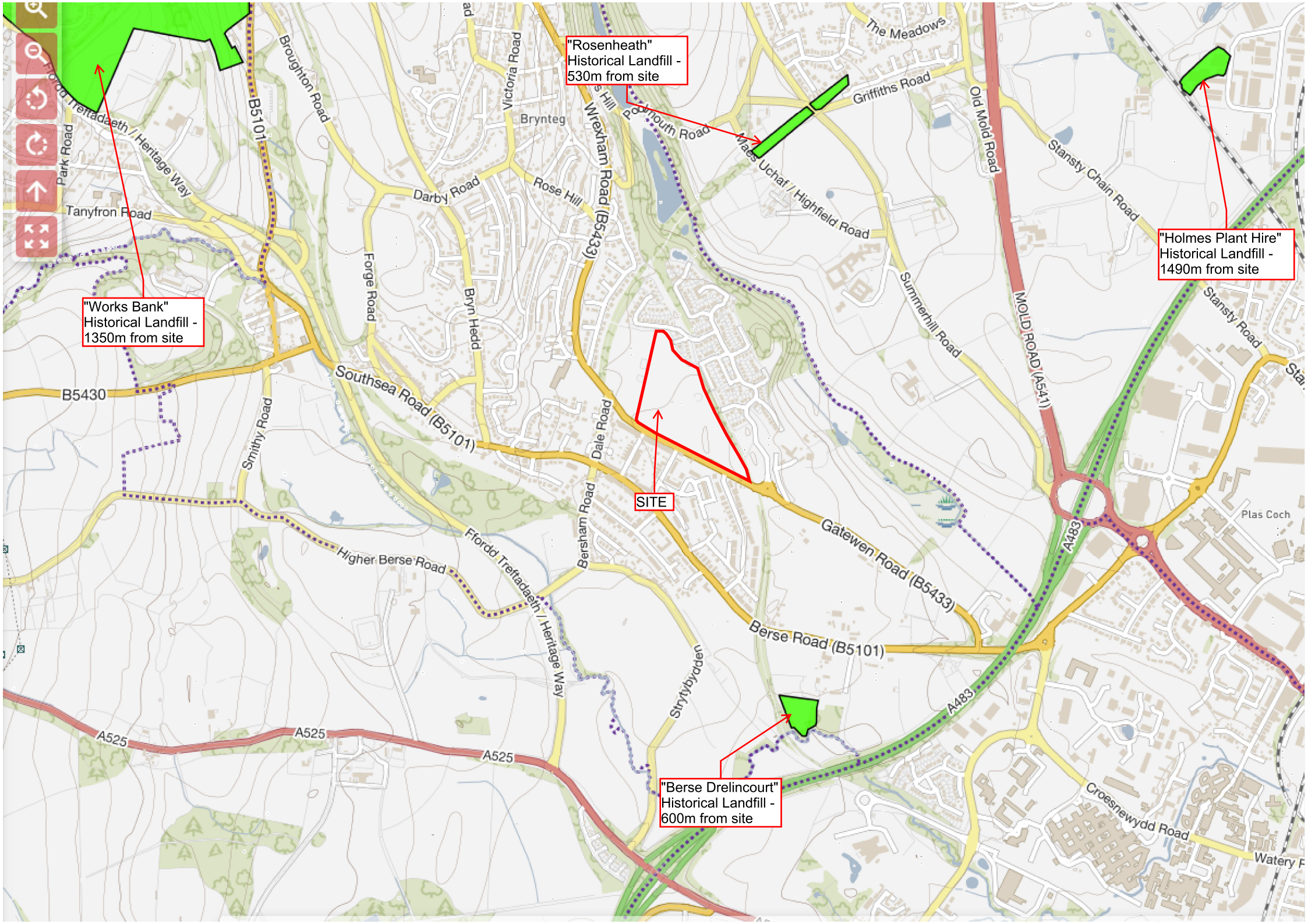


Site Investigation Report for land off
Gatewen Road, Wrexham

Appendix 1

National Resources Wales – Landfill Maps/Data



"Rosenheath"
Historical Landfill -
530m from site

"Works Bank"
Historical Landfill -
1350m from site

SITE

"Berse Dreincourt"
Historical Landfill -
600m from site

"Holmes Plant Hire"
Historical Landfill -
1490m from site

Historic Landfill Sites HLD REF: EAHLD35604 SITE NAME: Works Bank SITE ADD: Brymbo, Lodge, Wrexham EA WMLR: 37002 REGIS NO: WU1/L/BRI001 LIC HOLD: Brymbo Steel Works Ltd LICHOLDADD: Parkhill House, Newport, 133 High Street, Shropshire SITEOPNAME: Brymbo Steel Works Ltd SITEOPADD: Parkhill House, Newport, 133 High Street, Shropshire OS PREFIX: SJ EASTING: 329641 NORTHING: 352527 EA REGION: CY EA AREA: North LIC ISSUE: 1977-07-19Z LIC SURREN: 2008-05-19Z FIRSTINPUT: 1899-12-30Z INDUSTRIAL: Yes LICENCED: Yes Shape STArea : 943703.361877441 Shape STLength : 5314.48836196158 Shape Length: 5314.48836196278 Shape Area: 943703.360550528	Historic Landfill Sites HLD REF: EAHLD14762 SITE NAME: Rosenheath SITE ADD: Highfield, Wrexham, Stansty EA WMLR: 0 WRC REF: 6955/0072 SITE REF: WMBC L/37 LIC HOLD: Mr C Butler OS PREFIX: SJ EASTING: 331500 NORTHING: 352300 EA REGION: CY EA AREA: Northern CY LIC ISSUE: 1984-08-08Z FIRSTINPUT: 1984-08-31Z INERT: Yes LICENCED: Yes Shape STArea : 5142.17546844482 Shape STLength : 429.827077379285 Shape Length: 429.827077379285 Shape Area: 5142.17545905904
Historic Landfill Sites HLD REF: EAHLD14250 SITE NAME: Holmes Plant Hire SITE ADD: Rhosddu EA WMLR: 0 WRC REF: 6955/0032 LIC HOLD: D S Holmes Builders Limited OS PREFIX: SJ EASTING: 332600 NORTHING: 352400 EA REGION: CY EA AREA: Northern CY FIRSTINPUT: 1990-01-01Z LASTINPUT: 1991-02-18Z INDUSTRIAL: Yes LICENCED: Yes Shape STArea : 7479.19071960449 Shape STLength : 394.130948237507 Shape Length: 394.130948237507 Shape Area: 7479.19075668893	Historic Landfill Sites HLD REF: EAHLD14750 SITE NAME: Berse Drelincourt SITE ADD: Berse Road, Wrexham, Lower Berse EA WMLR: 0 WRC REF: 6955/0007 SITE REF: WMBC L/34 LIC HOLD: Mr L G Hockey OS PREFIX: SJ EASTING: 331500 NORTHING: 350700 EA REGION: CY EA AREA: Northern CY LIC ISSUE: 1981-05-29Z FIRSTINPUT: 1981-01-01Z LASTINPUT: 1985-12-31Z INERT: Yes LICENCED: Yes Shape STArea : 7032.62073516846 Shape STLength : 352.97014831547 Shape Length: 352.97014831547 Shape Area: 7032.62072584691

Site Investigation Report for land off
Gatewen Road, Wrexham

Appendix 2

GroundSure Enviro + Geo Report

GATEWEN ROAD, NEW BROUGHTON, WREXHAM, LL11 6UY

Order Details

Date: 17/05/2021
Your ref: 7791_-_PO_9048-BH
Our Ref: GS-7864459
Client: Coopers

Site Details

Location: 331355 351483
Area: 4.93 ha
Authority: [Wrexham - Wrexham County Borough Council](#)



Summary of findings

p. 2

Aerial image

p. 8

OS MasterMap site plan

p.13

groundsure.com/insightuserguide

Contact us with any questions at:

info@groundsure.com

08444 159 000

Summary of findings

Page	Section	Past land use	On site	0-50m	50-250m	250-500m	500-2000m
14	1.1	<u>Historical industrial land uses</u>	10	11	42	52	-
19	1.2	<u>Historical tanks</u>	5	0	1	3	-
19	1.3	<u>Historical energy features</u>	0	0	5	9	-
20	1.4	Historical petrol stations	0	0	0	0	-
21	1.5	<u>Historical garages</u>	0	0	9	0	-
21	1.6	Historical military land	0	0	0	0	-
Page	Section	Past land use - un-grouped	On site	0-50m	50-250m	250-500m	500-2000m
22	2.1	<u>Historical industrial land uses</u>	12	16	56	96	-
29	2.2	<u>Historical tanks</u>	14	0	1	11	-
30	2.3	<u>Historical energy features</u>	0	0	12	13	-
31	2.4	Historical petrol stations	0	0	0	0	-
32	2.5	<u>Historical garages</u>	0	0	18	0	-
Page	Section	Waste and landfill	On site	0-50m	50-250m	250-500m	500-2000m
33	3.1	Active or recent landfill	0	0	0	0	-
33	3.2	Historical landfill (BGS records)	0	0	0	0	-
34	3.3	Historical landfill (LA/mapping records)	0	0	0	0	-
34	3.4	Historical landfill (EA/NRW records)	0	0	0	0	-
34	3.5	Historical waste sites	0	0	0	0	-
34	3.6	Licensed waste sites	0	0	0	0	-
34	3.7	<u>Waste exemptions</u>	0	0	0	1	-
Page	Section	Current industrial land use	On site	0-50m	50-250m	250-500m	500-2000m
36	4.1	<u>Recent industrial land uses</u>	0	0	10	-	-
37	4.2	Current or recent petrol stations	0	0	0	0	-
37	4.3	Electricity cables	0	0	0	0	-
37	4.4	Gas pipelines	0	0	0	0	-
38	4.5	Sites determined as Contaminated Land	0	0	0	0	-



38	4.6	Control of Major Accident Hazards (COMAH)	0	0	0	0	-
38	4.7	Regulated explosive sites	0	0	0	0	-
38	4.8	Hazardous substance storage/usage	0	0	0	0	-
38	4.9	Historical licensed industrial activities (IPC)	0	0	0	0	-
39	4.10	Licensed industrial activities (Part A(1))	0	0	0	0	-
39	4.11	<u>Licensed pollutant release (Part A(2)/B)</u>	0	0	1	0	-
39	4.12	Radioactive Substance Authorisations	0	0	0	0	-
39	4.13	<u>Licensed Discharges to controlled waters</u>	0	0	0	1	-
40	4.14	Pollutant release to surface waters (Red List)	0	0	0	0	-
40	4.15	Pollutant release to public sewer	0	0	0	0	-
40	4.16	List 1 Dangerous Substances	0	0	0	0	-
40	4.17	List 2 Dangerous Substances	0	0	0	0	-
41	4.18	<u>Pollution Incidents (EA/NRW)</u>	0	0	0	1	-
41	4.19	Pollution inventory substances	0	0	0	0	-
41	4.20	Pollution inventory waste transfers	0	0	0	0	-
41	4.21	Pollution inventory radioactive waste	0	0	0	0	-
Page	Section	Hydrogeology	On site	0-50m	50-250m	250-500m	500-2000m
42	5.1	<u>Superficial aquifer</u>	Identified (within 500m)				
44	5.2	<u>Bedrock aquifer</u>	Identified (within 500m)				
45	5.3	<u>Groundwater vulnerability</u>	Identified (within 50m)				
46	5.4	Groundwater vulnerability- soluble rock risk	None (within 0m)				
46	5.5	Groundwater vulnerability- local information	None (within 0m)				
47	5.6	<u>Groundwater abstractions</u>	0	0	0	0	3
48	5.7	<u>Surface water abstractions</u>	0	0	0	0	5
50	5.8	Potable abstractions	0	0	0	0	0
50	5.9	Source Protection Zones	0	0	0	0	-
50	5.10	Source Protection Zones (confined aquifer)	0	0	0	0	-
Page	Section	Hydrology	On site	0-50m	50-250m	250-500m	500-2000m
51	6.1	<u>Water Network (OS MasterMap)</u>	0	0	4	-	-



52	6.2	<u>Surface water features</u>	0	0	2	-	-
52	6.3	<u>WFD Surface water body catchments</u>	1	-	-	-	-
53	6.4	<u>WFD Surface water bodies</u>	0	0	0	-	-
53	6.5	<u>WFD Groundwater bodies</u>	1	-	-	-	-
Page	Section	River and coastal flooding	On site	0-50m	50-250m	250-500m	500-2000m
54	7.1	Risk of Flooding from Rivers and Sea (RoFRaS)	None (within 50m)				
54	7.2	Historical Flood Events	0	0	0	-	-
54	7.3	Flood Defences	0	0	0	-	-
54	7.4	Areas Benefiting from Flood Defences	0	0	0	-	-
55	7.5	Flood Storage Areas	0	0	0	-	-
56	7.6	Flood Zone 2	None (within 50m)				
56	7.7	Flood Zone 3	None (within 50m)				
Page	Section	Surface water flooding					
57	8.1	<u>Surface water flooding</u>	1 in 30 year, 0.3m - 1.0m (within 50m)				
Page	Section	Groundwater flooding					
59	9.1	<u>Groundwater flooding</u>	Moderate (within 50m)				
Page	Section	Environmental designations	On site	0-50m	50-250m	250-500m	500-2000m
60	10.1	<u>Sites of Special Scientific Interest (SSSI)</u>	0	0	1	0	0
61	10.2	Conserved wetland sites (Ramsar sites)	0	0	0	0	0
61	10.3	Special Areas of Conservation (SAC)	0	0	0	0	0
61	10.4	Special Protection Areas (SPA)	0	0	0	0	0
61	10.5	National Nature Reserves (NNR)	0	0	0	0	0
62	10.6	Local Nature Reserves (LNR)	0	0	0	0	0
62	10.7	<u>Designated Ancient Woodland</u>	0	0	1	1	23
63	10.8	Biosphere Reserves	0	0	0	0	0
63	10.9	Forest Parks	0	0	0	0	0
63	10.10	Marine Conservation Zones	0	0	0	0	0
64	10.11	Green Belt	0	0	0	0	0
64	10.12	Proposed Ramsar sites	0	0	0	0	0



64	10.13	Possible Special Areas of Conservation (pSAC)	0	0	0	0	0
64	10.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0
64	10.15	Nitrate Sensitive Areas	0	0	0	0	0
65	10.16	Nitrate Vulnerable Zones	0	0	0	0	0
66	<u>10.17</u>	<u>SSSI Impact Risk Zones</u>	1	-	-	-	-
67	10.18	SSSI Units	0	0	0	0	0
Page	Section	Visual and cultural designations	On site	0-50m	50-250m	250-500m	500-2000m
68	11.1	World Heritage Sites	0	0	0	-	-
69	11.2	Area of Outstanding Natural Beauty	0	0	0	-	-
69	11.3	National Parks	0	0	0	-	-
69	<u>11.4</u>	<u>Listed Buildings</u>	0	0	2	-	-
70	11.5	Conservation Areas	0	0	0	-	-
70	11.6	Scheduled Ancient Monuments	0	0	0	-	-
70	11.7	Registered Parks and Gardens	0	0	0	-	-
Page	Section	Agricultural designations	On site	0-50m	50-250m	250-500m	500-2000m
71	<u>12.1</u>	<u>Agricultural Land Classification</u>	Grade 3b (within 250m)				
72	12.2	Open Access Land	0	0	0	-	-
72	12.3	Tree Felling Licences	0	0	0	-	-
72	12.4	Environmental Stewardship Schemes	0	0	0	-	-
73	12.5	Countryside Stewardship Schemes	0	0	0	-	-
Page	Section	Habitat designations	On site	0-50m	50-250m	250-500m	500-2000m
74	13.1	Priority Habitat Inventory	0	0	0	-	-
74	13.2	Habitat Networks	0	0	0	-	-
74	13.3	Open Mosaic Habitat	0	0	0	-	-
74	13.4	Limestone Pavement Orders	0	0	0	-	-
Page	Section	Geology 1:10,000 scale	On site	0-50m	50-250m	250-500m	500-2000m
75	<u>14.1</u>	<u>10k Availability</u>	Identified (within 500m)				
76	<u>14.2</u>	<u>Artificial and made ground (10k)</u>	1	2	0	2	-
78	<u>14.3</u>	<u>Superficial geology (10k)</u>	2	0	5	4	-



79	14.4	Landslip (10k)	0	0	0	0	-
80	14.5	<u>Bedrock geology (10k)</u>	2	1	3	9	-
82	14.6	<u>Bedrock faults and other linear features (10k)</u>	1	1	1	4	-
Page	Section	Geology 1:50,000 scale	On site	0-50m	50-250m	250-500m	500-2000m
83	15.1	<u>50k Availability</u>	Identified (within 500m)				
84	15.2	<u>Artificial and made ground (50k)</u>	0	1	0	1	-
85	15.3	<u>Artificial ground permeability (50k)</u>	0	1	-	-	-
86	15.4	<u>Superficial geology (50k)</u>	2	0	5	2	-
87	15.5	<u>Superficial permeability (50k)</u>	Identified (within 50m)				
87	15.6	Landslip (50k)	0	0	0	0	-
87	15.7	Landslip permeability (50k)	None (within 50m)				
88	15.8	<u>Bedrock geology (50k)</u>	2	1	3	9	-
90	15.9	<u>Bedrock permeability (50k)</u>	Identified (within 50m)				
90	15.10	<u>Bedrock faults and other linear features (50k)</u>	1	1	1	3	-
Page	Section	Boreholes	On site	0-50m	50-250m	250-500m	500-2000m
91	16.1	<u>BGS Boreholes</u>	6	2	0	-	-
Page	Section	Natural ground subsidence					
93	17.1	<u>Shrink swell clays</u>	Very low (within 50m)				
95	17.2	<u>Running sands</u>	Very low (within 50m)				
96	17.3	<u>Compressible deposits</u>	Very low (within 50m)				
98	17.4	<u>Collapsible deposits</u>	Very low (within 50m)				
99	17.5	<u>Landslides</u>	Low (within 50m)				
101	17.6	<u>Ground dissolution of soluble rocks</u>	Negligible (within 50m)				
Page	Section	Mining, ground workings and natural cavities	On site	0-50m	50-250m	250-500m	500-2000m
103	18.1	Natural cavities	0	0	0	0	-
104	18.2	<u>BritPits</u>	0	2	2	3	-
105	18.3	<u>Surface ground workings</u>	10	3	52	-	-
108	18.4	<u>Underground workings</u>	0	1	3	3	4
109	18.5	Historical Mineral Planning Areas	0	0	0	0	-



<u>109</u>	<u>18.6</u>	<u>Non-coal mining</u>	1	0	0	0	0
109	18.7	Mining cavities	0	0	0	0	0
109	18.8	JPB mining areas	None (within 0m)				
<u>110</u>	<u>18.9</u>	<u>Coal mining</u>	Identified (within 0m)				
110	18.10	Brine areas	None (within 0m)				
110	18.11	Gypsum areas	None (within 0m)				
110	18.12	Tin mining	None (within 0m)				
110	18.13	Clay mining	None (within 0m)				
Page	Section	Radon					
<u>111</u>	<u>19.1</u>	<u>Radon</u>	Between 10% and 30% (within 0m)				
Page	Section	Soil chemistry	On site	0-50m	50-250m	250-500m	500-2000m
<u>113</u>	<u>20.1</u>	<u>BGS Estimated Background Soil Chemistry</u>	5	2	-	-	-
113	20.2	BGS Estimated Urban Soil Chemistry	0	0	-	-	-
114	20.3	BGS Measured Urban Soil Chemistry	0	0	-	-	-
Page	Section	Railway infrastructure and projects	On site	0-50m	50-250m	250-500m	500-2000m
115	21.1	Underground railways (London)	0	0	0	-	-
115	21.2	Underground railways (Non-London)	0	0	0	-	-
116	21.3	Railway tunnels	0	0	0	-	-
<u>116</u>	<u>21.4</u>	<u>Historical railway and tunnel features</u>	4	12	7	-	-
117	21.5	Royal Mail tunnels	0	0	0	-	-
<u>117</u>	<u>21.6</u>	<u>Historical railways</u>	0	3	5	-	-
118	21.7	Railways	0	0	0	-	-
118	21.8	Crossrail 1	0	0	0	0	-
118	21.9	Crossrail 2	0	0	0	0	-
118	21.10	HS2	0	0	0	0	-

Recent aerial photograph



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Capture Date: 10/04/2020

Site Area: 4.93ha



Recent site history - 2017 aerial photograph



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Capture Date: 07/05/2017

Site Area: 4.93ha



Recent site history - 2009 aerial photograph



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Capture Date: 11/05/2009

Site Area: 4.93ha



Recent site history - 2001 aerial photograph



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Capture Date: 28/07/2001

Site Area: 4.93ha



Recent site history - 2000 aerial photograph

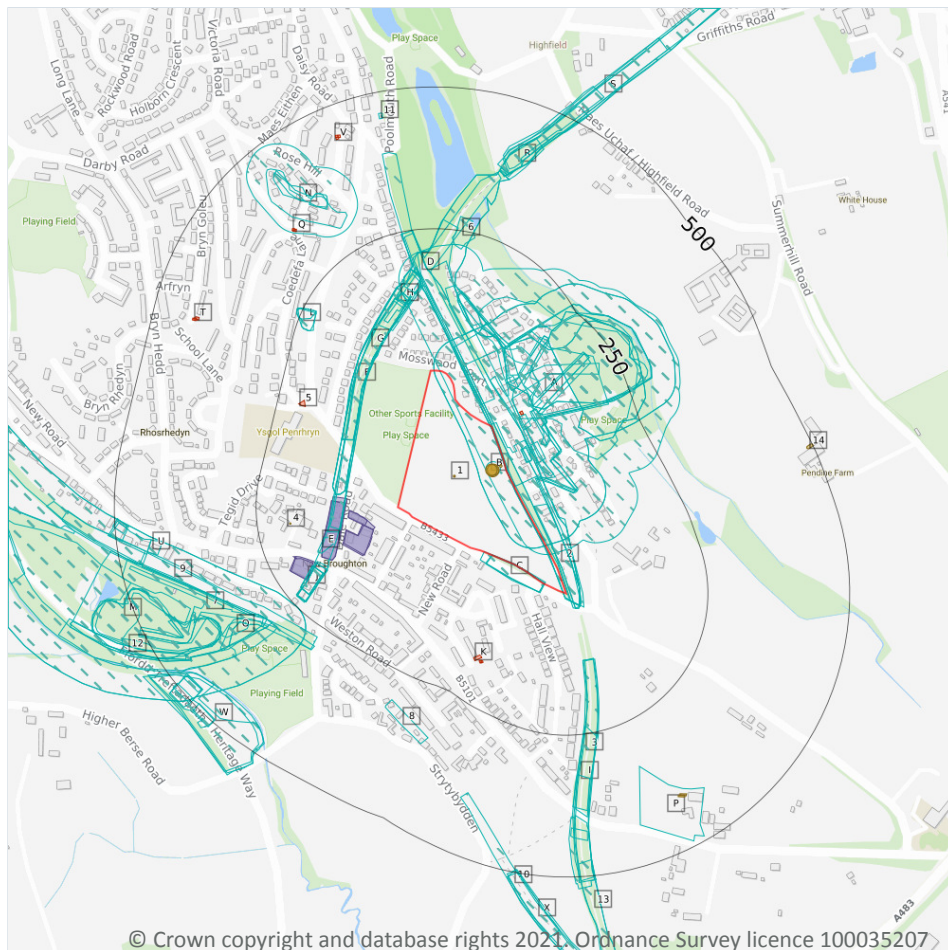


Capture Date: 04/09/2000

Site Area: 4.93ha



1 Past land use



- Site Outline
- Search buffers in metres (m)
- Historical industrial land uses
- Historical tanks
- Historical energy features
- Historical garages

1.1 Historical industrial land uses

Records within 500m

115

Potentially contaminative land use features digitised from historical Ordnance Survey mapping at 1:10,000 and 1:10,560 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use map on **page 14**

