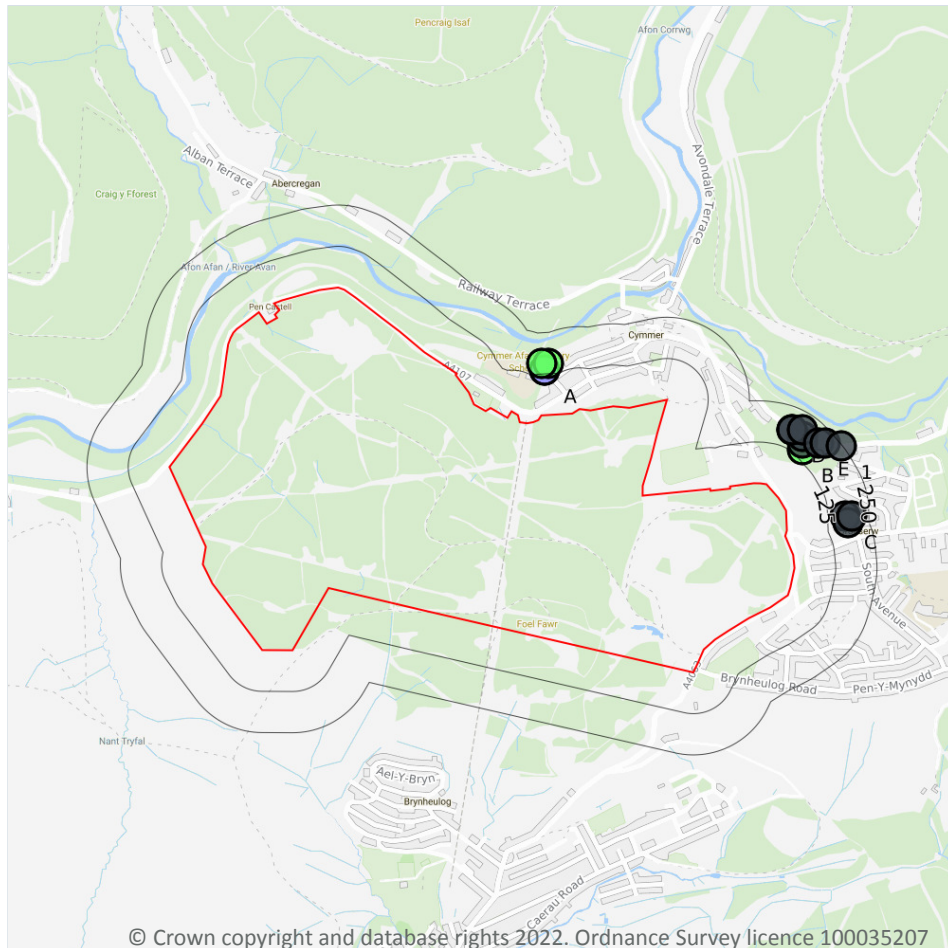


16 Boreholes



— Site Outline
Search buffers in metres (m)

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

16.1 BGS Boreholes

Records within 250m

16

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 123**

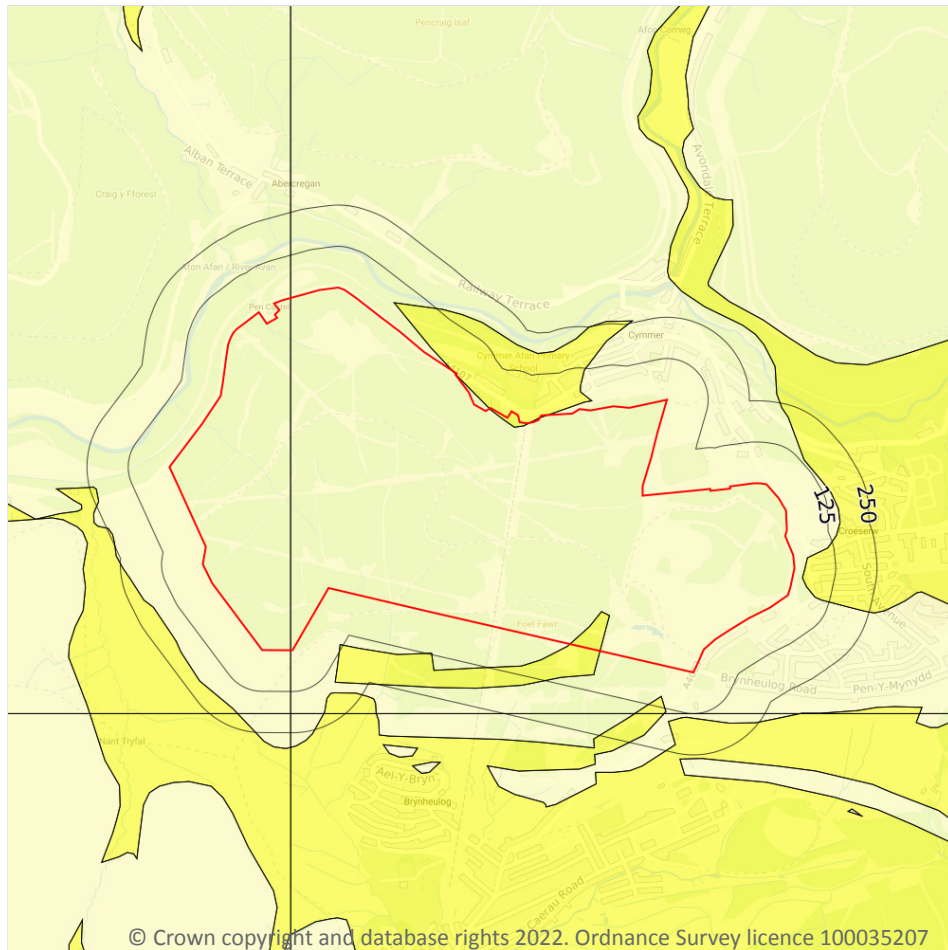
ID	Location	Grid reference	Name	Length	Confidential	Web link
A	136m N	285770 196040	CYMMER AFAN PROPOSED JUNIOR SCHOOL 1	6.25	N	373143
A	136m N	285770 196040	CYMMER AFAN PROPOSED JUNIOR SCHOOL 4	2.4	N	373146
B	151m NE	286550 195800	IN FIELD NEAR CROESERW (?) FARM	18.14	N	373139



ID	Location	Grid reference	Name	Length	Confidential	Web link
A	155m N	285780 196060	CYMMER AFAN PROPOSED JUNIOR SCHOOL 3	12.8	N	373145
A	156m N	285760 196060	CYMMER AFAN PROPOSED JUNIOR SCHOOL 2	10.1	N	373144
B	165m NE	286550 195820	CROES ERW BEND 4	-	Y	N/A
C	178m E	286680 195600	CYMMER DAY CENTRE 2	-	Y	N/A
B	181m NE	286550 195840	CROES ERW BEND 3	-	Y	N/A
D	183m NE	286520 195860	CROES ERW BEND 1A	-	Y	N/A
D	183m NE	286520 195860	CROES ERW BEND 1	-	Y	N/A
C	187m E	286690 195580	CYMMER DAY CENTRE 1	-	Y	N/A
B	197m NE	286550 195860	CROES ERW BEND 2	-	Y	N/A
C	198m E	286700 195600	CYMMER DAY CENTRE 3	-	Y	N/A
E	201m NE	286600 195820	CROES ERW BEND 5	-	Y	N/A
E	216m NE	286620 195820	CROES ERW BEND 6	-	Y	N/A
1	247m NE	286670 195810	CROES ERW BEND 8	-	Y	N/A

This data is sourced from the British Geological Survey.

