

Address: 282917.86237392283, 211100.677756288,
Date: 14 Oct 2019
Reference: GS-6396070
Client: Ove Arup & Partners International Ltd

NW N NE



SW S SE

Aerial Photograph Capture date: 26-May-2017
Grid Reference: 283073,211130
Site Size: 483.2560ha

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Overview of Findings

The Groundsure Geo Insight provides high quality geo-environmental information that allows geo-environmental professionals and their clients to make informed decisions and be forewarned of potential ground instability problems that may affect the ground investigation, foundation design and possibly remediation options that could lead to possible additional costs.

The report is based on the BGS 1:50,000 and 1:10,000 Digital Geological Map of Great Britain, BGS Geosure data; BRITPITS database; Non-coal mining data and Borehole Records, Coal Authority data including brine extraction areas, PBA non-coal mining and natural cavities database, Johnson Poole and Bloomer mining data and Groundsure's unique database including historical surface ground and underground workings.

For further details on each dataset, please refer to each individual section in the report as listed. Where the database has been searched a numerical result will be recorded. Where the database has not been searched '-' will be recorded.

Section 1: Geology 1:10,000 Scale

1.1 Artificial Ground	1.1 Is there any Artificial Ground/ Made Ground present beneath the study site at 1:10,000 scale?	Yes
1.2 Superficial Geology and Landslips	1.2.1 Is there any Superficial Ground/Drift Geology present beneath the study site at 1:10,000 scale?*	Yes
	1.2.2 Are there any records of landslip within 500m of the study site boundary at 1:10,000 scale?	No
1.3 Bedrock, Solid Geology and linear features	1.3.1 For records of Bedrock and Solid Geology beneath the study site* see the detailed findings section.	
	1.3.2 Are there any records of linear features within 500m of the study site boundary at 1:10,000 scale?	Yes

Section 2: Geology 1:50,000 Scale

2.1 Artificial Ground	2.1.1 Is there any Artificial Ground/ Made Ground present beneath the study site?	Yes
	2.1.2 Are there any records relating to permeability of artificial ground within the study site*boundary?	Yes
2.2 Superficial Geology and Landslips	2.2.1 Is there any Superficial Ground/Drift Geology present beneath the study site?*	Yes
	2.2.2 Are there any records of permeability of superficial ground within 500m of the study site?	Yes
	2.2.3 Are there any records of landslip within 500m of the study site boundary?	No
	2.2.4 Are there any records relating to permeability of landslips within the study site* boundary?	No

Section 2: Geology 1:50,000 Scale

2.3 Bedrock, Solid Geology and linear features

2.3.1 For records of Bedrock and Solid Geology beneath the study site* see the detailed findings section.

2.3.2 Are there any records relating to permeability of bedrock ground within the study site boundary?

Yes

2.3.3 Are there any records of linear features within 500m of the study site boundary?

Yes

Section 3: Radon

3. Radon

3.1 Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level?

The property is in a Radon Affected Area, as between 1 and 3% of properties are above the Action Level.

3.2 Radon Protection

No radon protective measures are necessary.

Section 4: Ground Workings

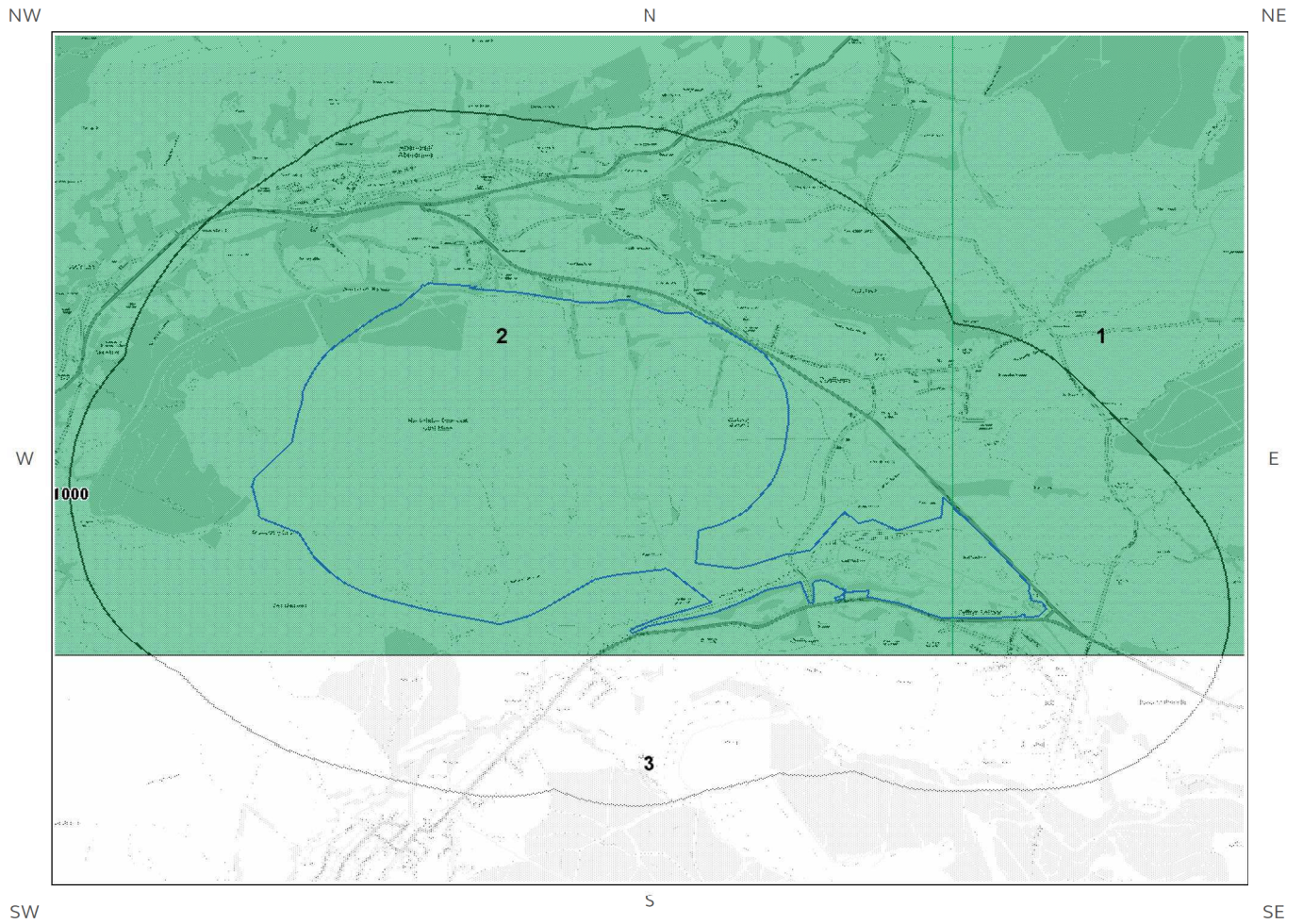
	On-site	0-50m	51-250	251-500	501-1000
4.1 Historical Surface Ground Working Features from Small Scale Mapping	800	160	346	Not Searched	Not Searched
4.2 Historical Underground Workings from Small Scale Mapping	76	17	38	33	101
4.3 Current Ground Workings	50	8	32	22	37

Section 5: Mining, Extraction & Natural Cavities

	On-site	0-50m	51-250	251-500	501-1000
5.1 Historical Mining	77	17	39	38	107
5.2 Coal Mining	1	0	0	0	0
5.3 Johnson Poole and Bloomer Mining Area	0	0	0	0	0
5.4 Non-Coal Mining*	2	0	1	0	1
5.5 Non-Coal Mining Cavities	0	0	0	0	0
5.5 Natural Cavities	0	0	0	0	0

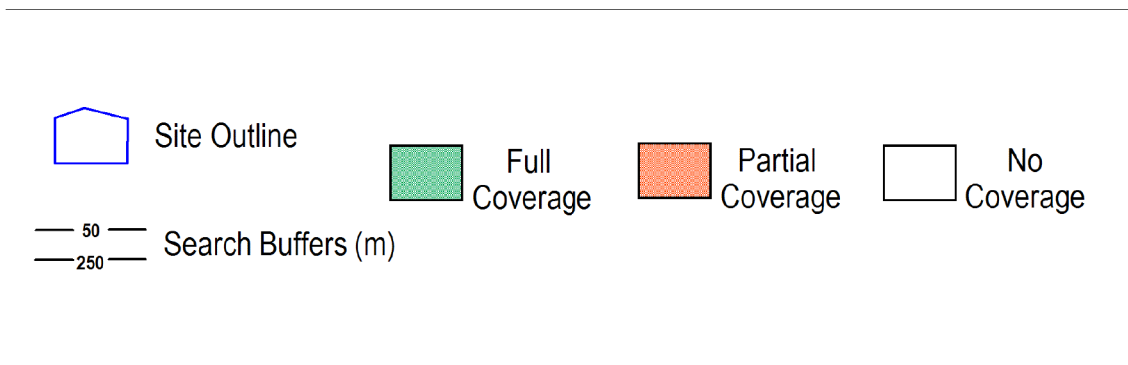
Section 5: Mining, Extraction & Natural Cavities	On-site	0-50m	51-250	251-500	501-1000
5.6 Brine Extraction	0	0	0	0	0
5.7 Gypsum Extraction	0	0	0	0	0
5.8 Cornwall and Devon Metalliferous Mining	0	0	0	0	0
5.9 Clay Mining	0	0	0	0	0
Section 6: Natural Ground Subsidence	On-site				
6.1 Shrink-Swell Clay	Very Low				
6.2 Landslides	Moderate				
6.3 Ground Dissolution of Soluble Rocks	Negligible				
6.4 Compressible Deposits	High				
6.5 Collapsible Deposits	Very Low				
6.5 Running Sand	Low				
Section 7: Borehole Records	On-site	0-50m	51-250		
7 BGS Recorded Boreholes	18	6	13		
Section 8: Estimated Background Soil Chemistry	On-site	0-50m	51-250		
8 Records of Background Soil Chemistry	128	14	0		
Section 9: Railways and Tunnels	On-site	0-50m	51-250	250-500	
9.1 Tunnels	0	0	0	Not Searched	
9.2 Historical Railway and Tunnel Features	77	6	11	Not Searched	
9.3 Historical Railways	12	0	4	Not Searched	
9.4 Active Railways	18	0	2	Not Searched	
9.5 Railway Projects	0	0	0	0	

1:10,000 Scale Availability



1_10,000 Availability Legend

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Availability of 1:10,000 Scale Geology Mapping

The following information represents the availability of the key components of the 1:10,000 scale geological data.

