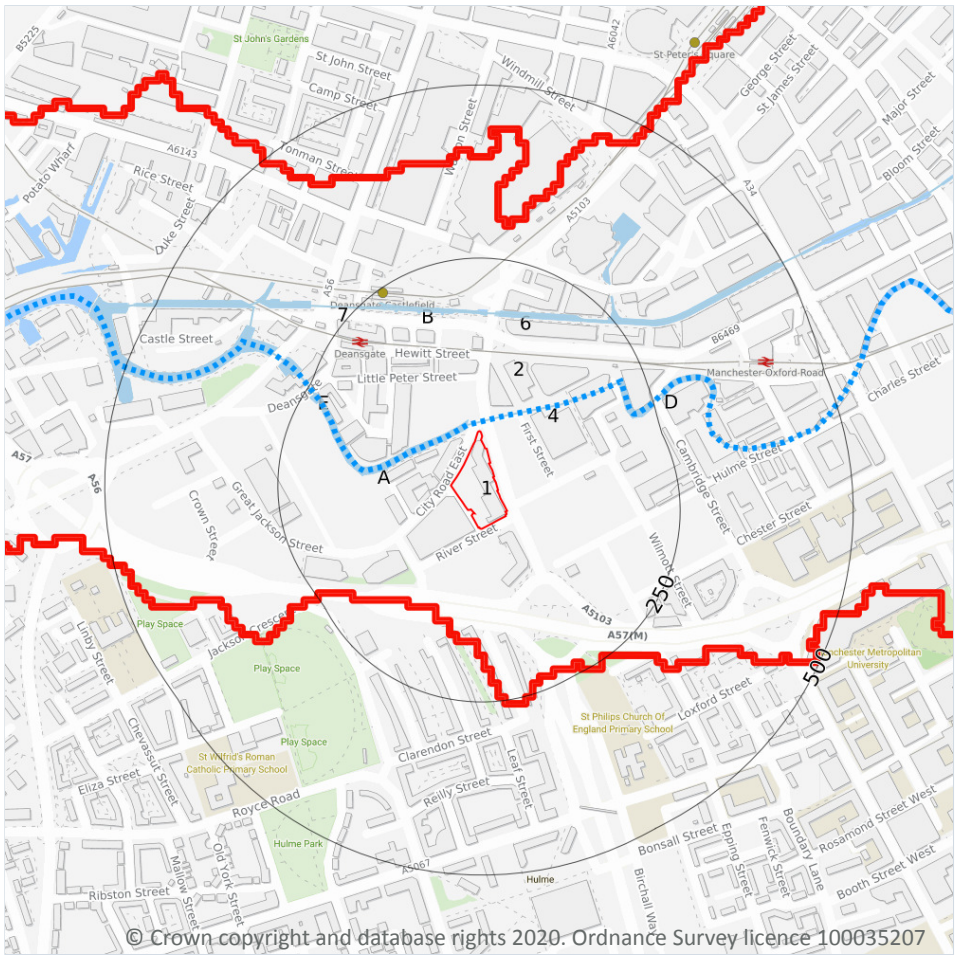
6 Hydrology



6.1 Water Network (OS MasterMap)

Records within 250m	11

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 95**

ID	Location	Type of water feature	Ground level	Permanence	Name
4	12m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	River Medlock

ID	Location	Type of water feature	Ground level	Permanence	Name
A	18m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	River Medlock
6	170m N	Canal. A manmade watercourse for inland navigation.	On ground surface	Watercourse contains water year round (in normal circumstances)	Rochdale Canal
B	195m NW	Canal. A manmade watercourse for inland navigation.	On ground surface	Watercourse contains water year round (in normal circumstances)	Rochdale Canal
B	198m NW	Canal. A manmade watercourse for inland navigation.	On ground surface	Watercourse contains water year round (in normal circumstances)	Rochdale Canal
D	214m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	River Medlock
B	224m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
B	224m NW	Canal. A manmade watercourse for inland navigation.	On ground surface	Watercourse contains water year round (in normal circumstances)	Rochdale Canal
E	234m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	River Medlock
E	237m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	River Medlock
7	248m NW	Canal. A manmade watercourse for inland navigation.	Underground	Watercourse contains water year round (in normal circumstances)	Rochdale Canal

This data is sourced from the Ordnance Survey.

6.2 Surface water features

Records within 250m	**4**

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 95**

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 95**

ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
2	**On site**	**River WB catchment**	**Medlock (Lumb Brook to Irwell)**	**GB112069061152**	**Roch Irk Medlock**	**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 95**

ID	Location	Type	Name	Water body ID	Overall rating	Chemical rating	Ecological rating	Year
3	13m N	River	Medlock (Lumb Brook to Irwell)	GB112069061152	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

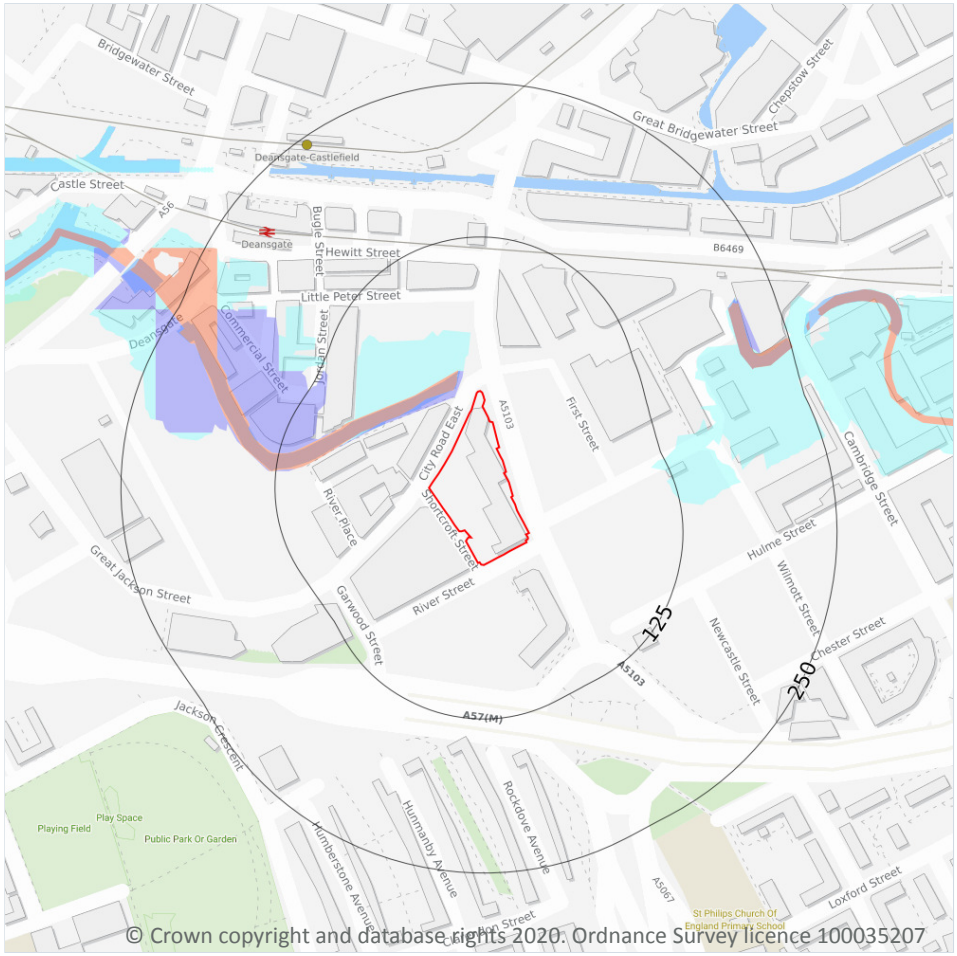
Groundwater bodies are also covered by the Directive and the same regime of objectives and reporting detailed in the previous section is in place. Click on the water body ID in the table to visit the EA Catchment Explorer to find out more about each groundwater body listed.

Features are displayed on the Hydrology map on **page 95**

ID	Location	Name	Water body ID	Overall rating	Chemical rating	Quantitative	Year
1	**On site**	**Manchester and East Cheshire Permo-Triassic Sandstone Aquifers**	**GB41201G101100**	**Poor**	**Poor**	**Poor**	**2015**

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

7 River and coastal flooding



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Site Outline

Search buffers in metres (m)

Environment Agency river and coastal flooding:

- High
- Medium
- Low
- Very Low
- Historical Flood Events
- Areas Used for Flood Storage
- Areas Benefiting from Flood Defences
- Flood Defences

7.1 Risk of Flooding from Rivers and Sea (RoFRaS)

Records within 50m	5

The chance of flooding from rivers and/or the sea in any given year, based on cells of 50m. Each cell is allocated one of four flood risk categories, taking into account flood defences and their condition; 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).

Features are displayed on the River and coastal flooding map on **page 99**

Distance	RoFRaS flood risk
On site	**N/A**
0 - 50m	High

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

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Site Outline

Search buffers in metres (m)

Flood zone 2

Flood zone 3

7.6 Flood Zone 2

Records within 50m	1

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.

Features are displayed on the River and coastal flooding map on **page 99**

Location	Type
15m W	Zone 2 - (Fluvial /Tidal Models)

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

7.7 Flood Zone 3

Records within 50m	1

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.

Features are displayed on the River and coastal flooding map on **page 99**

Location	Type
18m W	Zone 3 - (Fluvial Models)

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

8 Surface water flooding

Site Outline

Search buffers in metres (m)

1 in 1000 return period
- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

1 in 250 return period
- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

1 in 100 return period
- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

1 in 30 return period
- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

8.1 Surface water flooding

Highest risk on site	**Negligible**
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 103**

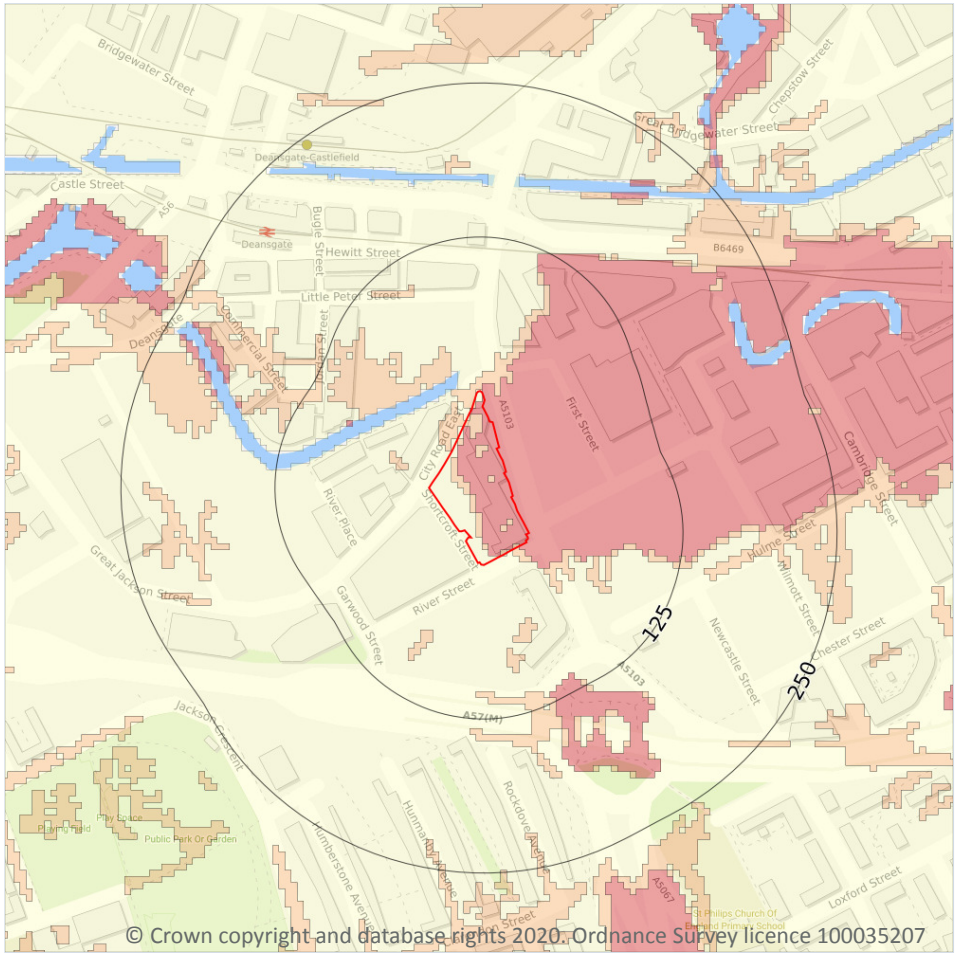
The data shown on the map and in the table above shows the highest likelihood of flood events happening at the site. Lower likelihood events may have greater flood depths and hence a greater potential impact on a site.

