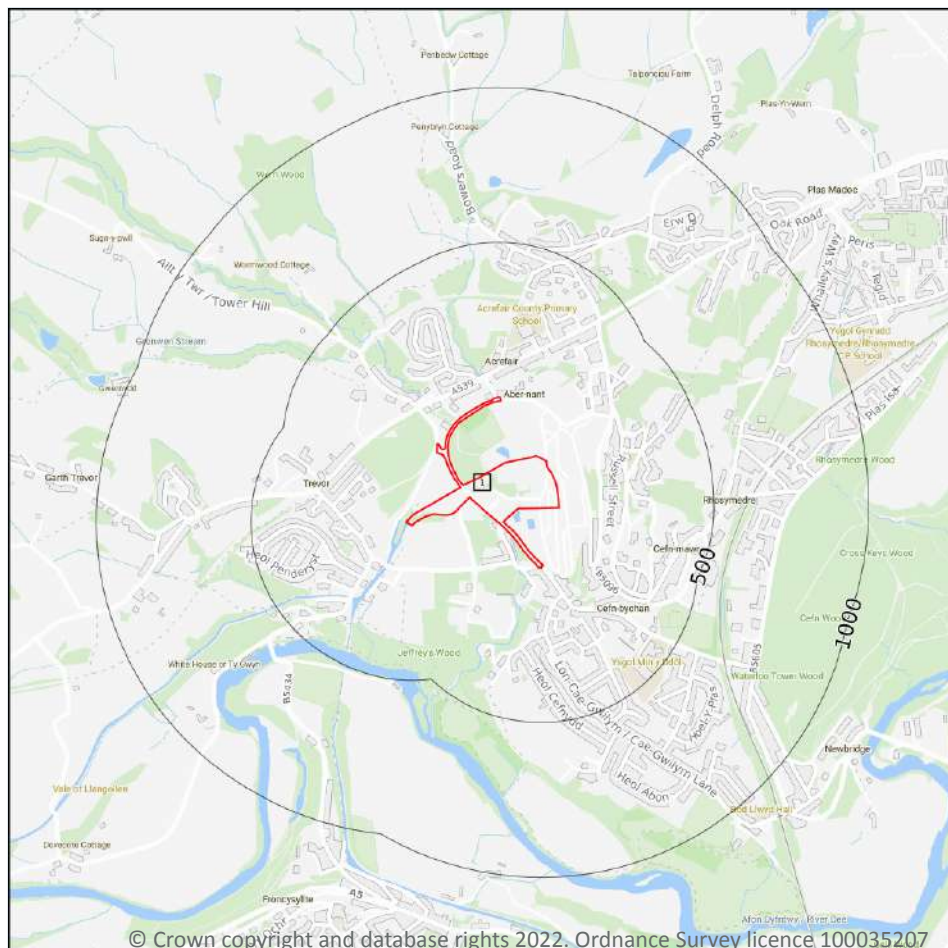


15 Geology 1:50,000 scale - Availability



- Site Outline
- Search buffers in metres (m)
- Geological map tile

15.1 50k Availability

Records within 500m

1

An indication on the coverage of 1:50,000 scale geology data for the site. Either 'Full' or 'No coverage' for each geological theme. Where 50k data is not available, this area has been filled in with 625k scale data.

Features are displayed on the Geology 1:50,000 scale - Availability map on **page 148**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	Full	Full	Full	Full	EW121_wrexham_v4

This data is sourced from the British Geological Survey.



Geology 1:50,000 scale - Artificial and made ground

15.2 Artificial and made ground (50k)

Records within 500m

0

Details of made, worked, infilled, disturbed and landscaped ground at 1:50,000 scale. Artificial ground can be associated with potentially contaminated material, unpredictable engineering conditions and instability.

This data is sourced from the British Geological Survey.

15.3 Artificial ground permeability (50k)

Records within 50m

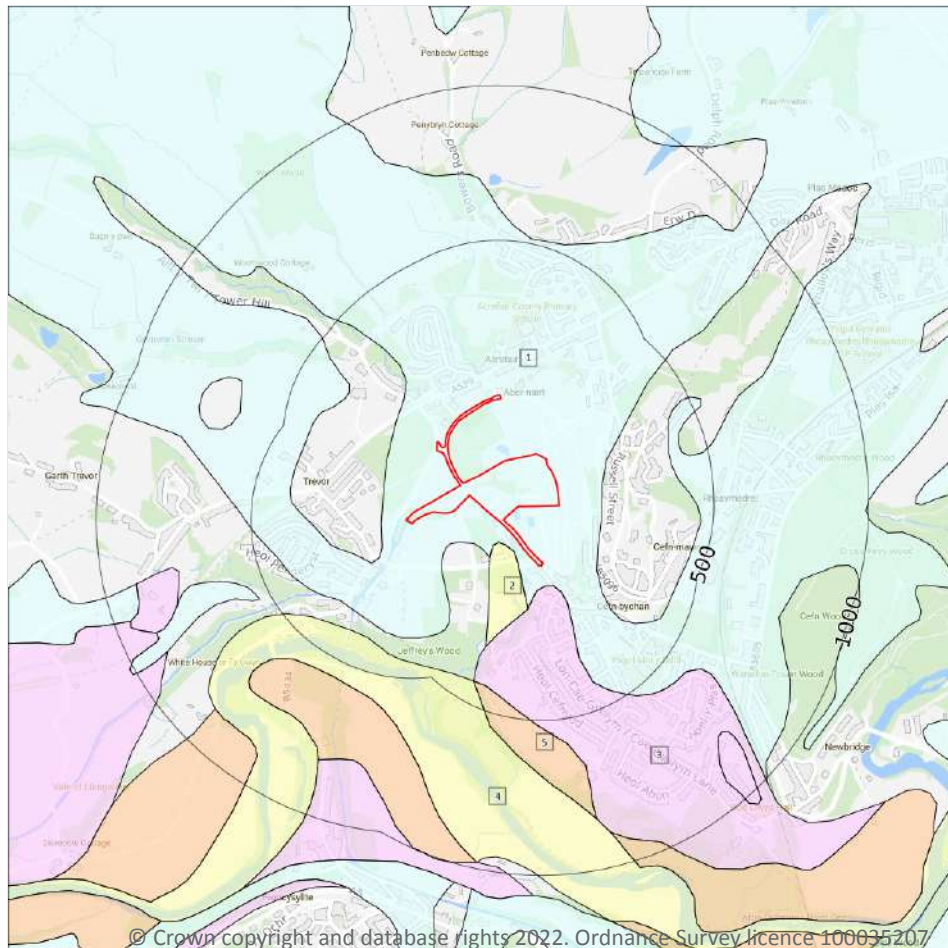
0

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

This data is sourced from the British Geological Survey.



Geology 1:50,000 scale - Superficial



Site Outline

Search buffers in metres (m)

Landslip (50k)

Superficial geology (50k)
Please see table for more details.

15.4 Superficial geology (50k)

Records within 500m

5

Superficial geological deposits at 1:50,000 scale. Also known as 'drift', these are the youngest geological deposits, formed during the Quaternary. They rest on older deposits or rocks referred to as bedrock.

Features are displayed on the Geology 1:50,000 scale - Superficial map on **page 150**

ID	Location	LEX Code	Description	Rock description
1	On site	TILLD-DMTN	TILL, DEVANSIAN	DIAMICTON
2	30m SW	ALV-XCZSV	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL
3	67m S	GFSDD-XSV	GLACIOFLUVIAL SHEET DEPOSITS, DEVANSIAN	SAND AND GRAVEL



ID	Location	LEX Code	Description	Rock description
4	394m SW	ALV-XCZSV	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL
5	425m SW	RTDU-XSV	RIVER TERRACE DEPOSITS (UNDIFFERENTIATED)	SAND AND GRAVEL

This data is sourced from the British Geological Survey.

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

Location	Flow type	Maximum permeability	Minimum permeability
On site	Mixed	High	Low
30m S	Intergranular	High	Very Low

This data is sourced from the British Geological Survey.

15.6 Landslip (50k)

Records within 500m	0
----------------------------	----------

Mass movement deposits on BGS geological maps at 1:50,000 scale. Primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground.

This data is sourced from the British Geological Survey.

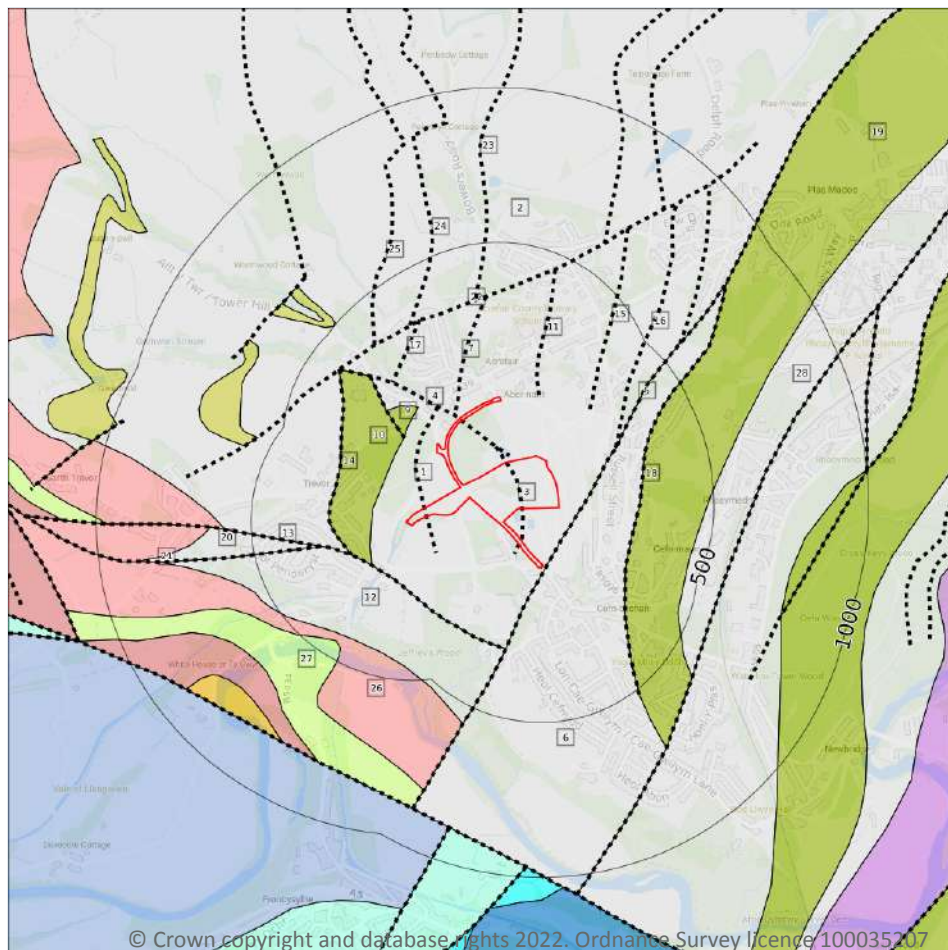
15.7 Landslip permeability (50k)

Records within 50m	0
---------------------------	----------

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

This data is sourced from the British Geological Survey.

Geology 1:50,000 scale - Bedrock



— Site Outline

Search buffers in metres (m)

.... Bedrock faults and other linear features (50k)

Bedrock geology (50k)
Please see table for more details.

15.8 Bedrock geology (50k)

Records within 500m

10

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 152**

ID	Location	LEX Code	Description	Rock age
2	On site	PLMC-MDSS	PENNINE LOWER COAL MEASURES FORMATION AND PENNINE MIDDLE COAL MEASURES FORMATION (UNDIFFERENTIATED) - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN

ID	Location	LEX Code	Description	Rock age
6	12m SE	PLMC-MDSS	PENNINE LOWER COAL MEASURES FORMATION AND PENNINE MIDDLE COAL MEASURES FORMATION (UNDIFFERENTIATED) - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
9	109m W	CF-SDST	CEFN ROCK - SANDSTONE	WESTPHALIAN
10	109m W	CF-SDST	CEFN ROCK - SANDSTONE	WESTPHALIAN
12	177m SW	PLMC-MDSS	PENNINE LOWER COAL MEASURES FORMATION AND PENNINE MIDDLE COAL MEASURES FORMATION (UNDIFFERENTIATED) - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
19	251m E	CF-SDST	CEFN ROCK - SANDSTONE	WESTPHALIAN
20	285m W	PLMC-MDSS	PENNINE LOWER COAL MEASURES FORMATION AND PENNINE MIDDLE COAL MEASURES FORMATION (UNDIFFERENTIATED) - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
26	413m SW	GS-SDAR	GWESPYR SANDSTONE - SANDSTONE AND [SUBEQUAL/SUBORDINATE] ARGILLACEOUS ROCKS, INTERBEDDED	NAMURIAN
27	445m SW	BSG-MDST	BOWLAND SHALE FORMATION - MUDSTONE	WISEAN
28	451m E	PLMC-MDSS	PENNINE LOWER COAL MEASURES FORMATION AND PENNINE MIDDLE COAL MEASURES FORMATION (UNDIFFERENTIATED) - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN

This data is sourced from the British Geological Survey.

15.9 Bedrock permeability (50k)

Records within 50m

1

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

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

This data is sourced from the British Geological Survey.



15.10 Bedrock faults and other linear features (50k)

Records within 500m

18

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

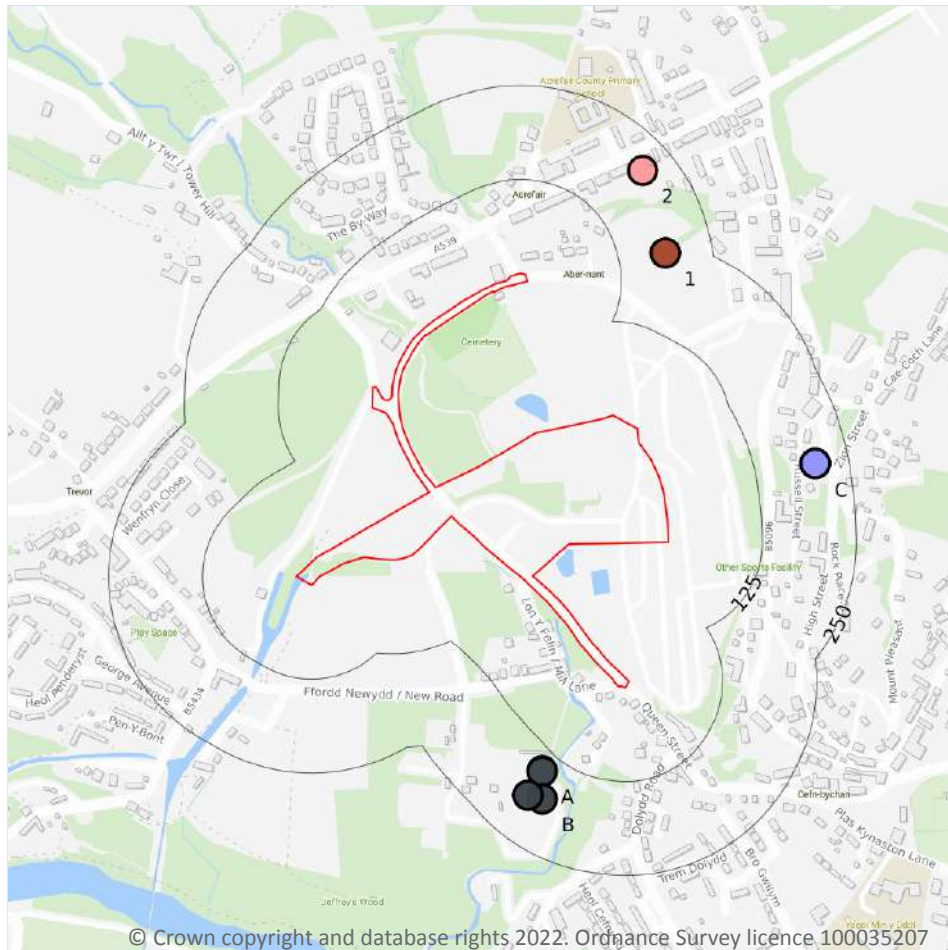
Features are displayed on the Geology 1:50,000 scale - Bedrock map on **page 152**

ID	Location	Category	Description
1	On site	ROCK	Coal seam, inferred
3	On site	ROCK	Coal seam, inferred
4	On site	FAULT	Fault, inferred, displacement unknown
5	12m SE	FAULT	Fault, inferred, displacement unknown
7	19m NW	ROCK	Coal seam, inferred
8	99m W	FAULT	Fault, inferred, displacement unknown
11	125m E	ROCK	Coal seam, inferred
13	177m SW	FAULT	Fault, inferred, displacement unknown
14	204m SW	ROCK	Coal seam, inferred
15	216m NE	ROCK	Coal seam, inferred
16	223m NE	ROCK	Coal seam, inferred
17	240m NW	ROCK	Coal seam, inferred
18	251m E	ROCK	Coal seam, inferred
21	285m W	FAULT	Fault, inferred, displacement unknown
22	317m N	FAULT	Fault, inferred, displacement unknown
23	322m N	ROCK	Coal seam, inferred
24	338m NW	ROCK	Coal seam, inferred
25	362m NW	ROCK	Coal seam, inferred

This data is sourced from the British Geological Survey.



16 Boreholes



— Site Outline
Search buffers in metres (m)

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

16.1 BGS Boreholes

Records within 250m

20

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 155**

ID	Location	Grid reference	Name	Length	Confidential	Web link
A	152m SW	327566 342201	MONSANTO CHEMICAL WORKS RUABON 1A	-	Y	N/A
A	152m SW	327566 342200	MONSANTO CHEMICAL WORKS RUABON 1	-	Y	N/A
B	180m SW	327567 342164	MONSANTO CHEMICAL WORKS RUABON 3	-	Y	N/A

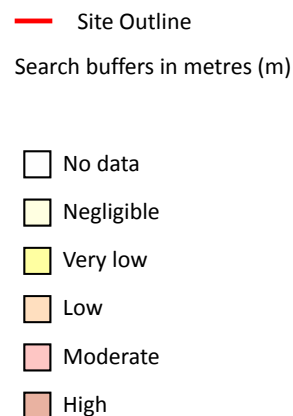
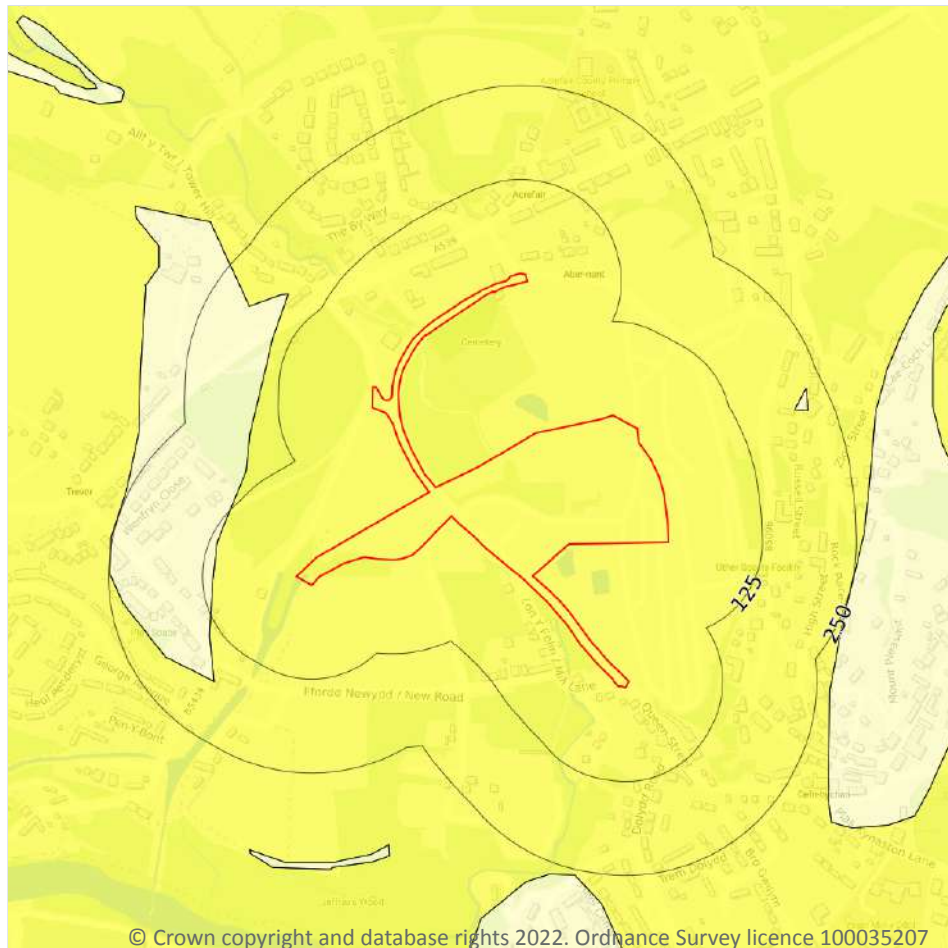


ID	Location	Grid reference	Name	Length	Confidential	Web link
B	180m SW	327567 342164	MONSANTO CHEMICAL WORKS RUABON 3A	-	Y	N/A
1	187m E	327730 342890	ABERNANT CEFN COLLIERY	-1.0	N	144331
B	188m SW	327548 342169	MONSANTO CHEMICAL WORKS RUABON 2A	-	Y	N/A
B	188m SW	327548 342169	MONSANTO CHEMICAL WORKS RUABON 2	-	Y	N/A
C	206m E	327930 342610	CEFN MAWR, RUSSELL STREET. TP.10	2.6	N	144088
C	206m E	327930 342610	CEFN MAWR, RUSSELL STREET. 3	17.95	N	144081
C	206m E	327930 342610	CEFN MAWR, RUSSELL STREET. TP.7	2.6	N	144085
C	206m E	327930 342610	CEFN MAWR, RUSSELL STREET. 4	17.1	N	144082
C	206m E	327930 342610	CEFN MAWR, RUSSELL STREET. 2	27.8	N	144080
C	206m E	327930 342610	CEFN MAWR, RUSSELL STREET. 1	19.45	N	144079
C	206m E	327930 342610	CEFN MAWR, RUSSELL STREET. TP.12	2.65	N	144090
C	206m E	327930 342610	CEFN MAWR, RUSSELL STREET. 5	21.05	N	144083
C	206m E	327930 342610	CEFN MAWR, RUSSELL STREET. 6	23.05	N	144084
C	206m E	327930 342610	CEFN MAWR, RUSSELL STREET. TP.9	2.2	N	144087
C	206m E	327930 342610	CEFN MAWR, RUSSELL STREET. TP.8	2.65	N	144086
C	206m E	327930 342610	CEFN MAWR, RUSSELL STREET. TP.11	3.3	N	144089
2	209m NE	327700 343000	J. EDWARDS ACREFAIR	35.96	N	144112

This data is sourced from the British Geological Survey.



