

ID	Location	Main Habitat	Other habitats
2	67m SE	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
3	89m S	Deciduous woodland	Main habitat: DWOOD (INV > 50%)

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

1

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.

Features are displayed on the Habitat designations map on [page 91 >](#)

ID	Location	Site reference	Identification confidence	Primary source	Secondary source	Tertiary source
4	216m N	BRITPITS ref: 73857; HLD_refs: EAHLD35046	Low	British Geological Survey BRITPITS database	Environment Agency Historic Landfill Sites	UK Perspectives Aerial Photography

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

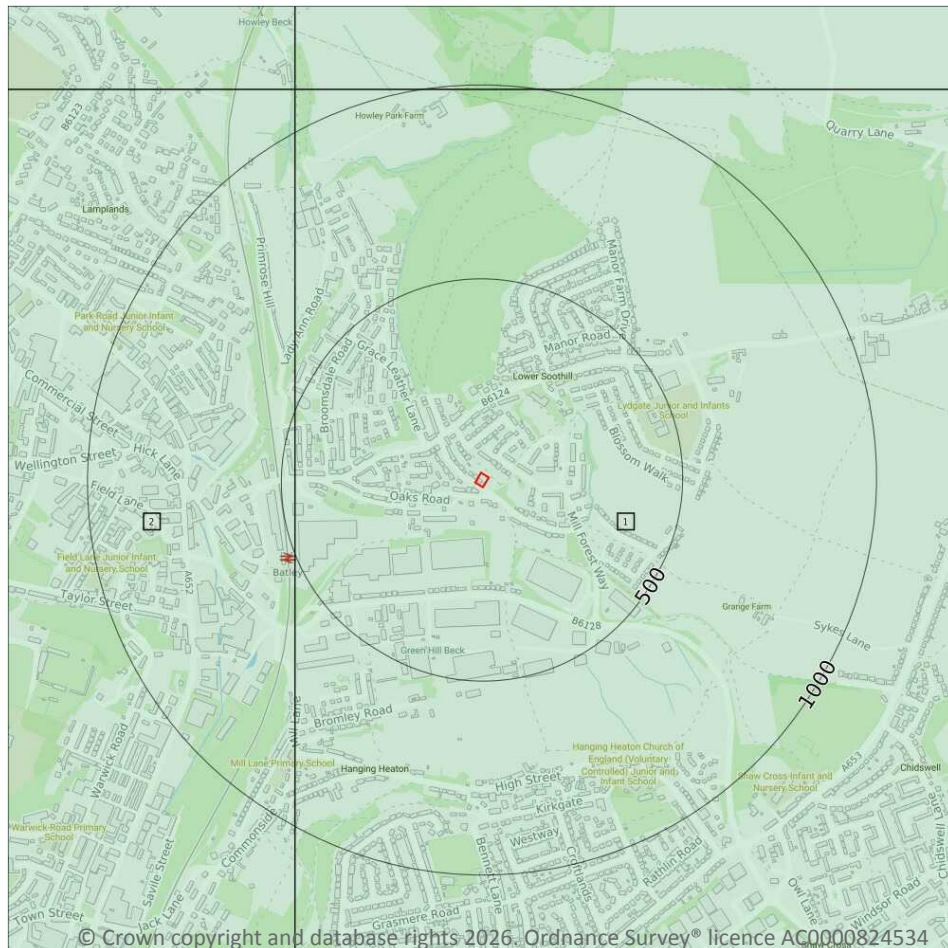


them additional protection via the creation of Limestone Pavement Orders, which made it a criminal offence to remove any part of the outcrop. The associated Limestone Pavement Priority Habitat is part of the UK Biodiversity Action Plan priority habitat in England.

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.

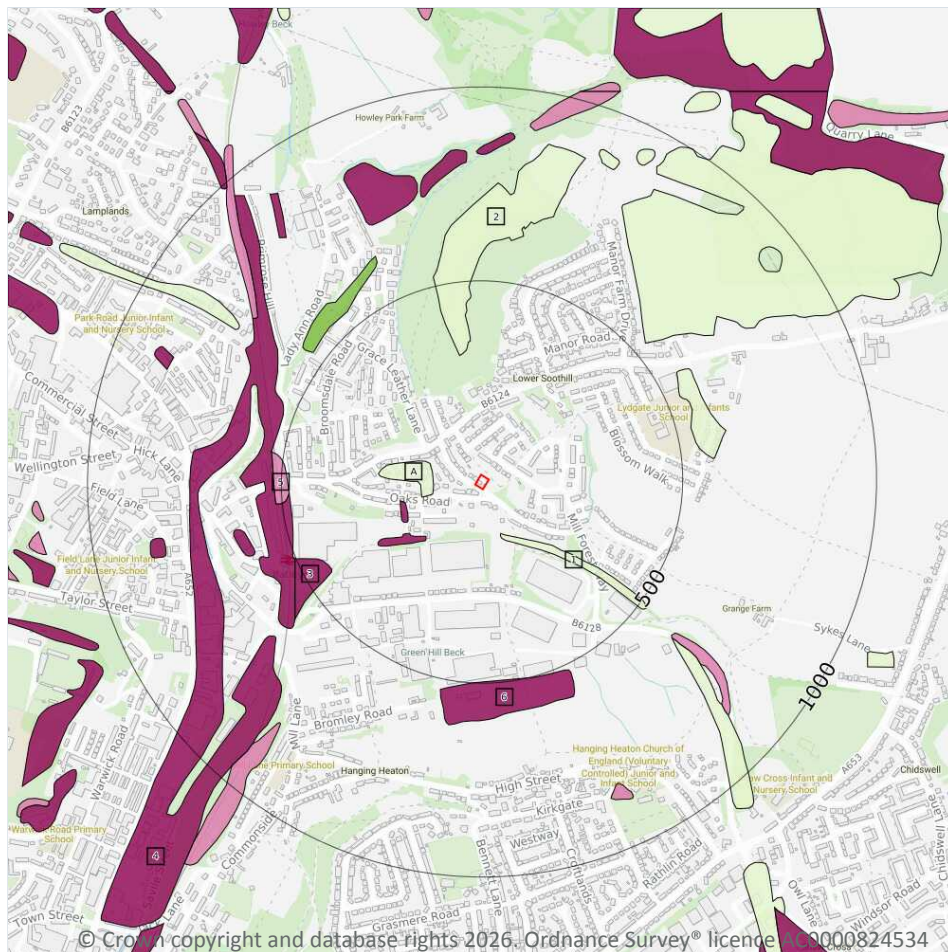
Features are displayed on the Geology 1:10,000 scale - Availability map on [page 94](#) >

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	Full	Full	Full	No coverage	SE22SE
2	465m W	Full	Full	Full	Full	SE22SW

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

9

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 95](#) >

ID	Location	LEX Code	Description	Rock description
A	107m W	WMGR-ARTDP	Infilled Ground	Artificial deposit
1	123m S	WMGR-ARTDP	Infilled Ground	Artificial deposit
A	184m SW	MGR-ARTDP	Made Ground (Undivided)	Artificial deposit
A	186m W	MGR-ARTDP	Made Ground (Undivided)	Artificial deposit



ID	Location	LEX Code	Description	Rock description
2	312m N	WMGR-ARTDP	Infilled Ground	Artificial deposit
3	430m SW	MGR-ARTDP	Made Ground (Undivided)	Artificial deposit
4	479m W	MGR-ARTDP	Made Ground (Undivided)	Artificial deposit
5	480m W	WGR-VOID	Worked Ground (Undivided)	Void
6	495m S	MGR-ARTDP	Made Ground (Undivided)	Artificial deposit

This data is sourced from the British Geological Survey.



Geology 1:10,000 scale - Superficial

14.3 Superficial geology (10k)

Records within 500m

0

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.

This data is sourced from the British Geological Survey.

