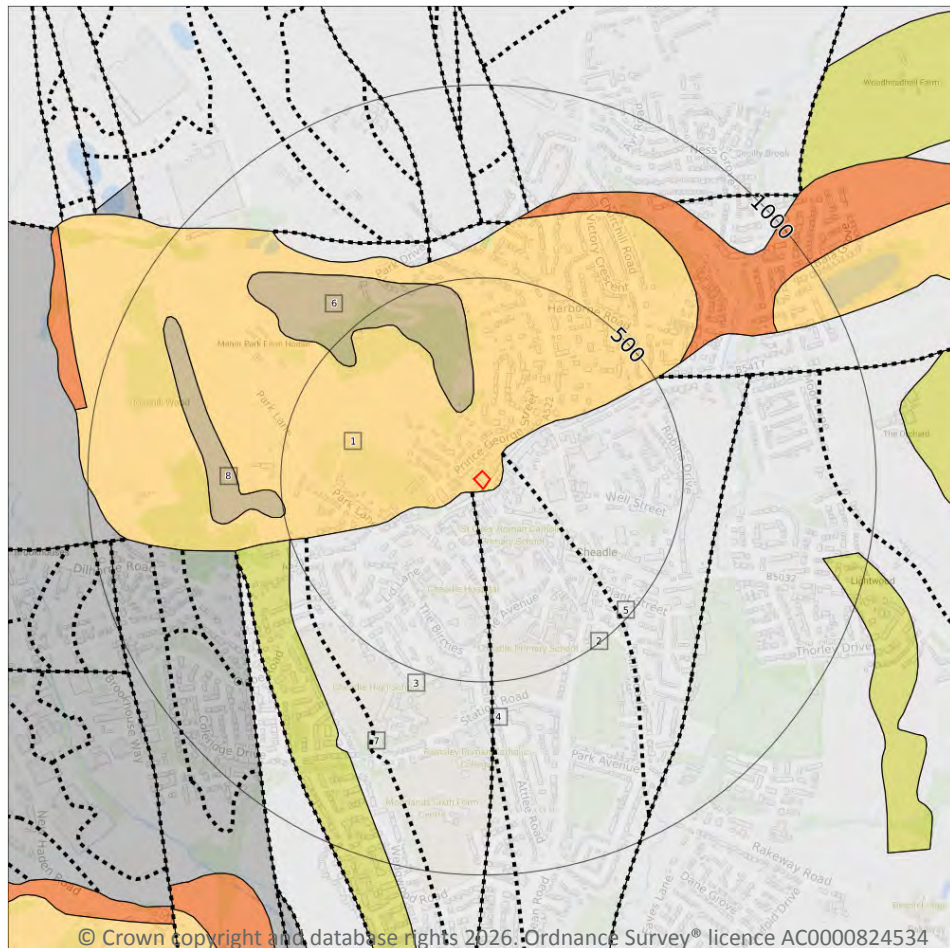


Geology 1:50,000 scale - Bedrock



- 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

5

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 82 >](#)

ID	Location	LEX Code	Description	Rock age
1	On site	CHES-SCON	Chester Formation-Interbedded sandstone and conglomerate	Olenekian
2	7m S	PLCM-MDSS	Pennine Lower Coal Measures Formation-Mudstone, siltstone and sandstone	Westphalian



ID	Location	LEX Code	Description	Rock age
3	27m SW	PLCM-MDSS	Pennine Lower Coal Measures Formation-Mudstone, siltstone and sandstone	Westphalian
6	162m N	FRE-SCON	Freehay Member-Interbedded sandstone and conglomerate	Not Defined
8	495m W	FRE-SCON	Freehay Member-Interbedded sandstone and conglomerate	Not Defined

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	Mixed	High	Moderate
6m S	Fracture	Moderate	Low

This data is sourced from the British Geological Survey.

15.10 Bedrock faults and other linear features (50k)

Records within 500m

3

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

Features are displayed on the Geology 1:50,000 scale - Bedrock map on [page 82 >](#)

ID	Location	Category	Description
4	27m SW	FAULT	Fault, inferred, crossmark on downthrow side, throw in metres
5	67m NE	ROCK	Coal seam, inferred
7	460m W	ROCK	Coal seam, observed

This data is sourced from the British Geological Survey.



16 Boreholes



— Site Outline
Search buffers in metres (m)

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

16.1 BGS Boreholes

Records within 250m

12

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 84](#) >

ID	Location	Grid reference	Name	Length	Confidential	Web link
1	102m NE	400850 343400	HIGH SREET CHEADLE 1	-	Y	N/A
A	217m E	401013 343343	SUN STREET CHEADLE W4	2.0	N	191990 ↗
A	226m E	401024 343329	SUN STREET CHEADLE W3	3.0	N	191989 ↗

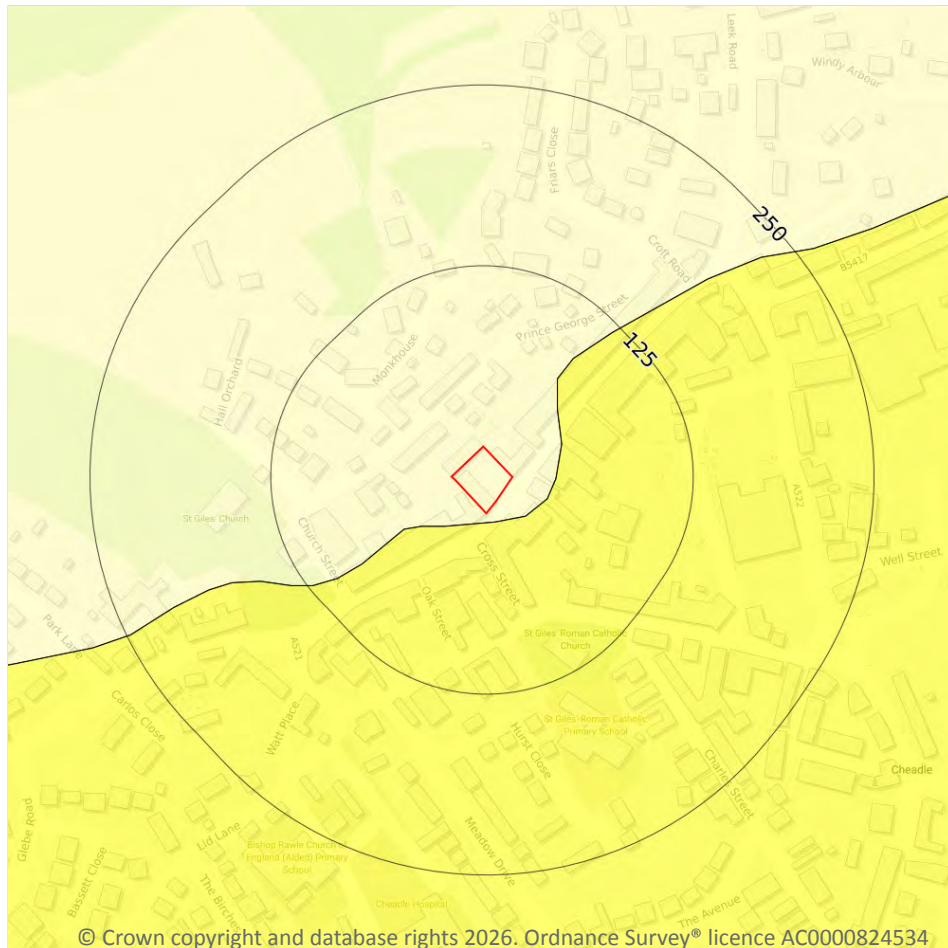


ID	Location	Grid reference	Name	Length	Confidential	Web link
A	227m E	401022 343346	SUN STREET CHEADLE TP 14	3.2	N	192003 ↗
A	232m E	401028 343341	SUN STREET CHEADLE TP 1	4.0	N	191991 ↗
A	235m E	401031 343340	SUN STREET CHEADLE W2	3.0	N	191988 ↗
A	236m E	401034 343325	SUN STREET CHEADLE W1	3.0	N	191987 ↗
A	238m E	401034 343346	SUN STREET CHEADLE TP 15	2.15	N	192004 ↗
A	239m E	401033 343354	SUN STREET CHEADLE TP 13	2.0	N	192002 ↗
A	241m E	401038 343336	SUN STREET CHEADLE TP 17	1.8	N	192006 ↗
A	247m E	401043 343343	SUN STREET CHEADLE TP 2	2.35	N	191992 ↗
A	247m E	401044 343338	SUN STREET CHEADLE TP 16	2.4	N	192005 ↗

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

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).

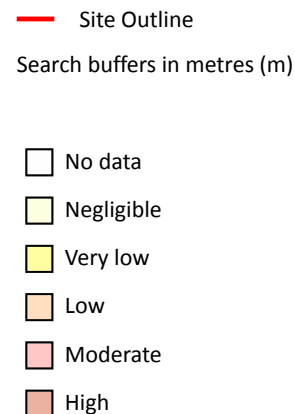
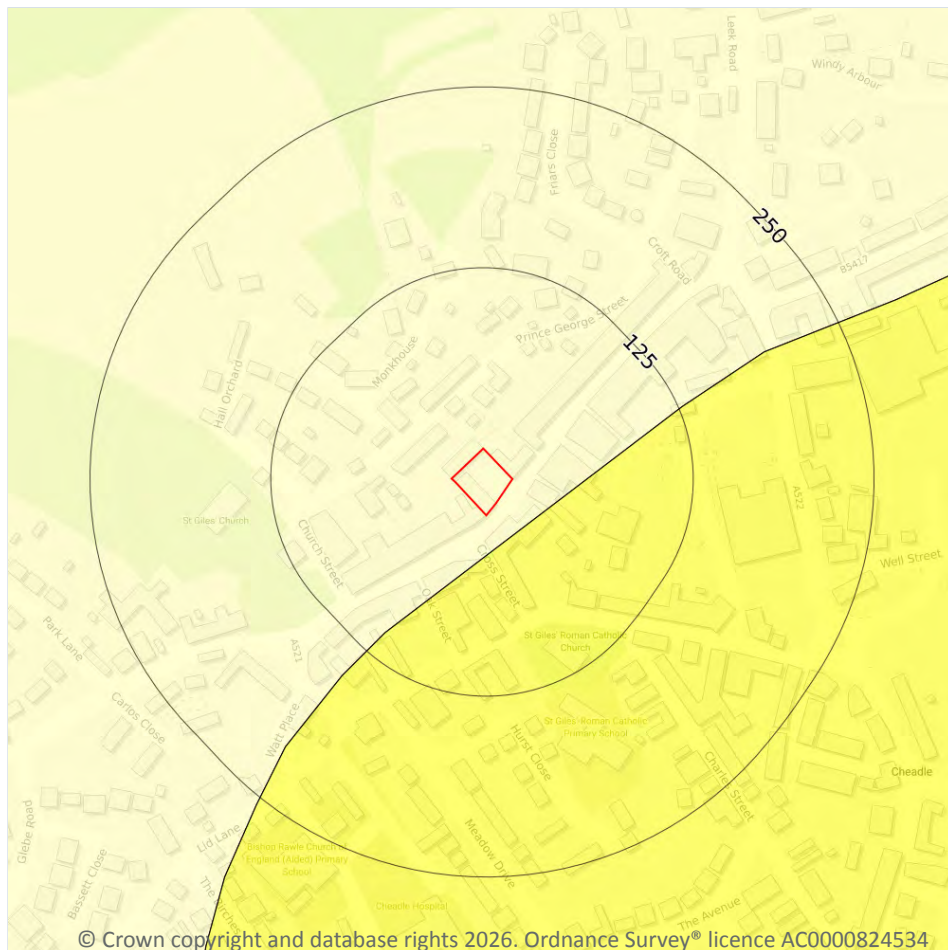
Features are displayed on the Natural ground subsidence - Shrink swell clays map on [page 86](#) >

Location	Hazard rating	Details
On site	Negligible	Ground conditions predominantly non-plastic.
7m S	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

2

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 87 >](#)

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
22m SE	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 - 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.

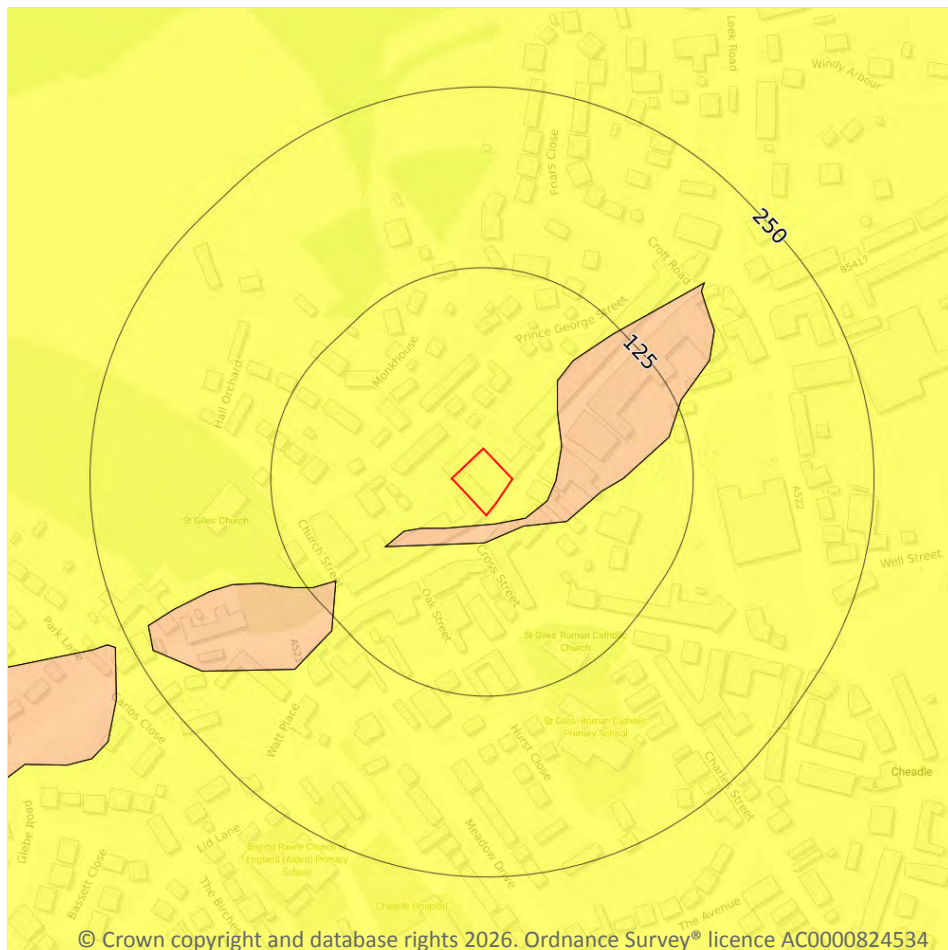
Features are displayed on the Natural ground subsidence - Collapsible deposits map on [page 90 >](#)

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



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

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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 91](#) >

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
7m S	Low	Slope instability problems may be present or anticipated. Site investigation should consider specifically the slope stability of the site.

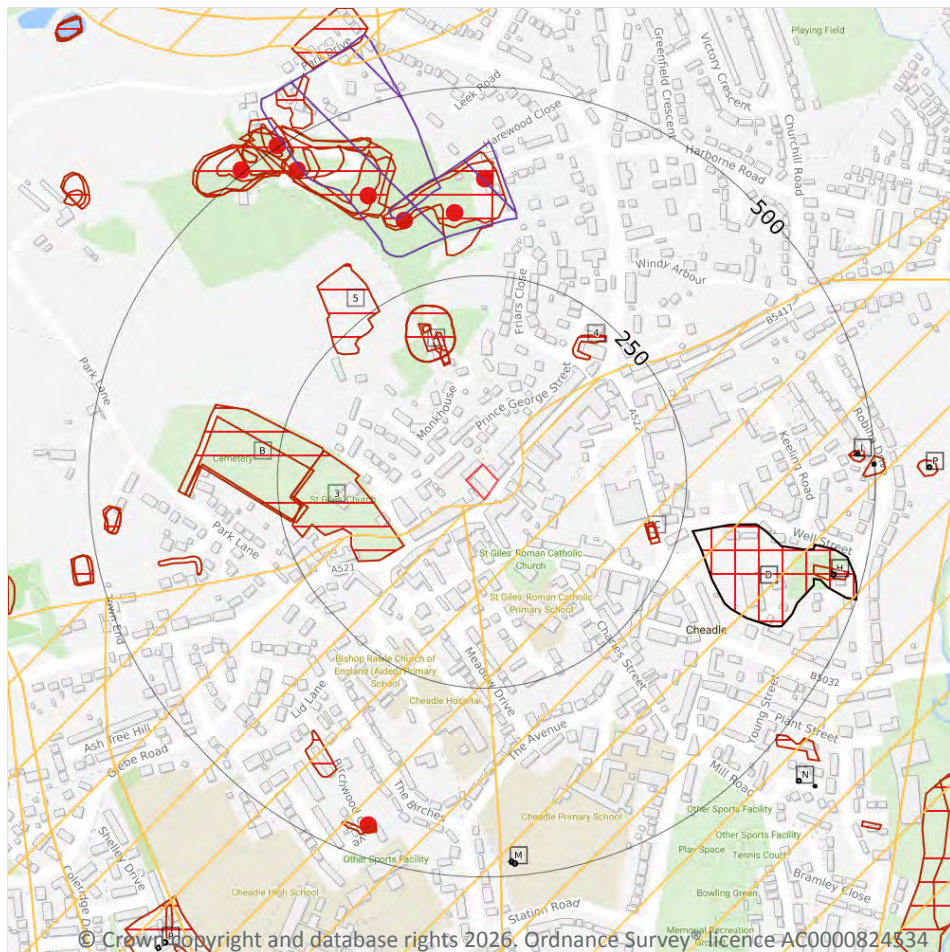
This data is sourced from the British Geological Survey.



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

6

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 95 >](#)



ID	Location	Details	Description
E	336m N	Name: Cheadle Park Address: Cheadle Park, STOKE ON TRENT, Staffordshire Commodity: Sand & Gravel 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.
G	339m N	Name: Cheadle Park Address: Cheadle Park, STOKE ON TRENT, Staffordshire Commodity: Sand & Gravel 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.
7	379m N	Name: Cheadle Park Address: Cheadle Park, STOKE ON TRENT, Staffordshire Commodity: Sand & Gravel 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.
F	387m NW	Name: Cheadle Park Address: Cheadle Park, STOKE ON TRENT, Staffordshire Commodity: Sand & Gravel 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
I	458m S	Name: Cheadle Brick Works Address: Cheadle, STOKE ON TRENT, Staffordshire Commodity: Clay & Shale 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.
K	460m NW	Name: Cheadle Park Address: Cheadle Park, STOKE ON TRENT, Staffordshire Commodity: Sand & Gravel 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

14

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 95 >](#)

ID	Location	Land Use	Year of mapping	Mapping scale
3	117m SW	Grave Yard	1879	1:10560
A	141m N	Reservoirs	1976	1:10000
A	142m N	Reservoirs	1949	1:10560
A	152m NW	Reservoirs	1949	1:10560
A	152m NW	Reservoir	1922	1:10560
A	152m NW	Covered Reservoir	1898	1:10560
4	189m NE	Unspecified Pit	1925	1:10560
A	191m NW	Reservoirs	1949	1:10560



ID	Location	Land Use	Year of mapping	Mapping scale
B	193m W	Cemetery	1976	1:10000
B	202m W	Cemetery	1949	1:10560
C	203m E	Reservoir	1925	1:10560
C	203m E	Reservoir	1898	1:10560
C	208m E	Reservoir	1880	1:10560
5	221m NW	Covered Reservoir	1879	1:10560

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

18.3 Underground workings

Records within 1000m

19

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 95 >](#)

ID	Location	Land Use	Year of mapping	Mapping scale
D	267m E	Colliery	1880	1:10560
H	458m E	Unspecified Shafts	1880	1:10560
L	475m E	Old Coal Shafts	1880	1:10560
M	478m S	Old Coal Shaft	1898	1:10560
M	481m S	Old Coal Shaft	1880	1:10560
L	496m E	Old Coal Shafts	1880	1:10560
N	556m SE	Coal Shafts	1880	1:10560
P	569m E	Old Coal Shafts	1880	1:10560
N	578m SE	Coal Shafts	1880	1:10560
-	713m S	Colliery	1880	1:10560
R	720m SW	Unspecified Old Shafts	1898	1:10560
R	731m SW	Unspecified Old Shafts	1898	1:10560
-	819m S	Unspecified Shafts	1880	1:10560
-	835m S	Old Coal Shafts	1898	1:10560



ID	Location	Land Use	Year of mapping	Mapping scale
-	838m S	Unspecified Shafts	1880	1:10560
-	841m S	Unspecified Shafts	1880	1:10560
-	935m NW	Colliery	1898	1:10560
-	966m SE	Coal Shafts	1880	1:10560
-	971m SE	Coal Shafts	1880	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

2

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.

Features are displayed on the Mining and ground workings map on [page 95 >](#)

ID	Location	Site Name	Mineral	Type	Planning Status	Planning Status Date
F	295m N	Park Hall	Sand and gravel	Surface mineral working	Valid	Not available
G	344m N	Park Hall	Sand and gravel	Surface mineral working	Valid	Not available

This data is sourced from the British Geological Survey.



18.6 Non-coal mining

Records within 1000m

19

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 95 >](#)

ID	Location	Name	Commodity	Class	Likelihood
1	7m 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.
2	27m SW	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	502m 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.
12	512m 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.
13	556m 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.
14	558m 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.
16	597m E	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.



ID	Location	Name	Commodity	Class	Likelihood
17	610m 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.
18	610m 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.
-	643m 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.
21	645m 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.
-	680m 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.
-	779m 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.
26	858m 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.
-	861m 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.
-	886m E	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.



ID	Location	Name	Commodity	Class	Likelihood
-	911m 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.
-	954m 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.
-	997m NW	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.

This data is sourced from the British Geological Survey.

18.7 JPB mining areas

Records on site

1

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

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

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
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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.

18.14 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.

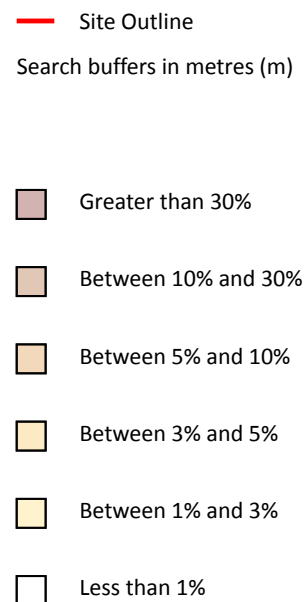
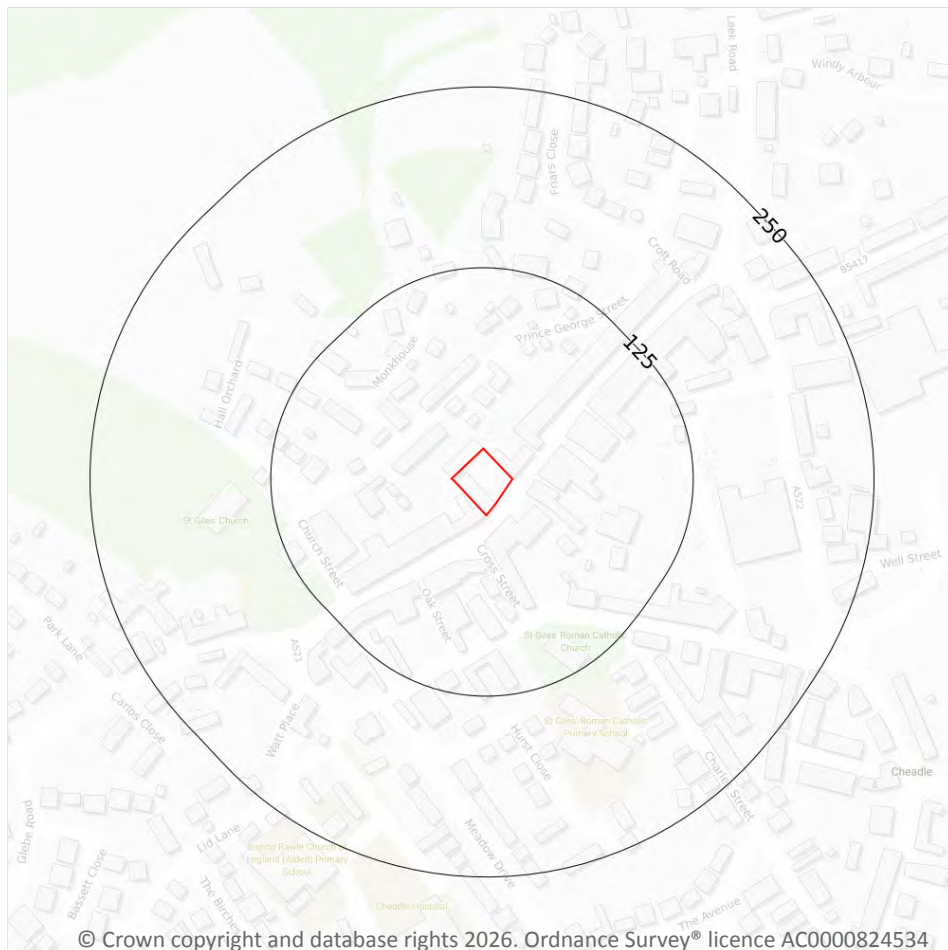
Not all 'holes' noted on Ordnance Survey® mapping will necessarily be present within this dataset.



This data is sourced from Groundsure.



20 Radon



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 107](#) >

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.



21 Soil chemistry

21.1 BGS Estimated Background Soil Chemistry

Records within 50m

4

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 mg/kg	No data	100 - 200 mg/kg	60 - 120 mg/kg	1.8 mg/kg	20 - 40 mg/kg	15 mg/kg
6m S	15 mg/kg	No data	100 - 200 mg/kg	60 - 120 mg/kg	1.8 mg/kg	40 - 60 mg/kg	15 mg/kg
22m SE	15 mg/kg	No data	100 - 200 mg/kg	60 - 120 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 mg/kg
27m SW	15 mg/kg	No data	100 - 200 mg/kg	60 - 120 mg/kg	1.8 mg/kg	40 - 60 mg/kg	15 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

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**0**

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.

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

0

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

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.

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> ↗.

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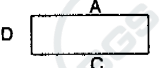


Appendix D – BGS Borehole Records



01038 43336

SK04SW 147

Dimensions : 2.50x0.70m		Orientation : 		Reduced Level 165.60	
GL	A	B	C	D	
	1 + 2				
	3				
	4				
1.0	5				164.60
2.0	End of Trial Pit at 1.80m.				163.60
3.0					162.60
4.0					161.60

Strata			Samples and Tests		
Depth (m)	No.	Description	Depth (m)	Type	Results
0.00-0.02	1	MADE GROUND: Tarmac			
0.02-0.20	2	MADE GROUND: Compact dark brown fragments of brick, ash and clinker.			
0.20-0.40	3	MADE GROUND: Compact silty red-brown fine to coarse sand.	0.30	D	
0.40-0.80	4	Soft dark brown sandy CLAY with a little gravel.	0.60	D	
0.80-1.80	5	Loose brown mottled yellow clayey fine to coarse SAND with some subangular fine to coarse gravel. At 1.80m: grading into firm sandy clay	1.70	GD	

Date of Excavation 27/07/97 Equipment JCB 3CX Stability Collapse of faces A and C	Groundwater No. Struck Behaviour 1 1.80 Seepage	Ground Level 165.60 m OD Coordinates 1947.73 mE 2229.76 mN Logged by JJ Checked by RP
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Remarks See key sheet and appendices for explanations.		Form 2/0	
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Trial Pit Record	Project Sun Street, Cheadle Somerfield Stores Ltd.	Contract 127216
 Exploration Associates		Trial Pit 17



01028 43341 SK04SW 132

Dimensions : 2.60 x 1.00m
Orientation : West

Orientation diagram: A (top), B (right), C (bottom), D (left)

GL	A	B	C	D	Reduced Level
1					165.99
2					
3					164.99
4					
5					163.99
6					
7					162.99
8					
4.0	End of Trial Pit at 4.00m.				161.99

Strata			Samples and Tests		
Depth (m)	No.	Description	Depth (m)	Type	Results
0.00-0.04	1	MADE GROUND: Tarmac			
0.04-0.60	2	MADE GROUND: Compact dark brown clayey silty fine to coarse sand with some subangular fine to coarse gravel including brick, ash and clinker	0.30-0.50	B	
			0.30	D	
0.60-1.15	3	MADE GROUND: Compact yellow brown silty very clayey fine to coarse sand with some subrounded fine to coarse gravel and occasional cobbles Below 1.10m: petrol odour	0.70-0.90	B	
			0.70	D	
1.15-1.40	4	Dense yellow brown silty very sandy subrounded fine to coarse GRAVEL and occasional cobbles	1.20-1.30	B	
			1.30	D	
1.40-2.10	5	Stiff to very stiff yellow brown mottled grey and dark grey silty CLAY with a little gravel including coal. Some rootlets. Petrol odour.	1.50-1.70	B	
			1.50	D	
2.10-2.40	6	Dark grey highly weathered silty carbonaceous organic MUDSTONE, very weak	2.10-2.20	B	
			2.10	D	
2.40-3.40	7	Light grey completely to highly weathered MUDSTONE, very weak	2.50-2.60	B	
3.40-4.00	8	Light grey highly weathered MUDSTONE, weak	3.40-3.60	B	
			3.60	W	
			3.70		

Date of Excavation 14/07/97 Equipment JCB 3CX Stability Stable	Groundwater No. Struck Behaviour 1 1.70 Wet 2 2.20 Slight seepage all faces 3 3.40 Rapid inflow all faces	Ground Level 165.99 m OD Coordinates 1938.76 mE 2234.24 mN Logged by JMJ Checked by R
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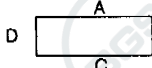
Remarks
See key sheet and appendices for explanations.

Form 2/0

Trial Pit Record	Project Sun Street, Cheadle Somerfield Stores Ltd.	Contract 127216
Exploration Associates		Trial Pit 1



01033 43354 SK04SW 143

Dimensions : 3.00x0.70m		Orientation : 		Orientation →	
GL	A	B	C	D	Reduced Level
	1				166.22
	2				
1.0	3				165.22
2.0	4				164.22
	End of Trial Pit at 2.00m.				
3.0					163.22
4.0					162.22

Strata			Samples and Tests		
Depth (m)	No.	Description	Depth (m)	Type	Results
0.00-0.40	1	MADE GROUND: Compact dark brown silty fine to coarse sand with many ash, clinker, brick, concrete, wire, metal (milk churn), glass and wood fragments.	0.20-0.30 0.20	B D	
0.40-0.80	2	Firm dark brown slightly sandy silty CLAY with a little to some subrounded fine to coarse gravel.	0.70-0.80 0.70	B D	
0.80-1.80	3	Soft brown mottled grey silty sandy CLAY with much subangular fine to coarse gravel. Below 1.00m: becoming clayey sand	1.00-1.20 1.10	B GD	
1.80-2.00	4	Dark grey/black highly weathered carbonaceous MUDSTONE, very weak (possibly reworked).	1.80	GD	

Date of Excavation 22/07/97 Equipment JCB 3CX Stability Statum 1: unstable	Groundwater No. Struck Behaviour 1 1.70 Wet	Ground Level 166.22 m OD Coordinates 1942.85 mE 2246.32 mN Logged by JJ Checked by PP
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Remarks See key sheet and appendices for explanations.		Form 2/0	
Trial Pit Record		Project Sun Street, Cheadle Somerfield Stores Ltd.	
Exploration Associates		Contract 127216 Trial Pit 13	



Sampling					Strata				
Depth	Type	Casing Depth	Date/ Water	SPT N (Cu)	Description	Depth (Thickness)	Level	Legend	
			22/07 1997		MADE GROUND concrete.	G.L. 0.07	165.67 165.60		
					MADE GROUND dark brown silty fine to coarse sand and subangular fine and medium gravel of ash and clinker.	(0.53) 0.60	165.07		
1.50-1.70	D				Brown silty fine to coarse SAND with clayey pockets and a little gravel.	(1.50)			
2.00-2.10	GD					2.10	163.57		
2.50-2.70	D				Grey highly weathered MUDSTONE weak.				
3.00			22/07			3.00	162.67		
					End of Borehole.				
Equipment: Dynamic Window Sampler					Groundwater No. Struck Behaviour		Sealed		
Borehole Dia (mm) Casing Dia (mm) 50 to 3.00m					1 0.60 Strata 3 wet		Ground Level 165.67 m OD Coordinates 1944.18 2220.42 mE mN		
Remarks					Drilled by GH Logged by JHW Checked by RP				
1. Gas monitoring @ 1.00m, CO2 0.90%, O2 18.9%, CH4 0.00. 2. 19mm diameter slotted standpipe installed.									
See key sheet and appendices for explanations.					Form 1/0				
Borehole Record					Project Sun Street, Cheadle Somerfield Stores Ltd.		Contract 127216		
Exploration Associates							Borehole W1(1 of 1)		



01034 43346 SK04SW 145

Dimensions : 2.80x0.70m		Orientation			
Orientation :		Reduced Level			
GL	A	B	C	D	165.71
1.0	3				164.71
2.0	4				163.71
3.0	5				162.71
4.0	6				161.71

End of Trial Pit at 2.15m.

Strata			Samples and Tests		
Depth (m)	No.	Description	Depth (m)	Type	Results
0.00-0.05	1	MADE GROUND: Tarmac			
0.05-0.20	2	MADE GROUND: Compact dark brown fine to coarse sand and subangular fine to coarse gravel. (Strong diesel odour).	0.15	GD	
0.20-1.00	3	MADE GROUND: Loose dark brown clayey silty fine to coarse sand.	0.60	GD	
1.00-1.80	4	Loose yellow-brown silty clayey fine to coarse SAND with subrounded fine to coarse gravel. (Strong petrol odour).	1.00	GD	
1.80-2.00	5	Dark grey highly weathered carbonaceous MUDSTONE, very weak.			
2.00-2.15	6	Grey, yellow-brown mottled orange silty completely to highly weathered MUDSTONE, very weak.	2.05	GD	

Date of Excavation	Equipment	Stability	Groundwater	No. Struck	Behaviour	Ground Level	Coordinates	Logged by	Checked by
27/08/97	JCB 3CX	Stable			Not encountered during excavation	165.71 m OD	1944.10 mE 2239.74 mN	JJ	JK

Remarks

See key sheet and appendices for explanations.

Form 2/0

Trial Pit Record	Project	Contract
	Sun Street, Cheadle Somerfield Stores Ltd.	127216
Exploration Associates		Trial Pit 15

SK04SW 130

01624 43329

Sampling					Strata			
Depth	Type	Casing Depth	Date/ Water	SPT N (Cu)	Description	Depth (Thickness)	Level	Legend
0.50	D		22/07 1997		MADE GROUND concrete.	G.L. 0.20 (0.50)	166.02 165.82 165.32	
1.50	GD				MADE GROUND dark brown fine to coarse sand and subangular fine and medium gravel of ash, clinker and brick fragments, clayey in parts.	0.70 (1.30)		
2.50	GD				Brown clayey silty fine to coarse SAND.	2.00	164.02	
3.00			22/07		Grey highly weathered MUDSTONE very weak.	3.00	163.02	
					End of Borehole.			
Equipment: Dynamic Window Sampler					Groundwater		Sealed	
Borehole Dia (mm) Casing Dia (mm) 50 to 3.00m					No. Struck Behaviour No groundwater encountered		Ground Level Coordinates 166.02 m OD 1935.33 2224.15	
Remarks					Drilled by Logged by Checked by		GH JMJ PC	
1. Gas monitoring @ 1.00m: CO2 0.90%, O2 18.9%, CH4 0.00. @ 2.00m: CO2 3.7%, O2 11.1%, CH4 0.00. 2. 19mm diameter slotted standpipe installed.								
See key sheet and appendices for explanations.								
Borehole Record					Project		Contract	
Exploration Associates					Sun Street, Cheadle Somerfield Stores Ltd.		127216	
					Borehole		W3(1 of 1)	



SK04SW 129

01031 43340

Sampling					Strata			
Depth	Type	Casing Depth	Date/ Water	SPT N (Cu)	Description	Depth (Thickness)	Level	Legend
			22/07 1997		MADE GROUND concrete.	G.L.	165.74	
0.50	D				MADE GROUND dark brown slightly silty fine to coarse sand and subangular fine and medium gravel of ash, clinker and brick fragments.	0.20 (0.70)	165.54	
1.50	D				Brown silty fine to coarse SAND slightly clayey in parts with a little gravel, (petrol odour).	0.90 (0.90)	164.84	
2.50	D				Grey completely weathered MUDSTONE very weak.	1.80	163.94	
3.00			22/07			3.00	162.74	
					End of Borehole.			
Equipment: Dynamic Window Sampler					Groundwater		Ground Level	
Borehole Dia (mm) Casing Dia (mm)					No. Struck Behaviour		Coordinates	
50 to 3.00m					1 0.90 Strata 3 wet		165.74 m OD 1941.51 mE 2233.92 mN	
					Sealed		Drilled by GH Logged by JMJ Checked by PZ	
Remarks 1. Gas monitoring @ 1.00m: CO2 6.4%, O2 11.6%, CH4 0.00. @ 2.00m: CO2 1.7% O2 18.6%, CH4 0.00. @ 3.00m: CO2 0.0% O2 20.1%, CH4 0.00. See key sheet and appendices for explanations. 2. 19mm diameter slotted standpipe installed.								
Borehole Record					Project		Contract	
Exploration Associates					Sun Street, Cheadle Somerfield Stores Ltd.		127216	
							Borehole	
							W2(1 of 1)	

Form 1/0



01022 43346 SK04SW 144

Dimensions : 3.00x0.70m

Orientation : 

Reduced Level 166.26

GL	A	B	C	D	Reduced Level
	2				166.26
1.0	3				165.26
2.0					164.26
3.0	4				163.26
4.0	End of Trial Pit at 3.20m.				162.26

Strata			Samples and Tests		
Depth (m)	No.	Description	Depth (m)	Type	Results
0.00-0.04	1	MADE GROUND: Tarmac			
0.04-0.40	2	MADE GROUND: Compact dark brown clayey silty fine to coarse sand with brick fragments.	0.50-0.60 0.50-1.00	B D GD	
0.40-1.80	3	Dense brown silty clayey fine to coarse SAND with some subrounded fine to coarse gravel.	1.90-3.10	GD GD	
1.80-3.20	4	Dark grey completely to highly weathered carbonaceous MUDSTONE, very weak. Below 2.50m: becoming moderately weathered, weak			

Date of Excavation 22/07/97 Equipment JCB 3CX Stability Stable	Groundwater No. Struck Behaviour 1 3.00 Seepage	Ground Level 166.26 m 00 Coordinates 1933.90 mE 2239.59 mN Logged by JJ Checked by <i>ef</i>
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Remarks

See key sheet and appendices for explanations.

Form 2/0

Trial Pit Record	Project Sun Street, Cheadle Somerfield Stores Ltd.	Contract 127216
 Exploration Associates		Trial Pit 14



SK04SW 131

01013 43343

Sampling					Strata				
Depth	Type	Casing Depth	Date/Water	SPT N (Cu)	Description	Depth (Thickness)	Level	Legend	
			22/07 1997		MADE GROUND concrete.	G.L. (0.40)	166.50		
1.00	D				Brown silty fine to coarse SAND and subrounded fine to coarse GRAVEL.	0.40 (1.10)	166.10		
1.75	GD				Grey highly weathered MUDSTONE very weak.	1.50	165.00		
2.00			22/07		 End of Borehole.	2.00	164.50		
Equipment: Dynamic Window Sampler					Groundwater		Sealed		Ground Level 166.50 m OD
Borehole Dia (mm) 50 to 2.00m					No. Struck Behaviour		No groundwater encountered		Coordinates 1926.43 2236.64 mE mN
Remarks					1. Gas monitoring @ 1.00m: CO2 1.1%, O2 19.2%, CH4 0.00m. 2. 19mm diameter slotted standpipe installed.				
See key sheet and appendices for explanations.					Form 1/0				
Borehole Record					Project		Contract		127216
Exploration Associates					Sun Street, Cheadle Somerfield Stores Ltd.		Borehole		W4(1 of 1)



01043 43343

Strat SW 133

Strata			Samples and Tests		
Depth (m)	No.	Description	Depth (m)	Type	Results
0.00-0.04	1	MADE GROUND: Tarmac			
0.04-0.20	2	MADE GROUND: Concrete			
0.20-0.80	3	MADE GROUND: Compact dark grey subangular fine to coarse gravel of ash and clinker	0.30-0.50 0.50	B D	
0.80-1.10	4	Firm yellow brown sandy CLAY with much subangular fine to coarse gravel	0.80-1.00	B	
1.10-1.65	5	Loose yellow brown clayey silty fine to coarse SAND with some subrounded fine to coarse gravel and occasional cobbles Below 1.20m: becoming red brown mottled grey At 1.50m: strong petrol odour	1.10-1.30 1.30-1.50	D B	
1.65-2.20	6	Dark grey completely to highly weathered MUDSTONE very weak with organic odour	1.65-1.75 1.75-1.65	B D	
2.20-2.35	7	Orange brown mottled blue grey silty highly weathered MUDSTONE, very weak	2.30-2.40 2.40-2.20	B D	

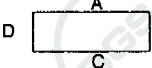
Date of Excavation 14/07/97 Equipment JCB 3CX Stability Stable	Groundwater No. Struck Behaviour Not encountered during excavation	Ground Level 165.46 m OD Coordinates 1952.10 mE 2236.85 mN Logged by JMJ Checked by RP
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Remarks See key sheet and appendices for explanations.		Form 2/0
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Trial Pit Record	Project Sun Street, Cheadle Somerfield Stores Ltd.	Contract 127216
Exploration Associates		Trial Pit 2



01044 43338 SK04SW 146

Dimensions : 2.80x0.70m		Orientation : 		Reduced Level
GL	A	B	C	D
	1+2			165.54
	3			
	4			
1.0	5			164.54
2.0	6			163.54
3.0	End of Trial Pit at 2.40m.			162.54
4.0				161.54

Strata			Samples and Tests		
Depth (m)	No.	Description	Depth (m)	Type	Results
0.00-0.01	1	MADE GROUND: Tarmac			
0.01-0.17	2	MADE GROUND: Concrete			
0.17-0.50	3	MADE GROUND: Compact dark brown fine to coarse sand with ash, brick and clinker fragments.	0.40	D	
0.50-0.80	4	Soft to firm dark brown silty CLAY with a little to some subrounded fine to coarse gravel.			
0.80-1.80	5	Firm yellow-brown very sandy CLAY with some to much subrounded fine to coarse gravel and clayey sand pockets.	1.10 1.30- 1.40	D GD	
1.80-2.40	6	Dark grey highly weathered carbonaceous MUDSTONE, very weak. Below 2.30m: grey			

Date of Excavation 27/07/97 Equipment JCB 3CX Stability Stable	Groundwater No. Struck Behaviour 1 1.20 Wet	Ground Level 165.54 m OD Coordinates 1952.68 mE 2231.81 mN Logged by JJ Checked by RQ
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Remarks See key sheet and appendices for explanations.		Form 2/0	
Trial Pit Record	Project Sun Street, Cheadle Somerfield Stores Ltd.	Contract	127216
 Exploration Associates		Trial Pit	16

Appendix E – Risk Assessment Methodology

Civic Earth Risk Assessment Methodology

Civic Earth's risk assessment methodology is based on the CIRIA C552 (2001) Contaminated Land Risk Assessment – A Guide to Good Practice¹.

The assessment approach is to quantify the potential risk at Phase 1 Stage via risk estimation and risk evaluation. This defines the overall risk category that can be used to identify likely actions to address the potential risk or undertake further risk evaluation.

The methodology is a qualitative approach and is undertaken for each identified potential contaminant linkage (source-pathway-receptor) identified for the site in accordance with the October 2020 Land Contamination Risk Management Guidance (LCRM)².

The methodology requires the classification of the following:

- The magnitude of the consequence (severity) of a risk occurring; and
- The magnitude of the probability (likelihood) of a risk occurring.

The potential consequences of contamination risks occurring at a site are classified in accordance with Table 1 below, which is based on CIRIA guidance¹.

Table 1: Classification of Consequence Ratings

Classification	Definition of Consequence	Examples
Severe	Short-term (acute) risks to human health. Short-term (acute) risk of pollution of sensitive water resource or ecosystem Catastrophic damage to crops/ building/ property/ infrastructure, including off-site soils	High concentration of cyanide on the surface of an informal recreation area Major spillage of contaminants from site into controlled waters Explosion causing building collapse
Medium	Long-term (chronic) risks to human health Long-term (chronic) pollution of sensitive water resource Significant change in an ecosystem/contamination of off-site soils	Concentrations of a contaminant on site exceeding the generic or site specific assessment criteria Leaching of contaminants from a site into a major or minor aquifer Death of species within a designated nature reserve
Mild	Pollution of non-sensitive water resource Significant damage to crops/ buildings/ property /infrastructure Damage to an ecosystem or sensitive buildings/structures/services	Pollution of a non-classified groundwater Damage to a building rendering it unsafe to occupy (e.g. foundation damage resulting in instability)
Minor	Easily preventable non-permanent effects Harm, although not necessarily significant harm, which may result in financial loss or expenditure resolve Easily repairable effects of damage to building/ structures/ services	Presence of contamination at concentrations which require the use of personal protective equipment during site work Loss of plants in a landscaping scheme/discolouration of concrete

The potential probability of the risks being realised are classified in accordance with the ratings set out in Table 2, which are based on CIRIA guidance¹. It should be noted that where a potential contaminant linkage has not been identified the likelihood is considered to be negligible.

¹ CIRIA, (2001). Contaminated Land Risk Assessment. A Guide to Good Practice. CIRIA C552.

² Environment Agency (2020). Land Contamination Risk Management (LCRM).

Table 2: Classification of Probability Ratings

Classification	Definition of Consequence
High likelihood	There is a contaminant linkage and an event that either appears very likely in the short term and almost inevitable in the long term, or there is evidence at the receptor that an event has occurred
Likely	There is a contaminant linkage and all the elements are present in the right place which means that it is probable that an event will occur. Circumstances are such that an event is not inevitable, but possible in the short term and likely over the long term
Low likelihood	There is a contaminant linkage and circumstances are possible under which an event could occur. However, it is by no means certain that even over a longer period such an event would take place and is less likely in the short term
Unlikely	There is a contaminant linkage but circumstances are such that it is improbable that an event would occur even in the very long term

In accordance with C552, the risk classifications for each potential contaminant linkage are classified in accordance with the matrix of consequence and probability set out in Table 3. The definitions for the risk classifications are presented in Table 4.

Table 3: Risk Classification Matrix

		Consequence			
		Severe	Medium	Mild	Minor
Probability	High Likelihood	Very High	High	Moderate	Moderate/Low
	Likely	High	Moderate	Moderate/Low	Low
	Low Likelihood	Moderate	Moderate/Low	Low	Very Low
	Unlikely	Moderate/Low	Low	Very Low	Very Low

Table 4: Risk Classification Definitions

Classification	Definition
Very High	There is a high probability that severe harm could arise to a designated receptor from the identified hazard or there is evidence that severe harm is currently happening. This risk, if realised, is likely to result in substantial liability. Urgent investigation (if not already undertaken) and remediation are likely to be required.
High	Harm is likely to arise to a designated receptor from the identified hazard. Realisation of the risk is likely to result in substantial liability. Urgent investigation (if not already undertaken) and remediation are likely to be required.
Moderate	It is possible that harm could arise to a designated receptor from the identified hazard. However, it is either relatively unlikely that such harm would be severe or if any harm were to occur it is more than likely that the harm would be relatively mild. Urgent investigation (if not already undertaken) is normally required to clarify the potential risk and to determine the potential liability. Some remedial works may be required in the longer term.
Low	It is possible that harm could arise to a designated receptor from the identified hazard, but it is considered likely that this harm, if realised, would at worst normally be mild.
Very Low	There is a low possibility that harm could arise to a designated receptor from the identified hazard. In the event of such harm being realised it is not likely to be severe.