17 Natural ground subsidence - Shrink swell clays



17.1 Shrink swell clays

Records within 50m

1

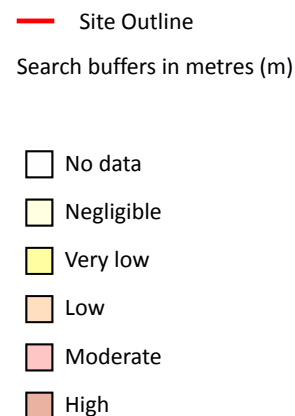
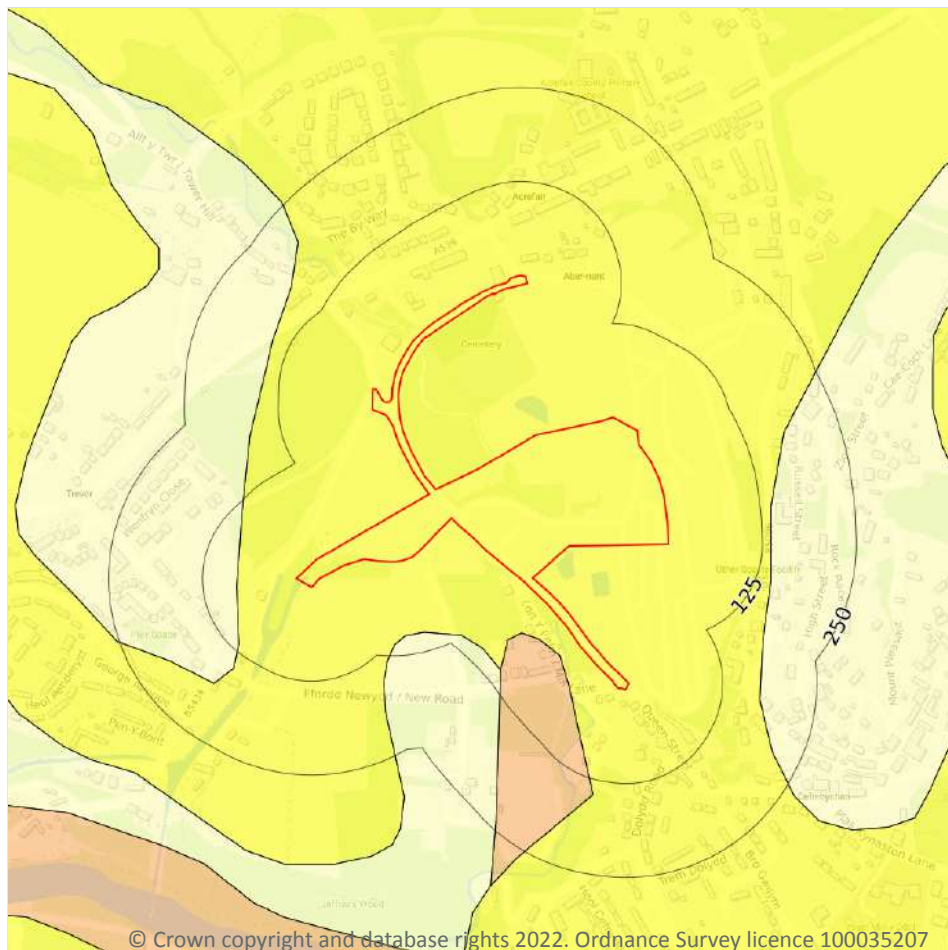
The potential hazard presented by soils that absorb water when wet (making them swell), and lose water as they dry (making them shrink). This shrink-swell behaviour is controlled by the type and amount of clay in the soil, and by seasonal changes in the soil moisture content (related to rainfall and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

Features are displayed on the Natural ground subsidence - Shrink swell clays map on **page 157**

Location	Hazard rating	Details
On site	Very low	Ground conditions predominantly low plasticity.

This data is sourced from the British Geological Survey.

Natural ground subsidence - Running sands



17.2 Running sands

Records within 50m

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 158**

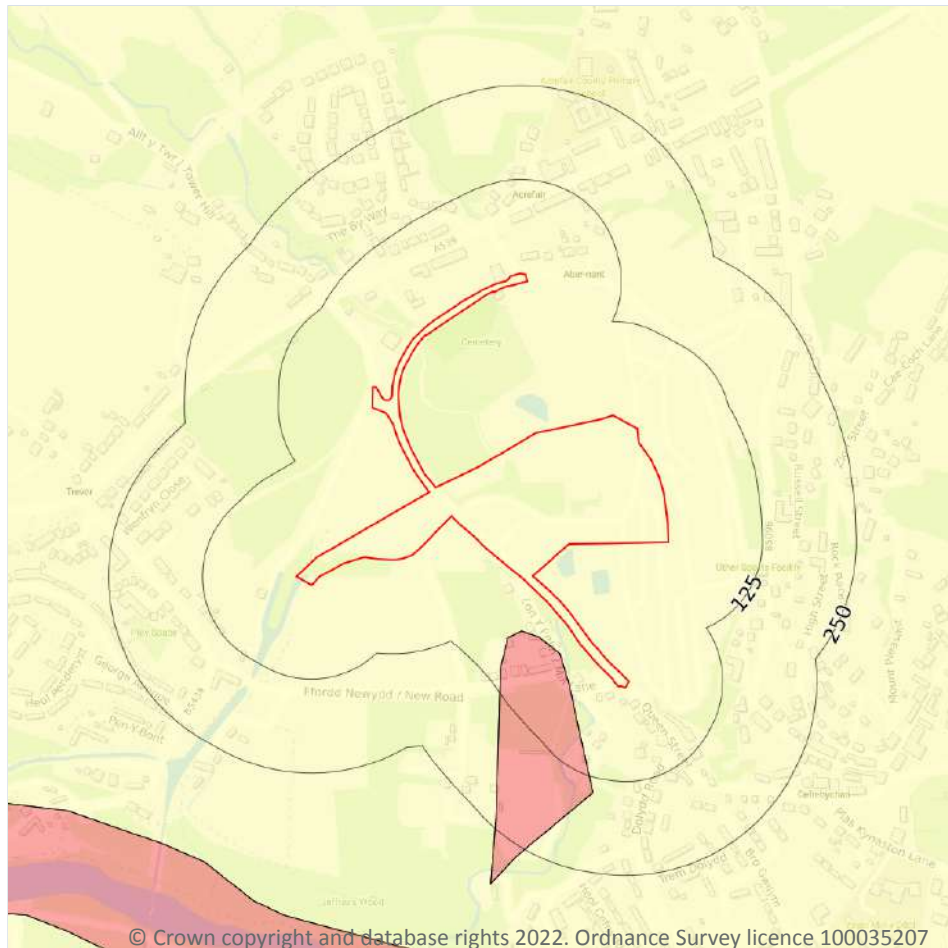
Location	Hazard rating	Details
On site	Very low	Running sand conditions are unlikely. No identified constraints on land use due to running conditions unless water table rises rapidly.

Location	Hazard rating	Details
30m SW	Low	Running sand conditions may be present. Constraints may apply to land uses involving excavation or the addition or removal of water.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Compressible deposits



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

17.3 Compressible deposits

Records within 50m

2

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

Features are displayed on the Natural ground subsidence - Compressible deposits map on **page 160**

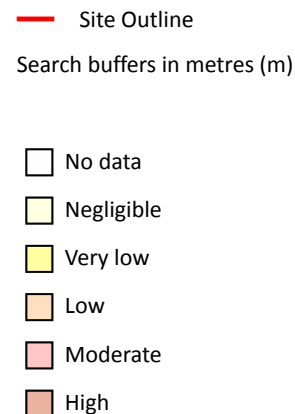
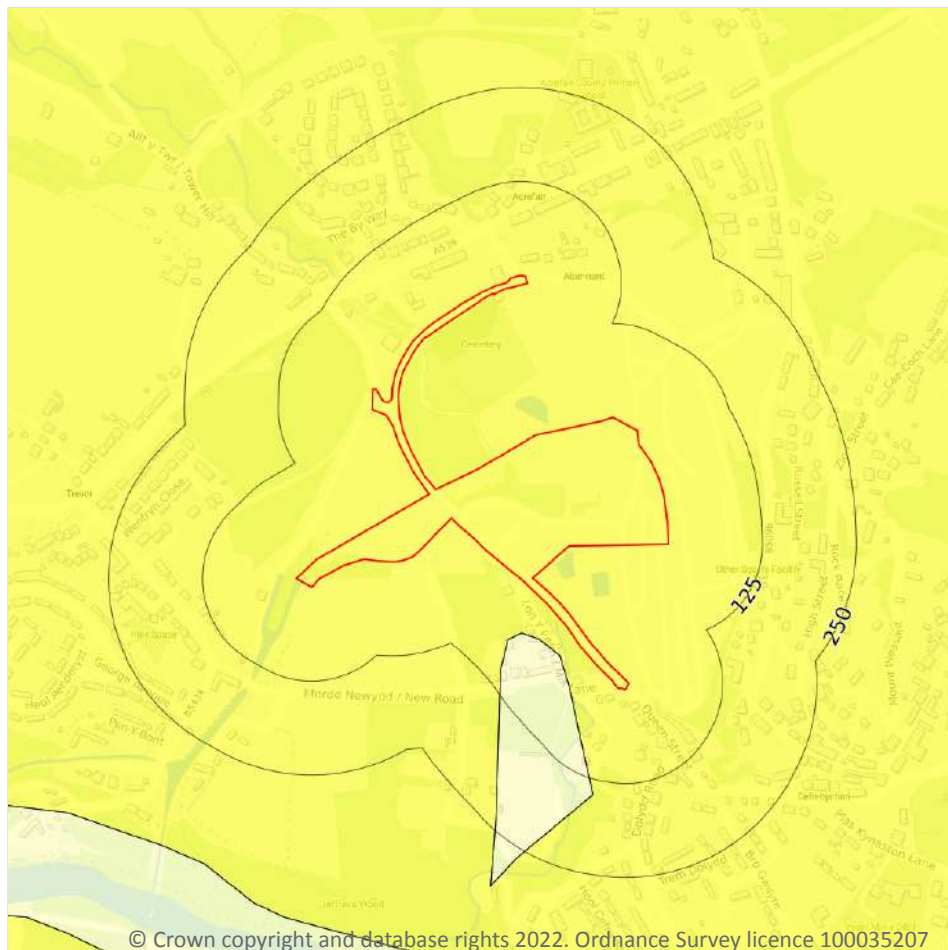
Location	Hazard rating	Details
On site	Negligible	Compressible strata are not thought to occur.
30m SW	Moderate	Compressibility and uneven settlement hazards are probably present. Land use should consider specifically the compressibility and variability of the site.



This data is sourced from the British Geological Survey.



Natural ground subsidence - Collapsible deposits



17.4 Collapsible deposits

Records within 50m

2

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.

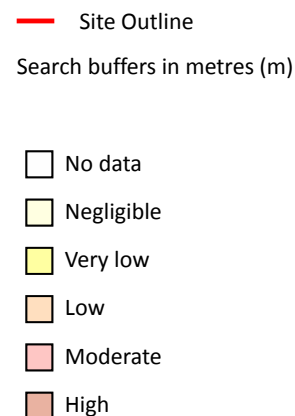
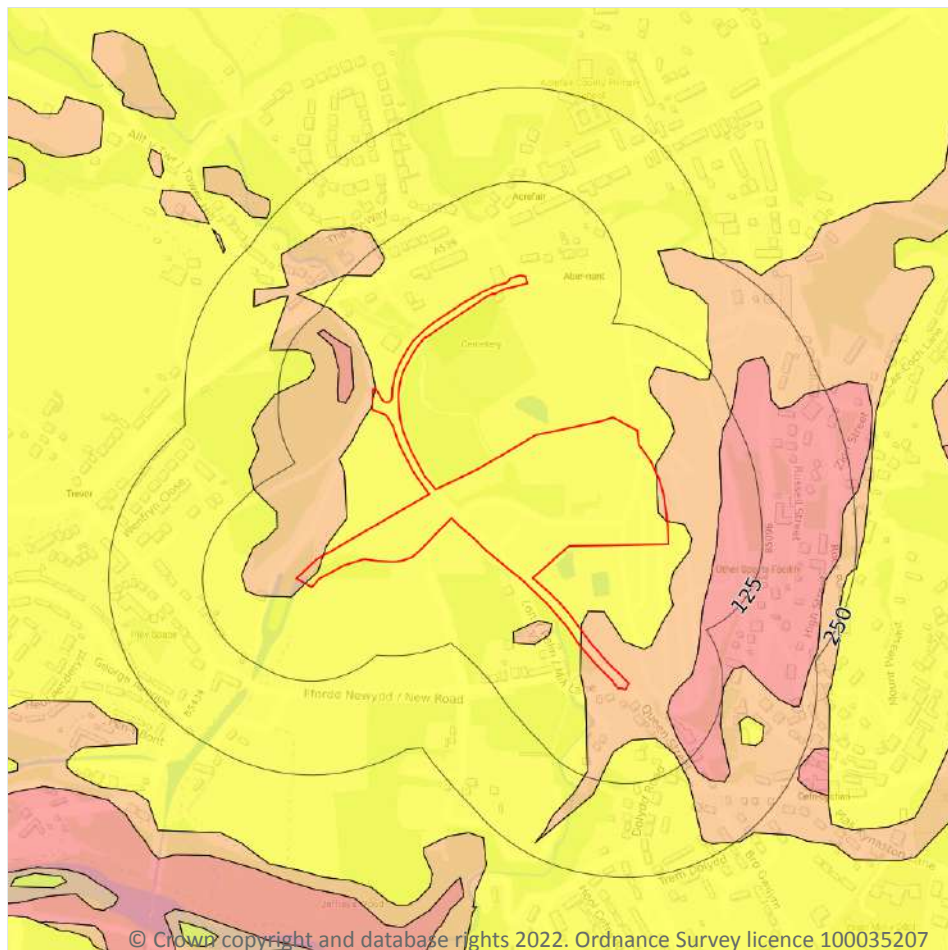
Features are displayed on the Natural ground subsidence - Collapsible deposits map on **page 162**

Location	Hazard rating	Details
On site	Very low	Deposits with potential to collapse when loaded and saturated are unlikely to be present.
30m SW	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

4

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 163**

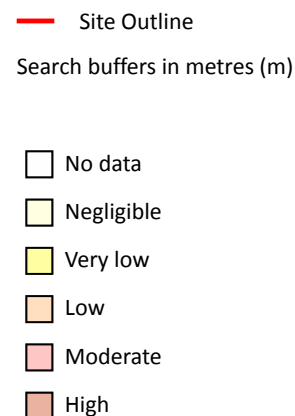
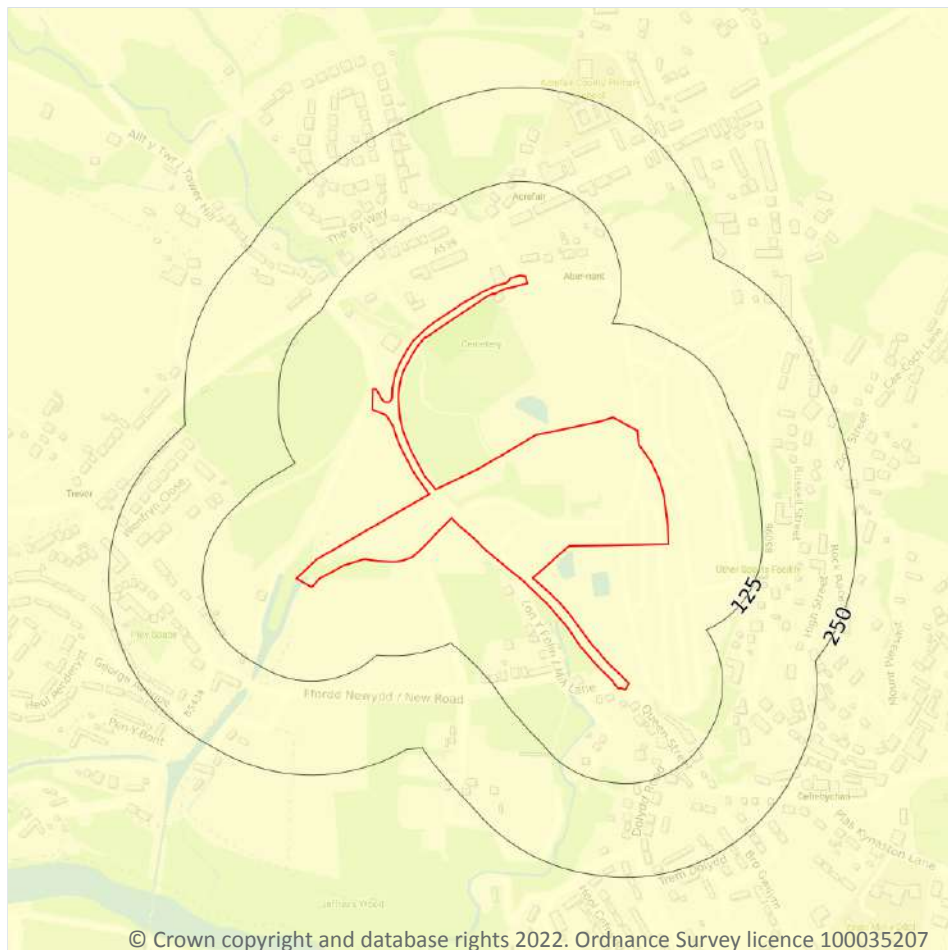
Location	Hazard rating	Details
On site	Very low	Slope instability problems are not likely to occur but consideration to potential problems of adjacent areas impacting on the site should always be considered.

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.
13m SW	Low	Slope instability problems may be present or anticipated. Site investigation should consider specifically the slope stability of the site.
26m W	Moderate	Slope instability problems are probably present or have occurred in the past. Land use should consider specifically the 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.