14.4 Landslip (10k)

Records within 500m

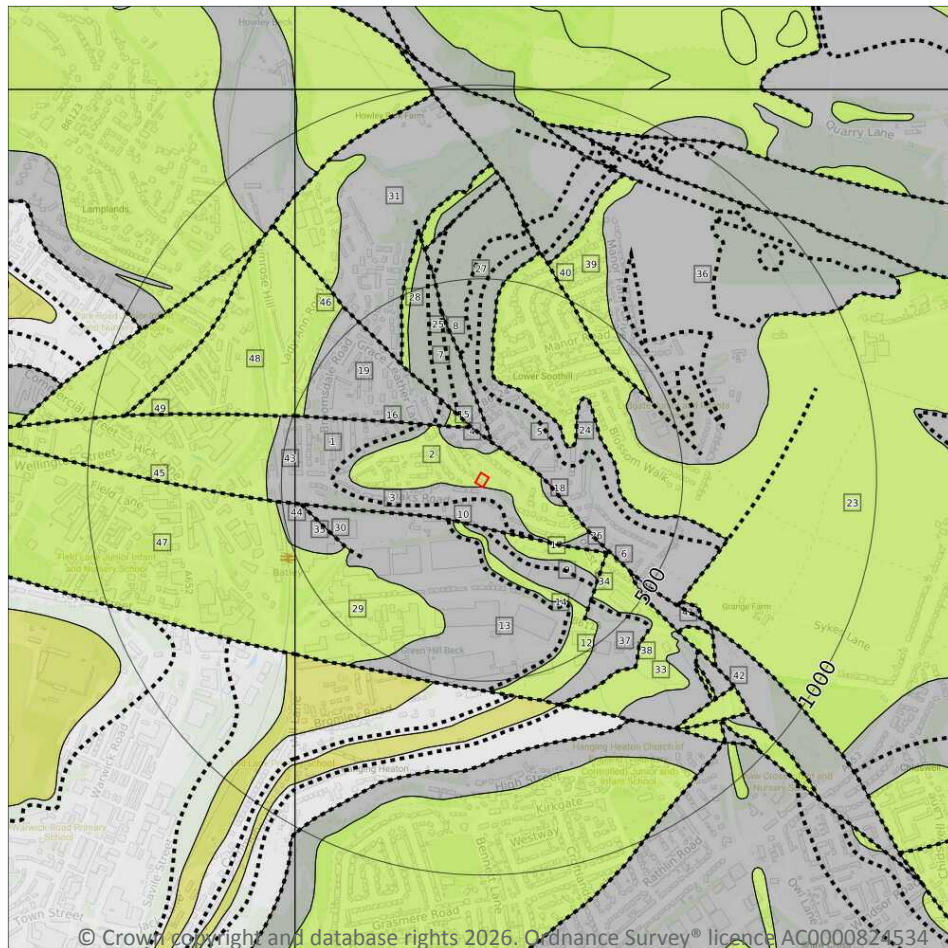
0

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

28

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 98](#) >

ID	Location	LEX Code	Description	Rock age
1	On site	PMCM-MDSS	Pennine Middle Coal Measures Formation-Mudstone, Siltstone And Sandstone	Westphalian
2	On site	HMR-SDST	Haigh Moor Rock-Sandstone	Westphalian
4	50m N	PMCM-MDSS	Pennine Middle Coal Measures Formation-Mudstone, Siltstone And Sandstone	Westphalian



ID	Location	LEX Code	Description	Rock age
5	80m NE	PMCM-MDSS	Pennine Middle Coal Measures Formation-Mudstone, Siltstone And Sandstone	Westphalian
7	84m N	PMCM-MDSS	Pennine Middle Coal Measures Formation-Mudstone, Siltstone And Sandstone	Westphalian
9	101m S	PMCM-MDSS	Pennine Middle Coal Measures Formation-Mudstone, Siltstone And Sandstone	Westphalian
12	106m SW	PMCM-SDST	Pennine Middle Coal Measures Formation-Sandstone	Westphalian
13	113m SW	PMCM-MDSS	Pennine Middle Coal Measures Formation-Mudstone, Siltstone And Sandstone	Westphalian
15	119m N	HMR-SDST	Haigh Moor Rock-Sandstone	Westphalian
17	130m SE	HMR-SDST	Haigh Moor Rock-Sandstone	Westphalian
18	135m E	PMCM-MDSS	Pennine Middle Coal Measures Formation-Mudstone, Siltstone And Sandstone	Westphalian
19	152m NW	PMCM-MDSS	Pennine Middle Coal Measures Formation-Mudstone, Siltstone And Sandstone	Westphalian
23	215m NE	PMCM-SDST	Pennine Middle Coal Measures Formation-Sandstone	Westphalian
26	242m SE	PMCM-MDSS	Pennine Middle Coal Measures Formation-Mudstone, Siltstone And Sandstone	Westphalian
28	316m NW	HMR-SDST	Haigh Moor Rock-Sandstone	Westphalian
29	321m SW	TR-SDST	Thornhill Rock-Sandstone	Westphalian
31	346m NW	PMCM-MDSS	Pennine Middle Coal Measures Formation-Mudstone, Siltstone And Sandstone	Westphalian
33	360m SE	HMR-SDST	Haigh Moor Rock-Sandstone	Westphalian
35	374m SW	PMCM-MDSS	Pennine Middle Coal Measures Formation-Mudstone, Siltstone And Sandstone	Westphalian
36	395m E	PMCM-MDSS	Pennine Middle Coal Measures Formation-Mudstone, Siltstone And Sandstone	Westphalian
37	399m SE	PMCM-MDSS	Pennine Middle Coal Measures Formation-Mudstone, Siltstone And Sandstone	Westphalian
39	430m NE	HRR-SDST	Horbury Rock-Sandstone	Westphalian
41	438m SE	PMCM-MDSS	Pennine Middle Coal Measures Formation-Mudstone, Siltstone And Sandstone	Westphalian
43	465m W	PMCM-MDSS	Pennine Middle Coal Measures Formation-Mudstone, Siltstone And Sandstone	Westphalian



ID	Location	LEX Code	Description	Rock age
44	468m W	PMCM-MDSS	Pennine Middle Coal Measures Formation-Mudstone, Siltstone And Sandstone	Westphalian
46	474m W	TR-SDST	Thornhill Rock-Sandstone	Westphalian
47	493m W	TR-SDST	Thornhill Rock-Sandstone	Westphalian
48	496m W	TR-SDST	Thornhill Rock-Sandstone	Westphalian

This data is sourced from the British Geological Survey.

14.6 Bedrock faults and other linear features (10k)

Records within 500m

21

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 98 >](#)

ID	Location	Category	Description
3	32m S	ROCK	Coal seam, inferred
6	80m NE	FAULT	Fault, inferred, displacement unknown
8	84m N	FAULT	Fault, inferred, displacement unknown
10	101m S	FAULT	Fault, inferred, displacement unknown
11	104m S	ROCK	Coal seam, inferred
14	119m SW	ROCK	Coal seam, inferred
16	119m N	FAULT	Fault, inferred, displacement unknown
20	159m N	ROCK	Coal seam, inferred
21	174m NW	ROCK	Coal seam, inferred
22	188m E	ROCK	Coal seam, inferred
24	215m NE	ROCK	Coal seam, inferred
25	230m NW	ROCK	Coal seam, inferred
27	312m N	ROCK	Coal seam, observed
30	346m SW	FAULT	Fault, inferred, displacement unknown
32	346m NW	ROCK	Coal seam, inferred

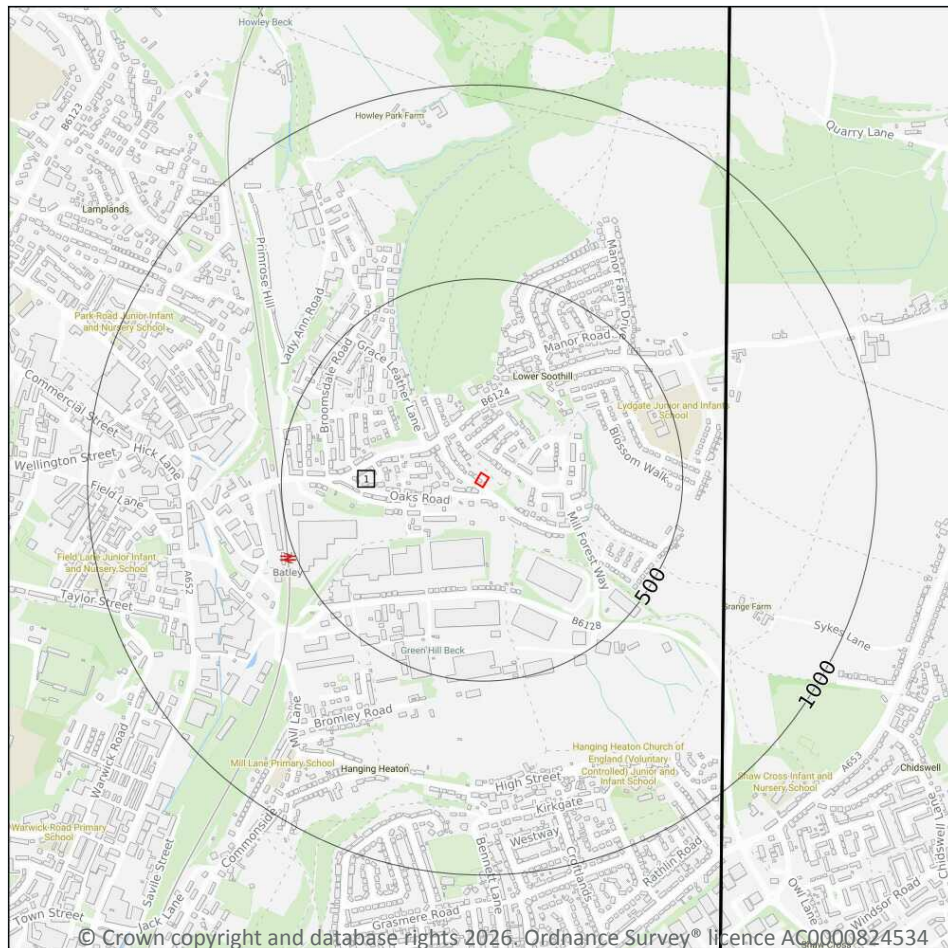


ID	Location	Category	Description
34	360m SE	FAULT	Fault, inferred, displacement unknown
38	405m SE	ROCK	Coal seam, inferred
40	430m NE	FAULT	Fault, inferred, displacement unknown
42	438m SE	FAULT	Fault, inferred, displacement unknown
45	468m W	FAULT	Fault, inferred, displacement unknown
49	496m W	FAULT	Fault, inferred, displacement unknown

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 102](#) >

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	Full	Full	Full	Full	EW077_huddersfield_v4

This data is sourced from the British Geological Survey.