ID	Distance	Artificial Coverage	Superficial Coverage	Bedrock Coverage	Mass Movement Coverage
1	0.0	Some deposits are mapped	Full	Full	Some deposits are mapped
2	0.0	Some deposits are mapped	Full	Full	Some deposits are mapped
3	131.0	No deposits are mapped	No coverage	No coverage	No coverage
N4	1158.0	Some deposits are mapped	Full	Full	Some deposits are mapped
N5	1441.0	Some deposits are mapped	Full	Full	Some deposits are mapped

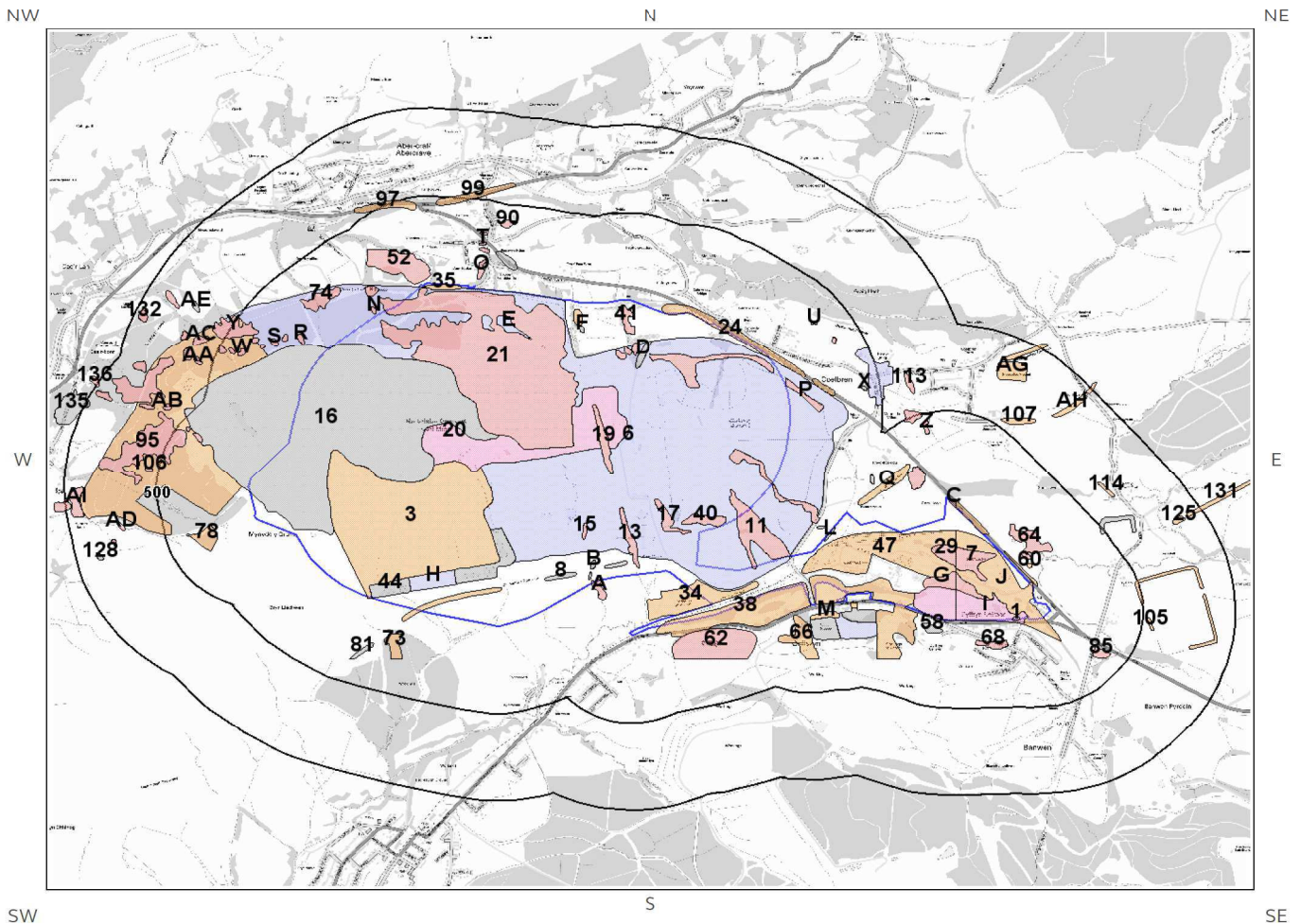
Guidance: The 1:10,000 scale geological interpretation is the most detailed generally available from BGS and is the scale at which most geological surveying is carried out in the field. The database is presented as four types of geology (artificial, mass movement, superficial and bedrock), although not all themes are mapped or available on every map sheet. Therefore a coverage layer showing the availability of the four themes is presented above.

The definitions of coverage are as follows:

Geology	Full Coverage	Partial Coverage	No Coverage
Bedrock	The whole tile has been mapped	Some but not all the tile has been mapped	No coverage
Superficial	The whole tile has been mapped	Some but not all of the tile has been mapped	No coverage
Artificial	Some deposits are mapped on this tile	-	No deposits are mapped
Mass Movement	Some deposits are mapped on this tile	-	No coverage

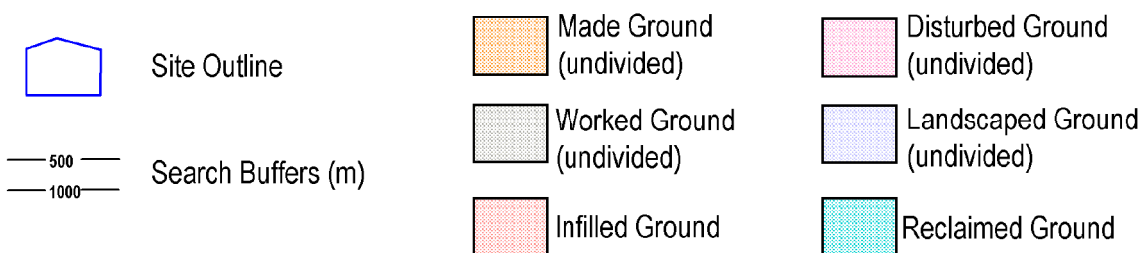
1 Geology (1:10,000 scale).

1.1 Artificial Ground map (1:10,000 scale)



Artificial Ground Legend

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1. Geology 1:10,000 scale

1.1 Artificial Ground

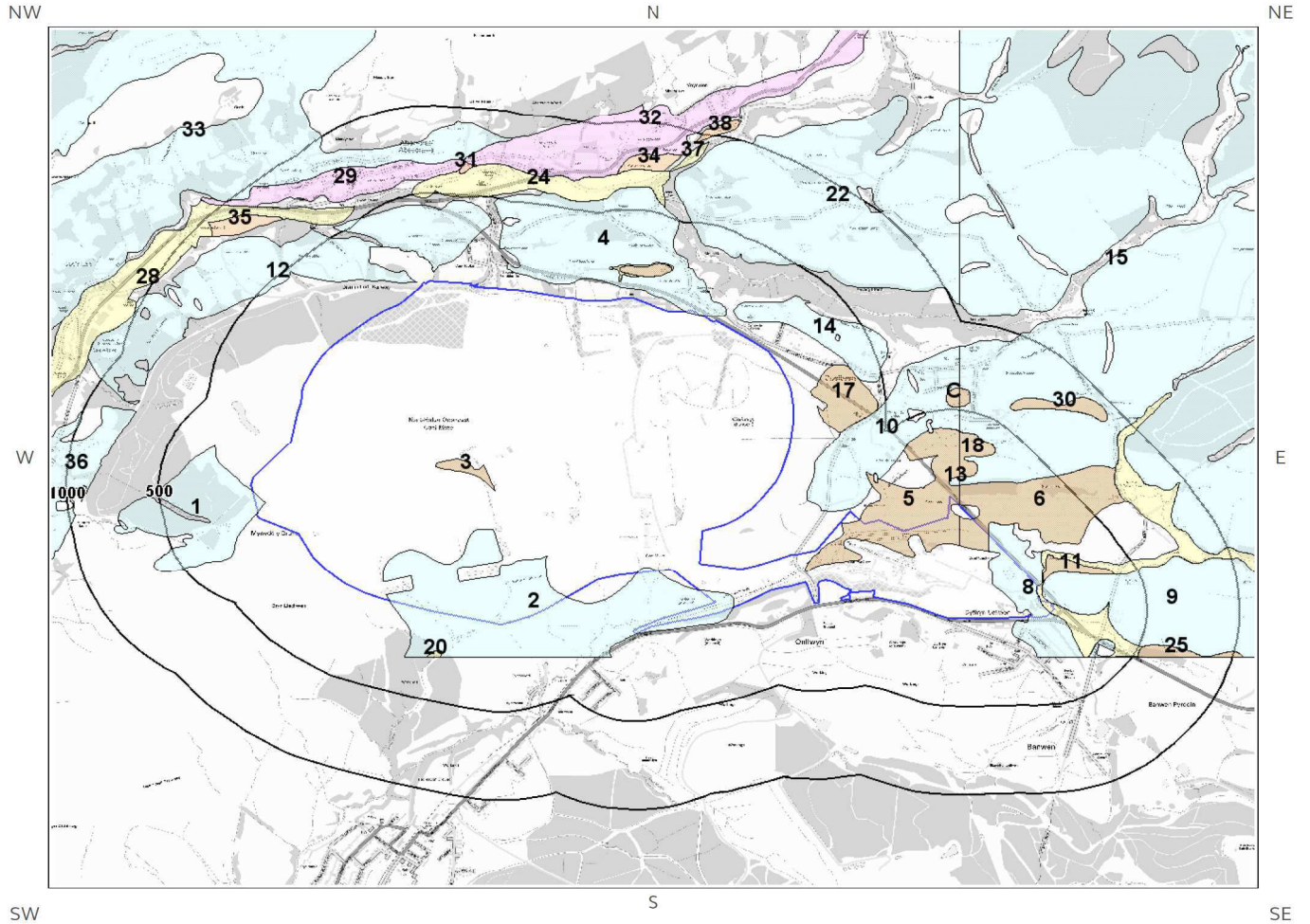
The following geological information represented on the mapping is derived from 1:10,000 scale BGS Geological mapping.