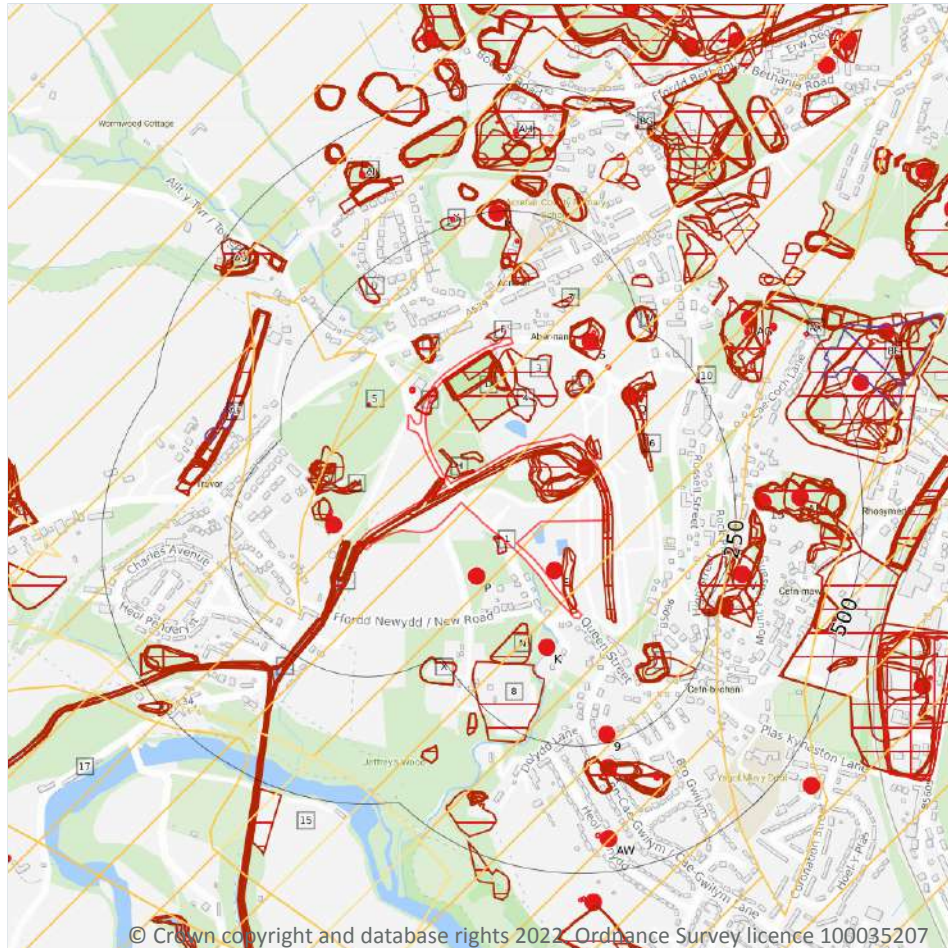
Features are displayed on the Natural ground subsidence - Ground dissolution of soluble rocks map on **page 165**

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

19

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 167**

ID	Location	Details	Description
A	On site	Name: Plas Kynaston Address: Cefn-mawr, WREXHAM, Denbighshire 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	16m NE	Name: Mill Inn Address: Cefn-mawr, WREXHAM, Denbighshire 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
J	58m NW	Name: Tref-y-nant Address: Cefn-mawr, WREXHAM, Denbighshire 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
K	79m SW	Name: Trevor-isaf Address: Garth, WREXHAM, Denbighshire 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
J	85m NW	Name: Tref-y-nant Address: Cefn-mawr, WREXHAM, Denbighshire 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
P	88m SW	Name: Mill Inn Address: Cefn-mawr, WREXHAM, Denbighshire 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
Q	125m NE	Name: Plas-aber-nant Address: Cefn-mawr, WREXHAM, Denbighshire 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
S	153m E	Name: Edward's Clay Pit Address: Cefn-mawr, Ruabon, WREXHAM, Clwyd Commodity: Clay & Shale 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
S	161m E	Name: Plas Kynaston Address: Cefn-mawr, WREXHAM, Denbighshire 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
9	232m S	Name: Cefn Colliery Address: Cefn-mawr, Ruabon, WREXHAM, Clwyd 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
R	247m N	Name: Tre-y-nant Hall Address: Cefn-mawr, WREXHAM, Denbighshire 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
V	282m E	Name: Cefn Mawr Address: Cefn Mawr, Ruabon, WREXHAM, Denbighshire 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
V	282m E	Name: Cefn Stone Quarries Address: Cefn Mawr, RUABON, Denbighshire 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
AB	297m S	Name: Cefn Colliery, Cae Gwily Pit Address: Cefn-mawr, Ruabon, WREXHAM, Clwyd 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
13	303m E	Name: Cefn Stone Quarries Address: Cefn Mawr, RUABON, Denbighshire 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
AE	377m E	Name: Cefn Stone Quarries, No. 1 Address: Cefn-mawr, Ruabon, WREXHAM, Clwyd 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
AG	399m NE	Name: Caeglo Colliery, Bye Pit Address: Cefn-mawr, Ruabon, WREXHAM, Clwyd 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
AG	415m NE	Name: Caeglo Colliery, Wards Deep Engine Pit Address: Cefn-mawr, Ruabon, WREXHAM, Clwyd 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
AW	435m S	Name: Dolydd Pits Address: Cefn-mawr, Ruabon, WREXHAM, Clwyd 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

This data is sourced from the British Geological Survey.



18.3 Surface ground workings

Records within 250m

139

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 167**

ID	Location	Land Use	Year of mapping	Mapping scale
1	On site	Pond	1873	1:10560
2	On site	Canal	1873	1:10560
A	On site	Unspecified Heap	1960	1:10560
A	On site	Unspecified Heap	1938	1:10560
A	On site	Unspecified Heap	1938	1:10560
A	On site	Unspecified Heap	1873	1:10560
A	On site	Unspecified Heap	1938	1:10560
A	On site	Unspecified Heap	1938	1:10560
A	On site	Unspecified Heap	1949	1:10560
A	On site	Unspecified Heap	1898	1:10560
A	On site	Unspecified Ground Workings	1910	1:10560
A	On site	Unspecified Ground Workings	1910	1:10560
B	On site	Canal	1949	1:10560
B	On site	Canal	1898	1:10560
B	On site	Canal	1910	1:10560
C	On site	Unspecified Heap	1938	1:10560
C	On site	Unspecified Heap	1938	1:10560
C	On site	Unspecified Heap	1949	1:10560
C	On site	Unspecified Heap	1910	1:10560
D	On site	Cemetery	1994	1:10000
D	On site	Cemetery	1974	1:10000
D	On site	Cemetery	1985	1:10000
D	On site	Cemetery	1938	1:10560



ID	Location	Land Use	Year of mapping	Mapping scale
D	On site	Cemetery	1910	1:10560
E	On site	Unspecified Ground Workings	1960	1:10560
E	On site	Unspecified Ground Workings	1949	1:10560
G	On site	Canal	1960	1:10560
G	On site	Canal	1994	1:10000
G	On site	Canal	1974	1:10000
G	On site	Canal	1985	1:10000
H	0m NW	Pond	1873	1:10560
H	0m NW	Ponds	1898	1:10560
D	0m SW	Cemetery	1949	1:10560
D	0m SW	Cemetery	1898	1:10560
D	2m S	Cemetery	1960	1:10560
D	3m SE	Burial Ground	1873	1:10560
F	3m NW	Unspecified Heap	1873	1:10560
A	8m NE	Unspecified Heap	1873	1:10560
D	9m S	Unspecified Heap	1873	1:10560
3	9m S	Unspecified Heap	1873	1:10560
H	11m NW	Unspecified Ground Workings	1994	1:10000
H	11m NW	Unspecified Ground Workings	1974	1:10000
H	11m NW	Unspecified Ground Workings	1985	1:10000
D	24m SE	Unspecified Heap	1938	1:10560
D	24m SE	Unspecified Heap	1938	1:10560
D	25m SE	Unspecified Heap	1910	1:10560
D	31m S	Unspecified Heap	1949	1:10560
I	33m NW	Unspecified Heap	1960	1:10560
D	34m SE	Unspecified Heap	1960	1:10560
I	35m NW	Unspecified Heap	1873	1:10560
I	36m NW	Unspecified Heap	1949	1:10560



ID	Location	Land Use	Year of mapping	Mapping scale
I	37m NW	Unspecified Heap	1938	1:10560
I	37m NW	Unspecified Heap	1938	1:10560
I	38m NW	Unspecified Heap	1910	1:10560
4	44m N	Unspecified Heap	1873	1:10560
L	73m N	Unspecified Heap	1873	1:10560
J	75m NW	Refuse Heap	1960	1:10560
L	76m N	Unspecified Heap	1938	1:10560
L	76m N	Unspecified Heap	1938	1:10560
M	78m NW	Unspecified Ground Workings	1960	1:10560
N	78m SW	Unspecified Heap	1994	1:10000
N	78m SW	Unspecified Heap	1974	1:10000
N	78m SW	Unspecified Heap	1985	1:10000
J	79m NW	Unspecified Heap	1938	1:10560
J	79m NW	Unspecified Heap	1938	1:10560
L	84m N	Unspecified Heap	1910	1:10560
M	88m NW	Unspecified Ground Workings	1949	1:10560
O	88m NW	Unspecified Ground Workings	1938	1:10560
O	88m NW	Unspecified Ground Workings	1938	1:10560
Q	90m NE	Unspecified Ground Workings	1949	1:10560
Q	90m NE	Unspecified Ground Workings	1910	1:10560
Q	91m NE	Unspecified Ground Workings	1938	1:10560
Q	91m NE	Unspecified Ground Workings	1938	1:10560
Q	91m NE	Unspecified Ground Workings	1960	1:10560
6	93m E	Unspecified Pit	1873	1:10560
L	95m N	Unspecified Heap	1873	1:10560
R	107m N	Unspecified Heap	1949	1:10560
7	107m NE	Unspecified Heap	1873	1:10560
R	109m N	Unspecified Heaps	1910	1:10560



ID	Location	Land Use	Year of mapping	Mapping scale
R	110m N	Unspecified Heap	1873	1:10560
R	111m N	Unspecified Heap	1960	1:10560
S	112m E	Unspecified Ground Workings	1910	1:10560
S	112m E	Unspecified Ground Workings	1938	1:10560
S	112m E	Unspecified Ground Workings	1938	1:10560
S	113m E	Unspecified Pit	1949	1:10560
S	115m E	Unspecified Pit	1960	1:10560
S	115m E	Unspecified Ground Workings	1960	1:10560
Q	116m NE	Unspecified Quarry and Ground Workings	1873	1:10560
O	117m NW	Unspecified Pit	1873	1:10560
O	120m NW	Unspecified Ground Workings	1960	1:10560
8	122m SW	Sewage Works	1949	1:10560
O	124m NW	Unspecified Ground Workings	1910	1:10560
O	125m NW	Unspecified Ground Workings	1949	1:10560
O	135m NW	Unspecified Ground Workings	1994	1:10000
O	135m NW	Unspecified Ground Workings	1974	1:10000
O	135m NW	Unspecified Ground Workings	1985	1:10000
R	137m N	Unspecified Pit	1949	1:10560
T	137m SE	Unspecified Heap	1938	1:10560
T	137m SE	Unspecified Heap	1938	1:10560
T	138m SE	Unspecified Ground Workings	1910	1:10560
R	140m N	Unspecified Heaps	1873	1:10560
T	141m SE	Unspecified Heap	1949	1:10560
R	142m N	Unspecified Heap	1960	1:10560
T	143m SE	Unspecified Heap	1960	1:10560
T	143m SE	Unspecified Heap	1994	1:10000
T	143m SE	Unspecified Heap	1974	1:10000
T	143m SE	Unspecified Heap	1985	1:10000



ID	Location	Land Use	Year of mapping	Mapping scale
T	156m SE	Unspecified Heap	1873	1:10560
U	191m NW	Unspecified Heap	1994	1:10000
U	191m NW	Unspecified Heap	1974	1:10000
U	191m NW	Unspecified Heap	1985	1:10000
V	210m SE	Unspecified Disused Quarry	1994	1:10000
V	210m SE	Unspecified Disused Quarry	1974	1:10000
V	210m SE	Unspecified Disused Quarry	1985	1:10000
R	213m N	Unspecified Heaps	1949	1:10560
R	213m N	Unspecified Heaps	1898	1:10560
R	213m N	Unspecified Heap	1960	1:10560
R	213m N	Unspecified Heap	1994	1:10000
R	213m N	Unspecified Heap	1974	1:10000
R	213m N	Unspecified Heap	1985	1:10000
R	215m N	Unspecified Heap	1910	1:10560
R	216m N	Unspecified Heap	1938	1:10560
R	216m N	Unspecified Heap	1938	1:10560
W	222m NE	Unspecified Heap	1910	1:10560
W	225m NE	Unspecified Heap	1960	1:10560
W	225m NE	Unspecified Heap	1994	1:10000
W	225m NE	Unspecified Heap	1974	1:10000
W	225m NE	Unspecified Heap	1985	1:10000
W	225m NE	Unspecified Heap	1873	1:10560
W	227m NE	Unspecified Heap	1938	1:10560
W	227m NE	Unspecified Heap	1938	1:10560
V	231m E	Unspecified Old Quarry	1938	1:10560
V	235m E	Unspecified Old Quarry	1910	1:10560
V	235m E	Unspecified Old Quarry	1949	1:10560
X	236m SW	Pond	1994	1:10000



ID	Location	Land Use	Year of mapping	Mapping scale
X	236m SW	Pond	1974	1:10000
X	236m SW	Pond	1985	1:10000
Y	238m N	Unspecified Heap	1873	1:10560
V	241m E	Unspecified Old Quarry	1960	1:10560

This data is sourced from Ordnance Survey/Groundsure.

18.4 Underground workings

Records within 1000m

135

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 167**

ID	Location	Land Use	Year of mapping	Mapping scale
A	On site	Unspecified Old Shaft	1898	1:10560
E	9m NE	Unspecified Old Shaft	1898	1:10560
C	27m NW	Unspecified Disused Shaft	1994	1:10000
C	27m NW	Unspecified Disused Shaft	1974	1:10000
C	27m NW	Unspecified Disused Shaft	1985	1:10000
J	53m NW	Unspecified Old Shafts	1960	1:10560
J	54m NW	Unspecified Old Shafts	1898	1:10560
J	56m NW	Old Coal Shafts	1949	1:10560
J	58m NW	Unspecified Disused Shaft	1994	1:10000
J	58m NW	Unspecified Disused Shaft	1974	1:10000
J	58m NW	Unspecified Disused Shaft	1985	1:10000
J	73m NW	Unspecified Old Shafts	1960	1:10560
K	73m SW	Unspecified Disused Shaft	1994	1:10000
K	73m SW	Unspecified Disused Shaft	1974	1:10000
K	73m SW	Unspecified Disused Shaft	1985	1:10000
K	73m SW	Unspecified Old Shaft	1960	1:10560



ID	Location	Land Use	Year of mapping	Mapping scale
J	74m NW	Old Coal Shafts	1949	1:10560
K	75m SW	Old Coal Shaft	1949	1:10560
J	77m NW	Unspecified Old Shafts	1898	1:10560
5	78m W	Unspecified Shaft	1873	1:10560
P	90m SW	Unspecified Old Shaft	1898	1:10560
L	147m NE	Air Shaft	1898	1:10560
S	157m E	Unspecified Shaft	1898	1:10560
R	188m N	Unspecified Old Shafts	1898	1:10560
10	245m NE	Unspecified Old Shaft	1898	1:10560
Y	252m N	Unspecified Old Shafts	1898	1:10560
AB	343m SE	Unspecified Disused Shaft	1994	1:10000
AB	343m SE	Unspecified Disused Shaft	1974	1:10000
AB	343m SE	Unspecified Disused Shaft	1985	1:10000
AG	378m NE	Old Coal Shafts	1949	1:10560
AG	380m NE	Unspecified Old Shafts	1960	1:10560
AG	380m NE	Unspecified Disused Shafts	1994	1:10000
AG	380m NE	Unspecified Disused Shafts	1974	1:10000
AG	380m NE	Unspecified Disused Shafts	1985	1:10000
AH	395m N	Unspecified Old Shaft	1960	1:10560
AH	398m N	Old Coal Shaft	1949	1:10560
AH	398m N	Unspecified Old Shaft	1898	1:10560
AH	402m N	Unspecified Disused Shaft	1974	1:10000
AH	402m N	Unspecified Disused Shaft	1985	1:10000
AG	403m NE	Unspecified Old Shaft	1898	1:10560
AJ	407m NW	Unspecified Old Shaft	1960	1:10560
AJ	410m NW	Old Coal Shaft	1949	1:10560
AJ	410m NW	Unspecified Old Shaft	1898	1:10560
AJ	411m NW	Unspecified Disused Shaft	1994	1:10000



ID	Location	Land Use	Year of mapping	Mapping scale
AJ	411m NW	Unspecified Disused Shaft	1974	1:10000
AJ	411m NW	Unspecified Disused Shaft	1985	1:10000
AH	422m N	Unspecified Old Shaft	1960	1:10560
AW	423m S	Unspecified Old Shaft	1898	1:10560
AG	426m NE	Old Coal Shaft	1949	1:10560
AG	427m NE	Unspecified Disused Shafts	1994	1:10000
AG	427m NE	Unspecified Disused Shafts	1974	1:10000
AG	427m NE	Unspecified Disused Shafts	1985	1:10000
AG	428m NE	Unspecified Old Shafts	1960	1:10560
AU	455m NW	Unspecified Shaft	1873	1:10560
AX	477m NE	Unspecified Old Shafts	1960	1:10560
BG	480m NE	Unspecified Old Shaft	1898	1:10560
BN	546m S	Unspecified Old Shaft	1949	1:10560
BN	546m S	Unspecified Old Shaft	1898	1:10560
BN	549m S	Unspecified Old Shaft	1960	1:10560
BQ	555m SE	Old Coal Shaft	1949	1:10560
BQ	556m SE	Unspecified Old Shaft	1898	1:10560
AP	591m SE	Disused Colliery	1949	1:10560
AP	591m SE	Colliery	1898	1:10560
BV	609m N	Unspecified Shaft	1949	1:10560
BV	631m N	Unspecified Shaft	1960	1:10560
BV	632m N	Clay Shafts	1949	1:10560
CC	669m NE	Unspecified Disused Old Shafts	1960	1:10560
CC	670m NE	Coal Shafts	1873	1:10560
CC	671m NE	Old Coal Shafts	1949	1:10560
CC	678m NE	Coal Shafts	1873	1:10560
BS	685m N	Unspecified Shaft	1960	1:10560
BS	687m N	Clay Shafts	1949	1:10560



ID	Location	Land Use	Year of mapping	Mapping scale
-	689m N	Unspecified Old Shaft	1960	1:10560
AP	692m E	Unspecified Shaft	1898	1:10560
-	707m N	Unspecified Shaft	1960	1:10560
-	709m N	Unspecified Shaft	1949	1:10560
CD	714m NE	Coal Shafts	1873	1:10560
CD	731m NE	Unspecified Disused Old Shafts	1960	1:10560
CD	733m NE	Old Coal Shafts	1949	1:10560
-	736m N	Unspecified Old Shaft	1960	1:10560
-	739m N	Old Coal Shaft	1949	1:10560
-	760m N	Unspecified Shaft	1960	1:10560
-	761m N	Old Coal Shaft	1949	1:10560
-	810m N	Old Coal Shafts	1949	1:10560
-	811m N	Unspecified Shafts	1898	1:10560
-	811m N	Unspecified Old Shafts	1960	1:10560
-	814m N	Old Coal Shafts	1949	1:10560
-	814m N	Unspecified Old Shafts	1960	1:10560
CN	816m NE	Old Coal Shafts	1949	1:10560
CN	817m NE	Unspecified Old Shafts	1960	1:10560
-	820m N	Clay Shafts	1949	1:10560
-	821m N	Unspecified Shaft	1960	1:10560
CN	821m NE	Unspecified Disused Shafts	1974	1:10000
CN	821m NE	Unspecified Disused Shafts	1985	1:10000
-	831m N	Unspecified Old Shafts	1898	1:10560
-	837m N	Unspecified Old Shafts	1960	1:10560
CN	849m NE	Unspecified Old Shafts	1960	1:10560
-	858m N	Unspecified Old Shafts	1960	1:10560
-	860m N	Old Coal Shafts	1949	1:10560
-	860m N	Unspecified Old Shafts	1898	1:10560



ID	Location	Land Use	Year of mapping	Mapping scale
-	867m N	Old Coal Shafts	1949	1:10560
-	869m N	Unspecified Old Shafts	1960	1:10560
CN	880m NE	Unspecified Old Shafts	1960	1:10560
CN	881m NE	Old Coal Shafts	1949	1:10560
CN	886m NE	Unspecified Disused Shafts	1974	1:10000
CN	886m NE	Unspecified Disused Shafts	1985	1:10000
-	911m N	Old Coal Shafts	1949	1:10560
-	912m N	Unspecified Old Shafts	1960	1:10560
-	924m NE	Old Coal Shafts	1949	1:10560
-	946m N	Old Coal Shafts	1949	1:10560
-	949m N	Old Coal Shafts	1949	1:10560
-	952m N	Unspecified Old Shafts	1960	1:10560
-	956m N	Unspecified Old Shafts	1960	1:10560
-	958m N	Old Coal Shafts	1949	1:10560
-	958m N	Unspecified Old Shafts	1898	1:10560
-	964m N	Old Coal Shaft	1949	1:10560
-	966m N	Unspecified Old Shafts	1960	1:10560
-	968m N	Unspecified Shafts	1898	1:10560
-	975m NE	Old Coal Shaft	1949	1:10560
-	975m NE	Unspecified Old Shaft	1898	1:10560
-	977m NE	Unspecified Old Shaft	1960	1:10560
-	979m N	Old Coal Shaft	1949	1:10560
-	980m NE	Unspecified Shafts	1898	1:10560
-	980m N	Unspecified Old Shaft	1960	1:10560
-	982m NE	Old Coal Shafts	1949	1:10560
-	984m N	Unspecified Disused Shafts	1960	1:10560
-	984m NE	Unspecified Old Shafts	1960	1:10560
-	987m NE	Old Coal Shafts	1949	1:10560



ID	Location	Land Use	Year of mapping	Mapping scale
-	989m NE	Unspecified Old Shafts	1960	1:10560
-	990m N	Old Coal Shafts	1949	1:10560
-	990m N	Unspecified Shafts	1898	1:10560
-	991m N	Old Coal Shafts	1949	1:10560
-	991m N	Unspecified Shafts	1898	1:10560
-	992m N	Unspecified Old Shafts	1960	1:10560
-	993m N	Unspecified Old Shaft	1960	1:10560

This data is sourced from Ordnance Survey/Groundsure.