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

103

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

15.4 Superficial geology (50k)

Records within 500m

0

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.

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

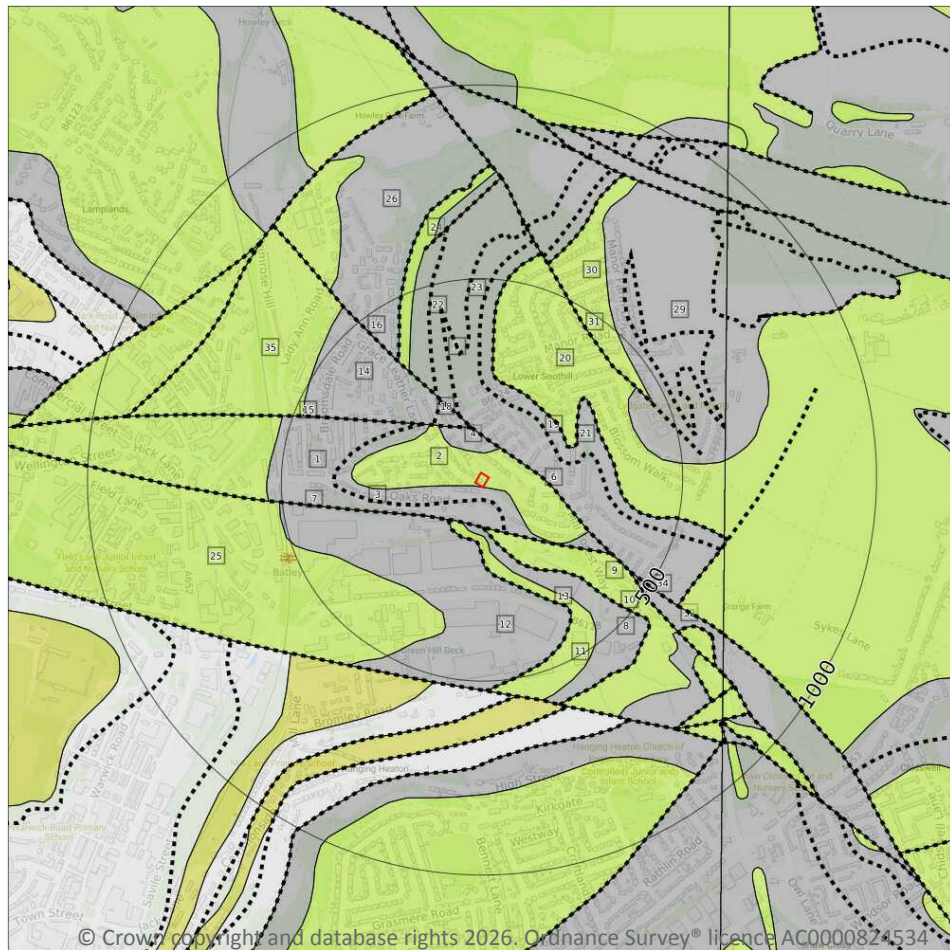
0

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

17

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 106](#) >

ID	Location	LEX Code	Description	Rock age
1	On site	PMCM-MDSS	Pennine Middle Coal Measures Formation-Mudstone, siltstone and sandstone	Westphalian
2	On site	HMR-SDST	Haigh Moor Rock-Sandstone	Westphalian
4	51m N	PMCM-MDSS	Pennine Middle Coal Measures Formation-Mudstone, siltstone and sandstone	Westphalian



ID	Location	LEX Code	Description	Rock age
5	80m NE	PMCM-MDSS	Pennine Middle Coal Measures Formation-Mudstone, siltstone and sandstone	Westphalian
8	101m S	PMCM-MDSS	Pennine Middle Coal Measures Formation-Mudstone, siltstone and sandstone	Westphalian
9	104m S	HMR-SDST	Haigh Moor Rock-Sandstone	Westphalian
11	105m SW	PMCM-SDST	Pennine Middle Coal Measures Formation-Sandstone	Westphalian
12	119m SW	PMCM-MDSS	Pennine Middle Coal Measures Formation-Mudstone, siltstone and sandstone	Westphalian
14	119m N	PMCM-MDSS	Pennine Middle Coal Measures Formation-Mudstone, siltstone and sandstone	Westphalian
20	218m E	HRR-SDST	Horbury Rock-Sandstone	Westphalian
24	321m NW	HMR-SDST	Haigh Moor Rock-Sandstone	Westphalian
25	323m SW	TR-SDST	Thornhill Rock-Sandstone	Westphalian
26	356m NW	PMCM-MDSS	Pennine Middle Coal Measures Formation-Mudstone, siltstone and sandstone	Westphalian
29	394m E	PMCM-MDSS	Pennine Middle Coal Measures Formation-Mudstone, siltstone and sandstone	Westphalian
30	429m NE	HRR-SDST	Horbury Rock-Sandstone	Westphalian
32	438m SE	PMCM-MDSS	Pennine Middle Coal Measures Formation-Mudstone, siltstone and sandstone	Westphalian
35	476m W	TR-SDST	Thornhill Rock-Sandstone	Westphalian

This data is sourced from the British Geological Survey.

15.9 Bedrock permeability (50k)

Records within 50m

2

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

Location	Flow type	Maximum permeability	Minimum permeability
On site	Fracture	Moderate	Low
On site	Fracture	High	Moderate

This data is sourced from the British Geological Survey.



15.10 Bedrock faults and other linear features (50k)

Records within 500m

18

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.

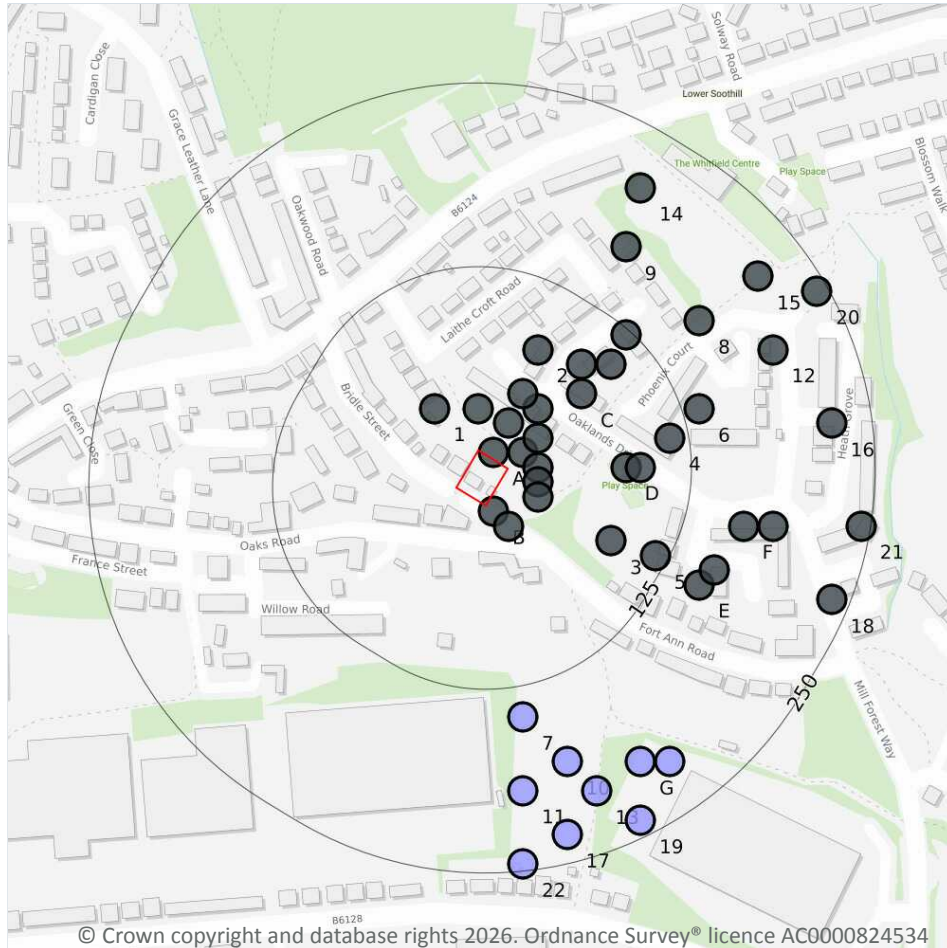
Features are displayed on the Geology 1:50,000 scale - Bedrock map on [page 106](#) >

ID	Location	Category	Description
3	32m S	ROCK	Coal seam, inferred
6	80m NE	FAULT	Fault, inferred, crossmark on downthrow side, throw in metres
7	101m S	FAULT	Fault, inferred, crossmark on downthrow side, throw in metres
10	104m S	ROCK	Coal seam, inferred
13	119m SW	ROCK	Coal seam, inferred
15	119m N	FAULT	Fault, inferred, crossmark on downthrow side, throw in metres
16	119m N	FAULT	Fault, inferred, crossmark on downthrow side, throw in metres
17	159m N	ROCK	Coal seam, inferred
18	174m NW	ROCK	Coal seam, inferred
19	185m NE	ROCK	Coal seam, inferred
21	218m E	ROCK	Coal seam, inferred
22	229m NW	ROCK	Coal seam, inferred
23	312m N	ROCK	Coal seam, inferred
27	356m NW	ROCK	Coal seam, inferred
28	371m SE	FAULT	Fault, inferred, crossmark on downthrow side, throw in metres
31	429m NE	FAULT	Fault, inferred, crossmark on downthrow side, throw in metres
33	438m SE	FAULT	Fault, inferred, displacement unknown
34	438m SE	FAULT	Fault, inferred, displacement unknown

This data is sourced from the British Geological Survey.