17 Natural ground subsidence - Shrink swell clays



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

17.1 Shrink swell clays

Records within 50m

3

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 125**

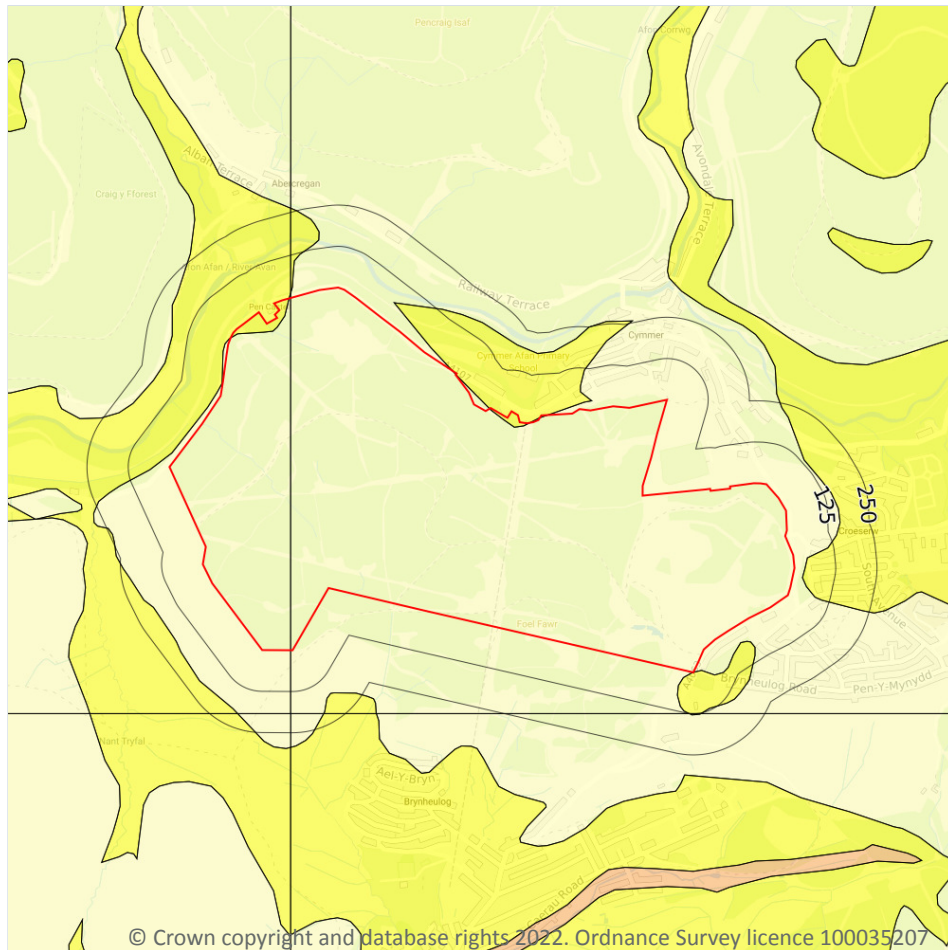
Location	Hazard rating	Details
On site	Negligible	Ground conditions predominantly non-plastic.
On site	Very low	Ground conditions predominantly low plasticity.
30m E	Very low	Ground conditions predominantly low plasticity.



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

5

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 127**

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

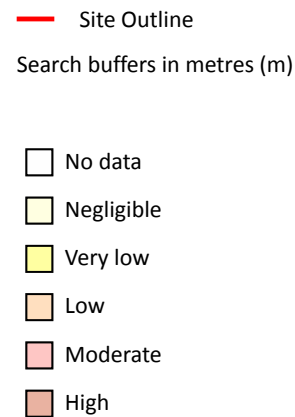
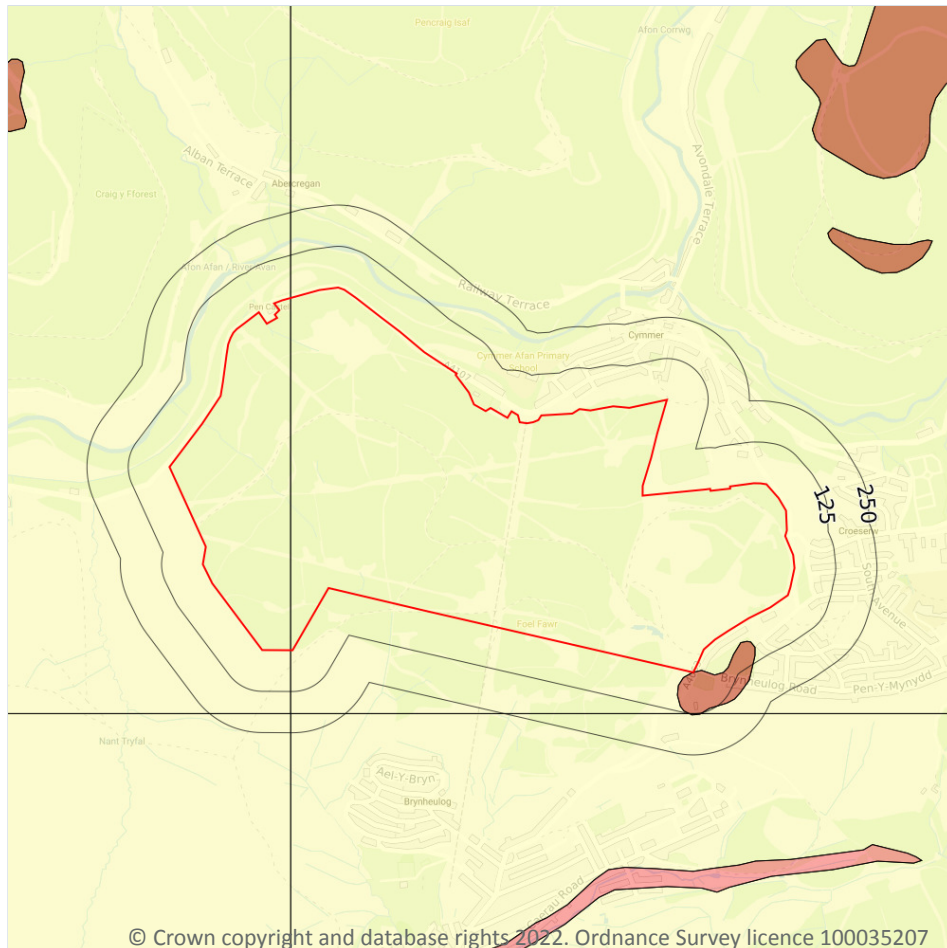


Location	Hazard rating	Details
On site	Very low	Running sand conditions are unlikely. No identified constraints on land use due to running conditions unless water table rises rapidly.
0m S	Very low	Running sand conditions are unlikely. No identified constraints on land use due to running conditions unless water table rises rapidly.
15m N	Very low	Running sand conditions are unlikely. No identified constraints on land use due to running conditions unless water table rises rapidly.
30m E	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



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.

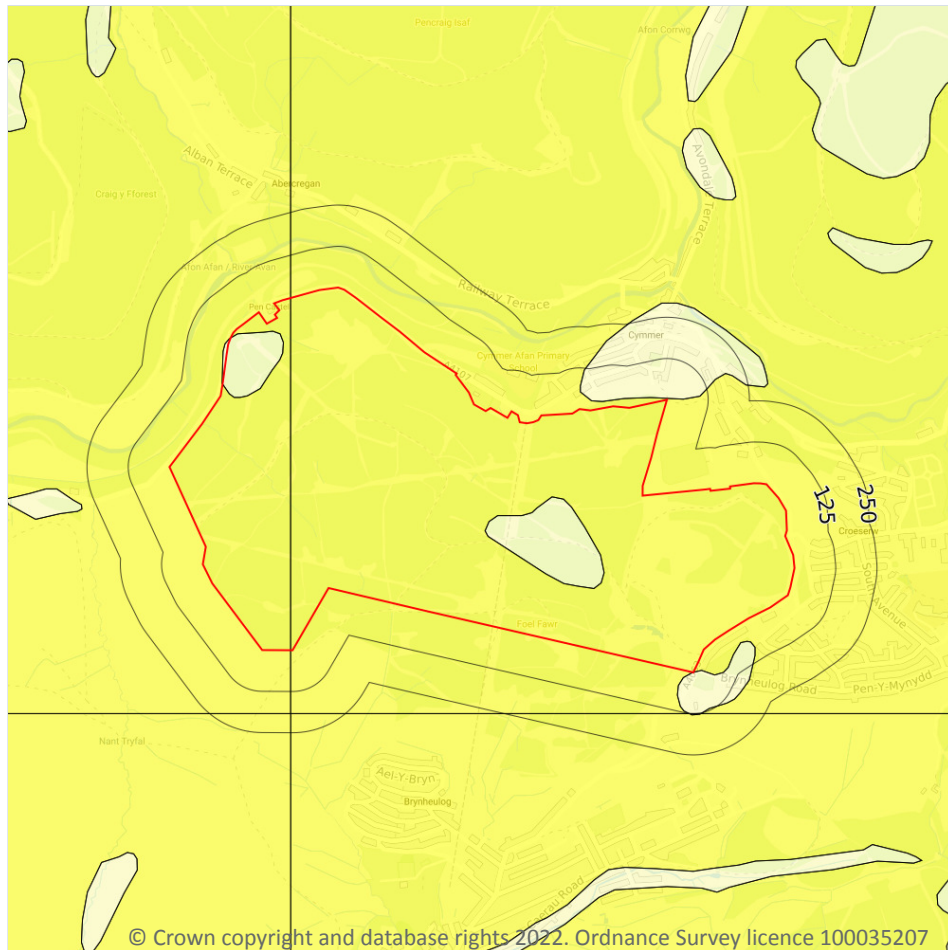
Features are displayed on the Natural ground subsidence - Compressible deposits map on **page 129**

Location	Hazard rating	Details
On site	Negligible	Compressible strata are not thought to occur.
0m S	High	Highly compressible strata present. Significant constraint on land use depending on thickness.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Collapsible deposits



17.4 Collapsible deposits

Records within 50m

4

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 130**

Location	Hazard rating	Details
On site	Negligible	Deposits with potential to collapse when loaded and saturated are believed not to be present.
On site	Very low	Deposits with potential to collapse when loaded and saturated are unlikely to be present.
0m S	Negligible	Deposits with potential to collapse when loaded and saturated are believed not to be present.