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 Ambiental Risk Analytics.

9 Groundwater flooding



Site Outline

Search buffers in metres (m)

- High
- Moderate - High
- Moderate
- Low
- Negligible

9.1 Groundwater flooding

Highest risk on site	**High**
Highest risk within 50m	**High**

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 105**

This data is sourced from Ambiental Risk Analytics.

10 Environmental designations

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	0

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

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

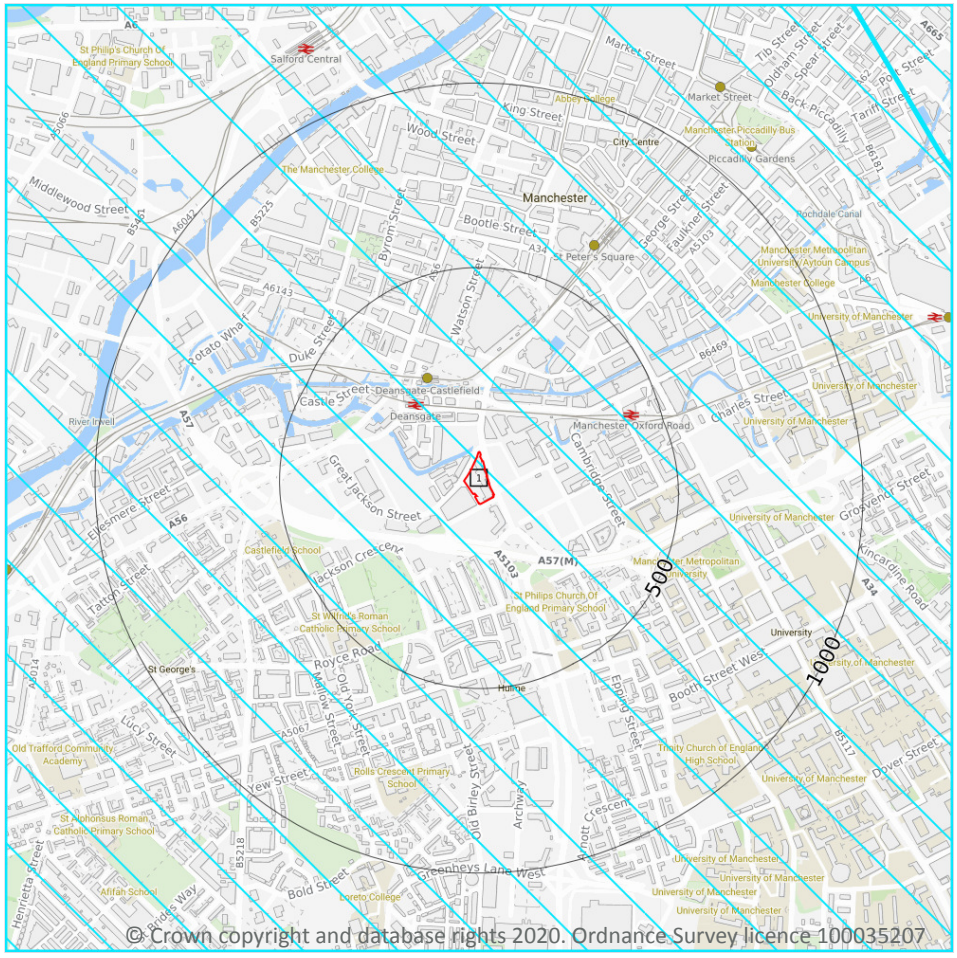
Records within 2000m	3

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
1226m NE	River Irk (Moston Brook to River Irwell) NVZ	Surface Water	S638	Existing
1292m N	River Irk (Moston Brook to River Irwell) NVZ	Surface Water	S638	Existing
1364m NW	Irwell / Man. Ship Canal (Kearsley to Irlam Locks) NVZ	Surface Water	S643	Existing

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

SSSI Impact Zones and Units



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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 110**

ID	Location	Type of developments requiring consultation
1	On site	**Air pollution - Livestock & poultry units with floorspace > 500m², slurry lagoons > 4000m². Combustion - General combustion processes >50MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion.**

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

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Site Outline

Search buffers in metres (m)

Listed buildings

Conservation areas

Conservation areas - no data

National Parks

Areas of Outstanding Natural Beauty

Registered parks and gardens

Scheduled Monuments

World Heritage Sites

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	11

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.

Features are displayed on the Visual and cultural designations map on **page 112**

ID	Location	Name	Grade	Reference Number	Listed date
1	175m N	Rochdale Canal Lock Number 90, Approximately 30 Metres West Of Albion Bridge, Manchester, M1	II	1247482	06/06/1994
2	203m N	13-17, Albion Street, Manchester, M1	II	1279694	03/10/1974
3	206m E	Former Cotton Mill On West Side Of Junction With Cambridge Street, Manchester, M1	II	1282998	06/06/1994
4	230m NE	Rochdale Canal Lock Number 89 (Tib Lock), On South Side Of Havelock Mills, Manchester, M1	II	1247596	06/06/1994

ID	Location	Name	Grade	Reference Number	Listed date
5	231m NW	Deansgate Station, Manchester, M3	II	1376146	20/08/1998
6	233m NE	Manchester South Junction And Altrincham Railway Viaduct, Manchester, M1	II	1200837	06/06/1994
A	237m NW	Rochdale Canal Lock Number 91 At East End Of Gaythorn Tunnel, Manchester, M3	II	1247483	29/01/1986
7	238m N	The Britons Protection Ph The Britons Protection Public House, Manchester,THE BRITONS PROTECTION PH	II	1292050	16/03/1990
B	238m NW	Boundary Stone On Knott Mill Bridge, Manchester, M15	II	1282975	06/06/1994
B	239m NW	Floodgate On East Side Of Knott Mill Bridge, Manchester, M15	II	1210156	06/06/1994
A	248m NW	Rochdale Canal Lock Keepers Cottage At Lock Number 91, Next To Gaythorn Tunnel, Manchester, M3	II	1247597	29/01/1986

This data is sourced from English Heritage, 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 English Heritage, 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 English Heritage, 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 English Heritage, 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

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 116**

ID	Location	Classification	Description
1	**On site**	**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	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.

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	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

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Site Outline

Search buffers in metres (m)

- Full coverage
- Partial coverage
- No coverage

14.1 10k Availability

Records within 500m	1

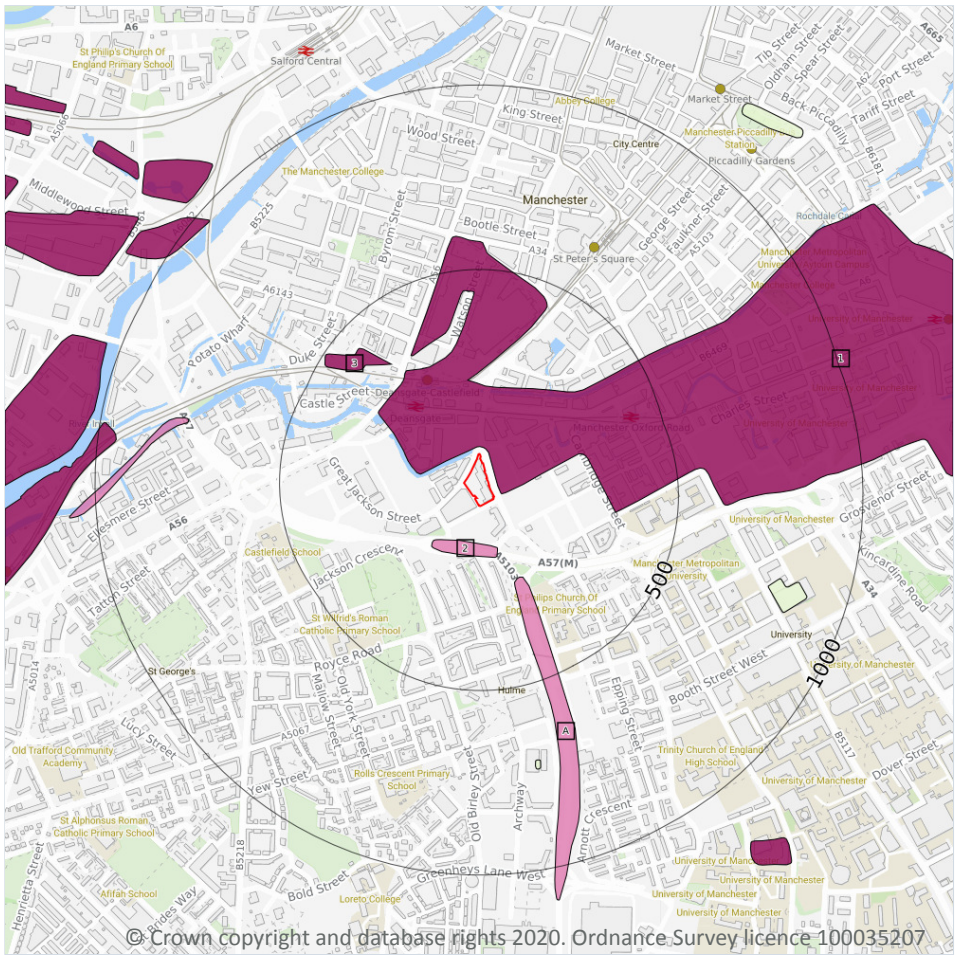
An indication on the coverage of 1:10,000 scale geology data for the site, the most detailed dataset provided by the British Geological Survey. Either 'Full', 'Partial' or 'No coverage' for each geological theme.

Features are displayed on the Geology 1:10,000 scale - Availability map on **page 119**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	**On site**	**Full**	**Full**	**Full**	**No coverage**	**SJ89NW**

This data is sourced from the British Geological Survey.