16 Boreholes



16.1 BGS Boreholes

Records within 250m

46

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 109](#) >

ID	Location	Grid reference	Name	Length	Confidential	Web link
A	4m NE	425490 424010	SOOTHILL LANE /SYKES LANE BATLEY 3	-	Y	N/A
B	7m SE	425490 423970	SOOTHILL LANE /SYKES LANE BATLEY 1	-	Y	N/A
A	15m NE	425510 424010	LOWER SOOTHILL BATLEY TP8	-	Y	N/A



ID	Location	Grid reference	Name	Length	Confidential	Web link
A	20m E	425520 424000	SOOTHILL LANE /SYKES LANE BATLEY 7	-	Y	N/A
B	21m SE	425500 423960	SOOTHILL LANE /SYKES LANE BATLEY 2	-	Y	N/A
A	22m SE	425520 423990	SOOTHILL LANE /SYKES LANE BATLEY 4	-	Y	N/A
A	26m NE	425500 424030	SOOTHILL LANE /SYKES LANE BATLEY 8	-	Y	N/A
A	27m SE	425520 423980	LOWER SOOTHILL BATLEY TP7	-	Y	N/A
A	29m N	425480 424040	LOWER SOOTHILL BATLEY TP21	-	Y	N/A
A	29m NE	425520 424020	SOOTHILL LANE /SYKES LANE BATLEY 9	-	Y	N/A
1	41m NW	425450 424040	LOWER SOOTHILL BATLEY TP9	-	Y	N/A
A	45m NE	425520 424040	LOWER SOOTHILL BATLEY TP10	-	Y	N/A
A	49m NE	425510 424050	SOOTHILL LANE /SYKES LANE BATLEY 12	-	Y	N/A
C	72m NE	425550 424050	SOOTHILL LANE /SYKES LANE BATLEY 14	-	Y	N/A
2	80m NE	425520 424080	LOWER SOOTHILL BATLEY TP22	-	Y	N/A
D	80m E	425580 424000	SOOTHILL LANE /SYKES LANE BATLEY 10	-	Y	N/A
3	86m SE	425570 423950	LOWER SOOTHILL BATLEY TP14	-	Y	N/A
C	87m NE	425550 424070	SOOTHILL LANE /SYKES LANE BATLEY 16	-	Y	N/A
D	90m E	425590 424000	LOWER SOOTHILL BATLEY TP13	-	Y	N/A
C	100m NE	425570 424070	LOWER SOOTHILL BATLEY TP6	-	Y	N/A
4	112m E	425610 424020	SOOTHILL LANE /SYKES LANE BATLEY 15	-	Y	N/A
5	116m SE	425600 423940	SOOTHILL LANE /SYKES LANE BATLEY 5	-	Y	N/A
C	121m NE	425580 424090	SOOTHILL LANE /SYKES LANE BATLEY 17	-	Y	N/A
6	137m E	425630 424040	LOWER SOOTHILL BATLEY TP12	-	Y	N/A
7	146m S	425510 423830	BATLEY BADLANDS PHASE1 TP3	2.0	N	104985 ↗
E	152m SE	425630 423920	LOWER SOOTHILL BATLEY TP15	-	Y	N/A
E	156m SE	425640 423930	SOOTHILL LANE /SYKES LANE BATLEY 6	-	Y	N/A
8	165m NE	425630 424100	LOWER SOOTHILL BATLEY TP4	-	Y	N/A
F	165m E	425660 423960	SOOTHILL LANE /SYKES LANE BATLEY 11	-	Y	N/A
9	171m NE	425580 424150	LOWER SOOTHILL BATLEY TP5	-	Y	N/A
10	183m S	425540 423800	BATLEY BADLANDS PHASE1 TP4	3.0	N	104986 ↗

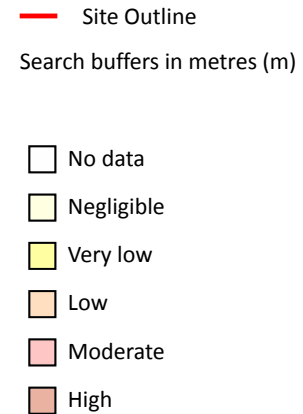
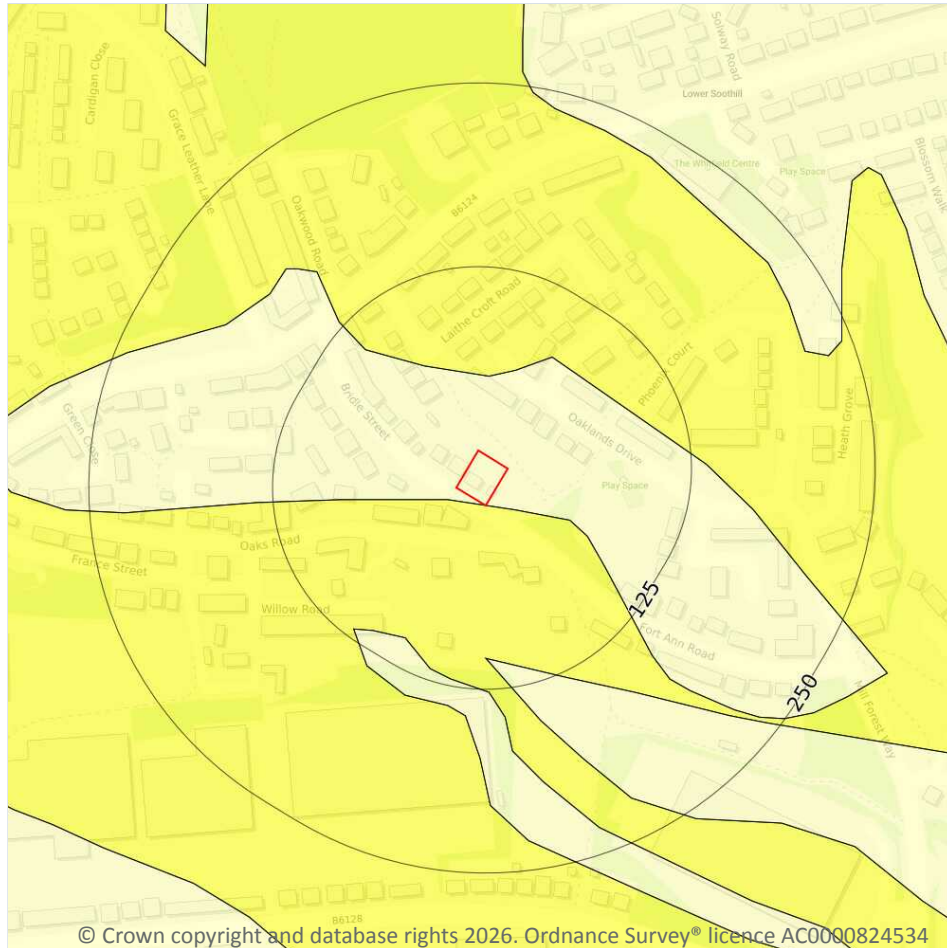


ID	Location	Grid reference	Name	Length	Confidential	Web link
F	184m E	425680 423960	LOWER SOOTHILL BATLEY TP18	-	Y	N/A
11	196m S	425510 423780	BATLEY BADLANDS PHASE1 TP2	3.0	N	104984 ↗
12	198m NE	425680 424080	LOWER SOOTHILL BATLEY TP11	-	Y	N/A
G	203m SE	425590 423800	BATLEY BADLANDS PHASE1 TP8	4.0	N	104990 ↗
13	208m S	425560 423780	BATLEY BADLANDS PHASE1 TP7	3.0	N	104989 ↗
14	210m NE	425590 424190	LOWER SOOTHILL BATLEY TP1	-	Y	N/A
G	214m SE	425610 423800	BATLEY BADLANDS PHASE1 10	4.0	N	104978 ↗
15	215m NE	425670 424130	LOWER SOOTHILL BATLEY TP2	-	Y	N/A
16	222m E	425720 424030	LOWER SOOTHILL BATLEY TP19	-	Y	N/A
17	231m S	425540 423750	BATLEY BADLANDS PHASE1 TP5	2.0	N	104987 ↗
18	238m E	425720 423910	LOWER SOOTHILL BATLEY TP16	-	Y	N/A
19	239m SE	425590 423760	BATLEY BADLANDS PHASE1 TP9	2.0	N	104991 ↗
20	243m NE	425710 424120	SOOTHILL LANE /SYKES LANE BATLEY 18	-	Y	N/A
21	243m E	425740 423960	LOWER SOOTHILL BATLEY TP17	-	Y	N/A
22	245m S	425510 423730	BATLEY BADLANDS PHASE1 TP1	2.0	N	104983 ↗

This data is sourced from the British Geological Survey.