18.5 Historical Mineral Planning Areas

Records within 500m

3

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, ground workings and natural cavities map on **page 167**

ID	Location	Site Name	Mineral	Type	Planning Status	Planning Status Date
AF	339m NW	Garth	Not available	Not available	Not available	Not available
AF	347m NW	Garth	Not available	Not available	Not available	Not available
BE	475m NE	Cefn No.2	Not available	Not available	Not available	Not available

This data is sourced from the British Geological Survey.

18.6 Non-coal mining

Records within 1000m

8

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 167**



ID	Location	Name	Commodity	Class	Likelihood
F	On site	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
15	413m SW	Not available	Vein Mineral	A	Sporadic underground mining of restricted extent may have occurred. Potential for difficult ground conditions are unlikely and localised and are at a level where they need not be considered
17	445m SW	Not available	Vein Mineral	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
-	700m W	Not available	Vein Mineral	A	Sporadic underground mining of restricted extent may have occurred. Potential for difficult ground conditions are unlikely and localised and are at a level where they need not be considered
-	700m W	Not available	Vein Mineral	E	Underground mining is known to have occurred within or very close to the area. Potential for difficult ground conditions should be investigated. Potential for localised subsidence is at a level where it should be considered
24	815m SW	Berwyn Hills	Vein Mineral	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
-	917m W	Not available	Ganister	E	Underground mining is known to have occurred within or very close to the area. Potential for difficult ground conditions should be investigated. Potential for localised subsidence is at a level where it should be considered
-	917m W	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

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

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

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

This data is sourced from the Coal Authority.

18.10 Brine areas

Records on site

0

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

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

18.11 Gypsum areas

Records on site

0

Generalised areas that may be affected by gypsum extraction.

This data is sourced from British Gypsum.

18.12 Tin mining

Records on site

0

Generalised areas that may be affected by historical tin mining.

This data is sourced from Groundsure.



18.13 Clay mining

Records on site

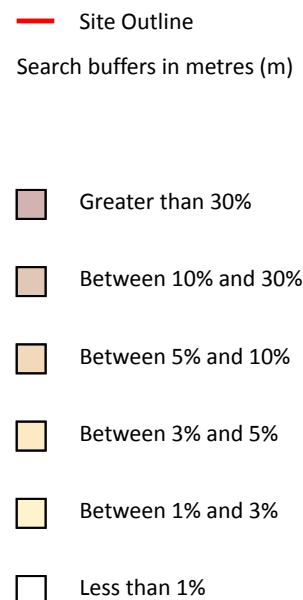
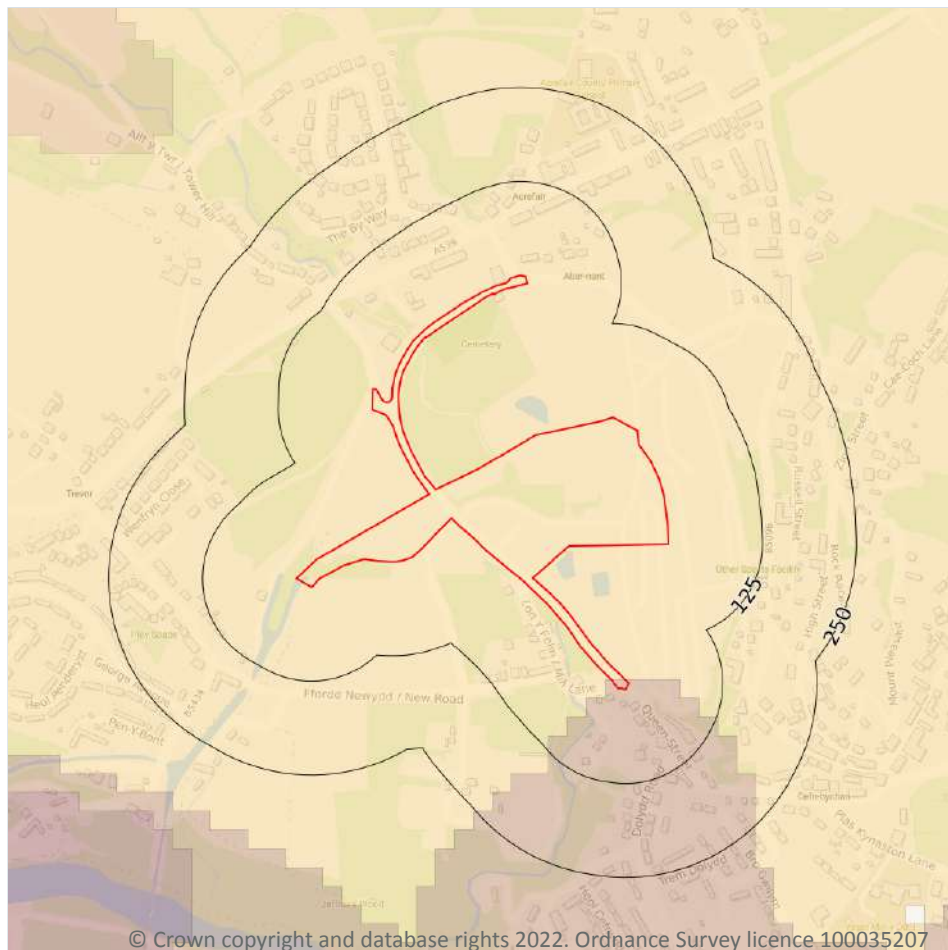
0

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



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 186**

Location	Estimated properties affected	Radon Protection Measures required
On site	Between 3% and 5%	Basic
On site	Between 10% and 30%	Full



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

6

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 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 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 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 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
12m SE	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
30m S	15 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

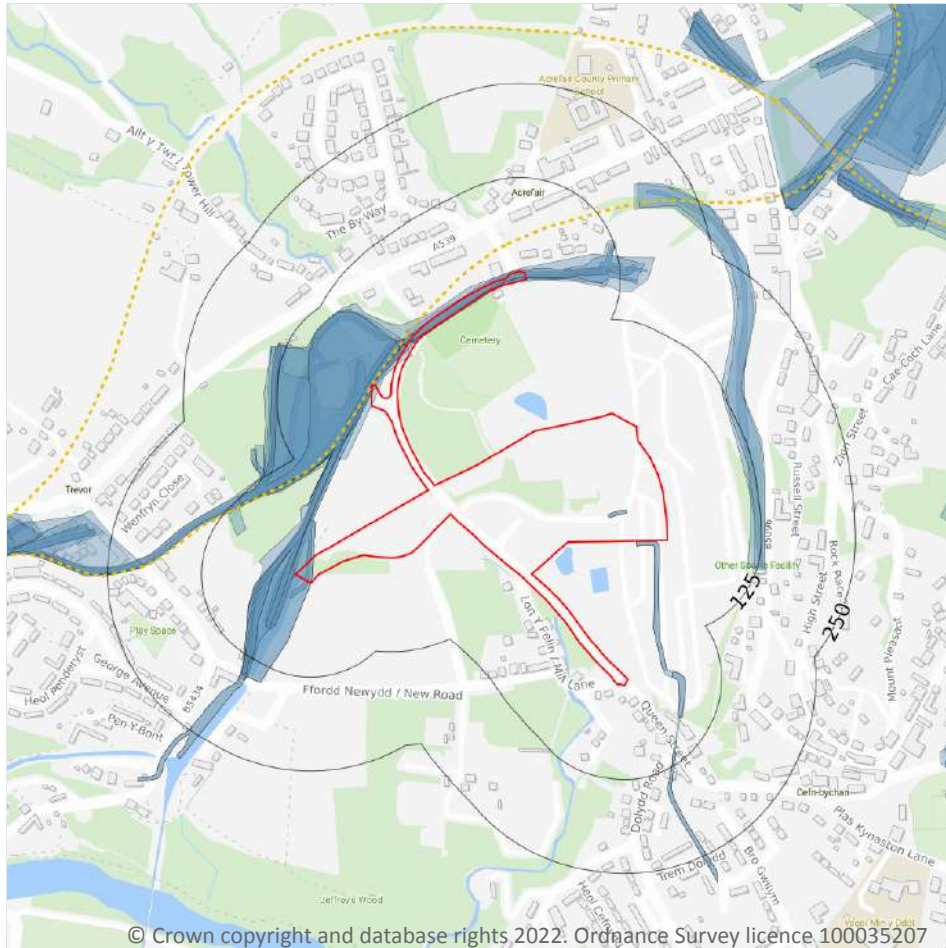
0

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
- 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

30

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 190**

Location	Land Use	Year of mapping	Mapping scale
On site	Tramway Sidings	1912	2500
On site	Railway Sidings	1899	2500
On site	Railway Sidings	1875	2500
On site	Railway Sidings	1873	10560
On site	Railway Sidings	1949	10560
On site	Railway Sidings	1898	10560
On site	Railway Sidings	1910	10560
On site	Railway Sidings	1960	10560
On site	Railway Sidings	1938	10560
0m NW	Railway Sidings	1938	10560
1m S	Tramway Sidings	1875	2500
1m S	Railway Sidings	1875	2500
2m NW	Railway Sidings	1912	2500
5m NW	Railway Sidings	1910	10560
24m NW	Railway Sidings	1875	2500
24m NW	Railway Sidings	1899	2500
26m NW	Tramway Sidings	1912	2500



Location	Land Use	Year of mapping	Mapping scale
52m NW	Railway Sidings	1875	2500
59m NW	Tramway Sidings	1912	2500
59m E	Railway Sidings	1875	2500
71m NW	Railway Sidings	1875	2500
84m SE	Tunnel	1875	2500
89m NW	Railway Sidings	1898	10560
107m SE	Railway Sidings	1875	2500
109m E	Railway Sidings	1949	10560
109m SE	Railway Sidings	1875	2500
115m E	Railway Sidings	1961	2500
116m E	Railway Sidings	1960	10560
203m W	Railway Sidings	1898	10560
212m W	Railway Sidings	1961	2500

This data is sourced from Ordnance Survey/Groundsure.

21.5 Royal Mail tunnels

Records within 250m

0

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

This data is sourced from Groundsure/the Postal Museum.

21.6 Historical railways

Records within 250m

3

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 190**



Location	Description
0m NW	Abandoned
37m NW	Abandoned
39m N	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>.

Terms and conditions

Groundsure's Terms and Conditions can be accessed at this link: <https://www.groundsure.com/terms-and-conditions-jan-2020/>.



Appendix E

Historic BGS Borehole Logs

CLIENT: Blue Space Horon Ltd							ROTARY OPENHOLE		BOREHOLE NO.	
SITE NAME: King Street				SITE LOCATION: Culin Manor, Weymouth			BOREHOLE LOG		BHI	
METHOD OF DRILLING: Rotary Operable				DIAMETER OF DRILL:			NATIONAL GRID		SHEET NO.	
DRILLING COMPANY: Van Ede				DATE: 25th September 2007			REFERENCE: IL 327901		1 of 4	
							N 342940		OD LEVEL:	
PROGRESS		CASING	DRILL RUN				STRATA		DESCRIPTION OF STRATA	
Time/Rate	Depth/Cor	Colour of Fluid Return	Return %	Depth Meters	Type	Run (min)	Depth (m)	Legend	Description of Strata	Level
25/09/07		brown/ black		As					MADE GROUND - Loose backfill of mixed clay, mine waste and coal fragments and some brick.	
							1.20		First is still yellow-brown and grey silty CLAY.	
							2.00		Weak grey MUDSTONE.	
							3.00			
							4.00			
							5.00			
							6.00			
							7.00			
							8.00			
							9.00			
							10.00			
Ashton Bennett Consultancy Creden House, Field End Lane, Hilberbridge, West Yorks HD9 2NH Tel: 01484 680531 Fax: 01484 680032							DRILLING NOTES: Boreholes installed at this hgt. Continued on sheet 2 in same station.			

CLIENT: Blue Space Horon Ltd							ROTARY OPENHOLE		BOREHOLE NO.	
SITE NAME: King Street				SITE LOCATION: Culin Manor, Woodham			BOREHOLE LOG		BH1	
METHOD OF DRILLING: Rotary Operated				DIAMETER OF DRILL:			NATIONAL GRID		SHEET NO.	
DRILLING COMPANY: Van Ede				DATE: 25th September 2007			REFERENCE: IL 327901		2 of 4	
							OD LEVEL:			
PROGRESS		CASING	DRILL RUN				STRATA		DESCRIPTION OF STRATA	
Time/Week	Depth/Day	Colour of Fluid Return	Return %	Drift Medium	Type	Run (mins)	Depth (m)	Legend	Description of Strata	Level
									Continued from sheet 1 to same station	
							31			
							32			
							33			
							34			
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							210			

CLIENT: Blue Space Horon Ltd							ROTARY OPENHOLE BOREHOLE LOG		BOREHOLE NO. BH1		
SITE NAME: King Street				SITE LOCATION: Celia Moore, Woodham			METHOD OF DRILLING: Rotary Operable		DIAMETER OF DRILL:		
DRILLING COMPANY: Van Ede				DATE: 25th September 2007			REFERENCE: IL 327901		SHEET NO. 9 of 4		
PROGRESS				CASING			DRILL RUN		STRATA		
Time/Week	Depth/Day	Colour of Fluid Return	Return %	Depth Meters	Type	Run Time	Depth (m)	Legend	DESCRIPTION OF STRATA		
			100	0m					Continued from sheet 7 to same station		
							21				
							22				
							23				
							24				
							25				
							26				
							27				
							28				
							29				
							30				
							Continued on sheet 8 to same station				
Ashton Bennett Consultancy Clerken House, Field End Lane, Hildenbridge, West Yorks HD9 2ND Tel: 01484 680531 Fax: 01484 680932							DRILLING NOTES:				

CLIENT: Blue Space Horon Ltd								ROTARY OPENHOLE BOREHOLE LOG		BOREHOLE NO. BH1	
SITE NAME: King Street				SITE LOCATION: Cuts Moor, Worsham				METHOD OF DRILLING: Rotary Operable		DIAMETER OF DRILL: 115mm	
METHOD OF DRILLING: Rotary Operable				DATE: 25th September 2007				REFERENCE: R 327901		SHEET NO. 4 of 4	
DRILLING COMPANY: Van Ede				DATE: 25th September 2007				REFERENCE: R 327901		OD LEVEL: 342940	
PROGRESS		CASING		DRILL RUN				STRATA		DESCRIPTION OF STRATA	
Time/Week	Depth/Day	Colour of Fluid Return	Return %	Depth Meters	Type	Run (min)	Depth (m)	Legend	Description of Strata	Level	
			100	0m	As				Continued from sheet 3 in same stratum		
							21				
							21.50				
		Weak black COAL	100				21.75				
		Weak grey MUDSTONE	100				22.00				
		Strong yellow SANDSTONE									
							25				
							34				
25.09.07											
									BOREHOLE COMPLETED AT 34.00m bgl.		
							35				
							36				
							37				
							38				
							39				
							40				
Ashton Bennett Consultancy Clerken House, Field End Lane, Hildenbridge, West Yorks HD9 2ND Tel: 01484 680531 Fax: 01484 680932								DRILLING NOTES:			

CLIENT: Blue Space Horon Ltd							ROTARY OPENHOLE BOREHOLE LOG		BOREHOLE NO. BH2		
SITE NAME: King Street				SITE LOCATION: Celia Moore, Weymouth			METHOD OF DRILLING: Rotary Operable		DIAMETER OF DRILL:		
DRILLING COMPANY: Van Ede							DATE: 25th September 2007		REFERENCE: R 327977 N 342945		
PROGRESS		CASING	DRILL RUN			STRATA		DESCRIPTION OF STRATA			
Time/Rate	Depth/Cor	Colour of Fluid Return	Return %	Depth Meters	Type	Run Time	Depth (m)	Lognet	Description of Strata	Level	
25/09/07		brown black		6m					MADE GROUND - Loose backfill of excavated clay, mine waste and coal fragments and some brick.		
							1.70		Fine to stiff yellow brown and grey silty CLAY.		
		yellow brown					4.95		Weak grey MUDSTONE.		
		grey	100								
Ashton Bennett Consultancy							DRILLING NOTES:				
Celia Moore, Field End Lane, Hidenbridge, West Yorks YO9 2N0 Tel: 01484 680531 Fax: 01484 680932											

CLIENT: Blue Space Horon Ltd							ROTARY OPENHOLE BOREHOLE LOG		BOREHOLE NO. BH2	
SITE NAME: King Street				SITE LOCATION: Culin Manor, Woodham			METHOD OF DRILLING: Rotary Operated		DIAMETER OF DRILL:	
DRILLING COMPANY: Van Ede				DATE: 25th September 2007			REFERENCE: IL 327977		SHEET NO. 2 of 3	
PROGRESS				CASING			DRILL RUN		STRATA	
Time/Week	Depth/Day	Colour of Fluid Return	Return %	Depth Meters	Type	Run Time	Depth (m)	Legend	DESCRIPTION OF STRATA	
				As					Continued from sheet 1 at same station	
							31			
							32			
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CLIENT: Blue Space Horon Ltd								ROTARY OPENHOLE BOREHOLE LOG		BOREHOLE NO. BH2	
SITE NAME: King Street				SITE LOCATION: Culin Manor, Woodham				METHOD OF DRILLING: Rotary Operable		DIAMETER OF DRILL: 3278/37	
DRILLING COMPANY: Van Ede				DATE: 25th September 2007				REFERENCE: R 3278/37		SHEET NO. 5 of 5	
PROGRESS				CASING				STRATA			
Time/Date	Depth/Cor	Colour of Fluid Return	Return %	Depth Meters	Type	Run Time	Depth (m)	Legend	Description of Strata		Level
		grey	100	As					Continued from sheet 2 to same station		
							21				
							22				
							23				
							24				
							25				
							26				
							27				
							28				
							29				
							30				
							31				
							32				
							33				
							34				
							35				
							36				
25.09.07							36.00				
								BOREHOLE COMPLETED AT 30 ftbs log.			
Ashton Bennett Consultancy Clerken House, Field End Lane, Holzbridge, West Yorks HD9 2ND Tel: 01484 680531 Fax: 01484 680932								DRILLING NOTES:			