Are there any records of Artificial/ Made Ground within 500m of the study site boundary at 1:10,000 scale? Yes

ID	Distance	Direction	LEX Code	Description	Rock Description
1	0.0	On Site	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
2A	0.0	On Site	WMGR-ARTDP	Infilled Ground	Artificial Deposit
3	0.0	On Site	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
4H	0.0	On Site	LSGR- UNKNOWN	Landscaped Ground (Undivided)	Unknown/unclassified Entry
5G	0.0	On Site	WMGR-ARTDP	Infilled Ground	Artificial Deposit
6	0.0	On Site	LSGR- UNKNOWN	Landscaped Ground (Undivided)	Unknown/unclassified Entry
7	0.0	On Site	WMGR-ARTDP	Infilled Ground	Artificial Deposit
8	0.0	On Site	WGR-VOID	Worked Ground (Undivided)	Void
9A	0.0	On Site	WGR-VOID	Worked Ground (Undivided)	Void
10B	0.0	On Site	WGR-VOID	Worked Ground (Undivided)	Void
11	0.0	On Site	WMGR-ARTDP	Infilled Ground	Artificial Deposit
12B	0.0	On Site	WGR-VOID	Worked Ground (Undivided)	Void
13	0.0	On Site	WMGR-ARTDP	Infilled Ground	Artificial Deposit
14L	0.0	On Site	WGR-VOID	Worked Ground (Undivided)	Void
15	0.0	On Site	WMGR-ARTDP	Infilled Ground	Artificial Deposit
16	0.0	On Site	WGR-VOID	Worked Ground (Undivided)	Void
17	0.0	On Site	WMGR-ARTDP	Infilled Ground	Artificial Deposit
18C	0.0	On Site	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
19	0.0	On Site	WMGR-ARTDP	Infilled Ground	Artificial Deposit
20	0.0	On Site	DDGR- UNKNOWN	Disturbed Ground (Undivided)	Unknown/unclassified Entry
21	0.0	On Site	WMGR-ARTDP	Infilled Ground	Artificial Deposit
22C	0.0	On Site	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
23	0.0	On Site	WMGR-ARTDP	Infilled Ground	Artificial Deposit
24	0.0	On Site	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
25D	0.0	On Site	WGR-VOID	Worked Ground (Undivided)	Void
26D	0.0	On Site	WMGR-ARTDP	Infilled Ground	Artificial Deposit
27D	0.0	On Site	WMGR-ARTDP	Infilled Ground	Artificial Deposit
28D	0.0	On Site	WMGR-ARTDP	Infilled Ground	Artificial Deposit
29	0.0	On Site	WMGR-ARTDP	Infilled Ground	Artificial Deposit
30E	0.0	On Site	LSGR- UNKNOWN	Landscaped Ground (Undivided)	Unknown/unclassified Entry
31F	0.0	On Site	WGR-VOID	Worked Ground (Undivided)	Void
32E	0.0	On Site	LSGR- UNKNOWN	Landscaped Ground (Undivided)	Unknown/unclassified Entry
33F	0.0	On Site	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
34	0.0	On Site	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
35	0.0	On Site	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
36G	0.0	On Site	DDGR- UNKNOWN	Disturbed Ground (Undivided)	Unknown/unclassified Entry
37H	0.0	On Site	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
38	0.0	On Site	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
39I	0.0	On Site	DDGR- UNKNOWN	Disturbed Ground (Undivided)	Unknown/unclassified Entry
40	0.0	On Site	WMGR-ARTDP	Infilled Ground	Artificial Deposit
41	0.0	On Site	WMGR-ARTDP	Infilled Ground	Artificial Deposit
42	0.0	On Site	WMGR-ARTDP	Infilled Ground	Artificial Deposit
43J	0.0	On Site	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
44	0.0	On Site	WGR-VOID	Worked Ground (Undivided)	Void


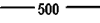

45K	0.0	On Site	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
46	0.0	On Site	WGR VOID	Worked Ground (Undivided)	Void
47	0.0	On Site	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
48I	0.0	On Site	WMGR-ARTDP	Infilled Ground	Artificial Deposit
49P	2.0	E	WMGR-ARTDP	Infilled Ground	Artificial Deposit
50N	10.0	NW	WMGR-ARTDP	Infilled Ground	Artificial Deposit
51J	16.0	NE	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
52	19.0	N	WMGR-ARTDP	Infilled Ground	Artificial Deposit
53K	24.0	SE	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
54V	36.0	W	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
55L	38.0	NW	WGR-VOID	Worked Ground (Undivided)	Void
56O	45.0	N	WMGR-ARTDP	Infilled Ground	Artificial Deposit
57K	48.0	SE	WGR-VOID	Worked Ground (Undivided)	Void
58	48.0	S	WGR-VOID	Worked Ground (Undivided)	Void
59M	54.0	S	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
60	55.0	NE	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
61K	60.0	S	LSGR- UNKNOWN	Landscaped Ground (Undivided)	Unknown/unclassified Entry
62	65.0	S	WMGR-ARTDP	Infilled Ground	Artificial Deposit
63Q	74.0	NE	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
64	75.0	NE	WMGR-ARTDP	Infilled Ground	Artificial Deposit
65M	81.0	S	WGR-VOID	Worked Ground (Undivided)	Void
66	91.0	SW	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
67N	105.0	NW	WMGR-ARTDP	Infilled Ground	Artificial Deposit
68	112.0	S	WMGR-ARTDP	Infilled Ground	Artificial Deposit
69R	121.0	NW	WMGR-ARTDP	Infilled Ground	Artificial Deposit
70O	125.0	N	WGR-VOID	Worked Ground (Undivided)	Void
71P	149.0	E	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
72Q	151.0	NW	WMGR-ARTDP	Infilled Ground	Artificial Deposit
73	154.0	S	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
74	199.0	NW	WMGR-ARTDP	Infilled Ground	Artificial Deposit
75O	202.0	N	WMGR-ARTDP	Infilled Ground	Artificial Deposit
76R	206.0	NW	WMGR-ARTDP	Infilled Ground	Artificial Deposit
77Q	212.0	N	WGR-VOID	Worked Ground (Undivided)	Void
78	229.0	SW	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
79S	231.0	NW	WMGR-ARTDP	Infilled Ground	Artificial Deposit
80T	239.0	N	WMGR-ARTDP	Infilled Ground	Artificial Deposit
81	240.0	S	WGR-VOID	Worked Ground (Undivided)	Void
82S	286.0	NW	WMGR-ARTDP	Infilled Ground	Artificial Deposit
83T	296.0	N	WMGR-ARTDP	Infilled Ground	Artificial Deposit
84U	299.0	NE	WMGR-ARTDP	Infilled Ground	Artificial Deposit
85	313.0	SE	WMGR-ARTDP	Infilled Ground	Artificial Deposit
86S	332.0	NW	WMGR-ARTDP	Infilled Ground	Artificial Deposit
87U	338.0	NE	WMGR-ARTDP	Infilled Ground	Artificial Deposit
88V	345.0	NW	WMGR-ARTDP	Infilled Ground	Artificial Deposit
89W	359.0	NW	WMGR-ARTDP	Infilled Ground	Artificial Deposit
90	361.0	N	WMGR-ARTDP	Infilled Ground	Artificial Deposit
91Y	362.0	NW	WMGR-ARTDP	Infilled Ground	Artificial Deposit
92Z	382.0	N	WMGR-ARTDP	Infilled Ground	Artificial Deposit
93X	398.0	E	WGR-VOID	Worked Ground (Undivided)	Void
94W	410.0	NW	WMGR-ARTDP	Infilled Ground	Artificial Deposit
95	414.0	NW	WMGR-ARTDP	Infilled Ground	Artificial Deposit
96X	419.0	E	LSGR- UNKNOWN	Landscaped Ground (Undivided)	Unknown/unclassified Entry
97	429.0	N	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
98V	437.0	NW	WMGR-ARTDP	Infilled Ground	Artificial Deposit
99	451.0	N	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
100Y	454.0	NW	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
101W	455.0	NW	WMGR-ARTDP	Infilled Ground	Artificial Deposit
102Z	467.0	NW	WMGR-ARTDP	Infilled Ground	Artificial Deposit
103	481.0	NE	WGR-VOID	Worked Ground (Undivided)	Void
104	482.0	E	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit

1.2 Superficial Deposits and Landslips map (1:10,000 scale)



Artificial Ground Legend

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-  Site Outline
-  500
-  1000 Search Buffers (m)

1.2 Superficial Deposits and Landslips

The following geological information represented on the mapping is derived from 1:10,000 scale BGS Geological mapping

1.2.1 Superficial Deposits/ Drift Geology

Are there any records of Superficial Deposits/ Drift Geology within 500m of the study site boundary at 1:10,000 scale? Yes

ID	Distance (m)	Direction	LEX Code	Description	Rock Description
1	0.0	On Site	TILLD-DMTN	Till, Devensian - Diamicton	Diamicton
2	0.0	On Site	TILLD-DMTN	Till, Devensian - Diamicton	Diamicton
3	0.0	On Site	PEAT-P	Peat - Peat	Peat
4	0.0	On Site	TILLD-DMTN	Till, Devensian - Diamicton	Diamicton
5	0.0	On Site	PEAT-P	Peat - Peat	Peat
6	0.0	On Site	PEAT-P	Peat - Peat	Peat
7	0.0	On Site	ALV-XCZSV	Alluvium - Clay, Silt, Sand And Gravel	Clay, Silt, Sand And Gravel
8	0.0	On Site	TILLD-DMTN	Till, Devensian - Diamicton	Diamicton
9	2.0	NE	TILLD-DMTN	Till, Devensian - Diamicton	Diamicton
10	14.0	N	TILLD-DMTN	Till, Devensian - Diamicton	Diamicton
11	34.0	NE	PEAT-P	Peat - Peat	Peat
12	37.0	W	TILLD-DMTN	Till, Devensian - Diamicton	Diamicton
13	64.0	N	TILLD-DMTN	Till, Devensian - Diamicton	Diamicton
14	66.0	NE	TILLD-DMTN	Till, Devensian - Diamicton	Diamicton
15	82.0	NE	TILLD-DMTN	Till, Devensian - Diamicton	Diamicton
16A	96.0	N	ALV-XCZSV	Alluvium - Clay, Silt, Sand And Gravel	Clay, Silt, Sand And Gravel
17	105.0	E	PEAT-P	Peat - Peat	Peat
18	122.0	NE	PEAT-P	Peat - Peat	Peat
19A	129.0	N	PEAT-P	Peat - Peat	Peat
20	211.0	S	ALV-XCZSV	Alluvium - Clay, Silt, Sand And Gravel	Clay, Silt, Sand And Gravel
21B	298.0	SE	TILLD-DMTN	Till, Devensian - Diamicton	Diamicton
22	368.0	NE	TILLD-DMTN	Till, Devensian - Diamicton	Diamicton
23B	424.0	SE	TILLD-DMTN	Till, Devensian - Diamicton	Diamicton
24	475.0	N	ALV-XCZSV	Alluvium - Clay, Silt, Sand And Gravel	Clay, Silt, Sand And Gravel

1.2.2 Landslip

Are there any records of Landslip within 500m of the study site boundary at 1:10,000 scale?