17 Natural ground subsidence - Shrink swell clays



17.1 Shrink swell clays

Records within 50m

2

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).

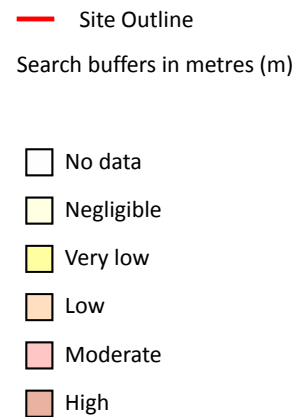
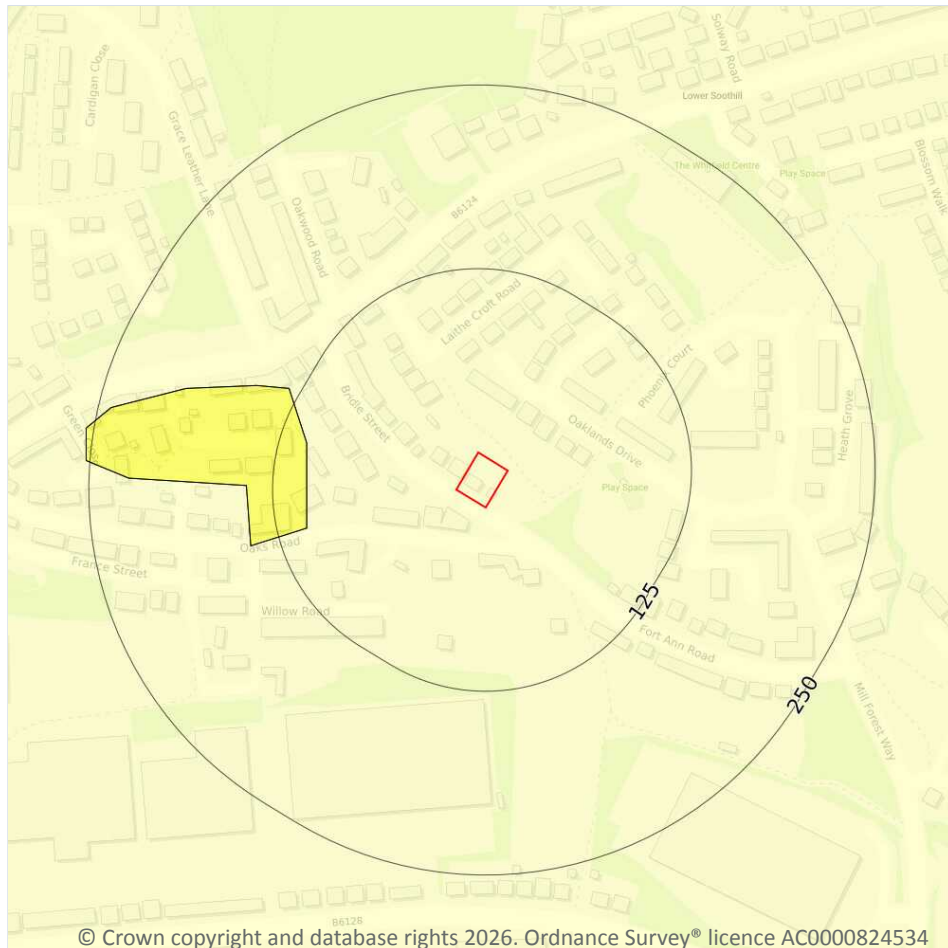
Features are displayed on the Natural ground subsidence - Shrink swell clays map on [page 112 >](#)

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

This data is sourced from the British Geological Survey.



Natural ground subsidence - Running sands



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.

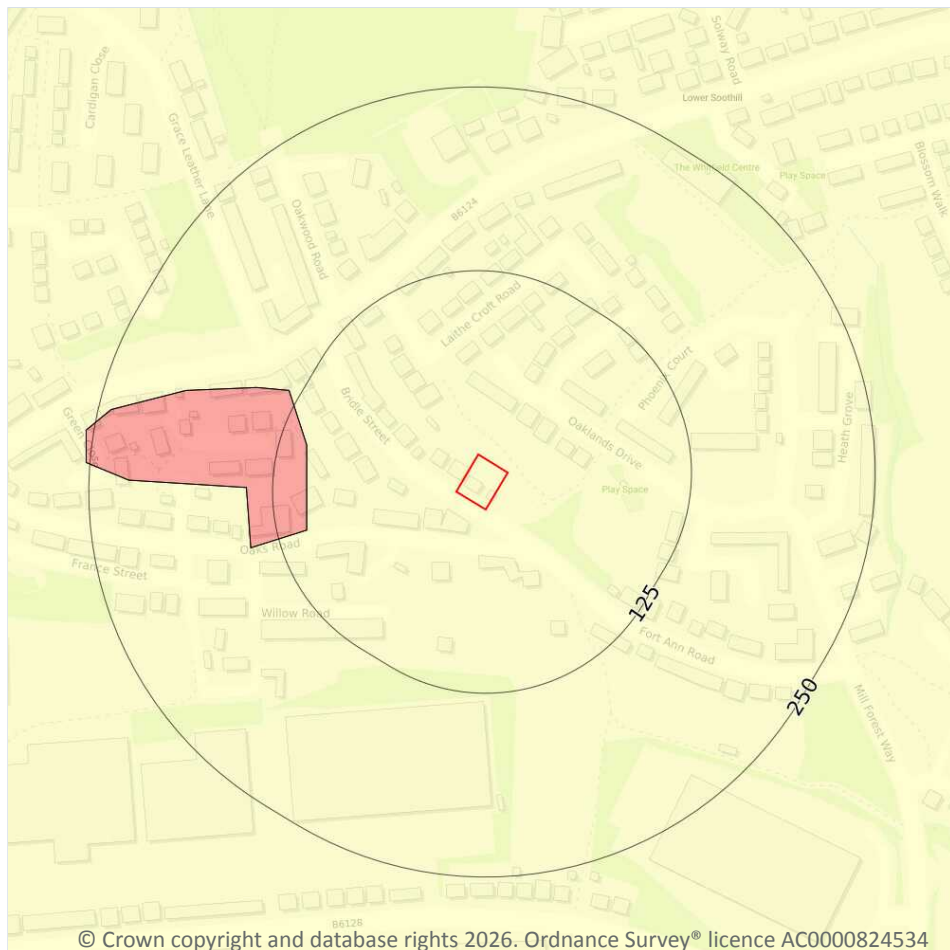
Features are displayed on the Natural ground subsidence - Running sands map on [page 113](#) >

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.



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

1

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.

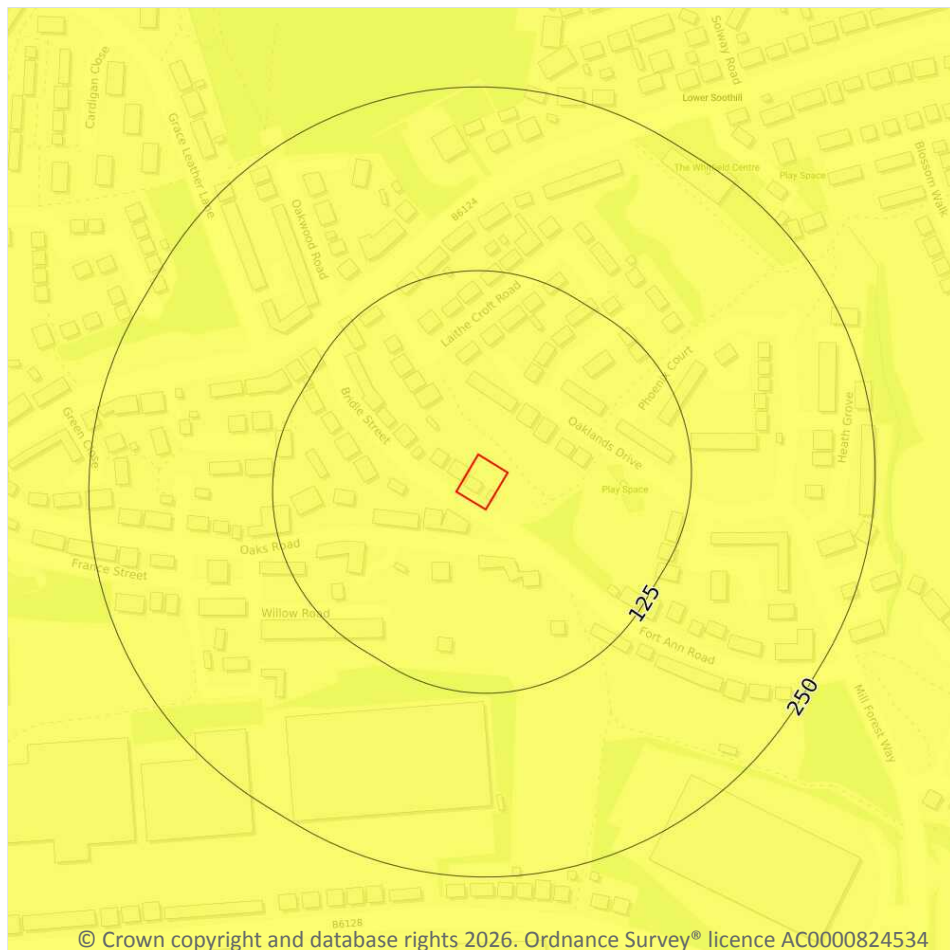
Features are displayed on the Natural ground subsidence - Compressible deposits map on [page 114](#) >