CLIENT: Blue Space Homes Ltd							ROTARY OPENHOLE BOREHOLE LOG			BOREHOLE NO. BH3	
SITE NAME: King Street						SITE LOCATION: Cottis Moor, Wetherham					SHEET NO. 1 of 3
METHOD OF DRILLING: Rotary Openhole						DIAMETER OF DRILL:					NATIONAL GRID
DRILLING COMPANY:						DATE:					REFERENCE:
Van Ede						25th September 2007					E 327878 N 542942
PROGRESS		CASING	DRILL RUN				STRATA		DESCRIPTION OF STRATA		
Date/Time	Depth/Case	Colour of Fluid Return	Rpm %	Fluid Medium	Type	Size (mm)	Depth (m)	Liquid	Description of Strata	Lat	
25/09/07		brown mud		oil					MADE GROUND - 1.5m backfill of recycled clay, rubble waste and coal fragments and some brick.		
							2.45		Pure to stiff yellow brown and grey silty CLAY.		
		grey	100				6.20		Weak grey MUDSTONE.		
Continued on sheet 2 in same format.											
Ashton Bennett Consultancy Clivelea House, Field End Lane, Hydonbridge, West Yorks HD9 2NJ Tel: 01484 830531 Fax: 01484 889032							DRILLING NOTES:				

CLIENT: Blue Space Horon Ltd							ROTARY OPENHOLE		BOREHOLE NO.	
SITE NAME: King Street				SITE LOCATION: Culin Manor, Woodham			BOREHOLE LOG		BH3	
METHOD OF DRILLING: Rotary Operated				DIAMETER OF DRILL:			NATIONAL GRID		SHEET NO.	
DRILLING COMPANY: Van Ede				DATE: 25th September 2007			REFERENCE: IL 327978		2 of 3	
							N 342943		OD LEVEL:	
PROGRESS		CASING	DRILL RUN		STRATA		DESCRIPTION OF STRATA			
Time/Rate	Depth/Cor	Colour of Fluid Return	Return %	Drift Medium	Type	Run (min)	Depth (m)	Legend	Description of Strata	
		grey	100	As					Continued from sheet 2 to same station	
							31			
							32			
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							34			
							35			
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							97			
							98			
							99			
							100			
Ashton Bennett Consultancy Cirelia House, Field End Lane, Hildenbridge, West Yorks HD9 2ND Tel: 01484 680531 Fax: 01484 680932							DRILLING NOTES:			

CLIENT: Blue Space Horon Ltd								ROTARY OPENHOLE BOREHOLE LOG		BOREHOLE NO. BH3	
SITE NAME: King Street				SITE LOCATION: Culin Manor, Woodham				METHOD OF DRILLING: Rotary Operable		DIAMETER OF DRILL:	
DRILLING COMPANY: Van Ede				DATE: 25th September 2007				REFERENCE: IL 3279/1 N 342943		SHEET NO. 5 of 5	
PROGRESS		CASING	DRILL RUN			STRATA		DESCRIPTION OF STRATA			
Time/Watch	Depth/Can	Colour of Fluid Return	Return %	Depth Meters	Type	Run Time	Depth (m)	Legend	Description of Strata		Level
		grey	100	0m					Continued from sheet 2 to same station		
							21				
							22				
							23				
							24				
							25				
							26				
							27				
							28				
							29				
							30				
							31				
							32				
							33				
							34				
							35				
							36				
25.00.07							36.00				
								BOREHOLE COMPLETED AT 30 ftbs log.			
Ashton Bennett Consultancy Clerken House, Field End Lane, Holzbridge, West Yorks HD9 2ND Tel: 01484 680531 Fax: 01484 680932								DRILLING NOTES:			

CLIENT: Blue Space Horon Ltd								ROTARY OPENHOLE BOREHOLE LOG		BOREHOLE NO. BH4	
SITE NAME: King Street				SITE LOCATION: Celia Moore, Woodham				METHOD OF DRILLING: Rotary Operable		DIAMETER OF DRILL: 127mm	
DRILLING COMPANY: Van Ede				DATE: 25th September 2007				REFERENCE: R 327936 N 342944		SHEET NO. 1 of 3	
PROGRESS		CASING	DRILL RUN		STRATA		DESCRIPTION OF STRATA				
Time/Date	Depth/Cor	Colour of Fluid Return	Return %	Depth Meters	Type	Size (mm)	Depth (m)	Legend	Description of Strata		Level
25/09/07		brown black		6m					MADE GROUND - Loose backfill of mixed clay, mine waste and coal fragments and some brick.		
							1				
							2	2.00	Firm to stiff yellow brown and grey silty CLAY.		
							3				
							4	4.00	Weak grey MUDSTONE.		
							5				
							6				
							7				
							8				
							9				
							10				
							Continued on sheet 2 in case history				
Ashton Bennett Consultancy Clerken House, Field End Lane, Hildenbridge, West Yorks HD9 2ND Tel: 01484 680531 Fax: 01484 680932							DRILLING NOTES:				

CLIENT: Blue Space Homes Ltd							ROTARY OPENHOLE BOREHOLE LOG			BOREHOLE NO. BH4	
SITE NAME: King Street						SITE LOCATION: Cottis Moor, Wetherham					
METHOD OF DRILLING: Rotary Openhole						DIAMETER OF DRILL:			NATIONAL GRID		SHEET NO.
DILLING COMPANY:						DATE:			REFERENCE:		2 of 3
Van Ede						25th September 2007			E 327986 N 342944		OD LEVEL:
PROGRESS		CASING	DRILL RUN				STRATA		DESCRIPTION OF STRATA		
Date/Time	Depth/Corr	Colour of Drill Return	Ram %	Drill Medium	Type	Size (mm)	Depth (m)	Lapset	Description of Strata	Lat	
		grey	100	Air					Continued from sheet 3 in same stratum		
							31				
							32				
							33				
							34				
							35				
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CLIENT: Blue Space Horon Ltd								ROTARY OPENHOLE BOREHOLE LOG		BOREHOLE NO. BH4	
SITE NAME: King Street				SITE LOCATION: Celia Manor, Woodham				NATIONAL GRID		SHEET NO. 5 of 5	
METHOD OF DRILLING: Rotary Operable				DIAMETER OF DRILL:				REFERENCE: IL 327936		OD LEVEL:	
DRILLING COMPANY: Van Ede				DATE: 25th September 2007				N 342944			
PROGRESS		CASING	DRILL RUN			STRATA		DESCRIPTION OF STRATA			
Time/Watch	Depth/Can	Colour of Fluid Return	Return %	Depth Meters	Type	Run Time	Depth (m)	Legend	Description of Strata		Level
		grey	100	0m					Continued from sheet 2 to same station		
							21				
							22				
							23				
							24				
							25				
							26				
							27				
							28				
							29				
							30				
							31				
							32				
							33				
							34				
							35				
							36				
25.00.07							36.00				
								BOREHOLE COMPLETED AT 30 ftbs log.			
Ashton Bennett Consultancy Clerken House, Field End Lane, Holzbridge, West Yorks HD9 2NH Tel: 01484 680531 Fax: 01484 680932								DRILLING NOTES:			

CLIENT: Blue Space Homes Ltd								ROTARY OPENHOLE BOREHOLE LOG		BOREHOLE NO. BH5	
SITE NAME: King Street				SITE LOCATION: Cuts Manor, Weymouth				METHOD OF DRILLING: Rotary Operable		DIAMETER OF DRILL:	
DRILLING COMPANY: Van Ede				DATE: 27th September 2007				REFERENCE: IL 327936 N 342931		SHEET NO. 1 of 3	
PROGRESS		CASING	DRILL RUN			STRATA		DESCRIPTION OF STRATA			
Time/Week	Depth/Cor	Colour of Fluid Return	Return %	Depth Meters	Type	Run Time	Depth (m)	Legend	Description of Strata		Level
27/09/07		brown sludgy		6m					MADE GROUND - Loose backfill of excavated clay, mine waste and coal fragments and some brick.		
							1				
							2				
		yellow brown					2.00		Firm to stiff yellow brown and grey silty CLAY.		
							3				
							4				
							4.70				
		grey	100				5		Weak grey MUDSTONE.		
							6				
							7				
							8				
							9				
							10				
								Continued on sheet 2 in case history			
Ashton Bennett Consultancy Clerken House, Field End Lane, Hildenbridge, West Yorks HD9 2NH Tel: 01484 680531 Fax: 01484 680932								DRILLING NOTES:			

CLIENT: Blue Space Horon Ltd							ROTARY OPENHOLE BOREHOLE LOG		BOREHOLE NO. BH5	
SITE NAME: King Street				SITE LOCATION: Culin Manor, Woodham			NATIONAL GRID		SHEET NO. 2 of 3	
METHOD OF DRILLING: Rotary Operated				DIAMETER OF DRILL:			REFERENCE: IL 327936		OD LEVEL:	
DRILLING COMPANY: Van Ede				DATE: 27th September 2007			N 342931			
PROGRESS		CASING		DRILL RUN			STRATA		DESCRIPTION OF STRATA	
Time/Rate	Depth/Cor	Colour of Fluid Return	Return %	Drift Medium	Type	Run Time	Depth (m)	Legend	Description of Strata	Level
									Continued from sheet 1 to same station	
							31			
							32			
							33			
							34			
							35			
							36			
							37			
							38			
							39			
							40			
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							99			
							100			
Ashton Bennett Consultancy Cirelia House, Field End Lane, Hildenbridge, West Yorks HD9 2ND Tel: 01484 680531 Fax: 01484 680932							DRILLING NOTES:			

CLIENT: Blue Space Horon Ltd								ROTARY OPENHOLE BOREHOLE LOG		BOREHOLE NO. BH5	
SITE NAME: King Street				SITE LOCATION: Culin Manor, Woodham				NATIONAL GRID		SHEET NO.	
METHOD OF DRILLING: Rotary Operated				DIAMETER OF DRILL:				REFERENCE: IL 327936		5 of 5	
DRILLING COMPANY: Van Ede				DATE: 27th September 2007				N 342931		OD LEVEL:	
PROGRESS		CASING	DRILL RUN			STRATA		DESCRIPTION OF STRATA			
Time/Date	Depth/Cor	Colour of Fluid Return	Return %	Depth Meters	Type	Run (min)	Depth (m)	Legend	Description of Strata		Level
		grey	100	0m					Continued from sheet 2 to same station		
							21				
							22				
							23				
							24				
							25				
							26				
							27				
							28				
							29				
							30				
							31				
							32				
							33				
							34				
							35				
							36				
27.09.07							36.00				
								BOREHOLE COMPLETED AT 30 ftbs lgl.			
Ashton Bennett Consultancy Clerken House, Field End Lane, Holzbridge, West Yorks HD9 2N0 Tel: 01484 680531 Fax: 01484 680932								DRILLING NOTES:			

CLIENT: Blue Space Homes Ltd								ROTARY OPENHOLE BOREHOLE LOG				BOREHOLE NO. BH6			
SITE NAME: King Street				SITE LOCATION: Cottin Manor, Wetherham											
METHOD OF DRILLING: Rotary Openhole				DIAMETER OF DRILL:				NATIONAL GRID				SHEET NO. 1 of 3			
DILLING COMPANY:				DATE: 27th September 2007				REFERENCE: B 327982 N 342937				OD LEVEL:			
Van Ede								27th September 2007							
PROGRESS		CASING	DRILL RUN				STRATA		DESCRIPTION OF STRATA				Level		
Date/Time	Depth/Corr	Colour of Fluid Return	Rotary %	Drill Mixture	Type	Size (mm)	Depth (m)	Lapset	Description of Strata				Level		
27/09/07		brown sludge							MADE GROUND - 1.5m thickfill of recycled clay, rubble waste and coal fragments and some brick.						
							1								
							2								
							2.60								
		yellow brown					3		Firm to stiff silty loess brown and grey silty CLAY.						
							4								
							5								
							6								
		grey	100				6.20		Grey weak MUONSTONE.						
							7								
							8								
							9								
							10		Continued on sheet 2 in same format.						

Ashton Bennett Consultancy
Chelms Chase, Field End Lane,
Hydonbridge, West Yorks HD9 2NH
Tel: 01484 606531 Fax: 01484 689932

DRILLING NOTES:

CLIENT: Blue Space Horon Ltd							ROTARY OPENHOLE BOREHOLE LOG		BOREHOLE NO. BH6	
SITE NAME: King Street				SITE LOCATION: Culin Manor, Woodham			METHOD OF DRILLING: Rotary Operated		DIAMETER OF DRILL:	
DRILLING COMPANY: Van Ede				DATE: 27th September 2007			REFERENCE: IL 32792		SHEET NO. 2 of 3	
PROGRESS				CASING			DRILL RUN		STRATA	
Time/Week	Depth/Day	Colour of Fluid Return	Return %	Depth Meters	Type	Run Time	Depth (m)	Legend	Description of Strata	Level
				0.0					Continued from sheet 1 to same station	
							11			
							12			
							13			
							14			
							15			
							15.50			
		black	100				15.65	Weak black COAL		
		grey	100					MUDSTONE		
							16			
							17			
							18			
							19			
							20		Continued on sheet 3 to same station	
Ashton Bennett Consultancy Clerken House, Field End Lane, Hildenbridge, West Yorks HD9 2ND Tel: 01484 680531 Fax: 01484 680932							DRILLING NOTES:			

CLIENT: Blue Space Homes Ltd								ROTARY OPENHOLE BOREHOLE LOG				BOREHOLE NO. BH6	
SITE NAME: King Street				SITE LOCATION: Cottin Manor, Wrexham									
METHOD OF DRILLING: Rotary Openhole				DIAMETER OF DRILL:				NATIONAL GRID				SHEET NO.	
DRIILLING COMPANY:				DATE:				REFERENCE:				3 of 3	
Van Ede				27th September 2007				E 327982 N 342937				OD LEVEL:	
PROGRESS		CASING	DRILL RUN				STRATA		DESCRIPTION OF STRATA				Level
Date/Time	Depth/Corr	Colour of Fluid Return	Rpm %	Fluid Meters	Type	Status	Depth (m)	Liquid	Description of Strata				Level
		grey	100	No					Continued from sheet 2 in same stratum				
							21						
							22						
							23						
							24						
							25						
							26						
							27						
							28						
							29						
							30	30.00					
27/09/07													
BOREHOLE COMPLETED AT 30.00m bgl.													
Ashton Bennett Consultancy Chertea House, Field End Lane, Holtsbridge, West Yorks HD9 2NH Tel: 01484 680531 Fax: 01484 680932													DRILLING NOTES:

CLIENT: Blue Space Homes Ltd							ROTARY OPENHOLE BOREHOLE LOG		BOREHOLE NO. BH7	
SITE NAME: King Street				SITE LOCATION: Cuts Manor, Weymouth			METHOD OF DRILLING: Rotary Operated		DIAMETER OF DRILL: 127.5mm	
DRILLING COMPANY: Van Ede				DATE: 27th September 2007			REFERENCE: R 327936 N 342937		SHEET NO. 1 of 3	
PROGRESS		CASING	DRILL RUN		STRATA		DESCRIPTION OF STRATA			
Time/Date	Depth/Cor	Colour of Fluid Return	Return %	Depth Meters	Type	Run Time	Depth (m)	Log	Description of Strata	Level
27/09/07		brown black		6m					MADE GROUND - Loose backfill of excavated clay, rubble waste and coal fragments and some brick.	
							2.50			
		yellow brown					3		Fine to stiff yellow brown and grey silty CLAY.	
							4			
							5			
							5.80			
		grey	100				6		Weak grey MUDSTONES.	
							7			
							8			
							9			
							10			
Ashton Bennett Consultancy Clerken House, Field End Lane, Hildenbridge, West Yorks HD9 2ND Tel: 01484 680531 Fax: 01484 680932							DRILLING NOTES: Borelogs recorded at 15m bgl. Continued on sheet 2 in case history			

CLIENT:		Blue Space Homes Ltd				ROTARY OPENHOLE BOREHOLE LOG			BOREHOLE NO. BH7	
SITE NAME:		King Street				SITE LOCATION:			Cott Moor, Wetherham	
METHOD OF DRILLING:		Rotary Openhole				DIAMETER OF DRILL:			NATIONAL GRID	
DRILLING COMPANY:		Van Ede				DATE:			SHEET NO. 2 of 3	
									OD LEVEL:	
									REFERENCE:	
									N 327876	
									N 342937	
PROGRESS		CASING		DRILL RUN			STRATA		DESCRIPTION OF STRATA	
Time/Rate	Depth/Cor.	Colour of Drill Return	Return %	Drill Mudlog	Type	Size (mm)	Depth (m)	Laplog	Description of Strata	Level
		grey	100	Nil					Continued from sheet 1 in same stratum	
							13.90			
							14.00		Weak Black COAL.	
		black	100				16.00		MUDSTONE -	
		grey	100							
							17.00			
							18.00			
							19.00			
							20.00		Continued on sheet 3 in same stratum	
Ashton Bennett Consultancy							DRILLING NOTES:			
Clivea House, Field End Lane, Hildesbridge, West Yorks HD9 2NH Tel: 01484 806531 Fax: 01484 889032										

CLIENT: Blue Space Homes Ltd								ROTARY OPENHOLE BOREHOLE LOG		BOREHOLE NO. BH7	
SITE NAME: King Street				SITE LOCATION: Culin Manor, Woodham				METHOD OF DRILLING: Rotary Operated		DIAMETER OF DRILL:	
DRILLING COMPANY: Van Ede				DATE: 27th September 2007				REFERENCE: IL 327936		SHEET NO. 5 of 5	
PROGRESS				CASING				STRATA			
Time/Date	Depth/Cor	Colour of Fluid Return	Return %	Depth Meters	Type	Run Time	Depth (m)	Legend	Description of Strata		Level
		grey	100	As					Continued from sheet 2 to same station		
							21				
							22				
							23				
							24				
							25				
							26				
							27				
							28				
							29				
							30				
							31				
							32				
							33				
							34				
							35				
							36				
27.09.07							36.00				
								BOREHOLE COMPLETED AT 30 ftbs lgl.			
Ashton Bennett Consultancy Clerken House, Field End Lane, Holzbridge, West Yorks HD9 2N0 Tel: 01484 680531 Fax: 01484 680932								DRILLING NOTES:			

CLIENT:		Blue Space Homes Ltd						ROTARY OPENHOLE BOREHOLE LOG		BOREHOLE NO. BH8	
SITE NAME:		King Street						SITE LOCATION:		Cottin Manor, Woodham	
METHOD OF DRILLING:		Rotary Openhole						DIAMETER OF DRILL:		NATIONAL GRID	
DRILLING COMPANY:		Van Ede						DATE:		SHEET NO.	
								27th September 2007		1 of 3	
								B: 327878		OD LEVEL:	
								N: 542937			
PROGRESS		CASING		DRILL RUN		STRATA		DESCRIPTION OF STRATA			
Time/Date	Depth/Cor.	Colour of Drill Return	Return %	Drill Moulding	Type	Size (mm)	Depth (m)	Logical	Description of Strata		Level
27/09/07		brown black		fin					MADE GROUND - 1.5m thickfill of recycled clay, rubble masonry and coal fragments and some brick.		
							1				
							2				
							3				
							4				
							5				
							6				
							7		Firm to stiff silty brown and grey clay.		
							8				
							9				
							10				
							11				
							12				
							13				
							14				
							15				
							16				
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							50				