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



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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 **4**

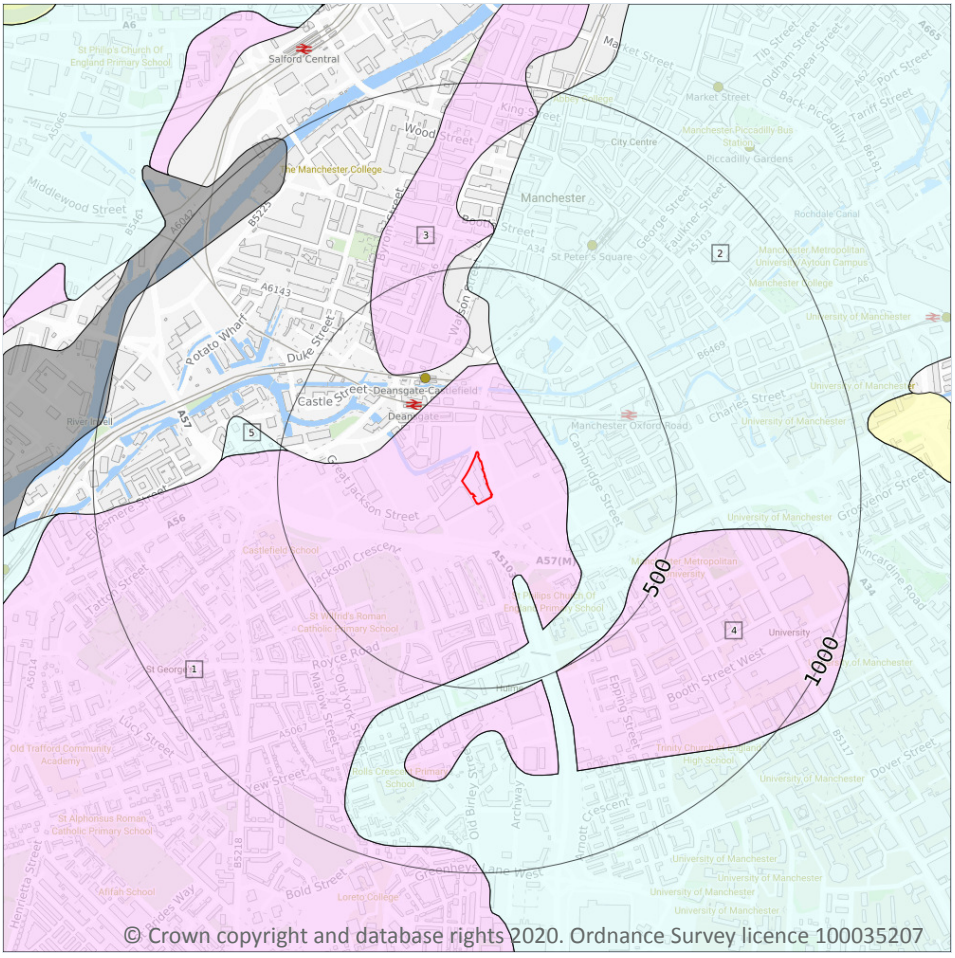
Details of made, worked, infilled, disturbed and landscaped ground at 1:10,000 scale. Artificial ground can be associated with potentially contaminated material, unpredictable engineering conditions and instability.

Features are displayed on the Geology 1:10,000 scale - Artificial and made ground map on **page 120**

ID	Location	LEX Code	Description	Rock description
1	20m N	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
2	101m S	WGR-VOID	Worked Ground (Undivided)	Void
A	220m SE	WGR-VOID	Worked Ground (Undivided)	Void
3	340m NW	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 **5**

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 122**

ID	Location	LEX Code	Description	Rock description
1	**On site**	**GFSDD-XSV**	**Glaciofluvial Sheet Deposits, Devensian - Sand And Gravel**	**Sand And Gravel**
2	174m NE	TILLD-DMTN	Till, Devensian - Diamicton	Diamicton
3	253m NW	GFSDD-XSV	Glaciofluvial Sheet Deposits, Devensian - Sand And Gravel	Sand And Gravel
4	442m SE	GFSDD-XSV	Glaciofluvial Sheet Deposits, Devensian - Sand And Gravel	Sand And Gravel

ID	Location	LEX Code	Description	Rock description
5	479m W	TILLD-DMTN	Till, Devensian - Diamicton	Diamicton

This data is sourced from the British Geological Survey.

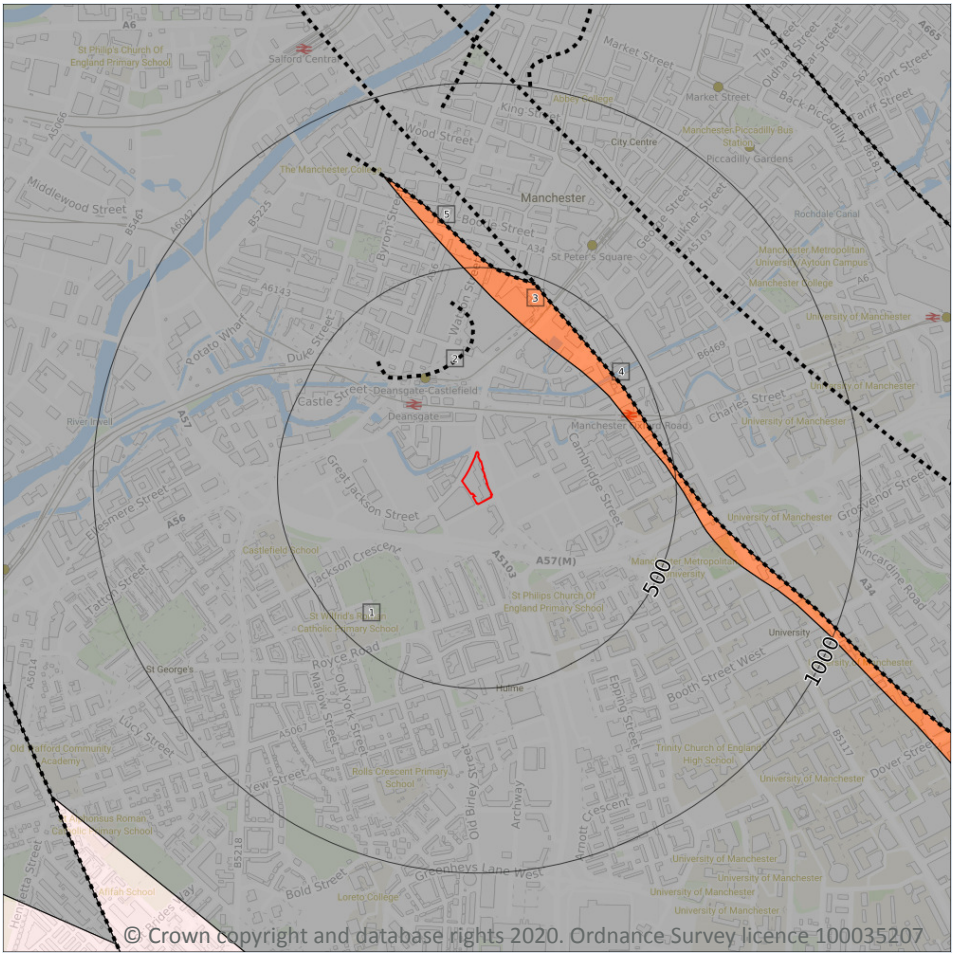
14.4 Landslip (10k)

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 **2**

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 124**

ID	Location	LEX Code	Description	Rock age
1	**On site**	**CPB-SDST**	**Chester Pebble Beds Formation - Sandstone**	**Early Triassic Epoch**
3	345m NE	MM-MDST	Manchester Marls Formation - Mudstone	Late Permian Epoch [Obsolete name]

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 124**

ID	Location	Category	Description
2	243m NW	LANDFORM	Buried channel or valley margin
4	414m NE	FAULT	Normal fault, inferred; crossmarks on downthrow side
5	481m N	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

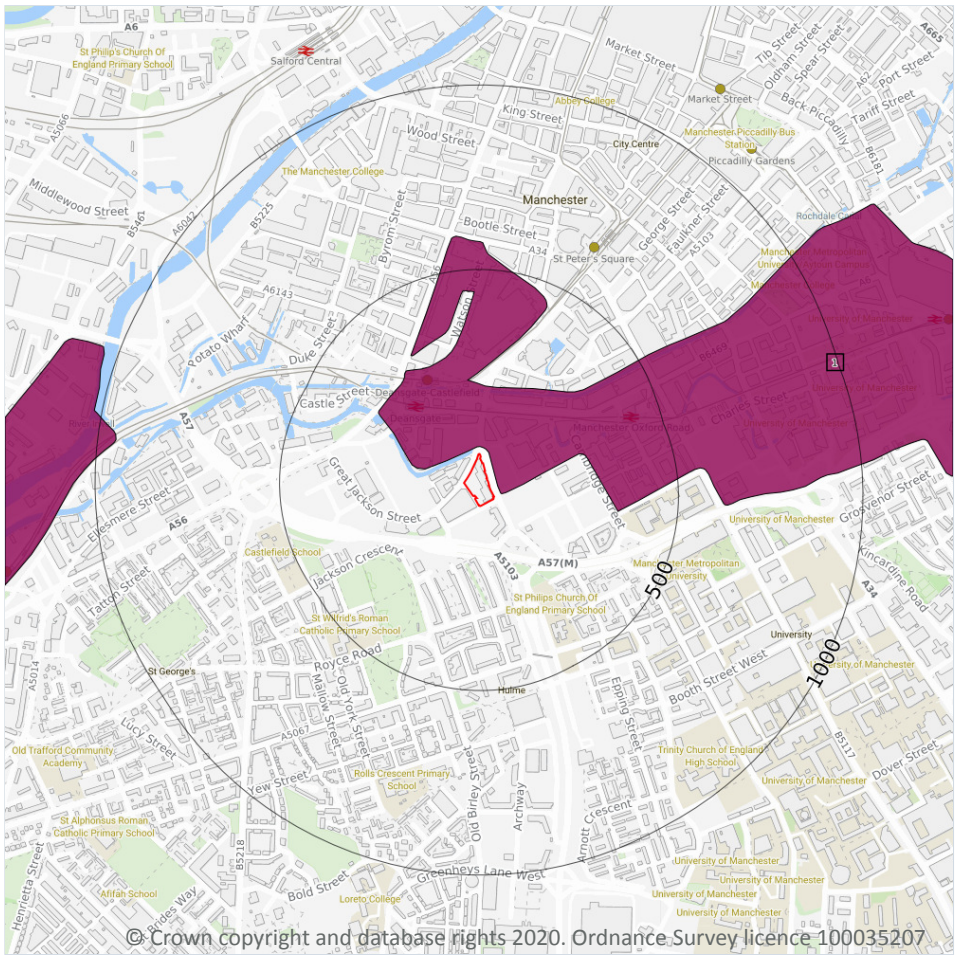
An indication on the coverage of 1:50,000 scale geology data for the site. Either 'Full' or 'No coverage' for each geological theme.

Features are displayed on the Geology 1:50,000 scale - Availability map on **page 126**

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



Site Outline

Search buffers in metres (m)

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

15.2 Artificial and made ground (50k)

Records within 500m	1

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 127**

ID	Location	LEX Code	Description	Rock description
1	20m N	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT

This data is sourced from the British Geological Survey.

