ID	Location	Land Use	Year of mapping	Mapping scale
C	**On site**	**Air Shaft**	**1875**	**1:10560**
J	13m SW	Disused Coal and Ironstone Pit	1875	1:10560
I	22m S	Old Ironstone Shaft	1903	1:10560
I	27m S	Old Ironstone Shaft	1901	1:10560
I	31m S	Old Ironstone Shaft	1948	1:10560
I	35m S	Unspecified Disused Shaft	1977	1:10000
I	35m S	Unspecified Disused Shaft	1982	1:10000
I	36m S	Unspecified Disused Shaft	1992	1:10000
O	37m N	Old Ironstone Levels	1901	1:10560
R	44m S	Old Ironstone Level	1903	1:10560
R	44m S	Old Ironstone Level	1901	1:10560
K	54m S	Old Ironstone Level	1948	1:10560
Q	62m S	Coal and Ironstone Pit	1875	1:10560
12	97m E	Air Shaft	1875	1:10560
13	141m SW	Air Shaft	1875	1:10560
AG	144m NW	Ironstone Levels	1903	1:10560
T	167m SE	Old Ironstone Shaft	1903	1:10560
T	168m SE	Old Ironstone Shaft	1901	1:10560
AK	174m E	Unspecified Levels	1875	1:10560
AJ	184m W	Ironstone Levels	1903	1:10560
AO	192m S	Coal Level	1875	1:10560
AQ	232m SE	Coal and Ironstone Pit	1875	1:10560
AG	242m NW	Air Shaft	1875	1:10560
AP	260m S	Old Ironstone Shaft	1948	1:10560
AP	260m S	Old Ironstone Shaft	1903	1:10560
AP	265m S	Old Ironstone Shaft	1901	1:10560
AZ	297m SW	Coal Level	1903	1:10560
AP	317m S	Ironstone Level	1901	1:10560

ID	Location	Land Use	Year of mapping	Mapping scale
AZ	337m SW	Coal Level	1901	1:10560
AJ	344m W	Unspecified Shaft	1948	1:10560
25	348m NE	Air Shaft	1875	1:10560
AJ	349m W	Disused Coal Level	1948	1:10560
AJ	349m W	Disused Coal Level	1948	1:10560
AQ	378m SE	Air Shaft	1875	1:10560
AJ	393m W	Old Coal Level	1903	1:10560
AJ	394m W	Old Coal Level	1901	1:10560
BD	406m NE	Unspecified Shaft	1875	1:10560
AZ	409m SW	Unspecified Disused Shaft	1965	1:10560
AZ	410m SW	Unspecified Disused Shaft	1977	1:10000
AZ	410m SW	Unspecified Disused Shaft	1982	1:10000
AZ	410m SW	Unspecified Disused Shaft	1992	1:10000
BU	457m S	Old Coal Level	1948	1:10560
BU	457m S	Ironstone Level	1903	1:10560
BQ	462m S	Old Ironstone Level	1901	1:10560
BY	509m SE	Unspecified Disused Shaft	1977	1:10000
BY	509m SE	Unspecified Disused Shaft	1982	1:10000
BY	510m SE	Unspecified Disused Shaft	1965	1:10560
BQ	536m S	Old Ironstone Level	1903	1:10560
CG	566m S	Air Shaft	1903	1:10560
CG	573m S	Air Shafts	1901	1:10560
45	600m NE	Air Shaft	1875	1:10560
CM	614m E	Ironstone Level	1875	1:10560
CL	656m E	Old Ironstone Levels	1901	1:10560
52	659m S	Ironstone Level	1875	1:10560
54	667m NW	Coal Shaft	1875	1:10560
CN	672m S	Coal Level	1903	1:10560