ID	Location	Land use	Dates present	Group ID
A	On site	Disused Colliery	1949	822303



ID	Location	Land use	Dates present	Group ID
A	On site	Mineral Railway Sidings	1974	833999
A	On site	Railway Sidings	1980	854960
A	On site	Colliery	1898	885351
A	On site	Railway Sidings	1985 - 1989	938847
A	On site	Colliery	1938	953277
B	On site	Unspecified Tank	1992	823884
C	On site	Cuttings	1938	851824
C	On site	Cuttings	1909	935036
C	On site	Cuttings	1938 - 1949	951109
A	1m NE	Colliery	1909	978122
A	1m E	Railway Sidings	1938	972345
A	4m NE	Colliery	1938	962241
2	4m E	Railway Sidings	1949	891726
A	6m NE	Railway Sidings	1938	872193
A	6m NE	Railway Sidings	1898	883909
D	25m NE	Railway Sidings	1949	849859
B	34m E	Railway Building	1964	887918
B	36m E	Railway Building	1974 - 1992	910929
A	44m NE	Railway Sidings	1909	945121
A	50m E	Unspecified Disused Shafts	1964	835482
B	54m E	Unspecified Disused Shafts	1964	835483
A	72m E	Railway Sidings	1909	888864
A	73m NE	Unspecified Disused Shafts	1964	835480
A	73m E	Unspecified Disused Shafts	1964	835481
D	76m NE	Cuttings	1909	795436
A	78m NE	Unspecified Ground Workings	1909	925995
A	78m NE	Unspecified Heap	1938	983391
A	79m E	Unspecified Heap	1949	976930



ID	Location	Land use	Dates present	Group ID
A	81m NE	Unspecified Heap	1938	913846
A	81m NE	Unspecified Heap	1898	964727
D	90m NE	Unspecified Heap	1938	850287
D	90m NE	Unspecified Heap	1898	872711
F	93m W	Cuttings	1938	967654
F	94m W	Cuttings	1909	913933
F	95m W	Cuttings	1938 - 1949	991091
G	97m NW	Cuttings	1989 - 1992	915157
G	97m W	Cuttings	1980	871863
G	97m W	Cuttings	1964	890187
G	97m W	Cuttings	1974	986515
G	99m NW	Cuttings	1985	945203
H	113m NW	Railway Station	1909	869945
I	122m S	Cuttings	1938	885228
H	122m N	Railway Station	1938	933339
I	122m S	Cuttings	1909	977100
H	123m N	Railway Station	1898	914244
3	124m S	Cuttings	1938 - 1949	979675
H	124m N	Disused Railway Station	1949	810843
E	131m SW	Unspecified Pit	1964 - 1980	861646
H	139m N	Cuttings	1949	944621
A	144m E	Unspecified Heap	1974 - 1992	862059
A	144m E	Unspecified Ground Workings	1964	914752
J	161m SW	Cuttings	1938	875711
J	166m SW	Cuttings	1949	845857
J	166m SW	Cuttings	1938	881017
J	176m SW	Cuttings	1964	860747
J	176m SW	Cuttings	1980	929195



ID	Location	Land use	Dates present	Group ID
J	176m SW	Cuttings	1974	950769
6	218m N	Unspecified Heap	1964 - 1980	979547
L	219m W	Old Gravel Pit	1909 - 1938	960311
L	222m W	Old Gravel Pit	1938	986413
L	228m NW	Unspecified Pit	1949	838966
I	236m S	Cuttings	1898	990950
M	250m SW	Railway Sidings	1898	844384
M	250m SW	Railway Sidings	1900	844385
M	269m SW	Railway Sidings	1938	895432
7	285m SW	Railway Sidings	1909	875159
N	289m NW	Unspecified Old Quarry	1938 - 1949	870289
N	298m NW	Unspecified Heap	1872	802781
M	300m SW	Colliery	1898 - 1938	982937
M	300m SW	Railway Sidings	1938 - 1949	867062
8	302m SW	Cuttings	1938 - 1949	937663
M	302m SW	Colliery	1938	862574
M	306m SW	Colliery	1949	972400
O	315m SW	Unspecified Pit	1949	928737
I	320m S	Cuttings	1964 - 1992	855391
P	331m SE	Unspecified Depot	1992	818103
O	335m SW	Unspecified Pit	1964 - 1980	912529
N	339m NW	Unspecified Old Quarry	1898	972654
N	341m NW	Unspecified Old Quarry	1909 - 1938	898204
9	350m SW	Cuttings	1872	795435
R	358m N	Cuttings	1898	958573
S	360m N	Cuttings	1909	989649
R	363m N	Cuttings	1938 - 1949	991392
S	365m N	Cuttings	1938	863398



ID	Location	Land use	Dates present	Group ID
S	367m N	Cuttings	1964 - 1980	990769
S	369m N	Cuttings	1985 - 1989	877175
N	372m NW	Unspecified Old Quarry	1898	947820
R	376m N	Cuttings	1992	880139
M	376m SW	Unspecified Ground Workings and Heap	1909	806970
M	377m SW	Unspecified Heap	1938	920850
M	379m SW	Unspecified Heap	1938 - 1980	888301
M	380m SW	Unspecified Heap	1898	968036
10	390m SW	Cuttings	1872	940498
I	392m S	Cuttings	1938 - 1992	883262
I	414m S	Cuttings	1974 - 1980	866658
U	419m W	Police Station	1964 - 1992	929597
U	438m W	Smithy	1898	915863
W	445m SW	Sewage Works	1938 - 1949	981457
W	450m SW	Unspecified Works	1964 - 1980	953208
W	450m SW	Council Sewage Works	1909	832430
U	452m W	Cuttings	1872	795433
11	453m N	Railway Building	1938	819086
12	454m SW	Railway Sidings	1909	850291
W	471m SW	Filter Beds	1938	867194
W	471m SW	Filter Beds	1909	986241
13	472m S	Railway Sidings	1938	794479
W	472m SW	Filter Beds	1938 - 1949	973229
U	478m W	Smithy	1909	987796
U	478m W	Smithy	1949	867319
W	492m SW	Filter Beds	1938	960178
W	494m SW	Filter Beds	1909	854061
X	494m S	Cuttings	1909	977854



ID	Location	Land use	Dates present	Group ID
X	495m S	Cuttings	1938 - 1949	865817
X	499m S	Cuttings	1938	863029

This data is sourced from Ordnance Survey / Groundsure.

1.2 Historical tanks

Records within 500m

9

Tank features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original ungrouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use map on **page 14**

ID	Location	Land use	Dates present	Group ID
1	On site	Unspecified Tank	1993 - 1999	140107
B	On site	Unspecified Tank	1912	109514
B	On site	Unspecified Tank	1962 - 1973	126896
B	On site	Unspecified Tank	1993 - 1999	135756
B	On site	Unspecified Tank	1959 - 1989	141793
4	191m W	Unspecified Tank	1912	109515
P	406m SE	Unspecified Tank	1993 - 1999	133347
P	407m SE	Unspecified Tank	1959 - 1989	143617
14	488m NE	Tanks	1993 - 1999	124419

This data is sourced from Ordnance Survey / Groundsure.

1.3 Historical energy features

Records within 500m

14

Energy features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original ungrouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.



Features are displayed on the Past land use map on **page 14**

ID	Location	Land use	Dates present	Group ID
A	56m NE	Electricity Substation	1993 - 1999	71608
K	167m SW	Electricity Substation	1993 - 1999	73100
K	173m SW	Electricity Substation	1973	73319
K	173m SW	Electricity Substation	1959 - 1989	64961
5	200m W	Electricity Substation	1983	60019
Q	341m NW	Electricity Substation	1994	78597
Q	343m NW	Electricity Substation	1979 - 1984	82602
Q	344m NW	Electricity Substation	1986	76677
T	419m W	Electricity Substation	1993	77184
T	422m W	Electricity Substation	1973	71862
T	424m W	Electricity Substation	1983	67363
V	440m N	Electricity Substation	1984 - 1986	67037
V	441m N	Electricity Substation	1996	73589
V	443m N	Electricity Substation	1984	69576

This data is sourced from Ordnance Survey / Groundsure.

1.4 Historical petrol stations

Records within 500m

0

Petrol stations digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original ungrouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey / Groundsure.



1.5 Historical garages

Records within 500m

9

Garages digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale, intelligently grouped into contiguous features. To prevent misrepresentation of the size of historical features at any given time, features are only grouped if they have similar geometries within immediately preceding or succeeding map editions. See section 2 for a breakdown of grouping if required. Grouped and the original ungrouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use map on **page 14**

ID	Location	Land use	Dates present	Group ID
E	54m SW	Garage	1959 - 1989	24592
E	59m SW	Garage	1959 - 1989	24613
E	59m SW	Garage	1962 - 1973	25731
E	59m SW	Garage	1973	21021
E	91m W	Garage	1962 - 1973	27800
E	92m W	Garage	1959 - 1989	26893
E	94m W	Garage	1993	23908
J	174m SW	Garage	1983 - 1993	26758
J	179m SW	Garage	1973	22508

This data is sourced from Ordnance Survey / Groundsure.

1.6 Historical military land

Records within 500m

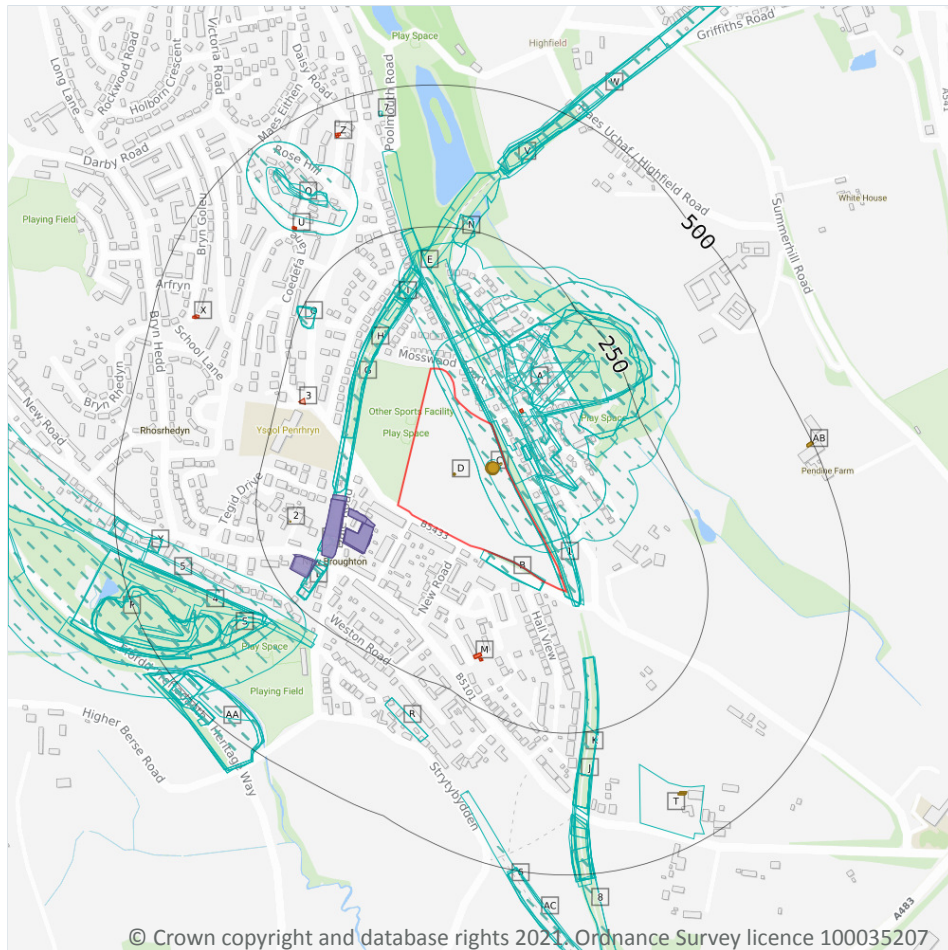
0

Areas of military land digitised from multiple sources including the National Archives, local records, MOD records and verified other sources, intelligently grouped into contiguous features.

This data is sourced from Ordnance Survey / Groundsure / other sources.



2 Past land use - un-grouped



- Site Outline
- Search buffers in metres (m)
- Historical industrial land uses
- Historical tanks
- Historical energy features
- Historical garages

2.1 Historical industrial land uses

Records within 500m

180

Potentially contaminative land use features digitised from historical Ordnance Survey mapping at 1:10,000 and 10,560 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use - un-grouped map on **page 22**

ID	Location	Land Use	Date	Group ID
A	On site	Colliery	1938	953277
A	On site	Disused Colliery	1949	822303
A	On site	Colliery	1898	885351



ID	Location	Land Use	Date	Group ID
A	On site	Railway Sidings	1989	938847
A	On site	Railway Sidings	1980	854960
A	On site	Mineral Railway Sidings	1974	833999
A	On site	Railway Sidings	1985	938847
B	On site	Cuttings	1909	935036
B	On site	Cuttings	1938	951109
B	On site	Cuttings	1949	951109
B	On site	Cuttings	1938	851824
C	On site	Unspecified Tank	1992	823884
A	1m NE	Colliery	1909	978122
A	1m E	Railway Sidings	1938	972345
A	4m NE	Colliery	1938	962241
A	4m NE	Colliery	1938	962241
1	4m E	Railway Sidings	1949	891726
A	6m NE	Railway Sidings	1938	872193
A	6m NE	Railway Sidings	1898	883909
E	25m NE	Railway Sidings	1949	849859
C	34m E	Railway Building	1964	887918
C	36m E	Railway Building	1989	910929
C	36m E	Railway Building	1992	910929
C	36m E	Railway Building	1980	910929
C	36m E	Railway Building	1974	910929
C	36m E	Railway Building	1985	910929
A	44m NE	Railway Sidings	1909	945121
A	50m E	Unspecified Disused Shafts	1964	835482
C	54m E	Unspecified Disused Shafts	1964	835483
A	72m E	Railway Sidings	1909	888864
A	73m NE	Unspecified Disused Shafts	1964	835480



ID	Location	Land Use	Date	Group ID
A	73m E	Unspecified Disused Shafts	1964	835481
E	76m NE	Cuttings	1909	795436
A	78m NE	Unspecified Ground Workings	1909	925995
A	78m NE	Unspecified Heap	1938	983391
A	78m NE	Unspecified Heap	1938	983391
A	79m E	Unspecified Heap	1949	976930
A	81m NE	Unspecified Heap	1938	913846
A	81m NE	Unspecified Heap	1898	964727
E	90m NE	Unspecified Heap	1938	850287
E	90m NE	Unspecified Heap	1898	872711
G	93m W	Cuttings	1938	967654
G	94m W	Cuttings	1909	913933
G	95m W	Cuttings	1938	991091
G	95m W	Cuttings	1949	991091
H	97m NW	Cuttings	1989	915157
H	97m NW	Cuttings	1992	915157
H	97m W	Cuttings	1980	871863
H	97m W	Cuttings	1974	986515
H	97m W	Cuttings	1964	890187
H	99m NW	Cuttings	1985	945203
I	113m NW	Railway Station	1909	869945
J	122m S	Cuttings	1938	885228
I	122m N	Railway Station	1938	933339
J	122m S	Cuttings	1909	977100
I	123m N	Railway Station	1898	914244
K	124m S	Cuttings	1938	979675
K	124m S	Cuttings	1949	979675
I	124m N	Disused Railway Station	1949	810843



ID	Location	Land Use	Date	Group ID
I	125m N	Railway Station	1938	933339
F	131m SW	Unspecified Pit	1980	861646
F	131m SW	Unspecified Pit	1974	861646
F	131m SW	Unspecified Pit	1964	861646
I	139m N	Cuttings	1949	944621
A	144m E	Unspecified Heap	1989	862059
A	144m E	Unspecified Heap	1992	862059
A	144m E	Unspecified Heap	1980	862059
A	144m E	Unspecified Heap	1974	862059
A	144m E	Unspecified Heap	1985	862059
A	144m E	Unspecified Ground Workings	1964	914752
L	161m SW	Cuttings	1938	875711
L	166m SW	Cuttings	1938	881017
L	166m SW	Cuttings	1949	845857
L	176m SW	Cuttings	1980	929195
L	176m SW	Cuttings	1974	950769
L	176m SW	Cuttings	1964	860747
N	218m N	Unspecified Heap	1980	979547
N	218m N	Unspecified Heap	1974	979547
N	218m N	Unspecified Heap	1964	979547
O	219m W	Old Gravel Pit	1938	960311
O	222m W	Old Gravel Pit	1938	986413
O	222m W	Old Gravel Pit	1909	960311
O	228m NW	Unspecified Pit	1949	838966
J	236m S	Cuttings	1898	990950
P	250m SW	Railway Sidings	1898	844384
P	269m SW	Railway Sidings	1938	895432
4	285m SW	Railway Sidings	1909	875159



ID	Location	Land Use	Date	Group ID
Q	289m NW	Unspecified Old Quarry	1938	870289
Q	289m NW	Unspecified Old Quarry	1949	870289
Q	298m NW	Unspecified Heap	1872	802781
P	300m SW	Colliery	1909	982937
P	300m SW	Railway Sidings	1938	867062
P	300m SW	Railway Sidings	1949	867062
R	302m SW	Cuttings	1938	937663
R	302m SW	Cuttings	1949	937663
P	302m SW	Colliery	1938	862574
P	302m SW	Colliery	1938	862574
P	306m SW	Colliery	1938	982937
P	306m SW	Colliery	1949	972400
P	306m SW	Colliery	1898	982937
S	315m SW	Unspecified Pit	1949	928737
J	320m S	Cuttings	1989	855391
J	320m S	Cuttings	1992	855391
J	320m S	Cuttings	1980	855391
J	320m S	Cuttings	1974	855391
J	320m S	Cuttings	1985	855391
J	320m S	Cuttings	1964	855391
T	331m SE	Unspecified Depot	1992	818103
S	335m SW	Unspecified Pit	1980	912529
S	335m SW	Unspecified Pit	1974	912529
S	335m SW	Unspecified Pit	1964	912529
Q	339m NW	Unspecified Old Quarry	1898	972654
Q	341m NW	Unspecified Old Quarry	1938	898204
Q	347m NW	Unspecified Old Quarry	1909	898204
5	350m SW	Cuttings	1872	795435



ID	Location	Land Use	Date	Group ID
V	358m N	Cuttings	1898	958573
W	360m N	Cuttings	1909	989649
V	363m N	Cuttings	1938	991392
V	363m N	Cuttings	1949	991392
W	365m N	Cuttings	1938	863398
W	367m N	Cuttings	1980	990769
W	367m N	Cuttings	1974	990769
W	367m N	Cuttings	1964	990769
W	369m N	Cuttings	1989	877175
W	369m N	Cuttings	1985	877175
Q	372m NW	Unspecified Old Quarry	1898	947820
V	376m N	Cuttings	1992	880139
P	376m SW	Unspecified Ground Workings and Heap	1909	806970
P	377m SW	Unspecified Heap	1938	920850
P	377m SW	Unspecified Heap	1938	920850
P	379m SW	Unspecified Heap	1938	888301
P	379m SW	Unspecified Heap	1949	888301
P	380m SW	Unspecified Heap	1898	968036
6	390m SW	Cuttings	1872	940498
J	392m S	Cuttings	1938	883262
J	392m S	Cuttings	1949	883262
J	393m S	Cuttings	1989	883262
J	393m S	Cuttings	1992	883262
J	393m S	Cuttings	1985	883262
J	395m S	Cuttings	1964	883262
J	414m S	Cuttings	1980	866658
J	414m S	Cuttings	1974	866658
P	414m SW	Unspecified Heap	1980	888301



ID	Location	Land Use	Date	Group ID
P	414m SW	Unspecified Heap	1974	888301
P	414m SW	Unspecified Heap	1964	888301
Y	419m W	Police Station	1989	929597
Y	419m W	Police Station	1992	929597
Y	419m W	Police Station	1980	929597
Y	419m W	Police Station	1974	929597
Y	419m W	Police Station	1985	929597
Y	419m W	Police Station	1964	929597
Y	438m W	Smithy	1898	915863
AA	445m SW	Sewage Works	1938	981457
AA	445m SW	Sewage Works	1938	981457
AA	448m SW	Sewage Works	1938	981457
AA	448m SW	Sewage Works	1949	981457
AA	450m SW	Unspecified Works	1980	953208
AA	450m SW	Unspecified Works	1974	953208
AA	450m SW	Unspecified Works	1964	953208
AA	450m SW	Council Sewage Works	1909	832430
J	452m S	Cuttings	1980	883262
J	452m S	Cuttings	1974	883262
Y	452m W	Cuttings	1872	795433
7	453m N	Railway Building	1938	819086
P	454m SW	Railway Sidings	1909	850291
AA	471m SW	Filter Beds	1938	867194
AA	471m SW	Filter Beds	1938	867194
AA	471m SW	Filter Beds	1909	986241
8	472m S	Railway Sidings	1938	794479
AA	472m SW	Filter Beds	1938	973229
AA	472m SW	Filter Beds	1949	973229



ID	Location	Land Use	Date	Group ID
Y	478m W	Smithy	1909	987796
Y	478m W	Smithy	1949	867319
AA	492m SW	Filter Beds	1938	960178
AA	492m SW	Filter Beds	1938	960178
AA	494m SW	Filter Beds	1909	854061
AC	494m S	Cuttings	1909	977854
AC	495m S	Cuttings	1938	865817
AC	495m S	Cuttings	1949	865817
AC	499m S	Cuttings	1938	863029

This data is sourced from Ordnance Survey / Groundsure.

2.2 Historical tanks

Records within 500m

26

Tank features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use - un-grouped map on **page 22**

ID	Location	Land Use	Date	Group ID
C	On site	Unspecified Tank	1912	109514
C	On site	Unspecified Tank	1994	135756
C	On site	Unspecified Tank	1973	126896
C	On site	Unspecified Tank	1962	126896
C	On site	Unspecified Tank	1959	141793
C	On site	Unspecified Tank	1989	141793
C	On site	Unspecified Tank	1989	141793
C	On site	Unspecified Tank	1999	135756
C	On site	Unspecified Tank	1994	135756
C	On site	Unspecified Tank	1993	135756
D	On site	Unspecified Tank	1994	140107



ID	Location	Land Use	Date	Group ID
D	On site	Unspecified Tank	1999	140107
D	On site	Unspecified Tank	1994	140107
D	On site	Unspecified Tank	1993	140107
2	191m W	Unspecified Tank	1912	109515
T	406m SE	Unspecified Tank	1993	133347
T	406m SE	Unspecified Tank	1994	133347
T	406m SE	Unspecified Tank	1999	133347
T	406m SE	Unspecified Tank	1994	133347
T	407m SE	Unspecified Tank	1959	143617
T	407m SE	Unspecified Tank	1989	143617
T	407m SE	Unspecified Tank	1989	143617
AB	488m NE	Tanks	1994	124419
AB	488m NE	Tanks	1999	124419
AB	488m NE	Tanks	1994	124419
AB	488m NE	Tanks	1993	124419

This data is sourced from Ordnance Survey / Groundsure.

2.3 Historical energy features

Records within 500m

25

Energy features digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use - un-grouped map on **page 22**

ID	Location	Land Use	Date	Group ID
A	56m NE	Electricity Substation	1994	71608
A	56m NE	Electricity Substation	1999	71608
A	56m NE	Electricity Substation	1994	71608
A	56m NE	Electricity Substation	1993	71608
M	167m SW	Electricity Substation	1994	73100



ID	Location	Land Use	Date	Group ID
M	167m SW	Electricity Substation	1999	73100
M	167m SW	Electricity Substation	1994	73100
M	167m SW	Electricity Substation	1993	73100
M	173m SW	Electricity Substation	1973	73319
M	173m SW	Electricity Substation	1959	64961
M	173m SW	Electricity Substation	1989	64961
3	200m W	Electricity Substation	1983	60019
U	341m NW	Electricity Substation	1994	78597
U	341m NW	Electricity Substation	1994	78597
U	343m NW	Electricity Substation	1979	82602
U	343m NW	Electricity Substation	1984	82602
U	344m NW	Electricity Substation	1986	76677
X	419m W	Electricity Substation	1993	77184
X	422m W	Electricity Substation	1973	71862
X	424m W	Electricity Substation	1983	67363
Z	440m N	Electricity Substation	1984	67037
Z	440m N	Electricity Substation	1986	67037
Z	441m N	Electricity Substation	1996	73589
Z	441m N	Electricity Substation	1996	73589
Z	443m N	Electricity Substation	1984	69576

This data is sourced from Ordnance Survey / Groundsure.