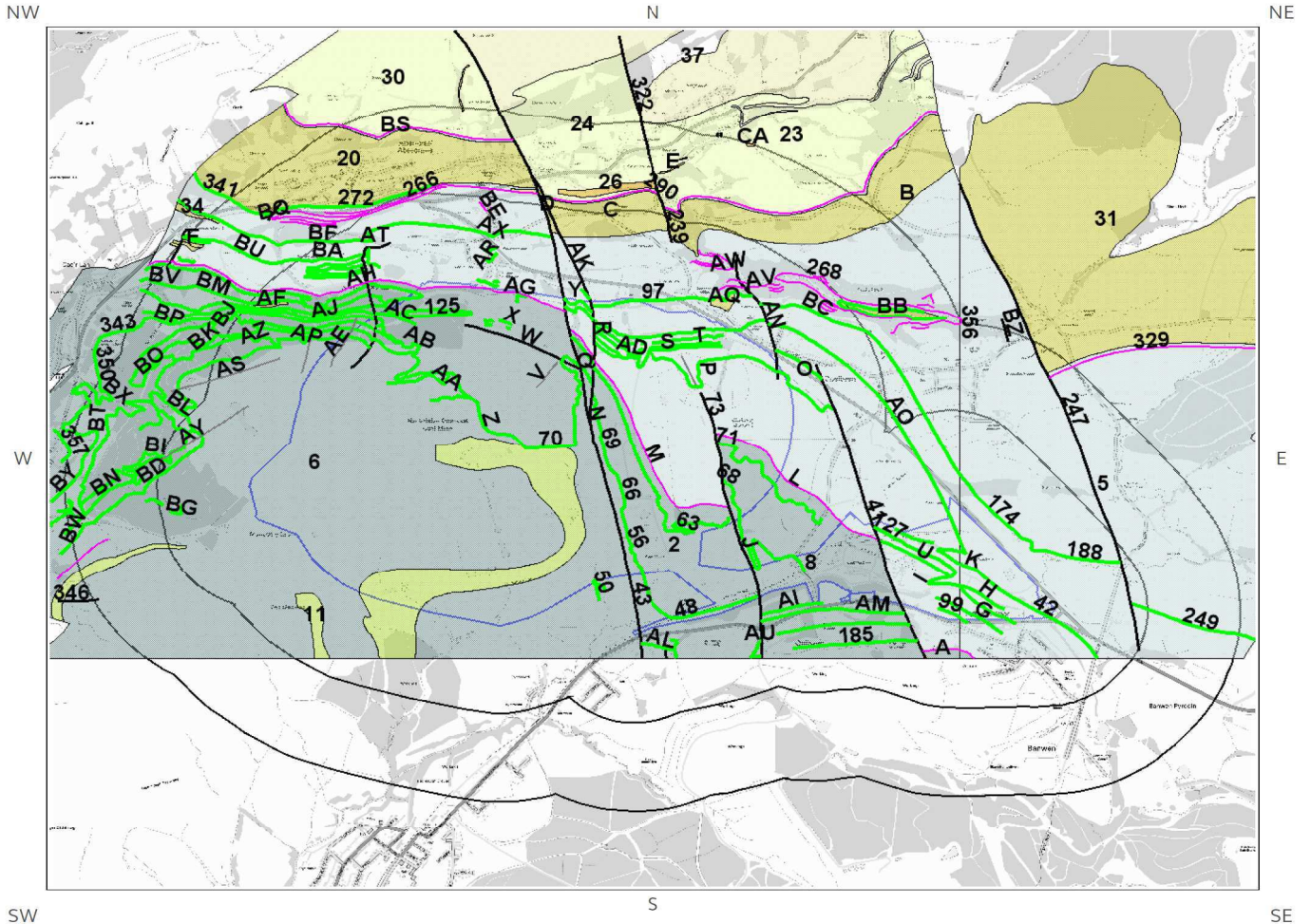
No

Database searched and no data found.

The geology map for the site and surrounding area are extracted from the BGS Digital Geological Map of Great Britain at 1:10,000 scale

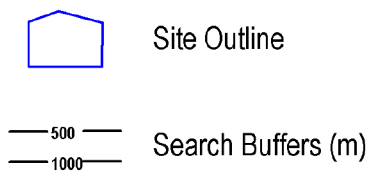
This Geology shows the main components as discrete layers, these are: Artificial / Made Ground, Superficial / Drift Geology and Landslips. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nationwide coverage.

1.3 Bedrock and linear features map (1:10,000 scale)



Bedrock and linear features Legend

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1.3 Bedrock and linear features

The following geological information represented on the mapping is derived from 1:10,000 scale BGS Geological mapping.

1.3.1 Bedrock/ Solid Geology

Records of Bedrock/Solid Geology within 500m of the study site boundary at 1:10,000 scale.

ID	Distance (m)	Direction	LEX Code	Description	Rock Age
1Y	0.0	On Site	SWLCM-MDSS	South Wales Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age
2	0.0	On Site	SWMCM-MDSS	South Wales Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsoviaian Sub-age - Duckmantian Sub-age
3AT	0.0	On Site	SWLCM-MDSS	South Wales Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age
4O	0.0	On Site	SWLCM-MDSS	South Wales Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age
5	0.0	On Site	SWLCM-MDSS	South Wales Lower Coal Measures Formation - Mudstone, Siltstone And Sandstone	Langsettian Sub-age
6	0.0	On Site	SWMCM-MDSS	South Wales Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsoviaian Sub-age - Duckmantian Sub-age
7	0.0	On Site	SWMCM-SDST	South Wales Middle Coal Measures Formation - Sandstone	Bolsoviaian Sub-age - Duckmantian Sub-age
8	0.0	On Site	SWMCM-MDSS	South Wales Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsoviaian Sub-age - Duckmantian Sub-age
9Q	0.0	On Site	SWMCM-MDSS	South Wales Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsoviaian Sub-age - Duckmantian Sub-age
10AQ	81.0	NE	SWLCM-SDST	South Wales Lower Coal Measures Formation - Sandstone	Langsettian Sub-age
11	142.0	SW	SWMCM-SDST	South Wales Middle Coal Measures Formation - Sandstone	Bolsoviaian Sub-age - Duckmantian Sub-age
12A	166.0	S	SWMCM-MDSS	South Wales Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsoviaian Sub-age - Duckmantian Sub-age
13A	169.0	S	SWMCM-MDSS	South Wales Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsoviaian Sub-age - Duckmantian Sub-age
14B	310.0	N	SWLCM-SDST	South Wales Lower Coal Measures Formation - Sandstone	Langsettian Sub-age
15C	341.0	N	SWLCM-SDST	South Wales Lower Coal Measures Formation - Sandstone	Langsettian Sub-age
16AF	341.0	NW	SWLCM-SDST	South Wales Lower Coal Measures Formation - Sandstone	Langsettian Sub-age
17D	355.0	N	SWLCM-SDST	South Wales Lower Coal Measures Formation - Sandstone	Langsettian Sub-age
18BR	411.0	SW	SWMCM-SDST	South Wales Middle Coal Measures Formation - Sandstone	Bolsoviaian Sub-age - Duckmantian Sub-age
19BB	474.0	NE	SWLCM-SDST	South Wales Lower Coal Measures Formation - Sandstone	Langsettian Sub-age

1.3.2 Linear features

Are there any records of linear features within 500m of the study site boundary at 1:10,000 scale? Yes