Location	Hazard rating	Details
On site	Negligible	Compressible strata are not thought to occur.

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.

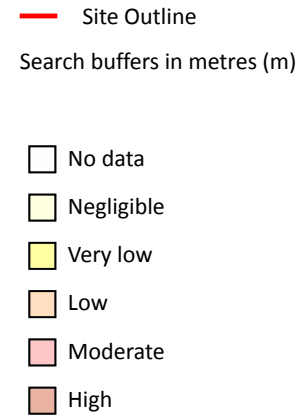
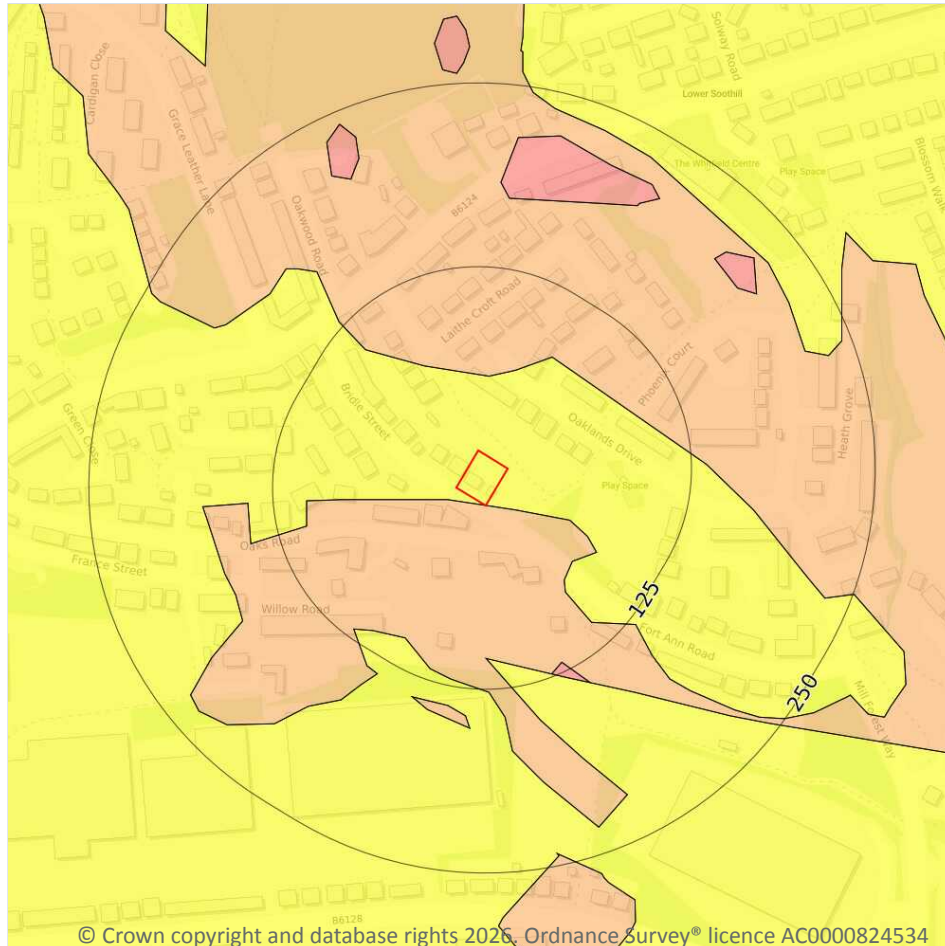
Features are displayed on the Natural ground subsidence - Collapsible deposits map on [page 115 >](#)

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



17.5 Landslides

Records within 50m

2

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

Features are displayed on the Natural ground subsidence - Landslides map on [page 116](#) >

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

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

This data is sourced from the British Geological Survey.



Natural ground subsidence - Ground dissolution of soluble rocks



— Site Outline
Search buffers in metres (m)

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

17.6 Ground dissolution of soluble rocks

Records within 50m

1

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

Features are displayed on the Natural ground subsidence - Ground dissolution of soluble rocks map on [page 118](#) >

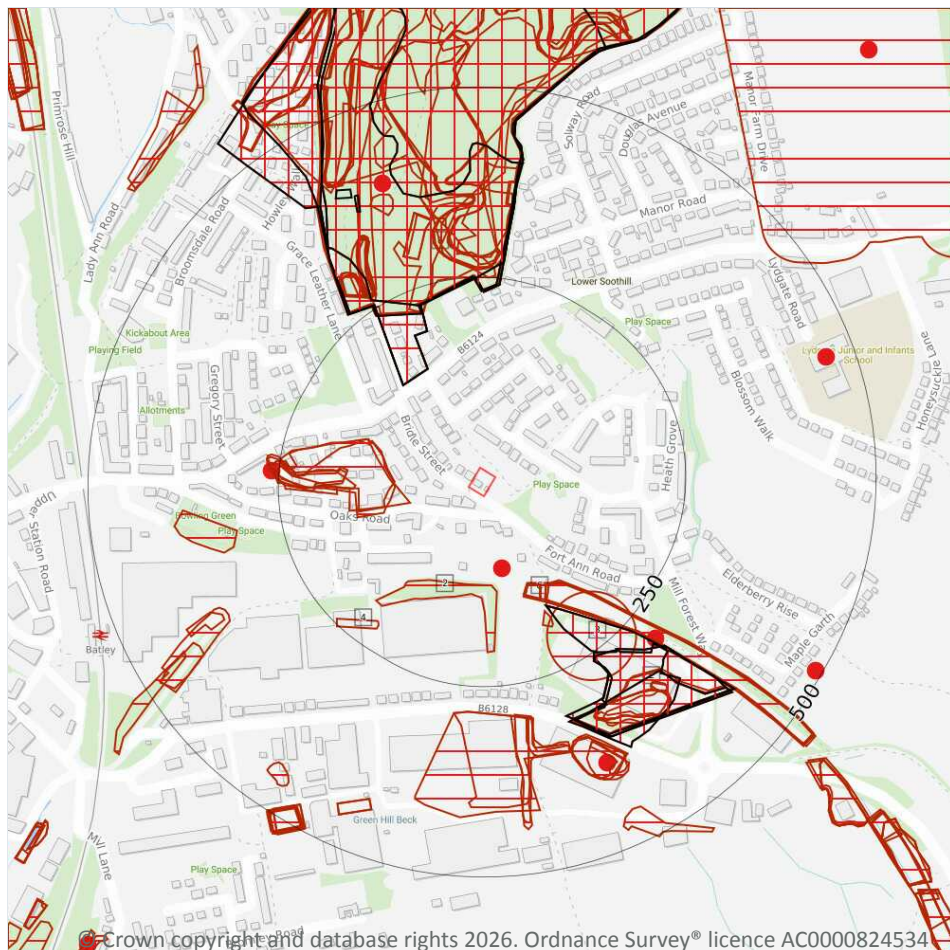
Location	Hazard rating	Details
On site	Negligible	Soluble rocks are either not thought to be present within the ground, or not prone to dissolution. Dissolution features are unlikely to be present.



This data is sourced from the British Geological Survey.



