

Site Details:

56, TAN YARD BROW,
MANCHESTER, M18 8UJ

Client Ref: Tan Yard Brow PO - 627932
Report Ref: GS-ZS4-XUT-E93-PRY
Grid Ref: 389181, 395929

Map Name: National Grid

Map date: 2001

Scale: 1:10,000

Printed at: 1:10,000



2001



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2010



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2024

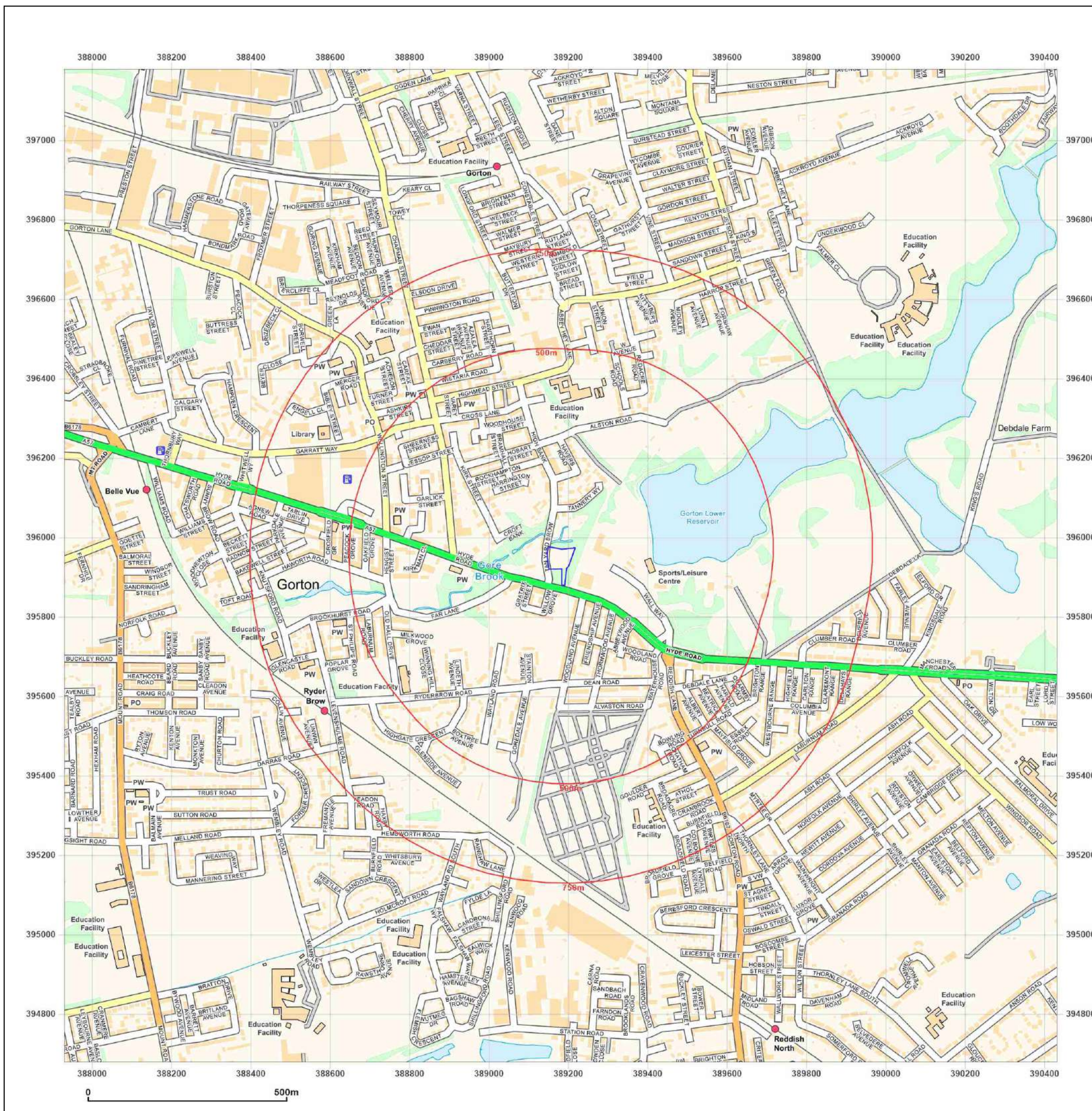


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APPENDIX 5 – GROUNDSURE REPORT

56, TAN YARD BROW, MANCHESTER, M18 8UJ

Order Details

Date: 10/04/2024
Your ref: Tan Yard Brow PO - 627932
Our Ref: GS-ENA-7X6-NPS-EQ4

Site Details

Location: 389178 395944
Area: 0.35 ha
Authority: [Manchester City Council](#) ↗



Summary of findings

[p. 2 >](#) **Aerial image**

[p. 9 >](#)

OS MasterMap site plan

[p.14 >](#) groundsure.com/insightuserguide ↗

Contact us with any questions at:

info@groundsure.com ↗

01273 257 755

Summary of findings

Page	Section	Past land use >	On site	0-50m	50-250m	250-500m	500-2000m
15 >	1.1 >	Historical industrial land uses >	5	17	22	47	-
19 >	1.2 >	Historical tanks >	0	3	0	0	-
19 >	1.3 >	Historical energy features >	0	0	2	8	-
20	1.4	Historical petrol stations	0	0	0	0	-
20 >	1.5 >	Historical garages >	0	0	2	1	-
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 >	Historical industrial land uses >	10	21	34	80	-
28 >	2.2 >	Historical tanks >	0	4	0	0	-
28 >	2.3 >	Historical energy features >	0	0	2	15	-
29	2.4	Historical petrol stations	0	0	0	0	-
29 >	2.5 >	Historical garages >	0	0	3	4	-
Page	Section	Waste and landfill >	On site	0-50m	50-250m	250-500m	500-2000m
31	3.1	Active or recent landfill	0	0	0	0	-
31	3.2	Historical landfill (BGS records)	0	0	0	0	-
32	3.3	Historical landfill (LA/mapping records)	0	0	0	0	-
32 >	3.4 >	Historical landfill (EA/NRW records) >	0	0	3	2	-
33	3.5	Historical waste sites	0	0	0	0	-
33	3.6	Licensed waste sites	0	0	0	0	-
33 >	3.7 >	Waste exemptions >	0	0	0	2	-
Page	Section	Current industrial land use >	On site	0-50m	50-250m	250-500m	500-2000m
34 >	4.1 >	Recent industrial land uses >	0	1	4	-	-
35 >	4.2 >	Current or recent petrol stations >	0	0	0	1	-
35	4.3	Electricity cables	0	0	0	0	-
35	4.4	Gas pipelines	0	0	0	0	-
36	4.5	Sites determined as Contaminated Land	0	0	0	0	-



36	4.6	Control of Major Accident Hazards (COMAH)	0	0	0	0	-
36	4.7	Regulated explosive sites	0	0	0	0	-
36	4.8	Hazardous substance storage/usage	0	0	0	0	-
36	4.9	Historical licensed industrial activities (IPC)	0	0	0	0	-
37	4.10	Licensed industrial activities (Part A(1))	0	0	0	0	-
37 >	4.11 >	Licensed pollutant release (Part A(2)/B) >	0	0	1	1	-
37	4.12	Radioactive Substance Authorisations	0	0	0	0	-
37 >	4.13 >	Licensed Discharges to controlled waters >	0	0	1	0	-
38	4.14	Pollutant release to surface waters (Red List)	0	0	0	0	-
38	4.15	Pollutant release to public sewer	0	0	0	0	-
38	4.16	List 1 Dangerous Substances	0	0	0	0	-
38	4.17	List 2 Dangerous Substances	0	0	0	0	-
39 >	4.18 >	Pollution Incidents (EA/NRW) >	0	2	6	2	-
40	4.19	Pollution inventory substances	0	0	0	0	-
40	4.20	Pollution inventory waste transfers	0	0	0	0	-
40	4.21	Pollution inventory radioactive waste	0	0	0	0	-
Page	Section	Hydrogeology >	On site	0-50m	50-250m	250-500m	500-2000m
41 >	5.1 >	Superficial aquifer >	Identified (within 500m)				
43 >	5.2 >	Bedrock aquifer >	Identified (within 500m)				
45 >	5.3 >	Groundwater vulnerability >	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 >	Groundwater abstractions >	0	0	0	0	11
50 >	5.7 >	Surface water abstractions >	0	0	0	0	2
51	5.8	Potable abstractions	0	0	0	0	0
51	5.9	Source Protection Zones	0	0	0	0	-
52	5.10	Source Protection Zones (confined aquifer)	0	0	0	0	-
Page	Section	Hydrology >	On site	0-50m	50-250m	250-500m	500-2000m
53 >	6.1 >	Water Network (OS MasterMap) >	0	3	8	-	-



54 >	6.2 >	Surface water features >	0	2	3	-	-
55 >	6.3 >	WFD Surface water body catchments >	1	-	-	-	-
55 >	6.4 >	WFD Surface water bodies >	0	1	0	-	-
56 >	6.5 >	WFD Groundwater bodies >	1	-	-	-	-
Page	Section	River and coastal flooding >	On site	0-50m	50-250m	250-500m	500-2000m
57 >	7.1 >	Risk of flooding from rivers and the sea >	High (within 50m)				
58	7.2	Historical Flood Events	0	0	0	-	-
58	7.3	Flood Defences	0	0	0	-	-
58	7.4	Areas Benefiting from Flood Defences	0	0	0	-	-
58	7.5	Flood Storage Areas	0	0	0	-	-
59 >	7.6 >	Flood Zone 2 >	Identified (within 50m)				
60 >	7.7 >	Flood Zone 3 >	Identified (within 50m)				
Page	Section	Surface water flooding >					
61 >	8.1 >	Surface water flooding >	1 in 30 year, 0.3m - 1.0m (within 50m)				
Page	Section	Groundwater flooding >					
63 >	9.1 >	Groundwater flooding >	High (within 50m)				
Page	Section	Environmental designations >	On site	0-50m	50-250m	250-500m	500-2000m
64	10.1	Sites of Special Scientific Interest (SSSI)	0	0	0	0	0
65	10.2	Conserved wetland sites (Ramsar sites)	0	0	0	0	0
65	10.3	Special Areas of Conservation (SAC)	0	0	0	0	0
65	10.4	Special Protection Areas (SPA)	0	0	0	0	0
65	10.5	National Nature Reserves (NNR)	0	0	0	0	0
66 >	10.6 >	Local Nature Reserves (LNR) >	0	0	0	0	1
66	10.7	Designated Ancient Woodland	0	0	0	0	0
66	10.8	Biosphere Reserves	0	0	0	0	0
66	10.9	Forest Parks	0	0	0	0	0
67	10.10	Marine Conservation Zones	0	0	0	0	0
67	10.11	Green Belt	0	0	0	0	0
67	10.12	Proposed Ramsar sites	0	0	0	0	0



67	10.13	Possible Special Areas of Conservation (pSAC)	0	0	0	0	0
67	10.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0
68	10.15	Nitrate Sensitive Areas	0	0	0	0	0
68	10.16	Nitrate Vulnerable Zones	0	0	0	0	0
69 >	10.17 >	SSSI Impact Risk Zones >	2	-	-	-	-
70	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
71	11.1	World Heritage Sites	0	0	0	-	-
72	11.2	Area of Outstanding Natural Beauty	0	0	0	-	-
72	11.3	National Parks	0	0	0	-	-
72 >	11.4 >	Listed Buildings >	0	0	5	-	-
73 >	11.5 >	Conservation Areas >	1	0	0	-	-
73	11.6	Scheduled Ancient Monuments	0	0	0	-	-
73	11.7	Registered Parks and Gardens	0	0	0	-	-
Page	Section	Agricultural designations >	On site	0-50m	50-250m	250-500m	500-2000m
74 >	12.1 >	Agricultural Land Classification >	Non Agricultural (within 250m)				
75	12.2	Open Access Land	0	0	0	-	-
75	12.3	Tree Felling Licences	0	0	0	-	-
75	12.4	Environmental Stewardship Schemes	0	0	0	-	-
75	12.5	Countryside Stewardship Schemes	0	0	0	-	-
Page	Section	Habitat designations >	On site	0-50m	50-250m	250-500m	500-2000m
76 >	13.1 >	Priority Habitat Inventory >	0	3	18	-	-
77	13.2	Habitat Networks	0	0	0	-	-
78	13.3	Open Mosaic Habitat	0	0	0	-	-
78	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
79 >	14.1 >	10k Availability >	Identified (within 500m)				
80 >	14.2 >	Artificial and made ground (10k) >	1	2	3	3	-
82 >	14.3 >	Superficial geology (10k) >	1	0	0	0	-

83	14.4	Landslip (10k)	0	0	0	0	-
84 >	14.5 >	Bedrock geology (10k) >	1	0	0	1	-
85	14.6	Bedrock faults and other linear features (10k)	0	0	0	0	-
Page	Section	Geology 1:50,000 scale >	On site	0-50m	50-250m	250-500m	500-2000m
86 >	15.1 >	50k Availability >	Identified (within 500m)				
87 >	15.2 >	Artificial and made ground (50k) >	1	1	1	0	-
88 >	15.3 >	Artificial ground permeability (50k) >	1	1	-	-	-
89 >	15.4 >	Superficial geology (50k) >	1	0	0	0	-
90 >	15.5 >	Superficial permeability (50k) >	Identified (within 50m)				
90	15.6	Landslip (50k)	0	0	0	0	-
90	15.7	Landslip permeability (50k)	None (within 50m)				
91 >	15.8 >	Bedrock geology (50k) >	1	0	0	1	-
92 >	15.9 >	Bedrock permeability (50k) >	Identified (within 50m)				
92	15.10	Bedrock faults and other linear features (50k)	0	0	0	0	-
Page	Section	Boreholes >	On site	0-50m	50-250m	250-500m	500-2000m
93 >	16.1 >	BGS Boreholes >	1	5	9	-	-
Page	Section	Natural ground subsidence >					
95 >	17.1 >	Shrink swell clays >	Very low (within 50m)				
96 >	17.2 >	Running sands >	Very low (within 50m)				
97 >	17.3 >	Compressible deposits >	Very low (within 50m)				
99 >	17.4 >	Collapsible deposits >	Very low (within 50m)				
100 >	17.5 >	Landslides >	Low (within 50m)				
102 >	17.6 >	Ground dissolution of soluble rocks >	Negligible (within 50m)				
Page	Section	Mining and ground workings >	On site	0-50m	50-250m	250-500m	500-2000m
104	18.1	BritPits	0	0	0	0	-
105 >	18.2 >	Surface ground workings >	0	0	47	-	-
107	18.3	Underground workings	0	0	0	0	0
107	18.4	Underground mining extents	0	0	0	0	-
107	18.5	Historical Mineral Planning Areas	0	0	0	0	-



107	18.6	Non-coal mining	0	0	0	0	0
107 >	18.7 >	JPB mining areas >	Identified (within 0m)				
108	18.8	The Coal Authority non-coal mining	0	0	0	0	-
108	18.9	Researched mining	0	0	0	0	-
108	18.10	Mining record office plans	0	0	0	0	-
109	18.11	BGS mine plans	0	0	0	0	-
109 >	18.12 >	Coal mining >	Identified (within 0m)				
109	18.13	Brine areas	None (within 0m)				
109	18.14	Gypsum areas	None (within 0m)				
109	18.15	Tin mining	None (within 0m)				
110	18.16	Clay mining	None (within 0m)				
Page	Section	Ground cavities and sinkholes	On site	0-50m	50-250m	250-500m	500-2000m
111	19.1	Natural cavities	0	0	0	0	-
111	19.2	Mining cavities	0	0	0	0	0
111	19.3	Reported recent incidents	0	0	0	0	-
111	19.4	Historical incidents	0	0	0	0	-
112	19.5	National karst database	0	0	0	0	-
Page	Section	Radon >					
113 >	20.1 >	Radon >	Less than 1% (within 0m)				
Page	Section	Soil chemistry >	On site	0-50m	50-250m	250-500m	500-2000m
115 >	21.1 >	BGS Estimated Background Soil Chemistry >	1	2	-	-	-
115 >	21.2 >	BGS Estimated Urban Soil Chemistry >	3	4	-	-	-
116	21.3	BGS Measured Urban Soil Chemistry	0	0	-	-	-
Page	Section	Railway infrastructure and projects >	On site	0-50m	50-250m	250-500m	500-2000m
117	22.1	Underground railways (London)	0	0	0	-	-
117	22.2	Underground railways (Non-London)	0	0	0	-	-
118	22.3	Railway tunnels	0	0	0	-	-
118 >	22.4 >	Historical railway and tunnel features >	0	25	0	-	-
119	22.5	Royal Mail tunnels	0	0	0	-	-



119 >	22.6 >	Historical railways >	0	0	3	-	-
120	22.7	Railways	0	0	0	-	-
120	22.8	Crossrail 1	0	0	0	0	-
120	22.9	Crossrail 2	0	0	0	0	-
120	22.10	HS2	0	0	0	0	-

Recent aerial photograph



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Capture Date: 18/10/2022

Site Area: 0.35ha



Recent site history - 2019 aerial photograph



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Capture Date: 22/04/2019

Site Area: 0.35ha



Recent site history - 2015 aerial photograph



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Capture Date: 11/06/2015

Site Area: 0.35ha



Recent site history - 2009 aerial photograph



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Capture Date: 02/06/2009

Site Area: 0.35ha



Recent site history - 2000 aerial photograph

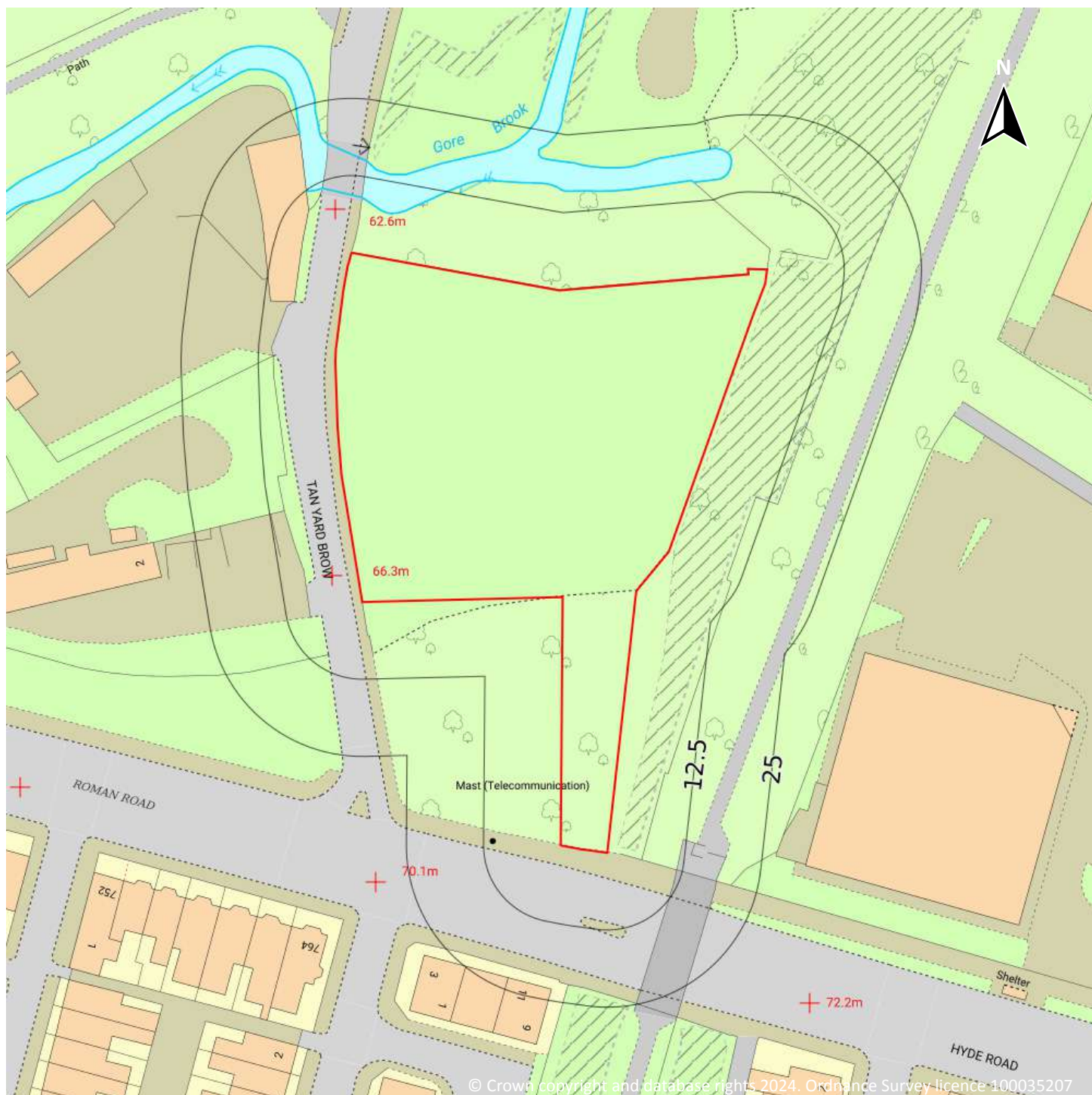


Capture Date: 19/06/2000

Site Area: 0.35ha



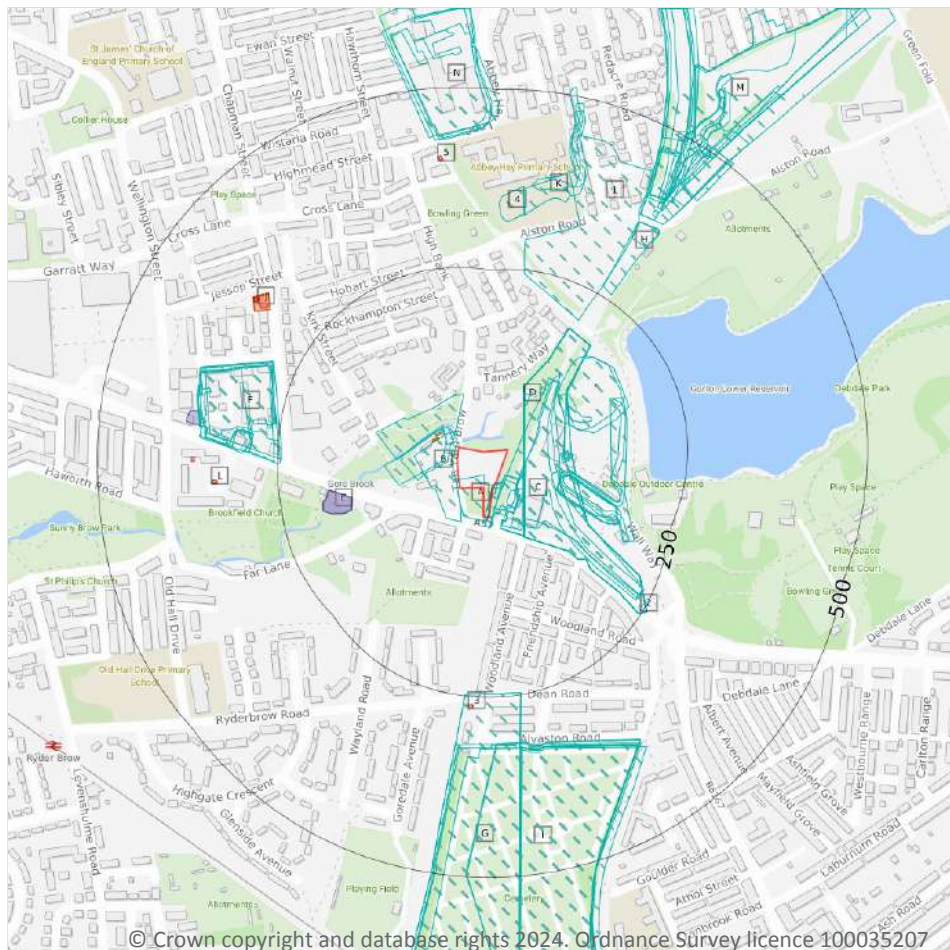
OS MasterMap site plan



Site Area: 0.35ha



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

91

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 15](#) >

ID	Location	Land use	Dates present	Group ID
A	On site	Leather Works	1938	833903



ID	Location	Land use	Dates present	Group ID
A	On site	Railway Station	1938	844867
A	On site	Railway Station	1890	863797
A	On site	Railway Station	1905 - 1938	867389
A	On site	Railway Station	1978	954694
B	4m SW	Tannery	1851	842303
C	6m S	Railway Sidings	1938 - 1968	892485
B	11m NW	Leather Works	1907 - 1915	845639
B	11m NW	Unspecified Works	1968	830552
A	19m SE	Railway Sidings	1938	965609
A	19m SE	Railway Sidings	1915	987279
C	19m SE	Railway Sidings	1918	864953
C	19m SE	Railway Sidings	1934	964506
B	19m NW	Leather Works	1923	965649
C	20m SE	Railway Sidings	1907	989102
A	22m SE	Railway Station	1956 - 1968	911352
C	23m NE	Railway Sidings	1892	901316
C	23m NE	Railway Sidings	1906	947161
C	23m NE	Railway Sidings	1938	952332
C	23m NE	Railway Sidings	1923	900788
C	30m E	Railway Sidings	1934	980919
A	33m SE	Railway Building	1907	820451
D	66m NE	Railway Building	1923	964696
D	66m NE	Railway Building	1918	974334
C	69m E	Unspecified Pit	1892 - 1985	940835
C	74m E	Railway Building	1934 - 1938	886798
C	75m E	Railway Building	1918	955575
C	79m E	Railway Building	1923	902689
C	79m E	Unspecified Ground Workings	1938	923951