15.3 Artificial ground permeability (50k)

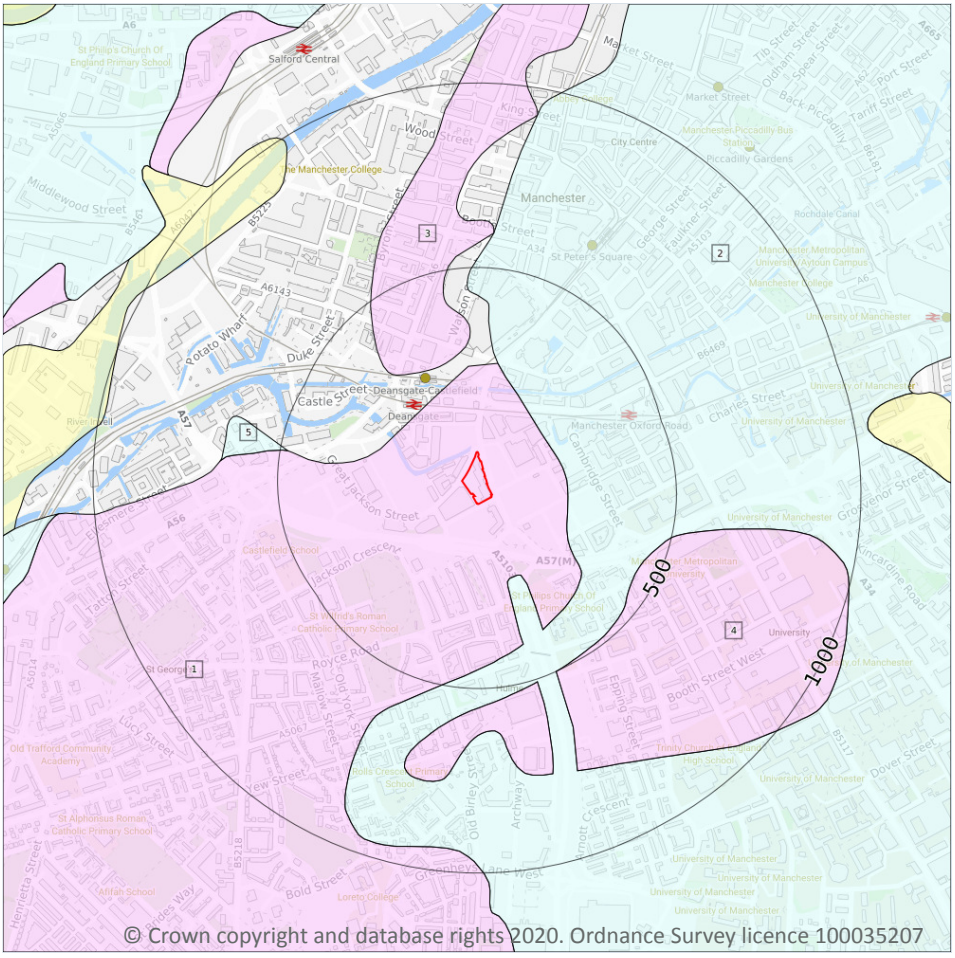
Records within 50m	**1**

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
20m NE	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 **5**

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 129**

ID	Location	LEX Code	Description	Rock description
1	**On site**	**GFSDD-XSV**	**GLACIOFLUVIAL SHEET DEPOSITS, DEVENSIAN**	**SAND AND GRAVEL**
2	174m NE	TILLD-DMTN	TILL, DEVENSIAN	DIAMICTON
3	253m NW	GFSDD-XSV	GLACIOFLUVIAL SHEET DEPOSITS, DEVENSIAN	SAND AND GRAVEL
4	442m SE	GFSDD-XSV	GLACIOFLUVIAL SHEET DEPOSITS, DEVENSIAN	SAND AND GRAVEL

ID	Location	LEX Code	Description	Rock description
5	479m W	TILLD-DMTN	TILL, DEVENSIAN	DIAMICTON

This data is sourced from the British Geological Survey.

15.5 Superficial 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 any superficial deposits (the zone between the land surface and the water table).

Location	Flow type	Maximum permeability	Minimum permeability
On site	**Intergranular**	**Very High**	**High**

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.

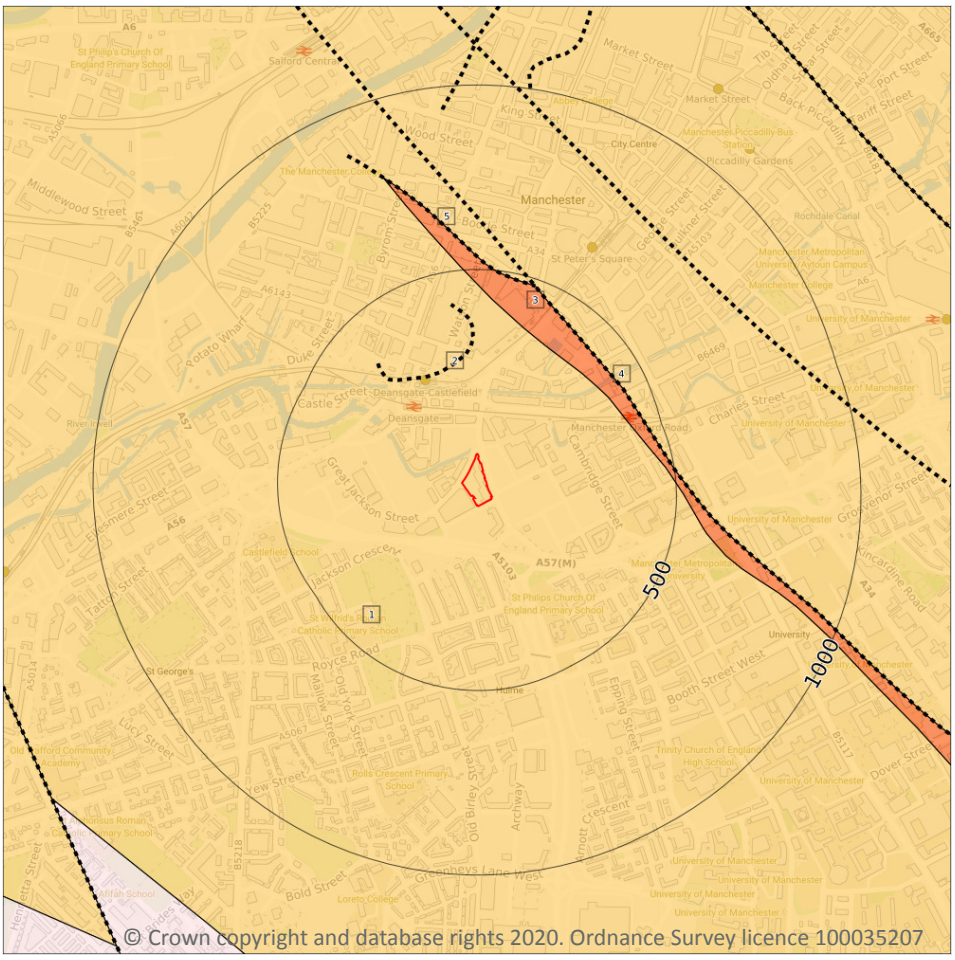
15.7 Landslip permeability (50k)

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



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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 **2**

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 131**

ID	Location	LEX Code	Description	Rock age
1	**On site**	**CHES-SDST**	**CHESTER FORMATION - SANDSTONE**	**OLENEKIAN**
3	345m NE	MM-MDST	MANCHESTER MARLS FORMATION - MUDSTONE	-

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	**Mixed**	**High**	**Moderate**

This data is sourced from the British Geological Survey.

15.10 Bedrock faults and other linear features (50k)

Records within 500m	3

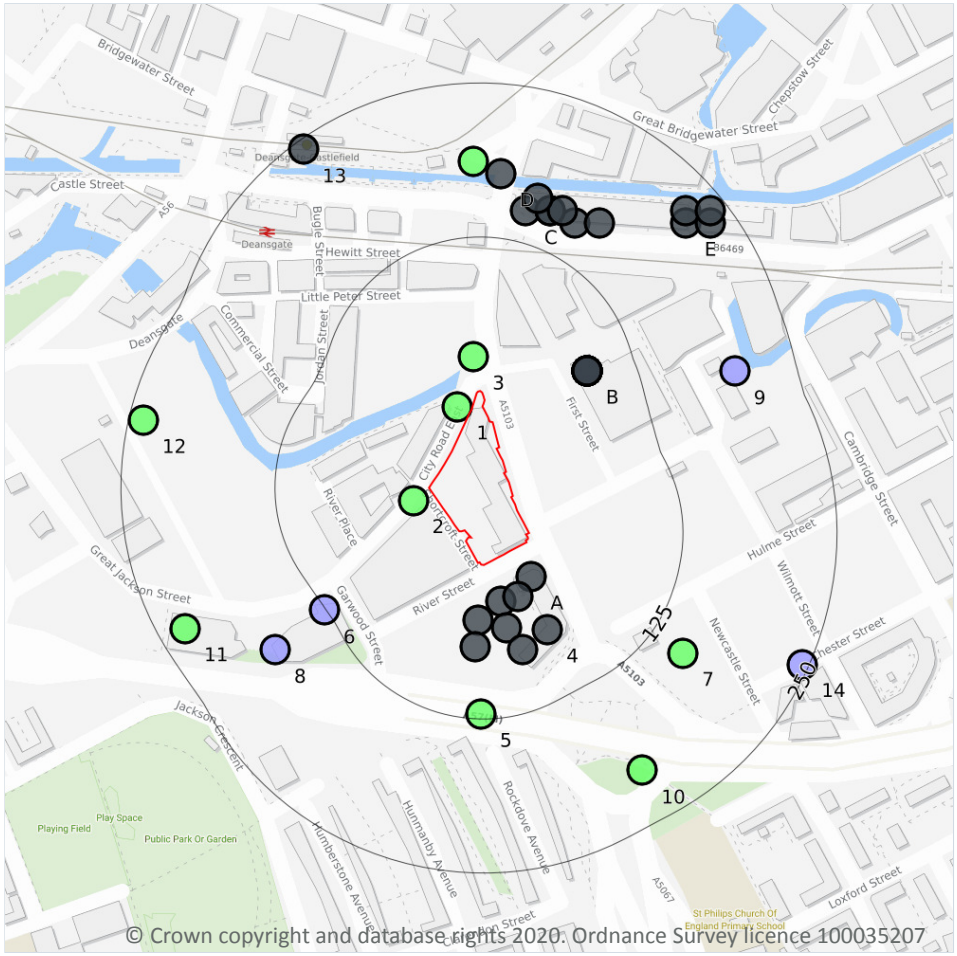
Linear features at the ground or bedrock surface at 1:50,000 scale of six main types; rock, fault, fold axis, mineral vein, alteration area or landform. Features are either observed or inferred, and relate primarily to bedrock.