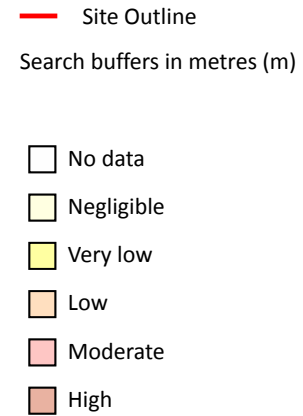
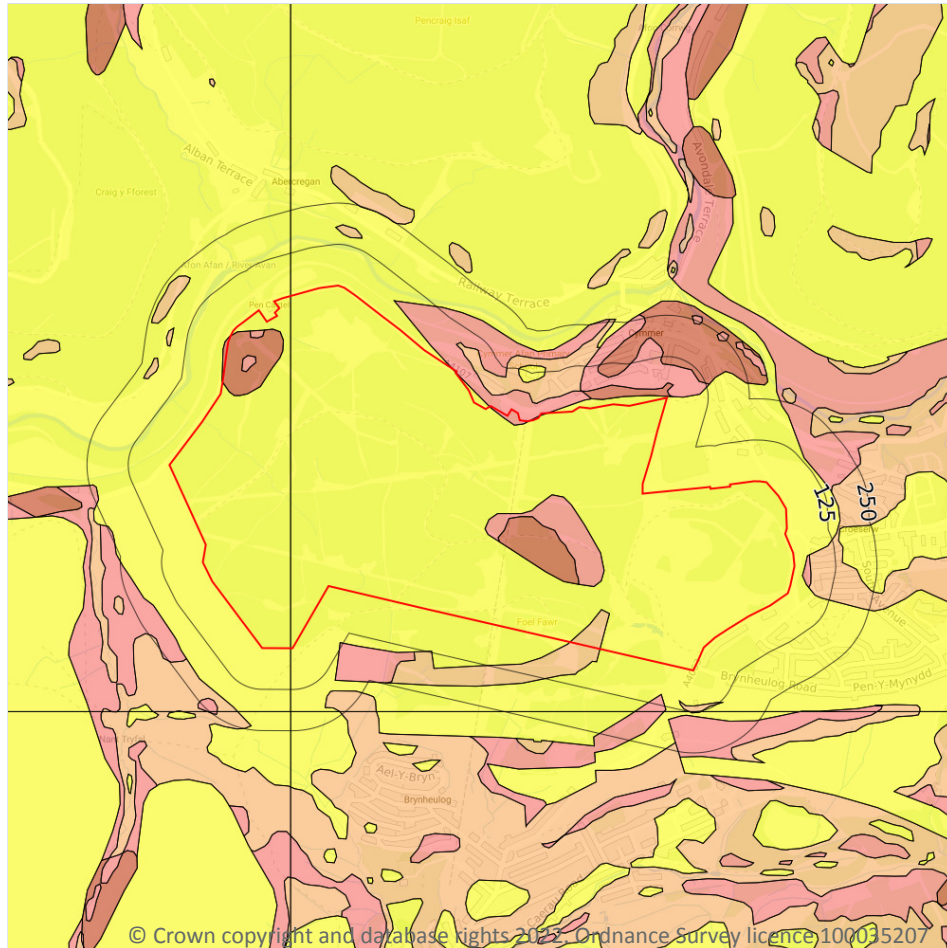
Location	Hazard rating	Details
----------	---------------	---------

4m N	Negligible	Deposits with potential to collapse when loaded and saturated are believed not to be present.
------	------------	---

This data is sourced from the British Geological Survey.



Natural ground subsidence - Landslides



17.5 Landslides

Records within 50m

9

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 132**

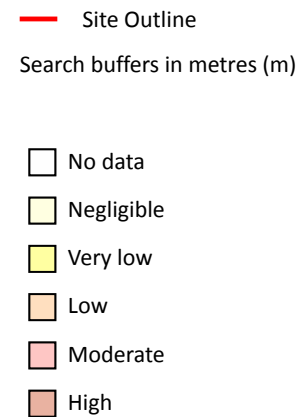
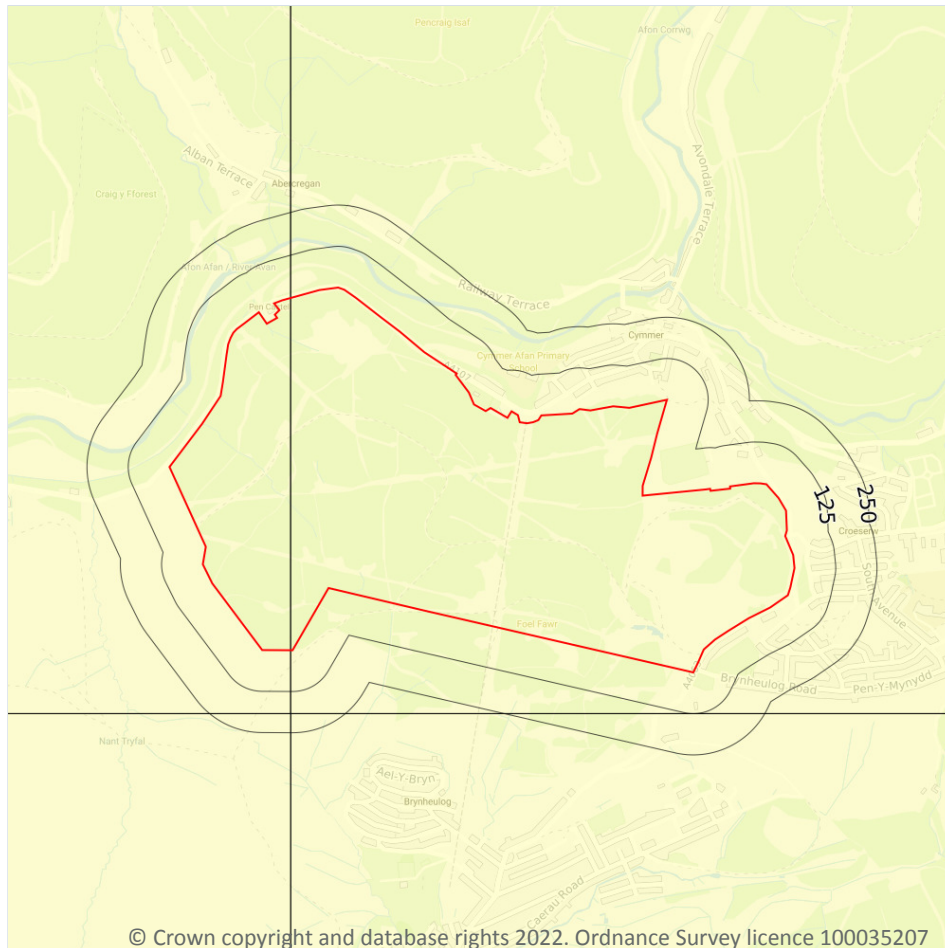
Location	Hazard rating	Details
On site	Very low	Slope instability problems are not likely to occur but consideration to potential problems of adjacent areas impacting on the site should always be considered.

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.
On site	Moderate	Slope instability problems are probably present or have occurred in the past. Land use should consider specifically the stability of the site.
On site	High	Slope instability problems almost certainly present and may be active. Significant constraint on land use.
4m N	High	Slope instability problems almost certainly present and may be active. Significant constraint on land use.
11m NE	Moderate	Slope instability problems are probably present or have occurred in the past. Land use should consider specifically the stability of the site.
30m E	Moderate	Slope instability problems are probably present or have occurred in the past. Land use should consider specifically the stability of the site.
33m NW	Low	Slope instability problems may be present or anticipated. Site investigation should consider specifically the slope stability of the site.
48m E	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



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.