18 Mining and ground workings



- Site Outline
- Search buffers in metres (m)
- BritPits
- Surface ground workings
- Underground workings
- Underground mining extents
- Historical mineral planning areas
- TCA non-coal mining
- 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 BritPits

Records within 500m

7

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

Features are displayed on the Mining and ground workings map on [page 120](#) >



ID	Location	Details	Description
1	97m S	Name: Lower Soothill Address: Lower Soothill, BATLEY, West Yorkshire Commodity: Coal, Deep Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Delf, Delph, Gravel Pit, Sand Pit, Sand and Gravel Pit, Clay Pit, Pit, Opencast Coal Site or Surface Mine. It may be mapped as Worked Ground or Worked and Made Ground on BGS mapping. Status description: Site which has ceased to extract minerals. May be considered as 'Closed' by operator. May be considered to have 'Active', 'Dormant' or 'Expired' planning permissions by the Mineral Planning Authority.
A	260m W	Name: Soothill Hall Address: Batley, BATLEY, West Yorkshire Commodity: Sandstone Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Delf, Delph, Gravel Pit, Sand Pit, Sand and Gravel Pit, Clay Pit, Pit, Opencast Coal Site or Surface Mine. It may be mapped as Worked Ground or Worked and Made Ground on BGS mapping. Status description: Site which has ceased to extract minerals. May be considered as 'Closed' by operator. May be considered to have 'Active', 'Dormant' or 'Expired' planning permissions by the Mineral Planning Authority.
B	293m SE	Name: Lower Soothill Coal Pit Address: Lower Soothill, BATLEY, West Yorkshire Commodity: Coal, Deep Status: Ceased	Type: Working is wholly underground, access by shaft, adit, drift or incline. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun' Ee' - Scots). May also be locally termed 'Quarry' or 'Underground Quarry' when referring to sites extracting building stone (e.g. in Dorset and Wiltshire). The location given is that of the mine entrance and may be approximate for older sites shown on contemporaneous mapping by the Geological Survey used as the source document. Status description: Site which has ceased to extract minerals. May be considered as 'Closed' by operator. May be considered to have 'Active', 'Dormant' or 'Expired' planning permissions by the Mineral Planning Authority.
K	385m SE	Name: Lower Soothill Address: Lower Soothill, BATLEY, West Yorkshire Commodity: Coal, Deep Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Delf, Delph, Gravel Pit, Sand Pit, Sand and Gravel Pit, Clay Pit, Pit, Opencast Coal Site or Surface Mine. It may be mapped as Worked Ground or Worked and Made Ground on BGS mapping. Status description: Site which has ceased to extract minerals. May be considered as 'Closed' by operator. May be considered to have 'Active', 'Dormant' or 'Expired' planning permissions by the Mineral Planning Authority.



ID	Location	Details	Description
D	395m N	Name: Lower Soothill Address: Soothill, BATLEY, West Yorkshire Commodity: Coal, Deep Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Delf, Delph, Gravel Pit, Sand Pit, Sand and Gravel Pit, Clay Pit, Pit, Opencast Coal Site or Surface Mine. It may be mapped as Worked Ground or Worked and Made Ground on BGS mapping. Status description: Site which has ceased to extract minerals. May be considered as 'Closed' by operator. May be considered to have 'Active', 'Dormant' or 'Expired' planning permissions by the Mineral Planning Authority.
10	462m E	Name: Manor House Address: Lower Soothill, BATLEY, West Yorkshire Commodity: Coal, Deep Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Delf, Delph, Gravel Pit, Sand Pit, Sand and Gravel Pit, Clay Pit, Pit, Opencast Coal Site or Surface Mine. It may be mapped as Worked Ground or Worked and Made Ground on BGS mapping. Status description: Site which has ceased to extract minerals. May be considered as 'Closed' by operator. May be considered to have 'Active', 'Dormant' or 'Expired' planning permissions by the Mineral Planning Authority.
12	491m SE	Name: Lower Soothill Address: Lower Soothill, BATLEY, West Yorkshire Commodity: Coal, Deep Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Delf, Delph, Gravel Pit, Sand Pit, Sand and Gravel Pit, Clay Pit, Pit, Opencast Coal Site or Surface Mine. It may be mapped as Worked Ground or Worked and Made Ground on BGS mapping. Status description: Site which has ceased to extract minerals. May be considered as 'Closed' by operator. May be considered to have 'Active', 'Dormant' or 'Expired' planning permissions by the Mineral Planning Authority.

This data is sourced from the British Geological Survey.

18.2 Surface ground workings

Records within 250m	29
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Historical land uses identified from Ordnance Survey® mapping that involved ground excavation at the surface. These features may or may not have been subsequently backfilled.

Features are displayed on the Mining and ground workings map on [page 120](#) >

ID	Location	Land Use	Year of mapping	Mapping scale
A	80m W	Unspecified Disused Quarry	1938	1:10560
A	97m W	Unspecified Quarry	1892	1:10560



ID	Location	Land Use	Year of mapping	Mapping scale
A	98m W	Unspecified Disused Quarry	1905	1:10560
2	117m S	Unspecified Ground Workings	1992	1:10000
B	127m SE	Cuttings	1931	1:10560
C	129m SE	Cuttings	1938	1:10560
C	129m SE	Cuttings	1948	1:10560
C	129m SE	Cuttings	1905	1:10560
C	129m SE	Cuttings	1892	1:10560
B	130m SE	Cuttings	1948	1:10560
B	142m SE	Cuttings	1938	1:10560
B	142m SE	Cuttings	1948	1:10560
B	142m SE	Cuttings	1892	1:10560
B	144m SE	Cuttings	1905	1:10560
D	146m NW	Old Colliery	1938	1:10560
D	146m NW	Colliery	1905	1:10560
A	149m W	Unspecified Disused Quarry	1948	1:10560
A	161m W	Unspecified Disused Quarry	1931	1:10560
A	161m W	Unspecified Disused Quarry	1948	1:10560
E	165m SE	Colliery	1905	1:10560
C	171m SE	Unspecified Pit	1905	1:10560
3	173m SE	Unspecified Hole	1938	1:10560
4	213m SW	Pond	1892	1:10560
D	217m N	Disused Colliery	1948	1:10560
F	217m N	Unspecified Pit	1957	1:10560
D	218m N	Old Colliery	1931	1:10560
D	219m N	Old Colliery	1948	1:10560
D	219m N	Refuse Heap	1971	1:10000
D	227m N	Colliery	1892	1:10560

This is data is sourced from Ordnance Survey®/Groundsure.



18.3 Underground workings

Records within 1000m

10

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

Features are displayed on the Mining and ground workings map on [page 120](#) >

ID	Location	Land Use	Year of mapping	Mapping scale
D	146m NW	Colliery	1905	1:10560
D	146m NW	Old Colliery	1938	1:10560
E	165m SE	Colliery	1905	1:10560
D	217m N	Disused Colliery	1948	1:10560
D	227m N	Colliery	1892	1:10560
E	251m SE	Disused Colliery	1948	1:10560
E	256m SE	Colliery	1892	1:10560
E	314m SE	Disused Colliery	1938	1:10560
D	371m NW	Unspecified Old Shafts	1948	1:10560
D	393m NW	Unspecified Old Shafts	1938	1:10560

This data is sourced from Ordnance Survey®/Groundsure.

18.4 Underground mining extents

Records within 500m

0

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

This data is sourced from Groundsure.

18.5 Historical Mineral Planning Areas

Records within 500m

0

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

This data is sourced from the British Geological Survey.



18.6 Non-coal mining

Records within 1000m

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 JPB mining areas

Records on site

0

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

This data is sourced from Johnson Poole and Bloomer.

18.8 The Coal Authority non-coal mining

Records within 500m

0

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

This data is sourced from The Coal Authority.

18.9 Researched mining

Records within 500m

0

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

This data is sourced from Groundsure.



18.10 Mining record office plans

Records within 500m

0

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

This data is sourced from Groundsure.

18.11 BGS mine plans

Records within 500m

0

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

This data is sourced from Groundsure.

18.12 Coal mining

Records on site

1

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

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

This data is sourced from the Coal Authority.

18.13 Brine areas

Records on site

0

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

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

18.14 Gypsum areas

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

This data is sourced from British Gypsum.

18.15 Tin mining

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

This data is sourced from Groundsure.

18.16 Clay mining

Records on site	0
-----------------	---

Generalised areas that may be affected by kaolin and ball clay extraction.

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

19 Ground cavities and sinkholes

19.1 Natural cavities

Records within 500m

0

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

This data is sourced from Stantec UK Ltd.

19.2 Mining cavities

Records within 1000m

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 Stantec UK Ltd.

19.3 Reported recent incidents

Records within 500m

0

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

This data is sourced from Groundsure.

19.4 Historical incidents

Records within 500m

0

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

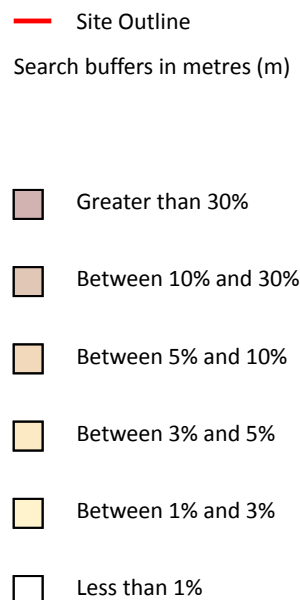
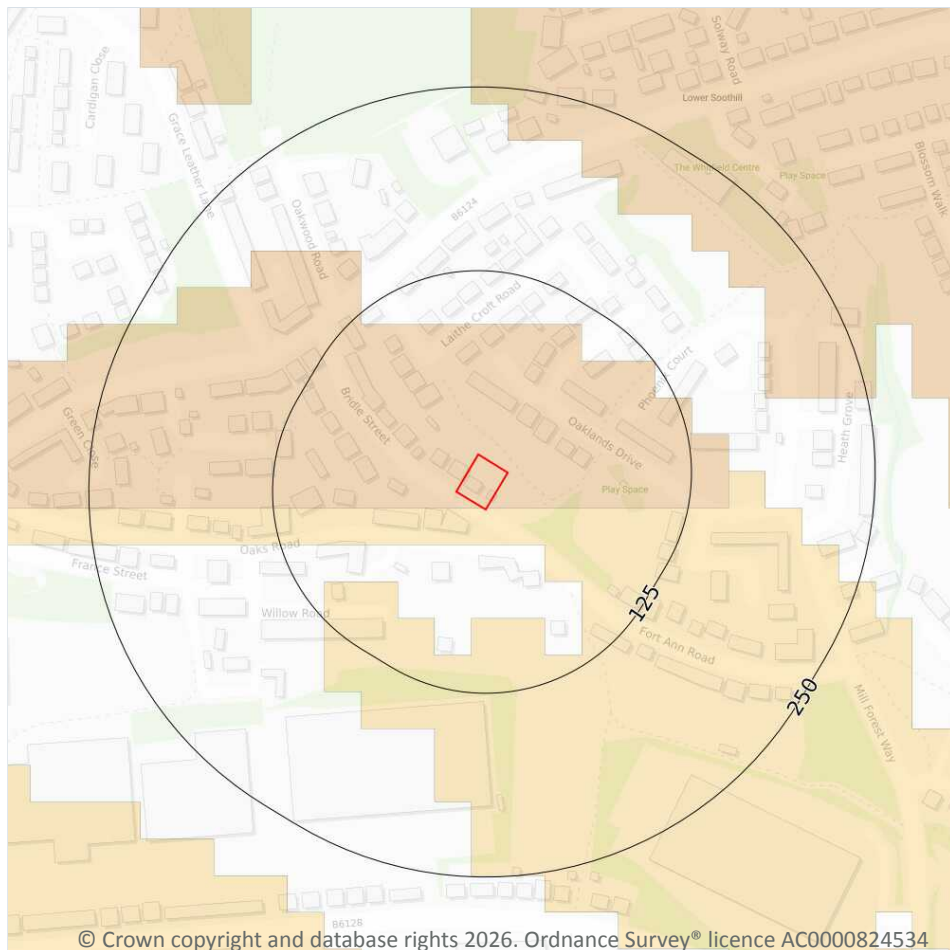
Not all 'holes' noted on Ordnance Survey® mapping will necessarily be present within this dataset.



This data is sourced from Groundsure.



20 Radon



20.1 Radon

Records on site

2

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

Features are displayed on the Radon map on [page 130 >](#)

Location	Estimated properties affected	Radon Protection Measures required
On site	Between 5% and 10%	Basic



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

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



21 Soil chemistry

21.1 BGS Estimated Background Soil Chemistry

Records within 50m

8

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

Location	Arsenic	Bioaccessible Arsenic	Lead	Bioaccessible Lead	Cadmium	Chromium	Nickel
On site	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
1m NE	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
1m NE	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
14m SE	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg

This data is sourced from the British Geological Survey.



21.2 BGS Estimated Urban Soil Chemistry

Records within 50m

0

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

This data is sourced from the British Geological Survey.

21.3 BGS Measured Urban Soil Chemistry

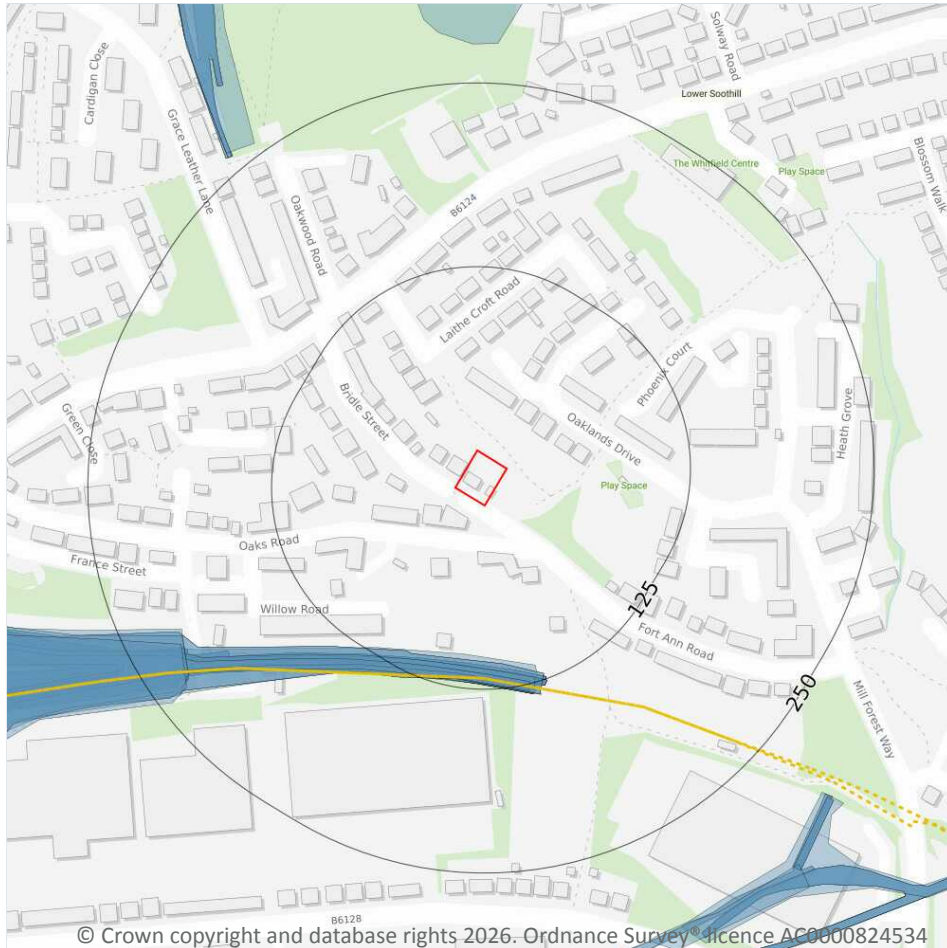
Records within 50m

0

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

This data is sourced from the British Geological Survey.

22 Railway infrastructure and projects



- Site Outline
- Search buffers in metres (m)
- C2 Crossrail 2 Stations
- Crossrail 2 Route
- Crossrail 2 Worksites
- Crossrail 2 Safeguarding
- Crossrail 2 Headhouses
- Railway stations
- Active railways
- Active tunnels
- Abandoned railways
- Historic railways
- Historic tunnels
- Underground stations
- Underground Lines
- Royal Mail tunnels
- HS2 optimised route
- HS2 Stations
- HS2 Depots
- HS2 Surface Safeguarding
- HS2 Subsurface Safeguarding

22.1 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.

22.2 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.

22.3 Railway tunnels

Records within 250m

0

Railway tunnels taken from contemporary Ordnance Survey® mapping.

This data is sourced from the Ordnance Survey®.

22.4 Historical railway and tunnel features

Records within 250m

19

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 134 >](#)

Location	Land Use	Year of mapping	Mapping scale
102m S	Railway Sidings	1948	10560
106m S	Railway Sidings	1905	10560
106m S	Railway Sidings	1938	10560
108m S	Railway Sidings	1966	2500
108m S	Railway Sidings	1956	2500
110m S	Railway Sidings	1956	2500
110m S	Railway Sidings	1966	2500
110m S	Railway Sidings	1931	10560
113m S	Railway Sidings	1939	2500
113m S	Railway Sidings	1948	10560
113m S	Railway Sidings	1933	2500
116m S	Railway Sidings	1907	2500
116m S	Railway Sidings	1894	2500
210m SW	Railway Sidings	1957	10560
211m SW	Railway Sidings	1971	10000
213m SW	Railway Sidings	1955	1250
214m SW	Railway Sidings	1969	1250



Location	Land Use	Year of mapping	Mapping scale
215m SW	Railway Sidings	1892	10560
221m SW	Railway Sidings	1922	2500

This data is sourced from Ordnance Survey®/Groundsure.

22.5 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.

22.6 Historical railways

Records within 250m

2

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

Features are displayed on the Railway infrastructure and projects map on [page 134 >](#)

Location	Description
117m S	Razed
117m S	Historical OSM

This data is sourced from OpenStreetMap.

22.7 Railways

Records within 250m

0

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

This data is sourced from Ordnance Survey® and OpenStreetMap.



22.8 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. Please note that the Crossrail 2 project has been temporarily suspended. It is possible funding will be received in the future, but there is no guarantee of this.

This data is sourced from publicly available information by Groundsure.

22.9 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> ↗.

Terms and conditions

Groundsure's Terms and Conditions can be accessed at this link: www.groundsure.com/terms-conditions-april-2026/ ↗.