Features are displayed on the Geology 1:50,000 scale - Bedrock map on **page 131**

ID	Location	Category	Description
2	243m NW	LANDFORM	Approximate margin of buried (superficial deposit-filled) channel or valley
4	415m NE	FAULT	Fault, inferred
5	481m N	FAULT	Fault, 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	58

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 133**

ID	Location	Grid reference	Name	Length	Confidential	Web link
1	11m NW	383595 397371	MANCHESTER CORP. B.SEWER	11.28	N	1042259
2	16m SW	383559 397295	MANCHESTER CORP. B.SEWER	11.28	N	1042258
A	27m SE	383655 397233	MEDLOCK STREET MANCHESTER 2	-	Y	N/A

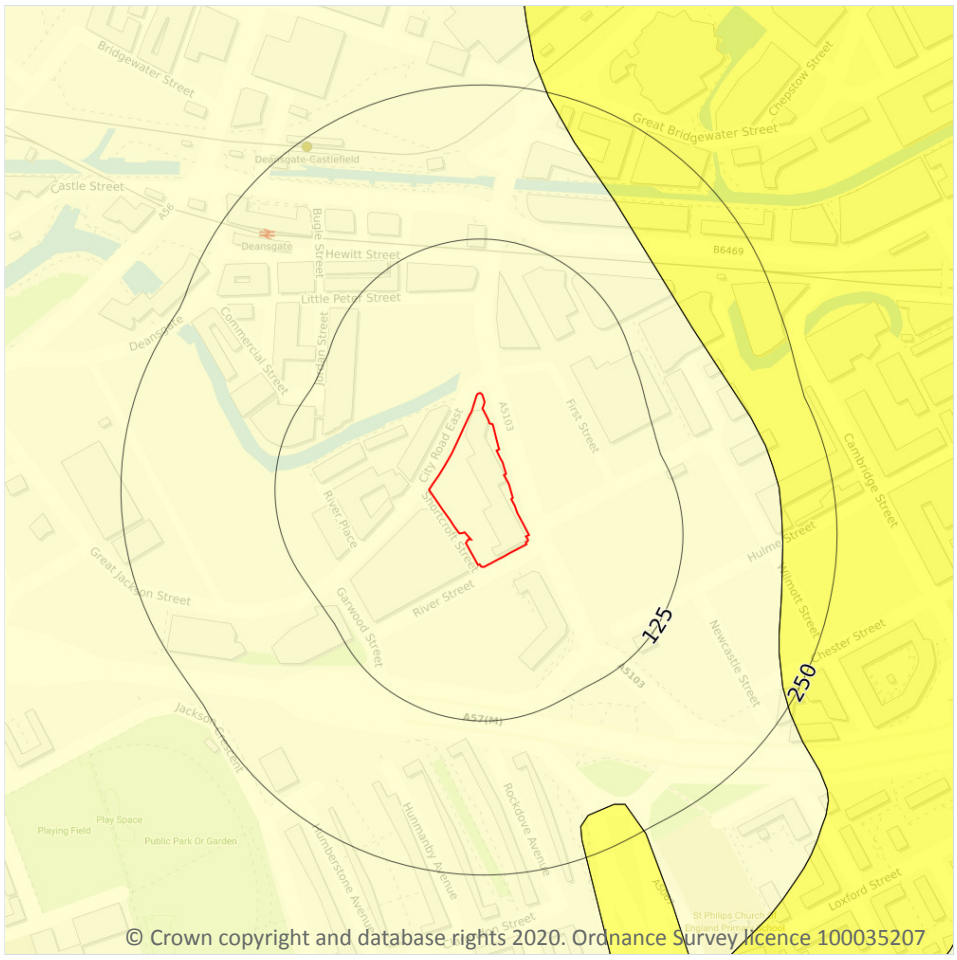
ID	Location	Grid reference	Name	Length	Confidential	Web link
3	29m N	383608 397412	MANCHESTER CORP. B.SEWER	11.28	N	1042260
A	33m SE	383630 397213	MEDLOCK STREET MANCHESTER TP 4	-	Y	N/A
A	36m SE	383644 397217	MEDLOCK STREET MANCHESTER TP 2	-	Y	N/A
A	45m S	383612 397198	MEDLOCK STREET MANCHESTER TP 6	-	Y	N/A
A	54m S	383635 397192	MEDLOCK STREET MANCHESTER TP 3	-	Y	N/A
A	67m S	383609 397176	MEDLOCK STREET MANCHESTER TP 5	-	Y	N/A
4	71m SE	383668 397190	MEDLOCK STREET MANCHESTER TP 1	-	Y	N/A
A	76m SE	383648 397174	MEDLOCK STREET MANCHESTER 1	-	Y	N/A
B	86m E	383700 397400	GAYTHORN GASWORKS M16	-	Y	N/A
B	86m E	383700 397400	GAYTHORN GASWORKS M18	-	Y	N/A
B	86m E	383700 397400	GAYTHORN GASWORKS M2	-	Y	N/A
B	86m E	383700 397400	GAYTHORN GASWORKS M5	-	Y	N/A
B	86m E	383700 397400	GAYTHORN GASWORKS R2	-	Y	N/A
B	86m E	383700 397400	GAYTHORN GASWORKS R2	-	Y	N/A
B	86m E	383700 397400	GAYTHORN GASWORKS M15	-	Y	N/A
B	86m E	383700 397400	GAYTHORN GASWORKS M1	-	Y	N/A
B	86m E	383700 397400	GAYTHORN GASWORKS M7	-	Y	N/A
B	86m E	383700 397400	GAYTHORN GASWORKS M6	-	Y	N/A
B	86m E	383700 397400	GAYTHORN GASWORKS M11	-	Y	N/A
B	86m E	383700 397400	GAYTHORN GASWORKS M12A	-	Y	N/A
B	86m E	383700 397400	GAYTHORN GASWORKS M13	-	Y	N/A
B	86m E	383700 397400	GAYTHORN GASWORKS M14	-	Y	N/A
B	86m E	383700 397400	GAYTHORN GASWORKS M3	-	Y	N/A
B	86m E	383700 397400	GAYTHORN GASWORKS M7A	-	Y	N/A
B	86m E	383700 397400	GAYTHORN GASWORKS M8	-	Y	N/A
B	86m E	383700 397400	GAYTHORN GASWORKS M9	-	Y	N/A
B	86m E	383700 397400	GAYTHORN GASWORKS M17	-	Y	N/A
B	86m E	383700 397400	GAYTHORN GASWORKS R1	-	Y	N/A

ID	Location	Grid reference	Name	Length	Confidential	Web link
B	86m E	383700 397400	GAYTHORN GASWORKS M4	-	Y	N/A
B	86m E	383700 397400	GAYTHORN GASWORKS M10	-	Y	N/A
B	86m E	383700 397400	GAYTHORN GASWORKS M12	-	Y	N/A
B	86m E	383700 397400	GAYTHORN GASWORKS R1	-	Y	N/A
5	121m S	383614 397122	MANCUNIAN WAY 4	13.11	N	1042491
6	126m SW	383487 397206	MANCUNIAN WAY 3	7.92	N	15635228
C	151m N	383650 397530	HACIENDA SITE WHITWORTH STREET MANCHESTER WS01	-	Y	N/A
7	156m SE	383778 397171	MANCUNIAN WAY 6	14.94	N	1042493
C	156m NE	383690 397520	HACIENDA SITE WHITWORTH STREET MANCHESTER WS06	-	Y	N/A
C	157m N	383670 397530	HACIENDA SITE WHITWORTH STREET MANCHESTER WS03	-	Y	N/A
C	157m N	383670 397530	HACIENDA SITE WHITWORTH STREET MANCHESTER WS04	-	Y	N/A
C	161m NE	383680 397530	HACIENDA SITE WHITWORTH STREET MANCHESTER WS05	-	Y	N/A
C	163m N	383660 397540	HACIENDA SITE WHITWORTH STREET MANCHESTER WS02	-	Y	N/A
C	167m NE	383710 397520	HACIENDA SITE WHITWORTH STREET MANCHESTER WS07	-	Y	N/A
D	177m N	383630 397560	GREAT BRIDGEWATER STREET 1	-	Y	N/A
8	177m SW	383447 397174	MANCUNIAN WAY 2	7.92	N	15635227
D	186m N	383608 397570	MANCHESTER CORP. B.SEWER	14.02	N	1042261
9	201m E	383820 397400	LOWER MEDLOCK UCSO'S CONTRACT 1 MAN 0285 503/503A	8.0	N	1043423
10	208m SE	383745 397076	MANCUNIAN WAY 5	15.24	N	1042492
E	215m NE	383780 397520	WHITWORTH STREET WEST MANCHESTER 1	-	Y	N/A
E	221m NE	383780 397530	WHITWORTH STREET WEST MANCHESTER 2	-	Y	N/A
11	229m SW	383374 397191	MANCUNIAN WAY 1	10.97	N	15635226
E	231m NE	383800 397520	WHITWORTH STREET WEST MANCHESTER 4	-	Y	N/A
E	237m NE	383800 397530	WHITWORTH STREET WEST MANCHESTER 3	-	Y	N/A

ID	Location	Grid reference	Name	Length	Confidential	Web link
12	238m W	383340 397360	LOWER MEDLOCK UCSO'S CONTRACT 1 MAN 0276 302	12.11	N	1043413
13	242m NW	383470 397580	FESTIVAL MARKETPLACE 3/1	-	Y	N/A
14	245m SE	383875 397162	MANCHESTER CORP. K.SEWER	9.45	N	1042244

This data is sourced from the British Geological Survey.

17 Natural ground subsidence - Shrink swell clays



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17.1 Shrink swell clays

Records within 50m	1

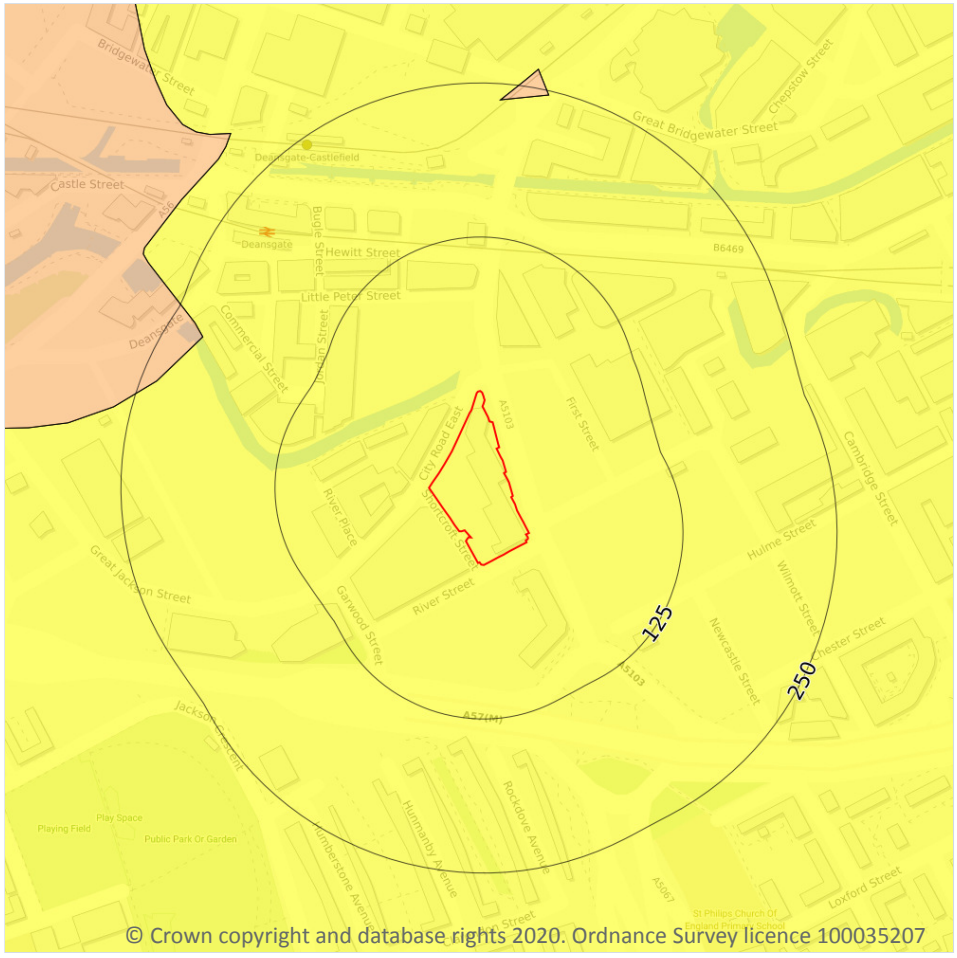
The potential hazard presented by soils that absorb water when wet (making them swell), and lose water as they dry (making them shrink). This shrink-swell behaviour is controlled by the type and amount of clay in the soil, and by seasonal changes in the soil moisture content (related to rainfall and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