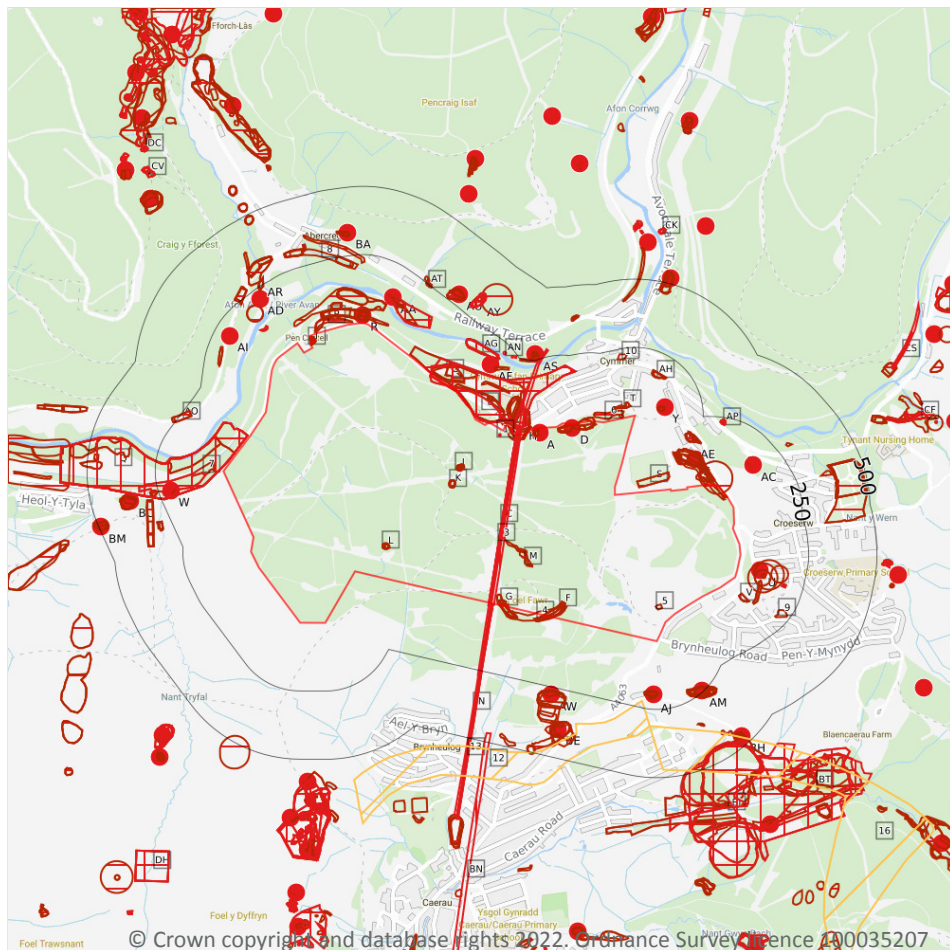
Features are displayed on the Natural ground subsidence - Ground dissolution of soluble rocks map on **page 134**

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



- 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 Stantec UK Ltd.

18.2 BritPits

Records within 500m

26

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, ground workings and natural cavities map on **page 136**

ID	Location	Details	Description
A	On site	Name: Glyncymmer Address: Cymer, Croeserw, NEATH, West Glamorgan Commodity: Sandstone Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
D	On site	Name: Glyncymmer Address: Cymer, Croeserw, NEATH, West Glamorgan Commodity: Sandstone Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
R	28m N	Name: Pen y Castell Address: Cymer, Croeserw, NEATH, West Glamorgan Commodity: Sandstone Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
H	37m NE	Name: Glyncymmor Colliery Address: Cymer, Croeserw, NEATH, West Glamorgan Commodity: Coal, Deep Status: Ceased	Type: Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots) Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority



ID	Location	Details	Description
U	82m E	Name: Croes-eru Address: Cymer, Croeserw, NEATH, West Glamorgan Commodity: Coal, Deep Status: Ceased	Type: Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots) Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
E	96m N	Name: Glyncymmer Address: Cymer, Croeserw, NEATH, West Glamorgan Commodity: Sandstone Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
Y	113m E	Name: Glyncymmer Address: Cymer, Croeserw, NEATH, West Glamorgan Commodity: Sandstone Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
AA	133m NE	Name: Aber-cregen Address: Cymer, Croeserw, NEATH, West Glamorgan Commodity: Sandstone Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
AC	149m NE	Name: Croes-eru Address: Cymer, Croeserw, NEATH, West Glamorgan Commodity: Coal, Deep Status: Ceased	Type: Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots) Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority



ID	Location	Details	Description
AF	153m NE	Name: Glyncymmer Colliery Address: Cymer, Croeserw, NEATH, West Glamorgan Commodity: Coal, Deep Status: Ceased	Type: Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots) Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
AE	160m N	Name: Glyncymmer Address: Cymer, Croeserw, NEATH, West Glamorgan Commodity: Sandstone Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
AI	192m NW	Name: Daren Isaf Address: Cymer, Croeserw, NEATH, West Glamorgan Commodity: Coal, Deep Status: Ceased	Type: Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots) Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
AJ	194m S	Name: Blaencaerau Hotel Address: Caerau, MAESTEG, Glamorgan Commodity: Sandstone Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
W	205m W	Name: Dyffryn Rhondda Address: Duffryn, NEATH, Neath Port Talbot Commodity: Coal, Deep Status: Ceased	Type: Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots) Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority



ID	Location	Details	Description
AD	212m NW	Name: Cymer Mine Address: Cymer, Croeserw, NEATH, West Glamorgan Commodity: Coal, Deep Status: Ceased	Type: Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots) Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
AM	245m SE	Name: Blaencaerau Hotel Address: Caerau, MAESTEG, Glamorgan Commodity: Sandstone Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
AR	268m NW	Name: Avan Vale Cottages Address: Cymer, Croeserw, NEATH, West Glamorgan Commodity: Sandstone Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
AS	270m N	Name: Glyncymmer Colliery Address: Cymer, Croeserw, NEATH, West Glamorgan Commodity: Sandstone Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
AW	277m S	Name: Foel Fawr Address: Caerau, MAESTEG, Glamorgan Commodity: Sandstone Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
AU	290m NE	Name: Aber-cregen Address: Cymer, Croeserw, NEATH, West Glamorgan Commodity: Sandstone Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority



ID	Location	Details	Description
AY	318m NE	Name: Craig y Fan Address: Croeserw, NEATH, West Glamorgan Commodity: Coal, Deep Status: Ceased	Type: Working is wholly underground, access by shaft, adit or drift. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun Ee - Scots) Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
BA	335m N	Name: Aber-cregen Address: Cymer, Croeserw, NEATH, West Glamorgan Commodity: Sandstone Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
BC	356m W	Name: Dyffryn Rhondda Colliery Address: Duffryn, Croeserw, NEATH, West Glamorgan Commodity: Sandstone Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
BE	394m S	Name: Rhiw Gynwyd Address: Caerau, MAESTEG, Glamorgan Commodity: Sandstone Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
BH	466m SE	Name: Blaencaerau Hotel Address: Caerau, MAESTEG, Glamorgan Commodity: Sandstone Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority
BM	493m SW	Name: Dyffryn Rhondda Colliery Address: Duffryn, Croeserw, NEATH, West Glamorgan Commodity: Sandstone Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site Status description: Site which, at date of entry, has ceased to extract minerals. May be considered as Closed by operator. May be considered to have Active, Dormant or Expired planning permissions by Mineral Planning Authority

This data is sourced from the British Geological Survey.



18.3 Surface ground workings

Records within 250m

250

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 136**

ID	Location	Land Use	Year of mapping	Mapping scale
4	On site	Unspecified Ground Workings	1897	1:10560
5	On site	Reservoir	1981	1:10000
A	On site	Unspecified Pit	1981	1:10000
A	On site	Unspecified Pit	1965	1:10560
A	On site	Unspecified Old Quarry	1948	1:10560
A	On site	Unspecified Old Quarry	1914	1:10560
A	On site	Unspecified Quarry	1897	1:10560
A	On site	Unspecified Old Quarry	1938	1:10560
A	On site	Unspecified Old Quarry	1921	1:10560
B	On site	Refuse Heap	1921	1:10560
B	On site	Colliery	1921	1:10560
B	On site	Colliery	1938	1:10560
B	On site	Refuse Heap	1938	1:10560
B	On site	Colliery	1914	1:10560
B	On site	Colliery	1897	1:10560
B	On site	Colliery	1938	1:10560
B	On site	Refuse Heap	1938	1:10560
D	On site	Unspecified Ground Workings	1981	1:10000
D	On site	Unspecified Pit	1981	1:10000
D	On site	Unspecified Pit	1965	1:10560
D	On site	Unspecified Ground Workings	1965	1:10560
D	On site	Unspecified Quarries	1914	1:10560
D	On site	Unspecified Quarries	1897	1:10560



ID	Location	Land Use	Year of mapping	Mapping scale
D	On site	Unspecified Quarries	1938	1:10560
D	On site	Unspecified Old Quarries	1948	1:10560
D	On site	Unspecified Quarries	1921	1:10560
E	On site	Unspecified Quarry	1948	1:10560
E	On site	Unspecified Quarry	1921	1:10560
E	On site	Unspecified Heap	1877	1:10560
F	On site	Unspecified Ground Workings	1921	1:10560
F	On site	Unspecified Ground Workings	1947	1:10560
F	On site	Unspecified Pit	1981	1:10000
F	On site	Unspecified Pit	1965	1:10560
F	On site	Unspecified Ground Workings	1948	1:10560
F	On site	Unspecified Ground Workings	1914	1:10560
F	On site	Unspecified Ground Workings	1897	1:10560
F	On site	Unspecified Ground Workings	1921	1:10560
F	On site	Unspecified Ground Workings	1921	1:10560
F	On site	Unspecified Ground Workings	1921	1:10560
G	On site	Unspecified Pit	1921	1:10560
G	On site	Unspecified Ground Workings	1947	1:10560
G	On site	Unspecified Pit	1981	1:10000
G	On site	Unspecified Pit	1965	1:10560
G	On site	Unspecified Pit	1948	1:10560
G	On site	Unspecified Pit	1914	1:10560
G	On site	Unspecified Pit	1897	1:10560
G	On site	Unspecified Pit	1938	1:10560
G	On site	Unspecified Pit	1921	1:10560
G	On site	Unspecified Pit	1938	1:10560
G	On site	Unspecified Pit	1921	1:10560
G	On site	Unspecified Pit	1921	1:10560



ID	Location	Land Use	Year of mapping	Mapping scale
H	On site	Unspecified Pit	1921	1:10560
H	On site	Cuttings	1877	1:10560
H	On site	Unspecified Pit	1938	1:10560
H	On site	Cuttings	1897	1:10560
H	On site	Unspecified Pit	1938	1:10560
I	On site	Unspecified Pit	1921	1:10560
I	On site	Unspecified Pit	1948	1:10560
I	On site	Unspecified Ground Workings	1914	1:10560
I	On site	Unspecified Pit	1938	1:10560
I	On site	Unspecified Pit	1938	1:10560
J	On site	Unspecified Pit	1921	1:10560
J	On site	Unspecified Pit	1981	1:10000
J	On site	Unspecified Pit	1965	1:10560
J	On site	Unspecified Pit	1948	1:10560
J	On site	Unspecified Pit	1914	1:10560
J	On site	Unspecified Ground Workings	1914	1:10560
J	On site	Unspecified Pit	1938	1:10560
J	On site	Reservoir	1897	1:10560
J	On site	Unspecified Pit	1938	1:10560
K	On site	Unspecified Pit	1921	1:10560
K	On site	Unspecified Pit	1965	1:10560
K	On site	Unspecified Pit	1948	1:10560
K	On site	Unspecified Pit	1914	1:10560
K	On site	Unspecified Pit	1897	1:10560
K	On site	Unspecified Pit	1938	1:10560
K	On site	Unspecified Pit	1938	1:10560
L	On site	Unspecified Pit	1921	1:10560
L	On site	Unspecified Quarry	1877	1:10560



ID	Location	Land Use	Year of mapping	Mapping scale
L	On site	Unspecified Pit	1981	1:10000
L	On site	Unspecified Pit	1965	1:10560
L	On site	Unspecified Pit	1948	1:10560
L	On site	Unspecified Pit	1914	1:10560
L	On site	Unspecified Heap	1938	1:10560
L	On site	Unspecified Heap	1938	1:10560
M	On site	Unspecified Ground Workings	1965	1:10560
M	On site	Unspecified Quarry	1948	1:10560
6	1m N	Unspecified Quarries	1897	1:10560
O	4m NE	Refuse Heap	1921	1:10560
P	6m N	Unspecified Ground Workings	1948	1:10560
E	8m N	Unspecified Ground Workings	1965	1:10560
Q	8m NW	Colliery	1938	1:10560
Q	8m NW	Colliery	1938	1:10560
Q	8m NW	Colliery	1921	1:10560
Q	8m NW	Colliery	1948	1:10560
Q	8m NW	Colliery	1914	1:10560
P	8m N	Unspecified Ground Workings	1988	1:10000
P	8m N	Unspecified Ground Workings	1964	1:10560
P	9m N	Cuttings	1965	1:10560
E	10m N	Unspecified Quarry	1897	1:10560
O	10m NE	Refuse Heap	1938	1:10560
O	10m NE	Refuse Heap	1938	1:10560
P	10m N	Cuttings	1914	1:10560
P	10m N	Cuttings	1921	1:10560
E	11m N	Unspecified Disused Quarry	1981	1:10000
R	11m N	Unspecified Quarry	1897	1:10560
E	13m N	Unspecified Quarry	1914	1:10560



ID	Location	Land Use	Year of mapping	Mapping scale
E	14m N	Unspecified Quarry	1938	1:10560
H	15m NE	Cuttings	1914	1:10560
H	15m NE	Cuttings	1921	1:10560
P	16m N	Cuttings	1948	1:10560
H	17m NE	Cuttings	1938	1:10560
P	19m N	Cuttings	1938	1:10560
S	19m N	Unspecified Pit	1981	1:10000
S	19m N	Unspecified Pit	1965	1:10560
H	20m NE	Unspecified Heap	1981	1:10000
H	20m NE	Unspecified Heap	1965	1:10560
H	21m NE	Cuttings	1965	1:10560
P	21m N	Cuttings	1981	1:10000
H	23m NE	Unspecified Heap	1921	1:10560
H	23m NE	Unspecified Heap	1914	1:10560
H	24m NE	Cuttings	1948	1:10560
H	24m NE	Unspecified Heap	1938	1:10560
H	24m NE	Unspecified Heap	1938	1:10560
H	24m NE	Unspecified Heap	1948	1:10560
O	26m NE	Unspecified Heap	1981	1:10000
O	26m NE	Unspecified Heap	1965	1:10560
P	28m N	Cuttings	1897	1:10560
H	28m N	Coal Level	1897	1:10560
T	34m N	Unspecified Ground Workings	1921	1:10560
T	34m N	Unspecified Ground Workings	1914	1:10560
7	35m W	Brick Works	1897	1:10560
U	44m E	Old Trial Level	1921	1:10560
P	46m N	Unspecified Ground Workings	1948	1:10560
B	51m N	Unspecified Heap	1897	1:10560



ID	Location	Land Use	Year of mapping	Mapping scale
P	53m N	Unspecified Ground Workings	1938	1:10560
P	53m N	Unspecified Ground Workings	1938	1:10560
V	63m SE	Unspecified Pit	1981	1:10000
V	63m SE	Unspecified Pit	1965	1:10560
U	64m E	Trial Level	1877	1:10560
W	64m W	Colliery	1897	1:10560
P	65m N	Unspecified Heap	1921	1:10560
P	65m N	Unspecified Heap	1914	1:10560
P	66m N	Unspecified Heap	1938	1:10560
P	66m N	Unspecified Heap	1938	1:10560
P	67m N	Unspecified Heap	1921	1:10560
P	67m N	Unspecified Heap	1914	1:10560
E	68m N	Unspecified Quarry	1897	1:10560
X	69m NW	Refuse Heap	1938	1:10560
X	69m NW	Refuse Heap	1938	1:10560
U	69m E	Old Trial Level	1914	1:10560
B	72m NE	Unspecified Ground Workings	1948	1:10560
B	84m NE	Unspecified Ground Workings	1965	1:10560
Y	88m E	Unspecified Old Quarry	1948	1:10560
Y	88m E	Unspecified Old Quarry	1914	1:10560
Y	88m E	Unspecified Quarry	1897	1:10560
Y	88m E	Unspecified Old Quarry	1921	1:10560
Y	88m E	Unspecified Old Quarry	1938	1:10560
Z	89m E	Unspecified Ground Workings	1981	1:10000
Z	89m E	Unspecified Ground Workings	1965	1:10560
AA	90m NE	Colliery	1897	1:10560
U	91m E	Old Trial Level	1938	1:10560
U	91m E	Old Trial Level	1938	1:10560

ID	Location	Land Use	Year of mapping	Mapping scale
AA	93m NE	Unspecified Heap	1981	1:10000
AB	108m NW	Old Trial Level	1948	1:10560
AA	111m NE	Unspecified Ground Workings	1948	1:10560
AA	122m NE	Unspecified Old Quarry	1914	1:10560
AA	122m NE	Unspecified Old Quarry	1921	1:10560
U	124m E	Old Trial Level	1897	1:10560
AA	125m NE	Unspecified Old Quarry	1938	1:10560
AC	136m NE	Old Trial Level	1938	1:10560
AC	136m NE	Old Trial Level	1938	1:10560
AC	136m NE	Trial Level	1877	1:10560
AC	145m NE	Old Trial Level	1921	1:10560
AC	145m NE	Old Trial Level	1948	1:10560
AC	145m NE	Old Trial Level	1914	1:10560
AC	145m NE	Old Trial Level	1897	1:10560
AC	148m NE	Disused Trial Level	1981	1:10000
AD	151m NW	Old Trial Level	1914	1:10560
AD	151m NW	Old Trial Level	1921	1:10560
AE	153m N	Unspecified Quarry	1938	1:10560
AF	154m NE	Unspecified Ground Workings	1948	1:10560
AE	155m N	Unspecified Old Quarry	1948	1:10560
AE	156m N	Unspecified Quarry	1914	1:10560
AE	156m N	Unspecified Quarry	1921	1:10560
AG	157m NE	Unspecified Old Level	1948	1:10560
AG	159m NE	Unspecified Old Level	1921	1:10560
AG	159m NE	Unspecified Old Level	1914	1:10560
AH	159m NE	Unspecified Old Quarry	1914	1:10560
AH	159m NE	Unspecified Old Quarry	1921	1:10560
AH	160m NE	Unspecified Old Quarry	1948	1:10560



ID	Location	Land Use	Year of mapping	Mapping scale
AG	161m NE	Unspecified Old Level	1938	1:10560
AG	161m NE	Unspecified Old Level	1938	1:10560
AH	162m NE	Unspecified Old Quarry	1938	1:10560
AE	167m N	Unspecified Pits	1877	1:10560
U	174m E	Old Trial Level	1948	1:10560
AI	174m NW	Old Trial Level	1921	1:10560
AI	174m NW	Old Trial Level	1897	1:10560
AI	179m NW	Unspecified Disused Level	1988	1:10000
AI	179m NW	Unspecified Disused Level	1964	1:10560
AI	181m NW	Old Trial Level	1948	1:10560
AJ	183m S	Unspecified Quarry	1973	1:10000
AJ	183m S	Unspecified Quarry	1965	1:10560
W	184m SW	Unspecified Ground Workings	1897	1:10560
AI	184m NW	Old Trial Level	1914	1:10560
AJ	185m S	Unspecified Quarry	1921	1:10560
AJ	186m S	Unspecified Quarries	1897	1:10560
AJ	186m S	Unspecified Quarry	1921	1:10560
AJ	186m S	Unspecified Quarry	1947	1:10560
AK	190m W	Old Trial Level	1938	1:10560
AK	190m W	Old Trial Level	1938	1:10560
AD	192m NW	Old Trial Level	1897	1:10560
AD	193m NW	Unspecified Disused Level	1988	1:10000
AD	193m NW	Unspecified Disused Level	1964	1:10560
8	200m N	Cuttings	1877	1:10560
9	201m SE	Unspecified Heap	1965	1:10560
AL	208m N	Cuttings	1914	1:10560
AL	208m N	Cuttings	1921	1:10560
10	210m N	Cuttings	1938	1:10560



ID	Location	Land Use	Year of mapping	Mapping scale
AM	210m SE	Unspecified Quarry	1921	1:10560
AL	212m N	Cuttings	1938	1:10560
AM	212m SE	Unspecified Disused Quarry	1973	1:10000
AM	212m SE	Unspecified Ground Workings	1965	1:10560
AM	212m SE	Unspecified Quarry	1921	1:10560
AM	212m SE	Unspecified Quarry	1947	1:10560
AO	216m NW	Cuttings	1914	1:10560
AO	216m NW	Cuttings	1921	1:10560
AO	216m NW	Cuttings	1938	1:10560
11	220m N	Unspecified Ground Workings	1914	1:10560
AP	224m N	Trial Levels	1948	1:10560
AP	225m N	Trial Levels	1914	1:10560
AP	225m N	Trial Levels	1921	1:10560
AP	226m N	Trial Levels	1938	1:10560
AM	230m SE	Unspecified Quarries	1897	1:10560
AQ	238m NW	Old Trial Level	1938	1:10560
AQ	238m NW	Old Trial Level	1938	1:10560
AR	238m NW	Unspecified Old Quarry	1948	1:10560
AR	238m NW	Unspecified Old Quarry	1914	1:10560
AR	238m NW	Unspecified Old Quarry	1897	1:10560
AR	238m NW	Unspecified Old Quarry	1921	1:10560
AR	240m NW	Unspecified Old Quarry	1938	1:10560
AS	242m N	Unspecified Old Quarry	1948	1:10560
AQ	244m NW	Cuttings	1948	1:10560
AT	244m NE	Unspecified Quarries	1921	1:10560
AQ	244m NW	Cuttings	1914	1:10560
AQ	244m NW	Cuttings	1921	1:10560
AQ	245m NW	Cuttings	1938	1:10560



ID	Location	Land Use	Year of mapping	Mapping scale
AT	246m NE	Unspecified Ground Workings	1914	1:10560
AT	248m NE	Unspecified Disused Quarries	1948	1:10560
AT	249m NE	Unspecified Quarries	1938	1:10560

This data is sourced from Ordnance Survey/Groundsure.

18.4 Underground workings

Records within 1000m

156

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, ground workings and natural cavities map on **page 136**

ID	Location	Land Use	Year of mapping	Mapping scale
1	On site	Air Shaft	1897	1:10560
2	On site	Tunnel	1877	1:10560
3	On site	Tunnel	1965	1:10560
B	On site	Colliery	1914	1:10560
B	On site	Colliery	1897	1:10560
B	On site	Colliery	1921	1:10560
C	On site	Tunnel	1948	1:10560
C	On site	Tunnel	1914	1:10560
C	On site	Tunnel	1897	1:10560
C	On site	Tunnel	1921	1:10560
N	3m S	Tunnel	1947	1:10560
N	3m S	Tunnel	1897	1:10560
N	3m S	Tunnel	1921	1:10560
Q	8m NW	Colliery	1948	1:10560
Q	8m NW	Colliery	1914	1:10560
Q	8m NW	Colliery	1921	1:10560
H	28m N	Coal Level	1897	1:10560



ID	Location	Land Use	Year of mapping	Mapping scale
W	64m W	Colliery	1897	1:10560
AA	90m NE	Colliery	1897	1:10560
AB	108m NW	Old Trial Level	1948	1:10560
AC	136m NE	Trial Level	1877	1:10560
AC	145m NE	Old Trial Level	1948	1:10560
AC	145m NE	Old Trial Level	1914	1:10560
AC	145m NE	Old Trial Level	1897	1:10560
AC	145m NE	Old Trial Level	1921	1:10560
AC	148m NE	Disused Trial Level	1981	1:10000
AG	157m NE	Unspecified Old Level	1948	1:10560
AG	159m NE	Unspecified Old Level	1914	1:10560
AG	159m NE	Unspecified Old Level	1921	1:10560
U	174m E	Old Trial Level	1948	1:10560
AI	174m NW	Old Trial Level	1897	1:10560
AI	174m NW	Old Trial Level	1921	1:10560
AI	179m NW	Unspecified Disused Level	1988	1:10000
AI	179m NW	Unspecified Disused Level	1964	1:10560
AI	181m NW	Old Trial Level	1948	1:10560
AI	184m NW	Old Trial Level	1914	1:10560
AD	192m NW	Old Trial Level	1897	1:10560
AD	193m NW	Unspecified Disused Level	1988	1:10000
AD	193m NW	Unspecified Disused Level	1964	1:10560
AN	214m NE	Air Shaft	1948	1:10560
AP	224m N	Trial Levels	1948	1:10560
AP	225m N	Trial Levels	1914	1:10560
AP	225m N	Trial Levels	1921	1:10560
AN	230m NE	Air Shaft	1914	1:10560
AN	230m NE	Air Shaft	1921	1:10560