ID	Location	Land use	Dates present	Group ID
C	81m E	Unspecified Pit	1907	920781
C	82m E	Unspecified Heap	1906	876556
C	82m E	Unspecified Heap	1918 - 1938	974868
C	83m E	Unspecified Pit	1934	962593
D	89m NE	Unspecified Ground Workings	1956 - 1968	848227
D	90m NE	Railway Building	1918	820450
D	95m NE	Unspecified Ground Workings	1907	977126
D	98m NE	Unspecified Heap	1991	804165
1	205m NE	Refuse Heap	1934 - 1938	874948
2	242m SE	Railway Building	1934 - 1938	862088
F	243m W	Unspecified Works	1968 - 1978	949370
G	245m S	Cemetery	1905	905880
G	245m S	Cemetery	1915	972492
F	246m W	Unspecified Works	1934 - 1938	932455
F	249m W	Unspecified Works	1915	978272
F	254m W	Unspecified Works	1923	983423
F	256m W	Sawmills	1938	950336
H	259m NE	Cuttings	1906 - 1923	927118
F	259m W	Sawmills	1905 - 1907	973020
F	285m W	Police Station	1915 - 1923	850134
F	286m W	Sawmills	1890	951692
I	314m S	Cemetery	1907	943247
I	315m S	Cemetery	1938	950222
I	315m S	Cemetery	1956 - 1978	886218
I	316m S	Cemetery	1923 - 1934	982841
4	317m N	Unspecified Pit	1905	840710
G	321m S	Cemetery	1938	934852
I	322m S	Cemetery	1985 - 1991	981507



ID	Location	Land use	Dates present	Group ID
I	322m S	Cemetery	1923	884698
I	322m S	Cemetery	1906	912413
I	322m S	Cemetery	1918	920741
I	322m S	Cemetery	1938	940474
I	325m S	Cemetery	1934	957811
K	326m N	Unspecified Ground Workings	1906	966521
H	340m NE	Cuttings	1934 - 1938	985574
K	363m N	Unspecified Ground Workings	1918 - 1923	844930
H	375m NE	Cuttings	1892	903302
H	376m NE	Cuttings	1906 - 1938	961394
H	382m NE	Railway Building	1892 - 1906	855260
M	395m NE	Brick Works	1906	864155
M	395m NE	Brick Works	1923	871507
H	397m NE	Cuttings	1906 - 1938	981960
H	400m NE	Cuttings	1934 - 1938	919974
H	404m NE	Cuttings	1956 - 1978	938269
H	406m NE	Cuttings	1918	967070
H	406m NE	Cuttings	1985 - 1991	877154
M	412m NE	Clay Pit	1918 - 1923	979574
M	418m NE	Cuttings	1892 - 1906	847153
N	428m N	Cotton Mills	1851	811453
N	428m N	Unspecified Mills	1890 - 1905	910568
N	432m N	Unspecified Mills	1923	944468
N	432m N	Unspecified Mills	1915	903286
H	434m NE	Cuttings	1978	961374
H	434m NE	Cuttings	1985	894852
H	443m NE	Unspecified Heap	1991	804166
H	464m NE	Cuttings	1906	928396



ID	Location	Land use	Dates present	Group ID
H	483m NE	Cuttings	1918 - 1938	892673
H	485m NE	Unspecified Ground Workings	1906	978509
H	487m NE	Unspecified Ground Workings	1934	926366
H	490m NE	Unspecified Ground Workings	1934 - 1938	918209
H	493m NE	Unspecified Ground Workings	1934 - 1938	978527
M	494m NE	Brick Works	1918	923629

This data is sourced from Ordnance Survey / Groundsure.

1.2 Historical tanks

Records within 500m

3

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 15 >](#)

ID	Location	Land use	Dates present	Group ID
B	30m NW	Tanks	1952	138786
B	30m NW	Tanks	1933	107101
B	30m NW	Unspecified Tank	1922	116493

This data is sourced from Ordnance Survey / Groundsure.

1.3 Historical energy features

Records within 500m

10

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 15 >](#)



ID	Location	Land use	Dates present	Group ID
D	150m NE	Electricity Substation	1950	73035
D	150m NE	Electricity Substation	1950	76655
3	261m S	Electricity Substation	1983 - 1998	78442
J	325m NW	Electricity Substations	1983	74659
J	329m NW	Electricity Substation	1950	65593
L	334m W	Electricity Substation	1989 - 1992	76192
J	345m NW	Electricity Substation	1982 - 1992	68602
J	346m NW	Electricity Substations	1983	78909
L	365m W	Electricity Substation	1972	62286
5	399m N	Electricity Substation	1981 - 1991	71239

This data is sourced from Ordnance Survey / Groundsure.

1.4 Historical petrol stations

Records within 500m	0
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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	3
----------------------------	----------

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 15 >](#)

ID	Location	Land use	Dates present	Group ID
E	151m W	Garage	1972 - 1992	26499



ID	Location	Land use	Dates present	Group ID
E	151m W	Garage	1989	22150
F	359m W	Garage	1963 - 1982	25513

This data is sourced from Ordnance Survey / Groundsure.

1.6 Historical military land

Records within 500m

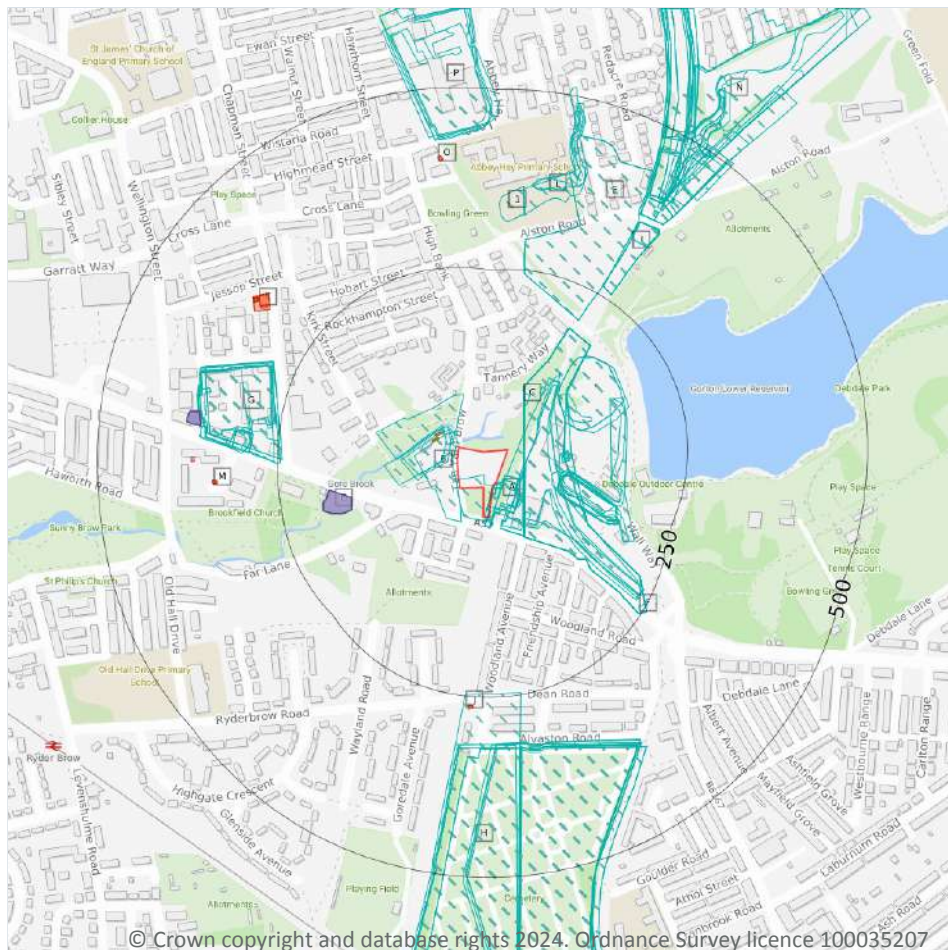
0

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

145

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	Railway Station	1907	867389
A	On site	Railway Station	1938	867389
A	On site	Railway Station	1934	867389



ID	Location	Land Use	Date	Group ID
A	On site	Railway Station	1915	867389
A	On site	Railway Station	1905	867389
A	On site	Railway Station	1890	863797
A	On site	Leather Works	1938	833903
A	On site	Railway Station	1938	844867
A	On site	Railway Station	1978	954694
A	On site	Railway Station	1923	867389
B	4m SW	Tannery	1851	842303
A	6m S	Railway Sidings	1968	892485
B	11m NW	Leather Works	1907	845639
B	11m NW	Unspecified Works	1968	830552
B	13m NW	Leather Works	1915	845639
A	19m SE	Railway Sidings	1938	965609
A	19m SE	Railway Sidings	1934	964506
A	19m SE	Railway Sidings	1915	987279
B	19m NW	Leather Works	1923	965649
A	20m SE	Railway Sidings	1907	989102
A	22m SE	Railway Station	1968	911352
A	23m NE	Railway Sidings	1938	952332
A	23m NE	Railway Sidings	1934	964506
A	23m NE	Railway Sidings	1906	947161
A	23m NE	Railway Sidings	1892	901316
A	23m NE	Railway Sidings	1918	864953
A	23m NE	Railway Sidings	1923	900788
A	25m SE	Railway Sidings	1938	892485
A	29m SE	Railway Station	1956	911352
A	30m E	Railway Sidings	1934	980919
A	33m SE	Railway Building	1907	820451



ID	Location	Land Use	Date	Group ID
C	66m NE	Railway Building	1923	964696
C	66m NE	Railway Building	1918	974334
A	69m E	Unspecified Pit	1892	940835
A	74m E	Railway Building	1938	886798
A	74m E	Railway Building	1934	886798
A	75m E	Railway Building	1918	955575
A	79m E	Railway Building	1923	902689
A	79m E	Unspecified Ground Workings	1938	923951
A	81m E	Unspecified Pit	1907	920781
A	82m E	Unspecified Heap	1938	974868
A	82m E	Unspecified Heap	1934	974868
A	82m E	Unspecified Heap	1906	876556
A	82m E	Unspecified Heap	1923	974868
A	82m E	Unspecified Heap	1918	974868
A	83m E	Unspecified Pit	1934	962593
A	84m E	Unspecified Pit	1956	940835
A	84m E	Unspecified Pit	1985	940835
A	84m E	Unspecified Pit	1978	940835
A	84m E	Unspecified Pit	1968	940835
C	89m NE	Unspecified Ground Workings	1956	848227
C	89m NE	Unspecified Ground Workings	1968	848227
C	90m NE	Railway Building	1918	820450
C	95m NE	Unspecified Ground Workings	1907	977126
C	98m NE	Unspecified Heap	1991	804165
E	205m NE	Refuse Heap	1938	874948
E	205m NE	Refuse Heap	1934	874948
F	242m SE	Railway Building	1938	862088
F	242m SE	Railway Building	1934	862088



ID	Location	Land Use	Date	Group ID
G	243m W	Unspecified Works	1978	949370
G	243m W	Unspecified Works	1968	949370
H	245m S	Cemetery	1905	905880
G	246m W	Unspecified Works	1938	932455
G	246m W	Unspecified Works	1934	932455
G	249m W	Unspecified Works	1915	978272
G	254m W	Unspecified Works	1923	983423
G	256m W	Sawmills	1938	950336
I	259m NE	Cuttings	1923	927118
I	259m NE	Cuttings	1918	927118
I	259m NE	Cuttings	1906	927118
G	259m W	Sawmills	1907	973020
G	262m W	Sawmills	1905	973020
G	285m W	Police Station	1915	850134
G	286m W	Sawmills	1890	951692
G	288m W	Police Station	1923	850134
H	314m S	Cemetery	1907	943247
H	315m S	Cemetery	1938	950222
H	315m S	Cemetery	1956	886218
H	315m S	Cemetery	1978	886218
H	315m S	Cemetery	1968	886218
H	316m S	Cemetery	1923	982841
1	317m N	Unspecified Pit	1905	840710
H	320m S	Cemetery	1915	972492
H	320m S	Cemetery	1934	982841
H	321m S	Cemetery	1938	934852
H	322m S	Cemetery	1985	981507
H	322m S	Cemetery	1991	981507



ID	Location	Land Use	Date	Group ID
H	322m S	Cemetery	1923	884698
H	322m S	Cemetery	1918	920741
H	322m S	Cemetery	1938	940474
H	322m S	Cemetery	1934	982841
H	322m S	Cemetery	1906	912413
H	325m S	Cemetery	1934	957811
L	326m N	Unspecified Ground Workings	1906	966521
I	340m NE	Cuttings	1938	985574
I	340m NE	Cuttings	1934	985574
L	363m N	Unspecified Ground Workings	1918	844930
L	365m N	Unspecified Ground Workings	1923	844930
I	375m NE	Cuttings	1892	903302
I	376m NE	Cuttings	1918	961394
I	376m NE	Cuttings	1938	961394
I	376m NE	Cuttings	1934	961394
I	376m NE	Cuttings	1906	961394
I	382m NE	Railway Building	1906	855260
I	383m NE	Railway Building	1892	855260
N	395m NE	Brick Works	1906	864155
N	395m NE	Brick Works	1923	871507
I	397m NE	Cuttings	1923	961394
I	397m NE	Cuttings	1938	981960
I	397m NE	Cuttings	1934	981960
I	400m NE	Cuttings	1934	961394
I	400m NE	Cuttings	1938	919974
I	400m NE	Cuttings	1934	919974
I	403m NE	Cuttings	1918	981960
I	403m NE	Cuttings	1906	981960



ID	Location	Land Use	Date	Group ID
I	404m NE	Cuttings	1956	938269
I	404m NE	Cuttings	1978	938269
I	404m NE	Cuttings	1968	938269
I	406m NE	Cuttings	1918	967070
I	406m NE	Cuttings	1985	877154
I	406m NE	Cuttings	1991	877154
N	412m NE	Clay Pit	1923	979574
I	418m NE	Cuttings	1892	847153
P	428m N	Cotton Mills	1851	811453
P	428m N	Unspecified Mills	1890	910568
P	430m N	Unspecified Mills	1905	910568
P	432m N	Unspecified Mills	1923	944468
P	432m N	Unspecified Mills	1915	903286
I	434m NE	Cuttings	1978	961374
I	434m NE	Cuttings	1985	894852
I	443m NE	Unspecified Heap	1991	804166
I	464m NE	Cuttings	1906	928396
I	483m NE	Cuttings	1938	892673
I	483m NE	Cuttings	1934	892673
I	484m NE	Cuttings	1934	892673
I	485m NE	Unspecified Ground Workings	1906	978509
I	486m NE	Cuttings	1918	892673
I	487m NE	Unspecified Ground Workings	1934	926366
I	490m NE	Unspecified Ground Workings	1938	918209
I	490m NE	Unspecified Ground Workings	1934	918209
I	493m NE	Unspecified Ground Workings	1938	978527
I	493m NE	Unspecified Ground Workings	1934	978527
N	494m NE	Clay Pit	1918	979574



ID	Location	Land Use	Date	Group ID
N	494m NE	Brick Works	1918	923629
I	498m NE	Cuttings	1923	892673

This data is sourced from Ordnance Survey / Groundsure.

2.2 Historical tanks

Records within 500m

4

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
B	30m NW	Tanks	1952	138786
B	30m NW	Tanks	1952	138786
B	30m NW	Unspecified Tank	1922	116493
B	30m NW	Tanks	1933	107101

This data is sourced from Ordnance Survey / Groundsure.

2.3 Historical energy features

Records within 500m

17

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
C	150m NE	Electricity Substation	1950	73035
C	150m NE	Electricity Substation	1950	76655
J	261m S	Electricity Substation	1983	78442
J	261m S	Electricity Substation	1983	78442
J	261m S	Electricity Substation	1991	78442



ID	Location	Land Use	Date	Group ID
J	262m S	Electricity Substation	1998	78442
K	325m NW	Electricity Substations	1983	74659
K	329m NW	Electricity Substation	1950	65593
K	329m NW	Electricity Substation	1950	65593
M	334m W	Electricity Substation	1992	76192
M	336m W	Electricity Substation	1989	76192
K	345m NW	Electricity Substation	1992	68602
K	346m NW	Electricity Substation	1982	68602
K	346m NW	Electricity Substations	1983	78909
M	365m W	Electricity Substation	1972	62286
O	399m N	Electricity Substation	1981	71239
O	399m N	Electricity Substation	1991	71239

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

7

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
D	151m W	Garage	1992	26499

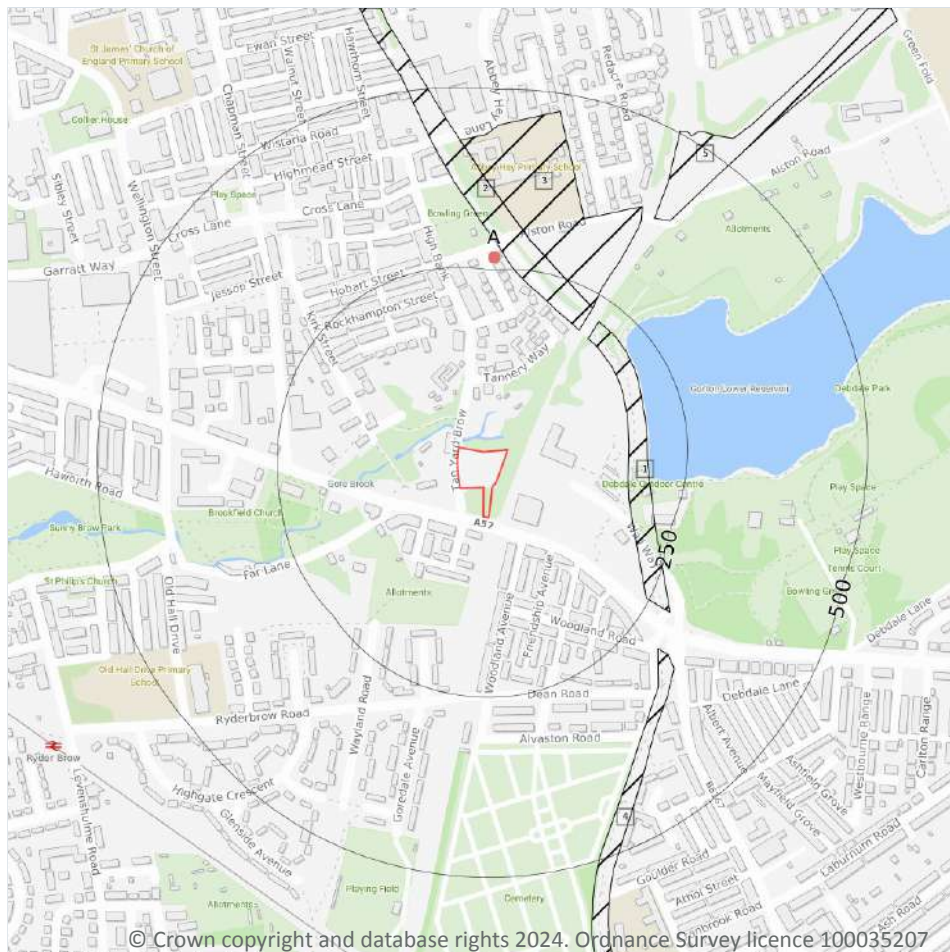


ID	Location	Land Use	Date	Group ID
D	151m W	Garage	1989	22150
D	151m W	Garage	1972	26499
G	359m W	Garage	1963	25513
G	359m W	Garage	1968	25513
G	360m W	Garage	1978	25513
G	360m W	Garage	1982	25513

This data is sourced from Ordnance Survey / Groundsure.



3 Waste and landfill



- Site Outline
- Search buffers in metres (m)
- Historical landfill (EA/NRW)
- 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

5

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.