Features are displayed on the Natural ground subsidence - Shrink swell clays map on **page 137**

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

17.2 Running sands

Records within 50m	1

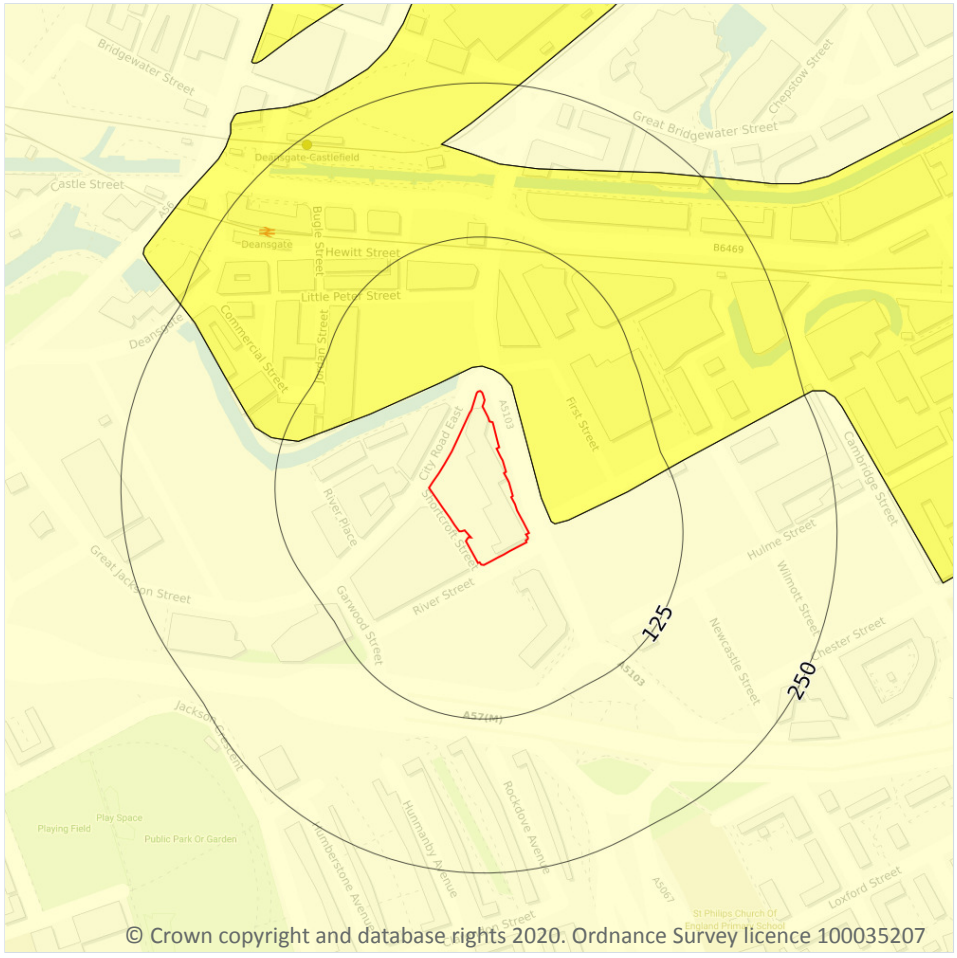
The potential hazard presented by rocks that can contain loosely-packed sandy layers that can become fluidised by water flowing through them. Such sands can 'run', removing support from overlying buildings and causing potential damage.

Features are displayed on the Natural ground subsidence - Running sands map on **page 138**

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.**

This data is sourced from the British Geological Survey.

Natural ground subsidence - Compressible deposits



Site Outline

Search buffers in metres (m)

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

17.3 Compressible deposits

Records within 50m	2

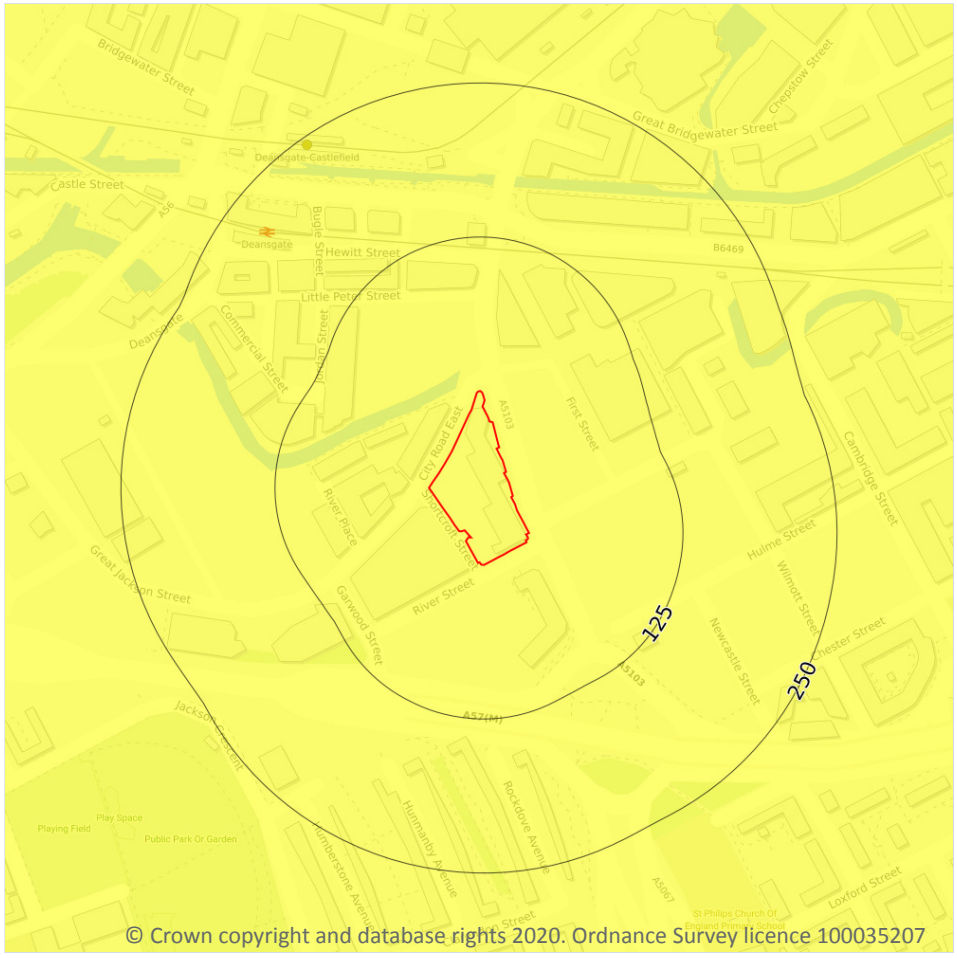
The potential hazard presented by types of ground that may contain layers of very soft materials like clay or peat and may compress if loaded by overlying structures, or if the groundwater level changes, potentially resulting in depression of the ground and disturbance of foundations.

Features are displayed on the Natural ground subsidence - Compressible deposits map on **page 139**

Location	Hazard rating	Details
On site	**Negligible**	**Compressible strata are not thought to occur.**
20m N	Very low	Compressibility and uneven settlement problems are not likely to be significant on the site for most land uses.

This data is sourced from the British Geological Survey.

Natural ground subsidence - Collapsible deposits



Site Outline

Search buffers in metres (m)

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

17.4 Collapsible deposits

Records within 50m	1

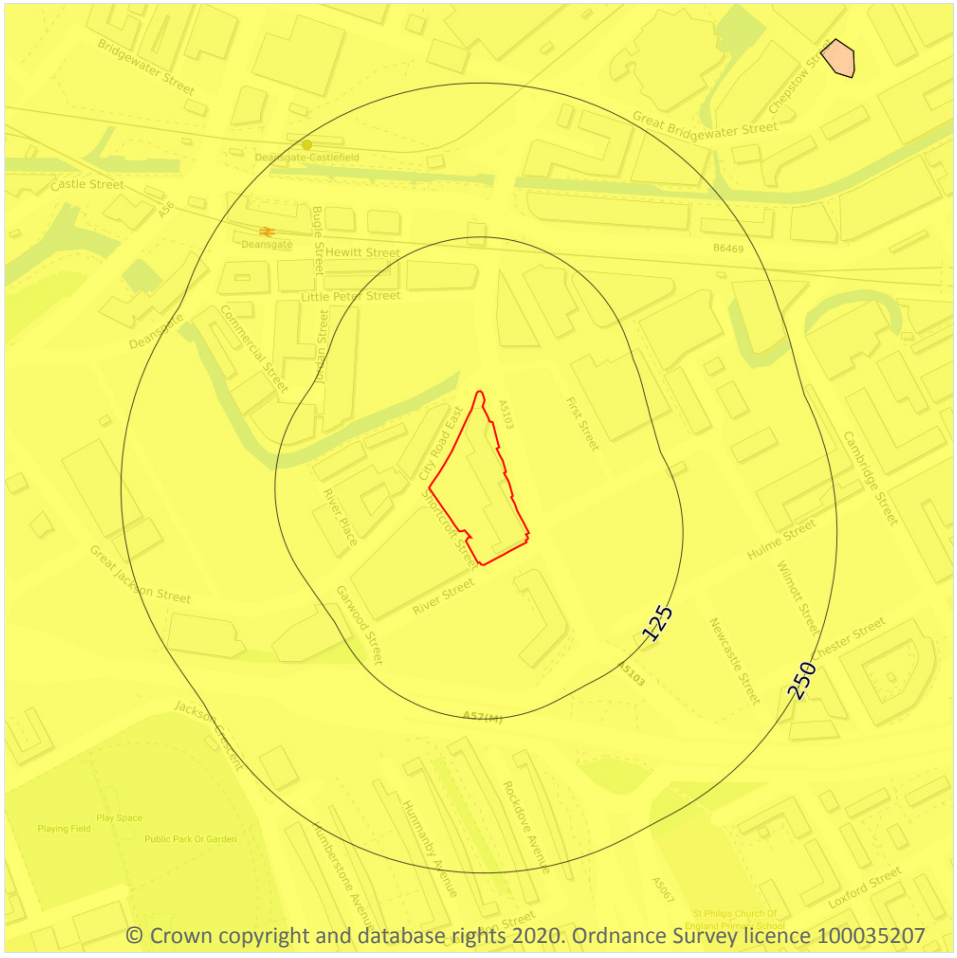
The potential hazard presented by natural deposits that could collapse when a load (such as a building) is placed on them or they become saturated with water.

Features are displayed on the Natural ground subsidence - Collapsible deposits map on **page 141**

Location	Hazard rating	Details
On site	**Very low**	**Deposits with potential to collapse when loaded and saturated are unlikely to be present.**

This data is sourced from the British Geological Survey.