ID	Location	Land Use	Year of mapping	Mapping scale
AN	239m NE	Air Shaft	1897	1:10560
13	267m S	Tunnel	1965	1:10560
AY	283m NE	Old Trial Levels	1948	1:10560
AY	283m NE	Old Trial Levels	1921	1:10560
AY	285m NE	Old Trial Levels	1914	1:10560
AY	285m NE	Old Trial Levels	1897	1:10560
AY	313m NE	Old Trial Levels	1948	1:10560
AY	313m NE	Old Trial Levels	1921	1:10560
AY	316m NE	Unspecified Disused Levels	1965	1:10560
BJ	444m SE	Unspecified Mine	1973	1:10000
BJ	454m SE	Colliery	1921	1:10560
BJ	455m SE	Colliery	1947	1:10560
BN	466m S	Tunnel	1876	1:10560
BQ	520m E	Old Coal Level	1921	1:10560
BQ	525m E	Old Coal Level	1948	1:10560
BT	553m SE	Colliery	1897	1:10560
BT	562m SE	Unspecified Mine	1965	1:10560
BQ	571m E	Old Coal Level	1914	1:10560
BQ	571m E	Old Coal Level	1897	1:10560
BW	576m NE	Old Trial Level	1948	1:10560
BW	576m NE	Old Trial Level	1914	1:10560
BW	576m NE	Old Trial Level	1897	1:10560
BW	576m NE	Old Trial Level	1921	1:10560
BR	577m S	Old Coal Levels	1921	1:10560
BR	577m S	Old Coal Levels	1897	1:10560
BW	579m NE	Unspecified Disused Level	1981	1:10000
BW	579m NE	Unspecified Disused Level	1965	1:10560
BR	582m S	Old Coal Levels	1947	1:10560



ID	Location	Land Use	Year of mapping	Mapping scale
BR	596m S	Unspecified Disused Mine	1989	1:10000
BR	596m S	Unspecified Disused Mine	1988	1:10000
BR	596m S	Unspecified Disused Mine	1964	1:10560
BZ	604m SW	Disused Trial Level	1989	1:10000
BZ	604m SW	Disused Trial Level	1988	1:10000
BZ	604m SW	Disused Trial Level	1964	1:10560
BZ	604m SW	Old Trial Level	1921	1:10560
BR	607m S	Disused Colliery	1947	1:10560
BR	607m S	Old Coal Levels	1897	1:10560
BR	607m S	Disused Colliery	1897	1:10560
BZ	611m SW	Old Trial Level	1947	1:10560
BR	629m S	Old Coal Levels	1947	1:10560
CF	648m NE	Old Coal Levels	1948	1:10560
BR	651m S	Old Coal Levels	1947	1:10560
BR	666m S	Disused Colliery	1921	1:10560
CD	668m N	Old Trial Level	1897	1:10560
CK	672m N	Old Coal Level	1897	1:10560
CK	675m N	Trial Level	1877	1:10560
CD	677m N	Old Trial Level	1921	1:10560
CD	685m N	Old Trial Level	1948	1:10560
CD	687m N	Old Trial Level	1914	1:10560
BR	694m S	Disused Trial Levels	1989	1:10000
BR	694m S	Disused Trial Levels	1988	1:10000
BR	694m S	Disused Trial Levels	1964	1:10560
BR	695m S	Disused Trial Levels	1989	1:10000
BR	695m S	Disused Trial Levels	1988	1:10000
BR	695m S	Disused Trial Levels	1964	1:10560
BR	700m S	Disused Trial Levels	1989	1:10000



ID	Location	Land Use	Year of mapping	Mapping scale
BR	700m S	Disused Trial Levels	1988	1:10000
BR	700m S	Disused Trial Levels	1964	1:10560
BR	702m S	Old Coal Levels	1947	1:10560
BT	713m SE	Unspecified Shaft	1921	1:10560
CF	717m NE	Old Coal Levels	1921	1:10560
BR	730m S	Old Coal Level	1897	1:10560
BR	735m S	Old Coal Levels	1921	1:10560
BR	743m S	Disused Trial Levels	1989	1:10000
BR	743m S	Disused Trial Levels	1988	1:10000
BR	743m S	Disused Trial Levels	1964	1:10560
BT	753m SE	Unspecified Shaft	1947	1:10560
BR	765m S	Old Coal Shaft	1897	1:10560
CS	766m NE	Tunnel	1948	1:10560
CS	766m NE	Tunnel	1914	1:10560
CS	766m NE	Tunnel	1897	1:10560
CS	766m NE	Tunnel	1921	1:10560
CS	768m NE	Tunnel	1965	1:10560
BR	769m S	Old Trial Level	1921	1:10560
BR	774m S	Old Trial Level	1947	1:10560
CT	802m NE	Unspecified Disused Level	1981	1:10000
CV	808m NW	Old Trial Levels	1914	1:10560
CV	808m NW	Old Trial Levels	1897	1:10560
CV	808m NW	Old Trial Levels	1921	1:10560
CV	808m NW	Trial Levels	1948	1:10560
CV	831m NW	Unspecified Disused Levels	1988	1:10000
CV	831m NW	Unspecified Disused Levels	1964	1:10560
CX	881m NW	Unspecified Disused Levels	1988	1:10000
CX	881m NW	Unspecified Disused Levels	1964	1:10560



ID	Location	Land Use	Year of mapping	Mapping scale
DB	890m SE	Old Trial Level	1947	1:10560
DB	890m SE	Old Trial Level	1921	1:10560
DC	897m NW	Unspecified Disused Level	1988	1:10000
DC	897m NW	Unspecified Disused Level	1964	1:10560
DB	897m SE	Old Trial Level	1897	1:10560
DC	900m NW	Old Trial Levels	1914	1:10560
DC	900m NW	Old Trial Levels	1897	1:10560
DC	900m NW	Old Trial Levels	1921	1:10560
DC	900m NW	Trial Levels	1948	1:10560
CX	918m NW	Old Trial Levels	1914	1:10560
CX	918m NW	Old Trial Levels	1897	1:10560
CX	918m NW	Old Trial Levels	1921	1:10560
CX	918m NW	Trial Levels	1948	1:10560
DC	923m NW	Coal Level	1948	1:10560
DE	925m NE	Old Trial Level	1897	1:10560
-	963m W	Old Trial Level	1914	1:10560
-	963m W	Old Trial Level	1921	1:10560
DH	966m SW	Colliery	1947	1:10560
DH	966m SW	Colliery	1897	1:10560
DI	970m S	Old Trial Levels	1921	1:10560
DI	971m S	Disused Trial Levels	1989	1:10000
DI	971m S	Disused Trial Levels	1988	1:10000
DI	971m S	Disused Trial Levels	1964	1:10560
DI	974m S	Old Trial Levels	1947	1:10560
-	976m SE	Old Coal Level	1947	1:10560
DI	977m S	Old Trial Levels	1897	1:10560
-	977m SE	Old Coal Level	1921	1:10560

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

2

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

Features are displayed on the Mining, ground workings and natural cavities map on **page 136**

ID	Location	Name	Commodity	Class	Likelihood
12	225m S	Not available	Iron Ore (Bedded)	B	Localised small scale underground mining may have occurred. Potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered
16	312m S	Not available	Iron Ore (Bedded)	B	Localised small scale underground mining may have occurred. Potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered

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 Stantec UK Ltd.



18.8 JPB mining areas

Records on site	0
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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.

18.9 Coal mining

Records on site	1
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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
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The Cheshire Brine Compensation District indicates areas that may be affected by salt and brine extraction in Cheshire and where compensation would be available where damage from this mining has occurred. Damage from salt and brine mining can still occur outside this district, but no compensation will be available.

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

18.11 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.

18.12 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.



18.13 Clay mining

Records on site

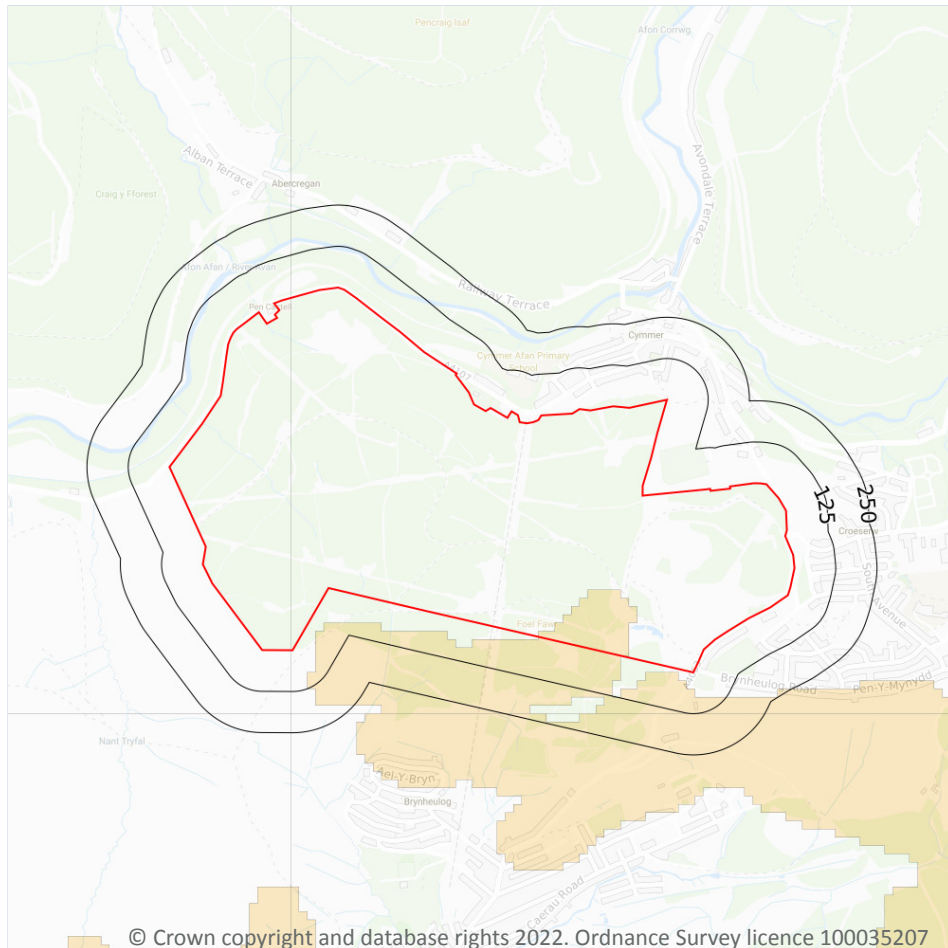
0

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

2

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 160**

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

53

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	25 - 35 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	25 - 35 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	25 - 35 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	25 - 35 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	25 - 35 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	25 - 35 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	25 - 35 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	25 - 35 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	25 - 35 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	25 - 35 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	25 - 35 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	25 - 35 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	25 - 35 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg



Location	Arsenic	Bioaccessible Arsenic	Lead	Bioaccessible Lead	Cadmium	Chromium	Nickel
On site	25 - 35 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	25 - 35 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	25 - 35 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	25 - 35 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	25 - 35 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	25 - 35 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	25 - 35 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	25 - 35 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	25 - 35 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	25 - 35 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	25 - 35 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	25 - 35 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	25 - 35 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	25 - 35 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	25 - 35 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	25 - 35 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	25 - 35 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	25 - 35 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	25 - 35 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	25 - 35 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	25 - 35 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg



Location	Arsenic	Bioaccessible Arsenic	Lead	Bioaccessible Lead	Cadmium	Chromium	Nickel
On site	35 - 45 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	35 - 45 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	35 - 45 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	35 - 45 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	35 - 45 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	35 - 45 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	35 - 45 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	35 - 45 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	35 - 45 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	35 - 45 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	35 - 45 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	35 - 45 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	35 - 45 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	35 - 45 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	35 - 45 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
2m W	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
2m NW	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
6m NE	35 - 45 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
15m NW	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
15m NW	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg



Location	Arsenic	Bioaccessible Arsenic	Lead	Bioaccessible Lead	Cadmium	Chromium	Nickel
30m E	35 - 45 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
43m E	25 - 35 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
49m E	25 - 35 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
49m NE	25 - 35 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
49m NE	25 - 35 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.

20.2 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.

20.3 BGS Measured Urban Soil Chemistry

Records within 50m

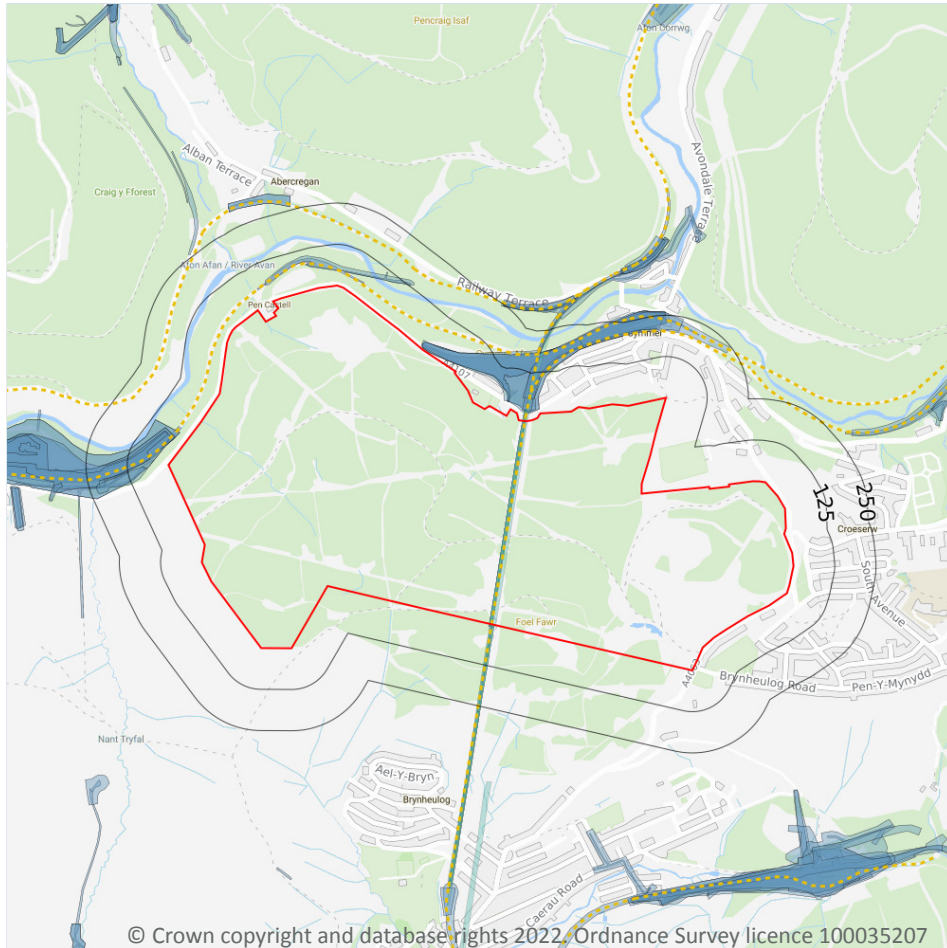
0

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 km².

This data is sourced from the British Geological Survey.



21 Railway infrastructure and projects



- Site Outline
- Search buffers in metres (m)
- C1 Crossrail 1 Stations
- Crossrail 1 Route
- Crossrail 1 Worksites
- 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

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

42

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 166**

Location	Land Use	Year of mapping	Mapping scale
On site	Tunnel	1899	2500
On site	Tunnel	1919	2500
On site	Tunnel	1961	2500
On site	Tunnel	1948	10560
On site	Tunnel	1914	10560
On site	Tunnel	1897	10560
On site	Tunnel	1877	10560
On site	Tunnel	1921	10560
On site	Tunnel	1938	10560
On site	Tunnel	1965	10560
3m S	Tunnel	1947	10560
3m S	Tunnel	1897	10560
3m S	Tunnel	1921	10560
4m S	Tunnel	1921	10560
4m NE	Railway Sidings	1914	10560
4m NE	Railway Sidings	1897	10560
4m NE	Railway Sidings	1921	10560



Location	Land Use	Year of mapping	Mapping scale
5m NE	Railway Sidings	1938	10560
7m S	Tunnel	1877	2500
7m S	Tunnel	1899	2500
7m S	Tunnel	1919	2500
9m NE	Railway Sidings	1899	2500
10m NE	Mineral Railway Sidings	1919	2500
32m NW	Railway Sidings	1988	10000
32m NW	Railway Sidings	1964	10560
35m NW	Railway Sidings	1914	10560
35m NW	Railway Sidings	1921	10560
37m NW	Railway Sidings	1961	2500
39m NE	Railway Sidings	1899	2500
45m NW	Railway Sidings	1948	10560
46m N	Railway Sidings	1897	10560
48m NW	Railway Sidings	1948	10560
49m W	Tramway Sidings	1899	2500
58m NW	Railway Sidings	1938	10560
60m NW	Railway Sidings	1919	2500
64m W	Tramway Sidings	1897	10560
65m W	Railway Sidings	1899	2500
101m N	Railway Sidings	1961	2500
122m W	Tramway Sidings	1919	2500
180m N	Railway Sidings	1965	10560
212m N	Railway Sidings	1961	2500
246m NE	Railway Sidings	1948	10560

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

12

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 166**

Location	Description
On site	Abandoned
10m N	Abandoned
31m NW	Abandoned
70m NW	Abandoned
146m W	Dismantled
171m NE	Abandoned
175m NE	Abandoned
185m W	Abandoned
186m NE	Abandoned
187m N	Abandoned
216m NE	Abandoned
240m NE	Abandoned

This data is sourced from OpenStreetMap.



21.7 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.

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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