ID	Distance (m)	Direction	Category Description	Feature Description
40J	0.0	On Site	FAULT	Normal fault, observed
41	0.0	On Site	FAULT	Normal fault, inferred
42	0.0	On Site	ROCK	Coal seam, inferred ()
43	0.0	On Site	FAULT	Normal fault, observed
44G	0.0	On Site	ROCK	Coal seam, inferred ()
45G	0.0	On Site	ROCK	Coal seam, inferred ()
46G	0.0	On Site	ROCK	Coal seam, inferred ()
47G	0.0	On Site	ROCK	Coal seam, inferred ()
48	0.0	On Site	ROCK	Coal seam, inferred ()
49H	0.0	On Site	ROCK	Coal seam, inferred ()
50	0.0	On Site	ROCK	Coal seam, inferred ()
51H	0.0	On Site	ROCK	Coal seam, inferred ()
52I	0.0	On Site	ROCK	Coal seam, inferred ()
53I	0.0	On Site	ROCK	Coal seam, inferred ()
54J	0.0	On Site	ROCK	Coal seam, observed ()
55K	0.0	On Site	ROCK	Coal seam, inferred ()
56	0.0	On Site	ROCK	Coal seam, observed ()
57K	0.0	On Site	ROCK	Coal seam, inferred ()
58K	0.0	On Site	ROCK	Coal seam, inferred ()
59K	0.0	On Site	ROCK	Coal seam, inferred ()
60L	0.0	On Site	FOSSIL_HORIZON	Fossil horizon, marine band ()
61AO	0.0	On Site	ROCK	Coal seam, inferred ()
62N	0.0	On Site	FAULT	Normal fault, observed
63	0.0	On Site	ROCK	Coal seam, observed ()
64L	0.0	On Site	ROCK	Coal seam, observed ()
65M	0.0	On Site	FOSSIL_HORIZON	Fossil horizon, marine band ()
66	0.0	On Site	ROCK	Coal seam, inferred ()
67M	0.0	On Site	ROCK	Coal seam, inferred ()
68	0.0	On Site	ROCK	Coal seam, inferred ()
69	0.0	On Site	ROCK	Coal seam, observed ()
70	0.0	On Site	ROCK	Coal seam, observed ()
71	0.0	On Site	ROCK	Coal seam, inferred ()
72Z	0.0	On Site	ROCK	Coal seam, observed ()
73	0.0	On Site	FAULT	Normal fault, inferred
74N	0.0	On Site	FAULT	Normal fault, inferred
75O	0.0	On Site	ROCK	Coal seam, observed ()
76N	0.0	On Site	ROCK	Coal seam, inferred ()
77V	0.0	On Site	FOLD_AXIS	Axial plane trace of major syncline
78P	0.0	On Site	ROCK	Coal seam, observed ()
79P	0.0	On Site	FOLD_AXIS	Axial plane trace of major anticline
80Q	0.0	On Site	ROCK	Coal seam, inferred ()
81AN	0.0	On Site	FAULT	Normal fault, observed
82R	0.0	On Site	FAULT	Normal fault, observed
83W	0.0	On Site	FAULT	Normal fault, inferred
84R	0.0	On Site	FOSSIL_HORIZON	Fossil horizon, marine band ()
85R	0.0	On Site	ROCK	Coal seam, inferred ()
86R	0.0	On Site	ROCK	Coal seam, inferred ()
87S	0.0	On Site	ROCK	Coal seam, observed ()

ID	Distance (m)	Direction	Category Description	Feature Description
88S	0.0	On Site	ROCK	Coal seam, observed ()
89P	0.0	On Site	ROCK	Coal seam, inferred ()
90T	0.0	On Site	ROCK	Coal seam, inferred ()
91S	0.0	On Site	ROCK	Coal seam, observed ()
92R	0.0	On Site	ROCK	Coal seam, inferred ()
93S	0.0	On Site	ROCK	Coal seam, observed ()
94R	0.0	On Site	ROCK	Coal seam, inferred ()
95T	0.0	On Site	ROCK	Coal seam, inferred ()
96R	0.0	On Site	ROCK	Coal seam, inferred ()
97	0.0	On Site	ROCK	Coal seam, observed ()
98AI	0.0	On Site	ROCK	Coal seam, inferred ()
99	0.0	On Site	ROCK	Coal seam, inferred ()
100U	0.0	On Site	ROCK	Coal seam, inferred ()
101I	0.0	On Site	ROCK	Coal seam, inferred ()
102U	0.0	On Site	ROCK	Coal seam, inferred ()
103Q	0.0	On Site	ROCK	Coal seam, observed ()
104X	0.0	On Site	ROCK	Coal seam, observed ()
105V	0.0	On Site	ROCK	Coal seam, observed ()
106W	0.0	On Site	ROCK	Coal seam, inferred ()
107X	0.0	On Site	ROCK	Coal seam, inferred ()
108X	0.0	On Site	ROCK	Coal seam, observed ()
109Y	0.0	On Site	ROCK	Coal seam, inferred ()
110Y	0.0	On Site	ROCK	Coal seam, inferred ()
111R	0.0	On Site	ROCK	Coal seam, inferred ()
112R	0.0	On Site	ROCK	Coal seam, observed ()
113Z	0.0	On Site	ROCK	Coal seam, observed ()
114AA	0.0	On Site	ROCK	Coal seam, observed ()
115AA	0.0	On Site	ROCK	Coal seam, observed ()
116AB	0.0	On Site	ROCK	Coal seam, observed ()
117AA	0.0	On Site	ROCK	Coal seam, inferred ()
118AC	0.0	On Site	ROCK	Coal seam, observed ()
119AB	0.0	On Site	ROCK	Coal seam, observed ()
120AB	0.0	On Site	ROCK	Coal seam, observed ()
121AC	0.0	On Site	ROCK	Coal seam, observed ()
122AC	0.0	On Site	ROCK	Coal seam, observed ()
123AB	0.0	On Site	ROCK	Coal seam, observed ()
124AC	0.0	On Site	ROCK	Coal seam, observed ()
125	0.0	On Site	ROCK	Coal seam, observed ()
126U	0.0	On Site	ROCK	Coal seam, inferred ()
127	0.0	On Site	ROCK	Coal seam, inferred ()
128AB	0.0	On Site	ROCK	Coal seam, observed ()
129Q	0.0	On Site	ROCK	Coal seam, observed ()
130AD	0.0	On Site	ROCK	Coal seam, inferred ()
131AD	0.0	On Site	ROCK	Coal seam, observed ()
132R	0.0	On Site	ROCK	Coal seam, observed ()
133AD	0.0	On Site	ROCK	Coal seam, observed ()
134AD	0.0	On Site	ROCK	Coal seam, observed ()
135S	0.0	On Site	ROCK	Coal seam, observed ()
136R	0.0	On Site	ROCK	Coal seam, observed ()
137S	0.0	On Site	ROCK	Coal seam, observed ()
138AD	0.0	On Site	ROCK	Coal seam, observed ()
139S	0.0	On Site	ROCK	Coal seam, observed ()
140AD	0.0	On Site	ROCK	Coal seam, observed ()

ID	Distance (m)	Direction	Category Description	Feature Description
141S	0.0	On Site	ROCK	Coal seam, observed ()
142AA	0.0	On Site	ROCK	Coal seam, observed ()
143AE	0.0	On Site	FOLD_AXIS	Axial plane trace of major syncline
144AE	0.0	On Site	ROCK	Coal seam, observed ()
145AE	0.0	On Site	ROCK	Coal seam, observed ()
146AE	0.0	On Site	FAULT	Normal fault, observed
147AE	0.0	On Site	ROCK	Coal seam, observed ()
148AF	0.0	On Site	ROCK	Coal seam, observed ()
149AH	0.0	On Site	FOSSIL_HORIZON	Fossil horizon, marine band ()
150AG	0.0	On Site	ROCK	Coal seam, observed ()
151AJ	5.0	NW	ROCK	Coal seam, observed ()
152Y	11.0	N	ROCK	Coal seam, inferred ()
153AG	14.0	N	ROCK	Coal seam, inferred ()
154AH	18.0	NW	ROCK	Coal seam, observed ()
155AH	19.0	NW	ROCK	Coal seam, observed ()
156AI	33.0	S	ROCK	Coal seam, observed ()
157O	36.0	NE	ROCK	Coal seam, inferred ()
158AG	39.0	N	ROCK	Coal seam, observed ()
159AE	39.0	NW	FOLD_AXIS	Axial plane trace of major anticline
160AM	44.0	S	ROCK	Coal seam, inferred ()
161AJ	45.0	NW	ROCK	Coal seam, observed ()
162AH	47.0	NW	ROCK	Coal seam, observed ()
163AH	47.0	NW	ROCK	Coal seam, inferred ()
164AJ	53.0	NW	ROCK	Coal seam, observed ()
165AL	58.0	SE	ROCK	Coal seam, observed ()
166AK	68.0	N	FAULT	Normal fault, inferred
167AH	72.0	NW	FAULT	Normal fault, inferred
168AK	73.0	N	FAULT	Normal fault, inferred
169AH	77.0	NW	ROCK	Coal seam, observed ()
170AL	91.0	S	ROCK	Coal seam, inferred ()
171AM	100.0	S	ROCK	Coal seam, inferred ()
172AL	105.0	S	ROCK	Coal seam, observed ()
173AL	106.0	S	FAULT	Normal fault, inferred
174	107.0	NE	ROCK	Coal seam, inferred ()
175AP	121.0	NW	ROCK	Coal seam, observed ()
176AN	128.0	N	ROCK	Coal seam, inferred ()
177AH	136.0	NW	ROCK	Coal seam, observed ()
178AR	144.0	NE	ROCK	Coal seam, observed ()
179AO	144.0	N	ROCK	Coal seam, inferred ()
180AP	159.0	NW	ROCK	Coal seam, observed ()
181AQ	165.0	NE	FOSSIL_HORIZON	Fossil horizon, marine band ()
182A	166.0	S	FOSSIL_HORIZON	Fossil horizon, marine band ()
183AH	166.0	NW	ROCK	Coal seam, observed ()
184A	169.0	S	FOSSIL_HORIZON	Fossil horizon, marine band ()
185	170.0	S	ROCK	Coal seam, inferred ()
186AQ	182.0	NE	ROCK	Coal seam, observed ()
187AS	183.0	NW	FOLD_AXIS	Axial plane trace of major syncline
188	186.0	NE	ROCK	Coal seam, inferred ()
189AJ	199.0	NW	ROCK	Coal seam, observed ()
190AR	200.0	N	ROCK	Coal seam, observed ()
191AS	206.0	NW	ROCK	Coal seam, observed ()
192BC	207.0	NE	ROCK	Coal seam, observed ()
193AP	209.0	NW	ROCK	Coal seam, observed ()