CLIENT: Blue Space Homes Ltd								ROTARY OPENHOLE BOREHOLE LOG		BOREHOLE NO. BH8
SITE NAME: King Street						SITE LOCATION: Celia Moore, Weymouth				
METHOD OF DRILLING: Rotary Openhole						DIAMETER OF DRILL:			NATIONAL GRID	SHEET NO.
DRIILLING COMPANY:						DATE: 27th September 2007			REFERENCE: E 327878 N 342937	2 of 3 OD LEVEL:
PROGRESS CASING						DRILL RUN		STRATA		DESCRIPTION OF STRATA
Date/Time	Depth/Case	Colour of Fluid Return	Rpm %	Fluid Medium	Type	Size (mm)	Depth (m)	Lapset	Description of Strata	Lat
		grey	100	Air					Continued from sheet 7 in same stratum	
							31			
							32			
							33			
							34			
							35			
							36			
							37			
							38			
							39			
							40			
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CLIENT: Blue Space Horon Ltd								ROTARY OPENHOLE BOREHOLE LOG		BOREHOLE NO. BH8	
SITE NAME: King Street				SITE LOCATION: Culin Manor, Woodham				NATIONAL GRID		SHEET NO. 5 of 5	
METHOD OF DRILLING: Rotary Operable				DIAMETER OF DRILL:				REFERENCE: IL 3279/1		OD LEVEL:	
DRILLING COMPANY: Van Ede				DATE: 27th September 2007				N 342937			
PROGRESS		CASING	DRILL RUN			STRATA		DESCRIPTION OF STRATA			
Time/Watch	Depth/Can	Colour of Fluid Return	Return %	Depth Meters	Type	Run Time	Depth (m)	Legend	Description of Strata		Level
		grey	100	As					Continued from sheet 2 to same station		
							21				
							22				
							23				
							24				
							25				
							26				
							27				
							28				
							29				
							30				
							31				
							32				
							33				
							34				
							35				
							36				
27.09.07							36.00				
								BOREHOLE COMPLETED AT 30 ftbs log.			
Ashton Bennett Consultancy Clerken House, Field End Lane, Holzbridge, West Yorks HD9 2N0 Tel: 01484 680531 Fax: 01484 680932								DRILLING NOTES:			

CLIENT: Blue Space Horon Ltd							ROTARY OPENHOLE BOREHOLE LOG		BOREHOLE NO. BH9		
SITE NAME: King Street				SITE LOCATION: Cuts Manor, Woodham			METHOD OF DRILLING: Rotary Operable		DIAMETER OF DRILL:		
DRILLING COMPANY: Van Ede				DATE: 27th September 2007			REFERENCE: R 327930 N 342944		SHEET NO. 1 of 3 OD LEVEL:		
PROGRESS		CASING	DRILL RUN				STRATA		DESCRIPTION OF STRATA		
Time/Rate	Depth/Cor	Colour of Fluid Return	Return %	Depth Meters	Type	Run Time	Depth (m)	Legend	Description of Strata	Level	
27/09/07		brown black	100	60					MADE GROUND - Loose backfill of mixed clay, mine waste and coal fragments and some brick		
							2.60		Fine to stiff yellow brown and grey silty CLAY		
							4.00		Weak grey MUDSTONE		
							10		Continued on sheet 2 in case history		
Ashton Bennett Consultancy Clerken House, Field End Lane, Hildenbridge, West Yorks HD9 2NH Tel: 01484 680531 Fax: 01484 680932							DRILLING NOTES:				

CLIENT: Blue Space Horon Ltd							ROTARY OPENHOLE		BOREHOLE NO.	
SITE NAME: King Street				SITE LOCATION: Culin Manor, Woodham			BOREHOLE LOG		BH9	
METHOD OF DRILLING: Rotary Operable				DIAMETER OF DRILL:			NATIONAL GRID		SHEET NO.	
DRILLING COMPANY: Van Ede				DATE: 27th September 2007			REFERENCE: IL 327930		2 of 3	
							N 342944		OD LEVEL:	
PROGRESS		CASING		DRILL RUN			STRATA		DESCRIPTION OF STRATA	
Time/Week	Depth/Day	Colour of Drill Return	Return %	Drill Medium	Type	Run (mins)	Depth (m)	Legend	Description of Strata	Level
		grey	100	As					Continued from sheet 7 to same station	
							31			
							32			
							33			
							34			
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							51			
							52			
							53			
							54			
							55			
							56			
							57			
							58			
							59			
							60			
							61			
							62			
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							67			
							68			
							69			
							70			
							71			
							72			
							73			
							74			
							75			
							76			
							77			
							78			
							79			
							80			
							81			
							82			
							83			
							84			
							85			
							86			
							87			
							88			
							89			
							90			
							91			
							92			
							93			
							94			
							95			
							96			
							97			
							98			
							99			
							100			
Ashton Bennett Consultancy Cirecia House, Field End Lane, Hildenbridge, West Yorks HD9 2ND Tel: 01484 680531 Fax: 01484 680932							DRILLING NOTES:			

CLIENT: Blue Space Horon Ltd							ROTARY OPENHOLE BOREHOLE LOG		BOREHOLE NO. BH9		
SITE NAME: King Street				SITE LOCATION: Culin Manor, Woodham			METHOD OF DRILLING: Rotary Operated		DIAMETER OF DRILL:		
DRILLING COMPANY: Van Ede				DATE: 27th September 2007			REFERENCE: IL 327930		SHEET NO. 5 of 5		
PROGRESS				CASING			DRILL RUN		STRATA		
Time/Date	Depth/Cor	Colour of Fluid Return	Return %	Depth Meters	Type	Run Time	Depth (m)	Legend	DESCRIPTION OF STRATA		
		grey	100	As					Continued from sheet 2 to same station		
							21				
							22				
							23				
							24				
							25				
							26				
							27				
							28				
							29				
							30				
							31				
							32				
							33				
							34				
							35				
							36				
27.09.07							36.00				
							BOREHOLE COMPLETED AT 30.00m log.				
Ashton Bennett Consultancy Clerken House, Field End Lane, Holtbridge, West Yorks HD9 2N0 Tel: 01484 680531 Fax: 01484 680932							DRILLING NOTES:				

CLIENT: Blue Space Homes Ltd								ROTARY OPENHOLE BOREHOLE LOG				BOREHOLE NO. BH10	
SITE NAME: King Street						SITE LOCATION: Cottin Manor, Wetherham							
METHOD OF DRILLING: Rotary Openhole						DIAMETER OF DRILL:				NATIONAL GRID		SHEET NO. 1 of 3	
DILLING COMPANY:						DATE: 27th September 2007				E : 327872 N : 342953		OD LEVEL:	
Van Ede						27th September 2007				N 342953			
PROGRESS		CASING	DRILL RUN				STRATA		DESCRIPTION OF STRATA				
Date/Time	Depth/Corr	Colour of Fluid Return	Rotary %	Drill Mud/Lubricant	Type	Size (mm)	Depth (m)	Lap/End	Description of Strata	Level			
27/09/07		brown sludge	100	Air					MADE GROUND - 1.5m thickfill of recycled clay, rubble waste and coal fragments and some brick.				
							2.45		Pure to stiff yellow brown and grey silty CLAY.				
		yellow brown					6.85		Weak grey MUDSTONE.				
		grey	100										
									Continued on sheet 2 in case history.				
Ashton Bennett Consultancy Cliveira House, Field End Lane, Hydonbridge, West Yorks HD9 2NH Tel: 01484 806531 Fax: 01484 889032									DRILLING NOTES:				

CLIENT:		Blue Space Homes Ltd					ROTARY OPENHOLE BOREHOLE LOG		BOREHOLE NO. BH10	
SITE NAME:		SITE LOCATION:								
King Street		Cottin Manor, Woodham								
METHOD OF DRILLING:		DIAMETER OF DRILL:					NATIONAL GRID		SHEET NO.	
Rotary Openhole							REFERENCE:		2 of 3	
DRILLING COMPANY:		DATE:					E 327872		OD LEVEL:	
Van Ede		27th September 2007					N 342953			
PROGRESS		CASING		DRILL RUN			STRATA		DESCRIPTION OF STRATA	
Time/Rate	Depth/Cor	Colour of Drill Return	Return %	Drill Mudlog	Type	Size (mm)	Depth (m)	Logset	Description of Strata	Level
		grey	100	Nil					Continued from sheet 3 in same stratum	
							31			
							32			
							33			
							34			
		Black	100				14.00			
							14.30	COAL		
		grey	100				25	MUDSTONE -		
							26			
							27			
							28			
							29			
							30		Continued on sheet 5 in same stratum	
Ashton Bennett Consultancy							DRILLING NOTES:			
Cliveia House, Field End Lane, Hildenbridge, West Yorks HD9 2NH Tel: 01484 636531 Fax: 01484 689932										

CLIENT: Blue Space Homes Ltd								ROTARY OPENHOLE BOREHOLE LOG						BOREHOLE NO. BH10																		
SITE NAME: King Street							SITE LOCATION: Cottin Manor, Woodham																									
METHOD OF DRILLING: Rotary Openhole							DIAMETER OF DRILL:									NATIONAL GRID		SHEET NO. 3 of 3														
DRIILING COMPANY:							DATE: 27th September 2007									E : 32°3'72"		OD LEVEL:														
Van Ede							N : 342953																									
PROGRESS		CASING		DRILL RUN				STRATA			DESCRIPTION OF STRATA																					
Date/Time	Depth/Dm	Colour of Fluid Return	Rpm %	Pitch M/min	Type	Status	Depth m	Liquid	Description of Strata	Level																						
		grey	100	No			21		Continued from sheet 2 in same stratum																							
							27/09/07																30.00		BOREHOLE COMPLETED AT 30.00m bgl							
							Ashton Bennett Consultancy Cheriton House, Field End Lane, Holzbridge, West York YO29 2NH. Tel: 01484 609531 Fax: 01484 689922												DRILLING NOTES:													

CLIENT: Blue Space Horon Ltd							ROTARY OPENHOLE BOREHOLE LOG		BOREHOLE NO. BH11	
SITE NAME: King Street				SITE LOCATION: Cuts Manor, Woodham			NATIONAL GRID		SHEET NO. 1 of 3	
METHOD OF DRILLING: Rotary Operable				DIAMETER OF DRILL:			REFERENCE: IL 327856		OD LEVEL:	
DRILLING COMPANY: Van Ede				DATE: 27th September 2007			N 342948			
PROGRESS		CASING		DRILL RUN			STRATA		DESCRIPTION OF STRATA	
Time/Rate	Depth/Cor	Colour of Fluid Return	Return %	Depth Meters	Type	Run Time	Depth (m)	Legend	Description of Strata	Level
27/09/07		brown black		6m					MADE GROUND - Loose backfill of mixed clay, mine waste and coal fragments and some brick.	
							1.00			
							1.40		Fine to stiff yellow brown and grey silty CLAY.	
		yellow brown					1.80			
							2.20			
							2.60			
							3.00			
							3.40			
							3.80			
		grey	100				4.20		Weak grey MUDSTONE.	
							4.60			
							5.00			
							5.40			
							5.80			
							6.20			
							6.60			
							7.00			
							7.40			
							7.80			
							8.20			
							8.60			
							9.00			
							9.40			
							9.80			
							10.20		Continued on sheet 2 in case history	
Ashton Bennett Consultancy Clerken House, Field End Lane, Hildenbridge, West Yorks HD9 2ND Tel: 01484 680531 Fax: 01484 680932							DRILLING NOTES:			

CLIENT:		Blue Space Homes Ltd		ROTARY OPENHOLE BOREHOLE LOG		BOREHOLE NO. BH11	
SITE NAME:		SITE LOCATION:		NATIONAL GRID REFERENCE:		SHEET NO.	
King Street		Cottin Manor, Woodham				2 of 3	
METHOD OF DRILLING:		DIAMETER OF DRILL:		REFERENCE:		OD LEVEL:	
Rotary Openhole							
DRILLING COMPANY:		DATE:		B 327850 N 542948			
Van Ede		27th September 2007					
PROGRESS		CASING		DRILL RUN		STRATA	
Description of Strata		Level		Description of Strata		Level	
Time/Date	Depth/Cor.	Colour of Drill Return	Return %	Drill Mudlog	Type	Size (mm)	Depth (m)
		grey	100	Nil			
							Continued from sheet 1 in same stratum
							31
							32
							33
							34
							14.70
							14.85
		black	100				Weak black COAL
		grey	100				MUDSTONE -
							35
							36
							37
							38
							39
							40
							Continued on sheet 5 in same stratum
Ashton Bennett Consultancy				DRILLING NOTES:			
Clivea House, Field End Lane, Holebridge, West Yorks HD9 2NH Tel: 01484 806531 Fax: 01484 889032							

CLIENT: Blue Space Horon Ltd								ROTARY OPENHOLE BOREHOLE LOG		BOREHOLE NO. BH11	
SITE NAME: King Street				SITE LOCATION: Culin Manor, Woodham				NATIONAL GRID		SHEET NO.	
METHOD OF DRILLING: Rotary Operated				DIAMETER OF DRILL:				REFERENCE: IL 327856		5 of 5	
DRILLING COMPANY: Van Ede				DATE: 27th September 2007				N 342948		OD LEVEL:	
PROGRESS		CASING	DRILL RUN				STRATA		DESCRIPTION OF STRATA		
Time/Date	Depth/Cor	Colour of Fluid Return	Return %	Depth Meters	Type	Run Time	Depth (m)	Legend	Description of Strata	Lined	
		grey	100	0m					Continued from sheet 2 to same station		
							21				
							22				
							23				
							24				
							25				
							26				
							27				
							28				
							29				
							30				
							31				
							32				
							33				
							34				
							35				
							36				
27.09.07							36.00				
								BOREHOLE COMPLETED AT 30.00m bgl.			
Ashton Bennett Consultancy Clerken House, Field End Lane, Holzbridge, West Yorks HD9 2N0 Tel: 01484 680531 Fax: 01484 680932								DRILLING NOTES:			

CLIENT: Blue Space Homes Ltd							ROTARY OPENHOLE BOREHOLE LOG		BOREHOLE NO. BH12		
SITE NAME: King Street				SITE LOCATION: Cuts Manor, Weymouth			METHOD OF DRILLING: Rotary Operated		DIAMETER OF DRILL:		
DRILLING COMPANY: Van Ede							DATE: 27th September 2007		REFERENCE: R 327861 N 342945		
PROGRESS CASING							STRATA		DESCRIPTION OF STRATA		
Time/Rate	Depth/Case	Colour of Fluid Return	Return %	Depth Meters	Type	Size (mm)	Depth (m)	Legend	Description of Strata	Level	
27/09/07		brown mud	100	6.0					MADE GROUND - Loose backfill of mixed clay, mine waste and coal fragments and some brick.		
							3.50		Fine to stiff yellow brown and grey silty CLAY.		
							6.40		Weak grey MUDSTONE.		
							10		Continued on sheet 2 in case history		
Ashton Bennett Consultancy Clerken House, Field End Lane, Hildenbridge, West Yorks HD9 2NH Tel: 01484 680531 Fax: 01484 680932							DRILLING NOTES:				

CLIENT: Blue Space Horon Ltd							ROTARY OPENHOLE BOREHOLE LOG		BOREHOLE NO. BH12	
SITE NAME: King Street				SITE LOCATION: Culin Manor, Woodham			METHOD OF DRILLING: Rotary Operated		DIAMETER OF DRILL: 327661	
DRILLING COMPANY: Van Ede				DATE: 27th September 2007			REFERENCE: N 342945		SHEET NO. 2 of 3	
PROGRESS		CASING	DRILL RUN		STRATA		DESCRIPTION OF STRATA			
Time/Week	Depth/Day	Colour of Fluid Return	Return %	Depth Meters	Type	Run Time	Depth (m)	Legend	Description of Strata	Level
		grey	100	As					Continued from sheet 1 to same station	
							14.40			
		black	100				14.60		Weak black COAL	
		grey	100						Weak grey MUDSTONE	
							15			
							16			
							17			
							18			
							19			
							20		Continued on sheet 3 to same station	
Ashton Bennett Consultancy Clerken House, Field End Lane, Hildenbridge, West Yorks HD9 2ND Tel: 01484 680531 Fax: 01484 680932							DRILLING NOTES:			

CLIENT: Blue Space Horon Ltd								ROTARY OPENHOLE BOREHOLE LOG		BOREHOLE NO. BH12	
SITE NAME: King Street				SITE LOCATION: Culin Manor, Woodham				NATIONAL GRID		SHEET NO. 5 of 5	
METHOD OF DRILLING: Rotary Operable				DIAMETER OF DRILL:				REFERENCE: IL 327861		OD LEVEL:	
DRILLING COMPANY: Van Ede				DATE: 27th September 2007				N 342945			
PROGRESS		CASING	DRILL RUN			STRATA		DESCRIPTION OF STRATA			
Time/Date	Depth/Cor	Colour of Fluid Return	Return %	Depth Meters	Type	Run Time	Depth (m)	Legend	Description of Strata		Level
		grey	100	0m					Continued from sheet 2 to same station		
							21				
							22				
							23				
							24				
							25				
							26				
							27				
							28				
							29				
							30				
							31				
							32				
							33				
							34				
							35				
							36				
27.09.07							36.00				
								BOREHOLE COMPLETED AT 30 ftbs log.			
Ashton Bennett Consultancy Clerken House, Field End Lane, Holtbridge, West Yorks HD9 2ND Tel: 01484 680531 Fax: 01484 688932								DRILLING NOTES:			

S 24 SE 1/4
 Cargo Collery
 C. J. - Mawr
 Section 7 Bys-Pit
 (Compiled from original section
 plotted to scale)
 (Communicated by Mr. E. Lloyd Jones)

		THICKNESS		DEPTH		Notes
		Feet	Inches	Feet	Inches	
410-ft fault Crops at surface nearly at red edge of pit In G.S. Mem. 1-121, p. 76						
From	Top of Main Coal	72		72		21-94
"	bottom	80		80		24-38
"	bottom of Main Coal			120		36-57
"	" " Upper Main Coal			153		46-03
"	" " Red Coal			202		61-56
"	" " Stone Coal			225		68-58
"	" " Half yard Coal			244		74-37
"	" " Strongest Coal (WATER, HARD)			269		75-89
"	" " Fireclump Coal			265		80-77
"	" " Two yard Coal			312		95-09
"	" " Lower Red Coal			332		98-14
"	" " (mostly pure, with heavy & Blue)			387		117-95
"	" " White & Blue Coal					
"	" " Leogreimion Coal			439		133-80
"	" " brown mudstone			544		165-81

FULLER SECTION IN SECTION BOOK OF
 WILLIAMS, DE RANCE AND STRAHAN pp 39-42

Carthage Colliery (dip 35°) (dip 35°)

Section of engine pit (L. Howard's deep engine pit) (as)

(Commenced by Mr. E. C. Howard)

	THICKNESS		DEPTH		Feet
	Feet	Inches	Feet	Inches	
(In downthrow side of fault) See P. E. Memoir 1-121, p. 46.					
To bottom of Sulphur Coal	(4) 3	-	3	-	91
Straggly Coal	thin	-	500	-	1524
Footwall Coal	(70) 2	6	84	-	1450
Soft Coal			103	-	3139
Coal	(4) 1	6	119	-	3627
Carthage Coal	(10) 2	-	124	-	3931
Car Top Coal	2	3	151	-	4602
WATER LEVEL	(65)	-	269	-	8199
Thos. Evans or Warrens Coal			306	-	9326
John the Gate Coal			317	-	1662
Dusty Coal			368	-	
Coal	2	6	461	-	12222
New Coal	(70)	-	447	-	13624
(In downthrow side of fault)					
Blind Coal			508	-	15240
Main Coal			517	-	15758
Brassy Coal			542	-	(4520)
Lower measures			563	-	17160

Fault down
E. 410'
down to top
of Brassy
just below
west side of
engine pit
before changing
to slight
west side
hade

FLYER SECTION IN SECTION BOOK OF
WILLIAMS, DE KANCE AND STEAHN pp 35-39

WELSH NATIONAL WATER DEVELOPMENT AUTHORITY

DEE AND CLWYD RIVER DIVISION

30-1.TIF

SJ24/30

DETAILED HYDROGEOLOGICAL RECORD SHEET : INDIVIDUAL SITE RECORD

NAME CAEGLO COL. N.G.R. 290 429
 ACREFAIR, CEFN, DENBYS. SJ 24 55 / 58
EXACT SITE KNOWN YES/NO LOCATION SKETCH YES/NO
HEIGHT A.C.D.137..... METRES ESTIMATED FROM MAP/SURVEY
REFERENCE POINT NONE/DETAILS/SKETCH

LOG YES/NO LOCATION OF LOG WERE/I.C.S.
SUMMARY OF LOG C.M. 550' deep

WATER QUALITY INFORMATION YES/NO

WATER LEVEL INFORMATION

ABSTRACTION YES/NO/OCCASIONALLY/NOT KNOWN/
 STAND-BY LICENSED ABSTRACTION
LICENCE NO. /HOOR /DAY /YEAR

PUMPING TEST YES/NO DATE

LOCATION OF DATA

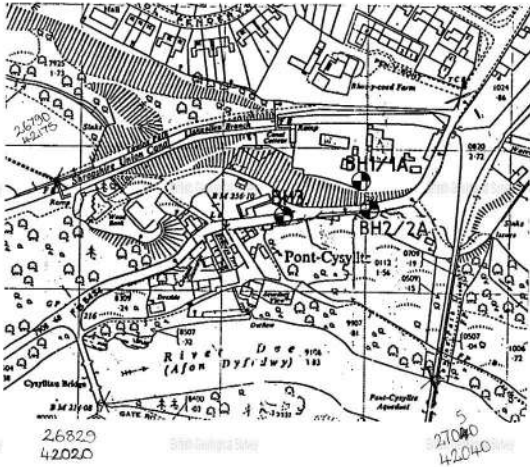
WATER LEVELS RECORDED NONE/ISOLATED READINGS/MONTHLY/AUTOGRAPHIC

LOCATION OF RECORDSACCESS

5245E 498

Sampling		Properties				Strata 27001, 42177					
Drill Run	Fr	Cr	FI	RQD	Description	Depth	Level	Legend			
6.1.					MADE GROUND: Earth, bricks, concrete**	6.1.					
1.00					MADE GROUND: Fine grey and brown clay with some gravel, ash, slate and iron fragments.	1.00					
	100%	63% (0%)	NI	0%							
2.20					MADE GROUND: Brick, mortar and welded ash fragments and sandstone cobbles.	2.00					
	100%	50% (0%)		0%	MADE GROUND: Fine medium and coarse gravel with some cobbles in a matrix of clay with some sand.	2.50					
3.00					Soft to fine grey mottled brown CLAY with a little sand and some angular to sub-rounded fine, medium and coarse gravel.	3.00					
	100%	77% (0%)		0%							
4.30	100%	100% (21%)		0%	Black moderately weathered COAL, very weak.	4.30					
4.45											
	100%	100% (23%)		0%	Stiff grey CLAY with much iron staining.	4.77					
5.40					Thinly interbedded light grey fine grained thinly laminated slightly weathered SANDSTONE, moderately strong to strong and brown very clayey highly weathered SILTSTONE. Weak to very weak.	5.20					
	100%	100% (94%)	3	58%							
6.00											
	100%	100% (62%)		41%							
6.40					Between 6.35m and 7.10m: sandstone.						
	100%	100% (94%)	8	61%							
7.40					Light grey, grey-brown very silty highly weathered MUDSTONE, weak. Much iron staining.	7.10					
	100%	65% (0%)	NI	0%							
8.00					Between 8.00m and 8.80m: completely weathered. Recovered as soft clay.						
	100%	80% (39%)		0%							
8.60					Black carbonaceous highly weathered MUDSTONE, moderately weak.	8.80					
	100%	70% (0%)		0%							
9.60					Between 8.80m and 9.00m: completely weathered. Between 9.50m: highly to completely weathered, weak.						
Location Co-ordinates: Ground Level: Chainage:											
Drilling					Groundwater						
Type	From	To	Size	Fluid	Struck	Behaviour	Sealed	Date	Hole	Cased	Water
Rotary Open Hole	6.1.	1.00	S	Mist				22.08.89	3.00	3.00	Dry
Rotary	1.00	6.70	5% x 40	Mist				23.08.89	3.00	3.00	Dry
Rotary	6.70	18.00	P	Mist				23.08.89	5.40	3.00	Dry
								24.08.89	5.40	3.00	-
Remarks Triflex triple tube core barrel used to 6.70m, unable to drill deeper due to strength of formation.											
Borehole Record					Project			Contract		d9084	
					Trefor Landslip						
					Clyde County Council						
Exploration Associates								Borehole		1 (1 of 2)	

Sampling		Properties				Strata		27001, 42177			
Drill Run	Fr	Cr	FI	RQD	Description	Depth	Level	Legend			
10.70	100%	91% (52%)	NI	0%	(See previous sheet).						
11.70	100%	94% (47%)		0%							
12.70	100%	82% (61%)		0%							
13.70	100%	97% (23%)		0%	Between 13.40m and 14.70m:-completely weathered.						
14.70	100%	90% (31%)		0%							
15.00	100%	81% (0%)		0%	Between 15.00m and 15.20m:-completely weathered.						
15.40	100%	100% (0%)		0%	Between 15.20m and 16.50m:-occasional thin beds moderately weathered, moderately weak.						
17.00	100%	80% (11%)		0%	Between 16.50m and 16.65m:-completely weathered.						
18.00	100%	99% (0%)		0%	Below 17.50m:-completely weathered.	18.00					
					End of Borehole.						
Location		Co-ordinates:		Ground Level:		Chainage:					
Drilling					Groundwater						
Type	From	To	Size	Fluid	Struck	Behaviour	Sealed	Date	Hole	Cased	Water
Core Liner	N/A							25.08.89 25.08.89 25.08.89	15.00 15.00 18.00	5.40 5.40 5.60	- Dry -
Remarks		Borehole terminated at 18.00m and rig relocated. Borehole grouted.									
Borehole Record					Project				Contract		
					Trefor Landslip				09084		
Exploration Associates					Clwyd County Council				Borehole 1 (2 of 2)		



SITE PLAN	Project Trefor Landslip Clwyd County Council	Contract D9084
exploration associates		Figure Drawing 2

Sampling		Properties			Strata		27001, 42177		
Drill Run	Fr	Cr	FI	RQD	Description	Depth	Level	Legend	
G.L.					MADE GROUND: Clay and brick and concrete fragments**	G.L.	95.73		
3.00						3.00	92.73		
3.30	100%	33% (0%)	NI	0%	Soft to firm brown CLAY with a little sand with some cobbles and boulders.				
3.60	100%	30% (0%)		0%					
4.00	100%	75% (0%)		0%					
4.50	100%	50% (30%)	-	20%					
5.00	100%	40% (0%)	NI	0%					
5.10	100%	100% (0%)		0%	Light grey fine grained thinly laminated slightly weathered SANDSTONE, strong, with some iron staining.	5.00	90.73		
6.45	100%	89% (80%)	2	51%	Between 5.35m and 5.55m:-bed of siltstone, weak. Between 5.75m and 5.80m:-bed of soft clay. Between 5.80m and 6.00m:-moderately weathered.				
	100%	99% (95%)		60%	Grey very silty highly weathered MUDSTONE, weak.	6.68	89.05		
7.55	100%	84% (0%)		0%	Black carbonaceous highly weathered MUDSTONE, moderately weak.	7.55	88.18		
8.00	100%	98% (0%)	NI	0%					
8.70									
	100%	81% (39%)		0%					

Location

Co-ordinates:

Ground Level: 95.73m AOD

Chainage:

Drilling

Groundwater

Type	From	To	Size	Fluid	Struck	Behaviour	Sealed	Date	Hole	Cased	Water
Rotary Open Hole	G.L.	3.00	P	Mist				25.08.89	6.45	5.00	+
Rotary Core	3.00	27.00	P	Mist				26.08.89	6.45	5.00	+
								26.08.89	12.20	5.00	+
								28.08.89	12.20	5.00	+

Remarks

Borehole grouted.

Borehole Record

Project

Trefor Landslip

Clwyd County Council

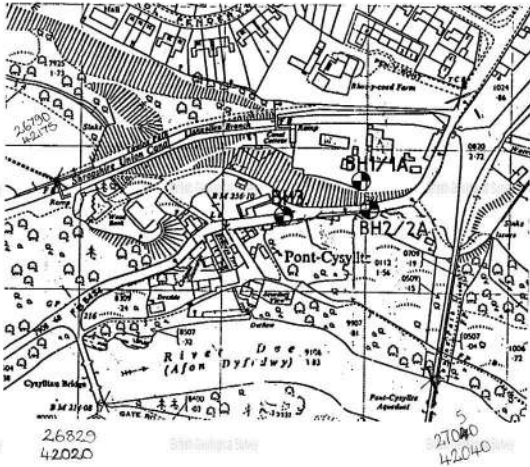
Contract 09084

Exploration Associates

Borehole 1A (1 of 3)

Sampling		Properties				Strata 27001, 42177					
Drill Run	Fr	Cr	FI	ROD	Description	Depth	Level	Legend			
10.50					(See previous sheet).						
	100%	91% (59%)	NI	0%	Between 10.50m and 12.00m:-moderately weathered and moderately weak.						
12.20		100%	92% (8%)	0%	Between 11.20m and 12.00m:-with much iron staining.						
13.50		100%	97% (61%)	0%	Between 13.00m and 13.50m:-completely weathered, recovered as soft clay.						
15.30		100%	99% (94%)	14	Below 14.00m:-slightly to moderately weathered and moderately weak to moderately strong.						
17.10		100%	90% (78%)	NI	Below 16.10m:-weak.						
18.60		100%	100% (47%)	8	Between 17.60m and 18.80m:-highly weathered, weak.						
Location Co-ordinates: Ground Level: 95.73m AOD Chainage:											
Drilling					Groundwater						
Type	From	To	Size	Fluid	Struck	Behaviour	Sealed	Date	Hole	Cased	Water
Core Liner	3.00	27.00	P					28.08.89 29.08.89 29.08.89	18.60 18.60 27.00	5.00 5.00 5.00	18.00 18.50 -
Remarks											
Borehole Record					Project Trefor Landslip Clwyd County Council			Contract p9084			
Exploration Associates								Borehole 1A (2 of 3)			

Sampling		Properties				Strata		27001, 42177		Depth	Level	Legend
Drill Run	Fr	Cr	FI	RQD	Description							
20.10			8		(See previous sheet). Between 20.10m and 20.50m:-completely weathered, very weak. Between 20.50m and 21.50m:-highly weathered, weak.							
	100%	96% (36%)		7%								
21.50			NI		Between 21.50m and 22.00m, and 22.70m and 23.10m:-completely weathered.							
	100%	99% (13%)		0%								
22.60												
	100%	96% (46%)		12%								
23.80			6									
	100%	96% (63%)	3	47%	Light brown coarse grained cross-bedded slightly to moderately weathered SANDSTONE, moderately strong. Below 24.60m:-closely spaced discontinuities of iron stained clay.					23.80	71.93	
25.70												
	100%	99% (58%)	5	8%								
27.00												
					End of Borehole.					27.00	68.73	
Location Co-ordinates: Ground Level: 95.73m AOD Chainage:												
Drilling						Groundwater						
Type	From	To	Size	Fluid	Struck	Behaviour	Sealed	Date	Hole	Cased	Water	
Remarks												
Borehole Record					Project					Contract		
					Trefor Landslip					D9084		
Exploration Associates					Clwyd County Council					Borehole		
										1A (3 of 3)		



SITE PLAN	Project Trefor Landslip Clwyd County Council	Contract D9084
exploration associates		Figure Drawing 2

Sampling		Properties				Strata 27007, 42157			
Drill Run	Fr	Cr	FI	RQD	Description	Depth	Level	Legend	
6.1.					TARMAC**	6.1.			
					MADE GROUND: Hardcore**	0.30			
					Firm brown CLAY**. (Possible Made Ground).	0.50			
					Between 1.30m and 1.70m: traces of coal.**				
1.70		80%	72%		Firm to stiff yellow brown CLAY with some rootlets, a little sand and sub-angular fine, medium and coarse gravel. Occasional cobbles.	1.70			
					Boulder from 2.20m to 2.60m.				
3.00		80%	100% (46%)	12	17%	Light grey fine and medium grained quartzose slightly weathered SANDSTONE, strong.	3.00		
3.70				NI					
				10		Between 3.72m and 3.87m: bed of brown moderately weathered mudstone, weak.			
4.30		80%	97% (45%)		20%	Dark grey carbonaceous thinly laminated highly weathered MUDSTONE, weak to very weak.	4.05		
				NI					
		80%	100% (7%)		0%	Between 5.20m and 5.23m, 5.33m and 5.46m and 5.73m and 6.37m: completely weathered.			
6.40		80%	100% (0%)		0%				
7.10		80%	100% (29%)		0%	Between 7.20m and 7.29m: ironstone bed.			
						Between 8.00m and 8.40m: iron staining			
8.60		80%	100% (0%)		0%	Between 8.90m and 9.20m: iron staining			
9.80									

Location

Co-ordinates:

Ground Level:

Chainage:

Drilling

Groundwater

Type	From	To	Size	Fluid	Struck	Behaviour	Sealed	Date	Hole	Cased	Water
Rotary Open	1.30	1.70	P	Mist				30.08.89	11.60	2.20	9.00
Rotary	1.70	11.60	P	Mist				31.08.89	11.60	2.20	9.00

Remarks

Inspection pit excavated to 1.30m. 31.8.89, unable to advance, borehole collapsing beneath, rock roller employed.

Borehole Record

Project

Trefor Landslip

Contract D9084

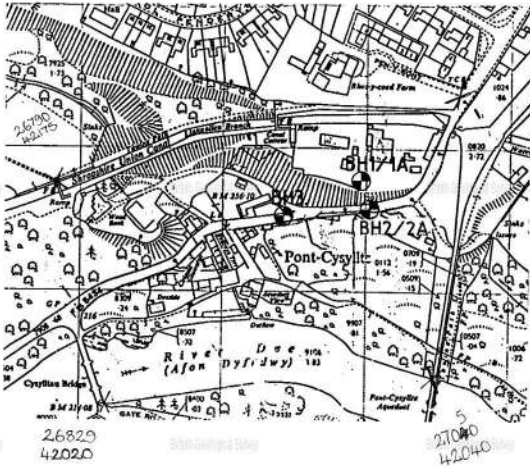
Exploration Associates

Clwyd County Council

Borehole 2 (1 of 2)

SJ 24 SE 500

Sampling		Properties			Strata		27007, 42157	
Drill Run	Fr	Cr	FI	RCD	Description	Depth	Level	Legend
10.90	80%	85% (21%)	41	0%	(See previous sheet).	11.60		
	80%	100% (0%)		0%				
11.60					End of Borehole.			

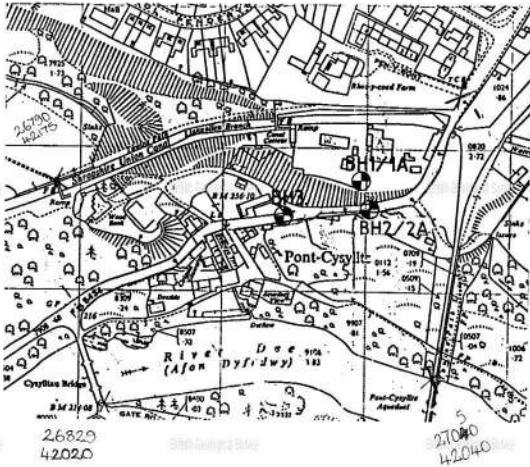


SITE PLAN	Project Trefor Landslip Clwyd County Council	Contract D9084
exploration associates		Figure Drawing 2

Sampling		Properties			Strata		27007, 42157				
Drill Run	Fr	Cr	FI	RQD	Description	Depth	Level	Legend			
6.1.					YABRAC**	6.1.	90.07				
0.60					MADE GROUND: Hardcore**	0.30	89.77				
					Firm brown CLAY**	0.45	89.62				
	80%	95% (0%)	NI	0%	Soft to firm brown mottled grey CLAY with a little sand.	0.60	89.47				
1.70					Grey completely weathered MUDSTONE, recovered as firm clay with some angular lithorelicts.	1.31	88.76				
	80%	90% (50%)	10	17%		1.36	88.71				
2.30					Black thickly laminated slightly weathered COAL, very weak.	1.75	88.32				
	80%	100% (67%)		100%		1.86	88.21				
2.75					Dark grey carbonaceous highly weathered MUDSTONE, very weak.						
	80%	100% (100%)		100%							
3.10					Light grey thinly laminated quartzose moderately weathered SILTSTONE/fine grained SANDSTONE, very weak.						
	80%	100% (80%)	5	80%	Below 2.30m: becoming slightly weathered and strong. Possible ironstone content.						
4.10					Between 2.75m: with occasional thin partings of mudstone.						
4.40					Between 3.90m and 4.10m: fragments of siltstone held in a clay matrix, possible coals.	4.40	85.67				
	80%	100% (36%)		22%							
4.90					Dark grey to black carbonaceous thinly laminated highly to completely weathered MUDSTONE, very weak. Much brown or orange iron staining.						
	80%	100% (0%)	NI	0%							
5.70					Below 5.00m: moderately weathered.						
	80%	100% (0%)		0%							
6.70					Around 7.00m: occasional small (<1cm) ironstone modules.						
6.90											
	80%	76% (21%)		0%							
7.90					At 8.40m: moderately weak.						
	80%	100% (36%)		0%							
9.10					Below 9.00m: slightly weathered and weak. With occasional small (<3cm) ironstone modules.						
	80%	100% (75%)		0%							
Location Co-ordinates: Ground Level: 90.07m AOD Chainage:											
Drilling					Groundwater						
Type	From	To	Size	Fluid	Struck	Behaviour	Sealed	Date	Hole	Cased	Water
Rotary	0.60	4.90	S	Mist				06.09.89	10.90	4.90	9.30
Rotary	4.90	14.65	P	Mist				07.09.89	10.90	4.90	9.40
Rotary	14.65	23.10	H	Mist				07.09.89	14.60	10.00	13.60
								08.09.89	14.65	10.00	12.90
Remarks Inspection pit excavated to 0.60m. 7.9.89 unable to advance P barrel beyond 10.00m, reduced to H, 8.09.89.											
Borehole Record					Project			Contract p9084			
					Trefor Landslip						
Exploration Associates					Clwyd County Council			Borehole 2A (1 of 3)			

Sampling		Properties			Strata 27007, 42157						
Drill Run	Fr	Cr	Fl	RQD	Description	Depth	Level	Legend			
					(See previous sheet).						
10.90					Between 10.62m and 10.90m: highly to completely weathered, recovered as firm to stiff clay with some lithorelicts.						
	80%	100% (5%)	NI	0%	Between 11.60m and 12.05m: completely weathered.						
12.20					Below 12.05m: moderately weathered, moderately weak.						
	80%	100% (32%)	6	19%	Between 12.55m and 12.85m: highly to completely weathered, weak.						
13.15					Below 13.50m: slightly to moderately weathered, slightly micaceous and weak. Closely spaced discontinuities with orange-brown iron staining.						
	80%	100% (12%)	NI	0%							
14.65	80%	100% (0%)		0%							
14.70	80%	100% (0%)		0%							
15.30											
	80%	100% (0%)		0%							
16.50											
	80%	100% (0%)		0%	At 17.00m: with disseminated pyrite						
17.50											
	80%	96% (0%)		0%	Between 17.82m and 18.50m: completely weathered, very weak.						
18.50											
	80%	87% (0%)		0%							
20.00					Black highly weathered coal, weak.	19.94	70.13				
Location		Co-ordinates:			Ground Level: 99.07m AOD		Chainage:				
Drilling					Groundwater						
Type	From	To	Size	Fluid	Struck	Behaviour	Sealed	Date	Hole	Cased	Water
Core Liner	4.90	14.65	P					08.09.89 09.09.89 09.09.89	14.65 14.65 23.10	11.00 11.00 16.70	11.00 13.10 -
Remarks					Piezometer installed at 18.30m, sand filter 17.50m to 18.50m.						
Borehole Record					Project			Contract			
					Trefor Landslip			D9084			
Exploration Associates					Clwyd County Council			Borehole			
								2A (2 of 3)			

Sampling		Properties				Strata		27007, 42157				
Drill Run	Fr	Cr	Fl	ROO	Description	Depth	Level	Legend				
					Light grey medium and coarse grained cross bedded slightly weathered SANDSTONE, strong to moderately strong.	20.00	70.07					
	80%	100% (100%)	2	100%	Light grey medium and coarse grained cross bedded slightly weathered SANDSTONE, strong to moderately strong.							
21.50 21.60	80%	100% (100%)		100%								
	80%	100% (100%)	0	100%								
23.10						23.10	66.97					
					End of Borehole.							
Location												
Co-ordinates:				Ground Level: 90.07m AOD				Chainage:				
Drilling					Groundwater							
Type	From	To	Size	Fluid	Struck	Behaviour	Sealed	Date	Hole	Cased	Water	
Remarks												
Borehole Record					Project				Contract			
					Trefor Landslip				09084			
Exploration Associates					Clwyd County Council				Borehole			
									2A (3 of 3)			



SITE PLAN	Project Trefor Landslip Clwyd County Council	Contract D9084
exploration associates		Figure Drawing 2

Appendix F

Consultants Coal Mining Report

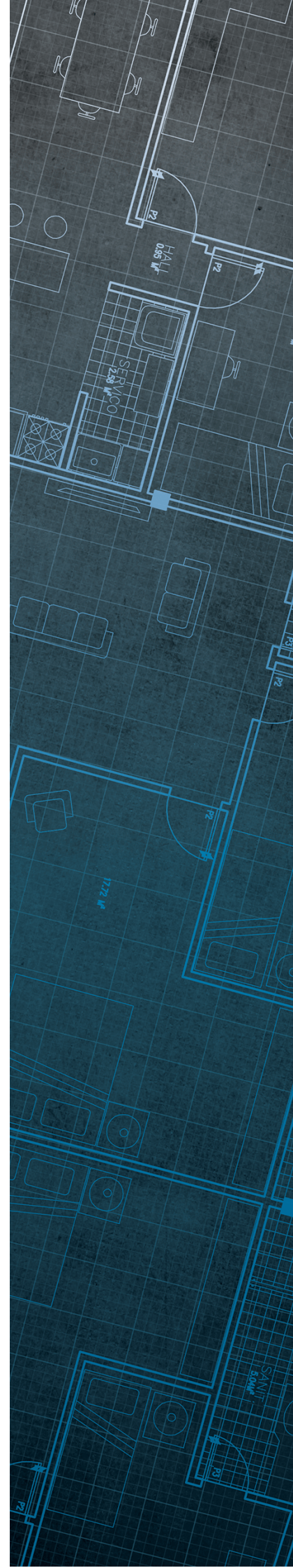


The Coal
Authority

Consultants Coal Mining Report

Trevor Basin, Wrexham, LL14 3np
Wrexham

Date of enquiry:	6 October 2022
Date enquiry received:	6 October 2022
Issue date:	6 October 2022
Our reference:	51003316425001
Your reference:	GS-9105500



Consultants

Coal Mining Report

This report is based on and limited to the records held by the Coal Authority at the time the report was produced.