Natural ground subsidence - Landslides



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Site Outline

Search buffers in metres (m)

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

17.5 Landslides

Records within 50m	1

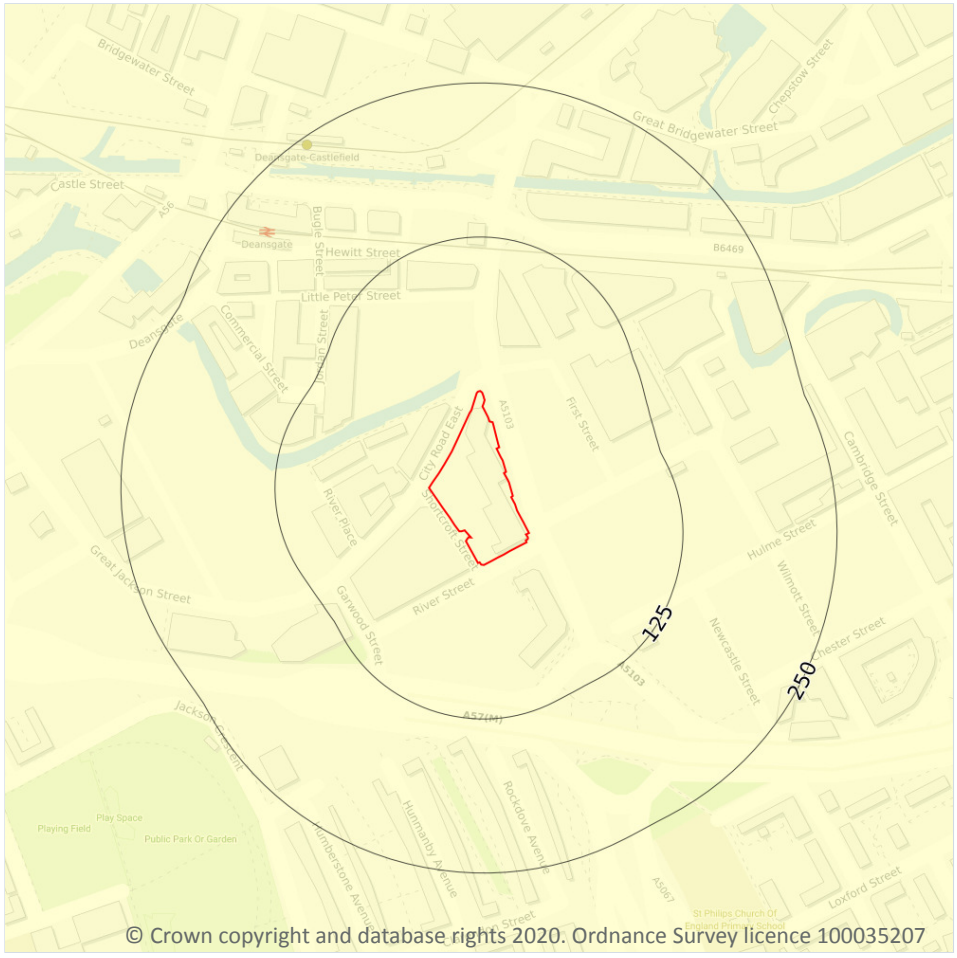
The potential for landsliding (slope instability) to be a hazard assessed using 1:50,000 scale digital maps of superficial and bedrock deposits, combined with information from the BGS National Landslide Database and scientific and engineering reports.

Features are displayed on the Natural ground subsidence - Landslides map on **page 142**

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.**

This data is sourced from the British Geological Survey.

Natural ground subsidence - Ground dissolution of soluble rocks



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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

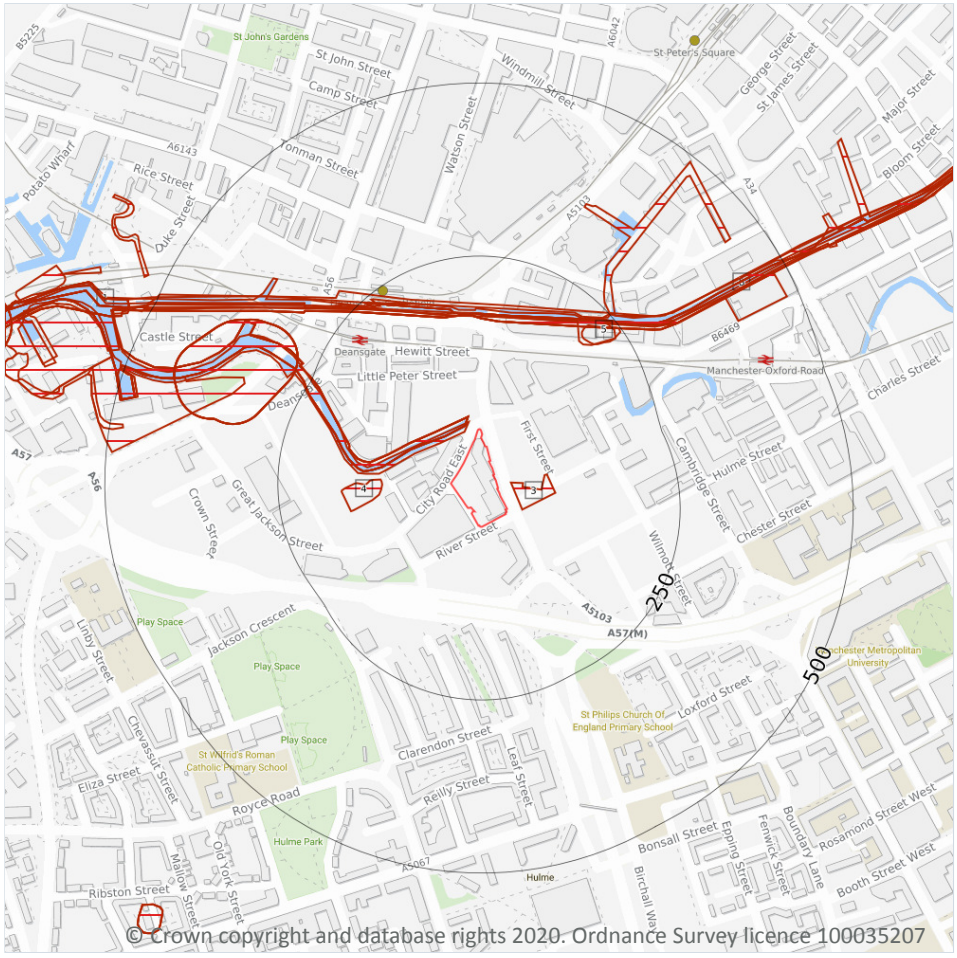
The potential hazard presented by ground dissolution, which occurs when water passing through soluble rocks produces underground cavities and cave systems. These cavities reduce support to the ground above and can cause localised collapse of the overlying rocks and deposits.

Features are displayed on the Natural ground subsidence - Ground dissolution of soluble rocks map on **page 143**

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, ground workings and natural cavities



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Site Outline

Search buffers in metres (m)

- Natural cavities (Area)
- Natural cavities (Point)
- BritPits
- Surface ground workings
- Underground workings
- Historical Mineral Planning Areas
- Mining Cavities

Non Coal Mining

- Sporadic underground mining of restricted extent possible
- Localised small scale underground mining possible
- Small scale mining possible
- Underground mining known or likely within or in close proximity
- Underground mining known within or in very close proximity

18.1 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 Peter Brett Associates (PBA).

18.2 BritPits

Records within 500m	0

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.

This data is sourced from the British Geological Survey.

18.3 Surface ground workings

Records within 250m	15

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, ground workings and natural cavities map on **page 145**

ID	Location	Land Use	Year of mapping	Mapping scale
1	17m NW	Canal	1988	1:10000
2	20m W	Canal	1956	1:10560
A	20m W	Canal	1971	1:10000
A	20m W	Canal	1978	1:10000
A	20m W	Canal	1985	1:10000
A	20m W	Canal	1994	1:10000
3	20m NE	Pond	1851	1:10560
4	99m W	Pond	1851	1:10560
B	158m N	Canal	1938	1:10560
B	158m N	Canal	1932	1:10560
B	158m N	Canal	1916	1:10560
B	158m N	Canal	1905	1:10560
B	158m N	Canal	1923	1:10560
B	164m N	Canal	1896	1:10560
5	199m NE	Pond	1851	1:10560

This is data is sourced from Ordnance Survey/Groundsure.

18.4 Underground workings

Records within 1000m	0

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

This is data is sourced from Ordnance Survey/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	0

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).

This data is sourced from the British Geological Survey.

18.7 Mining cavities

Records within 1000m	0

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.

This data is sourced from Peter Brett Associates (PBA).

18.8 JPB mining areas

Records on site	1

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

Location	Details
On site	**In addition to being located inside an area where The Coal Authority have information on coal mining activities, Johnson Poole & Bloomer (JPB) have information such as mining plans and maps held within their archive of mining activities that have occurred within 1km of this property which may supplement this information. Further details and a quote for services can be obtained by emailing this report to enquiries.gs@jpb.co.uk.**

This data is sourced from Johnson Poole and Bloomer.

18.9 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.

18.10 Brine areas

Records on site	**0**

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.

18.11 Gypsum areas

Records on site	**0**

Generalised areas that may be affected by gypsum extraction.

This data is sourced from British Gypsum.

18.12 Tin mining

Records on site	0

Generalised areas that may be affected by historical tin mining.

This data is sourced from Mining Searches UK.

18.13 Clay mining

Records on site	0

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 Radon

Site Outline

Search buffers in metres (m)

- Greater than 30%
- Between 10% and 30%
- Between 5% and 10%
- Between 3% and 5%
- Between 1% and 3%
- Less than 1%

19.1 Radon

Records on site	1

Estimated percentage of dwellings exceeding the Radon Action Level. This data is the highest resolution radon dataset available for the UK and is produced to a 75m level of accuracy to allow for geological data accuracy and a 'residential property' buffer. The findings of this section should supersede any estimations derived from the Indicative Atlas of Radon in Great Britain. The data was derived from both geological assessments and long term measurements of radon in more than 479,000 households.

Features are displayed on the Radon map on **page 150**

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

This data is sourced from the British Geological Survey and Public Health England.

20 Soil chemistry

20.1 BGS Estimated Background Soil Chemistry

Records within 50m	1

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 km^2. 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 km^2; 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 - 200 mg/kg**	**60 - 120 mg/kg**	**1.8 mg/kg**	**60 - 90 mg/kg**	**30 - 45 mg/kg**

This data is sourced from the British Geological Survey.

20.2 BGS Estimated Urban Soil Chemistry

Records within 50m	9

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 km^2).

Location	Arsenic (mg/kg)	Bioaccessible Arsenic (mg/kg)	Lead (mg/kg)	Bioaccessible Lead (mg/kg)	Cadmium (mg/kg)	Chromium (mg/kg)	Copper (mg/kg)	Nickel (mg/kg)	Tin (mg/kg)
On site	**22**	**3.8**	**78**	**54**	**0.4**	**98**	**34**	**28**	**7**
On site	**20**	**3.5**	**71**	**49**	**0.4**	**88**	**31**	**27**	**6**
On site	**19**	**3.3**	**42**	**29**	**0.3**	**79**	**28**	**26**	**5**
On site	**22**	**3.8**	**34**	**23**	**0.3**	**88**	**25**	**28**	**4**
16m N	18	3.2	67	46	0.5	75	29	24	5
20m NW	18	3.2	47	32	0.3	70	29	24	6
43m S	22	3.8	79	54	0.4	100	34	29	8

Location	Arsenic (mg/kg)	Bioaccessible Arsenic (mg/kg)	Lead (mg/kg)	Bioaccessible Lead (mg/kg)	Cadmium (mg/kg)	Chromium (mg/kg)	Copper (mg/kg)	Nickel (mg/kg)	Tin (mg/kg)
45m S	22	3.8	34	23	0.2	85	26	27	4
47m E	22	3.8	104	71	0.9	104	47	29	7

This data is sourced from the British Geological Survey.