ID	Distance (m)	Direction	Category Description	Feature Description
194AT	221.0	NW	ROCK	Coal seam, observed ()
195AP	223.0	NW	ROCK	Coal seam, observed ()
196AT	228.0	NW	FAULT	Normal fault, observed
197AQ	228.0	N	FOSSIL_HORIZON	Fossil horizon, marine band ()
198AU	229.0	SE	ROCK	Coal seam, inferred ()
199AU	230.0	SE	ROCK	Coal seam, observed ()
200AP	231.0	NW	ROCK	Coal seam, observed ()
201AQ	236.0	NE	FAULT	Normal fault, inferred
202AH	242.0	NW	ROCK	Coal seam, inferred ()
203AH	257.0	NW	ROCK	Coal seam, inferred ()
204AV	257.0	NE	FOSSIL_HORIZON	Fossil horizon, marine band ()
205AY	257.0	W	FOLD_AXIS	Axial plane trace of major anticline
206AV	260.0	NE	FOSSIL_HORIZON	Fossil horizon, marine band ()
207AW	265.0	N	FOSSIL_HORIZON	Fossil horizon, marine band ()
208AH	269.0	NW	ROCK	Coal seam, observed ()
209AW	277.0	N	FOSSIL_HORIZON	Fossil horizon, marine band ()
210AP	280.0	NW	ROCK	Coal seam, observed ()
211AF	280.0	NW	ROCK	Coal seam, observed ()
212AH	282.0	NW	ROCK	Coal seam, inferred ()
213AX	285.0	N	ROCK	Coal seam, observed ()
214AU	287.0	S	ROCK	Coal seam, inferred ()
215AF	288.0	NW	ROCK	Coal seam, observed ()
216AT	291.0	NW	FAULT	Normal fault, inferred
217AH	294.0	NW	ROCK	Coal seam, observed ()
218AV	303.0	NE	FOSSIL_HORIZON	Fossil horizon, marine band ()
219BF	303.0	N	ROCK	Coal seam, inferred ()
220AT	307.0	NW	ROCK	Coal seam, inferred ()
221AF	310.0	NW	ROCK	Coal seam, inferred ()
222AV	313.0	NE	FOSSIL_HORIZON	Fossil horizon, marine band ()
223AT	314.0	NW	ROCK	Coal seam, observed ()
224AH	314.0	NW	ROCK	Coal seam, observed ()
225AX	322.0	N	ROCK	Coal seam, inferred ()
226AF	323.0	NW	ROCK	Coal seam, inferred ()
227AT	323.0	NW	ROCK	Coal seam, observed ()
228AT	328.0	NW	ROCK	Coal seam, inferred ()
229BD	329.0	NW	ROCK	Coal seam, inferred ()
230AY	329.0	NW	ROCK	Coal seam, observed ()
231AT	331.0	NW	ROCK	Coal seam, observed ()
232AZ	332.0	NW	ROCK	Coal seam, observed ()
233AY	345.0	NW	ROCK	Coal seam, observed ()
234AT	346.0	NW	ROCK	Coal seam, observed ()
235BA	350.0	NW	ROCK	Coal seam, observed ()
236AZ	362.0	NW	ROCK	Coal seam, observed ()
237BA	364.0	NW	ROCK	Coal seam, observed ()
238AZ	368.0	NW	ROCK	Coal seam, observed ()
239	371.0	N	FAULT	Normal fault, inferred
240BB	374.0	NE	FOSSIL_HORIZON	Fossil horizon, marine band ()
241BG	379.0	W	ROCK	Coal seam, observed ()
242BC	381.0	NE	FOSSIL_HORIZON	Fossil horizon, marine band ()
243AF	382.0	NW	ROCK	Coal seam, inferred ()
244BC	389.0	NE	FOSSIL_HORIZON	Fossil horizon, marine band ()
245AY	401.0	NW	ROCK	Coal seam, observed ()
246BC	406.0	NE	FOSSIL_HORIZON	Fossil horizon, marine band ()

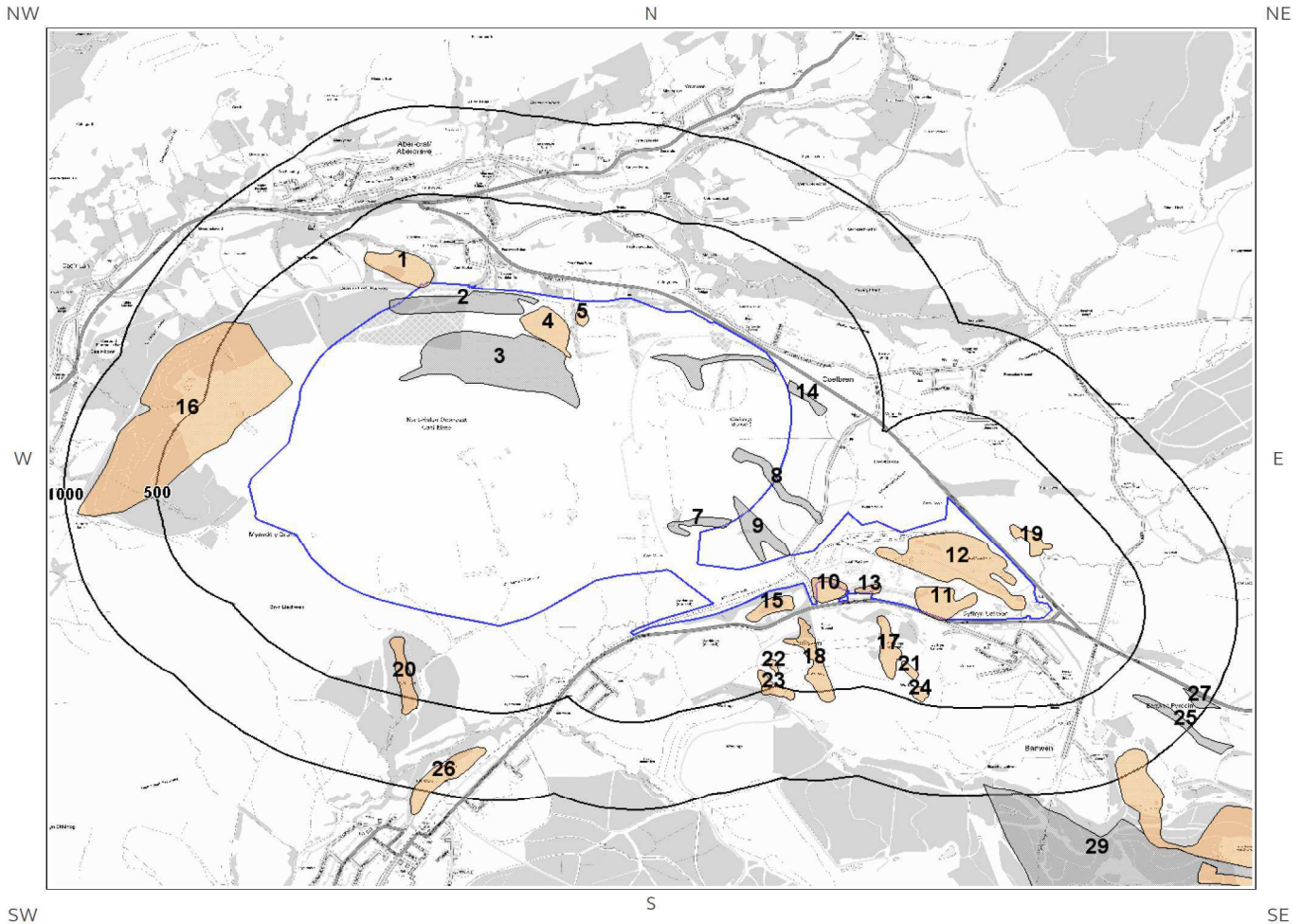
ID	Distance (m)	Direction	Category Description	Feature Description
247	408.0	E	FAULT	Normal fault, inferred
248AY	410.0	NW	ROCK	Coal seam, observed ()
249	411.0	E	ROCK	Coal seam, inferred ()
250AF	411.0	NW	ROCK	Coal seam, inferred ()
251AY	414.0	NW	ROCK	Coal seam, observed ()
252BE	421.0	N	FOSSIL_HORIZON	Fossil horizon, marine band ()
253BC	422.0	NE	FOSSIL_HORIZON	Fossil horizon, marine band ()
254AY	426.0	NW	ROCK	Coal seam, observed ()
255D	426.0	N	FAULT	Normal fault, observed
256BD	448.0	W	ROCK	Coal seam, observed ()
257BE	453.0	N	FOSSIL_HORIZON	Fossil horizon, marine band ()
258AZ	455.0	NW	ROCK	Coal seam, observed ()
259BD	468.0	W	ROCK	Coal seam, observed ()
260BD	468.0	W	ROCK	Coal seam, observed ()
261BF	471.0	N	FOSSIL_HORIZON	Fossil horizon, marine band ()
262BJ	472.0	NW	ROCK	Coal seam, observed ()
263BB	474.0	NE	ROCK	Coal seam, observed ()
264BG	477.0	W	ROCK	Coal seam, observed ()
265BU	483.0	NW	ROCK	Coal seam, inferred ()
266	485.0	N	FOSSIL_HORIZON	Fossil horizon, marine band ()
267BH	491.0	N	FAULT	Normal fault, observed
268	496.0	NE	FOSSIL_HORIZON	Fossil horizon, marine band ()
269BB	498.0	NE	ROCK	Coal seam, inferred ()

The geology map for the site and surrounding area are extracted from the BGS Digital Geological Map of great Britain at 1:10,000 scale.

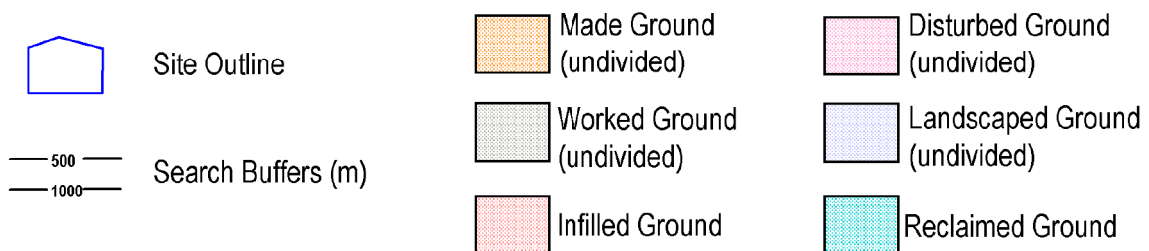
This Geology shows the main components as discrete layers, these are: Bedrock/ Solid Geology and linear features such as faults. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nationwide coverage.

2 Geology 1:50,000 Scale

2.1 Artificial Ground map



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2. Geology 1:50,000 scale

2.1 Artificial Ground

The following geological information represented on the mapping is derived from 1:50,000 scale BGS Geological mapping, Sheet No: 231

2.1.1 Artificial/ Made Ground

Are there any records of Artificial/ Made Ground within 500m of the study site boundary? Yes

ID	Distance (m)	Direction	LEX Code	Description	Rock Description
1	0.0	On Site	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
2	0.0	On Site	WGR-VOID	WORKED GROUND (UNDIVIDED)	VOID
3	0.0	On Site	WGR-VOID	WORKED GROUND (UNDIVIDED)	VOID
4	0.0	On Site	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
5	0.0	On Site	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
6	0.0	On Site	WGR-VOID	WORKED GROUND (UNDIVIDED)	VOID
7	0.0	On Site	WGR-VOID	WORKED GROUND (UNDIVIDED)	VOID
8	0.0	On Site	WGR-VOID	WORKED GROUND (UNDIVIDED)	VOID
9	0.0	On Site	WGR-VOID	WORKED GROUND (UNDIVIDED)	VOID
10	0.0	On Site	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
11	0.0	On Site	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
12	0.0	On Site	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
13	0.0	On Site	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
14	2.0	E	WGR-VOID	WORKED GROUND (UNDIVIDED)	VOID
15	36.0	SE	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
16	58.0	W	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
17	84.0	S	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
18	95.0	SW	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
19	97.0	NE	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
20	175.0	S	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
21	296.0	S	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
22	349.0	SE	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
23	382.0	S	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
24	408.0	S	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT

2.1.2 Permeability of Artificial Ground

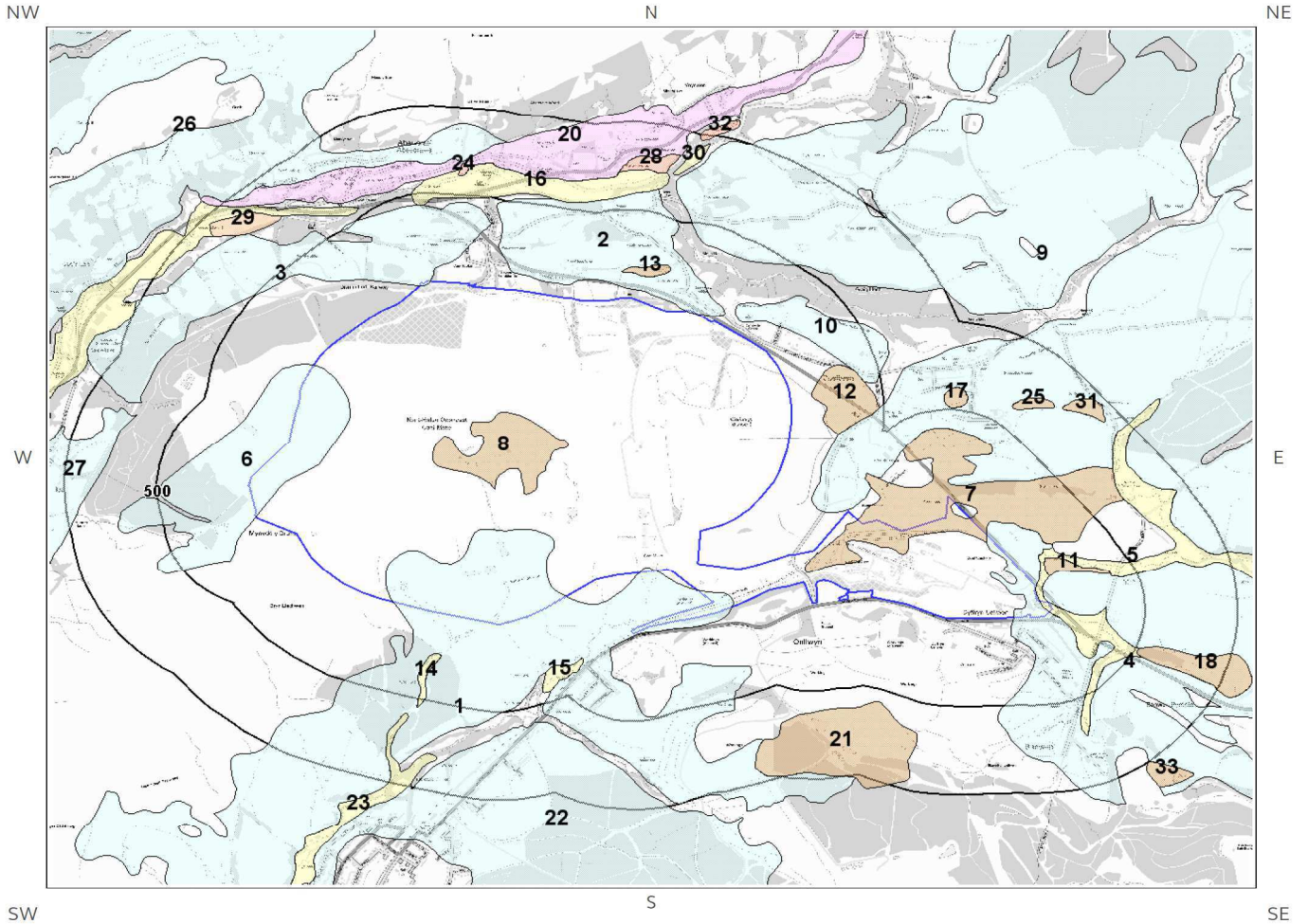
Are there any records relating to permeability of artificial ground within the study site boundary? Yes

Distance (m)	Direction	Flow Type	Maximum Permeability	Minimum Permeability
0.0	On Site	Mixed	Very High	Low
0.0	On Site	Mixed	Very High	Low
0.0	On Site	Mixed	Very High	Low

Distance (m)	Direction	Flow Type	Maximum Permeability	Minimum Permeability
0.0	On Site	Mixed	Very High	Low
0.0	On Site	Mixed	Very High	Low
0.0	On Site	Mixed	Very High	Low
0.0	On Site	Mixed	Very High	Low
0.0	On Site	Mixed	Very High	Low
0.0	On Site	Mixed	Very High	Low
36.0	SE	Mixed	Very High	Low



2.2 Superficial Deposits and Landslips map (1:50,000 scale)



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 Site Outline

 Search Buffers (m)

2.2 Superficial Deposits and Landslips

2.2.1 Superficial Deposits/ Drift Geology

Are there any records of Superficial Deposits/ Drift Geology within 500m of the study site boundary? Yes

ID	Distance	Direction	LEX Code	Description	Rock Description
1	0.0	On Site	TILLD-DMTN	TILL, DEVENSIAN	DIAMICTON
2	0.0	On Site	TILLD-DMTN	TILL, DEVENSIAN	DIAMICTON
3	0.0	On Site	TILLD-DMTN	TILL, DEVENSIAN	DIAMICTON
4	0.0	On Site	TILLD-DMTN	TILL, DEVENSIAN	DIAMICTON
5	0.0	On Site	ALV-XCZSV	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL
6	0.0	On Site	TILLD-DMTN	TILL, DEVENSIAN	DIAMICTON
7	0.0	On Site	PEAT-P	PEAT	PEAT
8	0.0	On Site	PEAT-P	PEAT	PEAT
9	10.0	N	TILLD-DMTN	TILL, DEVENSIAN	DIAMICTON
10	71.0	NE	TILLD-DMTN	TILL, DEVENSIAN	DIAMICTON
11	94.0	NE	PEAT-P	PEAT	PEAT
12	118.0	E	PEAT-P	PEAT	PEAT
13	136.0	N	PEAT-P	PEAT	PEAT
14	228.0	S	ALV-XCZSV	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL
15	306.0	SW	ALV-XCZSV	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL
16	431.0	N	ALV-XCZSV	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL

2.2.2 Permeability of Superficial Ground

Are there any records relating to permeability of superficial ground within the study site boundary? Yes

Distance (m)	Direction	Flow Type	Maximum Permeability	Minimum Permeability
0.0	On Site	Mixed	High	Low
0.0	On Site	Mixed	High	Low
0.0	On Site	Mixed	High	Low
0.0	On Site	Mixed	Low	Very Low
0.0	On Site	Mixed	High	Low
0.0	On Site	Mixed	Low	Very Low
0.0	On Site	Mixed	Low	Very Low
0.0	On Site	Intergranular	High	Very Low
0.0	On Site	Mixed	High	Low
4.0	NE	Mixed	High	Low
10.0	N	Mixed	High	Low

2.2.3 Landslip

Are there any records of Landslip within 500m of the study site boundary?

No

Database searched and no data found.

The geology map for the site and surrounding area are extracted from the BGS Digital Geological Map of Great Britain at 1:50,000 scale.

This Geology shows the main components as discrete layers, there are: Artificial/ Made Ground, Superficial/ Drift Geology and Landslips. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nationwide coverage.

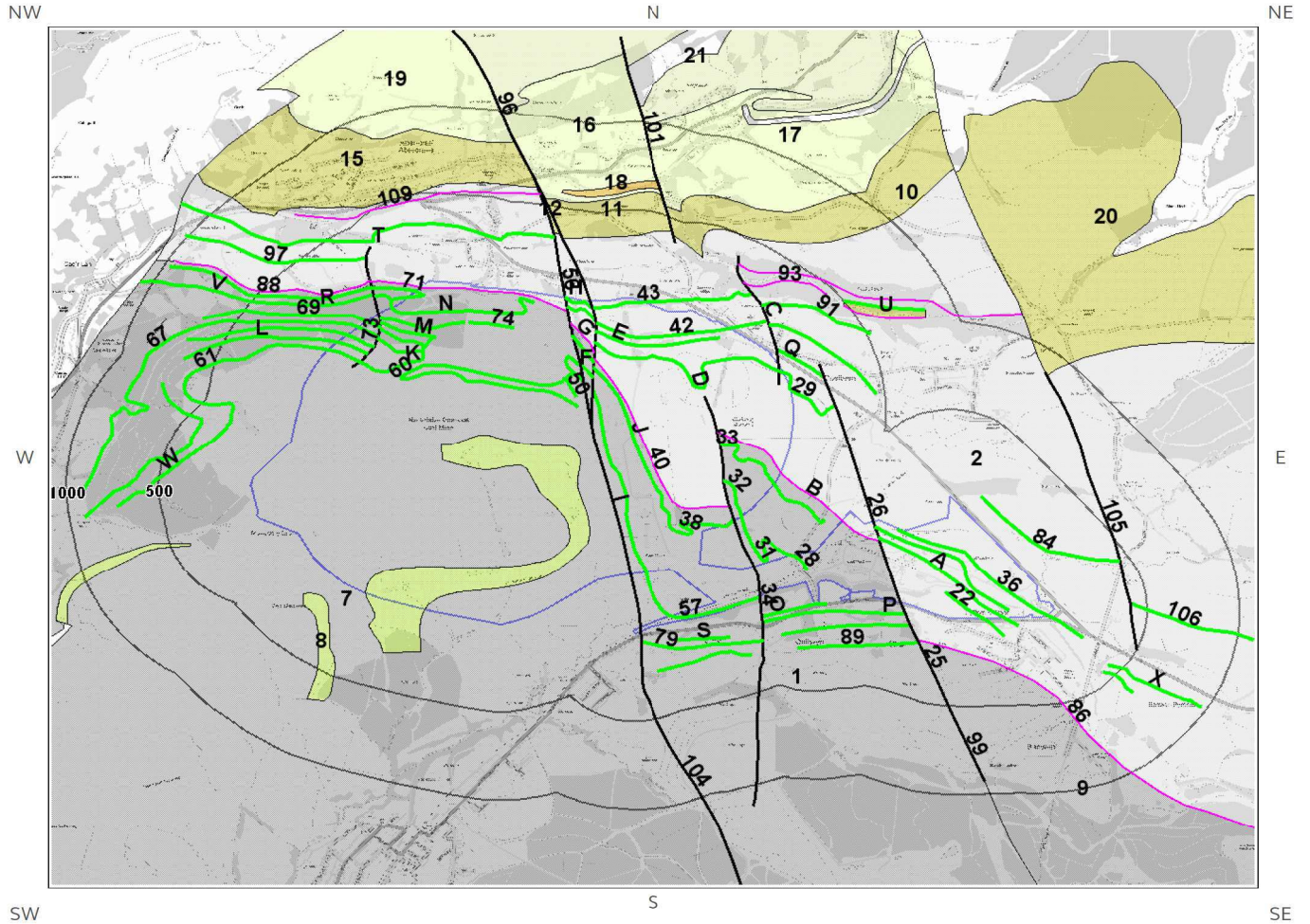
2.2.4 Landslip Permeability

Are there any records relating to permeability of landslips within the study site boundary?

No

Database searched and no data found.

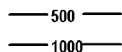
2.3 Bedrock and linear features map (1:50,000 scale)



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Site Outline



Search Buffers (m)

2.3 Bedrock, Solid Geology & linear features

The following geological information represented on the mapping is derived from 1:50,000 scale BGS Geological mapping, Sheet No: 231

2.3.1 Bedrock/Solid Geology

Records of Bedrock/Solid Geology within 500m of the study site boundary:

ID	Distance	Direction	LEX Code	Rock Description	Rock Age
1	0.0	On Site	SWMCM-MDSS	SOUTH WALES MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
2	0.0	On Site	SWLCM-MDSS	SOUTH WALES LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
3T	0.0	On Site	SWLCM-MDSS	SOUTH WALES LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
4H	0.0	On Site	SWLCM-MDSS	SOUTH WALES LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
5F	0.0	On Site	SWMCM-MDSS	SOUTH WALES MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
6	0.0	On Site	SWMCM-SDST	SOUTH WALES MIDDLE COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN
7	0.0	On Site	SWMCM-MDSS	SOUTH WALES MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
8	137.0	SW	SWMCM-SDST	SOUTH WALES MIDDLE COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN
9	160.0	S	SWMCM-MDSS	SOUTH WALES MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
10	303.0	N	SWLCM-SDST	SOUTH WALES LOWER COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN
11	331.0	N	SWLCM-SDST	SOUTH WALES LOWER COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN
12	350.0	N	SWLCM-SDST	SOUTH WALES LOWER COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN
13	399.0	SW	SWMCM-SDST	SOUTH WALES MIDDLE COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN

ID	Distance	Direction	LEX Code	Rock Description	Rock Age
14U	484.0	NE	SWLCM-SDST	SOUTH WALES LOWER COAL MEASURES FORMATION - SANDSTONE	WESTPHALIAN

2.3.2 Permeability of Bedrock Ground

Are there any records relating to permeability of bedrock ground within the study site boundary? Yes

Distance	Direction	Flow Type	Maximum Permeability	Minimum Permeability
0.0	On Site	Fracture	Moderate	Low
0.0	On Site	Fracture	Moderate	Low
0.0	On Site	Fracture	High	Moderate
0.0	On Site	Fracture	Moderate	Low

2.3.3 Linear features

Are there any records of linear features within 500m of the study site boundary? Yes

ID	Distance	Direction	Category Description	Feature Description
22	0.0	On Site	ROCK	Coal seam, inferred
23A	0.0	On Site	ROCK	Coal seam, inferred
24A	0.0	On Site	ROCK	Coal seam, inferred
25	0.0	On Site	FAULT	Fault, observed, displacement unknown
26	0.0	On Site	FAULT	Fault, inferred, displacement unknown
27B	0.0	On Site	FOSSIL_HORIZON	Marine band
28	0.0	On Site	ROCK	Coal seam, observed
29	0.0	On Site	ROCK	Coal seam, observed
30B	0.0	On Site	ROCK	Coal seam, observed
31	0.0	On Site	ROCK	Coal seam, observed
32	0.0	On Site	ROCK	Coal seam, observed
33	0.0	On Site	ROCK	Coal seam, observed
34	0.0	On Site	FAULT	Fault, inferred, displacement unknown
35C	0.0	On Site	FAULT	Fault, observed, displacement unknown
36	0.0	On Site	ROCK	Coal seam, inferred
37C	0.0	On Site	ROCK	Coal seam, inferred
38	0.0	On Site	ROCK	Coal seam, observed
39D	0.0	On Site	ROCK	Coal seam, observed
40	0.0	On Site	FOSSIL_HORIZON	Marine band
41D	0.0	On Site	ROCK	Coal seam, observed
42	0.0	On Site	ROCK	Coal seam, observed
43	0.0	On Site	ROCK	Coal seam, observed
44J	0.0	On Site	ROCK	Coal seam, inferred
45I	0.0	On Site	FAULT	Fault, observed, displacement unknown
46E	0.0	On Site	ROCK	Coal seam, inferred
47E	0.0	On Site	ROCK	Coal seam, inferred
48F	0.0	On Site	ROCK	Coal seam, observed

ID	Distance	Direction	Category Description	Feature Description
49F	0.0	On Site	ROCK	Coal seam, inferred
50	0.0	On Site	ROCK	Coal seam, observed
51G	0.0	On Site	FOSSIL_HORIZON	Marine band
52F	0.0	On Site	ROCK	Coal seam, observed
53G	0.0	On Site	FAULT	Fault, inferred, displacement unknown
54H	0.0	On Site	ROCK	Coal seam, inferred
55H	0.0	On Site	ROCK	Coal seam, inferred
56	0.0	On Site	FAULT	Fault, inferred, displacement unknown
57	0.0	On Site	ROCK	Coal seam, inferred
58I	0.0	On Site	ROCK	Coal seam, observed
59J	0.0	On Site	ROCK	Coal seam, inferred
60	0.0	On Site	ROCK	Coal seam, observed
61	0.0	On Site	ROCK	Coal seam, observed
62K	0.0	On Site	ROCK	Coal seam, observed
63L	0.0	On Site	ROCK	Coal seam, observed
64K	0.0	On Site	ROCK	Coal seam, observed
65L	0.0	On Site	ROCK	Coal seam, observed
66M	0.0	On Site	ROCK	Coal seam, observed
67	0.0	On Site	ROCK	Coal seam, observed
68M	0.0	On Site	ROCK	Coal seam, observed
69	0.0	On Site	ROCK	Coal seam, observed
70N	0.0	On Site	ROCK	Coal seam, observed
71	0.0	On Site	ROCK	Coal seam, observed
72N	0.0	On Site	FOSSIL_HORIZON	Marine band
73	0.0	On Site	FAULT	Fault, observed, displacement unknown
74	0.0	On Site	ROCK	Coal seam, inferred
75O	4.0	S	ROCK	Coal seam, inferred
76Q	41.0	NE	ROCK	Coal seam, inferred
77O	52.0	S	ROCK	Coal seam, observed
78P	56.0	S	ROCK	Coal seam, inferred
79	57.0	SE	ROCK	Coal seam, observed
80R	106.0	NW	ROCK	Coal seam, observed
81S	106.0	S	ROCK	Coal seam, inferred
82P	109.0	S	ROCK	Coal seam, inferred
83Q	125.0	NE	ROCK	Coal seam, inferred
84	125.0	NE	ROCK	Coal seam, inferred
85R	149.0	NW	ROCK	Coal seam, observed
86	160.0	S	FOSSIL_HORIZON	Marine band
87S	164.0	S	ROCK	Coal seam, inferred
88	179.0	NW	FOSSIL_HORIZON	Marine band
89	183.0	S	ROCK	Coal seam, inferred
90T	201.0	NW	FAULT	Fault, inferred, displacement unknown
91	202.0	NE	ROCK	Coal seam, observed
92S	221.0	S	ROCK	Coal seam, inferred
93	261.0	NE	FOSSIL_HORIZON	Marine band
94T	278.0	N	ROCK	Coal seam, inferred
95W	301.0	NW	ROCK	Coal seam, inferred
96	306.0	N	FAULT	Fault, observed, displacement unknown
97	312.0	NW	ROCK	Coal seam, inferred
98U	334.0	NE	FOSSIL_HORIZON	Marine band
99	343.0	S	FAULT	Fault, inferred, displacement unknown
100V	357.0	NW	ROCK	Coal seam, inferred
101	370.0	N	FAULT	Fault, inferred, displacement unknown

ID	Distance	Direction	Category Description	Feature Description
102V	391.0	NW	ROCK	Coal seam, inferred
103W	393.0	NW	ROCK	Coal seam, observed
104	395.0	S	FAULT	Fault, inferred, displacement unknown
105	405.0	E	FAULT	Fault, inferred, displacement unknown
106	409.0	E	ROCK	Coal seam, inferred
107X	432.0	SE	ROCK	Coal seam, inferred
108X	444.0	SE	ROCK	Coal seam, inferred
109	465.0	N	FOSSIL_HORIZON	Marine band
110U	484.0	NE	FOSSIL_HORIZON	Marine band
111U	499.0	NE	ROCK	Coal seam, inferred

The geology map for the site and surrounding area are extracted from the BGS Digital Geological Map of Great Britain at 1:50,000 scale.

This Geology shows the main components as discrete layers, these are: Bedrock/Solid Geology and linear features such as faults. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nation wide coverage.