Client name

GROUNDSURE LIMITED

Enquiry address

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Wrexham

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Nottinghamshire
NG18 4RG

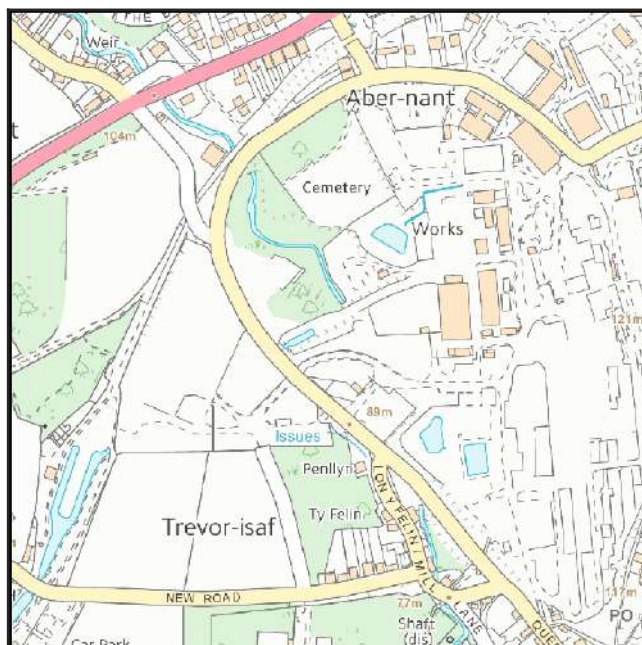
www.groundstability.com

 @coalauthority

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 /thecoalauthority

 /thecoalauthority



Approximate position of property



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Section 1 – Mining activity and geology

Past underground mining

Colliery	Seam	Mineral	Coal Authority reference	Depth (m)	Direction to working	Dipping rate of seam worked (degrees)	Dipped direction of seam worked	Extraction thickness (cm)	Year last mined
unnamed	STONE	Coal	38VR	6	Beneath Property	9.0	East	200	1860
unnamed	NANT (SOFT 5 QTRS)	Coal	38WL	10	Beneath Property	9.5	East	160	1862
unnamed	RUABON YARD (SOFT 5 QTRS)	Coal	7H2M	11	Beneath Property	9.0	East	110	1862
unnamed	RUABON YARD (SOFT 5 QTRS)	Coal	4JRK	17	Beneath Property	9.0	East	110	1862
unnamed	HALF YARD / QUEEN	Coal	90B7	26	Beneath Property	9.0	East	50	1860
unnamed	WALL AND BENCH	Coal	7902	31	Beneath Property	9.0	South-East	110	1860
unnamed	WALL AND BENCH	Coal	90B4	55	Beneath Property	9.0	South-East	110	1860
unnamed	WALL AND BENCH	Coal	7903	140	East	9.0	South-East	110	1860

Probable unrecorded shallow workings

Yes.

Spine roadways at shallow depth

No spine roadway recorded at shallow depth.

Mine entries

Entry type	Reference	Grid reference	Treatment description	Mineral	Conveyancing details
Shaft	327342-215	327259 342740		Coal	
Shaft	327342-216	327287 342742	This shaft has probably been filled to an unknown specification.	Coal	
Shaft	327342-217	327352 342760		Coal	
Shaft	327342-218	327605 342771		Coal	
Shaft	327342-219	327611 342720		Coal	
Shaft	327342-223	327756 342719		Coal	
Shaft	327342-229	327683 342606		Coal	
Shaft	327342-230	327734 342573		Coal	
Shaft	327342-231	327813 342570		Coal	
Shaft	327342-232	327189 342521		Coal	
Shaft	327342-233	327187 342487	This shaft has been filled at some time in the past. As a result of some minor slumping of the fill the shaft was topped up with clean stone and a stock proof post and wire fence erected around.	Coal	
Shaft	327342-235	327621 342403	The shaft was covered during October 1977 using a 4.57m square concrete cap incorporating 12m3 of concrete with 2 x 3.66m RSJs and wire mesh reinforcement.	Coal	
Shaft	327342-236	327617 342260		Coal	
Shaft	327342-303	327633 342507		Coal	
Shaft	327342-304	327704 342474		Coal	
Shaft	327342-305	327637 342332	The Coal Board agreed to fill this shaft in December 1955 but there is no record to say if this was carried out.	Coal	
Shaft	327342-306	327659 342307		Coal	
Shaft	327342-307	327746 342290		Coal	
Shaft	327342-400	327406 342810		Coal	
Shaft	327342-408	327600 342828		Coal	
Shaft	327342-409	327625 342926		Coal	
Shaft	327342-418	327816 342497		Coal	
Shaft	327342-420	327733 342265		Coal	

Entry type	Reference	Grid reference	Treatment description	Mineral	Conveyancing details
Shaft	327342-432	327635 342573		Coal	
Shaft	327342-433	327757 342666		Coal	
Shaft	327342-457	327696 342360		Coal	
Shaft	327342-458	327691 342490		Coal	
Shaft	327342-484	327570 342947		Coal	
Shaft	327342-485	327608 342935		Coal	
Shaft	327342-491	327576 342873		Coal	
Shaft	327342-492	327595 342853		Coal	
Shaft	327342-493	327513 342813		Coal	
Shaft	327342-495	327587 342758		Coal	
Shaft	327342-496	327541 342740		Coal	
Shaft	327342-497	327270 342781		Coal	
Shaft	327342-504	327577 342441		Coal	
Shaft	327342-505	327592 342428		Coal	
Shaft	327342-507	327705 342483		Coal	
Shaft	327342-555	327277 342744		Coal	
Shaft	327342-556	327627 342821		Coal	
Shaft	327342-559	327728 342607		Coal	
Shaft	327342-560	327739 342631		Coal	
Shaft	327342-561	327400 342819	This entry was searched for in May 1988 by NKC Geotech Ltd but was not located. The shaft is presumed to be to the South of the 6m x 10m area on the Southern boundary searched.	Coal	
Shaft	327342-562	327393 342802		Coal	
Shaft	327342-573	327754 342646		Coal	
Shaft	327342-600	327511 342887		Coal	

Abandoned mine plan catalogue numbers

The following abandoned mine plan catalogue numbers intersect with some, or all, of the enquiry boundary:

2334	14884	NW1411
NW1503	16713	5974
13855	NW1401	9549

Our records show we have more plans than those shown above which could affect the enquiry boundary.

Please contact us on 0345 762 6848 to determine the exact abandoned mine plans you require based on your needs.

Outcrops

Seam name	Mineral	Seam workable	Distance to outcrop (m)	Direction to outcrop	Bearing of outcrop
RUABON YARD (SOFT 5 QTRS)	Coal	Yes	34.3	North-West	7
RUABON YARD (SOFT 5 QTRS)	Coal	Yes	Within	N/A	155
STONE	Coal	Yes	Within	N/A	195
WALL AND BENCH	Coal	Yes	Within	N/A	164

Geological faults, fissures and breaklines

Please refer to the 'Summary of findings' map (on separate sheet) for details of any geological faults, fissures or breaklines either within or intersecting the enquiry boundary.

Fault under or close to the property recorded.

Opencast mines

None recorded within 500 metres of the enquiry boundary.

Coal Authority managed tips

None recorded within 500 metres of the enquiry boundary.

Section 2 – Investigative or remedial activity

Please refer to the 'Summary of findings' map (on separate sheet) for details of any activity within the area of the site boundary.

Site investigations

None recorded within 50 metres of the enquiry boundary.

Remediated sites

None recorded within 50 metres of the enquiry boundary.

Coal mining subsidence

The Coal Authority has not received a damage notice or claim for the subject property, or any property within 50 metres of the enquiry boundary, since 31 October 1994.

There is no current Stop Notice delaying the start of remedial works or repairs to the property.

The Coal Authority is not aware of any request having been made to carry out preventive works before coal is worked under section 33 of the Coal Mining Subsidence Act 1991.

Mine gas

None recorded within 500 metres of the enquiry boundary.

Mine water treatment schemes

None recorded within 500 metres of the enquiry boundary.

Section 3 – Licensing and future mining activity

Future underground mining

None recorded.

Coal mining licensing

None recorded within 200 metres of the enquiry boundary.

Court orders

None recorded.

Section 46 notices

No notices have been given, under section 46 of the Coal Mining Subsidence Act 1991, stating that the land is at risk of subsidence.

Withdrawal of support notices

The property is not in an area where a notice to withdraw support has been given.

The property is not in an area where a notice has been given under section 41 of the Coal Industry Act 1994, cancelling the entitlement to withdraw support.

Payments to owners of former copyhold land

The property is not in an area where a relevant notice has been published under the Coal Industry Act 1975/Coal Industry Act 1994.

Section 4 – Further information

The following potential risks have been identified and as part of your risk assessment should be investigated further.

Development advice

The site is within an area of historical coal mining activity. Should you require advice and/or support on understanding the mining legacy, its risks to your development or what next steps you need to take, please contact us.

For further information on specific site or ground investigations in relation to any issues raised in Section 4, please call us on 0345 762 6848 or email us at groundstability@coal.gov.uk.

Section 5 – Data definitions

The datasets used in this report have limitations and assumptions within their results. For more guidance on the data and the results specific to the enquiry boundary, please **call us on 0345 762 6848** or **email us at groundstability@coal.gov.uk**.

Past underground coal mining

Details of all recorded underground mining relative to the enquiry boundary. Only past underground workings where the enquiry boundary is within 0.7 times the depth of the workings (zone of likely physical influence) allowing for seam inclination, will be included.

Probable unrecorded shallow workings

Areas where the Coal Authority believes there to be unrecorded coal workings that exist at or close to the surface (less than 30 metres deep).

Spine roadways at shallow depth

Connecting roadways either, working to working, or, surface to working, both in-seam and cross measures that exist at or close to the surface (less than 30 metres deep), either within or within 10 metres of the enquiry boundary.

Mine entries

Details of any shaft or adit either within, or within 100 metres of the enquiry boundary including approximate location, brief treatment details where known, the mineral worked from the mine entry and conveyance details where the mine entry has previously been sold by the Authority or its predecessors British Coal or the National Coal Board.

Abandoned mine plan catalogue numbers

Plan numbers extracted from the abandoned mines catalogue containing details of coal and other mineral abandonment plans deposited via the Mines Inspectorate in accordance with the Coal Mines Regulation Act and Metalliferous Mines Regulation Act 1872. A maximum of 9 plan extents that intersect with the enquiry boundary will be included. This does not infer that the workings and/or mine entries shown on the abandonment plan will be relevant to the site/property boundary.

Outcrops

Details of seam outcrops will be included where the enquiry boundary intersects with a conjectured or actual seam outcrop location (derived by either the British Geological Survey or the Coal Authority) or intersects with a defined 50 metres buffer on the coal (dip) side of the outcrop. An indication of whether the Coal Authority believes the seam to be of sufficient thickness and/or quality to have been worked will also be included.

Geological faults, fissures and breaklines

Geological disturbances or fractures in the bedrock. Surface fault lines (British Geological Survey derived data) and fissures and breaklines (Coal Authority derived data) intersecting with the enquiry boundary will be included. In some circumstances faults, fissures or breaklines have been known to contribute to surface subsidence damage as a consequence of underground coal mining.

Opencast mines

Opencast coal sites from which coal has been removed in the past by opencast (surface) methods and where the enquiry boundary is within 500 metres of either the licence area, site boundary, excavation area (high wall) or coaling area.

Coal Authority managed tips

Locations of disused colliery tip sites owned and managed by the Coal Authority, located within 500 metres of the enquiry boundary.

Site investigations

Details of site investigations within 50 metres of the enquiry boundary where the Coal Authority has received information relating to coal mining risk investigation and/or remediation by third parties.

Remediated sites

Sites where the Coal Authority has undertaken remedial works either within or within 50 metres of the enquiry boundary following report of a hazard relating to coal mining under the Coal Authority's Emergency Surface Hazard Call Out procedures.

Coal mining subsidence

Details of alleged coal mining subsidence claims made since 31 October 1994 either within or within 50 metres of the enquiry boundary. Where the claim relates to the enquiry boundary confirmation of whether the claim was accepted, rejected or whether liability is still being determined will be given. Where the claim has been discharged, whether this was by repair, payment of compensation or a combination of both, the value of the claim, where known, will also be given.

Details of any current 'Stop Notice' deferring remedial works or repairs affecting the property/site, and if so the date of the notice.

Details of any request made to execute preventative works before coal is worked under section 33 of the Coal Mining Subsidence Act 1991. If yes, whether any person withheld consent or failed to comply with any request to execute preventative works.

Mine gas

Reports of alleged mine gas emissions received by the Coal Authority, either within or within 500 metres of the enquiry boundary that subsequently required investigation and action by the Coal Authority to mitigate the effects of the mine gas emission.

Mine water treatment schemes

Locations where the Coal Authority has constructed or operates assets that remove pollutants from mine water prior to the treated mine water being discharged into the receiving water body.

These schemes are part of the UK's strategy to meet the requirements of the Water Framework Directive. Schemes fall into 2 basic categories: Remedial – mitigating the impact of existing pollution or Preventative – preventing a future pollution incident.

Mine water treatment schemes generally consist of one or more primary settlement lagoons and one or more reed beds for secondary treatment. A small number are more specialised process treatment plants.

Future underground mining

Details of all planned underground mining relative to the enquiry boundary. Only those future workings where the enquiry boundary is within 0.7 times the depth of the workings (zone of likely physical influence) allowing for seam inclination will be included.

Coal mining licensing

Details of all licenses issued by the Coal Authority either within or within 200 metres of the enquiry boundary in relation to the under taking of surface coal mining, underground coal mining or underground coal gasification.

Court orders

Orders in respect of the working of coal under the Mines (Working Facilities and Support) Acts of 1923 and 1966 or any statutory modification or amendment thereof.

Section 46 notices

Notice of proposals relating to underground coal mining operations that have been given under section 46 of the Coal Mining Subsidence Act 1991.

Withdrawal of support notices

Published notices of entitlement to withdraw support and the date of the notice. Details of any revocation notice withdrawing the entitlement to withdraw support given under Section 41 of the Coal Industry Act 1994.

Payment to owners of former copyhold land

Relevant notices which may affect the property and any subsequent notice of retained interests in coal and coal mines, acceptance or rejection notices and whether any compensation has been paid to a claimant.

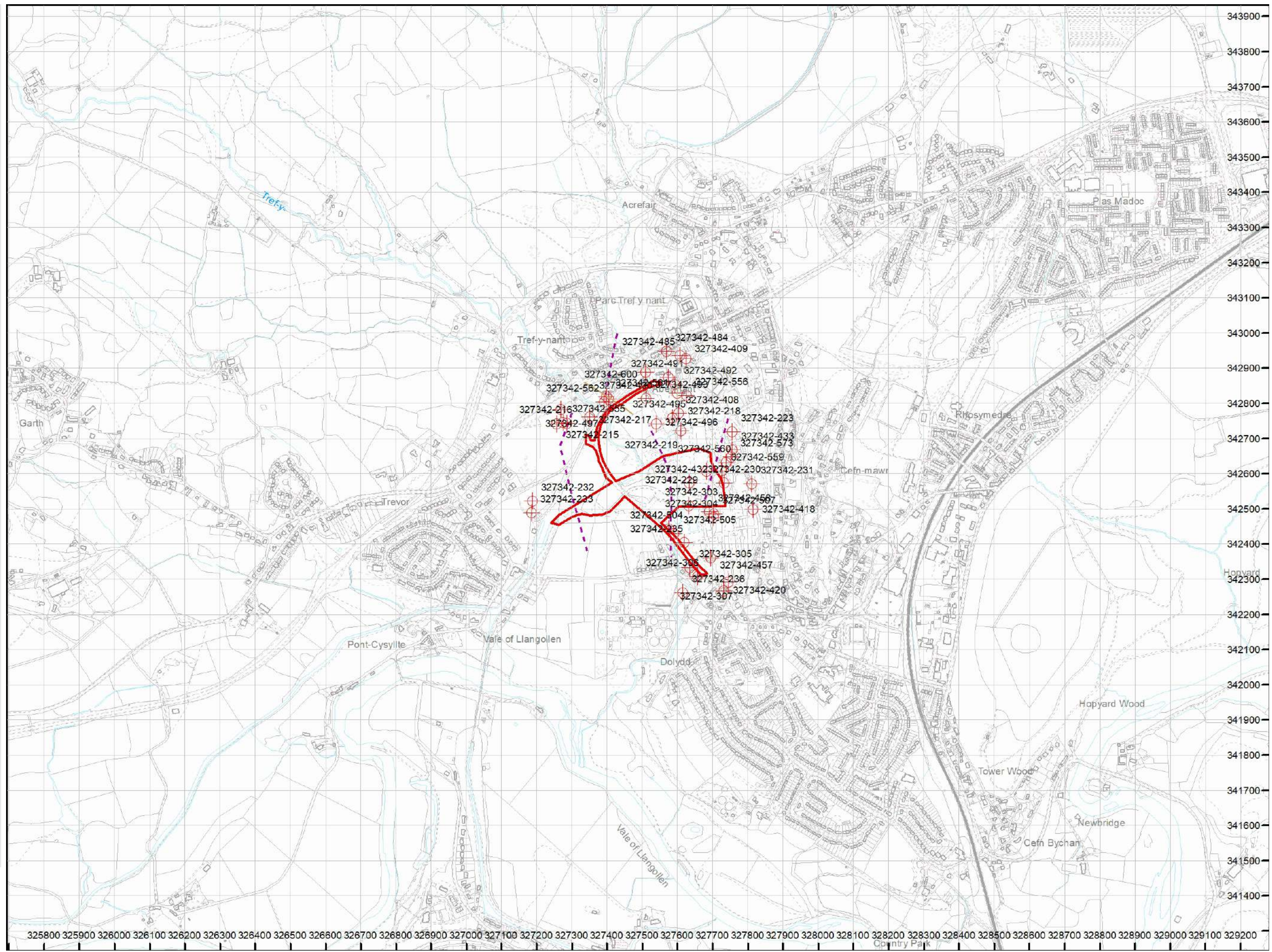
The map highlights any specific surface or subsurface features within or near to the boundary of the site.

Key

- Approximate position of the enquiry boundary shown 
- Disused mine shaft 
- Outcrop (Conjectured) 
- Geological faults 

How to contact us

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Appendix G

Mine Abandonment Plans