2.4 Historical petrol stations

Records within 500m

0

Petrol stations digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

This data is sourced from Ordnance Survey / Groundsure.



2.5 Historical garages

Records within 500m

18

Garages digitised from historical Ordnance Survey mapping at high-detail 1:1,250 and 1:2,500 scale. Any records shown are available intelligently grouped in section 1. Grouped and the original un-grouped features can be cross-referenced across sections 1 and 2 using the 'Group ID'.

Features are displayed on the Past land use - un-grouped map on **page 22**

ID	Location	Land Use	Date	Group ID
F	54m SW	Garage	1959	24592
F	54m SW	Garage	1989	24592
F	54m SW	Garage	1989	24592
F	59m SW	Garage	1959	24613
F	59m SW	Garage	1989	24613
F	59m SW	Garage	1989	24613
F	59m SW	Garage	1973	25731
F	59m SW	Garage	1962	25731
F	59m SW	Garage	1973	21021
F	91m W	Garage	1973	27800
F	91m W	Garage	1962	27800
F	92m W	Garage	1959	26893
F	92m W	Garage	1989	26893
F	92m W	Garage	1989	26893
F	94m W	Garage	1993	23908
L	174m SW	Garage	1993	26758
L	176m SW	Garage	1983	26758
L	179m SW	Garage	1973	22508

This data is sourced from Ordnance Survey / Groundsure.



3 Waste and landfill



- Site Outline
- Search buffers in metres (m)
- Waste exemptions

3.1 Active or recent landfill

Records within 500m

0

Active or recently closed landfill sites under Environment Agency/Natural Resources Wales regulation.

This data is sourced from the Environment Agency and Natural Resources Wales.

3.2 Historical landfill (BGS records)

Records within 500m

0

Landfill sites identified on a survey carried out on behalf of the DoE in 1973. These sites may have been closed or operational at this time.

This data is sourced from the British Geological Survey.



3.3 Historical landfill (LA/mapping records)

Records within 500m**0**

Landfill sites identified from Local Authority records and high detail historical mapping.

This data is sourced from the Ordnance Survey/Groundsure and Local Authority records.

3.4 Historical landfill (EA/NRW records)

Records within 500m**0**

Known historical (closed) landfill sites (e.g. sites where there is no PPC permit or waste management licence currently in force). This includes sites that existed before the waste licensing regime and sites that have been licensed in the past but where a licence has been revoked, ceased to exist or surrendered and a certificate of completion has been issued.

This data is sourced from the Environment Agency and Natural Resources Wales.

3.5 Historical waste sites

Records within 500m**0**

Waste site records derived from Local Authority planning records and high detail historical mapping.

This data is sourced from Ordnance Survey/Groundsure and Local Authority records.

3.6 Licensed waste sites

Records within 500m**0**

Active or recently closed waste sites under Environment Agency/Natural Resources Wales regulation.

This data is sourced from the Environment Agency and Natural Resources Wales.

3.7 Waste exemptions

Records within 500m**1**

Activities involving the storage, treatment, use or disposal of waste that are exempt from needing a permit. Exemptions have specific limits and conditions that must be adhered to.

Features are displayed on the Waste and landfill map on **page 33**

ID	Location	Site	Reference	Category	Sub-Category	Description
1	371m SE	Vets Now, Vets Now Wrexham Emergency Clinic, Gatewen Road, New Broughton, Wrexham, Wreccsam, LL116YA	NRW- WME036854	Treating waste exemption	Not on a farm	Sorting and de-naturing of controlled drugs for disposal

This data is sourced from the Environment Agency and Natural Resources Wales.



4 Current industrial land use



- Site Outline
- Search buffers in metres (m)
- Recent industrial land uses
- Licensed pollutant release (Part A(2)/B)
- Licensed Discharges to controlled waters
- Pollution Incidents (EA/NRW)

4.1 Recent industrial land uses

Records within 250m

10

Current potentially contaminative industrial sites.

Features are displayed on the Current industrial land use map on **page 36**

ID	Location	Company	Address	Activity	Category
1	58m E	Electricity Sub Station	Clwyd, LL11	Electrical Features	Infrastructure and Facilities
A	80m NE	Electricity Sub Station	Clwyd, LL11	Electrical Features	Infrastructure and Facilities
A	80m NE	Sewage Ppg	Clwyd, LL11	Waste Storage, Processing and Disposal	Infrastructure and Facilities



ID	Location	Company	Address	Activity	Category
2	143m W	Keys Direct	97, Moss Valley Road, New Broughton, Wrexham, Clwyd, LL11 6JA	Vehicle Repair, Testing and Servicing	Repair and Servicing
3	174m SW	Electricity Sub Station	Clwyd, LL11	Electrical Features	Infrastructure and Facilities
4	197m NE	Sewage Pumping Station	Clwyd, LL11	Waste Storage, Processing and Disposal	Infrastructure and Facilities
B	201m SW	Robertson's Garage	Southsea Road, New Broughton, Wrexham, Clwyd, LL11 6TD	Vehicle Repair, Testing and Servicing	Repair and Servicing
5	213m W	Electricity Sub Station	Clwyd, LL11	Electrical Features	Infrastructure and Facilities
6	229m SW	Price Coaches	The Haven, Bersham Road, New Broughton, Wrexham, Clwyd, LL11 6TF	Vehicle Hire and Rental	Hire Services
7	245m SW	Steve Williams Transport	Bryn Helyg, Main Road, Caego, Wrexham, Clwyd, LL11 6TS	Distribution and Haulage	Transport, Storage and Delivery

This data is sourced from Ordnance Survey.

4.2 Current or recent petrol stations

Records within 500m

0

Open, closed, under development and obsolete petrol stations.

This data is sourced from Experian.

4.3 Electricity cables

Records within 500m

0

High voltage underground electricity transmission cables.

This data is sourced from National Grid.

4.4 Gas pipelines

Records within 500m

0

High pressure underground gas transmission pipelines.

This data is sourced from National Grid.



4.5 Sites determined as Contaminated Land

Records within 500m**0**

Contaminated Land Register of sites designated under Part 2a of the Environmental Protection Act 1990.

This data is sourced from Local Authority records.

4.6 Control of Major Accident Hazards (COMAH)

Records within 500m**0**

Control of Major Accident Hazards (COMAH) sites. This data includes upper and lower tier sites, and includes a historical archive of COMAH sites and Notification of Installations Handling Hazardous Substances (NIHHS) records.

This data is sourced from the Health and Safety Executive.

4.7 Regulated explosive sites

Records within 500m**0**

Sites registered and licensed by the Health and Safety Executive under the Manufacture and Storage of Explosives Regulations 2005 (MSER). The last update to this data was in April 2011.

This data is sourced from the Health and Safety Executive.

4.8 Hazardous substance storage/usage

Records within 500m**0**

Consents granted for a site to hold certain quantities of hazardous substances at or above defined limits in accordance with the Planning (Hazardous Substances) Regulations 2015.

This data is sourced from Local Authority records.

4.9 Historical licensed industrial activities (IPC)

Records within 500m**0**

Integrated Pollution Control (IPC) records of substance releases to air, land and water. This data represents a historical archive as the IPC regime has been superseded.

This data is sourced from the Environment Agency and Natural Resources Wales.



4.10 Licensed industrial activities (Part A(1))

Records within 500m

0

Records of Part A(1) installations regulated under the Environmental Permitting (England and Wales) Regulations 2016 for the release of substances to the environment.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.11 Licensed pollutant release (Part A(2)/B)

Records within 500m

1

Records of Part A(2) and Part B installations regulated under the Environmental Permitting (England and Wales) Regulations 2016 for the release of substances to the environment.

Features are displayed on the Current industrial land use map on **page 36**

ID	Location	Address	Details	
B	206m SW	Robertson's Garage, Southsea Road, New Broughton, Wrexham, LL11 6TX	Process: Waste Oil Burner 0.4 MW Status: New Legislation Applies Permit Type: Part B	Enforcement: No Enforcement Notified. Date of enforcement: No Enforcement Notified. Comment: No Enforcement Notified.

This data is sourced from Local Authority records.

4.12 Radioactive Substance Authorisations

Records within 500m

0

Records of the storage, use, accumulation and disposal of radioactive substances regulated under the Radioactive Substances Act 1993.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.13 Licensed Discharges to controlled waters

Records within 500m

1

Discharges of treated or untreated effluent to controlled waters under the Water Resources Act 1991.

Features are displayed on the Current industrial land use map on **page 36**



ID	Location	Address	Details	
9	478m SW	NEW BROUGHTON COMBINED SEWERAGE (SE, NEW BROUGHTON COMBINED SEWERAGE, COMBINED SEWERAGE (SEE CM 1989	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: CM0049601 Permit Version: 1 Receiving Water: GWENFRO	Status: Effective Issue date: 20/05/1968 Effective Date: 20/05/1968 Revocation Date: -

This data is sourced from the Environment Agency and Natural Resources Wales.

4.14 Pollutant release to surface waters (Red List)

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

Discharges of specified substances under the Environmental Protection (Prescribed Processes and Substances) Regulations 1991.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.15 Pollutant release to public sewer

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

Discharges of Special Category Effluents to the public sewer.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.16 List 1 Dangerous Substances

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

Discharges of substances identified on List I of European Directive E 2006/11/EC, and regulated under the Environmental Damage (Prevention and Remediation) Regulations 2015.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.17 List 2 Dangerous Substances

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

Discharges of substances identified on List II of European Directive E 2006/11/EC, and regulated under the Environmental Damage (Prevention and Remediation) Regulations 2015.

This data is sourced from the Environment Agency and Natural Resources Wales.

4.18 Pollution Incidents (EA/NRW)

Records within 500m

1

Records of substantiated pollution incidents. Since 2006 this data has only included category 1 (major) and 2 (significant) pollution incidents.

Features are displayed on the Current industrial land use map on **page 36**

ID	Location	Details	
8	373m N	Incident Date: 17/09/2014 Incident Identification: 1278590 Pollutant: Pollutant Not Identified Pollutant Description: Not Identified	Water Impact: - Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)

This data is sourced from the Environment Agency and Natural Resources Wales.

4.19 Pollution inventory substances

Records within 500m

0

The pollution inventory (substances) includes reporting on annual emissions of certain regulated substances to air, controlled waters and land. A reporting threshold for each substance is also included. Where emissions fall below the reporting threshold, no value will be given. The data is given for the most recent complete year available.

This data is sourced from the Environment Agency and the Scottish Environment Protection Agency.

4.20 Pollution inventory waste transfers

Records within 500m

0

The pollution inventory (waste transfers) includes reporting on annual transfers and recovery/disposal of controlled wastes from a site. A reporting threshold for each waste type is also included. Where releases fall below the reporting threshold, no value will be given. The data is given for the most recent complete year available.

This data is sourced from the Environment Agency and the Scottish Environment Protection Agency.

4.21 Pollution inventory radioactive waste

Records within 500m

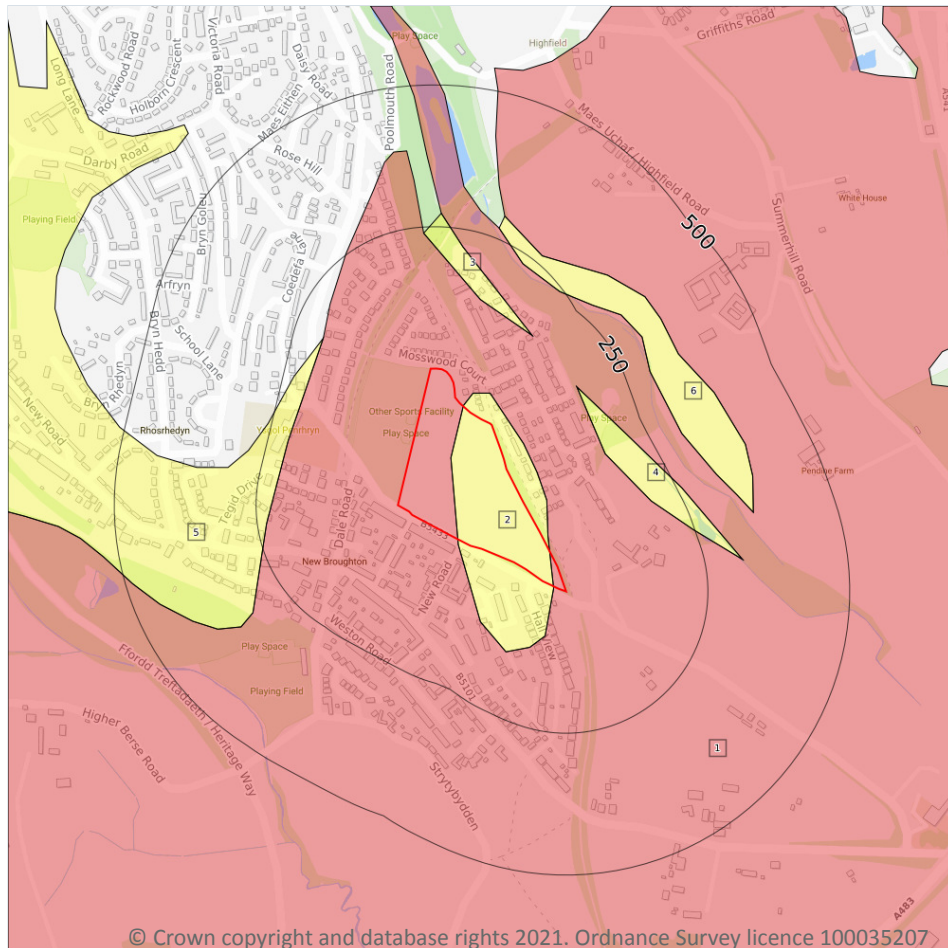
0

The pollution inventory (radioactive wastes) includes reporting on annual releases of radioactive substances from a site, including the means of release. Where releases fall below the reporting threshold, no value will be given. The data is given for the most recent complete year available.

This data is sourced from the Environment Agency and the Scottish Environment Protection Agency.



5 Hydrogeology - Superficial aquifer



- Site Outline
- Search buffers in metres (m)
- Principal
 - Secondary A
 - Secondary B
 - Secondary Undifferentiated
 - Unproductive
 - Unknown

5.1 Superficial aquifer

Records within 500m

6

Aquifer status of groundwater held within superficial geology.

Features are displayed on the Hydrogeology map on **page 42**

ID	Location	Designation	Description
1	On site	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
2	On site	Secondary Undifferentiated	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type

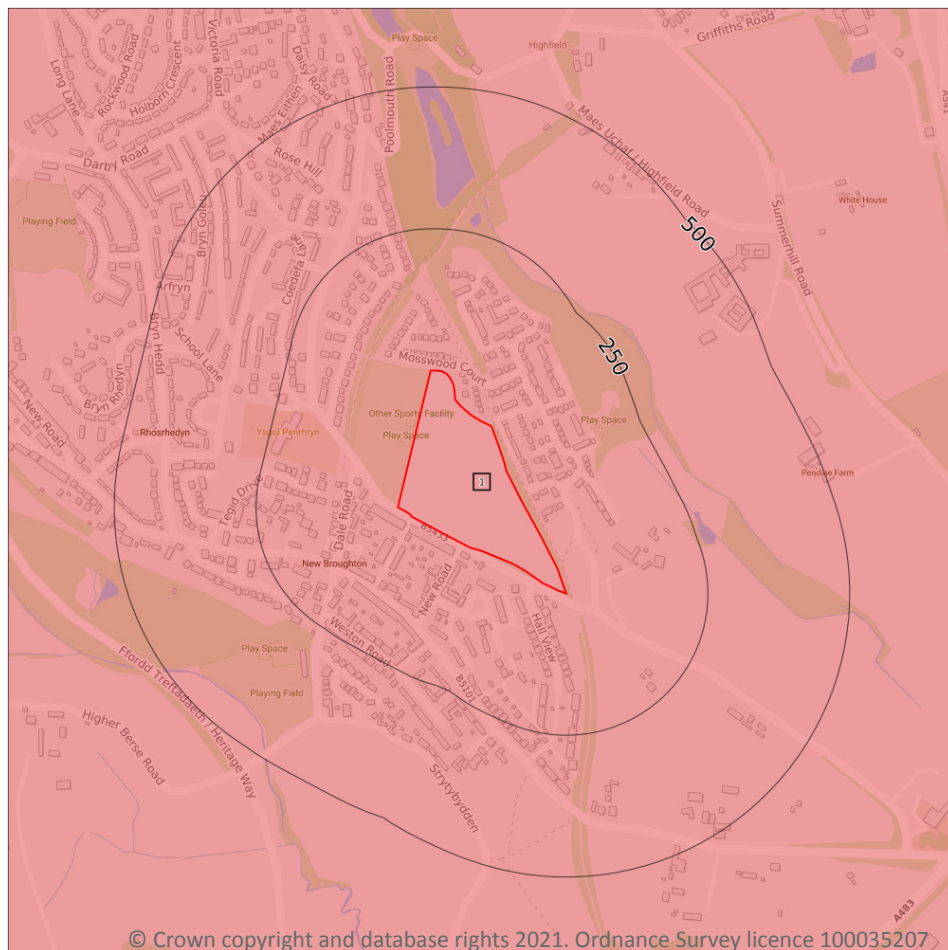


ID	Location	Designation	Description
3	139m NE	Secondary Undifferentiated	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type
4	164m NE	Secondary Undifferentiated	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type
5	197m W	Secondary Undifferentiated	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type
6	233m NE	Secondary Undifferentiated	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type

This data is sourced from the British Geological Survey, the Environment Agency and Natural Resources Wales.



Bedrock aquifer



- Site Outline**
- Search buffers in metres (m)**
- Principal
 - Secondary A
 - Secondary B
 - Secondary Undifferentiated
 - Unproductive

5.2 Bedrock aquifer

Records within 500m

1

Aquifer status of groundwater held within bedrock geology.

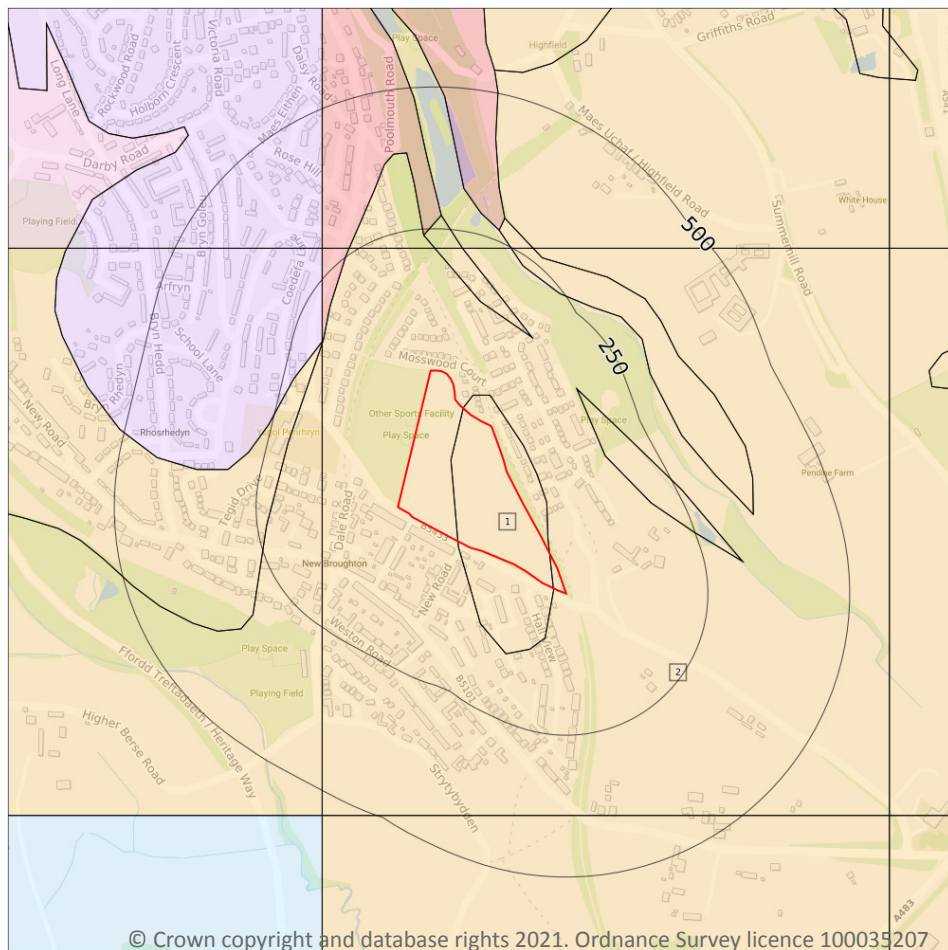
Features are displayed on the Bedrock aquifer map on **page 44**

ID	Location	Designation	Description
1	On site	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers

This data is sourced from the British Geological Survey, the Environment Agency and Natural Resources Wales.



Groundwater vulnerability



Site Outline

Search buffers in metres (m)

Superficial vulnerability

- Principal superficial aquifer, high vulnerability
- Secondary superficial aquifer, high vulnerability
- Principal superficial aquifer, medium vulnerability
- Secondary superficial aquifer, medium vulnerability
- Principal superficial aquifer, low vulnerability
- Secondary superficial aquifer, low vulnerability

Bedrock vulnerability

- Principal bedrock aquifer, high vulnerability
- Secondary bedrock aquifer, high vulnerability
- Principal bedrock aquifer, medium vulnerability
- Secondary bedrock aquifer, medium vulnerability
- Principal bedrock aquifer, low vulnerability
- Secondary bedrock aquifer, low vulnerability

Other information

- Unproductive aquifer
- Soluble rock risk
- Local information

5.3 Groundwater vulnerability

Records within 50m

2

An assessment of the vulnerability of groundwater to a pollutant discharged at ground level based on the hydrological, geological, hydrogeological and soil properties within a one kilometre square grid. Groundwater vulnerability is described as High, Medium or Low as follows:

- High - Areas able to easily transmit pollution to groundwater. They are likely to be characterised by high leaching soils and the absence of low permeability superficial deposits.
- Medium - Intermediate between high and low vulnerability.
- Low - Areas that provide the greatest protection from pollution. They are likely to be characterised by low leaching soils and/or the presence of superficial deposits characterised by a low permeability.

Features are displayed on the Groundwater vulnerability map on **page 45**

ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
1	On site	Summary Classification: Secondary superficial aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: High Infiltration value: >70% Dilution value: 300- 550mm/year	Vulnerability: High Aquifer type: Secondary Thickness: 3-10m Patchiness value: <90% Recharge potential: High	Vulnerability: High Aquifer type: Secondary Flow mechanism: Well connected fractures
2	On site	Summary Classification: Secondary superficial aquifer - High Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: High Infiltration value: >70% Dilution value: 300- 550mm/year	Vulnerability: High Aquifer type: Secondary Thickness: 3-10m Patchiness value: <90% Recharge potential: High	Vulnerability: High Aquifer type: Secondary Flow mechanism: Well connected fractures

This data is sourced from the British Geological Survey, the Environment Agency and Natural Resources Wales.

5.4 Groundwater vulnerability- soluble rock risk

Records on site

0

This dataset identifies areas where solution features that enable rapid movement of a pollutant may be present within a 1km grid square.

This data is sourced from the British Geological Survey and the Environment Agency.

5.5 Groundwater vulnerability- local information

Records on site

0

This dataset identifies areas where additional local information affecting vulnerability is held by the Environment Agency. Further information can be obtained by contacting the Environment Agency local Area groundwater team through the Environment Agency National Customer Call Centre on 03798 506 506 or by email on enquiries@environment-agency.gov.uk.

This data is sourced from the British Geological Survey and the Environment Agency.

Abstractions and Source Protection Zones



- Site Outline
- Search buffers in metres (m)**
- Source Protection Zone 1
Inner catchment
- Source Protection Zone 2
Outer catchment
- Source Protection Zone 3
Total catchment
- Source Protection Zone 4
Zone of Special Interest
- Source Protection Zone 1c
Inner catchment - confined aquifer
- Source Protection Zone 2c
Outer catchment - confined aquifer
- Source Protection Zone 3c
Total catchment - confined aquifer
- Drinking water abstraction licences
Polygon features
- Drinking water abstraction licences
Linear features
- Groundwater abstraction licence (point)
- Groundwater abstraction licence (area)
- Groundwater abstraction licence (linear)
- Surface Water Abstractions (point)
- Surface Water Abstractions (area)
- Surface Water Abstractions (linear)

5.6 Groundwater abstractions

Records within 2000m

3

Licensed groundwater abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, between two points (line data) or a larger area.

Features are displayed on the Abstractions and Source Protection Zones map on **page 47**

ID	Location	Details	
-	1320m SE	Status: Historical Licence No: 24/67/7/0012 Details: Process water Direct Source: EAW Groundwater Point: WELL NO.1 Data Type: Point Name: Carlsberg Tetley Brewing Ltd. Easting: 332600 Northing: 350780	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 25/02/1966 Expiry Date: - Issue No: 100 Version Start Date: 04/05/1970 Version End Date: -
-	1377m SE	Status: Historical Licence No: 24/67/7/0012 Details: Process water Direct Source: EAW Groundwater Point: WELL NO.2 Data Type: Point Name: Carlsberg Tetley Brewing Ltd. Easting: 332610 Northing: 350681	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 25/02/1966 Expiry Date: - Issue No: 100 Version Start Date: 04/05/1970 Version End Date: -
-	1380m SE	Status: Historical Licence No: 24/67/7/0012 Details: Process water Direct Source: EAW Groundwater Point: WELL NO.3 Data Type: Point Name: Carlsberg Tetley Brewing Ltd. Easting: 332630 Northing: 350710	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 25/02/1966 Expiry Date: - Issue No: 100 Version Start Date: 04/05/1970 Version End Date: -

This data is sourced from the Environment Agency and Natural Resources Wales.

5.7 Surface water abstractions

Records within 2000m

5

Licensed surface water abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, a stretch of watercourse or a larger area.

Features are displayed on the Abstractions and Source Protection Zones map on **page 47**



ID	Location	Details	
-	704m S	Status: Historical Licence No: 24/67/7/0135 Details: Spray Irrigation - Direct Direct Source: EAW Surface Water Point: RIVER GWENFRO Data Type: Line Name: Morris Easting: 331190 Northing: 350560	Annual Volume (m ³): 4546 Max Daily Volume (m ³): 511.434 Original Application No: - Original Start Date: 24/02/1967 Expiry Date: - Issue No: 101 Version Start Date: 13/06/2003 Version End Date: -
-	704m S	Status: Active Licence No: 24/67/7/0135 Details: Spray Irrigation - Direct - High Direct Source: - Point: - Data Type: Line Name: - Easting: 331190 Northing: 350560	Annual Volume (m ³): 4,546 Max Daily Volume (m ³): 981.96 Original Application No: - Original Start Date: Jun 13 2003 12:00AM Expiry Date: - Issue No: - Version Start Date: - Version End Date: -
-	1320m S	Status: Historical Licence No: 24/67/7/0135 Details: Spray Irrigation - Direct Direct Source: EAW Surface Water Point: TRIBUTARY OF RIVER GWENFRO Data Type: Line Name: Morris Easting: 331100 Northing: 350060	Annual Volume (m ³): 4546 Max Daily Volume (m ³): 511.434 Original Application No: - Original Start Date: 24/02/1967 Expiry Date: - Issue No: 101 Version Start Date: 13/06/2003 Version End Date: -
-	1343m S	Status: Historical Licence No: 24/67/7/0135 Details: Spray Irrigation - Direct Direct Source: EAW Surface Water Point: TRIBUTARY OF RIVER GWENFRO Data Type: Line Name: Morris Easting: 331800 Northing: 350100	Annual Volume (m ³): 4546 Max Daily Volume (m ³): 511.434 Original Application No: - Original Start Date: 24/02/1967 Expiry Date: - Issue No: 101 Version Start Date: 13/06/2003 Version End Date: -
-	1481m SE	Status: Historical Licence No: 24/67/7/0135 Details: Spray Irrigation - Direct Direct Source: EAW Surface Water Point: RIVER GWENFRO Data Type: Point Name: Rees Easting: 332350 Northing: 350230	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 24/02/1967 Expiry Date: - Issue No: 100 Version Start Date: 28/01/1983 Version End Date: -

This data is sourced from the Environment Agency and Natural Resources Wales.



5.8 Potable abstractions

Records within 2000m

0

Licensed potable water abstractions for sites extracting more than 20 cubic metres of water a day and includes active and historical records. The data may be for a single abstraction point, a stretch of watercourse or a larger area.

This data is sourced from the Environment Agency and Natural Resources Wales.

5.9 Source Protection Zones

Records within 500m

0

Source Protection Zones define the sensitivity of an area around a potable abstraction site to contamination.

This data is sourced from the Environment Agency and Natural Resources Wales.

5.10 Source Protection Zones (confined aquifer)

Records within 500m

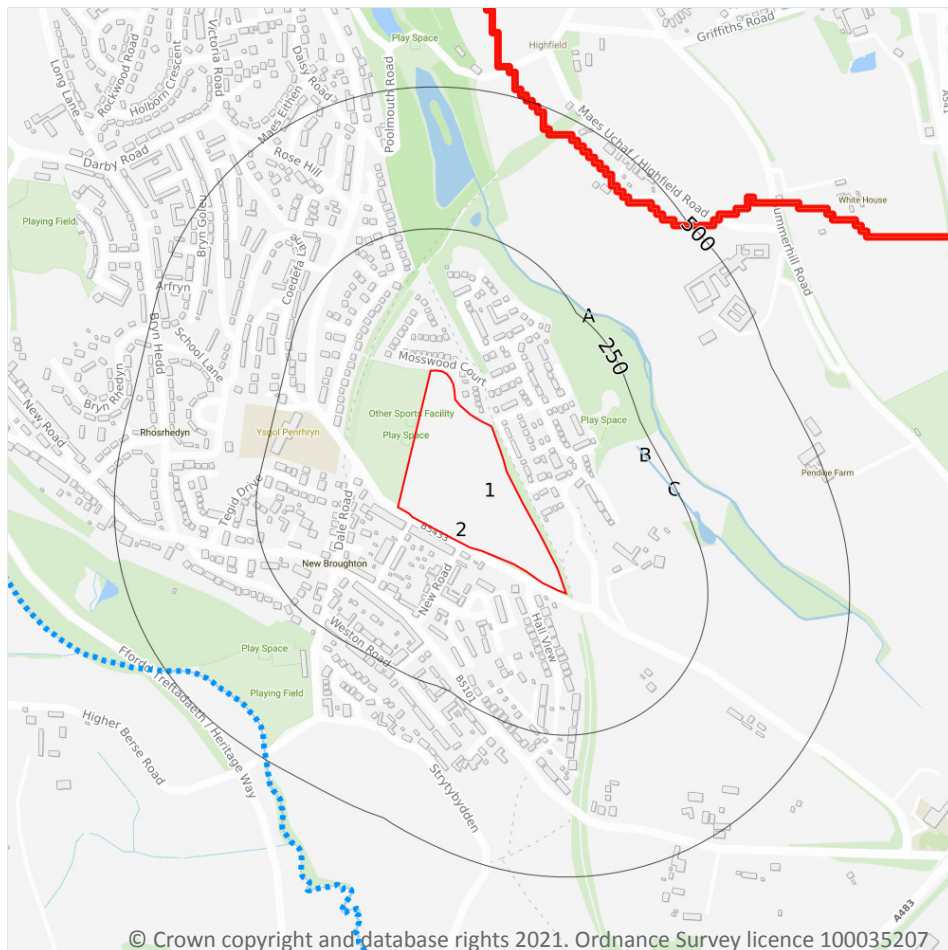
0

Source Protection Zones in the confined aquifer define the sensitivity around a deep groundwater abstraction to contamination. A confined aquifer would normally be protected from contamination by overlying geology and is only considered a sensitive resource if deep excavation/drilling is taking place.

This data is sourced from the Environment Agency and Natural Resources Wales.



6 Hydrology



- Site Outline
- Search buffers in metres (m)
- Water Network (OS MasterMap)
- Surface water features (wider than 5m)
- Surface water features (narrower than 5m)
- ⋯ WFD River, canal and surface water transfer water bodies
- WFD Lake water bodies
- WFD Transitional and coastal water bodies
- WFD Surface water body catchments boundaries
- WFD Groundwater body boundaries

6.1 Water Network (OS MasterMap)

Records within 250m

4

Detailed water network of Great Britain showing the flow and precise central course of every river, stream, lake and canal.

Features are displayed on the Hydrology map on **page 51**

ID	Location	Type of water feature	Ground level	Permanence	Name
A	221m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-



ID	Location	Type of water feature	Ground level	Permanence	Name
B	223m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
B	225m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
C	225m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-

This data is sourced from the Ordnance Survey.

6.2 Surface water features

Records within 250m

2

Covering rivers, streams and lakes (some overlap with OS MasterMap Water Network data in previous section) but additionally covers smaller features such as ponds. Rivers and streams narrower than 5m are represented as a single line. Lakes, ponds and rivers or streams wider than 5m are represented as polygons.

Features are displayed on the Hydrology map on **page 51**

This data is sourced from the Ordnance Survey.

6.3 WFD Surface water body catchments

Records on site

1

The Water Framework Directive is an EU-led framework for the protection of inland surface waters, estuaries, coastal waters and groundwater through river basin-level management planning. In terms of surface water, these basins are broken down into smaller units known as management, operational and water body catchments.

Features are displayed on the Hydrology map on **page 51**

ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
2	On site	River WB catchment	Gwenfro	GB111067051730	Clywedog - Dee	Dee

This data is sourced from the Environment Agency and Natural Resources Wales.



6.4 WFD Surface water bodies

Records identified

1

Surface water bodies under the Directive may be rivers, lakes, estuary or coastal. To achieve the purpose of the Directive, environmental objectives have been set and are reported on for each water body. The progress towards delivery of the objectives is then reported on by the relevant competent authorities at the end of each six-year cycle. The river water body directly associated with the catchment listed in the previous section is detailed below, along with any lake, canal, coastal or artificial water body within 250m of the site.

Features are displayed on the Hydrology map on **page 51**

ID	Location	Type	Name	Water body ID	Overall rating	Chemical rating	Ecological rating	Year
6	441m SW	River	Gwenfro	GB111067051730	Moderate	Fail	Good	2016

This data is sourced from the Environment Agency and Natural Resources Wales.

6.5 WFD Groundwater bodies

Records on site

1

Groundwater bodies are also covered by the Directive and the same regime of objectives and reporting detailed in the previous section is in place.

Features are displayed on the Hydrology map on **page 51**

ID	Location	Name	Water body ID	Overall rating	Chemical rating	Quantitative	Year
1	On site	Dee Carboniferous Coal Measures	GB41102G204800	Poor	Poor	Good	2016

This data is sourced from the Environment Agency and Natural Resources Wales.

7 River and coastal flooding

7.1 Risk of Flooding from Rivers and Sea (RoFRaS)

Records within 50m

0

The chance of flooding from rivers and/or the sea in any given year, based on cells of 50m. Each cell is allocated one of four flood risk categories, taking into account flood defences and their condition; Very low (less than 1 in 1000 chance in any given year), Low (less than 1 in 100 but greater than or equal to 1 in 1000 chance), Medium (less than 1 in 30 but greater than or equal to 1 in 100 chance) or High (greater than or equal to 1 in 30 chance).

This data is sourced from the Environment Agency and Natural Resources Wales.

7.2 Historical Flood Events

Records within 250m

0

Records of historic flooding from rivers, the sea, groundwater and surface water. Records began in 1946 when predecessor bodies started collecting detailed information about flooding incidents, although limited details may be included on flooding incidents prior to this date. Takes into account the presence of defences, structures, and other infrastructure where they existed at the time of flooding, and includes flood extents that may have been affected by overtopping, breaches or blockages.

This data is sourced from the Environment Agency and Natural Resources Wales.

7.3 Flood Defences

Records within 250m

0

Records of flood defences owned, managed or inspected by the Environment Agency and Natural Resources Wales. Flood defences can be structures, buildings or parts of buildings. Typically these are earth banks, stone and concrete walls, or sheet-piling that is used to prevent or control the extent of flooding.

This data is sourced from the Environment Agency and Natural Resources Wales.

7.4 Areas Benefiting from Flood Defences

Records within 250m

0

Areas that would benefit from the presence of flood defences in a 1 in 100 (1%) chance of flooding each year from rivers or 1 in 200 (0.5%) chance of flooding each year from the sea.

This data is sourced from the Environment Agency and Natural Resources Wales.

7.5 Flood Storage Areas

Records within 250m

0

Areas that act as a balancing reservoir, storage basin or balancing pond to attenuate an incoming flood peak to a flow level that can be accepted by the downstream channel or to delay the timing of a flood peak so that its volume is discharged over a longer period.

This data is sourced from the Environment Agency and Natural Resources Wales.



River and coastal flooding - Flood Zones

7.6 Flood Zone 2

Records within 50m

0

Areas of land at risk of flooding, when the presence of flood defences are ignored. Covering land between Flood Zone 3 (see next section) and the extent of the flooding from rivers or the sea with a 1 in 1000 (0.1%) chance of flooding each year.

This data is sourced from the Environment Agency and Natural Resources Wales.

7.7 Flood Zone 3

Records within 50m

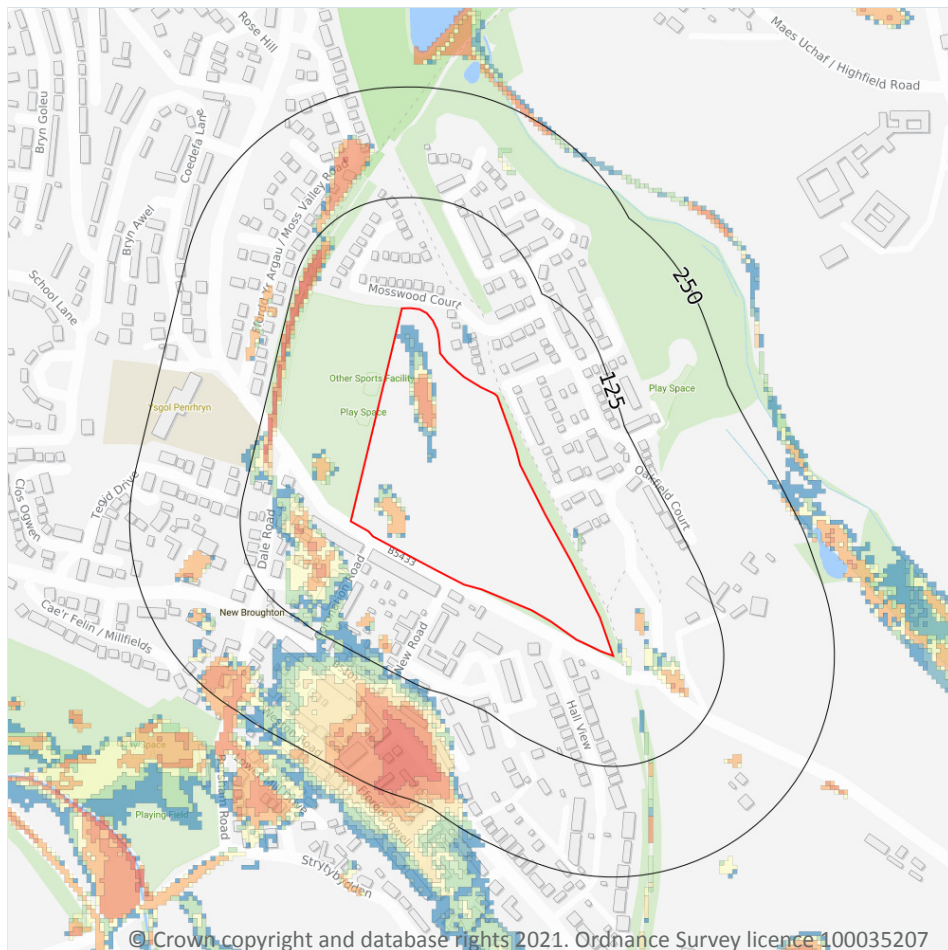
0

Areas of land at risk of flooding, when the presence of flood defences are ignored. Covering land with a 1 in 100 (1%) or greater chance of flooding each year from rivers or a 1 in 200 (0.5%) or greater chance of flooding each year from the sea.

This data is sourced from the Environment Agency and Natural Resources Wales.



8 Surface water flooding



— Site Outline

Search buffers in metres (m)

1 in 1000 return period

- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

1 in 250 return period

- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

1 in 100 return period

- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

1 in 30 return period

- Depth between 0.1m - 0.3m
- Depth between 0.3m - 1.0m
- Depth greater than 1.0m

8.1 Surface water flooding

Highest risk on site

1 in 30 year, 0.3m - 1.0m

Highest risk within 50m

1 in 30 year, 0.3m - 1.0m

Ambiental Risk Analytics surface water (pluvial) FloodMap identifies areas likely to flood as a result of extreme rainfall events, i.e. land naturally vulnerable to surface water ponding or flooding. This data set was produced by simulating 1 in 30 year, 1 in 100 year, 1 in 250 year and 1 in 1,000 year rainfall events. Modern urban drainage systems are typically built to cope with rainfall events between 1 in 20 and 1 in 30 years, though some older ones may flood in a 1 in 5 year rainfall event.

Features are displayed on the Surface water flooding map on **page 57**

The data shown on the map and in the table above shows the highest likelihood of flood events happening at the site. Lower likelihood events may have greater flood depths and hence a greater potential impact on a site.

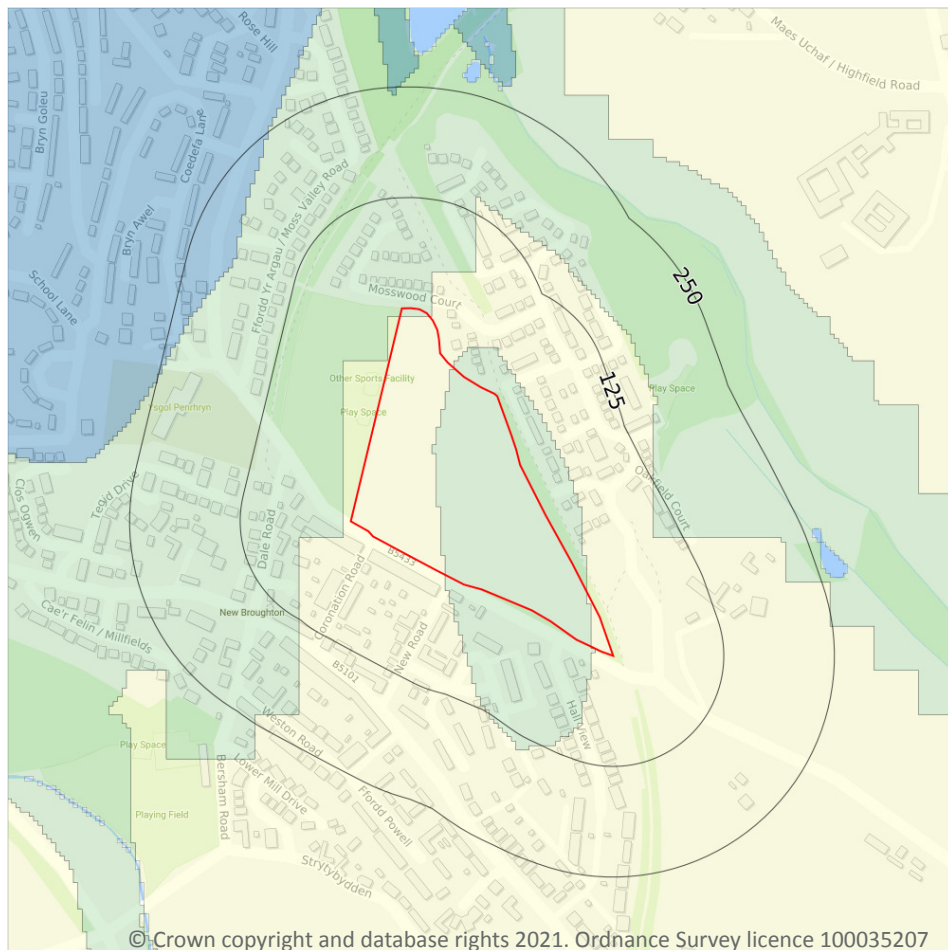
The table below shows the maximum flood depths for a range of return periods for the site.

Return period	Maximum modelled depth
1 in 1000 year	Between 0.3m and 1.0m
1 in 250 year	Between 0.3m and 1.0m
1 in 100 year	Between 0.3m and 1.0m
1 in 30 year	Between 0.3m and 1.0m

This data is sourced from Ambiantal Risk Analytics.



9 Groundwater flooding



- Site Outline**
- Search buffers in metres (m)**
- High
 - Moderate - High
 - Moderate
 - Low
 - Negligible

9.1 Groundwater flooding

Highest risk on site

Moderate

Highest risk within 50m

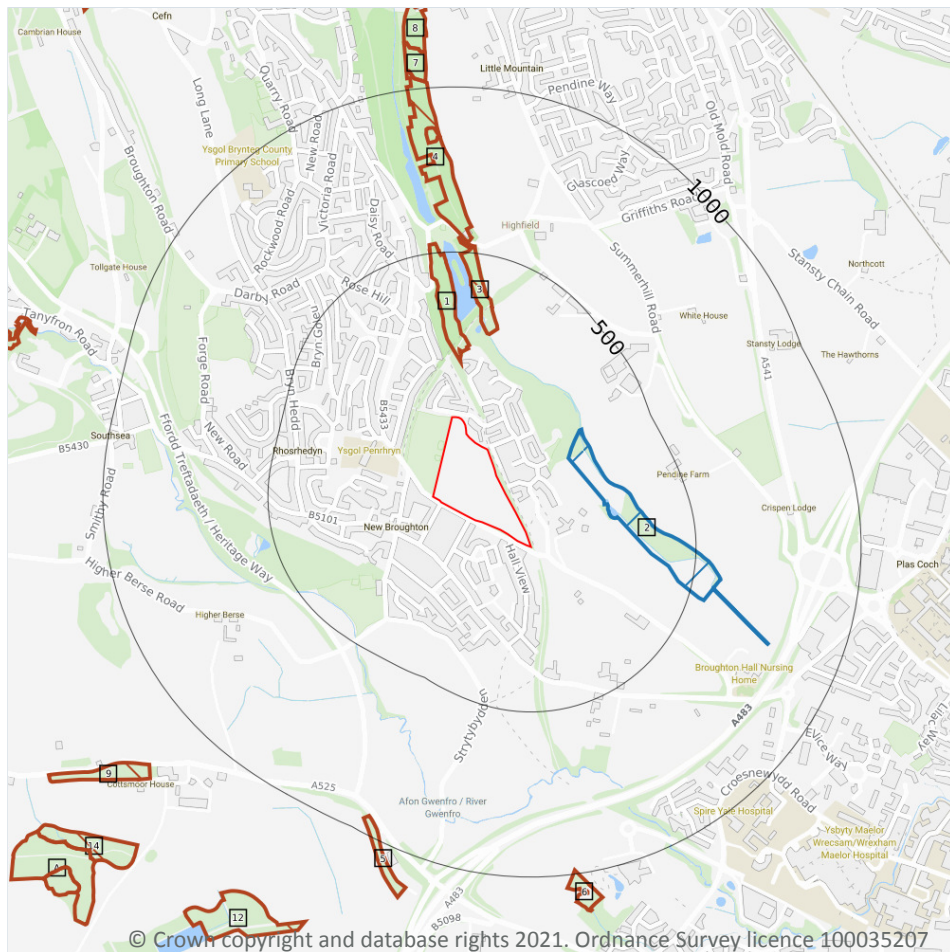
Moderate

Groundwater flooding is caused by unusually high groundwater levels. It occurs when the water table rises above the ground surface or within underground structures such as basements or cellars. Groundwater flooding tends to exhibit a longer duration than surface water flooding, possibly lasting for weeks or months, and as a result it can cause significant damage to property. This risk assessment is based on a 1 in 100 year return period and a 5m Digital Terrain Model (DTM).

Features are displayed on the Groundwater flooding map on **page 59**

This data is sourced from Ambiantal Risk Analytics.

10 Environmental designations



- Site Outline
- Search buffers in metres (m)
- Sites of Special Scientific Interest (SSSI)
- Designated Ancient Woodland

10.1 Sites of Special Scientific Interest (SSSI)

Records within 2000m

1

Sites providing statutory protection for the best examples of UK flora, fauna, or geological or physiographical features. Originally notified under the National Parks and Access to the Countryside Act 1949, SSSIs were re-notified under the Wildlife and Countryside Act 1981. Improved provisions for the protection and management of SSSIs were introduced by the Countryside and Rights of Way Act 2000 (in England and Wales) and (in Scotland) by the Nature Conservation (Scotland) Act 2004 and the Wildlife and Natural Environment (Scotland) Act 2010.

Features are displayed on the Environmental designations map on **page 60**

ID	Location	Name	Data source
2	219m NE	Gatenwen Marsh	Natural Resources Wales



This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.2 Conserved wetland sites (Ramsar sites)

Records within 2000m

0

Ramsar sites are designated under the Convention on Wetlands of International Importance, agreed in Ramsar, Iran, in 1971. They cover all aspects of wetland conservation and wise use, recognizing wetlands as ecosystems that are extremely important for biodiversity conservation in general and for the well-being of human communities. These sites cover a broad definition of wetland; marsh, fen, peatland or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, and even some marine areas.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.3 Special Areas of Conservation (SAC)

Records within 2000m

0

Areas which have been identified as best representing the range and variety within the European Union of habitats and (non-bird) species listed on Annexes I and II to the Directive. SACs are designated under the EC Habitats Directive.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.4 Special Protection Areas (SPA)

Records within 2000m

0

Sites classified by the UK Government under the EC Birds Directive, SPAs are areas of the most important habitat for rare (listed on Annex I to the Directive) and migratory birds within the European Union.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.5 National Nature Reserves (NNR)

Records within 2000m

0

Sites containing examples of some of the most important natural and semi-natural terrestrial and coastal ecosystems in Great Britain. They are managed to conserve their habitats, provide special opportunities for scientific study or to provide public recreation compatible with natural heritage interests.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.



10.6 Local Nature Reserves (LNR)

Records within 2000m

0

Sites managed for nature conservation, and to provide opportunities for research and education, or simply enjoying and having contact with nature. They are declared by local authorities under the National Parks and Access to the Countryside Act 1949 after consultation with the relevant statutory nature conservation agency.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.7 Designated Ancient Woodland

Records within 2000m

25

Ancient woodlands are classified as areas which have been wooded continuously since at least 1600 AD. This includes semi-natural woodland and plantations on ancient woodland sites. 'Wooded continuously' does not mean there is or has previously been continuous tree cover across the whole site, and not all trees within the woodland have to be old.

Features are displayed on the Environmental designations map on **page 60**

ID	Location	Name	Woodland Type
1	169m N	Unknown	Restored Ancient Woodland Site
3	269m N	Unknown	Restored Ancient Woodland Site
4	532m N	Unknown	Restored Ancient Woodland Site
5	946m SW	Unknown	Restored Ancient Woodland Site
6	988m S	Unknown	Restored Ancient Woodland Site
7	1019m N	Unknown	Plantation on Ancient Woodland Site
8	1109m N	Unknown	Restored Ancient Woodland Site
9	1182m SW	Unknown	Restored Ancient Woodland Site
-	1287m N	Unknown	Restored Ancient Woodland Site
11	1287m W	Unknown	Ancient Semi Natural Woodland
12	1320m SW	Unknown	Plantation on Ancient Woodland Site
-	1370m N	Unknown	Restored Ancient Woodland Site
14	1384m SW	Unknown	Restored Ancient Woodland Site
A	1492m SW	Unknown	Plantation on Ancient Woodland Site
-	1574m SW	Unknown	Restored Ancient Woodland Site
A	1576m SW	Unknown	Restored Ancient Woodland Site



ID	Location	Name	Woodland Type
-	1649m W	Unknown	Ancient Semi Natural Woodland
17	1661m NW	Unknown	Ancient Semi Natural Woodland
-	1696m N	Unknown	Ancient Semi Natural Woodland
-	1709m N	Unknown	Ancient Semi Natural Woodland
-	1747m NW	Unknown	Ancient Woodland Site of Unknown Category
-	1754m NW	Unknown	Ancient Woodland Site of Unknown Category
-	1945m W	Unknown	Ancient Semi Natural Woodland
-	1972m S	Unknown	Restored Ancient Woodland Site
-	1985m SW	Unknown	Ancient Semi Natural Woodland

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.8 Biosphere Reserves

Records within 2000m

0

Biosphere Reserves are internationally recognised by UNESCO as sites of excellence to balance conservation and socioeconomic development between nature and people. They are recognised under the Man and the Biosphere (MAB) Programme with the aim of promoting sustainable development founded on the work of the local community.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

10.9 Forest Parks

Records within 2000m

0

These are areas managed by the Forestry Commission designated on the basis of recreational, conservation or scenic interest.

This data is sourced from the Forestry Commission.

10.10 Marine Conservation Zones

Records within 2000m

0

A type of marine nature reserve in UK waters established under the Marine and Coastal Access Act (2009). They are designated with the aim to protect nationally important, rare or threatened habitats and species.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.



10.11 Green Belt

Records within 2000m

0

Areas designated to prevent urban sprawl by keeping land permanently open.

This data is sourced from the Ministry of Housing, Communities and Local Government.

10.12 Proposed Ramsar sites

Records within 2000m

0

Ramsar sites are areas listed as a Wetland of International Importance under the Convention on Wetlands of International Importance especially as Waterfowl Habitat (the Ramsar Convention) 1971. The sites here supplied have a status of 'Proposed' having been identified for potential adoption under the framework.

This data is sourced from Natural England.

10.13 Possible Special Areas of Conservation (pSAC)

Records within 2000m

0

Special Areas of Conservation are areas which have been identified as best representing the range and variety within the European Union of habitats and (non-bird) species listed on Annexes I and II to the Directive. SACs are designated under the EC Habitats Directive. Those sites supplied here are those with a status of 'Possible' having been identified for potential adoption under the framework.

This data is sourced from Natural England and Natural Resources Wales.

10.14 Potential Special Protection Areas (pSPA)

Records within 2000m

0

Special Protection Areas (SPAs) are areas designated (or 'classified') under the European Union Wild Birds Directive for the protection of nationally and internationally important populations of wild birds. Those sites supplied here are those with a status of 'Potential' having been identified for potential adoption under the framework.

This data is sourced from Natural England.

10.15 Nitrate Sensitive Areas

Records within 2000m

0

Areas where nitrate concentrations in drinking water sources exceeded or was at risk of exceeding the limit of 50 mg/l set by the 1980 EC Drinking Water Directive. Voluntary agricultural measures as a means of reducing the levels of nitrate were introduced by DEFRA as MAFF, with payments being made to farmers who complied. The scheme was started as a pilot in 1990 in ten areas, later implemented within 32 areas. The scheme was



closed to further new entrants in 1998, although existing agreements continued for their full term. All Nitrate Sensitive Areas fell within the areas designated as Nitrate Vulnerable Zones (NVZs) in 1996 under the EC Nitrate Directive (91/676/EEC).

This data is sourced from Natural England.

10.16 Nitrate Vulnerable Zones

Records within 2000m

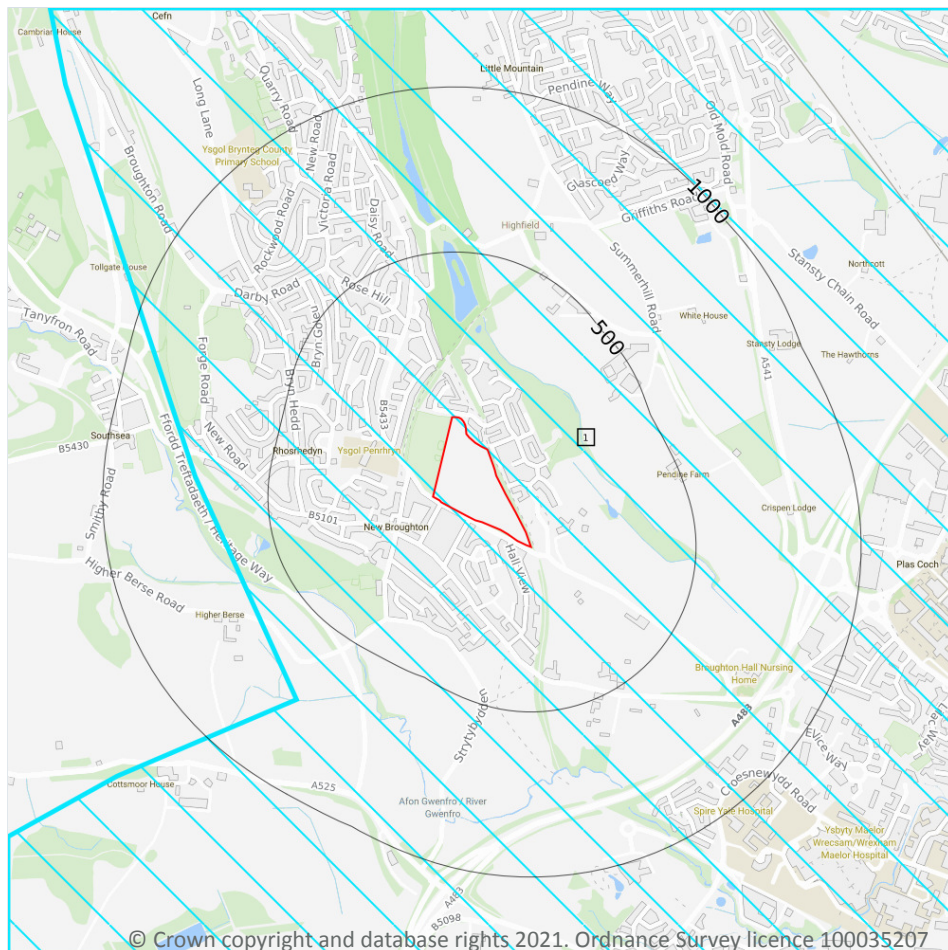
0

Areas at risk from agricultural nitrate pollution designated under the EC Nitrate Directive (91/676/EEC). These are areas of land that drain into waters polluted by nitrates. Farmers operating within these areas have to follow mandatory rules to tackle nitrate loss from agriculture.

This data is sourced from Natural England and Natural Resources Wales.



SSSI Impact Zones and Units



- Site Outline
- Search buffers in metres (m)
- SSSI Impact Risk Zones
- SSSI Units
- Not recorded
- Favourable
- Unfavourable - Recovering
- Unfavourable - No change
- Unfavourable - Declining
- Partially destroyed
- Destroyed

10.17 SSSI Impact Risk Zones

Records on site

1

Developed to allow rapid initial assessment of the potential risks to SSSIs posed by development proposals. They define zones around each SSSI which reflect the particular sensitivities of the features for which it is notified and indicate the types of development proposal which could potentially have adverse impacts.

Features are displayed on the SSSI Impact Zones and Units map on **page 66**

ID	Location	Type of developments requiring consultation
1	On site	Air pollution - Livestock & poultry units with floorspace > 500m², slurry lagoons > 4000m². Combustion - General combustion processes >50MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/ combustion



This data is sourced from Natural England.

10.18 SSSI Units

Records within 2000m

0

Divisions of SSSIs used to record management and condition details. Units are the smallest areas for which Natural England gives a condition assessment, however, the size of units varies greatly depending on the types of management and the conservation interest.

This data is sourced from Natural England and Natural Resources Wales.



11 Visual and cultural designations



- Site Outline
- Search buffers in metres (m)
- Listed buildings
- Conservation areas
- Conservation areas - no data
- National Parks
- Areas of Outstanding Natural Beauty
- Registered parks and gardens
- Scheduled Monuments
- World Heritage Sites

11.1 World Heritage Sites

Records within 250m

0

Sites designated for their globally important cultural or natural interest requiring appropriate management and protection measures. World Heritage Sites are designated to meet the UK's commitments under the World Heritage Convention.

This data is sourced from Historic England, Cadw and Historic Environment Scotland.

11.2 Area of Outstanding Natural Beauty

Records within 250m

0

Areas of Outstanding Natural Beauty (AONB) are conservation areas, chosen because they represent 18% of the finest countryside. Each AONB has been designated for special attention because of the quality of their flora, fauna, historical and cultural associations, and/or scenic views. The National Parks and Access to the Countryside Act of 1949 created AONBs and the Countryside and Rights of Way Act, 2000 added further regulation and protection. There are likely to be restrictions to some developments within these areas.

This data is sourced from Natural England, Natural Resources Wales and Scottish Natural Heritage.

11.3 National Parks

Records within 250m

0

In England and Wales, the purpose of National Parks is to conserve and enhance landscapes within the countryside whilst promoting public enjoyment of them and having regard for the social and economic well-being of those living within them. In Scotland National Parks have the additional purpose of promoting the sustainable use of the natural resources of the area and the sustainable social and economic development of its communities. The National Parks and Access to the Countryside Act 1949 established the National Park designation in England and Wales, and The National Parks (Scotland) Act 2000 in Scotland.

This data is sourced from Natural England, Natural Resources Wales and the Scottish Government.

11.4 Listed Buildings

Records within 250m

2

Buildings listed for their special architectural or historical interest. Building control in the form of 'listed building consent' is required in order to make any changes to that building which might affect its special interest. Listed buildings are graded to indicate their relative importance, however building controls apply to all buildings equally, irrespective of their grade, and apply to the interior and exterior of the building in its entirety, together with any curtilage structures.

Features are displayed on the Visual and cultural designations map on **page 68**

ID	Location	Name	Grade	Reference Number	Listed date
1	175m E	Gatewen Hall, Set Back From The Main Road And Approached Via A Narrow Lane	II	3176	13/10/1966
2	203m W	Millward House, Close To The Roundabout At The NW End Of New Broughton, On The N Side Of The Road Leading To Southsea And Brymbo	II	1570	07/06/1963

This data is sourced from Historic England, Cadw and Historic Environment Scotland.



11.5 Conservation Areas

Records within 250m

0

Local planning authorities are obliged to designate as conservation areas any parts of their own area that are of special architectural or historic interest, the character and appearance of which it is desirable to preserve or enhance. Designation of a conservation area gives broader protection than the listing of individual buildings. All the features within the area, listed or otherwise, are recognised as part of its character. Conservation area designation is the means of recognising the importance of all factors and of ensuring that planning decisions address the quality of the landscape in its broadest sense.

This data is sourced from Historic England, Cadw and Historic Environment Scotland.

11.6 Scheduled Ancient Monuments

Records within 250m

0

A scheduled monument is an historic building or site that is included in the Schedule of Monuments kept by the Secretary of State for Digital, Culture, Media and Sport. The regime is set out in the Ancient Monuments and Archaeological Areas Act 1979. The Schedule of Monuments has c.20,000 entries and includes sites such as Roman remains, burial mounds, castles, bridges, earthworks, the remains of deserted villages and industrial sites. Monuments are not graded, but all are, by definition, considered to be of national importance.

This data is sourced from Historic England, Cadw and Historic Environment Scotland.

11.7 Registered Parks and Gardens

Records within 250m

0

Parks and gardens assessed to be of particular interest and of special historic interest. The emphasis being on 'designed' landscapes, rather than on planting or botanical importance. Registration is a 'material consideration' in the planning process, meaning that planning authorities must consider the impact of any proposed development on the special character of the landscape.

This data is sourced from Historic England, Cadw and Historic Environment Scotland.



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ID	Location	Classification	Description
8	147m NE	Grade 3b	Moderate quality agricultural land
9	152m NE	Grade 4	Poor quality agricultural land
12	216m NE	Grade 2	Good quality agricultural land
14	217m NE	Grade 2	Good quality agricultural land
16	234m N	Grade 2	Good quality agricultural land
17	249m NE	Grade 3b	Moderate quality agricultural land

This data is sourced from Natural Resources Wales.

12.2 Open Access Land

Records within 250m

0

The Countryside and Rights of Way Act 2000 (CROW Act) gives a public right of access to land without having to use paths. Access land includes mountains, moors, heaths and downs that are privately owned. It also includes common land registered with the local council and some land around the England Coast Path. Generally permitted activities on access land are walking, running, watching wildlife and climbing.

This data is sourced from Natural England and Natural Resources Wales.

12.3 Tree Felling Licences

Records within 250m

0

Felling Licence Application (FLA) areas approved by Forestry Commission England. Anyone wishing to fell trees must ensure that a licence or permission under a grant scheme has been issued by the Forestry Commission before any felling is carried out or that one of the exceptions apply.

This data is sourced from the Forestry Commission.

12.4 Environmental Stewardship Schemes

Records within 250m

0

Environmental Stewardship covers a range of schemes that provide financial incentives to farmers, foresters and land managers to look after and improve the environment. The schemes identified may be historical schemes that have now expired, or may still be active.

This data is sourced from Natural England.



12.5 Countryside Stewardship Schemes

Records within 250m

0

Countryside Stewardship covers a range of schemes that provide financial incentives to farmers, foresters and land managers to look after and improve the environment. Main objectives are to improve the farmed environment for wildlife and to reduce diffuse water pollution.

This data is sourced from Natural England.



13 Habitat designations

13.1 Priority Habitat Inventory

Records within 250m

0

Habitats of principal importance as named under Natural Environment and Rural Communities Act (2006) Section 41.

This data is sourced from Natural England.

13.2 Habitat Networks

Records within 250m

0

Habitat networks for 18 priority habitat networks (based primarily, but not exclusively, on the priority habitat inventory) and areas suitable for the expansion of networks through restoration and habitat creation.

This data is sourced from Natural England.

13.3 Open Mosaic Habitat

Records within 250m

0

Sites verified as Open Mosaic Habitat. Mosaic habitats are brownfield sites that are identified under the UK Biodiversity Action Plan as a priority habitat due to the habitat variation within a single site, supporting an array of invertebrates.

This data is sourced from Natural England.

13.4 Limestone Pavement Orders

Records within 250m

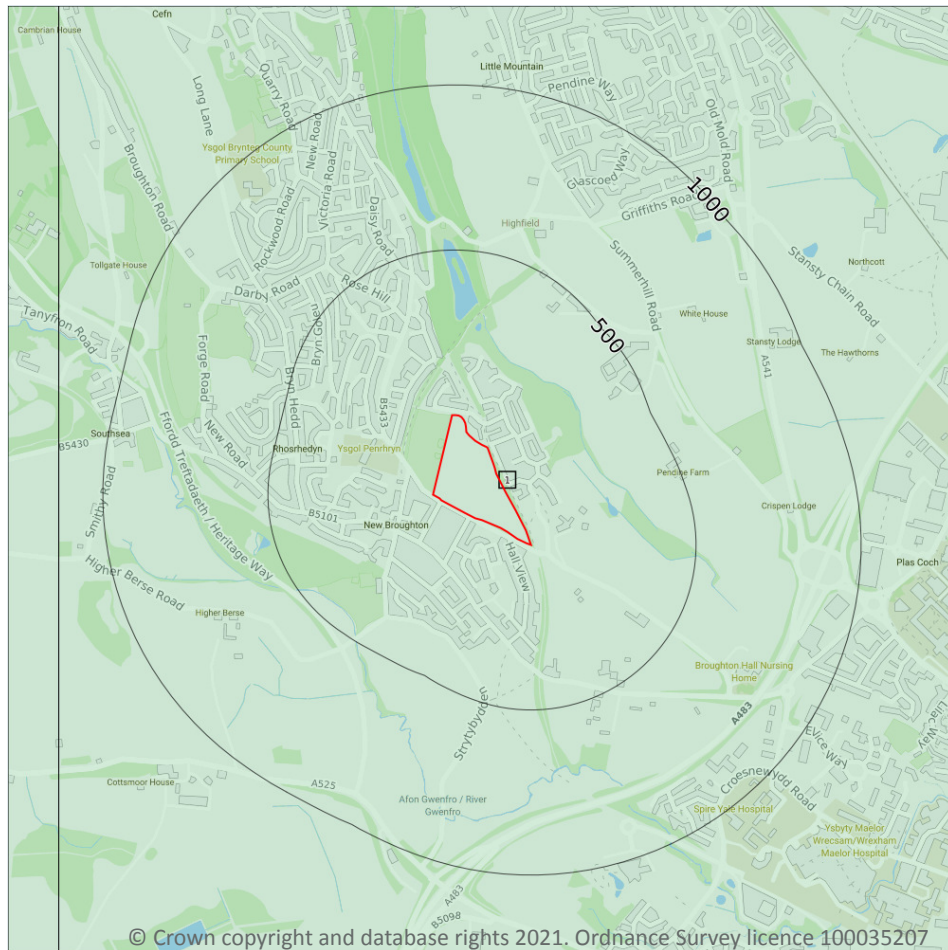
0

Limestone pavements are outcrops of limestone where the surface has been worn away by natural means over millennia. These rocks have the appearance of paving blocks, hence their name. Not only do they have geological interest, they also provide valuable habitats for wildlife. These habitats are threatened due to their removal for use in gardens and water features. Many limestone pavements have been designated as SSSIs which affords them some protection. In addition, Section 34 of the Wildlife and Countryside Act 1981 gave them additional protection via the creation of Limestone Pavement Orders, which made it a criminal offence to remove any part of the outcrop. The associated Limestone Pavement Priority Habitat is part of the UK Biodiversity Action Plan priority habitat in England.

This data is sourced from Natural England.



14 Geology 1:10,000 scale - Availability



— Site Outline
Search buffers in metres (m)

- Full coverage
- Partial coverage
- No coverage

14.1 10k Availability

Records within 500m

1

An indication on the coverage of 1:10,000 scale geology data for the site, the most detailed dataset provided by the British Geological Survey. Either 'Full', 'Partial' or 'No coverage' for each geological theme.

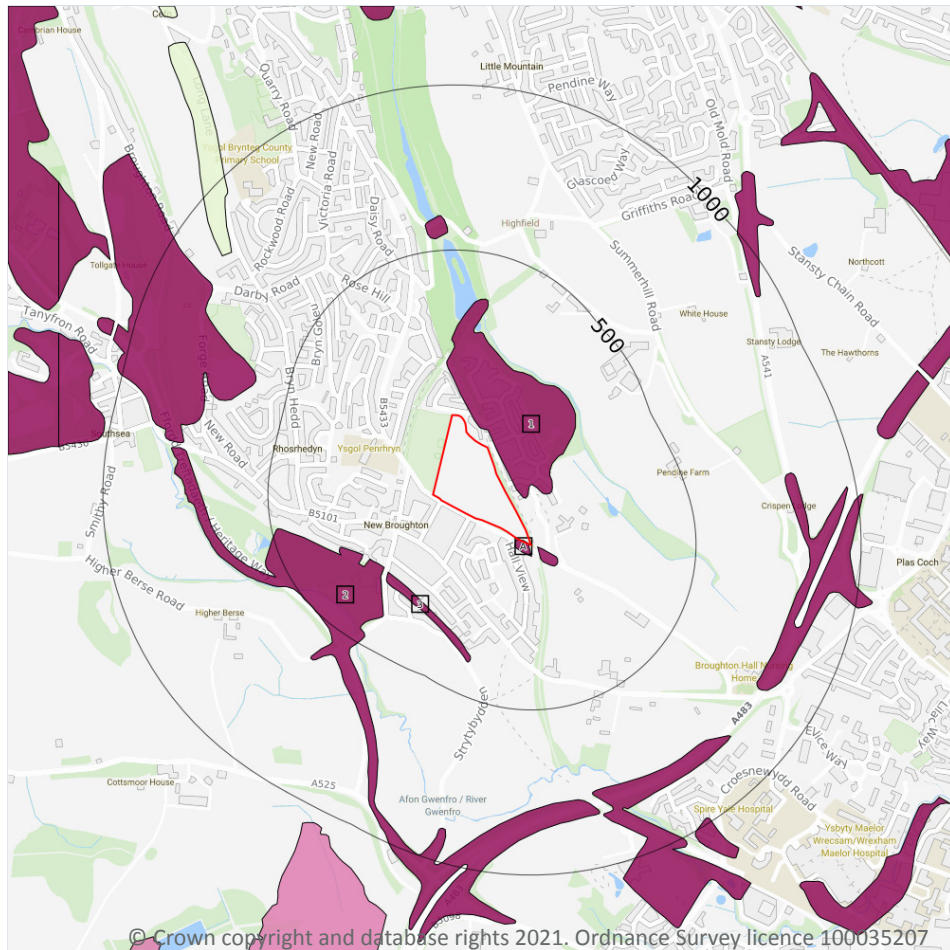
Features are displayed on the Geology 1:10,000 scale - Availability map on **page 75**

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	Full	Full	Full	Full	SJ35SW

This data is sourced from the British Geological Survey.



Geology 1:10,000 scale - Artificial and made ground



— Site Outline
Search buffers in metres (m)

- Reclaimed ground
- Made ground
- Worked ground
- Infilled ground
- Disturbed ground
- Landscaped ground

14.2 Artificial and made ground (10k)

Records within 500m

5

Details of made, worked, infilled, disturbed and landscaped ground at 1:10,000 scale. Artificial ground can be associated with potentially contaminated material, unpredictable engineering conditions and instability.

Features are displayed on the Geology 1:10,000 scale - Artificial and made ground map on **page 76**

ID	Location	LEX Code	Description	Rock description
A	On site	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
A	22m E	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
1	23m NE	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
2	265m SW	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit

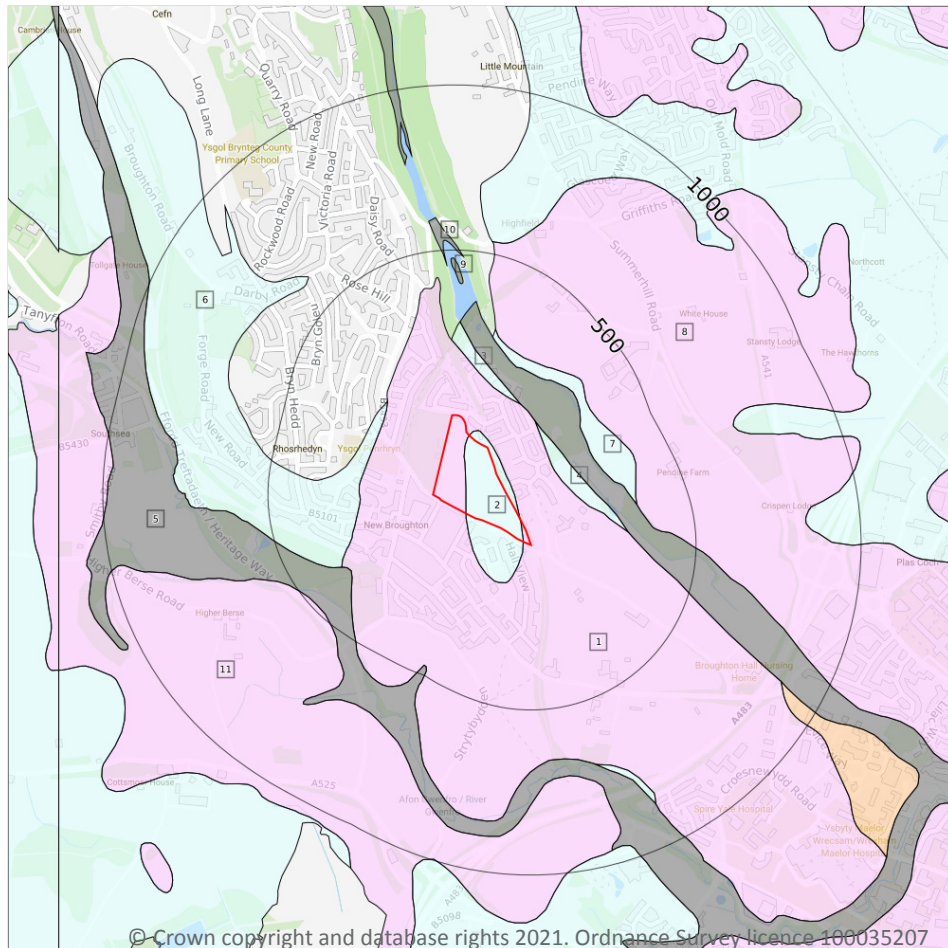


ID	Location	LEX Code	Description	Rock description
3	271m SW	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit

This data is sourced from the British Geological Survey.



Geology 1:10,000 scale - Superficial



Site Outline

Search buffers in metres (m)

Landslip (10k)

Superficial geology (10k)
Please see table for more details.

14.3 Superficial geology (10k)

Records within 500m

11

Superficial geological deposits at 1:10,000 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 1:10,000 scale - Superficial map on **page 78**

ID	Location	LEX Code	Description	Rock description
1	On site	GFDU-XSV	Glaciofluvial Deposits - Sand And Gravel	Sand And Gravel
2	On site	TILL-DMTN	Till - Diamicton	Diamicton
3	132m NE	TILL-DMTN	Till - Diamicton	Diamicton
4	161m NE	TILL-DMTN	Till - Diamicton	Diamicton



ID	Location	LEX Code	Description	Rock description
5	162m NE	ALV-C	Alluvium - Clay (unlithified Deposits Coding Scheme)	Clay
6	197m W	TILL-DMTN	Till - Diamicton	Diamicton
7	225m NE	TILL-DMTN	Till - Diamicton	Diamicton
8	254m NE	GFDU-XSV	Glaciofluvial Deposits - Sand And Gravel	Sand And Gravel
9	398m N	ALV-C	Alluvium - Clay (unlithified Deposits Coding Scheme)	Clay
10	457m N	ALV-C	Alluvium - Clay (unlithified Deposits Coding Scheme)	Clay
11	485m SW	GFDU-XSV	Glaciofluvial Deposits - Sand And Gravel	Sand And Gravel

This data is sourced from the British Geological Survey.

14.4 Landslip (10k)

Records within 500m

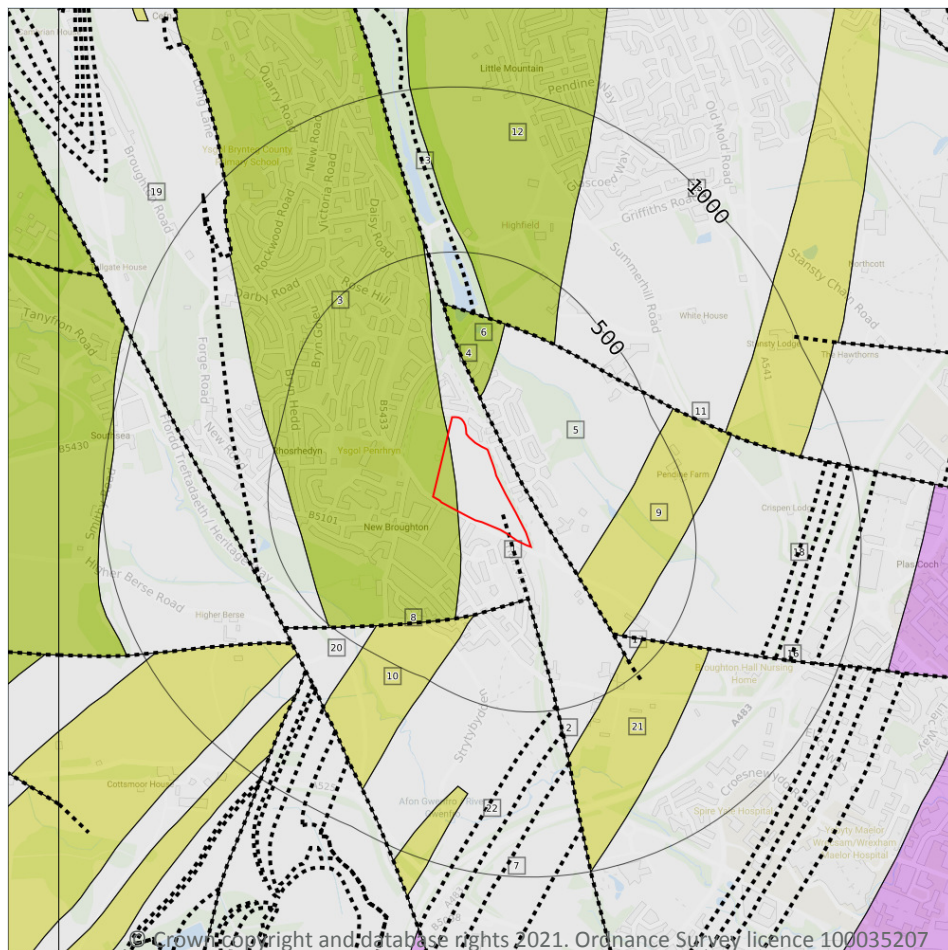
0

Mass movement deposits on BGS geological maps at 1:10,000 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.



Geology 1:10,000 scale - Bedrock



Site Outline

Search buffers in metres (m)

Bedrock faults and other linear features (10k)

Bedrock geology (10k)
Please see table for more details.

14.5 Bedrock geology (10k)

Records within 500m

15

Bedrock geology at 1:10,000 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 1:10,000 scale - Bedrock map on **page 80**

ID	Location	LEX Code	Description	Rock age
1	On site	PLMC-MDSS	Pennine Lower Coal Measures Formation And Pennine Middle Coal Measures Formation (undifferentiated) - Mudstone, Siltstone And Sandstone	Bolsovia Sub-age - Langsettian Sub-age
3	On site	CF-SDST	Cefn Rock - Sandstone	Bolsovia Sub-age

ID	Location	LEX Code	Description	Rock age
5	48m NE	PLMC-MDSS	Pennine Lower Coal Measures Formation And Pennine Middle Coal Measures Formation (undifferentiated) - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Langsettian Sub-age
6	86m NE	CF-SDST	Cefn Rock - Sandstone	Bolsovian Sub-age
7	158m S	PLMC-MDSS	Pennine Lower Coal Measures Formation And Pennine Middle Coal Measures Formation (undifferentiated) - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Langsettian Sub-age
9	165m SE	PLMC-SDST	Pennine Lower Coal Measures Formation And Pennine Middle Coal Measures Formation (undifferentiated) - Sandstone	Bolsovian Sub-age - Langsettian Sub-age
10	259m SW	PLMC-SDST	Pennine Lower Coal Measures Formation And Pennine Middle Coal Measures Formation (undifferentiated) - Sandstone	Bolsovian Sub-age - Langsettian Sub-age
12	314m N	CF-SDST	Cefn Rock - Sandstone	Bolsovian Sub-age
13	314m N	PLMC-MDSS	Pennine Lower Coal Measures Formation And Pennine Middle Coal Measures Formation (undifferentiated) - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Langsettian Sub-age
15	361m NE	PLMC-MDSS	Pennine Lower Coal Measures Formation And Pennine Middle Coal Measures Formation (undifferentiated) - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Langsettian Sub-age
17	363m SE	PLMC-MDSS	Pennine Lower Coal Measures Formation And Pennine Middle Coal Measures Formation (undifferentiated) - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Langsettian Sub-age
18	382m SE	PLMC-MDSS	Pennine Lower Coal Measures Formation And Pennine Middle Coal Measures Formation (undifferentiated) - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Langsettian Sub-age
19	415m W	PLMC-MDSS	Pennine Lower Coal Measures Formation And Pennine Middle Coal Measures Formation (undifferentiated) - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Langsettian Sub-age
20	422m SW	PLMC-MDSS	Pennine Lower Coal Measures Formation And Pennine Middle Coal Measures Formation (undifferentiated) - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Langsettian Sub-age
21	431m SE	PLMC-SDST	Pennine Lower Coal Measures Formation And Pennine Middle Coal Measures Formation (undifferentiated) - Sandstone	Bolsovian Sub-age - Langsettian Sub-age

This data is sourced from the British Geological Survey.



14.6 Bedrock faults and other linear features (10k)

Records within 500m

7

Linear features at the ground or bedrock surface at 1:10,000 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.

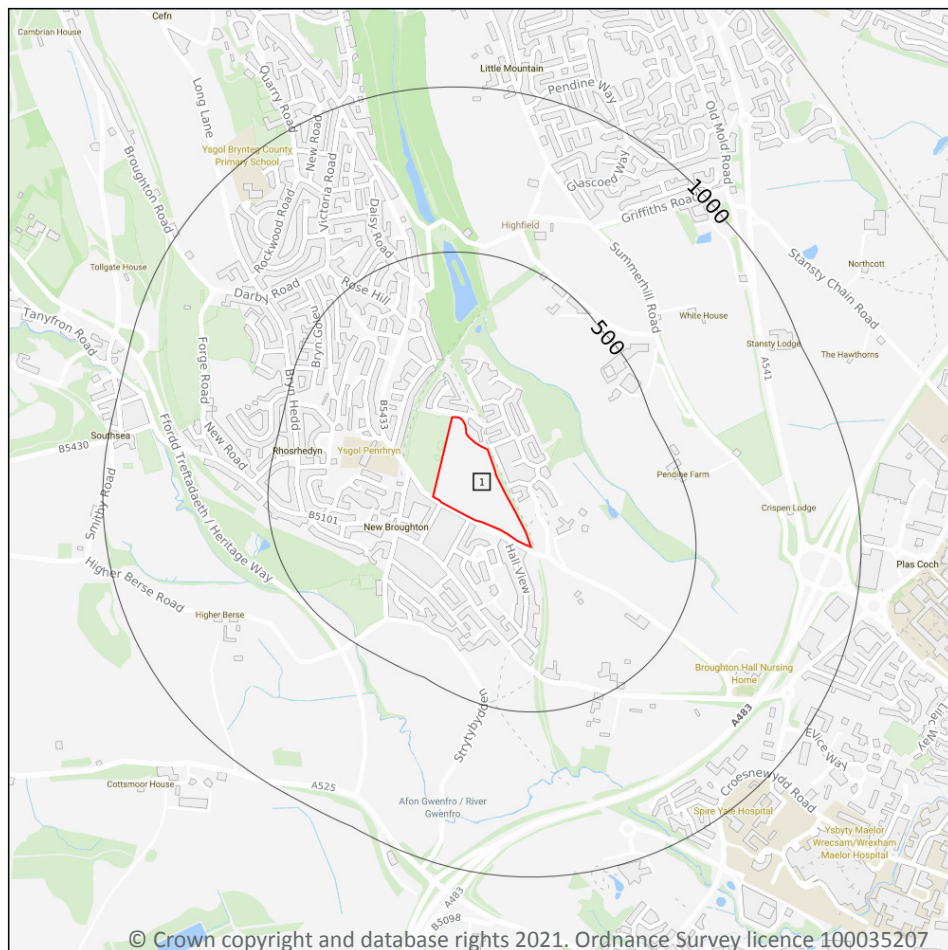
Features are displayed on the Geology 1:10,000 scale - Bedrock map on **page 80**

ID	Location	Category	Description
2	On site	FAULT	Normal fault, inferred
4	48m NE	FAULT	Normal fault, inferred
8	158m S	FAULT	Normal fault, inferred
11	314m N	FAULT	Normal fault, inferred
14	318m N	ROCK	Coal seam, inferred
16	363m SE	FAULT	Normal fault, inferred
22	487m S	ROCK	Coal seam, inferred

This data is sourced from the British Geological Survey.



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.

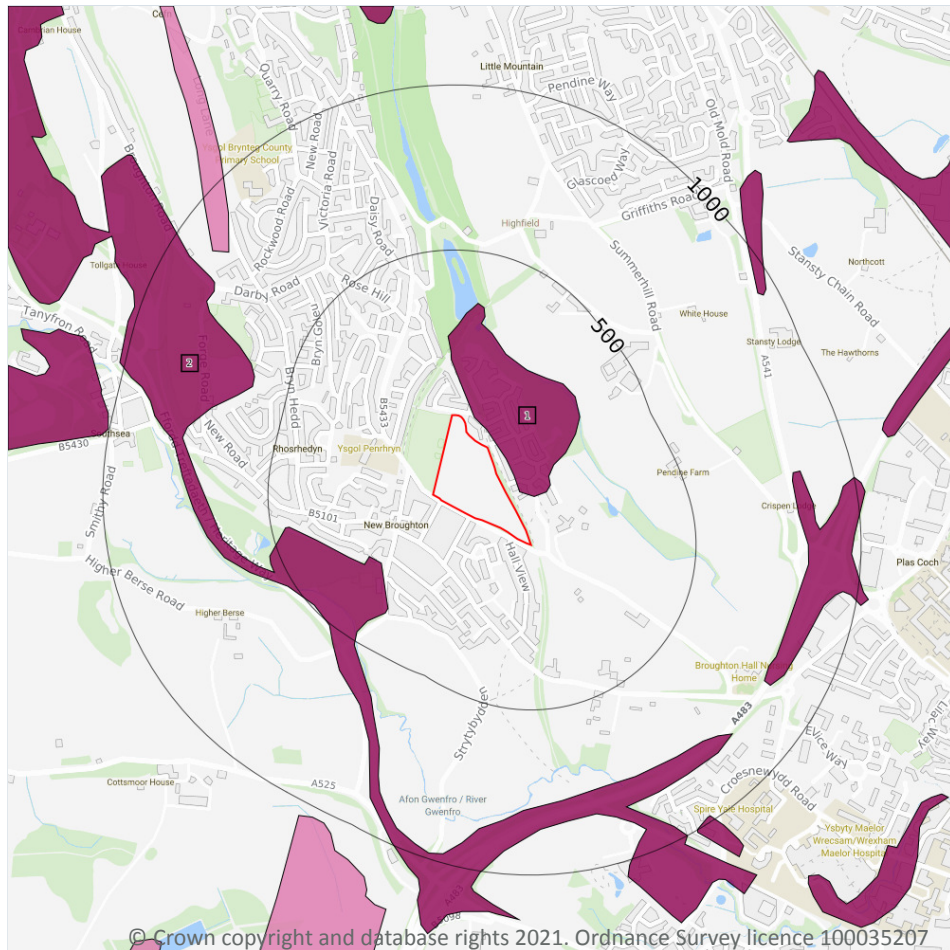
Features are displayed on the Geology 1:50,000 scale - Availability map on **page 83**

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



- Site Outline
- Search buffers in metres (m)
- Made ground
 - Worked ground
 - Infilled ground
 - Disturbed ground
 - Landscaped ground

15.2 Artificial and made ground (50k)

Records within 500m

2

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.

Features are displayed on the Geology 1:50,000 scale - Artificial and made ground map on **page 84**

ID	Location	LEX Code	Description	Rock description
1	29m NE	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
2	260m SW	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT

This data is sourced from the British Geological Survey.

15.3 Artificial ground permeability (50k)

Records within 50m

1

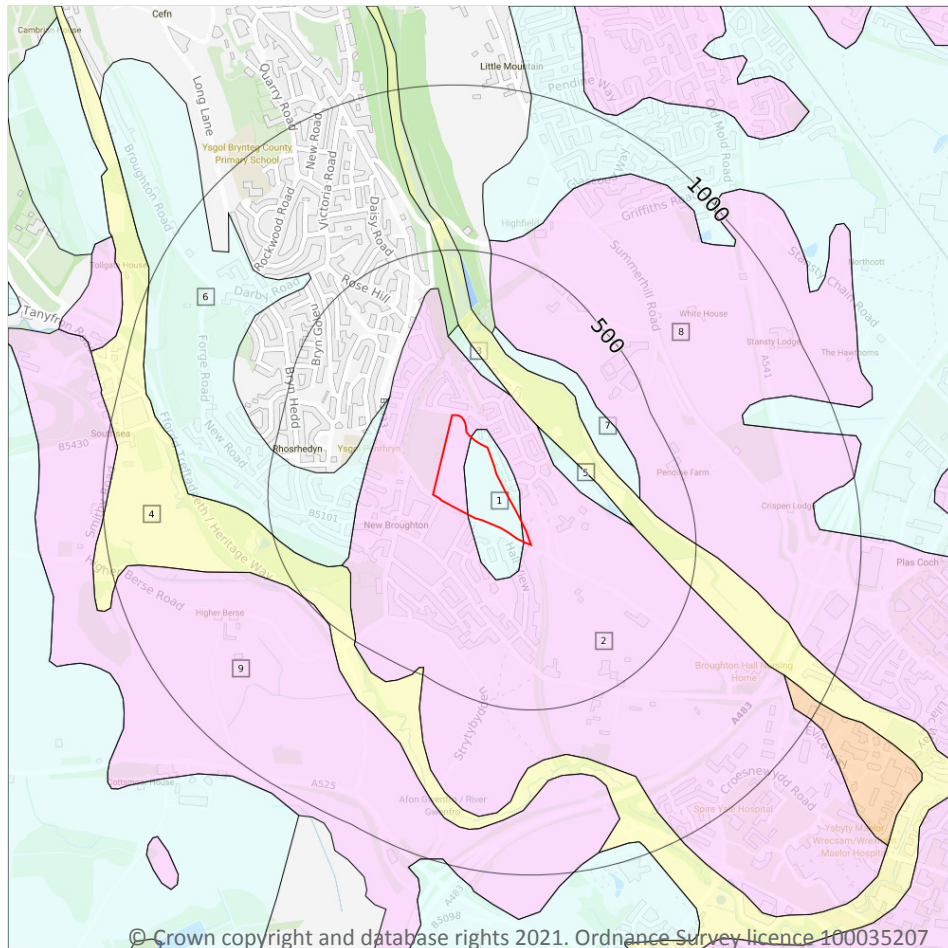
A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any artificial deposits (the zone between the land surface and the water table).

Location	Flow type	Maximum permeability	Minimum permeability
29m NE	Mixed	Very High	Low

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

9

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 86**

ID	Location	LEX Code	Description	Rock description
1	On site	TILLD-DMTN	TILL, DEVANSIAN	DIAMICTON
2	On site	GFSDD-XSV	GLACIOFLUVIAL SHEET DEPOSITS, DEVANSIAN	SAND AND GRAVEL
3	139m NE	TILLD-DMTN	TILL, DEVANSIAN	DIAMICTON



ID	Location	LEX Code	Description	Rock description
4	157m NE	ALV-XCZSV	ALLUVIUM	CLAY, SILT, SAND AND GRAVEL
5	164m NE	TILLD-DMTN	TILL, DEVENSIAN	DIAMICTON
6	197m W	TILLD-DMTN	TILL, DEVENSIAN	DIAMICTON
7	233m NE	TILLD-DMTN	TILL, DEVENSIAN	DIAMICTON
8	265m NE	GFSD-DXSV	GLACIOFLUVIAL SHEET DEPOSITS, DEVENSIAN	SAND AND GRAVEL
9	491m SW	GFSD-DXSV	GLACIOFLUVIAL SHEET DEPOSITS, DEVENSIAN	SAND AND GRAVEL

This data is sourced from the British Geological Survey.

15.5 Superficial permeability (50k)

Records within 50m	2
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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
On site	Intergranular	Very High	High

This data is sourced from the British Geological Survey.

15.6 Landslip (50k)

Records within 500m	0
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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)

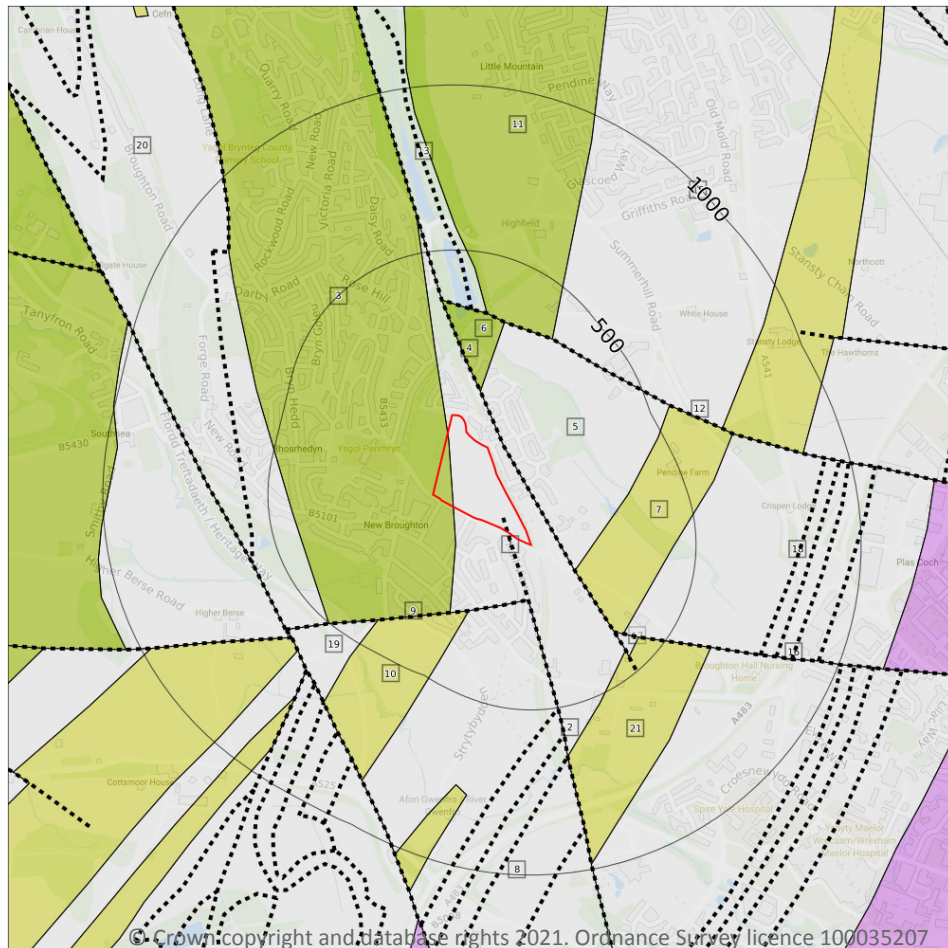
Records within 50m	0
---------------------------	----------

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

15

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 88**

ID	Location	LEX Code	Description	Rock age
1	On site	PLMC-MDSS	PENNINE LOWER COAL MEASURES FORMATION AND PENNINE MIDDLE COAL MEASURES FORMATION (UNDIFFERENTIATED) - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
3	On site	CF-SDST	CEFN ROCK - SANDSTONE	WESTPHALIAN

ID	Location	LEX Code	Description	Rock age
5	47m NE	PLMC-MDSS	PENNINE LOWER COAL MEASURES FORMATION AND PENNINE MIDDLE COAL MEASURES FORMATION (UNDIFFERENTIATED) - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
6	97m NE	CF-SDST	CEFN ROCK - SANDSTONE	WESTPHALIAN
7	154m SE	PLMC-SDST	PENNINE LOWER COAL MEASURES FORMATION AND PENNINE MIDDLE COAL MEASURES FORMATION (UNDIFFERENTIATED) - SANDSTONE	WESTPHALIAN
8	167m S	PLMC-MDSS	PENNINE LOWER COAL MEASURES FORMATION AND PENNINE MIDDLE COAL MEASURES FORMATION (UNDIFFERENTIATED) - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
10	262m SW	PLMC-SDST	PENNINE LOWER COAL MEASURES FORMATION AND PENNINE MIDDLE COAL MEASURES FORMATION (UNDIFFERENTIATED) - SANDSTONE	WESTPHALIAN
11	315m NE	CF-SDST	CEFN ROCK - SANDSTONE	WESTPHALIAN
13	322m N	PLMC-MDSS	PENNINE LOWER COAL MEASURES FORMATION AND PENNINE MIDDLE COAL MEASURES FORMATION (UNDIFFERENTIATED) - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
15	363m NE	PLMC-MDSS	PENNINE LOWER COAL MEASURES FORMATION AND PENNINE MIDDLE COAL MEASURES FORMATION (UNDIFFERENTIATED) - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
17	366m SE	PLMC-MDSS	PENNINE LOWER COAL MEASURES FORMATION AND PENNINE MIDDLE COAL MEASURES FORMATION (UNDIFFERENTIATED) - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
18	377m SE	PLMC-MDSS	PENNINE LOWER COAL MEASURES FORMATION AND PENNINE MIDDLE COAL MEASURES FORMATION (UNDIFFERENTIATED) - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
19	410m SW	PLMC-MDSS	PENNINE LOWER COAL MEASURES FORMATION AND PENNINE MIDDLE COAL MEASURES FORMATION (UNDIFFERENTIATED) - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
20	422m W	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
21	429m SE	PLMC-SDST	PENNINE LOWER COAL MEASURES FORMATION AND PENNINE MIDDLE COAL MEASURES FORMATION (UNDIFFERENTIATED) - SANDSTONE	WESTPHALIAN

This data is sourced from the British Geological Survey.

15.9 Bedrock permeability (50k)

Records within 50m	2
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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
On site	Fracture	High	Moderate

This data is sourced from the British Geological Survey.

15.10 Bedrock faults and other linear features (50k)

Records within 500m	6
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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.

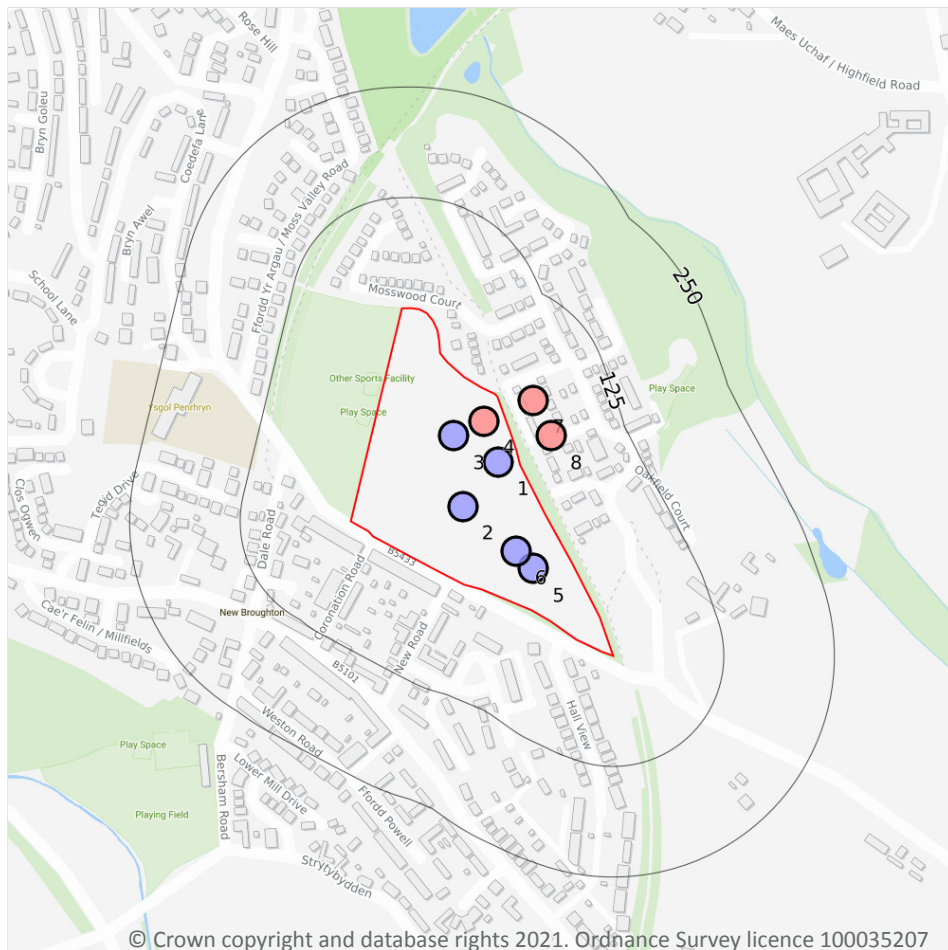
Features are displayed on the Geology 1:50,000 scale - Bedrock map on **page 88**

ID	Location	Category	Description
2	On site	FAULT	Fault, inferred, displacement unknown
4	47m NE	FAULT	Fault, inferred, displacement unknown
9	167m S	FAULT	Fault, inferred, displacement unknown
12	315m NE	FAULT	Fault, inferred, displacement unknown
14	324m N	ROCK	Coal seam, inferred
16	366m SE	FAULT	Fault, inferred, displacement unknown

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

8

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 91**

ID	Location	Grid reference	Name	Length	Confidential	Web link
1	On site	331300 351610	SECONDARY SCH NEW BROUGH'N BH2	4.57	N	155724
2	On site	331260 351560	SECONDARY SCH NEW BROUGH'N BH3	3.05	N	155725
3	On site	331250 351640	SECONDARY SCH NEW BROUGH'N BH1	6.1	N	155723

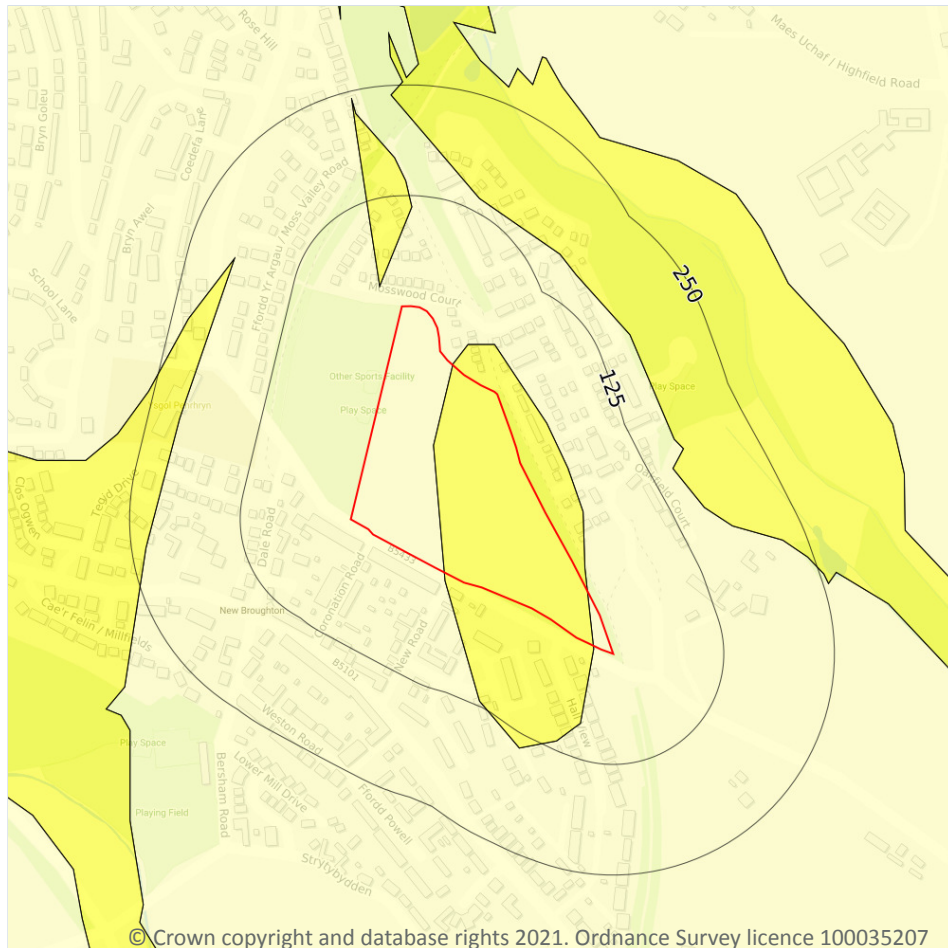


ID	Location	Grid reference	Name	Length	Confidential	Web link
4	On site	331284 351657	GATWEN COLL. U/G IN MAIN	152.4	N	154882
5	On site	331340 351490	SECONDARY SCH NEW BROUGH'N BH5	4.57	N	155727
6	On site	331320 351510	SECONDARY SCH NEW BROUGH'N BH4	6.71	N	155726
7	37m E	331340 351680	GATEWEN COLLIERY NO 1 PIT	233.32	N	154854
8	43m E	331360 351640	GATEWEN COLL. NO.2 UP. SHAFT	211.84	N	155428

This data is sourced from the British Geological Survey.



17 Natural ground subsidence - Shrink swell clays



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

17.1 Shrink swell clays

Records within 50m

3

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

Features are displayed on the Natural ground subsidence - Shrink swell clays map on **page 93**

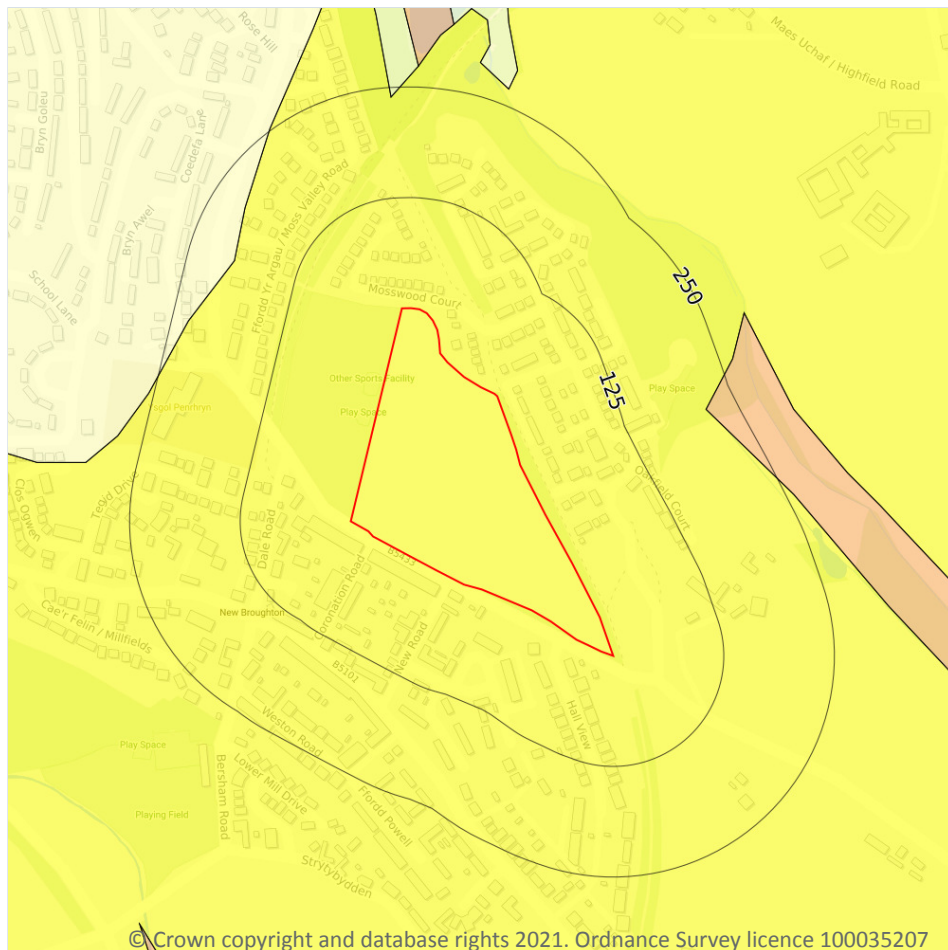
Location	Hazard rating	Details
On site	Negligible	Ground conditions predominantly non-plastic.
On site	Very low	Ground conditions predominantly low plasticity.
34m NW	Very low	Ground conditions predominantly low plasticity.



This data is sourced from the British Geological Survey.



Natural ground subsidence - Running sands



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

17.2 Running sands

Records within 50m

1

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.

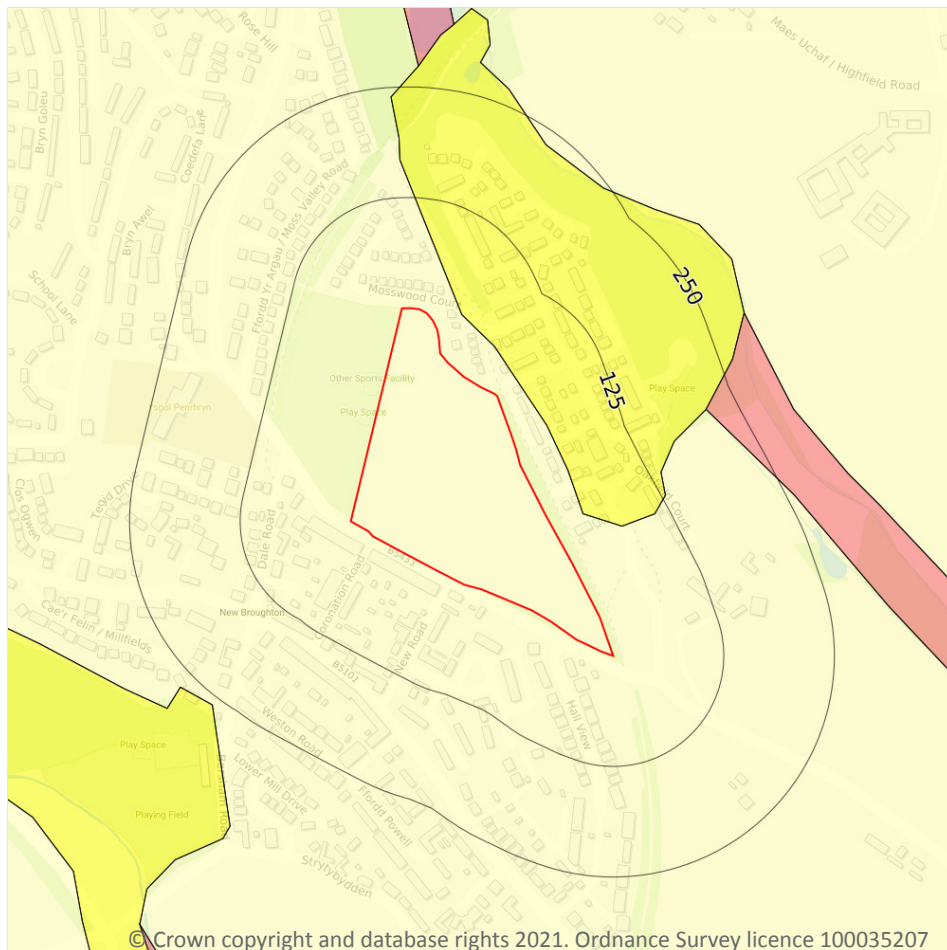
Features are displayed on the Natural ground subsidence - Running sands map on **page 95**

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.

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.

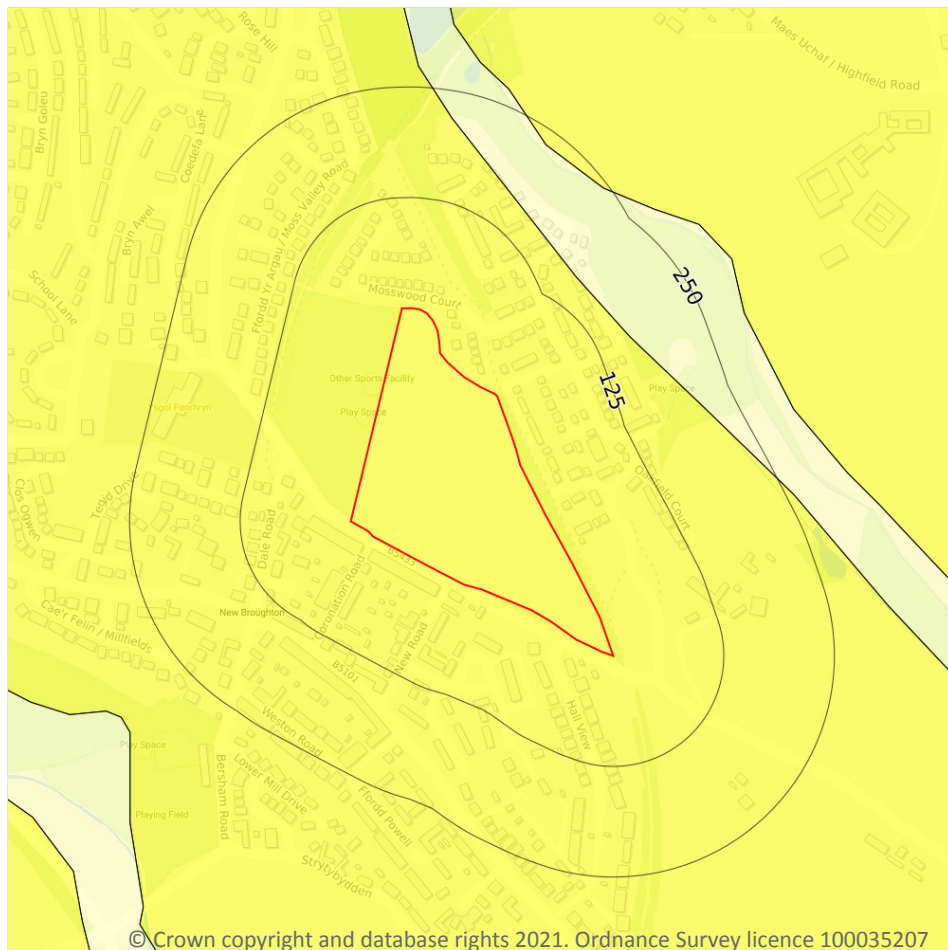
Features are displayed on the Natural ground subsidence - Compressible deposits map on **page 96**

Location	Hazard rating	Details
On site	Negligible	Compressible strata are not thought to occur.
29m NE	Very low	Compressibility and uneven settlement problems are not likely to be significant on the site for most land uses.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Collapsible deposits



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

17.4 Collapsible deposits

Records within 50m

1

The potential hazard presented by natural deposits that could collapse when a load (such as a building) is placed on them or they become saturated with water.

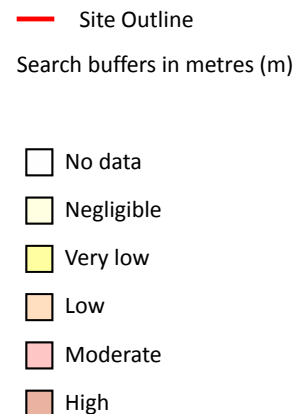
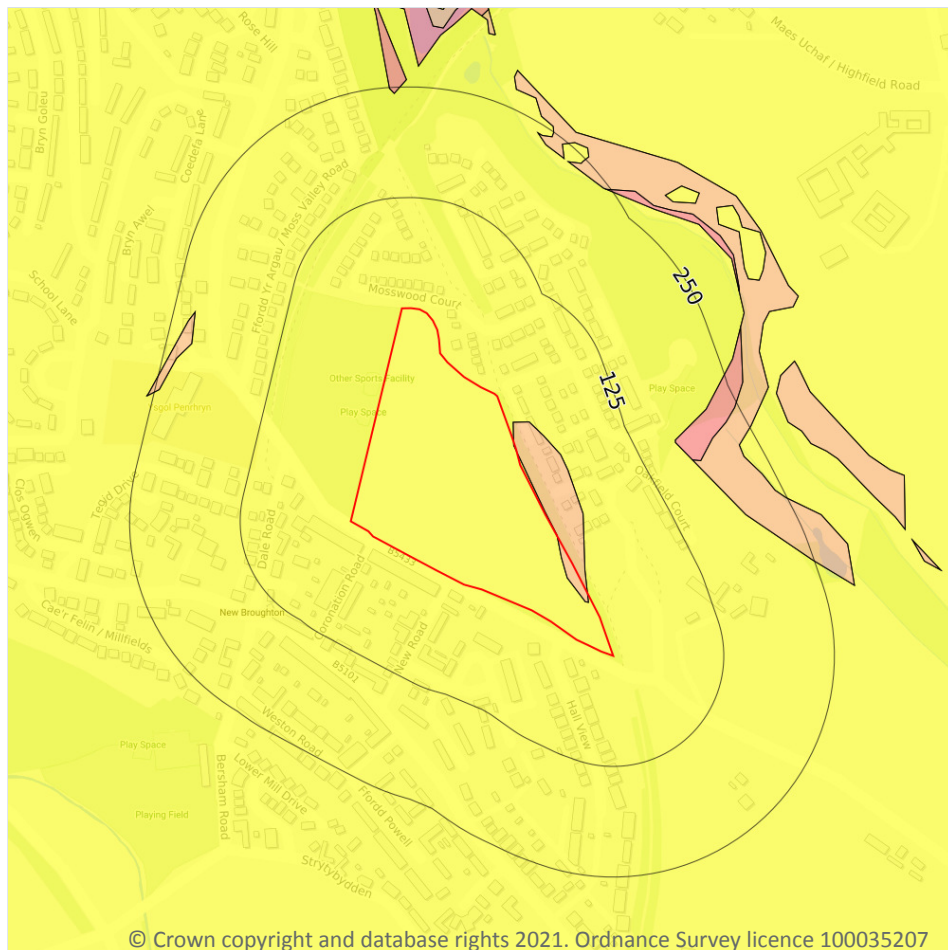
Features are displayed on the Natural ground subsidence - Collapsible deposits map on **page 98**

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

This data is sourced from the British Geological Survey.



Natural ground subsidence - Landslides



17.5 Landslides

Records within 50m

2

The potential for landsliding (slope instability) to be a hazard assessed using 1:50,000 scale digital maps of superficial and bedrock deposits, combined with information from the BGS National Landslide Database and scientific and engineering reports.

Features are displayed on the Natural ground subsidence - Landslides map on **page 99**

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.

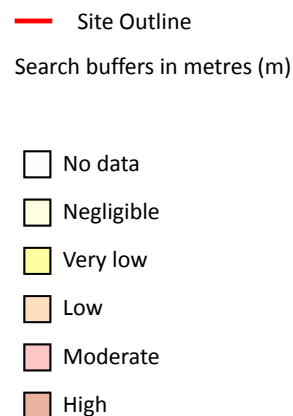


Location	Hazard rating	Details
On site	Low	Slope instability problems may be present or anticipated. Site investigation should consider specifically the slope stability of the site.

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.

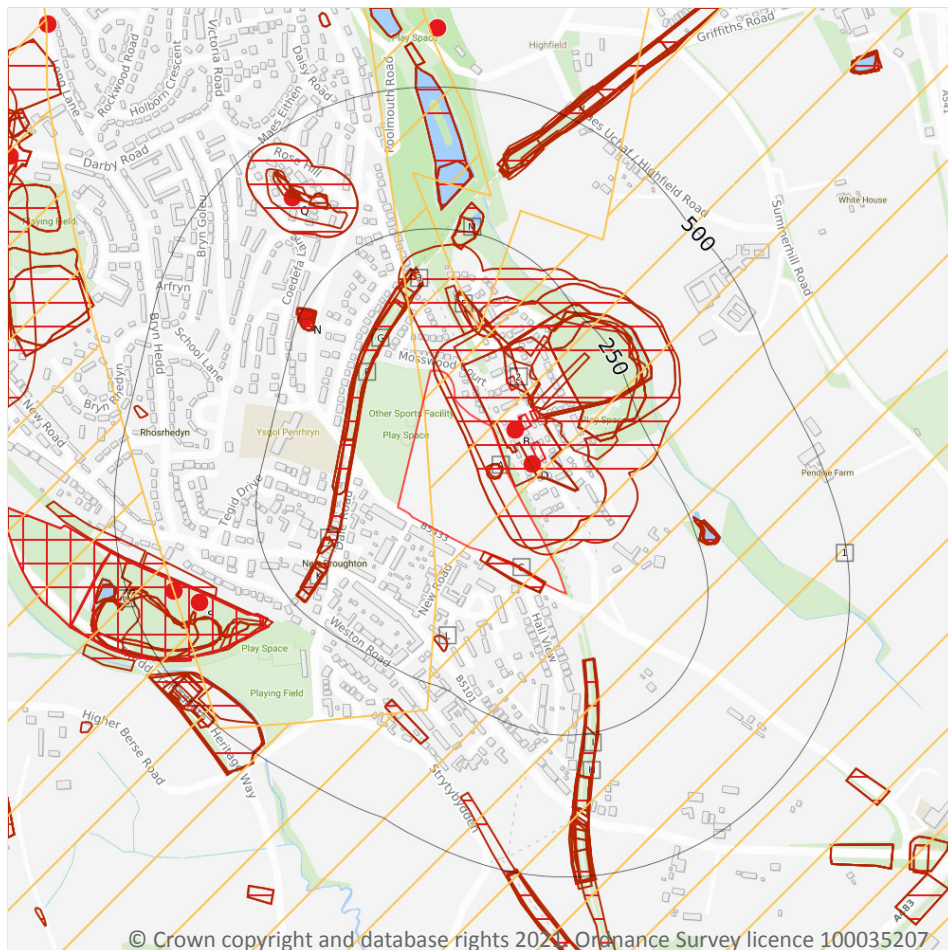
Features are displayed on the Natural ground subsidence - Ground dissolution of soluble rocks map on **page 101**

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

7

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 103**

ID	Location	Details	Description
B	36m E	Name: Gatewen Colliery, No. 1 Shaft Address: New Broughton, 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
D	47m NE	Name: Gatewen Colliery No. 2 Shaft Address: New Broughton, 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
N	239m NW	Name: Coed-Efa Gravel Pit Address: New Broughton, WREXHAM, Denbighshire Commodity: Sand & Gravel 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
N	239m NW	Name: Coed-Efa Gravel Pit Address: New Broughton, 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



ID	Location	Details	Description
S	388m SW	Name: New Broughton Colliery, No. 1 Shaft Address: New Broughton, 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
Q	390m NW	Name: Broughton Address: New Broughton, 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
S	421m W	Name: New Broughton Colliery, No. 2 Shaft Address: New Broughton, 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

This data is sourced from the British Geological Survey.

18.3 Surface ground workings

Records within 250m	65
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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 103**

ID	Location	Land Use	Year of mapping	Mapping scale
A	On site	Reservoir	1938	1:10560
A	On site	Reservoir	1949	1:10560
A	On site	Reservoir	1938	1:10560
B	On site	Colliery	1938	1:10560
B	On site	Disused Colliery	1949	1:10560



ID	Location	Land Use	Year of mapping	Mapping scale
B	On site	Colliery	1898	1:10560
C	On site	Cuttings	1938	1:10560
C	On site	Cuttings	1949	1:10560
C	On site	Cuttings	1938	1:10560
C	On site	Cuttings	1909	1:10560
B	1m NE	Colliery	1909	1:10560
B	4m NE	Colliery	1938	1:10560
B	4m NE	Colliery	1938	1:10560
E	76m NE	Cuttings	1909	1:10560
B	78m NE	Unspecified Ground Workings	1909	1:10560
B	78m NE	Unspecified Heap	1938	1:10560
B	78m NE	Unspecified Heap	1938	1:10560
B	79m E	Unspecified Heap	1949	1:10560
B	81m NE	Unspecified Heap	1938	1:10560
B	81m NE	Unspecified Heap	1898	1:10560
E	90m NE	Unspecified Heap	1938	1:10560
E	90m NE	Unspecified Heap	1898	1:10560
F	93m W	Cuttings	1938	1:10560
F	94m W	Cuttings	1909	1:10560
F	95m W	Cuttings	1938	1:10560
F	95m W	Cuttings	1949	1:10560
G	97m NW	Cuttings	1989	1:10000
G	97m NW	Cuttings	1992	1:10000
G	97m W	Cuttings	1980	1:10000
G	97m W	Cuttings	1974	1:10000
G	97m W	Cuttings	1964	1:10560
G	99m NW	Cuttings	1985	1:10000
H	122m S	Cuttings	1938	1:10560



ID	Location	Land Use	Year of mapping	Mapping scale
H	122m S	Cuttings	1909	1:10560
I	124m S	Cuttings	1938	1:10560
I	124m S	Cuttings	1949	1:10560
J	131m SW	Unspecified Pit	1980	1:10000
J	131m SW	Unspecified Pit	1974	1:10000
J	131m SW	Unspecified Pit	1964	1:10560
3	139m N	Cuttings	1949	1:10560
B	144m E	Unspecified Heap	1989	1:10000
B	144m E	Unspecified Heap	1992	1:10000
B	144m E	Unspecified Heap	1980	1:10000
B	144m E	Unspecified Heap	1974	1:10000
B	144m E	Unspecified Heap	1985	1:10000
B	144m E	Unspecified Ground Workings	1964	1:10560
K	161m SW	Cuttings	1938	1:10560
L	164m S	Pond	1898	1:10560
L	164m S	Pond	1872	1:10560
K	166m SW	Cuttings	1938	1:10560
K	166m SW	Cuttings	1949	1:10560
K	176m SW	Cuttings	1980	1:10000
K	176m SW	Cuttings	1974	1:10000
K	176m SW	Cuttings	1964	1:10560
M	218m N	Unspecified Heap	1980	1:10000
M	218m N	Unspecified Heap	1974	1:10000
M	218m N	Unspecified Heap	1964	1:10560
N	219m W	Old Gravel Pit	1938	1:10560
N	222m W	Old Gravel Pit	1938	1:10560
N	222m W	Old Gravel Pit	1909	1:10560
M	223m N	Pond	1989	1:10000

ID	Location	Land Use	Year of mapping	Mapping scale
M	223m N	Pond	1992	1:10000
M	223m N	Pond	1985	1:10000
N	228m NW	Unspecified Pit	1949	1:10560
H	236m S	Cuttings	1898	1:10560

This is data is sourced from Ordnance Survey/Groundsure.

18.4 Underground workings

Records within 1000m

11

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 103**

ID	Location	Land Use	Year of mapping	Mapping scale
B	50m E	Unspecified Disused Shafts	1964	1:10560
D	54m E	Unspecified Disused Shafts	1964	1:10560
2	73m NE	Unspecified Disused Shafts	1964	1:10560
B	73m E	Unspecified Disused Shafts	1964	1:10560
S	306m SW	Colliery	1938	1:10560
S	306m SW	Colliery	1898	1:10560
U	306m SW	Colliery	1939	1:10560
AL	815m NW	Colliery	1938	1:10560
AL	815m NW	Colliery	1898	1:10560
-	815m W	Colliery	1900	1:10560
AL	817m NW	Disused Colliery	1939	1:10560

This is data is sourced from Ordnance Survey/Groundsure.



18.5 Historical Mineral Planning Areas

Records within 500m

0

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

This data is sourced from the British Geological Survey.

18.6 Non-coal mining

Records within 1000m

1

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 103**

ID	Location	Name	Commodity	Class	Likelihood
1	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

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

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

This data is sourced from the Coal Authority.

18.10 Brine areas

Records on site	0
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The Cheshire Brine Compensation District indicates areas that may be affected by salt and brine extraction in Cheshire and where compensation would be available where damage from this mining has occurred. Damage from salt and brine mining can still occur outside this district, but no compensation will be available.

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

18.11 Gypsum areas

Records on site	0
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Generalised areas that may be affected by gypsum extraction.

This data is sourced from British Gypsum.

18.12 Tin mining

Records on site	0
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Generalised areas that may be affected by historical tin mining.

This data is sourced from Mining Searches UK.

18.13 Clay mining

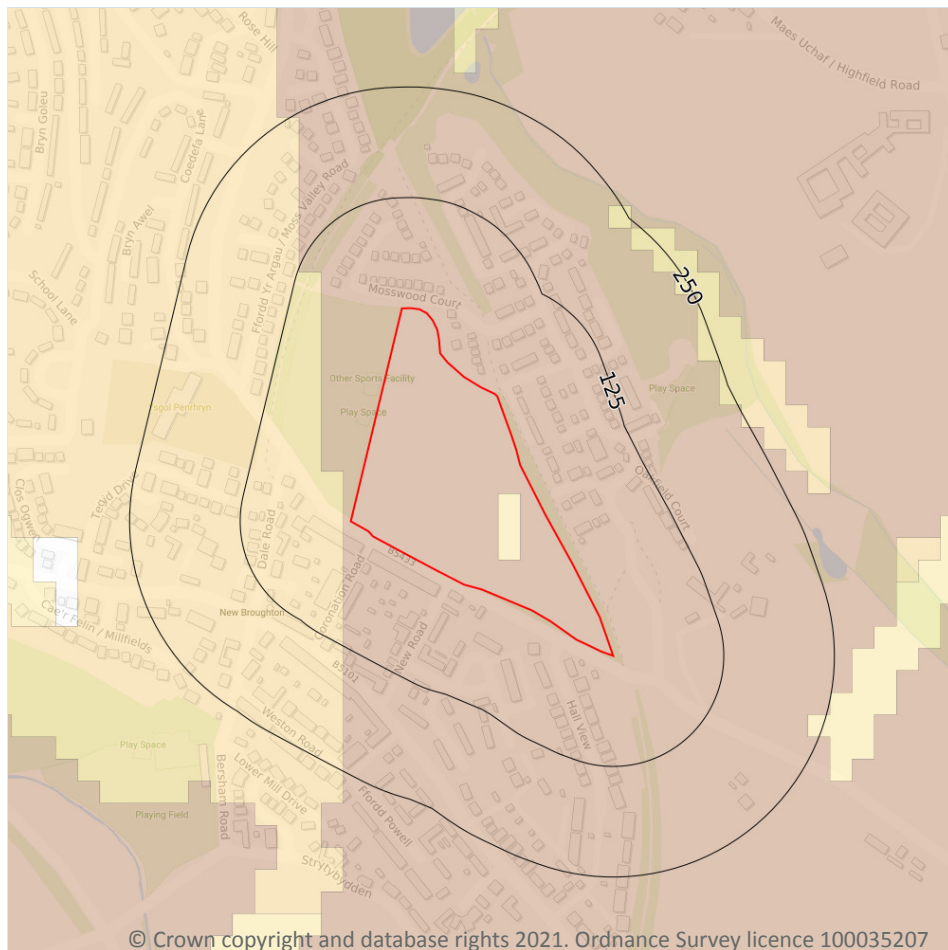
Records on site	0
-----------------	---

Generalised areas that may be affected by kaolin and ball clay extraction.

This data is sourced from the Kaolin and Ball Clay Association (UK).



19 Radon



- Site Outline**
- Search buffers in metres (m)**
- Greater than 30%
 - Between 10% and 30%
 - Between 5% and 10%
 - Between 3% and 5%
 - Between 1% and 3%
 - Less than 1%

19.1 Radon

Records on site

2

Estimated percentage of dwellings exceeding the Radon Action Level. This data is the highest resolution radon dataset available for the UK and is produced to a 75m level of accuracy to allow for geological data accuracy and a 'residential property' buffer. The findings of this section should supersede any estimations derived from the Indicative Atlas of Radon in Great Britain. The data was derived from both geological assessments and long term measurements of radon in more than 479,000 households.

Features are displayed on the Radon map on **page 111**

Location	Estimated properties affected	Radon Protection Measures required
On site	Between 1% and 3%	None
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

7

The estimated values provide the likely background concentration of the potentially harmful elements Arsenic, Cadmium, Chromium, Lead and Nickel in topsoil. The values are estimated primarily from rural topsoil data collected at a sample density of approximately 1 per 2 km². In areas where rural soil samples are not available, estimation is based on stream sediment data collected from small streams at a sampling density of 1 per 2.5 km²; this is the case for most of Scotland, Wales and southern England. The stream sediment data are converted to soil-equivalent concentrations prior to the estimation.

Location	Arsenic	Bioaccessible Arsenic	Lead	Bioaccessible Lead	Cadmium	Chromium	Nickel
On site	15 mg/kg	No data	100 - 200 mg/kg	60 - 120 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 - 200 mg/kg	60 - 120 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	200 - 300 mg/kg	120 - 240 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 - 200 mg/kg	60 - 120 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 mg/kg
On site	15 mg/kg	No data	200 - 300 mg/kg	120 - 240 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
6m SW	15 mg/kg	No data	200 - 300 mg/kg	120 - 240 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 mg/kg
47m NE	15 mg/kg	No data	100 - 200 mg/kg	60 - 120 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg

This data is sourced from the British Geological Survey.

20.2 BGS Estimated Urban Soil Chemistry

Records within 50m

0

Estimated topsoil chemistry of Arsenic, Cadmium, Chromium, Copper, Nickel, Lead, Tin and Zinc and bioaccessible Arsenic and Lead in 23 urban centres across Great Britain. These estimates are derived from interpolation of the measured urban topsoil data referred to above and provide information across each city between the measured sample locations (4 per km²).

This data is sourced from the British Geological Survey.



20.3 BGS Measured Urban Soil Chemistry

Records within 50m

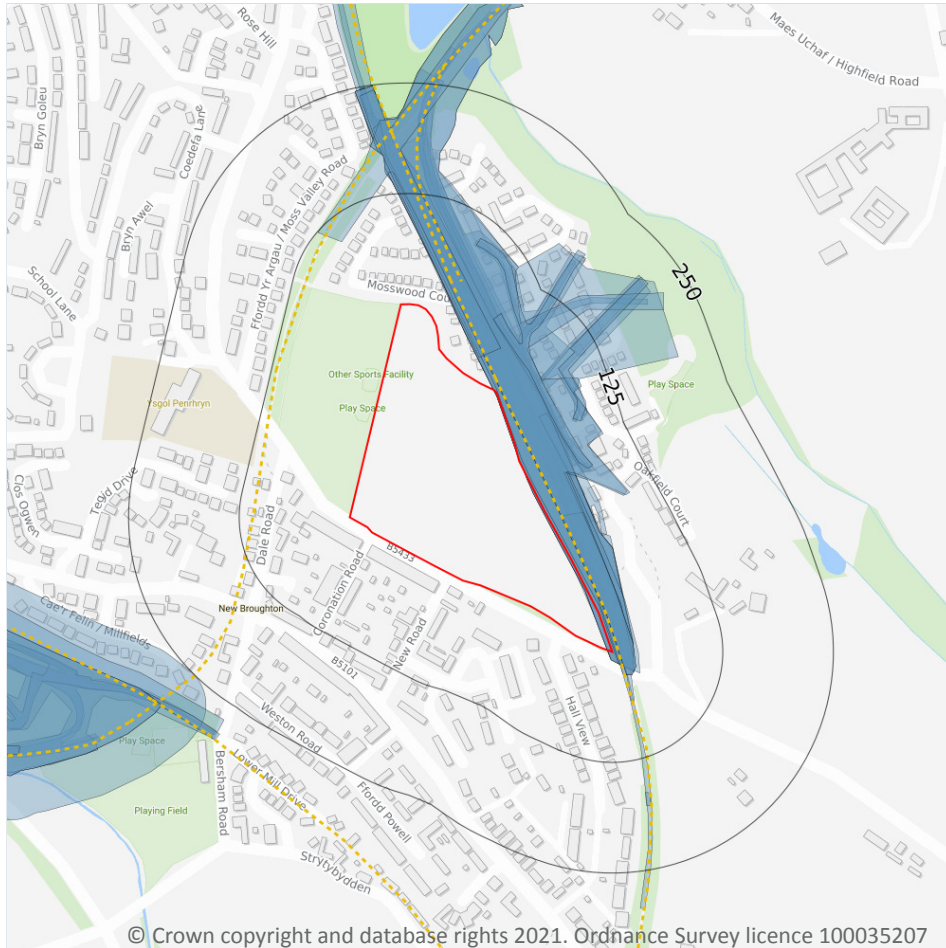
0

The locations and measured total concentrations (mg/kg) of Arsenic, Cadmium, Chromium, Copper, Nickel, Lead, Tin and Zinc in urban topsoil samples from 23 urban centres across Great Britain. These are collected at a sample density of 4 per km².

This data is sourced from the British Geological Survey.



21 Railway infrastructure and projects



- Site Outline
- Search buffers in metres (m)**
- C1 Crossrail 1 Stations
- Crossrail 1 Route
- Crossrail 1 Worksites
- C2 Crossrail 2 Stations
- Crossrail 2 Route
- Crossrail 2 Worksites
- Crossrail 2 Safeguarding
- Crossrail 2 Headhouses
- Railway stations
- Active railways
- Active tunnels
- Abandoned railways
- Historic railways
- Historic tunnels
- Underground stations
- Underground Lines
- Royal Mail tunnels
- HS2 optimised route
- HS2 Stations
- HS2 Depots
- HS2 Surface Safeguarding
- HS2 Subsurface Safeguarding

21.1 Underground railways (London)

Records within 250m

0

Details of all active London Underground lines, including approximate tunnel roof depth and operational hours.

This data is sourced from publicly available information by Groundsure.

21.2 Underground railways (Non-London)

Records within 250m

0

Details of the Merseyrail system, the Tyne and Wear Metro and the Glasgow Subway. Not all parts of all systems are located underground. The data contains location information only and does not include a depth assessment.



This data is sourced from publicly available information by Groundsure.

21.3 Railway tunnels

Records within 250m

0

Railway tunnels taken from contemporary Ordnance Survey mapping.

This data is sourced from the Ordnance Survey.

21.4 Historical railway and tunnel features

Records within 250m

23

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 115**

Location	Land Use	Year of mapping	Mapping scale
On site	Mineral Railway Sidings	1974	10000
On site	Railway Sidings	1989	10000
On site	Railway Sidings	1980	10000
On site	Railway Sidings	1985	10000
1m E	Railway Sidings	1938	10560
4m E	Railway Sidings	1949	10560
4m E	Mineral Railway Sidings	1962	2500
6m NE	Railway Sidings	1938	10560
6m NE	Railway Sidings	1898	10560
7m E	Railway Sidings	1912	2500
10m NE	Railway Sidings	1899	2500
10m NE	Railway Sidings	1993	2500
10m E	Railway Sidings	1939	2500
25m NE	Railway Sidings	1949	10560
40m E	Tramway Sidings	1899	2500
44m NE	Railway Sidings	1909	10560
72m E	Railway Sidings	1909	10560



Location	Land Use	Year of mapping	Mapping scale
163m S	Railway Sidings	1993	2500
215m N	Railway Sidings	1984	2500
215m N	Railway Sidings	1986	2500
218m N	Mineral Railway Sidings	1962	2500
218m N	Railway Sidings	1979	2500
218m N	Railway Sidings	1984	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 **8**

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 115**

Location	Description
6m NE	Abandoned
13m NE	Razed
43m NE	Abandoned
51m NE	Abandoned
108m W	Razed
110m W	Abandoned
191m N	Razed



Location	Description
203m N	Abandoned

This data is sourced from OpenStreetMap.

21.7 Railways

Records within 250m	0
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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
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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
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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
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HS2 is a proposed high speed rail network running from London to Manchester and Leeds via Birmingham. Main civils construction on Phase 1 (London to Birmingham) of the project began in 2019, and it is currently anticipated that this phase will be fully operational by 2026. Construction on Phase 2a (Birmingham to Crewe) is anticipated to commence in 2021, with the service fully operational by 2027. Construction on Phase 2b (Crewe to Manchester and Birmingham to Leeds) is scheduled to begin in 2023 and be operational by 2033.

This data is sourced from HS2 Ltd.

Data providers

Groundsure works with respected data providers to bring you the most relevant and accurate information. To find out who they are and their areas of expertise see <https://www.groundsure.com/sources-reference>.

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