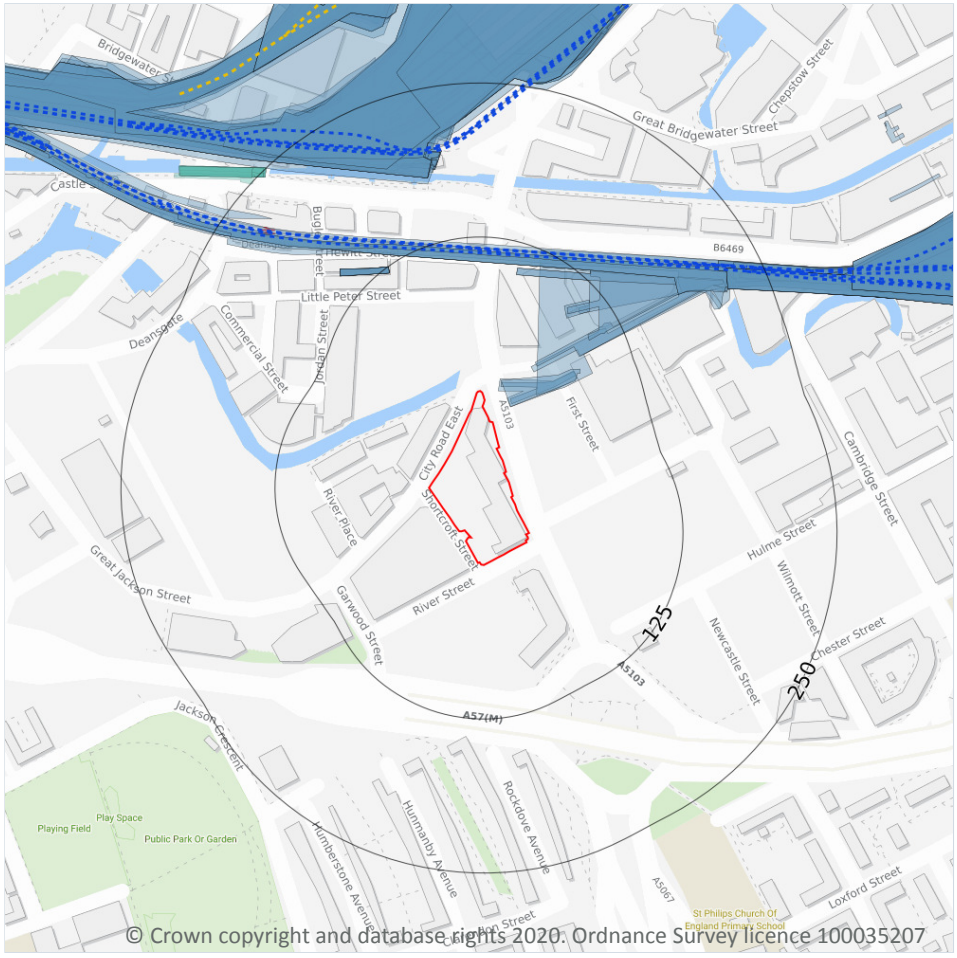
20.3 BGS Measured Urban Soil Chemistry

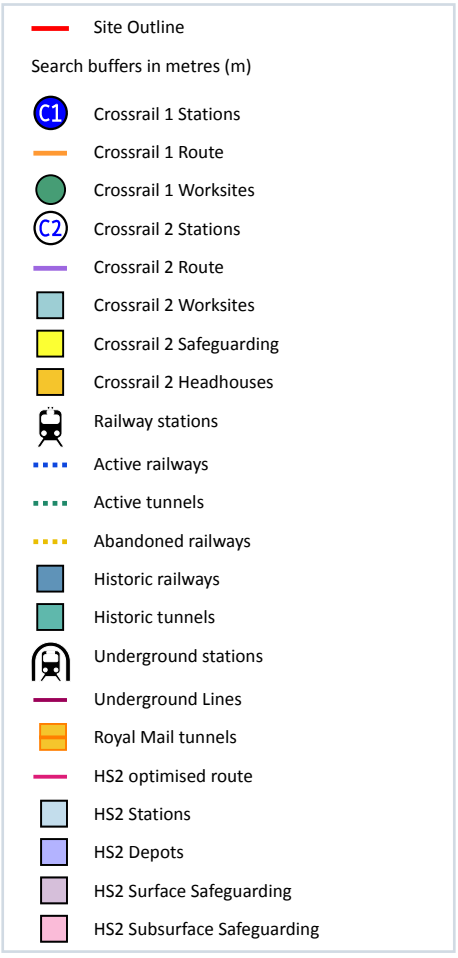
Records within 50m	0

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 km^2.

This data is sourced from the British Geological Survey.

21 Railway infrastructure and projects





21.1 Underground railways (London)

Records within 250m	0

Details of all active London Underground lines, including approximate tunnel roof depth and operational hours.

This data is sourced from publicly available information by Groundsure.

21.2 Underground railways (Non-London)

Records within 250m	0

Details of the Merseyrail system, the Tyne and Wear Metro and the Glasgow Subway. Not all parts of all systems are located underground. The data contains location information only and does not include a depth assessment.

This data is sourced from publicly available information by Groundsure.

21.3 Railway tunnels

Records within 250m	0

Railway tunnels taken from contemporary Ordnance Survey mapping.

This data is sourced from the Ordnance Survey.

21.4 Historical railway and tunnel features

Records within 250m	57

Railways and tunnels digitised from historical Ordnance Survey mapping as scales of 1:1,250, 1:2,500, 1:10,000 and 1:10,560.

Features are displayed on the Railway infrastructure and projects map on **page 153**

Location	Land Use	Year of mapping	Mapping scale
13m E	Railway Sidings	1893	2500
16m E	Railway Sidings	1891	500
18m E	Railway Sidings	1896	10560
42m NE	Railways	1893	-
45m NE	Railway Sidings	1922	2500
49m NE	Railway	1922	-
91m NE	Railway Sidings	1893	2500
95m NE	Railway Sidings	1891	500
99m N	Railway Sidings	1932	2500
105m N	Railway Sidings	1893	2500
105m N	Railway Sidings	1908	2500
110m N	Railway	1932	-
120m NW	Railway Sidings	1980	1250
120m NW	Railway Sidings	1985	1250
120m NW	Railway Sidings	1987	1250
120m NW	Railway Sidings	1990	1250
173m N	Railway Sidings	1923	10560

Location	Land Use	Year of mapping	Mapping scale
178m N	Railway Sidings	1938	10560
178m N	Railway Sidings	1932	10560
178m N	Railway Sidings	1916	10560
178m N	Railway Sidings	1905	10560
184m N	Railway Sidings	1948	2500
184m N	Railway Sidings	1979	2500
184m N	Railway Sidings	1963	2500
186m N	Railway Sidings	1951	1250
186m N	Railway Sidings	1948	1250
188m N	Railway Sidings	1891	500
195m N	Railway Sidings	1896	10560
195m N	Railway Sidings	1956	10560
209m NW	Railways	1893	-
216m NE	Railway Sidings	1948	2500
216m NE	Railway Sidings	1979	2500
216m NE	Railway Sidings	1938	10560
216m NE	Railway Sidings	1932	10560
216m NE	Railway Sidings	1916	10560
216m NE	Railway Sidings	1905	10560
216m NE	Railway Sidings	1923	10560
218m NW	Railway Sidings	1955	-
221m N	Railway Sidings	1891	500
224m NE	Railway Sidings	1963	2500
229m NE	Railway Sidings	1969	1250
229m NE	Railway Sidings	1953	1250
229m N	Railway Sidings	1891	500
230m NE	Railway Sidings	1980	1250
244m N	Railway Sidings	1891	500

Location	Land Use	Year of mapping	Mapping scale
245m NW	Tunnel	1948	2500
245m NW	Tunnel	1979	2500
245m NW	Tunnel	1963	2500
245m NW	Tunnel	1995	1250
245m NW	Tunnel	1994	1250
245m NW	Tunnel	1955	-
246m NW	Tunnel	1948	1250
246m NW	Tunnel	1963	1250
246m NW	Tunnel	1979	1250
246m NW	Tunnel	1981	1250
248m NW	Tunnel	1932	-
249m NW	Tunnel	1932	2500

This data is sourced from Ordnance Survey/Groundsure.

21.5 Royal Mail tunnels

Records within 250m	0

The Post Office Railway, otherwise known as the Mail Rail, is an underground railway running through Central London from Paddington Head District Sorting Office to Whitechapel Eastern Head Sorting Office. The line is 10.5km long. The data includes details of the full extent of the tunnels, the depth of the tunnel, and the depth to track level.

This data is sourced from Groundsure/the Postal Museum.

21.6 Historical railways

Records within 250m	0

Former railway lines, including dismantled lines, abandoned lines, disused lines, historic railways and razed lines.

This data is sourced from OpenStreetMap.

21.7 Railways

Records within 250m	25

Currently existing railway lines, including standard railways, narrow gauge, funicular, trams and light railways.

Features are displayed on the Railway infrastructure and projects map on **page 153**

Location	Name	Type
112m N	-	rail
114m N	-	rail
116m N	-	rail
116m N	Not given	Multi Track
170m NE	-	rail
198m N	-	light_rail
200m N	Not given	Multi Track
200m N	Not given	Multi Track
201m N	Not given	Multi Track
202m N	-	tram
203m N	Not given	Multi Track
204m N	Not given	Multi Track
204m N	-	light_rail
204m N	-	light_rail
205m N	Not given	Multi Track
205m N	-	light_rail
210m N	Not given	Multi Track
212m N	Not given	Multi Track
217m N	Not given	Multi Track
218m NW	-	light_rail
234m NE	-	rail
237m NE	-	rail
238m NW	-	light_rail
242m NE	Not given	Multi Track

Location	Name	Type
242m NE	Not given	Multi Track

This data is sourced from Ordnance Survey and OpenStreetMap.

21.8 Crossrail 1

Records within 500m	0

The Crossrail railway project links 41 stations over 100 kilometres from Reading and Heathrow in the west, through underground sections in central London, to Shenfield and Abbey Wood in the east.

This data is sourced from publicly available information by Groundsure.

21.9 Crossrail 2

Records within 500m	0

Crossrail 2 is a proposed railway linking the national rail networks in Surrey and Hertfordshire via an underground tunnel through London.

This data is sourced from publicly available information by Groundsure.

21.10 HS2

Records within 500m	0

HS2 is a proposed high speed rail network running from London to Manchester and Leeds via Birmingham. Main civils construction on Phase 1 (London to Birmingham) of the project began in 2019, and it is currently anticipated that this phase will be fully operational by 2026. Construction on Phase 2a (Birmingham to Crewe) is anticipated to commence in 2021, with the service fully operational by 2027. Construction on Phase 2b (Crewe to Manchester and Birmingham to Leeds) is scheduled to begin in 2023 and be operational by 2033.

This data is sourced from HS2 ltd.

Data providers

Groundsure works with respected data providers to bring you the most relevant and accurate information. To find out who they are and their areas of expertise see https://www.groundsure.com/sources-reference.

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