Features are displayed on the Waste and landfill map on [page 31 >](#)

ID	Location	Details		
1	168m E	Site Address: Stockport Branch Canal, Greater Manchester Licence Holder Address: -	Waste Licence: - Site Reference: F056 Waste Type: - Environmental Permitting Regulations (Waste) Reference: - Licence Issue: - Licence Surrender: -	Operator: - Licence Holder: - First Recorded: - Last Recorded: -
2	193m NE	Site Address: Stockport Branch Canal, Greater Manchester Licence Holder Address: -	Waste Licence: - Site Reference: F056 Waste Type: Inert, Liquid sludge Environmental Permitting Regulations (Waste) Reference: - Licence Issue: - Licence Surrender: -	Operator: - Licence Holder: - First Recorded: - Last Recorded: -
3	229m NE	Site Address: High Bank, Gorton, Greater Manchester Licence Holder Address: -	Waste Licence: - Site Reference: F037 Waste Type: - Environmental Permitting Regulations (Waste) Reference: - Licence Issue: - Licence Surrender: -	Operator: - Licence Holder: - First Recorded: - Last Recorded: -
4	297m SE	Site Address: Stockport Branch Canal, Greater Manchester Licence Holder Address: -	Waste Licence: - Site Reference: J073 Waste Type: - Environmental Permitting Regulations (Waste) Reference: - Licence Issue: - Licence Surrender: -	Operator: - Licence Holder: - First Recorded: - Last Recorded: -



ID	Location	Details		
5	380m NE	Site Address: Gorton Disused Railway Cutting, Off Abbey Hey Lane, Abbey Hey, Manchester, Greater Manchester Licence Holder Address: -	Waste Licence: Yes Site Reference: F062, 0827 Waste Type: Inert Environmental Permitting Regulations (Waste) Reference: NR1/L/SPH001 Licence Issue: 06/03/1996 Licence Surrender: -	Operator: Ruleland Limited Licence Holder: SPH Group First Recorded - Last Recorded: -

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	2
----------------------------	----------

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.

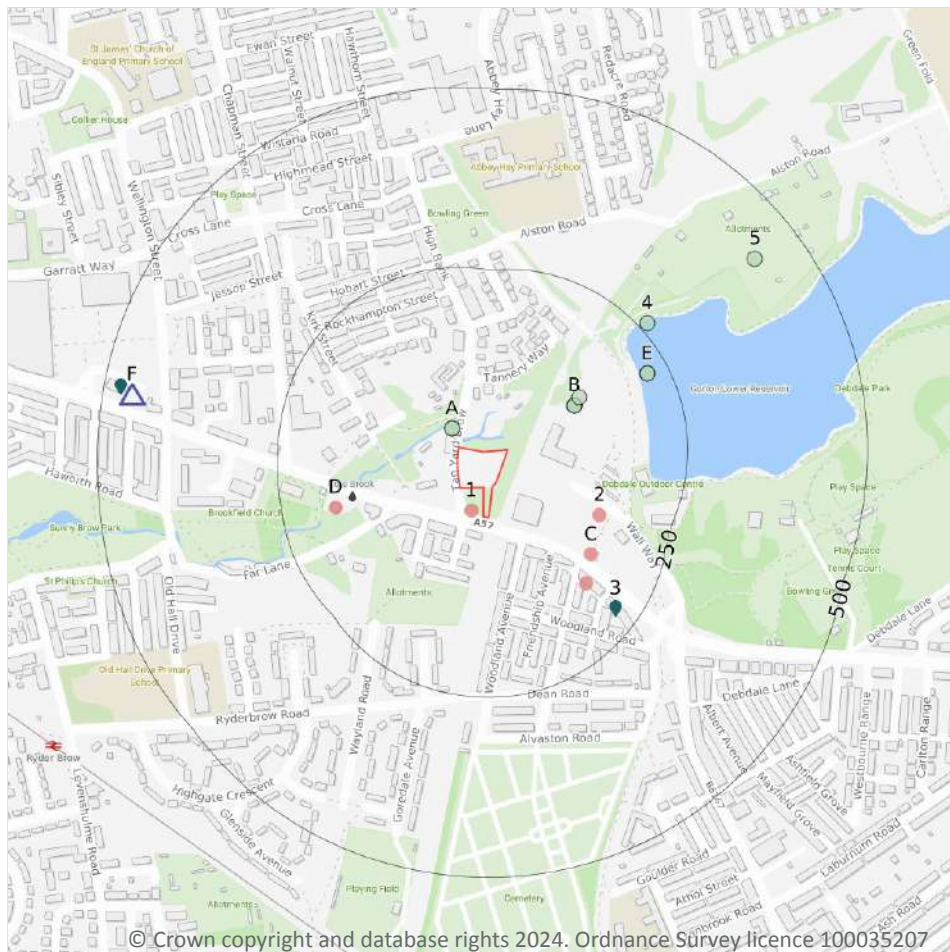
Features are displayed on the Waste and landfill map on [page 31 >](#)

ID	Location	Site	Reference	Category	Sub-Category	Description
A	267m N	-	WEX362832	Disposing of waste exemption	Not on a farm	Burning waste in the open
A	267m N	-	WEX235567	Disposing of waste exemption	Not on a farm	Burning waste in the open

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
- △ Current or recent petrol stations
- 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

5

Current potentially contaminative industrial sites.

Features are displayed on the Current industrial land use map on [page 34 >](#)

ID	Location	Company	Address	Activity	Category
1	17m S	Mast (Telecommu nication)	Greater Manchester, M18	Telecommunications Features	Infrastructure and Facilities
2	150m E	Electricity Sub Station	Greater Manchester, M18	Electrical Features	Infrastructure and Facilities



ID	Location	Company	Address	Activity	Category
C	151m SE	Mast (Telecommu nication)	Greater Manchester, M18	Telecommunications Features	Infrastructure and Facilities
C	163m SE	Adept Audio	800, Hyde Road, Manchester, Greater Manchester, M18 7JD	Electronic Equipment	Industrial Products
D	175m W	B M Commercial s	724, Hyde Road, Manchester, Greater Manchester, M18 7EF	New Vehicles	Motoring

This data is sourced from Ordnance Survey.

4.2 Current or recent petrol stations

Records within 500m	1
----------------------------	----------

Open, closed, under development and obsolete petrol stations.

Features are displayed on the Current industrial land use map on [page 34 >](#)

ID	Location	Company	Address	LPG	Status
F	460m W	TESCO EXTRA	Hyde Road, Gorton, Manchester, Greater Manchester, M18 8LD	No	Open

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

2

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 34 >](#)

ID	Location	Address	Details	
3	216m SE	Debdale Dry Cleaners, 818 Hyde Road, Gorton, Manchester, M18 7JD	Process: Dry Cleaning Status: Current Permit Permit Type: Part B	Enforcement: No Enforcement Notified Date of enforcement: No Enforcement Notified Comment: No Enforcement Notified
F	477m W	Tesco Petrol Station (Hyde Road), Hyde Road, Gorton, Manchester, M18 8LD	Process: Unloading of Petrol into Storage at Service Stations Status: Current Permit 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 34 >](#)



ID	Location	Address	Details	
D	150m W	HYDE ROAD, MANCHESTER, GREATER MANCHESTER	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: 01MAN0377 Permit Version: 1 Receiving Water: -	Status: POST NRA LEGISLATION WHERE ISSUE DATE > 31-AUG-89 (HISTORIC ONLY) Issue date: - Effective Date: 01/01/1995 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

10

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 34](#) >

ID	Location	Details	
A	28m NW	Incident Date: 14/11/2001 Incident Identification: 42750 Pollutant: Contaminated Water Pollutant Description: Firefighting Run-Off	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
A	28m NW	Incident Date: 14/11/2001 Incident Identification: 42750 Pollutant: Contaminated Water Pollutant Description: Firefighting Run-Off	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
B	110m NE	Incident Date: 30/04/2003 Incident Identification: 155151 Pollutant: Inert Materials and Wastes:Inert Materials and Wastes Pollutant Description: Construction and Demolition Materials and Wastes:Soils and Clay	Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
B	110m NE	Incident Date: 30/04/2003 Incident Identification: 155151 Pollutant: Inert Materials and Wastes Pollutant Description: Soils and Clay	Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
B	110m NE	Incident Date: 30/04/2003 Incident Identification: 155151 Pollutant: Inert Materials and Wastes Pollutant Description: Construction and Demolition Materials and Wastes	Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
B	122m NE	Incident Date: 01/05/2003 Incident Identification: 155476 Pollutant: Inert Materials and Wastes Pollutant Description: Construction and Demolition Materials and Wastes	Water Impact: Category 4 (No Impact) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
E	220m NE	Incident Date: 30/09/2002 Incident Identification: 111510 Pollutant: Oils and Fuel Pollutant Description: Gas and Fuel Oils	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
E	220m NE	Incident Date: 30/09/2002 Incident Identification: 111510 Pollutant: Oils and Fuel Pollutant Description: Gas and Fuel Oils	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)



ID	Location	Details	
4	261m NE	Incident Date: 28/01/2003 Incident Identification: 133806 Pollutant: Oils and Fuel Pollutant Description: Gas and Fuel Oils	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
5	433m NE	Incident Date: 17/03/2003 Incident Identification: 143717 Pollutant: Oils and Fuel Pollutant Description: Gas and Fuel Oils	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) 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.

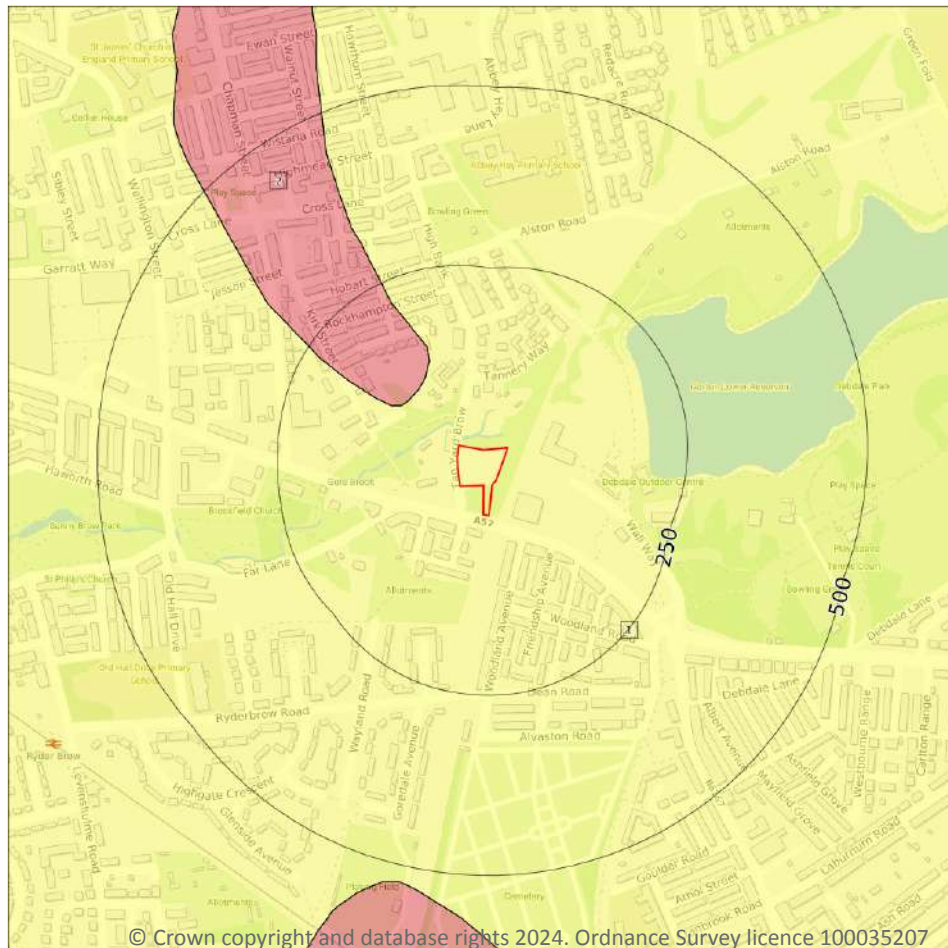
4.21 Pollution inventory radioactive waste

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

2

Aquifer status of groundwater held within superficial geology.

Features are displayed on the Hydrogeology map on [page 41](#) >

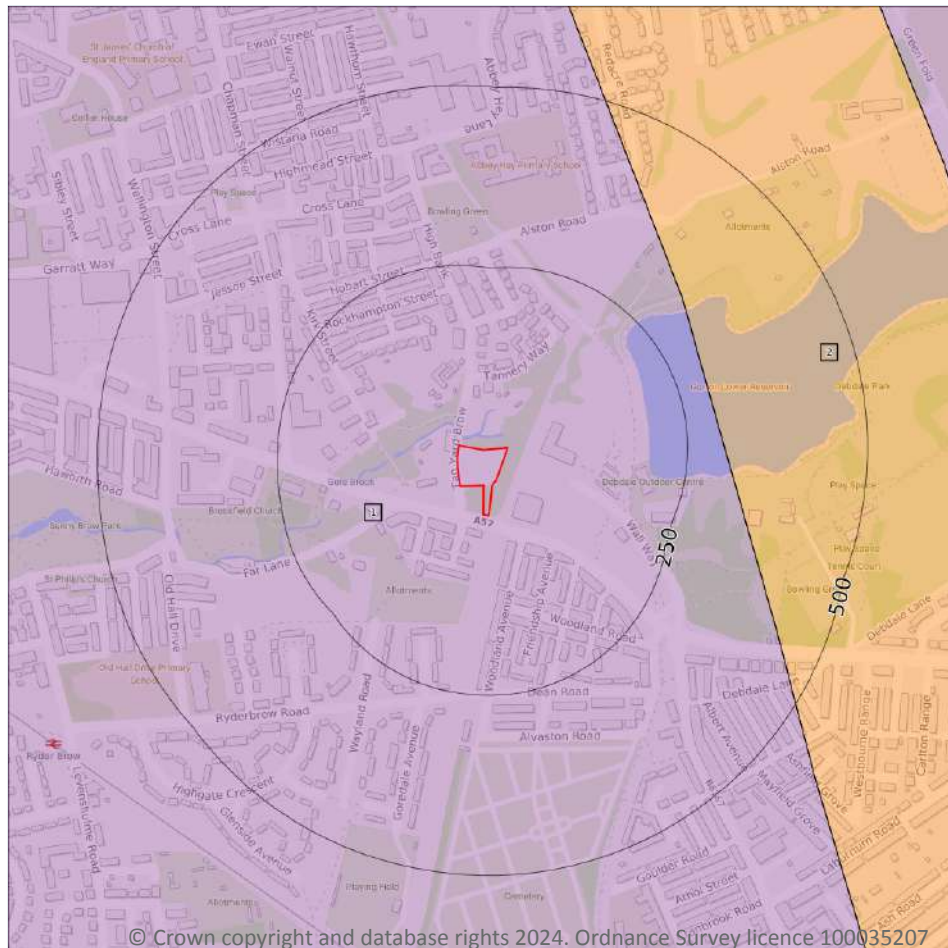
ID	Location	Designation	Description
1	On site	Secondary Undifferentiated	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type
2	94m NW	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.



Bedrock aquifer



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

5.2 Bedrock aquifer

Records within 500m

2

Aquifer status of groundwater held within bedrock geology.

Features are displayed on the Bedrock aquifer map on [page 43](#) >

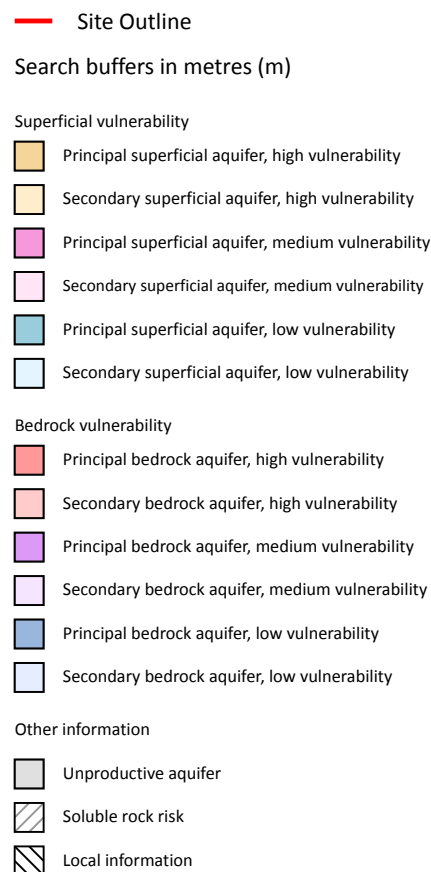
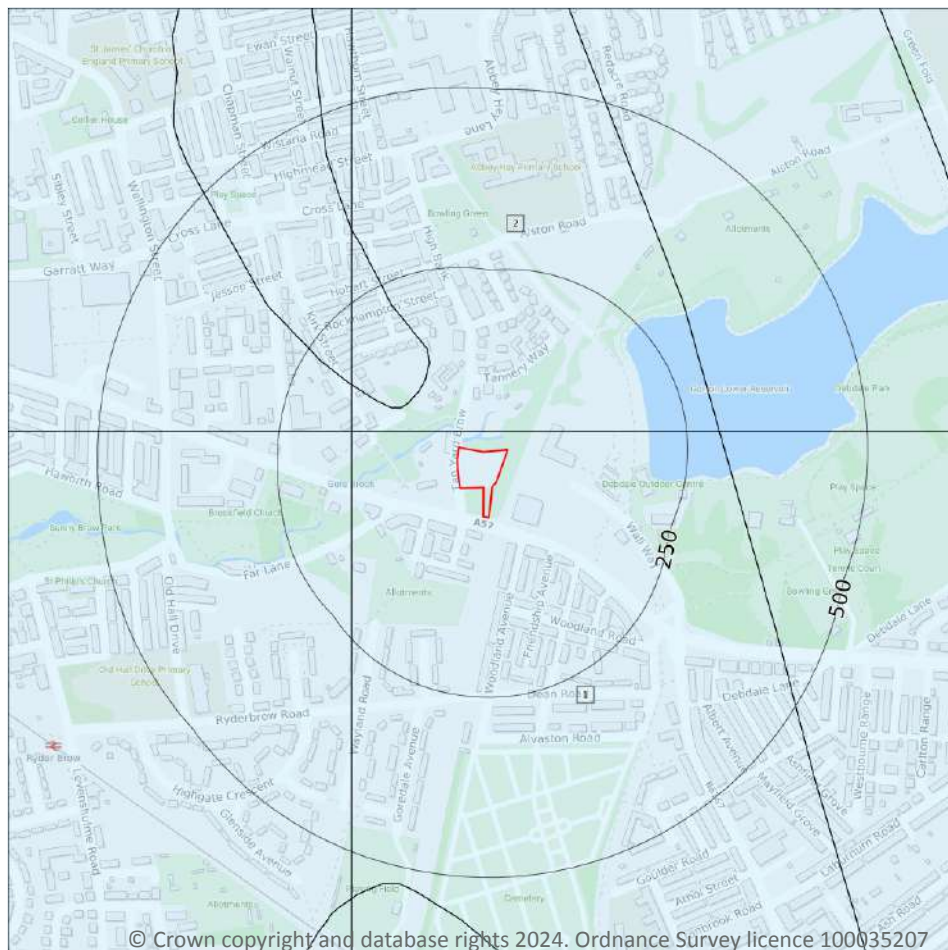
ID	Location	Designation	Description
1	On site	Principal	Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale. Generally principal aquifers were previously major aquifers
2	290m E	Secondary B	Predominantly lower permeability layers which may store/yield limited amounts of groundwater due to localised features such as fissures, thin permeable horizons and weathering. These are generally the water-bearing parts of the former non-aquifers



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



Groundwater vulnerability



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 - Low Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: Low Infiltration value: <40% Dilution value: 300- 550mm/year	Vulnerability: Low Aquifer type: Secondary Thickness: >10m Patchiness value: >90% Recharge potential: Low	Vulnerability: Low Aquifer type: Principal Flow mechanism: Well connected fractures
2	22m NW	Summary Classification: Secondary superficial aquifer - Low Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: Low Infiltration value: <40% Dilution value: 300- 550mm/year	Vulnerability: Low Aquifer type: Secondary Thickness: >10m Patchiness value: >90% Recharge potential: Low	Vulnerability: Low Aquifer type: Principal 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.

- 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
 -  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)

47

ID	Location	Details	
-	1204m W	Status: Historical Licence No: 2569006043 Details: Dust Suppression Direct Source: Ground Water - North West Region Point: PERMO-TRIASSIC SANDSTONE AT BELLE VUE, MANCHESTER Data Type: Point Name: G R A LIMITED Easting: 387950 Northing: 396100	Annual Volume (m ³): 4000 Max Daily Volume (m ³): 22 Original Application No: - Original Start Date: 20/06/2003 Expiry Date: 31/03/2014 Issue No: 2 Version Start Date: 01/04/2008 Version End Date: -
-	1364m SW	Status: Historical Licence No: 2569013018 Details: General use relating to Secondary Category (Medium Loss) Direct Source: Ground Water - North West Region Point: "BOREHOLE AT SANDFOLD LANE, LEVENSHULME, MANCHESTER" Data Type: Point Name: CBA ENTERPRISES LTD Easting: 388500 Northing: 394700	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 18/06/1992 Expiry Date: - Issue No: 100 Version Start Date: 29/03/1996 Version End Date: -
-	1364m SW	Status: Historical Licence No: 2569013018 Details: General use relating to Secondary Category (Medium Loss) Direct Source: Ground Water - North West Region Point: BOREHOLE AT SANDFOLD LANE, LEVENSHULME, MANCHESTER Data Type: Point Name: CBA ENTERPRISES LTD Easting: 388500 Northing: 394700	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 18/06/1992 Expiry Date: - Issue No: 100 Version Start Date: 29/03/1996 Version End Date: -
-	1364m SW	Status: Historical Licence No: 2569013018 Details: General use relating to Secondary Category (Medium Loss) Direct Source: Ground Water - North West Region Point: BOREHOLE AT SANDFOLD LANE LEVENSHULME MANCHESTER Data Type: Point Name: CBA ENTERPRISES LTD Easting: 388500 Northing: 394700	Annual Volume (m ³): 117835 Max Daily Volume (m ³): 409 Original Application No: - Original Start Date: 18/06/1992 Expiry Date: - Issue No: 100 Version Start Date: 29/03/1996 Version End Date: -



ID	Location	Details	
-	1437m NW	Status: Active Licence No: NW/069/0004/012 Details: Process Water Direct Source: Ground Water - North West Region Point: BOREHOLE AT PRESTON STREET, MANCHESTER Data Type: Point Name: Cemex UK Materials Limited Easting: 388030 Northing: 396880	Annual Volume (m ³): 7500 Max Daily Volume (m ³): 72 Original Application No: NPS/WR/030760A Original Start Date: 19/06/2014 Expiry Date: 31/03/2027 Issue No: 2 Version Start Date: 21/12/2018 Version End Date: -
-	1437m NW	Status: Historical Licence No: 2569006044 Details: Process Water Direct Source: Ground Water - North West Region Point: BOREHOLE AT PRESTON STREET, GORTON, MANCHESTER Data Type: Point Name: CEMEX UK MATERIALS LTD Easting: 388030 Northing: 396880	Annual Volume (m ³): 15000 Max Daily Volume (m ³): 115 Original Application No: - Original Start Date: 23/10/2003 Expiry Date: 31/03/2014 Issue No: 3 Version Start Date: 15/10/2007 Version End Date: -
-	1557m W	Status: Historical Licence No: 2569006042 Details: Spray Irrigation - Direct Direct Source: Ground Water - North West Region Point: PERMO-TRIASSIC SANDSTONE AT BELLE VUE LEISURE CENTRE Data Type: Point Name: CLIVE BACK Easting: 387591 Northing: 395891	Annual Volume (m ³): 10000 Max Daily Volume (m ³): 276 Original Application No: - Original Start Date: 11/07/2002 Expiry Date: 31/03/2014 Issue No: 4 Version Start Date: 29/02/2012 Version End Date: -
-	1557m W	Status: Historical Licence No: NW/069/0006/006 Details: Spray Irrigation - Direct Direct Source: Ground Water - North West Region Point: PERMO-TRIASSIC SANDSTONE AT BELLE VUE LEISURE CENTRE Data Type: Point Name: The Chief Operating Officer of the Eastlands Trust Easting: 387591 Northing: 395891	Annual Volume (m ³): 8000 Max Daily Volume (m ³): 276 Original Application No: - Original Start Date: 16/05/2014 Expiry Date: 31/03/2016 Issue No: 1 Version Start Date: 16/05/2014 Version End Date: -



ID	Location	Details	
-	1558m W	Status: Historical Licence No: 2569006042 Details: Spray Irrigation - Direct Direct Source: Ground Water - North West Region Point: PERMO-TRIASSIC SANDSTONE AT BELLE VUE LEISURE CENTRE Data Type: Point Name: CLIVE BACK Easting: 387590 Northing: 395890	Annual Volume (m ³): 15000 Max Daily Volume (m ³): 276 Original Application No: - Original Start Date: 11/07/2002 Expiry Date: 31/03/2014 Issue No: 3 Version Start Date: 04/02/2009 Version End Date: -
-	1576m E	Status: Active Licence No: NW/069/0013/001/R01 Details: Spray Irrigation - Direct Direct Source: Ground Water - North West Region Point: DENTON GOLF CLUB BOREHOLE Data Type: Point Name: The Denton Golf Club Limited Easting: 390716 Northing: 396461	Annual Volume (m ³): 8000 Max Daily Volume (m ³): 127.4 Original Application No: NPS/WR/024169 Original Start Date: 01/04/2018 Expiry Date: 31/03/2030 Issue No: 1 Version Start Date: 01/04/2018 Version End Date: -
-	1576m E	Status: Historical Licence No: NW/069/0013/001 Details: Spray Irrigation - Direct Direct Source: Ground Water - North West Region Point: DENTON GOLF CLUB BOREHOLE Data Type: Point Name: The Denton Golf Club Limited Easting: 390716 Northing: 396461	Annual Volume (m ³): 8000 Max Daily Volume (m ³): 127.4 Original Application No: - Original Start Date: 27/08/2009 Expiry Date: 31/03/2018 Issue No: 1 Version Start Date: 27/08/2009 Version End Date: -

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

5.7 Surface water abstractions

Records within 2000m

2

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	
-	1603m NE	Status: Historical Licence No: 2569006039 Details: Spray Irrigation - Direct Direct Source: "Surface, Non-Tidal - North West Region" Point: "UPPER GORTON RESERVOIR, AUDENSHAW, MANCHESTER" Data Type: Point Name: FAIRFIELD GOLF AND SAILING CLUB Easting: 390450 Northing: 397000	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 20/11/1996 Expiry Date: - Issue No: 100 Version Start Date: 20/11/1996 Version End Date: -
-	1603m NE	Status: Historical Licence No: 2569006039 Details: Spray Irrigation - Direct Direct Source: Surface, Non-Tidal - North West Region Point: UPPER GORTON RESERVOIR, AUDENSHAW, MANCHESTER Data Type: Point Name: FAIRFIELD GOLF AND SAILING CLUB Easting: 390450 Northing: 397000	Annual Volume (m ³): - Max Daily Volume (m ³): - Original Application No: - Original Start Date: 20/11/1996 Expiry Date: - Issue No: 100 Version Start Date: 20/11/1996 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

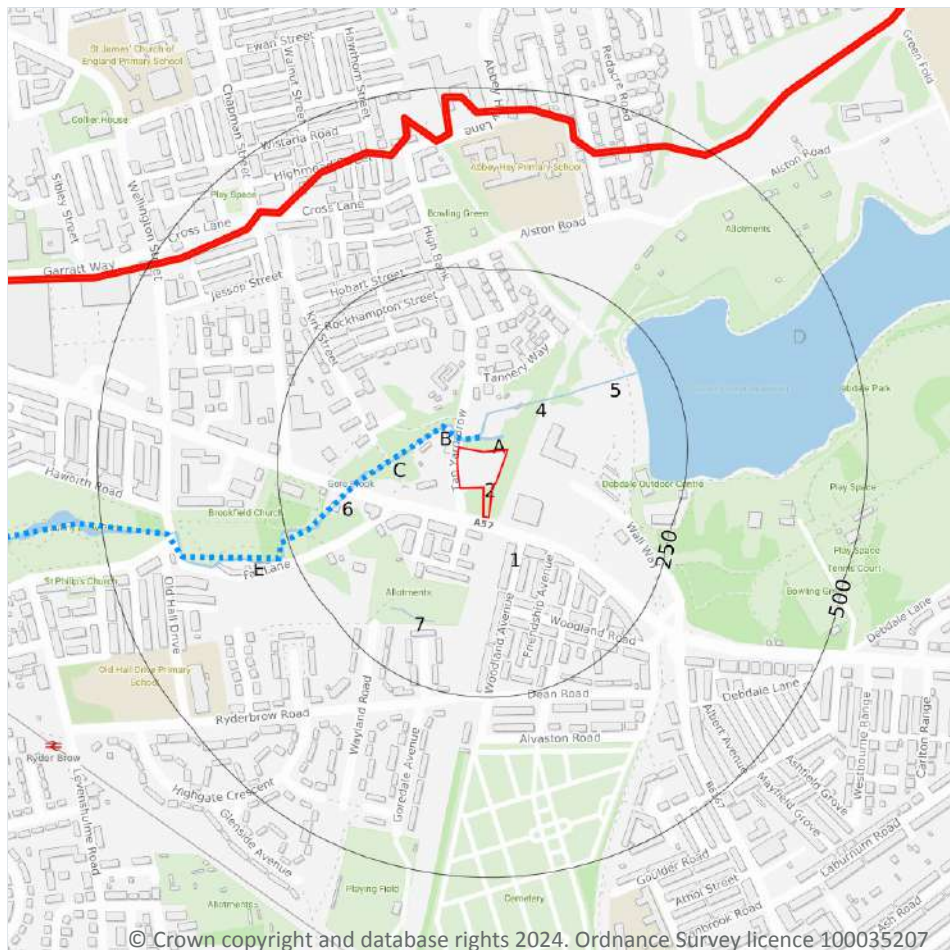
0

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



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- 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

11

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 53](#) >

ID	Location	Type of water feature	Ground level	Permanence	Name
B	10m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Gore Brook



ID	Location	Type of water feature	Ground level	Permanence	Name
A	17m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
A	18m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Gore Brook
4	54m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Gore Brook
C	87m W	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	Gore Brook
C	97m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Gore Brook
5	117m NE	Manmade watercourse for water transfer.	On ground surface	Watercourse may not contain water all year round	Gore Brook
6	137m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Gore Brook
7	160m S	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
E	199m W	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Gore Brook
D	219m NE	Reservoir. An area of non-tidal water used for storing water.	On ground surface	Watercourse contains water year round (in normal circumstances)	Gorton Lower Reservoir

This data is sourced from the Ordnance Survey.

6.2 Surface water features

Records within 250m

5

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 53](#) >



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 53](#) >

ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
1	On site	River	Platt Brook (Source to Fallowfield Bk)	GB112069061060	Bollin Dean Mersey Upper	Mersey Upper

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. Click on the water body ID in the table to visit the EA Catchment Explorer to find out more about each water body listed.

Features are displayed on the Hydrology map on [page 53](#) >

ID	Location	Type	Name	Water body ID	Overall rating	Chemical rating	Ecological rating	Year
3	11m NW	River	Platt Brook (Source to Fallowfield Bk)	GB112069061060 ↗	Moderate	Fail	Moderate	2019

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. Click on the water body ID in the table to visit the EA Catchment Explorer to find out more about each groundwater body listed.

Features are displayed on the Hydrology map on [page 53](#) >

ID	Location	Name	Water body ID	Overall rating	Chemical rating	Quantitative	Year
2	On site	Manchester and East Cheshire Permo-Triassic Sandstone Aquifers	GB41201G101100 ↗	Poor	Poor	Poor	2019

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



7 River and coastal flooding



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- Site Outline
- Search buffers in metres (m)
- River and coastal flooding:
 - High
 - Medium
 - Low
 - Very Low
- Historical Flood Events
- Areas Used for Flood Storage
- Areas Benefiting from Flood Defences
- Flood Defences

7.1 Risk of flooding from rivers and the sea

Records within 50m

4

The chance of flooding from rivers and/or the sea in any given year, based on cells of 50m within the Risk of Flooding from Rivers and Sea (RoFRaS)/Flood Risk Assessment Wales (FRAW) models. Each cell is allocated one of four flood risk categories, taking into account flood defences and their condition. The risk categories for RoFRaS for rivers and the sea and FRAW for rivers are; 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). The risk categories for FRAW for the sea are; Very low (less than 1 in 1000 chance in any given year), Low (less than 1 in 200 but greater than or equal to 1 in 1000 chance), Medium (less than 1 in 30 but greater than or equal to 1 in 200 chance) or High (greater than or equal to 1 in 30 chance).

Features are displayed on the River and coastal flooding map on [page 57 >](#)



Distance	Flood risk category
On site	Medium
0 - 50m	High

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



- Site Outline
- Search buffers in metres (m)
- Flood zone 2
- Flood zone 3

7.6 Flood Zone 2

Records within 50m

1

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.

Features are displayed on the River and coastal flooding map on [page 57 >](#)

Location	Type
On site	Zone 2 - (Fluvial /Tidal Models)

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



7.7 Flood Zone 3

Records within 50m

1

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.

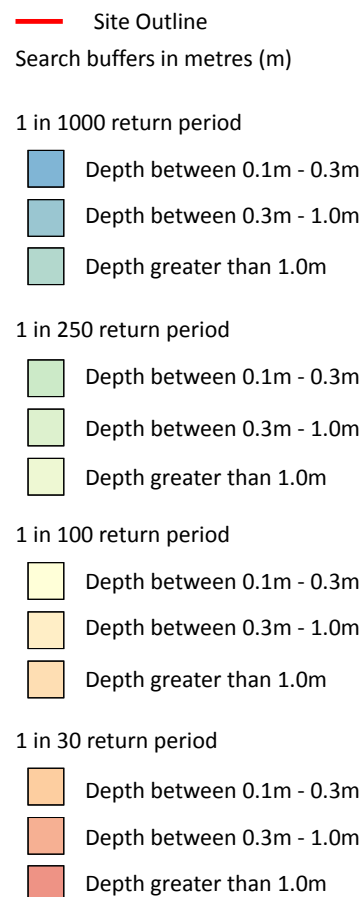
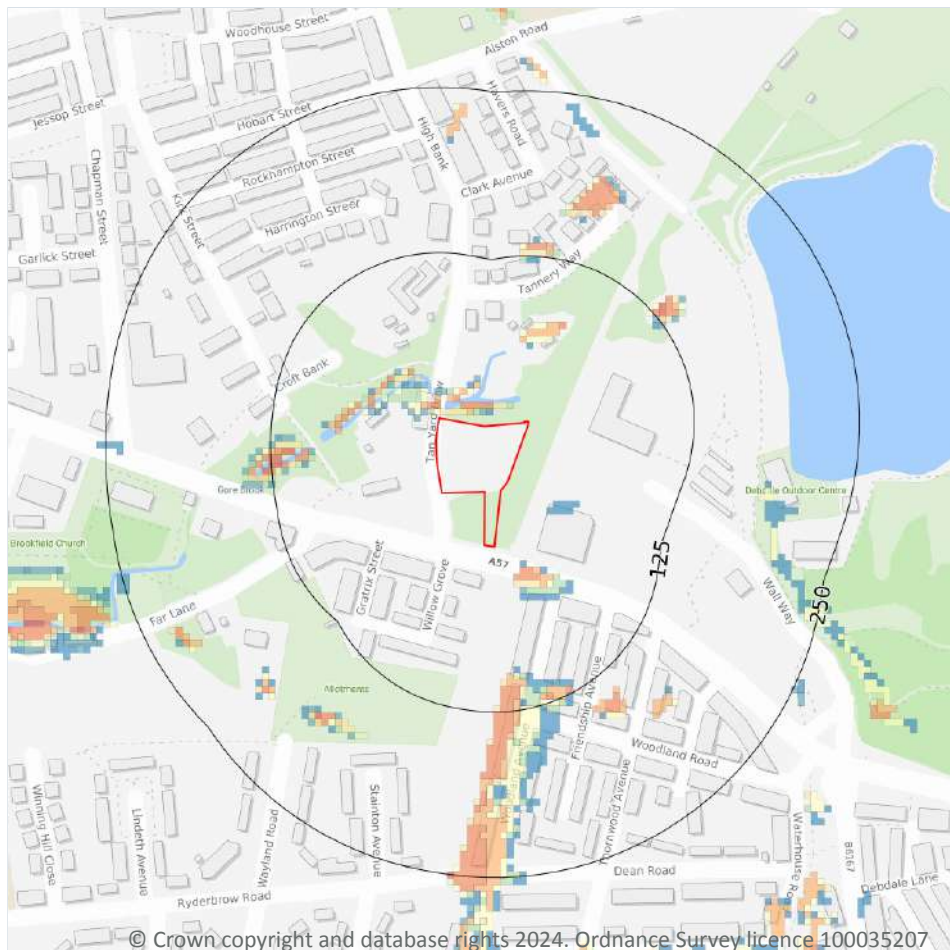
Features are displayed on the River and coastal flooding map on [page 57 >](#)

Location	Type
3m NW	Zone 3 - (Fluvial Models)

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



8 Surface water flooding



8.1 Surface water flooding

Highest risk on site

Negligible

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 61](#) >

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.

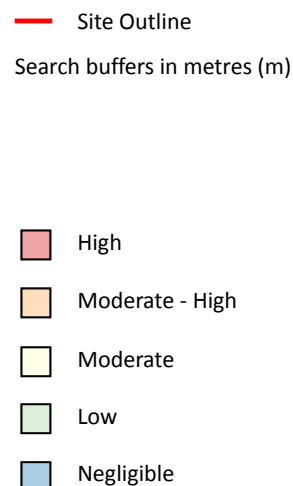
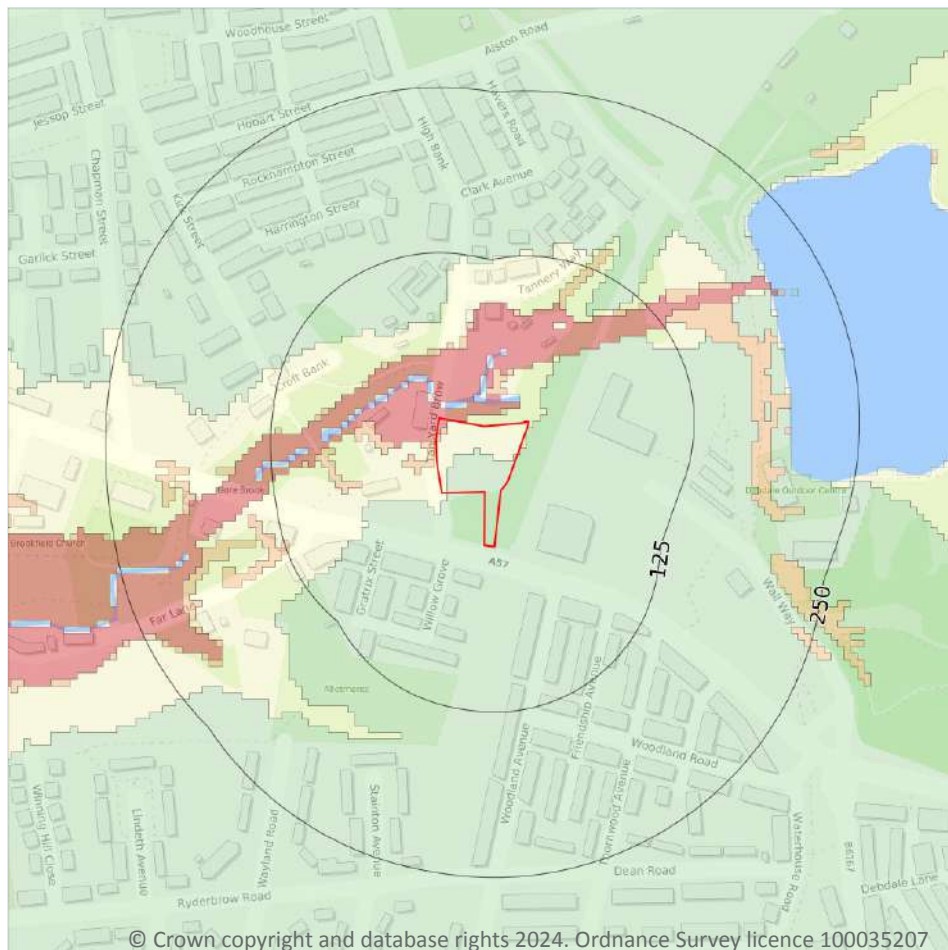
The table below shows the maximum flood depths for a range of return periods for the site.

Return period	Maximum modelled depth
1 in 1000 year	Negligible
1 in 250 year	Negligible
1 in 100 year	Negligible
1 in 30 year	Negligible

This data is sourced from Ambiantal Risk Analytics.



9 Groundwater flooding



9.1 Groundwater flooding

Highest risk on site

High

Highest risk within 50m

High

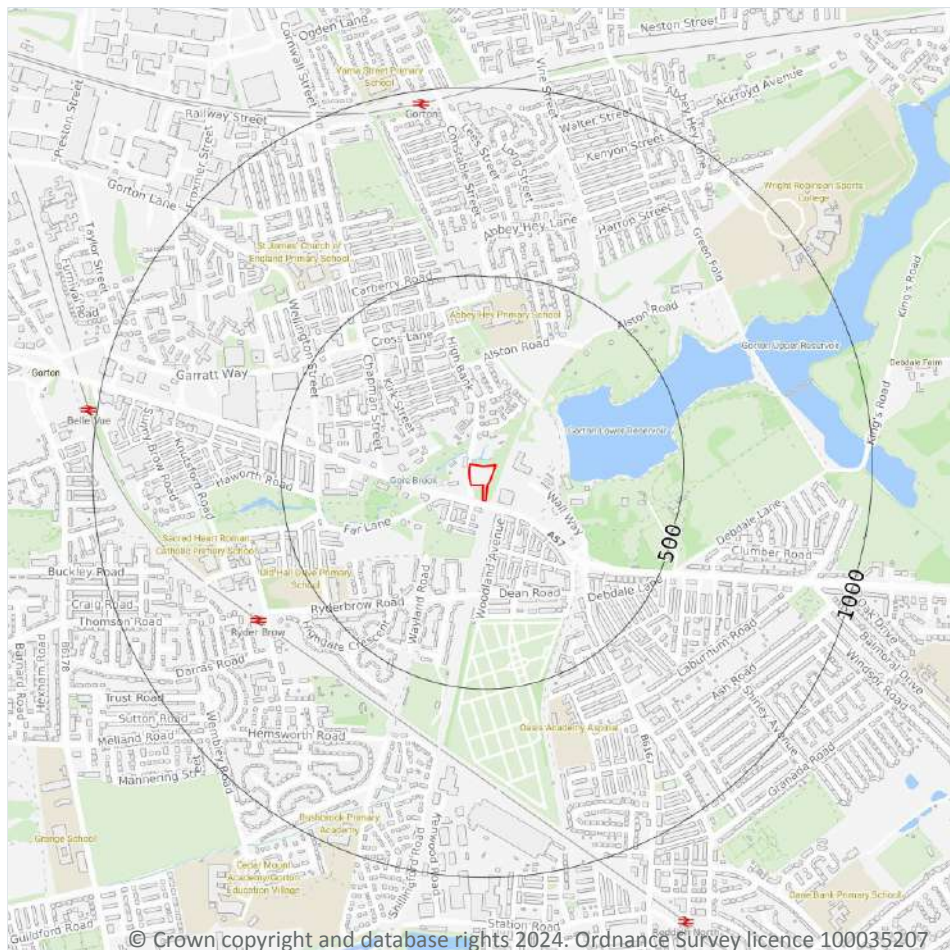
Groundwater flooding is caused by unusually high groundwater levels. It occurs when the water table rises above the ground surface or within underground structures such as basements or cellars. Groundwater flooding tends to exhibit a longer duration than surface water flooding, possibly lasting for weeks 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 63](#) >

This data is sourced from Ambiantal Risk Analytics.



10 Environmental designations



- Site Outline
- Search buffers in metres (m)
- + Local Nature Reserves (LNR)

10.1 Sites of Special Scientific Interest (SSSI)

Records within 2000m

0

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.

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

1

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. Features are displayed on the Environmental designations map on [page 64 >](#)

ID	Location	Name	Data source
-	1909m S	Highfield Country Park	Natural England

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

10.7 Designated Ancient Woodland

Records within 2000m

0

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.

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

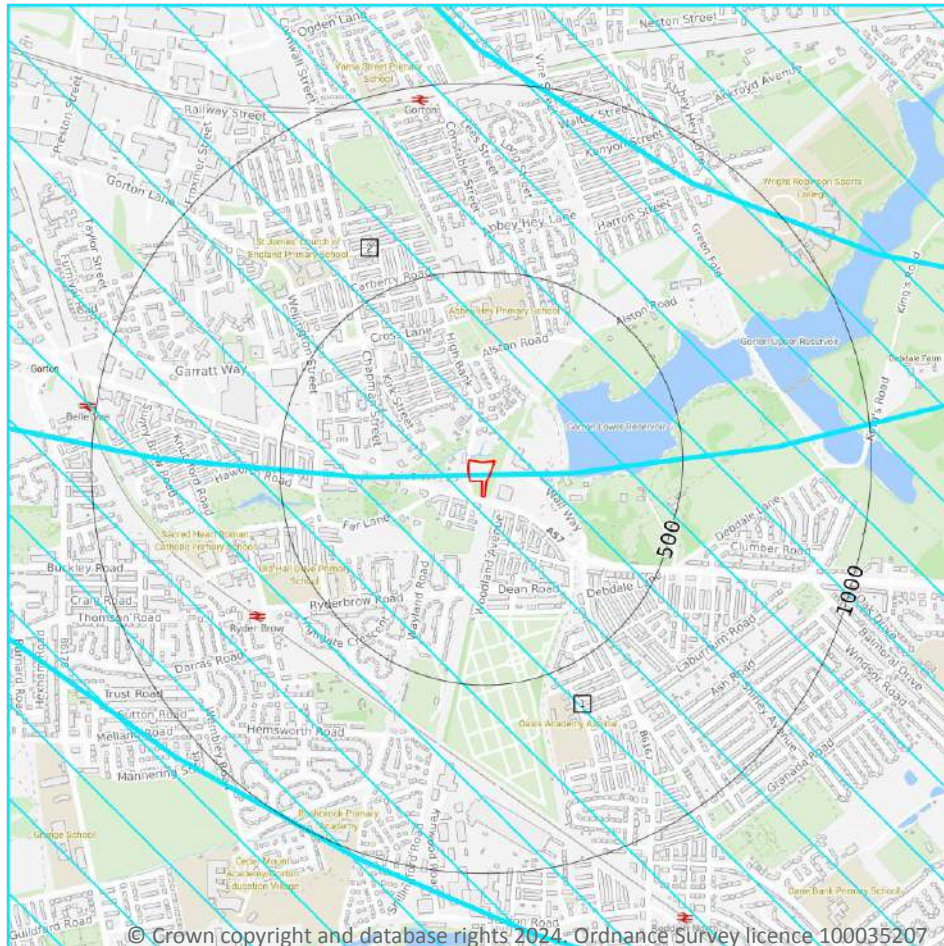
0

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

2

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 69](#) >



ID	Location	Type of developments requiring consultation
1	On site	Infrastructure - Airports, helipads and other aviation proposals. Air pollution - Livestock & poultry units with floorspace > 500m², slurry lagoons & digestate stores > 750m², manure stores > 3500t. 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.
2	On site	Infrastructure - Airports, helipads and other aviation proposals. Air pollution - Any industrial/agricultural development that could cause AIR POLLUTION (incl: industrial processes, livestock & poultry units with floorspace > 500m², slurry lagoons & digestate stores > 750m², manure stores > 3500t). 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

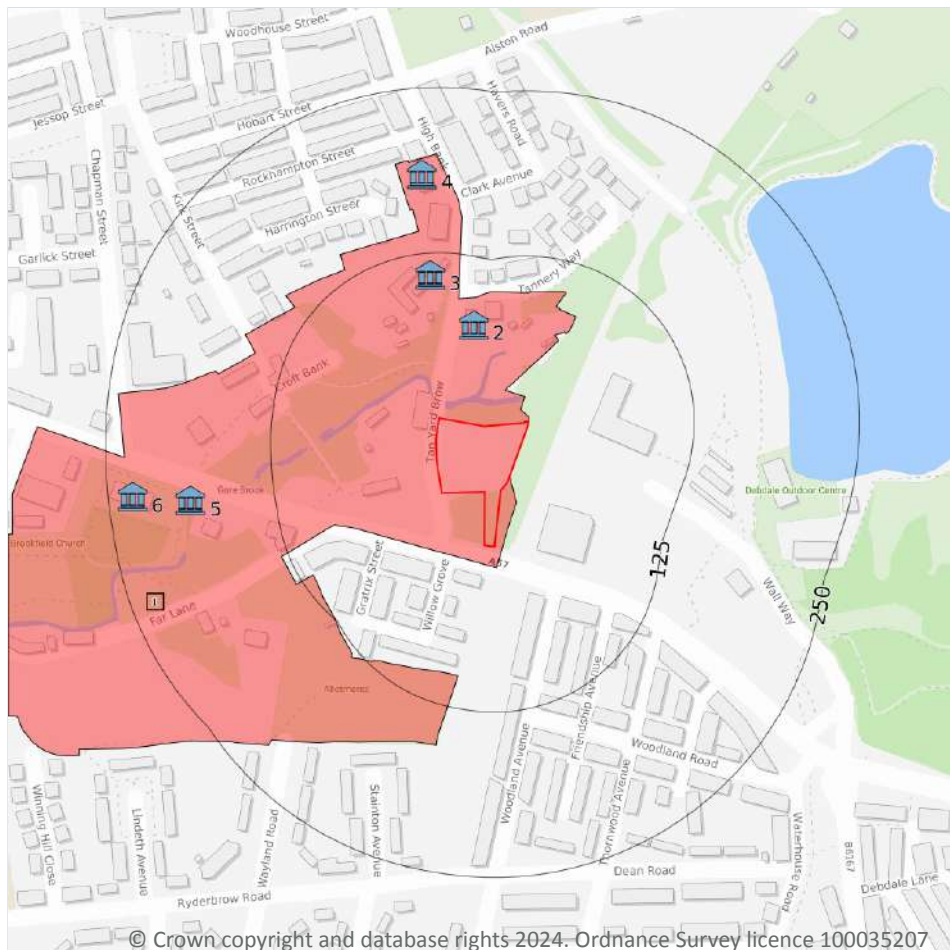
Records within 2000m	0
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Divisions of SSSIs used to record management and condition details. Units are the smallest areas for which Natural England gives a condition assessment, however, the size of units varies greatly depending on the types of management 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

5

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 71 >](#)

ID	Location	Name	Grade	Reference Number	Listed date
2	74m N	56-60, Tan Yard Brow	II	1254688	16/11/1971
3	109m N	Spring Bank Farmhouse And Adjoining Farm Building	II	1270654	03/10/1974
4	185m N	60-66, High Bank	II	1218639	16/11/1971
5	188m W	Lodge In Churchyard To East Of Brookfield Unitarian Church, With Attached Wall	II	1200819	03/10/1974
6	232m W	Brookfield Unitarian Church	II*	1218832	03/10/1974



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

11.5 Conservation Areas

Records within 250m

1

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.

Features are displayed on the Visual and cultural designations map on [page 71 >](#)

ID	Location	Name	District	Date of designation
1	On site	Gore Brook Valley, Gorton	Manchester	22/12/1993

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

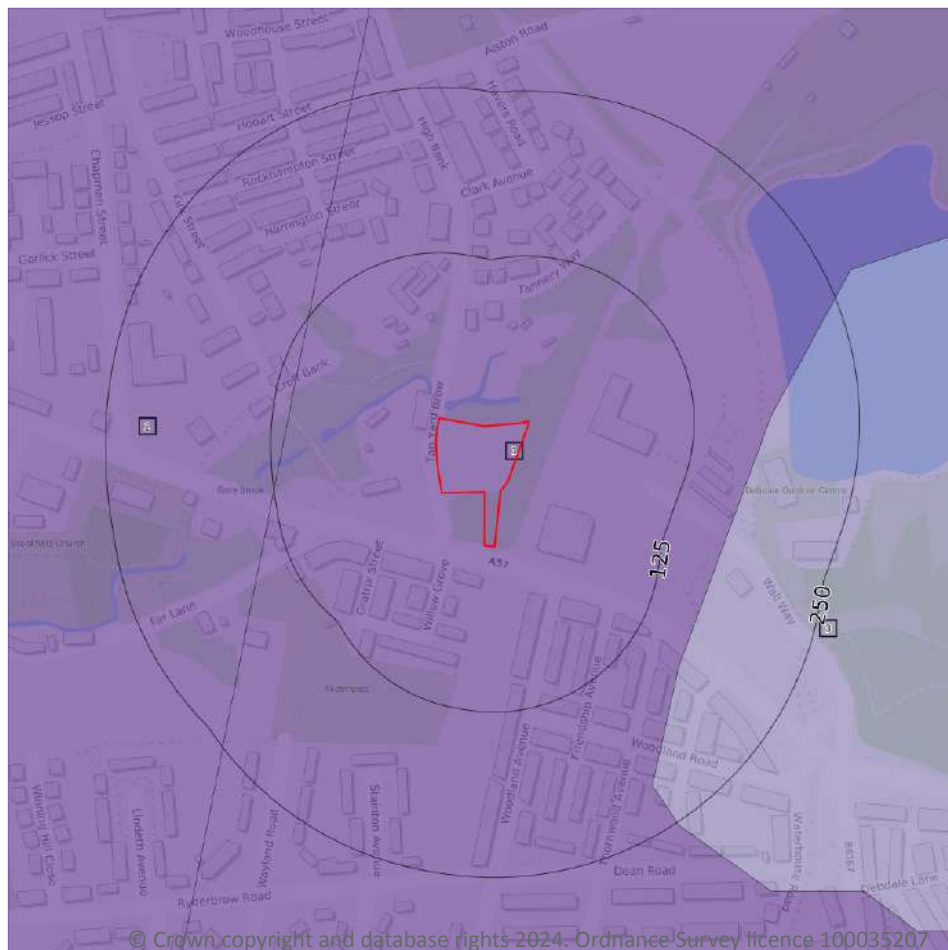
0

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.



12 Agricultural designations



- Site Outline
- Search buffers in metres (m)
- Grade 1 - excellent quality
- Grade 2 - very good quality
- Grade 3 - good to moderate quality
- Grade 3a - good quality
- Grade 3b - moderate quality
- Grade 4 - poor quality
- Grade 5 - very poor quality
- Non-agricultural land
- Urban land
- Exclusion land
- Tree felling licences
- Open Access land

12.1 Agricultural Land Classification

Records within 250m

3

Classification of the quality of agricultural land taking into consideration multiple factors including climate, physical geography and soil properties. It should be noted that the categories for the grading of agricultural land are not consistent across England, Wales and Scotland.

Features are displayed on the Agricultural designations map on [page 74](#) >

ID	Location	Classification	Description
1	On site	Urban	-
2	112m W	Urban	-
3	162m SE	Non Agricultural	-



This data is sourced from Natural England.

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



- Site Outline**
- Search buffers in metres (m)**
- Priority Habitat Inventory
 - Open Mosaic Habitat
 - Limestone Pavement Orders
- Habitat Networks**
- Primary Habitat
 - Restorable Habitat
 - Associated Habitats
 - Habitat Restoration-Creation
 - Network Enhancement Zone 1
 - Network Enhancement Zone 2

13.1 Priority Habitat Inventory

Records within 250m

21

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

Features are displayed on the Habitat designations map on [page 76 >](#)

ID	Location	Main Habitat	Other habitats
1	12m NW	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
2	18m NW	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
3	41m NW	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
A	79m W	Deciduous woodland	Main habitat: DWOOD (INV > 50%)



ID	Location	Main Habitat	Other habitats
4	91m NE	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
A	96m W	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
5	101m S	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
6	105m NW	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
7	117m NE	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
8	123m NW	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
9	125m NE	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
10	139m SW	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
11	159m S	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
12	185m W	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
13	190m W	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
14	191m SW	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
B	196m NE	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
15	197m NE	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
B	202m NE	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
16	207m W	Deciduous woodland	Main habitat: DWOOD (INV > 50%)
17	228m E	Deciduous woodland	Main habitat: DWOOD (INV > 50%)

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

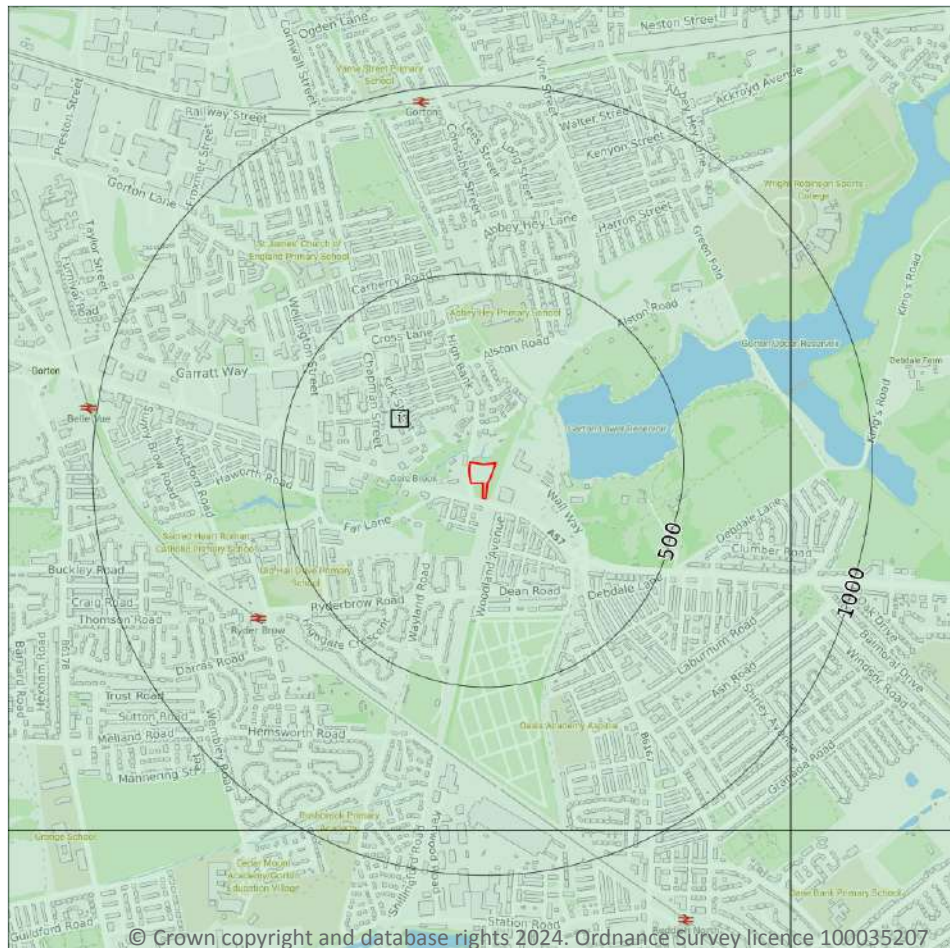
Records within 250m**0**

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.

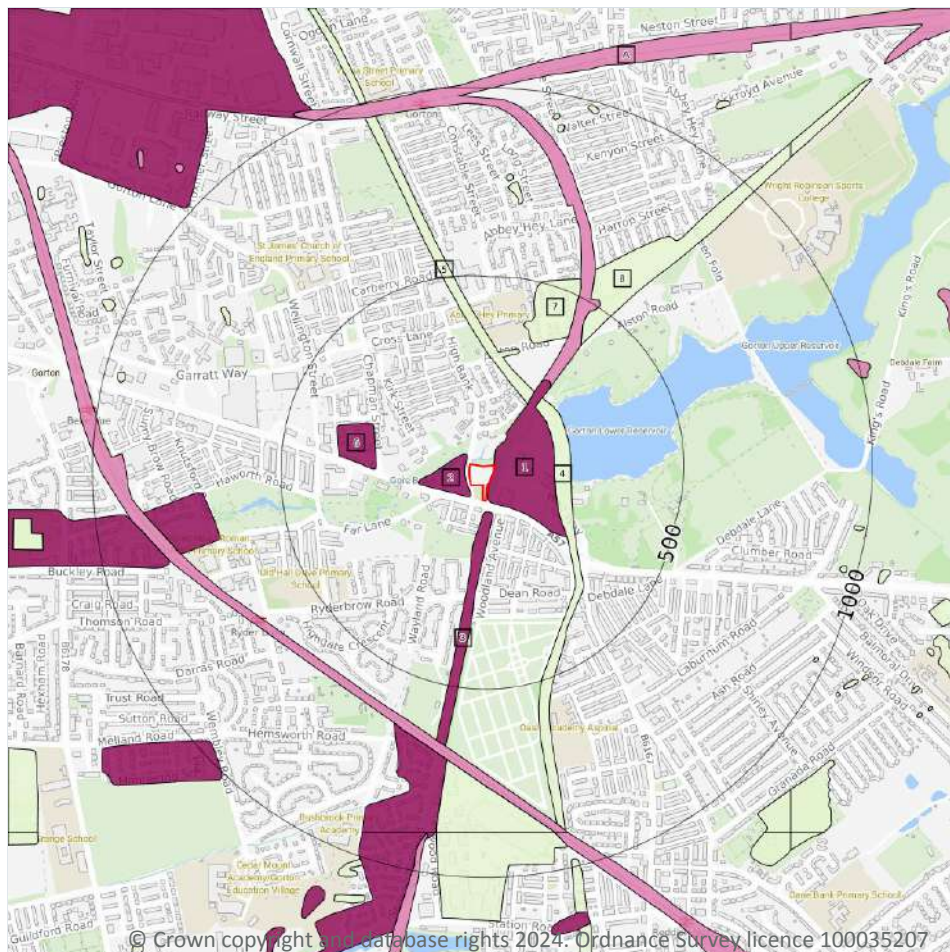
Features are displayed on the Geology 1:10,000 scale - Availability map on [page 79](#) >

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	Full	Full	Full	Full	SJ89NE

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

9

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 80](#) >

ID	Location	LEX Code	Description	Rock description
1	On site	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
2	8m SW	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
3	30m S	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
4	157m E	WMGR-ARTDP	Infilled Ground	Artificial Deposit

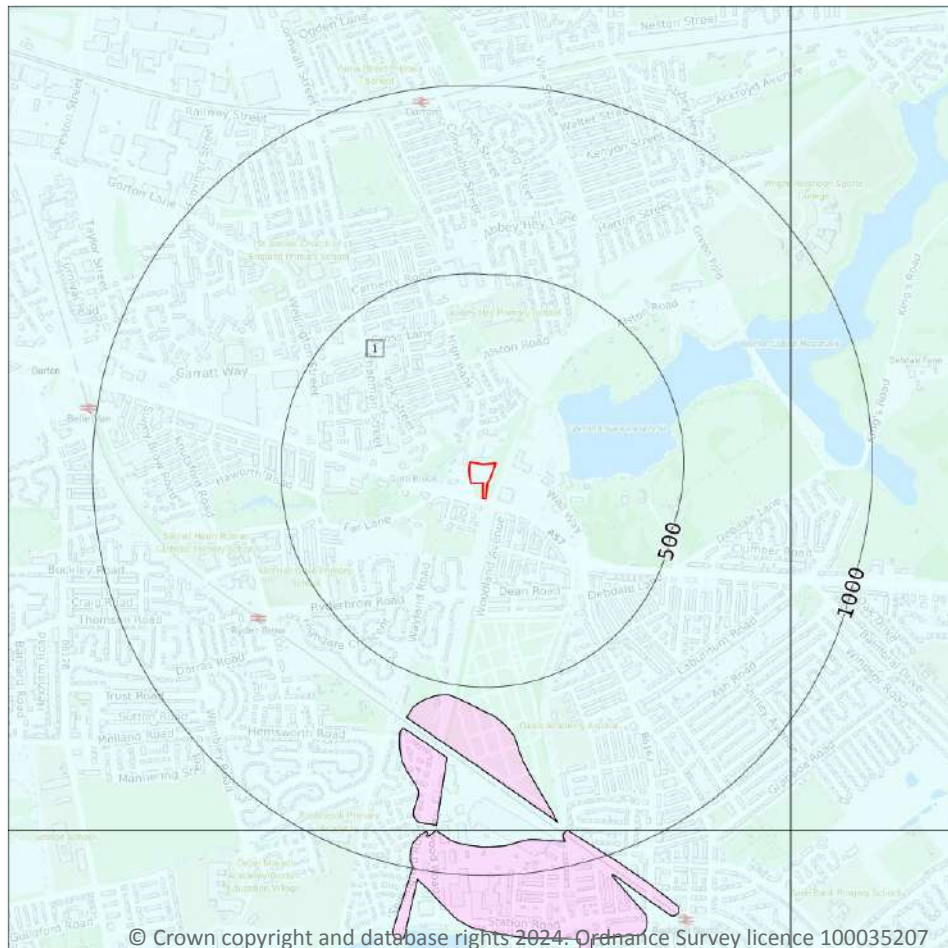


ID	Location	LEX Code	Description	Rock description
5	183m NE	WMGR-ARTDP	Infilled Ground	Artificial Deposit
6	247m W	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
A	253m NE	WGR-VOID	Worked Ground (Undivided)	Void
7	340m N	WMGR-ARTDP	Infilled Ground	Artificial Deposit
8	392m NE	WMGR-ARTDP	Infilled Ground	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

1

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 82](#) >

ID	Location	LEX Code	Description	Rock description
1	On site	TILLD-DMTN	Till, Devensian - Diamicton	Diamicton

This data is sourced from the British Geological Survey.



14.4 Landslip (10k)

Records within 500m

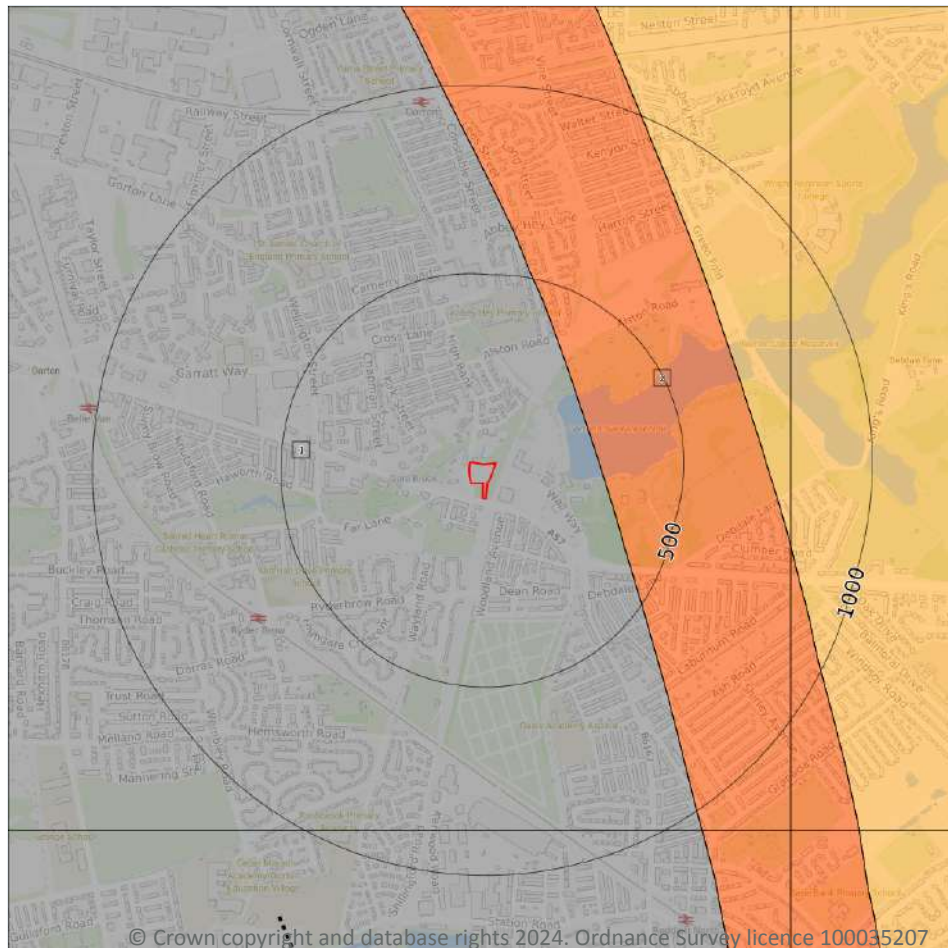
0

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

2

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 84](#) >

ID	Location	LEX Code	Description	Rock age
1	On site	CPB-SDST	Chester Pebble Beds Formation - Sandstone	Early Triassic Epoch
2	262m E	MM-MDST	Manchester Marls Formation - Mudstone	Late Permian Epoch [Obsolete name]

This data is sourced from the British Geological Survey.



14.6 Bedrock faults and other linear features (10k)

Records within 500m

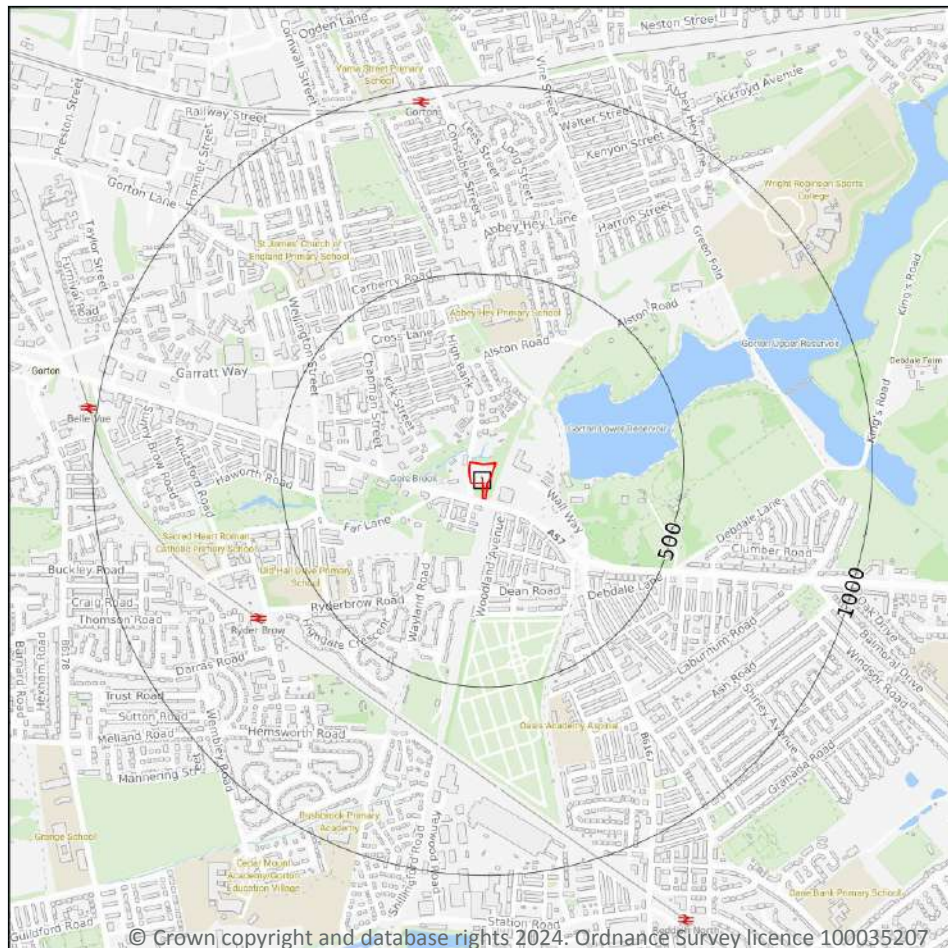
0

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.

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.

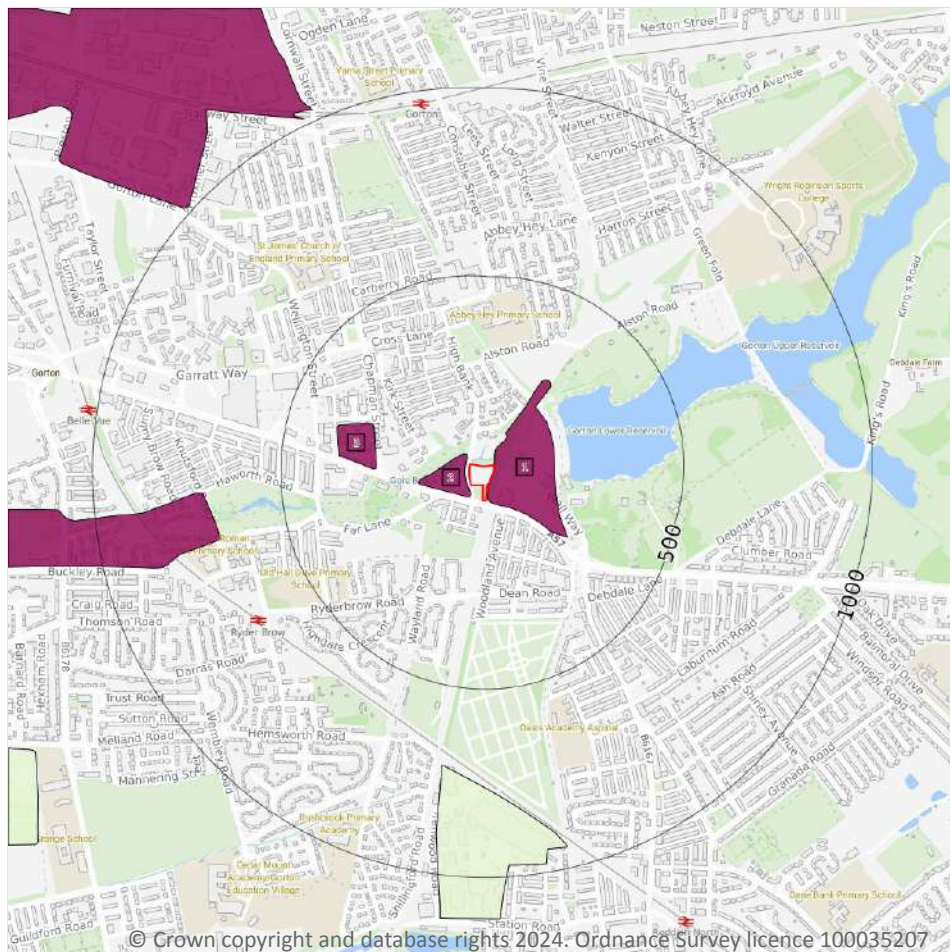
Features are displayed on the Geology 1:50,000 scale - Availability map on [page 86](#) >

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	No coverage	Full	Full	No coverage	EW085_manchester_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

3

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 87](#) >

ID	Location	LEX Code	Description	Rock description
1	On site	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
2	8m SW	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
3	247m W	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**2**

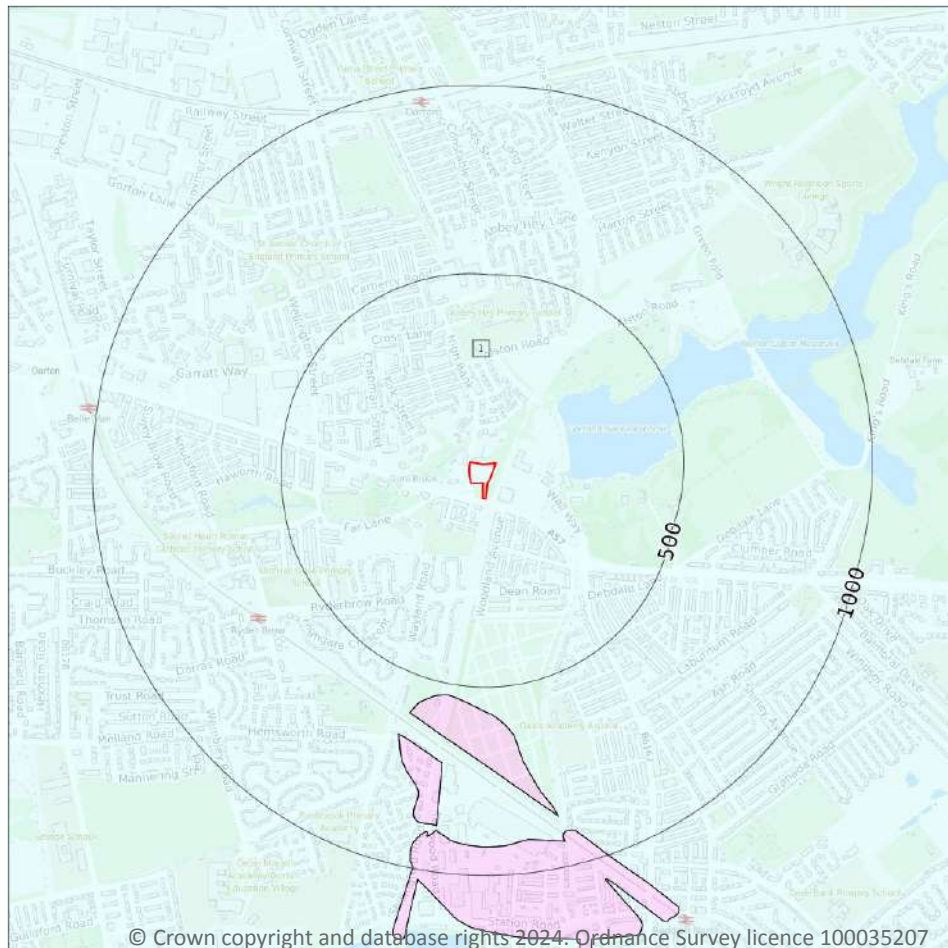
A qualitative classification of estimated rates of vertical movement of water from the ground surface through the unsaturated zone of any artificial deposits (the zone between the land surface and the water table).

Location	Flow type	Maximum permeability	Minimum permeability
On site	Mixed	Very High	Low
8m SW	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

1

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 89](#) >

ID	Location	LEX Code	Description	Rock description
1	On site	TILLD-DMTN	TILL, DEVANSIAN	DIAMICTON

This data is sourced from the British Geological Survey.



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

Location	Flow type	Maximum permeability	Minimum permeability
On site	Mixed	High	Low

This data is sourced from the British Geological Survey.

15.6 Landslip (50k)

Records within 500m**0**

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

This data is sourced from the British Geological Survey.

15.7 Landslip permeability (50k)

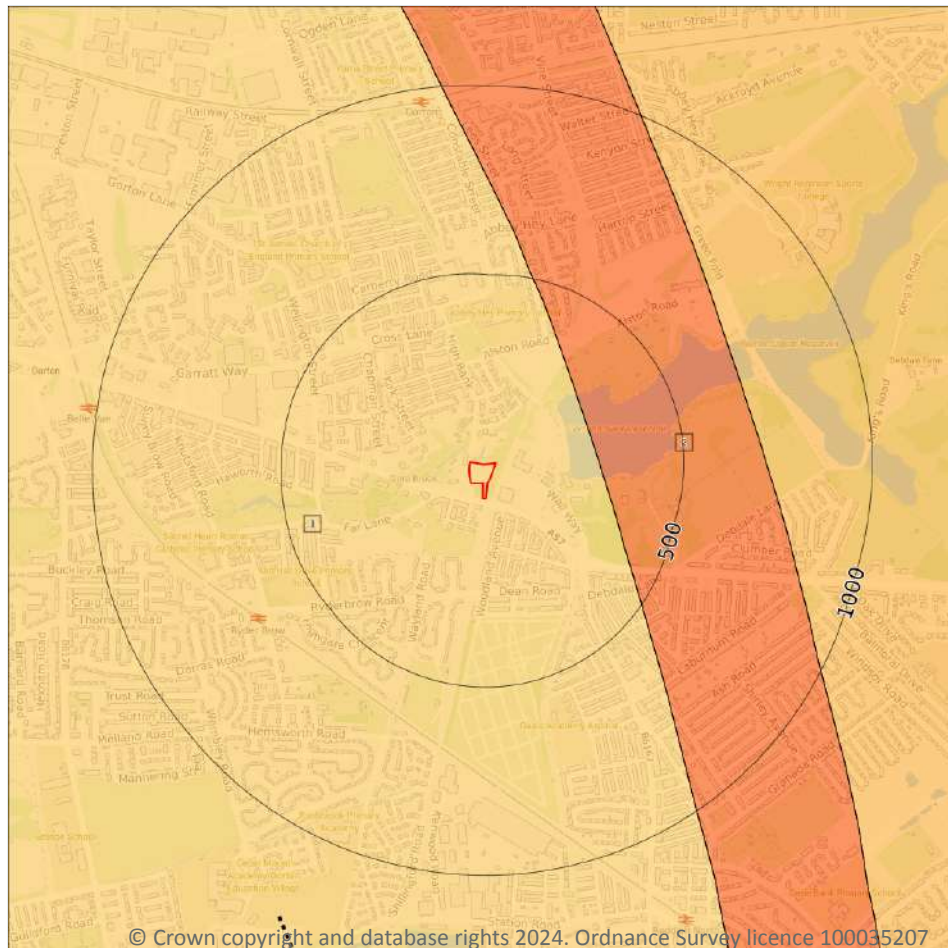
Records within 50m**0**

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

This data is sourced from the British Geological Survey.



Geology 1:50,000 scale - Bedrock



— Site Outline

Search buffers in metres (m)

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

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

15.8 Bedrock geology (50k)

Records within 500m

2

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 91](#) >

ID	Location	LEX Code	Description	Rock age
1	On site	CHES-SDST	CHESTER FORMATION - SANDSTONE	OLENEKIAN
2	262m E	MM-MDST	MANCHESTER MARLS FORMATION - MUDSTONE	-

This data is sourced from the British Geological Survey.



15.9 Bedrock permeability (50k)

Records within 50m**1**

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

Location	Flow type	Maximum permeability	Minimum permeability
On site	Mixed	High	Moderate

This data is sourced from the British Geological Survey.

15.10 Bedrock faults and other linear features (50k)

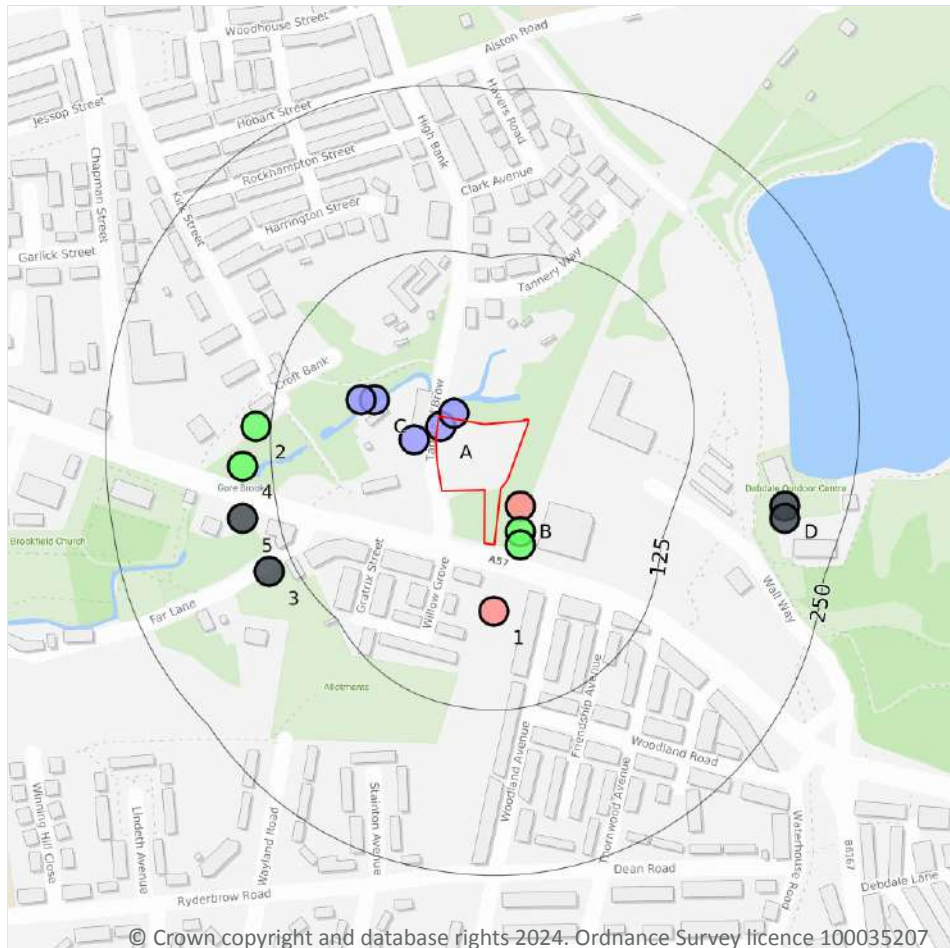
Records within 500m**0**

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.

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

15

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 93](#) >

ID	Location	Grid reference	Name	Length	Confidential	Web link
A	On site	389150 395970	CHORLTON BROOK 26	3.4	N	936889 ↗
A	4m NW	389160 395980	CHORLTON BROOK 27	2.8	N	936890 ↗
B	16m SE	389210 395910	HYDE ROAD IMPROVEMENT 4	40.0	N	937086 ↗



ID	Location	Grid reference	Name	Length	Confidential	Web link
A	17m W	389130 395960	TAN YARD BROW A	7.0	N	937189 ↗
B	18m SE	389210 395890	HYDE ROAD IMPROVEMENT 3	30.0	N	937085 ↗
B	19m SE	389210 395880	HYDE ROAD IMPROVEMENT 2	30.0	N	937084 ↗
1	50m S	389190 395830	HYDE ROAD IMPROVEMENT 1	30.5	N	937083 ↗
C	51m NW	389100 395990	TAN YARD BROW HA2	2.0	N	937188 ↗
C	60m NW	389090 395990	TAN YARD BROW HA1	3.0	N	937187 ↗
2	137m W	389010 395970	HYDE ROAD IMPROVEMENT 2	13.5	N	937088 ↗
3	144m SW	389020 395860	GORE BROOK LOCAL SEWERS PHASE 2 11	-	Y	N/A
4	147m W	389000 395940	HYDE ROAD IMPROVEMENT 1	13.5	N	937087 ↗
5	152m W	389000 395900	GORE BROOK LOCAL SEWERS PHASE 2 12	-	Y	N/A
D	204m E	389410 395910	PROPOSED SAILING CENTRE DEBDALE PARK GORTON 1	-	Y	N/A
D	207m E	389410 395900	PROPOSED SAILING CENTRE DEBDALE PARK GORTON 2	-	Y	N/A

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

1

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

Features are displayed on the Natural ground subsidence - Shrink swell clays map on [page 95 >](#)

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

This data is sourced from the British Geological Survey.



Natural ground subsidence - Running sands



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

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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.

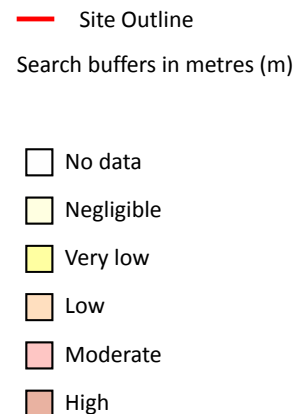
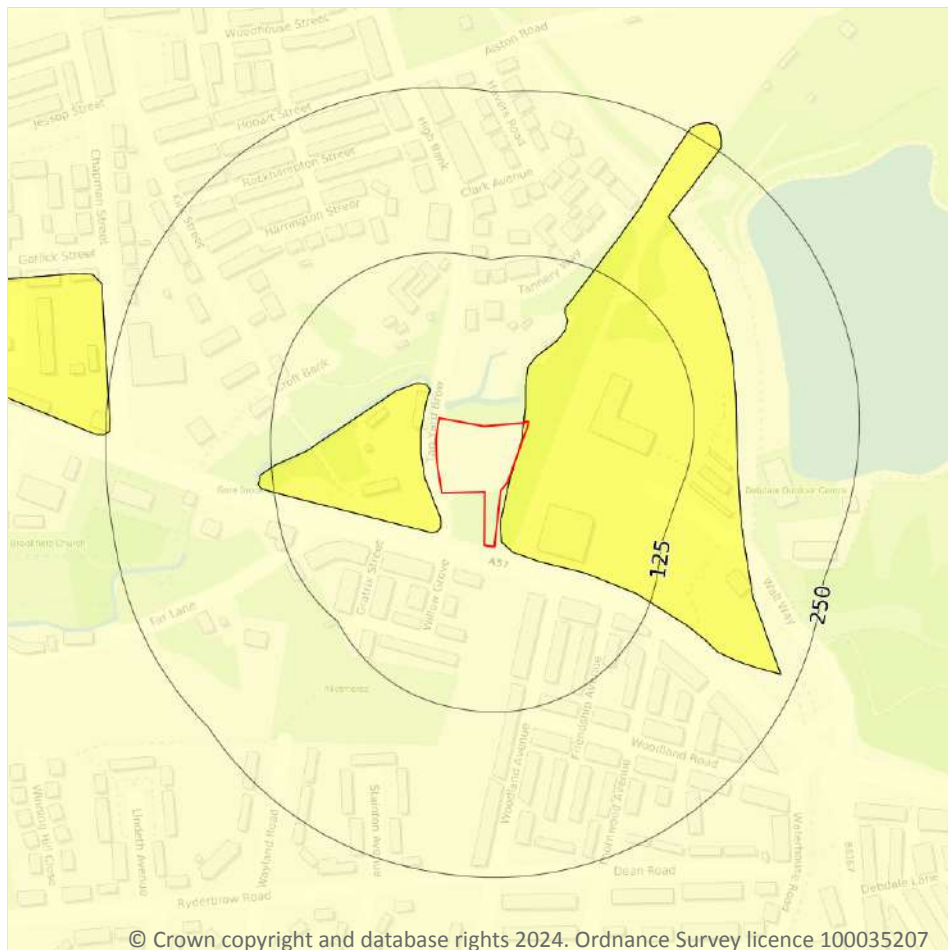
Features are displayed on the Natural ground subsidence - Running sands map on [page 96](#) >

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



17.3 Compressible deposits

Records within 50m

3

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 97 >](#)

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

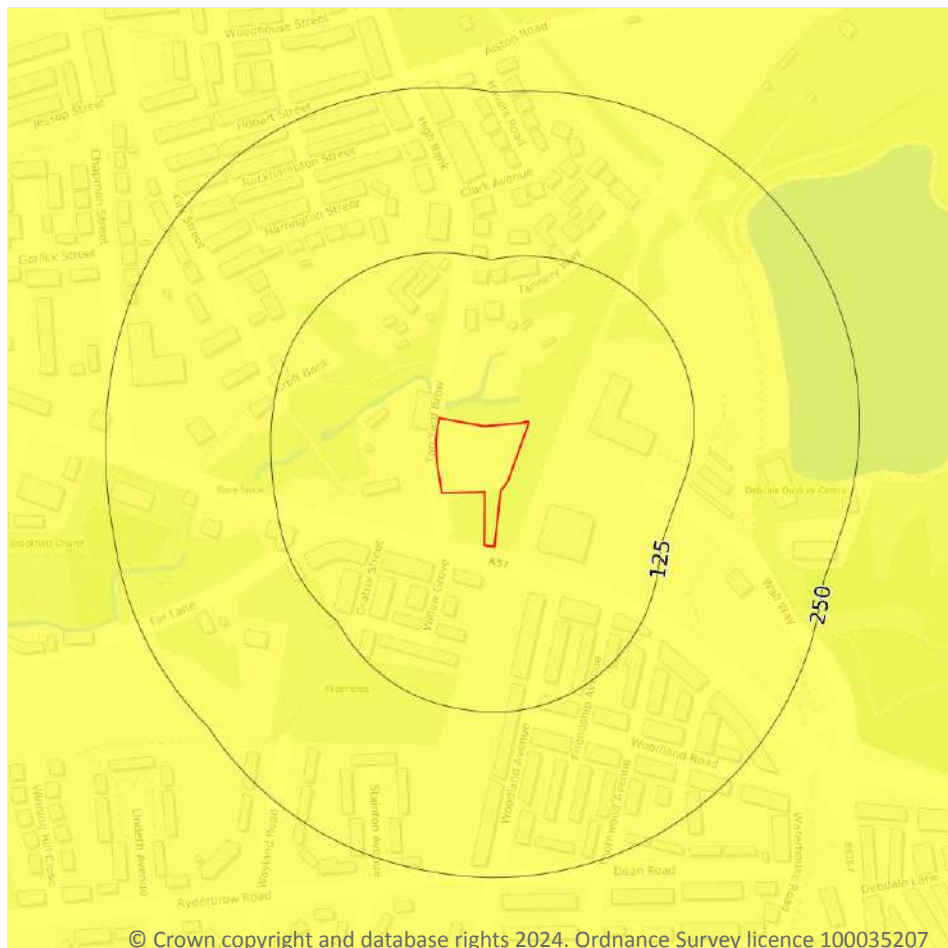


Location	Hazard rating	Details
8m SW	Very low	Compressibility and uneven settlement problems are not likely to be significant on the site for most land uses.

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

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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.

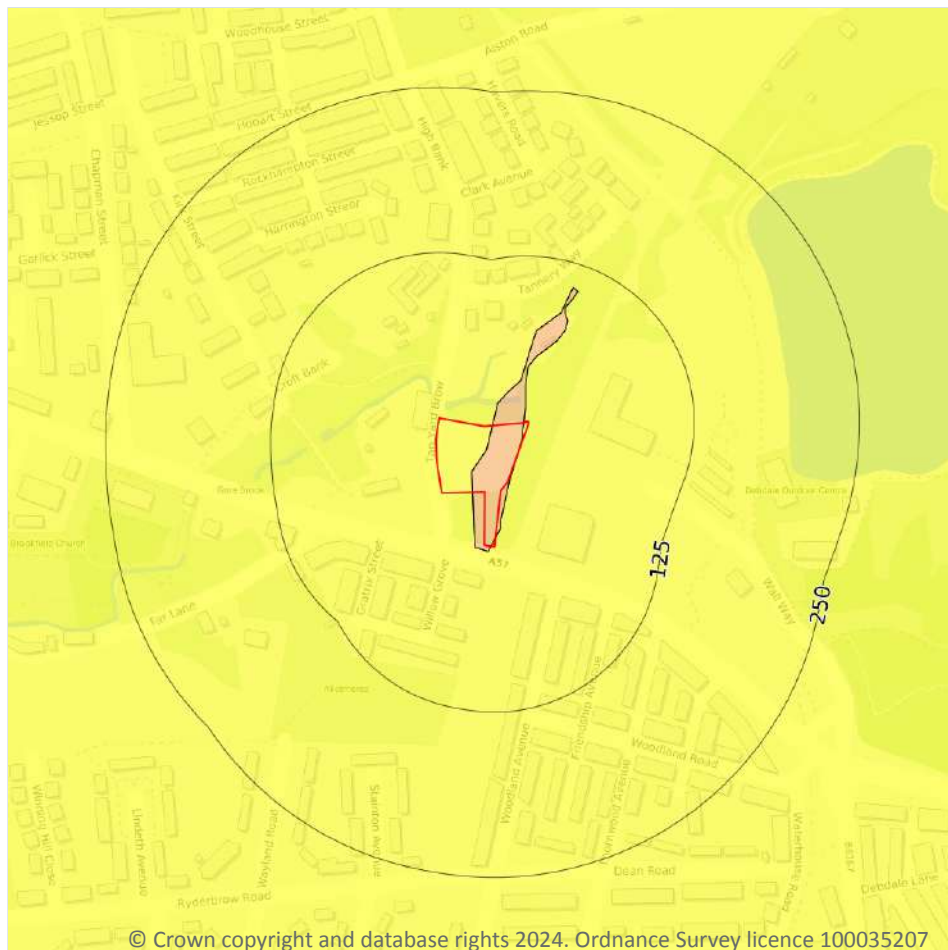
Features are displayed on the Natural ground subsidence - Collapsible deposits map on [page 99](#) >

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

This data is sourced from the British Geological Survey.



Natural ground subsidence - Landslides



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

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17.5 Landslides

Records within 50m

2

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

Features are displayed on the Natural ground subsidence - Landslides map on [page 100](#) >

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



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

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 102](#) >

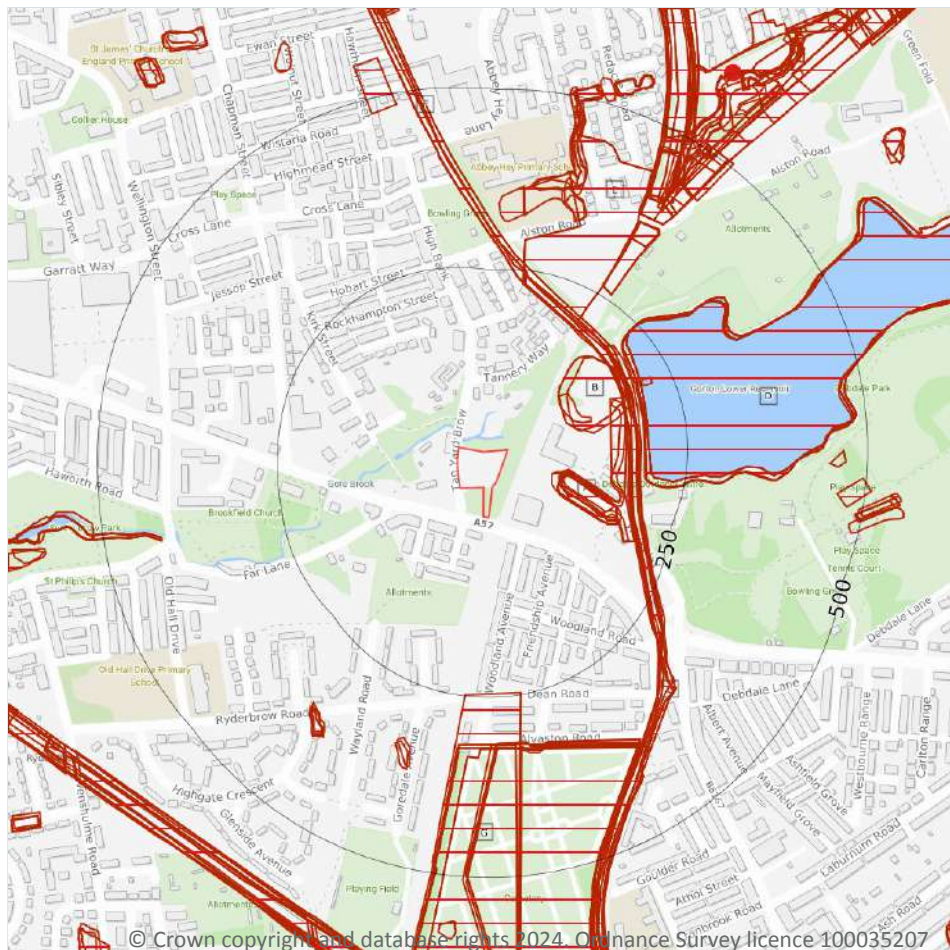
Location	Hazard rating	Details
On site	Negligible	Soluble rocks are either not thought to be present within the ground, or not prone to dissolution. Dissolution features are unlikely to be present.



This data is sourced from the British Geological Survey.



18 Mining and ground workings



- Site Outline
- Search buffers in metres (m)
- BritPits
- Surface ground workings
- Underground workings
- Underground mining extents
- Historical mineral planning areas
- TCA non-coal mining
- Non Coal Mining
 - Sporadic underground mining of restricted extent possible
 - Localised small scale underground mining possible
 - Small scale mining possible
 - Underground mining known or likely within or in close proximity
 - Underground mining known within or in very close proximity

18.1 BritPits

Records within 500m

0

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.

This data is sourced from the British Geological Survey.

18.2 Surface ground workings

Records within 250m

47

Historical land uses identified from Ordnance Survey mapping that involved ground excavation at the surface. These features may or may not have been subsequently backfilled.

Features are displayed on the Mining and ground workings map on [page 104](#) >

ID	Location	Land Use	Year of mapping	Mapping scale
A	69m E	Unspecified Pit	1892	1:10560
A	79m E	Unspecified Ground Workings	1938	1:10560
A	81m E	Unspecified Pit	1907	1:10560
A	82m E	Unspecified Heap	1918	1:10560
A	82m E	Unspecified Heap	1938	1:10560
A	82m E	Unspecified Heap	1934	1:10560
A	82m E	Unspecified Heap	1906	1:10560
A	82m E	Unspecified Heap	1923	1:10560
A	83m E	Unspecified Pit	1934	1:10560
A	84m E	Unspecified Pit	1968	1:10560
A	84m E	Unspecified Pit	1956	1:10560
A	84m E	Unspecified Pit	1985	1:10000
A	84m E	Unspecified Pit	1978	1:10000
B	89m NE	Unspecified Ground Workings	1968	1:10560
B	89m NE	Unspecified Ground Workings	1956	1:10560
B	95m NE	Unspecified Ground Workings	1907	1:10560
B	98m NE	Unspecified Heap	1991	1:10000
C	168m E	Canal	1934	1:10560
C	170m E	Canal	1923	1:10560
C	170m E	Canal	1938	1:10560
C	170m E	Canal	1934	1:10560
C	170m E	Canal	1906	1:10560
C	170m E	Canal	1892	1:10560



ID	Location	Land Use	Year of mapping	Mapping scale
C	170m E	Canal	1918	1:10560
C	171m E	Canal	1907	1:10560
A	172m E	Canal	1968	1:10560
A	172m E	Canal	1956	1:10560
D	190m E	Reservoir	1934	1:10560
D	192m E	Reservoir	1923	1:10560
D	192m E	Reservoir	1938	1:10560
D	192m E	Reservoir	1934	1:10560
D	192m E	Reservoir	1906	1:10560
D	192m E	Reservoir	1892	1:10560
D	192m E	Reservoir	1918	1:10560
D	196m E	Pond	1968	1:10560
D	196m E	Reservoir	1956	1:10560
D	196m E	Reservoir	1985	1:10000
D	196m E	Reservoir	1978	1:10000
D	196m E	Reservoir	1991	1:10000
E	205m NE	Refuse Heap	1938	1:10560
E	205m NE	Refuse Heap	1934	1:10560
F	229m N	Canal	1938	1:10560
F	229m N	Canal	1934	1:10560
F	229m N	Canal	1915	1:10560
F	229m N	Canal	1905	1:10560
F	229m N	Canal	1890	1:10560
G	245m S	Cemetery	1905	1:10560

This is data is sourced from Ordnance Survey/Groundsure.



18.3 Underground workings

Records within 1000m**0**

Historical land uses identified from Ordnance Survey mapping that indicate the presence of underground workings e.g. mine shafts.

This data is sourced from Ordnance Survey/Groundsure.

18.4 Underground mining extents

Records within 500m**0**

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

This data is sourced from Groundsure.

18.5 Historical Mineral Planning Areas

Records within 500m**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**0**

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).

This data is sourced from the British Geological Survey.

18.7 JPB mining areas

Records on site**1**

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

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

This data is sourced from Johnson Poole and Bloomer.

18.8 The Coal Authority non-coal mining

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

This data provides an indication of the potential zone of influence of recorded underground non-coal mining workings. Any and all analysis and interpretation of Coal Authority Data in this report is made by Groundsure, and is in no way supported, endorsed or authorised by the Coal Authority. The use of the data is restricted to the terms and provisions contained in this report. Data reproduced in this report may be the copyright of the Coal Authority and permission should be sought from Groundsure prior to any re-use.

This data is sourced from The Coal Authority.

18.9 Researched mining

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

This data indicates areas of potential mining identified from alternative or archival sources, including; BGS Geological paper maps, Lidar data, aerial photographs (from World War II onwards), archaeological data services, websites, Tithe maps, and various text/plans from collected books and reports. Some of this data is approximate and Groundsure have interpreted the resultant risk area and, where possible, specific areas of risk have been captured.

This data is sourced from Groundsure.

18.10 Mining record office plans

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

This dataset is representative of Mining Record Office and/or plan extents held by Groundsure and should be considered approximate. Where possible, plans have been located and any specific areas of risk they depict have been captured.

This data is sourced from Groundsure.

18.11 BGS mine plans

Records within 500m**0**

This dataset is representative of BGS mine plans held by Groundsure and should be considered approximate. Where possible, plans have been located and any specific areas of risk they depict have been captured.

This data is sourced from Groundsure.

18.12 Coal mining

Records on site**1**

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

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

This data is sourced from the Coal Authority.

18.13 Brine areas

Records on site**0**

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

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

18.14 Gypsum areas

Records on site**0**

Generalised areas that may be affected by gypsum extraction.

This data is sourced from British Gypsum.

18.15 Tin mining

Records on site**0**

Generalised areas that may be affected by historical tin mining.

This data is sourced from Groundsure.



18.16 Clay mining

Records on site

0

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

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



19 Ground cavities and sinkholes

19.1 Natural cavities

Records within 500m

0

Industry recognised national database of natural cavities. Sinkholes and caves are formed by the dissolution of soluble rock, such as chalk and limestone, gulls and fissures by cambering. Ground instability can result from movement of loose material contained within these cavities, often triggered by water.

This data is sourced from Stantec UK Ltd.

19.2 Mining cavities

Records within 1000m

0

Industry recognised national database of mining cavities. Degraded mines may result in hazardous subsidence (crown holes). Climatic conditions and water escape can also trigger subsidence over mine entrances and workings.

This data is sourced from Stantec UK Ltd.

19.3 Reported recent incidents

Records within 500m

0

This data identifies sinkhole information gathered from media reports and Groundsure's own records. This data goes back to 2014 and includes relative accuracy ratings for each event and links to the original data sources. The data is updated on a regular basis and should not be considered a comprehensive catalogue of all sinkhole events. The absence of data in this database does not mean a sinkhole definitely has not occurred during this time.

This data is sourced from Groundsure.

19.4 Historical incidents

Records within 500m

0

This dataset comprises an extract of 1:10,560, 1:10,000, 1:2,500 and 1:1,250 scale historical Ordnance Survey maps held by Groundsure, dating back to the 1840s. It shows shakeholes, deneholes and other 'holes' as noted on these maps. Dene holes are medieval chalk extraction pits, usually comprising a narrow shaft with a number of chambers at the base of the shaft. Shakeholes are an alternative name for suffusion sinkholes, most commonly found in the limestone landscapes of North Yorkshire but also extensively noted around the Brecon Beacons National Park.

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



This data is sourced from Groundsure.

19.5 National karst database

Records within 500m

0

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

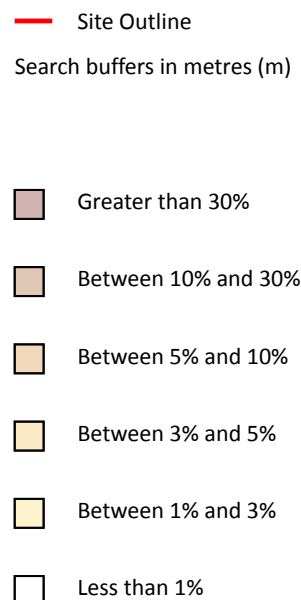
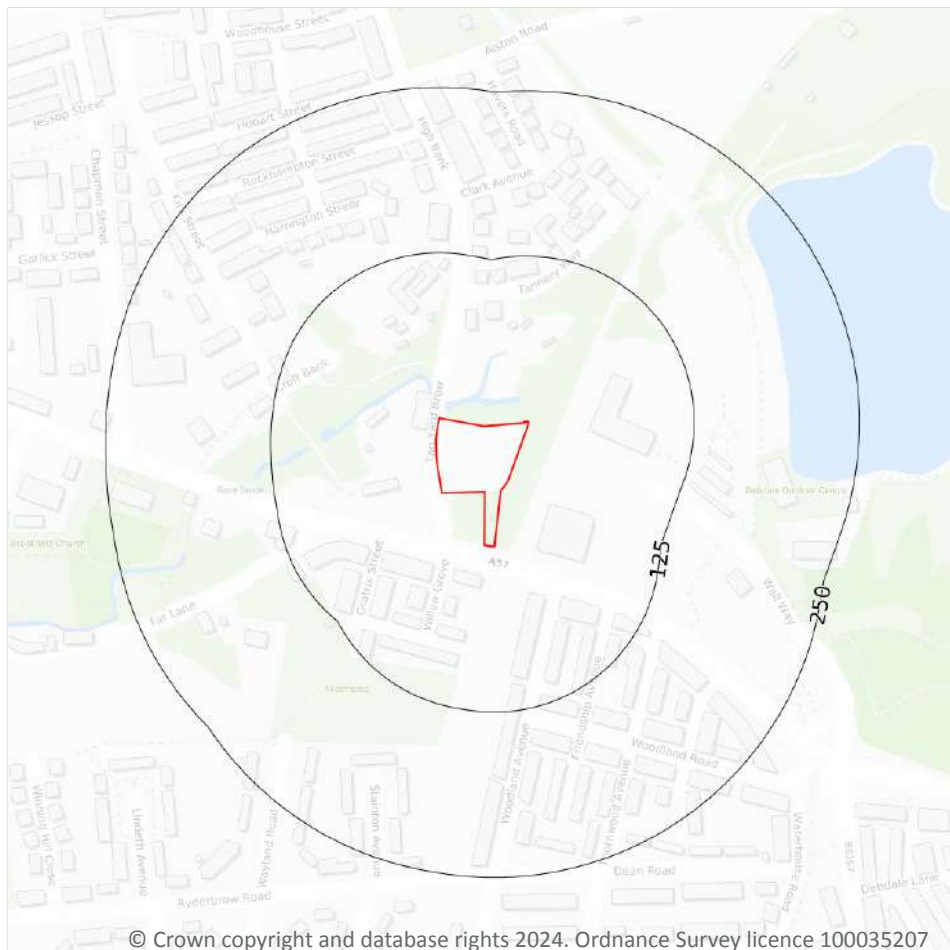
Since the database was set up in 2002 data covering most of the evaporite karst areas of the UK have now been added, along with data covering about 60% of the Chalk, and 35% of the Carboniferous Limestone outcrops. Many of the classic upland karst areas have yet to be included. Recorded so far are: Over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

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

This data is sourced from the British Geological Survey.



20 Radon



20.1 Radon

Records on site

1

The Radon Potential data classifies areas based on their likelihood of a property having a radon level at or above the Action Level in Great Britain. The dataset is intended for use at 1:50,000 scale and was derived from both geological assessments and indoor radon measurements (more than 560,000 records). A minimum 50m buffer should be considered when searching the maps, as the smallest detectable feature at this scale is 50m. The findings of this section should supersede any estimations derived from the Indicative Atlas of Radon in Great Britain (1:100,000 scale).

Features are displayed on the Radon map on [page 113](#) >

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



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



21 Soil chemistry

21.1 BGS Estimated Background Soil Chemistry

Records within 50m

3

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 - 25 mg/kg	No data	100 - 200 mg/kg	60 - 120 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
22m NW	15 - 25 mg/kg	No data	100 - 200 mg/kg	60 - 120 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
22m NW	15 - 25 mg/kg	No data	200 - 300 mg/kg	120 - 240 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg

This data is sourced from the British Geological Survey.

21.2 BGS Estimated Urban Soil Chemistry

Records within 50m

7

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).

Location	Arsenic (mg/kg)	Bioaccessible Arsenic (mg/kg)	Lead (mg/kg)	Bioaccessible Lead (mg/kg)	Cadmium (mg/kg)	Chromium (mg/kg)	Copper (mg/kg)	Nickel (mg/kg)	Tin (mg/kg)
On site	22	3.8	56	38	0.3	79	27	33	2
On site	23	4	49	34	0.3	77	25	33	2
On site	23	4	56	38	0.3	80	22	35	5
7m SE	23	4	53	36	0.3	78	19	35	4



Location	Arsenic (mg/kg)	Bioaccessible Arsenic (mg/kg)	Lead (mg/kg)	Bioaccessible Lead (mg/kg)	Cadmium (mg/kg)	Chromium (mg/kg)	Copper (mg/kg)	Nickel (mg/kg)	Tin (mg/kg)
22m NW	22	3.8	58	40	0.3	82	29	34	2
25m NE	23	4	53	36	0.3	87	26	37	5
47m W	23	4	88	60	0.3	78	30	32	16

This data is sourced from the British Geological Survey.

21.3 BGS Measured Urban Soil Chemistry

Records within 50m

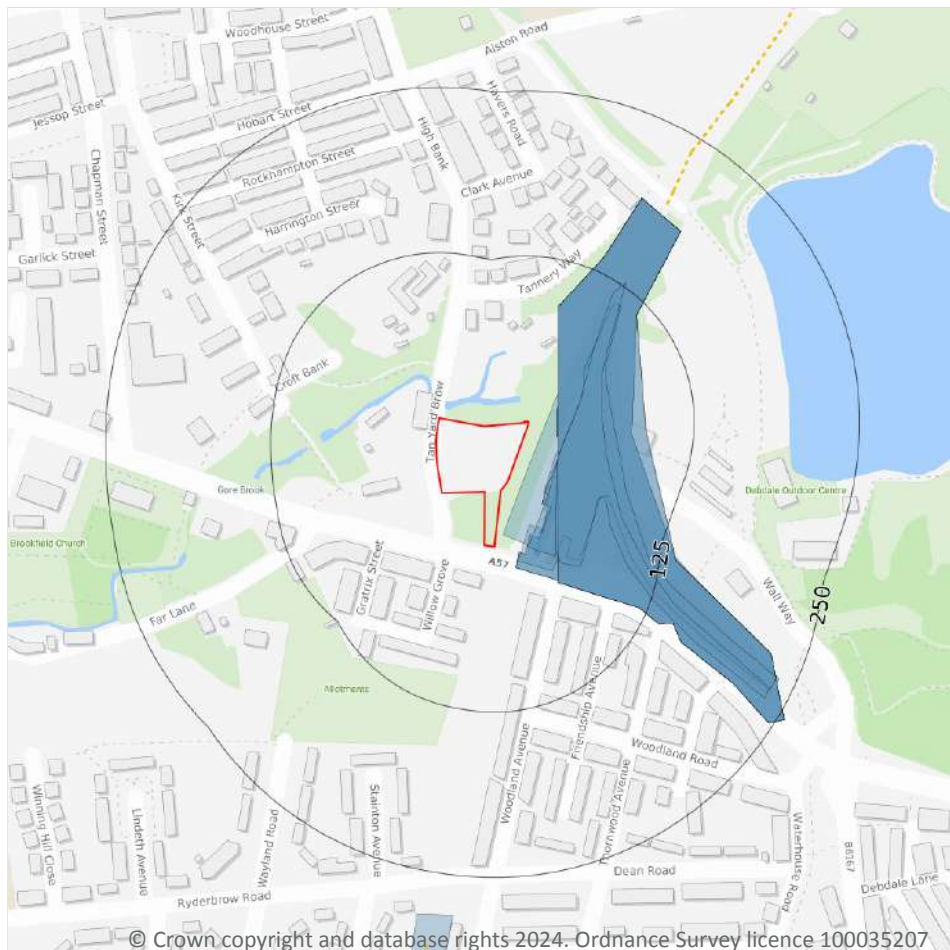
0

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

This data is sourced from the British Geological Survey.



22 Railway infrastructure and projects



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

22.1 Underground railways (London)

Records within 250m

0

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

This data is sourced from publicly available information by Groundsure.

22.2 Underground railways (Non-London)

Records within 250m

0

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



This data is sourced from publicly available information by Groundsure.

22.3 Railway tunnels

Records within 250m

0

Railway tunnels taken from contemporary Ordnance Survey mapping.

This data is sourced from the Ordnance Survey.

22.4 Historical railway and tunnel features

Records within 250m

25

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 117 >](#)

Location	Land Use	Year of mapping	Mapping scale
6m S	Railway Sidings	1968	10560
19m SE	Railway Sidings	1938	10560
19m SE	Railway Sidings	1934	10560
19m SE	Railway Sidings	1915	10560
20m SE	Railway Sidings	1907	10560
21m NE	Railway Sidings	1892	2500
21m NE	Railway Sidings	1908	2500
21m NE	Railway Sidings	1922	2500
21m NE	Railway Sidings	1934	2500
23m NE	Railway Sidings	1938	10560
23m NE	Railway Sidings	1934	10560
23m NE	Railway Sidings	1906	10560
23m NE	Railway Sidings	1892	10560
23m NE	Railway Sidings	1918	10560
23m NE	Railway Sidings	1923	10560
25m SE	Railway Sidings	1938	10560
30m E	Railway Sidings	1934	10560



Location	Land Use	Year of mapping	Mapping scale
31m SE	Railway Sidings	1893	2500
31m SE	Railway Sidings	1908	2500
31m SE	Railway Sidings	1922	2500
31m SE	Railway Sidings	1933	2500
32m SE	Railway Sidings	1952	2500
33m SE	Railway Sidings	1960	1250
33m SE	Railway Sidings	1952	1250
41m SE	Railway Sidings	1893	2500

This data is sourced from Ordnance Survey/Groundsure.

22.5 Royal Mail tunnels

Records within 250m

0

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

This data is sourced from Groundsure/the Postal Museum.

22.6 Historical railways

Records within 250m

3

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

Features are displayed on the Railway infrastructure and projects map on [page 117 >](#)

Location	Description
193m NE	Dismantled
206m NE	Dismantled
238m NE	Dismantled

This data is sourced from OpenStreetMap.



22.7 Railways

Records within 250m**0**

Currently existing railway lines, including standard railways, narrow gauge, funicular, trams and light railways.

This data is sourced from Ordnance Survey and OpenStreetMap.

22.8 Crossrail 1

Records within 500m**0**

The Crossrail railway project links 41 stations over 100 kilometres from Reading and Heathrow in the west, through underground sections in central London, to Shenfield and Abbey Wood in the east.

This data is sourced from publicly available information by Groundsure.

22.9 Crossrail 2

Records within 500m**0**

Crossrail 2 is a proposed railway linking the national rail networks in Surrey and Hertfordshire via an underground tunnel through London.

This data is sourced from publicly available information by Groundsure.

22.10 HS2

Records within 500m**0**

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

This data is sourced from HS2 Ltd.



Data providers

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

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APPENDIX 6 –UXO RISK ASSESSMENT

Preliminary Unexploded Ordnance (UXO) Risk Assessment

Project Name	Land off Tan Yard Brow, Gorton, Greater Manchester
Client	Ridge and Partners LLP
Site Address	Tan Yard Brow, Gorton, Greater Manchester
Report Reference	PA19858-00
Date	22/04/2024
Author	WF
Quality Assurance	PB

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Assessment Objective

This preliminary unexploded ordnance (UXO) risk assessment is a qualitative screening exercise to assess the likely potential of encountering UXO at the Land off Tan Yard Brow, Gorton, Greater Manchester site. The assessment involves the consideration of the basic factors that affect the potential for UXO to be present at a site as outlined in Stage One of the UXO risk management process.

Background

This assessment uses the sources of information available in-house to 1st Line Defence Ltd to enable the placement of a development site in context with events that may have led to the presence of German air-delivered or Allied military UXO. The report will identify any immediate necessity for risk mitigation or additional research in the form of a Detailed UXO Risk Assessment. It makes use of 1st Line Defence's extensive historical archives, library and unique geo-databases, as well as internet resources, and is researched and compiled by UXO specialists and graduate researchers.

The assessment directly follows CIRIA C681 guidelines "Unexploded Ordnance, a Guide for the Construction Industry". The document will therefore assess the following factors:

- Basic Site Data
- Previous Military Use
- Indicators of potential aerial delivered UXO threat
- Consideration of any Mitigating Factors
- Extent of Proposed Intrusive Works
- Any requirement for Further Work

It should be noted that the vast majority of construction sites in the UK will have a low or negligible risk of encountering UXO and should be able to be screened out at this preliminary stage. The report is meant as a common sense 'first step' in the UXO risk management process. The content of the report and conclusions drawn are based on basic, preliminary research using the information available to 1st Line Defence at the time this report was produced. It should be noted that the only way to entirely negate risk from UXO to a project would be to support the works proposed with appropriate UXO risk mitigation measures. It is rarely possible to state that there is absolutely 'no' risk from UXO to a project.

Site Boundary



Risk Assessment Considerations	
Site location and description/current use	The site is located in the Gorton area of Greater Manchester, North West England. According to recent aerial imagery, the site currently comprises undeveloped grass-covered land, woodland, and a small area of derelict hardstanding ground. The site is bordered to the north by undeveloped land and more woodland, to the south by Hyde Road, and to the west by Tan Yard Brow. The site is approximately centred on the OS grid reference: SJ 89181 95934.
Are there any indicators of current/historical military activity on/close to the site?	In-house records do not indicate that the site footprint had any former military use. No features such as WWII defensive positions, encampments or firing ranges are recorded to have been located at or in the immediate vicinity of the site. In addition, no information of ordnance being stored, produced, or disposed of within the proposed site boundary could be found. The closest Heavy Anti-Aircraft (HAA) battery was positioned approximately 1.1km south of the site. The range of a fired projectile can be up to 15km. The conditions in which unexploded anti-aircraft ordnance may have fallen unrecorded are generally analogous to that of aerial delivered German bombs.
What was the pre- and post-WWII history of the site?	Pre-WWII OS mapping dated 1933 indicates that the site comprised two uncharacterised buildings and undeveloped land. The site was bound to the north by undeveloped land, to the east by <i>Hyde Road Station</i>, to the south by <i>Hyde Road</i> and to the west by buildings and <i>Tan Yard Brow</i>. Low-quality post-WWII OS mapping dated 1948-1945 indicates no significant change on-site or in the immediate vicinity.
Was the area subject to bombing during WWII?	During WWII, the site was situated in the County Borough of Manchester. According to official Home Office bombing statistics, this borough sustained an overall low density of bombing with an average of 27.1 items dropped per 1,000 acres. This consisted of 712 high explosive (HE) bombs, 18 parachute mines, seven oil bombs, and one V-1 pilotless aircraft, totalling 738 recorded incidents across 27,255 acres. According to a University of Manchester Bomb and Damage Map, no ordnance is recorded to have fallen on-site or in the site's immediate vicinity. The closest recorded incident was located approximately 110m south-west of the site. Furthermore, no positive evidence of bombing on-site or in the site's immediate vicinity has been found within online resources.
Is there any evidence of bomb damage on/close to the site?	A comparison of OS mapping showed that all structures on-site and in the immediate vicinity seemingly remained intact throughout WWII.
To what degree would the site have been subject to access?	Given the site's occupation by two uncharacterised buildings and, more significantly, the site's immediate proximity to Hyde Road Station to the east, it is anticipated that access and observation would have been frequent. Furthermore, given the apparent lack of obvious bomb damage in the immediate vicinity, there is no reason to believe that this level of access would have reduced at any point during WWII.
To what degree has the site been developed post-WWII?	Post-WWII, both buildings previously on-site have been removed. According to online information, the station buildings at Hyde Road immediately east of the site were demolished in the late 1960's.¹

¹ http://disused-stations.org.uk/h/hyde_road/index.shtml

What is the nature and extent of the intrusive works proposed?

The nature and extent of works proposed was not available at the time of writing.

Summary and Conclusions

During WWII, the site was situated in the County Borough of Manchester. According to official Home Office bombing statistics, this borough sustained an overall low density of bombing with an average of 27.1 items dropped per 1,000 acres. According to a University of Manchester Bomb and Damage Map, no ordnance is recorded to have fallen on-site or in the site's immediate vicinity. Furthermore, no positive evidence of bombing could be found within online resources to the site or to the station to its east.

This lack of bombing is corroborated by the lack of obvious structural change on-site or in the site's immediate vicinity, according to OS mapping comparisons.

Given the lack of bombing and damage recorded on-site and in the immediate vicinity, and the anticipated frequent access and observation as the result of Hyde Road Station immediately east, the risk of UXO contamination within the site boundary is not thought to be elevated above the general 'background' level for this area.

Recommendations

Given the findings of this preliminary report, the risk from UXO on site is not considered to be significantly elevated above the 'background level' for this area of Manchester in general. Whilst it would be possible to conduct further research in the form of a Detailed UXO Risk Assessment for this site, it is not thought likely to significantly alter the findings of this report. It is therefore recommended that **no further research** is taken.

If the client has any anecdotal or empirical evidence of UXO risk on site, please contact 1st Line Defence.

It should be noted that although the risk from unexploded ordnance on this site has been assessed as low/minimal, this does not mean there is 'no' risk of encountering UXO. This preliminary report has been undertaken with due diligence, and all reasonable care has been taken to access and analyse relevant historical information. By necessity, when dealing with historical evidence, and when making assessments of UXO risk, various assumptions have to be made which we have discussed and justified within this report. Our reports take a common-sense and practical approach to the assessment of UXO risk, and we strive to be reasonable and pragmatic in our conclusions. As referenced, it would be possible to undertake further research into this site, but based on the evidence to hand, this is not deemed strictly necessary, and no reasonably justifiable requirement for proactive on-site mitigation has been identified.

It should however be stressed that if any suspect items are encountered during the proposed works, 1st Line Defence should be contacted for advice/assistance, and to re-assess the risk as necessary. Furthermore, we would recommend that ground personnel are always made aware of the potential for encountering UXO, what to look out for and what to do in the unlikely event that a suspect item is encountered, and that a UXO Risk Management Plan is put together for the proposed works. We would be happy to provide a template and guidance for this – contact us on 01992 245020. Should the scope of works change or additional works be proposed, 1st Line Defence should be contacted to re-evaluate the risk.

This report has been prepared by 1st Line Defence Limited with all reasonable care and skill. The report contains historical data and information from third party sources. 1st Line Defence Limited has sought to verify the accuracy and comprehensiveness of this information where possible but cannot be held accountable for any inherent errors. Furthermore, whilst every reasonable effort has been made to locate and access all relevant historical information, 1st Line Defence cannot be held responsible for any changes to risk level or mitigation recommendations resulting from documentation or other information which may come to light at a later date.

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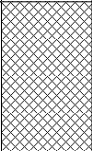
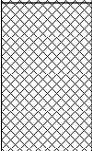
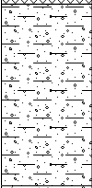
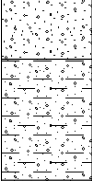
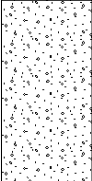
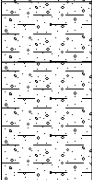
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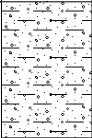
Front cover image credit: London County Council Bomb Damage Mapping (London Metropolitan Archives)

APPENDIX 7 – ENGINEERING LOGS

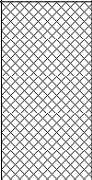
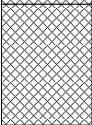
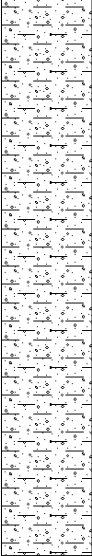
RIDGE Ridge and Partners LLP www.ridge.co.uk				Cable Percussive Borehole Log				Borehole No. CP101 Sheet 1 of 2			
Project Name: Tan Yard Brow				Client: John Stephens & Co		Contractor: D & I Drilling		Logged By: SD			
Location: Tan Yard Brow, Gorton, Manchester, M18 7FN				Equipment: Dando 2000		Depth: 15.15m		Hole Type: CP			
Project ID: 5025143		Date: 03/05/2024		Co-cords: E389176.00 N395952.00		Level:		Scale: 1:50			
Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description			
		Depth (m)	Type	Results							
					0.20			MADE GROUND: Grass over dark brown slightly gravelly sandy Silt with abundant roots and rootlets. Gravel is fine to coarse subangular to subrounded of sandstone and mudstone. Sand is fine to coarse.			
		1.20 - 1.65 1.20	D SPT	N=20 (7,4/4,5,5,6)	1.00			MADE GROUND: Dark brown sandy silty fine to coarse angular to subangular Gravel of sandstone and flint with occasional fragments of brick, concrete and clinker with rare cobbles of whole brick. Sand is fine to coarse.		1	
		2.20 - 2.65 2.20	D SPT	N=31 (7,5/6,7,8,10)				Stiff brown mottled light grey gravelly sandy CLAY. Gravel is fine to coarse subangular to subrounded of sandstone and mudstone. Sand is fine to coarse.		2	
		2.70 - 3.00	B		2.60			Very stiff brown slightly gravelly sandy CLAY. Gravel is fine to coarse subangular to subrounded of sandstone and mudstone. Sand is fine to coarse.		3	
		3.30 3.50 - 3.70 3.70 - 4.00	SPT D B	N=50 (6,8/50 for 245mm)	3.60			Stiff brown gravelly sandy CLAY. Gravel is fine to coarse subangular to subrounded of sandstone and mudstone. Sand is fine to coarse.		4	
		4.40 - 4.45 4.40	D SPT	N=50 (7,9/50 for 275mm)						5	
		5.60	SPT	N=26 (4,4/5,6,7,8)						6	
		7.10 - 7.55	U							7	
		7.60	D							8	
		8.50 - 8.95 8.50	D SPT	N=26 (4,4/5,7,7,7)						9	
9.00 - 9.30	B							10			
Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation
Remarks:										AGS	
1) Cable Percussive Borehole complete at 15.15m bgl.											
2) No groundwater encountered.											
3) Backfilled with arisings upon completion.											
Logged in general accordance with BS 5930: Code of practice for ground investigations.											

RIDGE Ridge and Partners LLP www.ridge.co.uk				Cable Percussive Borehole Log				Borehole No. CP101 Sheet 2 of 2			
Project Name: Tan Yard Brow				Client: John Stephens & Co		Contractor: D & I Drilling		Logged By: SD			
Location: Tan Yard Brow, Gorton, Manchester, M18 7FN				Equipment: Dando 2000		Depth: 15.15m		Hole Type: CP			
Project ID: 5025143		Date: 03/05/2024		Co-cords: E389176.00 N395952.00		Level:		Scale: 1:50			
Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description			
		Depth (m)	Type	Results							
		10.10 - 10.55	U	N=28 (4,5/6,6,7,9)	15.15			Stiff brown gravelly sandy CLAY. Gravel is fine to coarse subangular to subrounded of sandstone and mudstone. Sand is fine to coarse.	11		
		10.60	D								
		11.50 - 11.95 11.50	D SPT								
		13.20 - 13.50 13.20	D SPT								
		13.50 - 13.90	B								
		14.70	SPT	N=31 (5,6/7,7,8,9)				15			
		End of Borehole at 15.150m							16		
									17		
									18		
									19		
									20		
Hole Diameter		Casing Diameter		Chiselling				Inclination and Orientation			
Depth Base	Diameter	Depth Base	Diameter	Depth Top	Depth Base	Duration	Tool	Depth Top	Depth Base	Inclination	Orientation
Remarks:											
1) Cable Percussive Borehole complete at 15.15m bgl.											
2) No groundwater encountered.											
3) Backfilled with arisings upon completion.											
Logged in general accordance with BS 5930: Code of practice for ground investigations.											

RIDGE		Ridge and Partners LLP www.ridge.co.uk		WLS Borehole Log				Borehole No. WS102 Sheet 1 of 2					
Project Name: Tan Yard Brow				Client: John Stephens & Co		Contractor: D & I Drilling		Logged By: SD					
Location: Tan Yard Brow, Gorton, Manchester, M18 7FN				Equipment: Archway Dart		Depth: 5.45m		Hole Type: WLS					
Project ID: 5025143		Date: 03/05/2024		Co-cords: E389165.00 N395932.00		Level:		Scale: 1:25					
Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description					
		Depth (m)	Type	Results									
		0.10 - 0.20	ES		0.50			MADE GROUND: Grass over dark brown sandy silty fine to coarse subangular to subrounded Gravel of sandstone and mudstone with rare cobbles of concrete, occasional roots and rootlets and occasional fragments of brick, metal and glass. Sand is fine to coarse.	1				
		0.60 - 0.70	ES					MADE GROUND: Grey brown gravelly sandy Clay with occasional fragments of brick. Gravel is fine to coarse angular to subrounded of coal, sandstone and mudstone. Sand is fine to coarse.					
		1.10 - 1.20	D		1.00			Firm light brown mottled grey gravelly sandy CLAY. Gravel is fine to coarse subangular to subrounded of coal, sandstone and mudstone. Sand is fine to coarse.	2				
		1.20	SPT	N=11 (1,2/2,3,3,3)									
		1.40 1.45 1.50		HVP=70 HVP=75 HVP=90									
				1.80 1.85 1.90 2.00	SPT	N=15 (1,3/5,3,3,4)	1.80			Firm light brown mottled grey gravelly sandy CLAY. Gravel is fine to coarse subangular to subrounded of coal, sandstone and mudstone. Sand is fine to coarse.	3		
				2.40 - 2.50	D								
							2.80			Firm light brown slightly gravelly sandy CLAY. Gravel is fine to coarse subangular to subrounded of coal, sandstone and mudstone. Sand is fine to coarse. Limited Recovery: Firm light brown slightly gravelly sandy CLAY. Gravel is fine to coarse subangular to subrounded of coal, sandstone and mudstone. Sand is fine to coarse.	4		
				3.00	SPT	N=27 (4,5/7,6,6,8)							
				4.00	SPT	N=34 (6,7/8,7,9,10)	4.00			No Recovery	5		
		5.00	SPT	N=32 (6,7/7,8,8,9)									
Groundwater Information										Hole Diameter		Casing Diameter	
Date		Depth Strike	Time Elapsed		Depth Water	Depth Base		Diameter	Depth Base	Diameter			
		2.20											
Remarks: 1) Window Sample Borehole complete at 5.45m bgl. 2) Groundwater encountered at 2.20m bgl. 3) Backfilled with arisings upon completion.													
Logged in general accordance with BS 5930: Code of practice for ground investigations.													

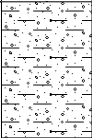
RIDGE		Ridge and Partners LLP www.ridge.co.uk		WLS Borehole Log				Borehole No. WS102 Sheet 2 of 2	
Project Name: Tan Yard Brow				Client: John Stephens & Co		Contractor: D & I Drilling		Logged By: SD	
Location: Tan Yard Brow, Gorton, Manchester, M18 7FN				Equipment: Archway Dart		Depth: 5.45m		Hole Type: WLS	
Project ID: 5025143		Date: 03/05/2024		Co-cords: E389165.00 N395932.00		Level:		Scale: 1:25	
Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					5.45			Stiff brown slightly gravelly sandy CLAY. Gravel is fine to coarse subangular to subrounded of sandstone and mudstone. Sand is fine to coarse.	
								End of Borehole at 5.450m	
6 7 8 9 10									
Groundwater Information						Hole Diameter		Casing Diameter	
Date	Depth Strike	Time Elapsed	Depth Water	Depth Base	Diameter	Depth Base	Diameter		
	2.20								
Remarks: 1) Window Sample Borehole complete at 5.45m bgl. 2) Groundwater encountered at 2.20m bgl. 3) Backfilled with arisings upon completion. