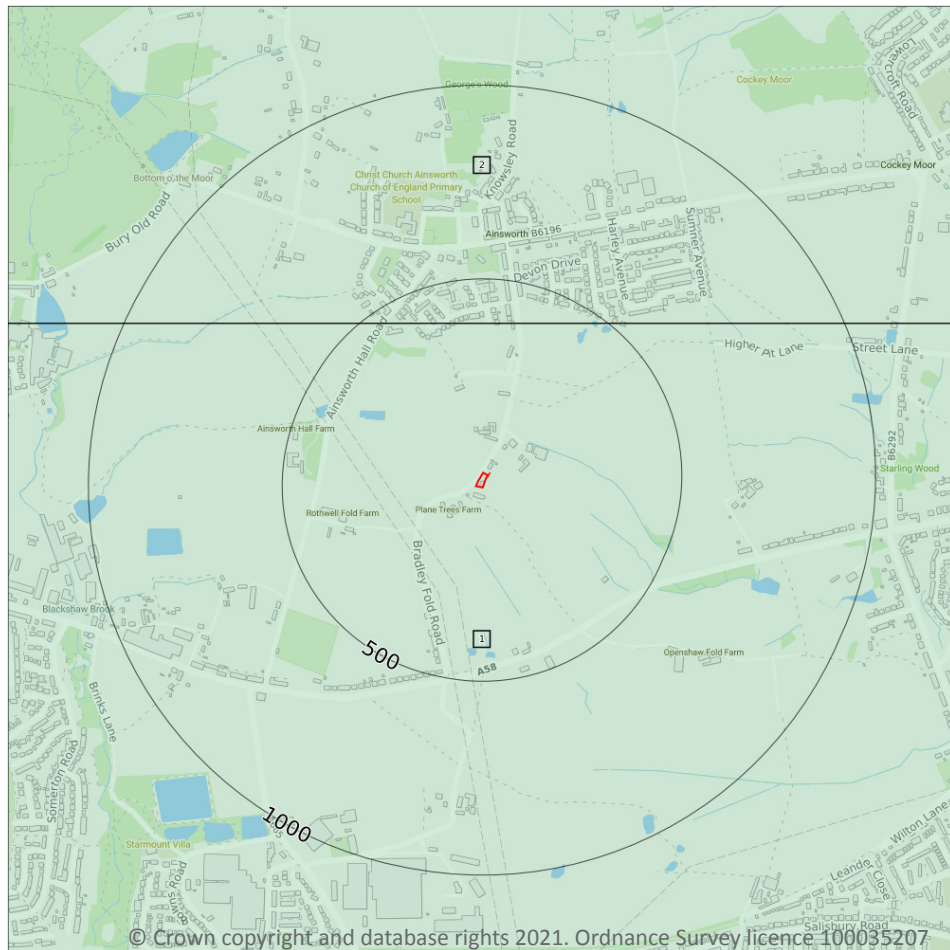
Records within 250m

0

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.

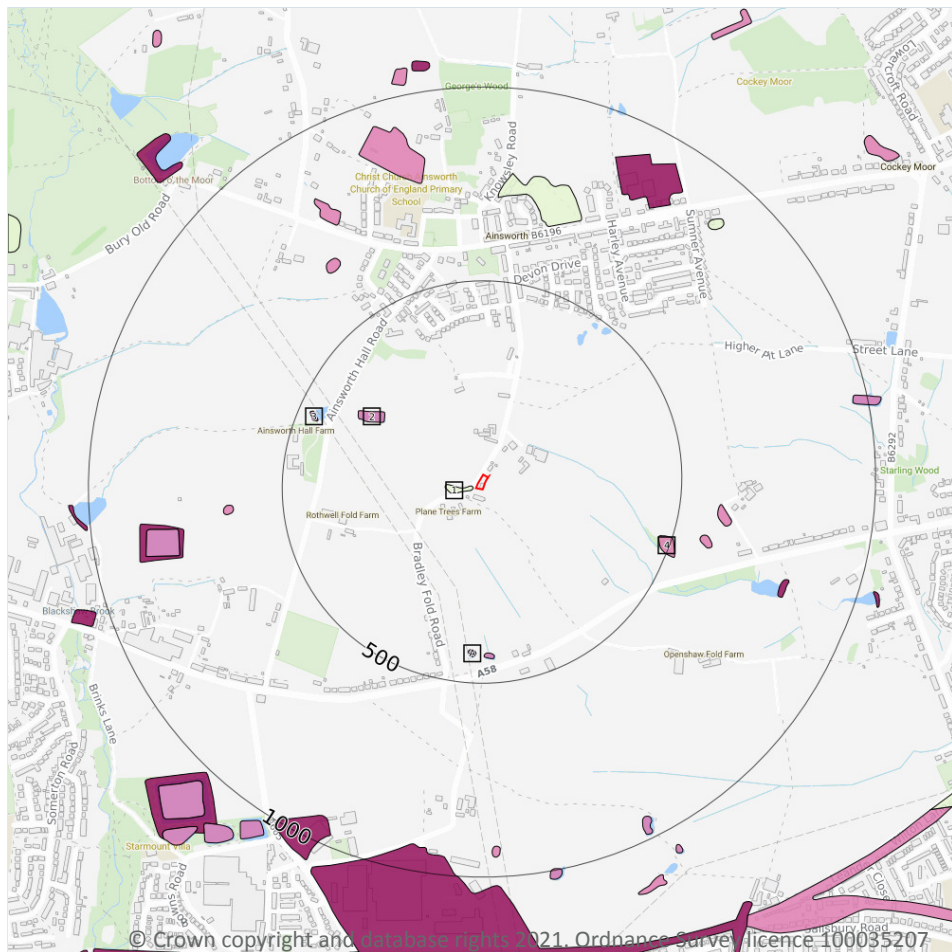
Features are displayed on the Geology 1:10,000 scale - Availability map on **page 66**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	Full	Full	Full	Full	SD70NE
2	385m N	Full	Full	Full	Full	SD71SE

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

6

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 67**

ID	Location	LEX Code	Description	Rock description
1	7m W	WMGR-ARTDP	Infilled Ground	Artificial Deposit
2	290m NW	WGR-VOID	Worked Ground (Undivided)	Void
A	414m S	WGR-VOID	Worked Ground (Undivided)	Void
A	422m S	WGR-VOID	Worked Ground (Undivided)	Void

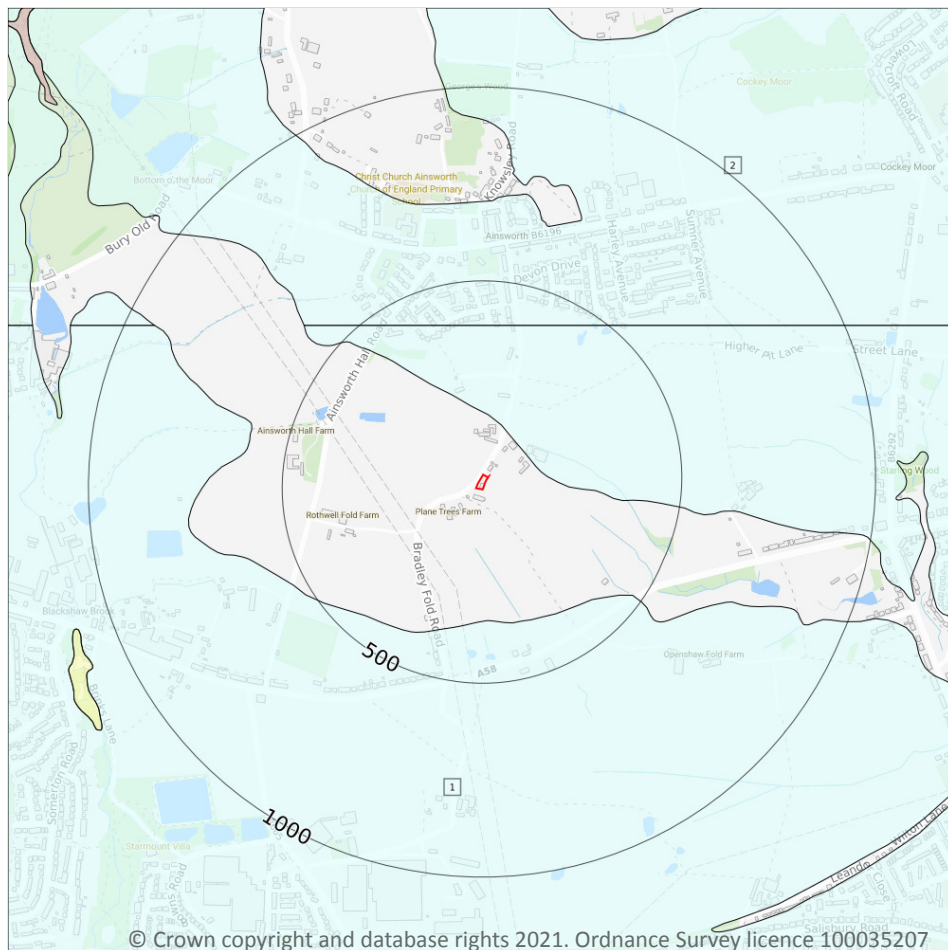


ID	Location	LEX Code	Description	Rock description
3	443m W	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
4	466m E	WGR-VOID	Worked Ground (Undivided)	Void

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 69**

ID	Location	LEX Code	Description	Rock description
1	113m NE	TILLD-DMTN	Till, Devensian - Diamicton	Diamicton
2	385m N	TILLD-DMTN	Till, Devensian - Diamicton	Diamicton

This data is sourced from the British Geological Survey.

14.4 Landslip (10k)

Records within 500m

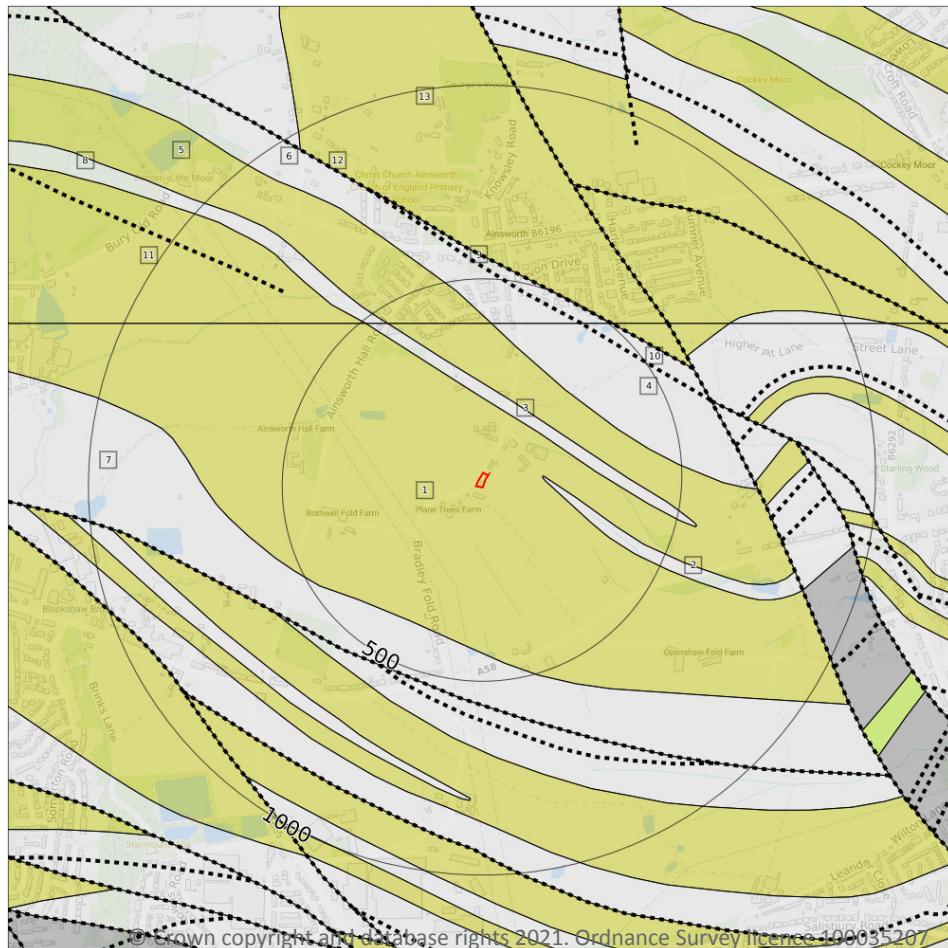
0

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

10

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 71**

ID	Location	LEX Code	Description	Rock age
1	On site	CAR-SDST	Cannel Rock (south Lancashire) - Sandstone	Langsettian Sub-age
2	142m E	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age
3	163m NE	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age



ID	Location	LEX Code	Description	Rock age
4	297m NE	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age
5	385m N	CAR-SDST	Cannel Rock (south Lancashire) - Sandstone	Langsettian Sub-age
6	386m N	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age
7	387m SW	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age
8	457m NW	PLCM-MDSS	Pennine Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age
11	490m NW	CAR-SDST	Cannel Rock (south Lancashire) - Sandstone	Langsettian Sub-age
13	496m NE	OL-SDST	Old Lawrence Rock - Sandstone	Langsettian Sub-age

This data is sourced from the British Geological Survey.

14.6 Bedrock faults and other linear features (10k)

Records within 500m

3

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.

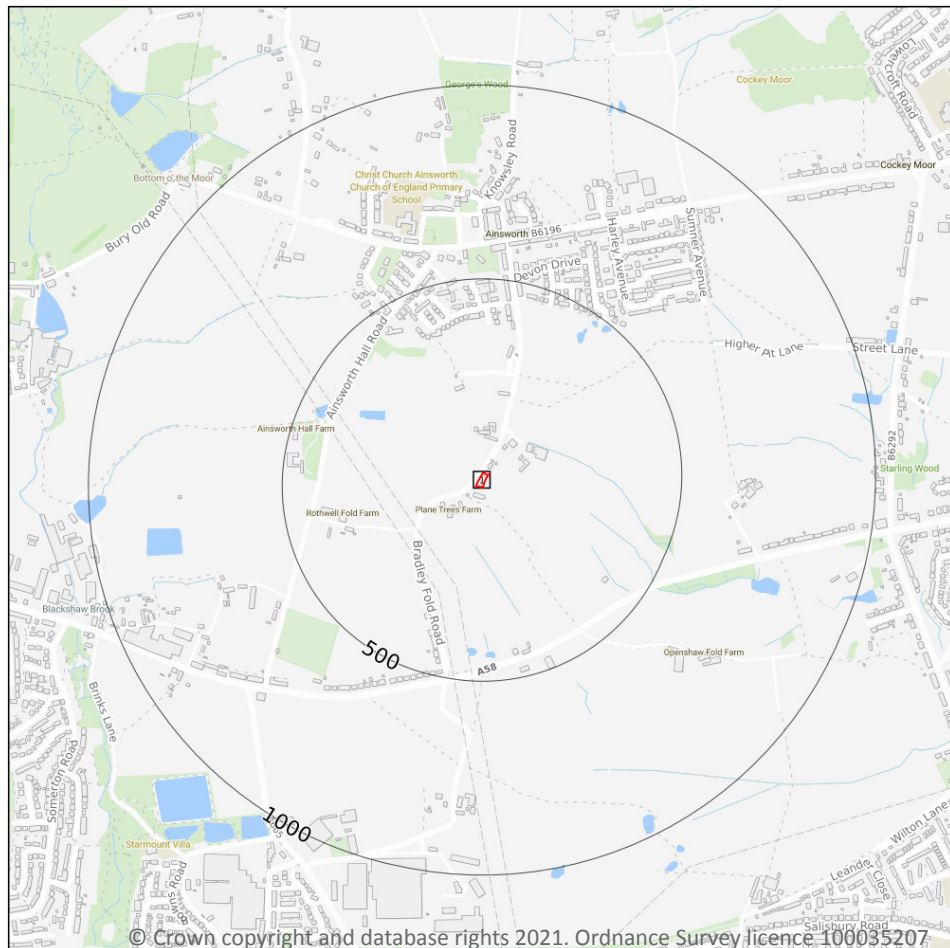
Features are displayed on the Geology 1:10,000 scale - Bedrock map on **page 71**

ID	Location	Category	Description
9	459m NE	ROCK	Coal seam, inferred
10	460m NE	ROCK	Coal seam, inferred
12	496m NE	FAULT	Normal fault, inferred; crossmarks on downthrow side

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 73**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	No coverage	Full	Full	No coverage	EW085_manchester_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

0

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.

This data is sourced from the British Geological Survey.

15.3 Artificial ground permeability (50k)

Records within 50m

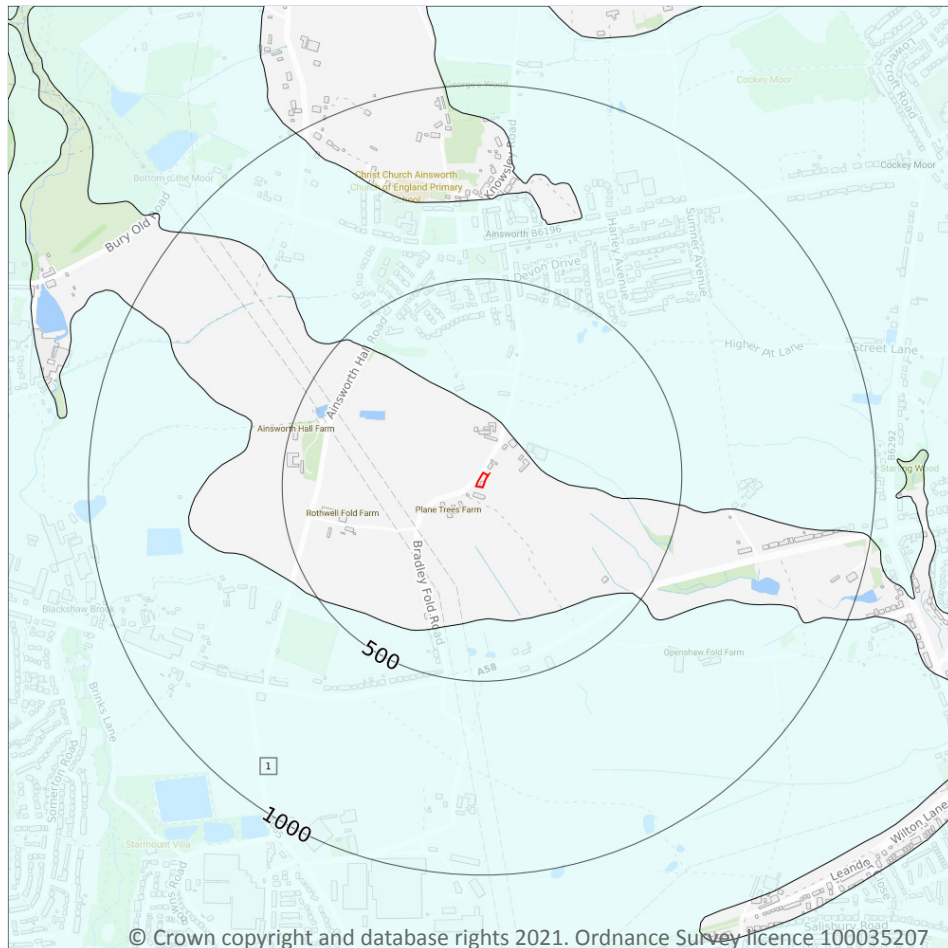
0

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).

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

1

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 75**

ID	Location	LEX Code	Description	Rock description
1	113m NE	TILLD-DMTN	TILL, DEVANSIAN	DIAMICTON

This data is sourced from the British Geological Survey.



15.5 Superficial permeability (50k)

Records within 50m

0

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).

This data is sourced from the British Geological Survey.

15.6 Landslip (50k)

Records within 500m

0

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

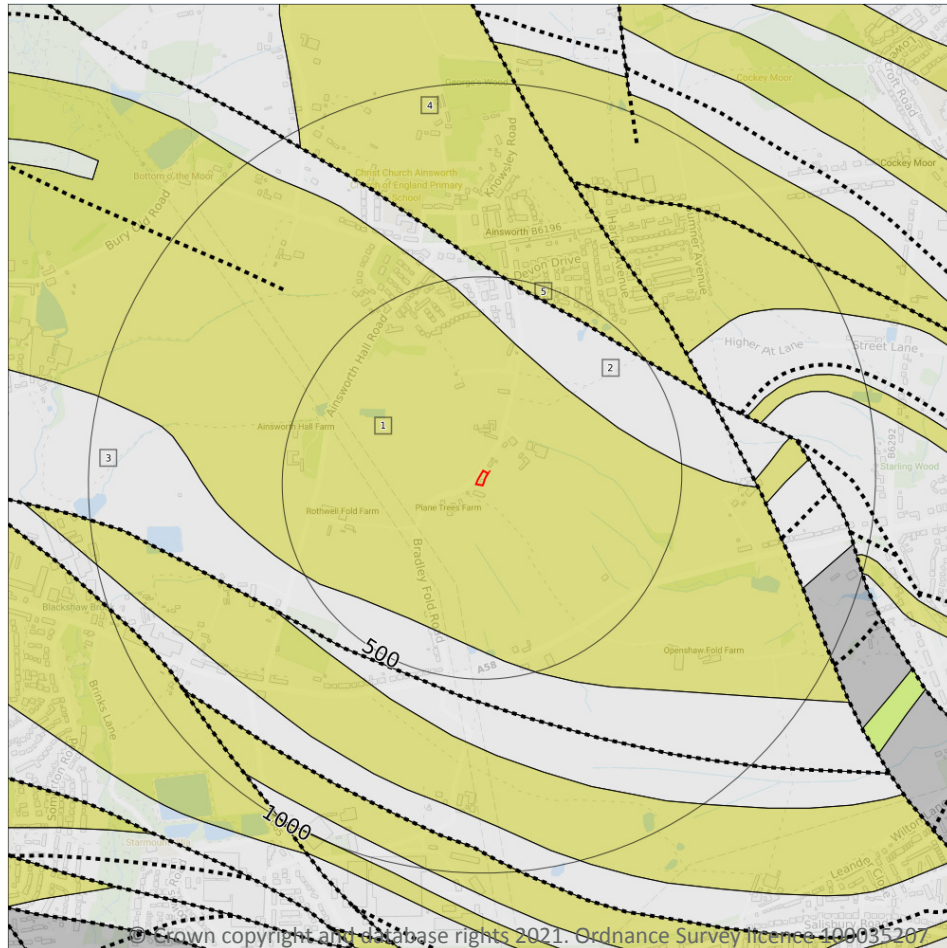
0

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

4

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 77**

ID	Location	LEX Code	Description	Rock age
1	On site	CAR-SDST	CANNEL ROCK (SOUTH LANCASHIRE) - SANDSTONE	WESTPHALIAN
2	297m NE	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
3	387m SW	PLCM-MDSS	PENNINE LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN



ID	Location	LEX Code	Description	Rock age
4	459m NE	OL-SDST	OLD LAWRENCE ROCK - SANDSTONE	WESTPHALIAN

This data is sourced from the British Geological Survey.

15.9 Bedrock permeability (50k)

Records within 50m

1

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	High	Moderate

This data is sourced from the British Geological Survey.

15.10 Bedrock faults and other linear features (50k)

Records within 500m

1

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.

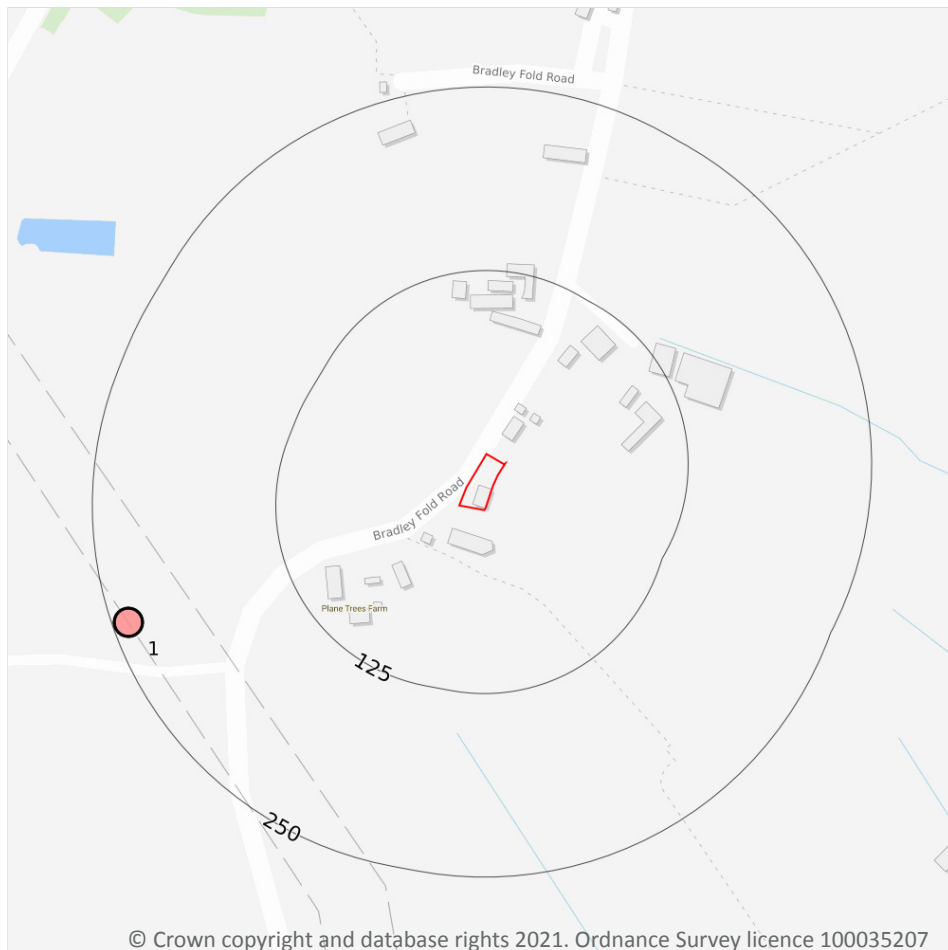
Features are displayed on the Geology 1:50,000 scale - Bedrock map on **page 77**

ID	Location	Category	Description
5	459m NE	ROCK	Coal seam, inferred

This data is sourced from the British Geological Survey.



16 Boreholes



— Site Outline
Search buffers in metres (m)

- Confidential
- 0 - 10m
- 10 - 30m
- 30m+
- Unknown

16.1 BGS Boreholes

Records within 250m

1

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.

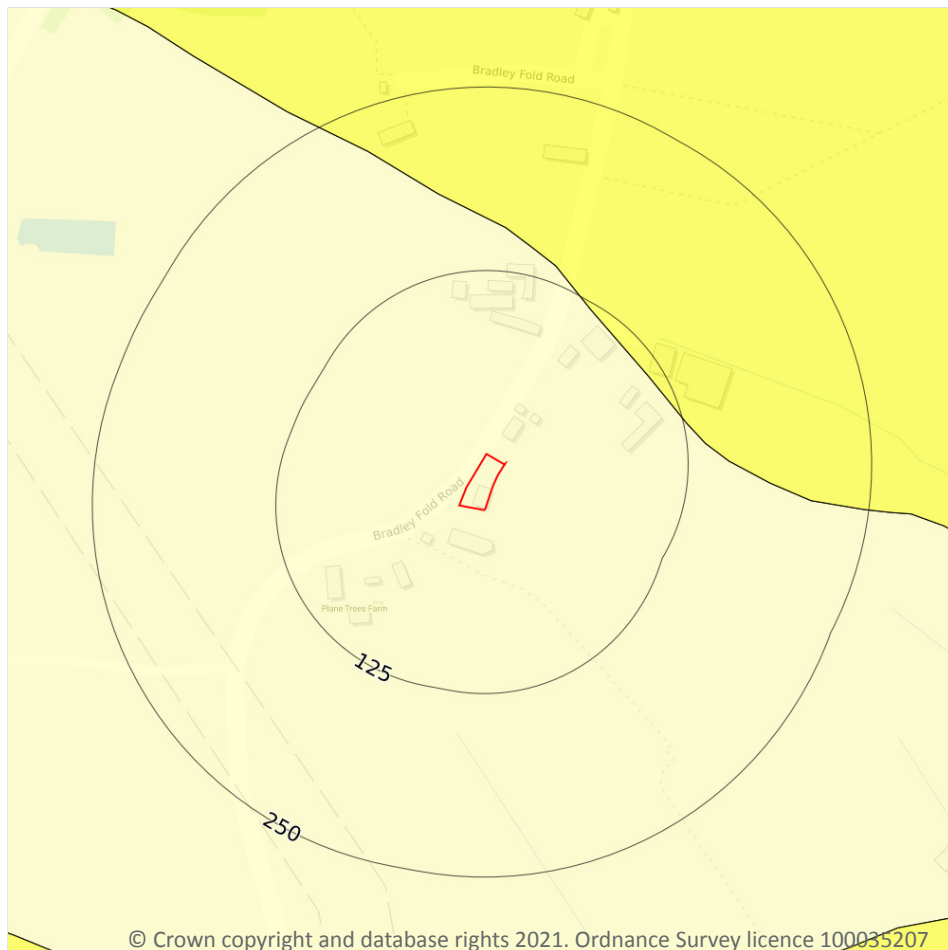
Features are displayed on the Boreholes map on **page 79**

ID	Location	Grid reference	Name	Length	Confidential	Web link
1	239m W	376100 409500	ROTHWELLS LANE ROTHWELLS FARM 4	56.85	N	18385

This data is sourced from the British Geological Survey.



17 Natural ground subsidence - Shrink swell clays



- Site Outline
- Search buffers in metres (m)
- ☐ No data
 - ☐ Negligible
 - ☒ Very low
 - ☐ Low
 - ☐ Moderate
 - ☐ High

17.1 Shrink swell clays

Records within 50m

1

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).

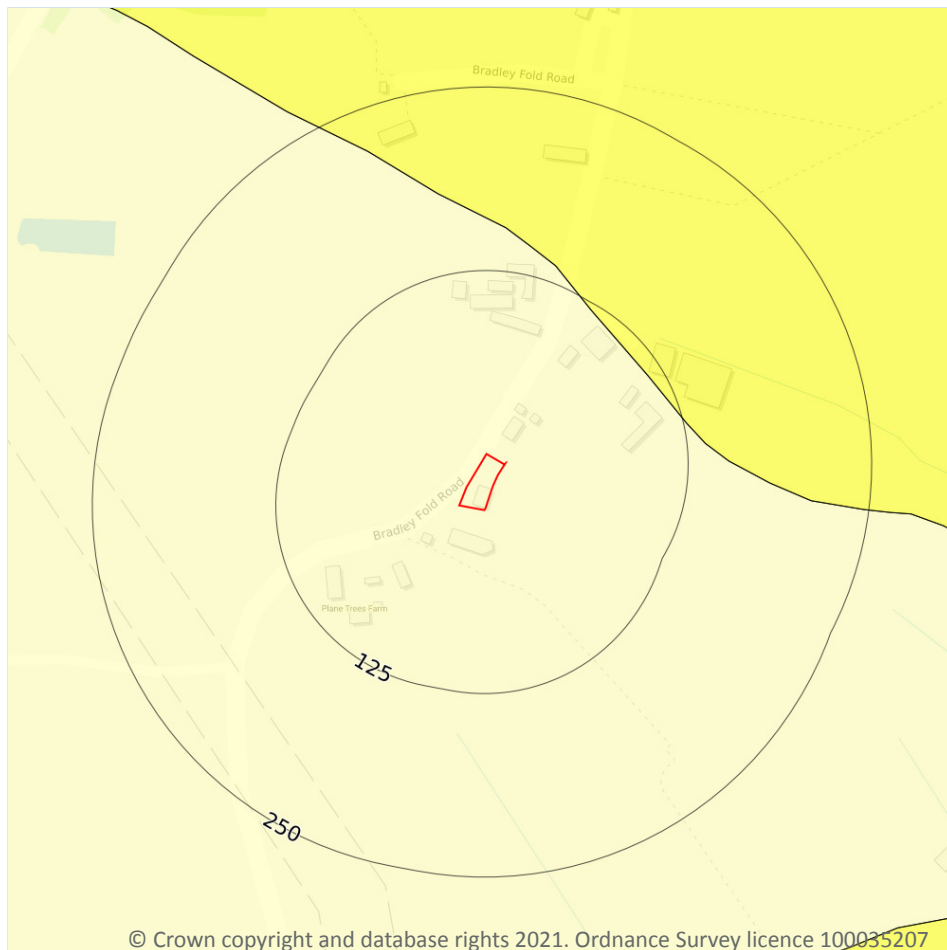
Features are displayed on the Natural ground subsidence - Shrink swell clays map on **page 80**

Location	Hazard rating	Details
On site	Negligible	Ground conditions predominantly non-plastic.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Running sands



- Site Outline
- Search buffers in metres (m)
- ☐ No data
 - ☐ Negligible
 - ☐ Very low
 - ☐ Low
 - ☐ Moderate
 - ☐ High

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17.2 Running sands

Records within 50m

1

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 81**

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.

This data is sourced from the British Geological Survey.