ID	Location	Land Use	Year of mapping	Mapping scale
BP	676m E	Old Ironstone Level	1903	1:10560
BP	684m E	Unspecified Old Level	1948	1:10560
56	696m NE	Air Shaft	1875	1:10560
CQ	699m S	Unspecified Old Shaft	1948	1:10560
-	710m S	Air Shaft	1875	1:10560
58	724m E	Air Shaft	1875	1:10560
-	725m S	Old Coal Level	1948	1:10560
BP	737m E	Air Shaft	1903	1:10560
BP	739m E	Air Shaft	1901	1:10560
CJ	743m E	Unspecified Disused Shaft	1965	1:10560
BP	748m E	Air Shaft	1875	1:10560
CJ	752m E	Unspecified Old Shaft	1901	1:10560
CJ	753m E	Unspecified Old Shaft	1948	1:10560
CJ	753m E	Unspecified Old Shaft	1903	1:10560
DC	790m E	Ironstone Pits	1948	1:10560
CM	807m E	Old Ironstone Level	1903	1:10560
DH	808m SE	Unspecified Disused Shaft	1965	1:10560
DH	808m SE	Unspecified Disused Shaft	1977	1:10000
DH	808m SE	Unspecified Disused Shaft	1982	1:10000
DG	808m E	Unspecified Drift	1901	1:10560
DG	812m E	Unspecified Drift	1903	1:10560
DL	831m NE	Fire Clay and Coal Drift	1948	1:10560
DL	834m NE	Unspecified Drift	1901	1:10560
DH	847m SE	Old Air Shaft	1948	1:10560
DH	847m SE	Air Shaft	1903	1:10560
DH	848m SE	Air Shaft	1901	1:10560
DH	852m SE	Disused Air Shaft	1992	1:10000
DH	853m SE	Disused Air Shaft	1977	1:10000

ID	Location	Land Use	Year of mapping	Mapping scale
DH	853m SE	Disused Air Shaft	1982	1:10000
DH	865m SE	Air Shaft	1875	1:10560
71	884m S	Ironstone Level	1875	1:10560
DL	924m NE	Unspecified Drift	1903	1:10560
-	946m E	Unspecified Old Shaft	1948	1:10560
DV	969m NW	Air Shaft	1875	1:10560
-	975m SE	Old Ironstone Level	1903	1:10560
-	976m SE	Old Ironstone Level	1901	1:10560

This is data is sourced from Ordnance Survey/Groundsure.

18.4 Underground mining extents

Records within 500m	0

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

This data is sourced from Groundsure.

18.5 Historical Mineral Planning Areas

Records within 500m	0

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

This data is sourced from the British Geological Survey.

18.6 Non-coal mining

Records within 1000m	10

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

Features are displayed on the Mining and ground workings map on **page 172 >**

ID	Location	Name	Commodity	Class	Likelihood
J	**On site**	**Not available**	**Iron Ore (Bedded)**	**B**	**Underground mine workings may have occurred in the past or current mines may be working at significant depth to modern engineering standards. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.**
8	55m NE	Not available	Iron Ore (Bedded)	B	Underground mine workings may have occurred in the past or current mines may be working at significant depth to modern engineering standards. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.
Y	71m S	Not available	Iron Ore (Bedded)	B	Underground mine workings may have occurred in the past or current mines may be working at significant depth to modern engineering standards. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.
10	76m NE	Not available	Iron Ore (Bedded)	B	Underground mine workings may have occurred in the past or current mines may be working at significant depth to modern engineering standards. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.
27	380m N	Not available	Iron Ore (Bedded)	B	Underground mine workings may have occurred in the past or current mines may be working at significant depth to modern engineering standards. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.
49	639m S	Not available	Ironstone (bedded)	D	Underground mining is considered likely to have occurred within or close to the area. The location, extent and nature of mining should be considered in any site investigation. Potential for difficult ground conditions should be considered.
50	641m W	Not available	Iron Ore (Bedded)	B	Underground mine workings may have occurred in the past or current mines may be working at significant depth to modern engineering standards. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.
-	780m N	Not available	Iron Ore (Bedded)	B	Underground mine workings may have occurred in the past or current mines may be working at significant depth to modern engineering standards. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.
-	905m N	Not available	Vein Mineral	A	Underground mine workings are uncommon, although the geology is similar to that worked elsewhere. Potential for difficult ground conditions are unlikely and are at a level where they need not be considered.

ID	Location	Name	Commodity	Class	Likelihood
-	912m S	Not available	Ironstone (bedded)	D	Underground mining is considered likely to have occurred within or close to the area. The location, extent and nature of mining should be considered in any site investigation. Potential for difficult ground conditions should be considered.

This data is sourced from the British Geological Survey.

18.7 JPB mining areas

Records on site	0

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

This data is sourced from Johnson Poole and Bloomer.

18.8 The Coal Authority non-coal mining

Records within 500m	9

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.

Features are displayed on the Mining and ground workings map on **page 172 >**

ID	Location	Mineral type	Mineral
5	21m S	Metals	Ironstone
M	26m NE	Metals	Ironstone
M	28m NE	Metals	Ironstone
M	61m NE	Metals	Ironstone
M	62m NE	Metals	Ironstone
M	62m NE	Metals	Ironstone
AS	230m NE	Metals	Ironstone
18	244m E	Metals	Ironstone
23	323m S	Metals	Ironstone

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	1

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.

Location	Mineral
On site	**Coal**

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

Generalised areas that may be affected by gypsum extraction.

This data is sourced from British Gypsum.

18.15 Tin mining

Records on site	0

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.

19.5 National karst database

Records within 500m	0

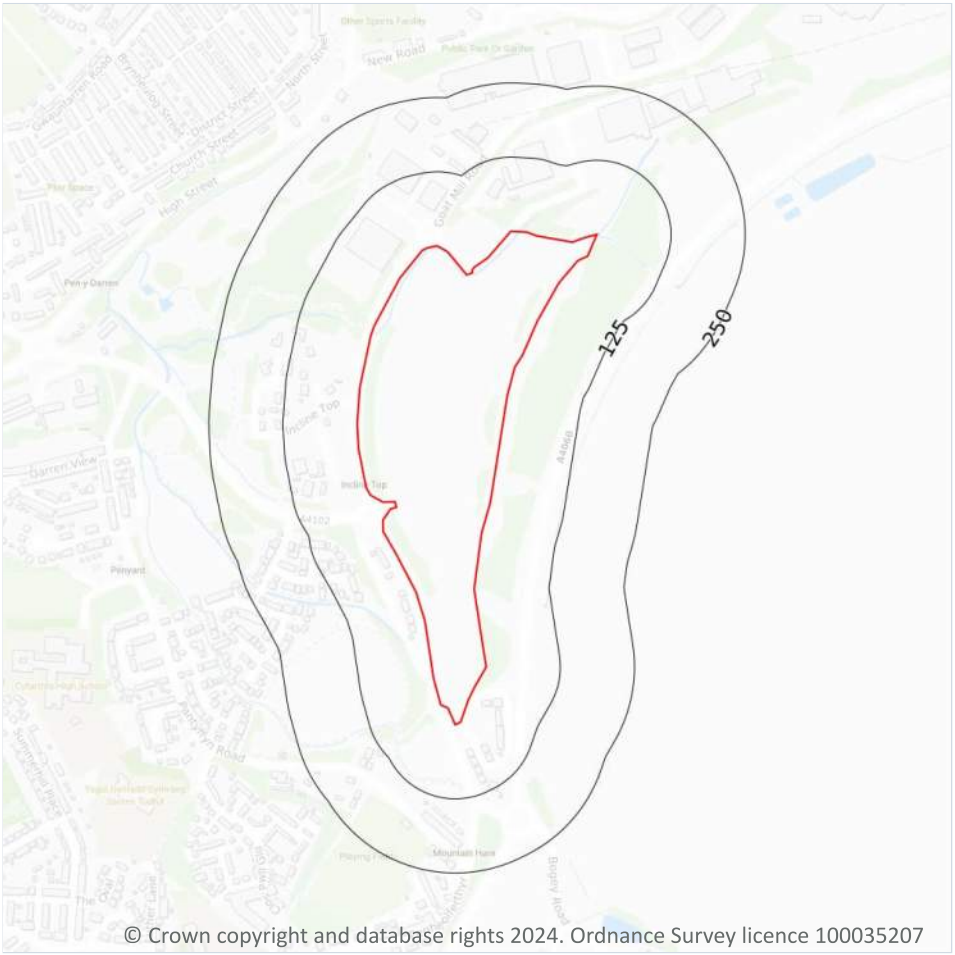
This is a comprehensive database of national karst information gathered from a wide range of sources. BGS have collected data on five main types of karst feature: Sinkholes, stream links, caves, springs, and incidences of associated damage to buildings, roads, bridges and other engineered works.

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

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

This data is sourced from the British Geological Survey.

20 Radon



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%

20.1 Radon

Records on site	1

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 204 >**

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

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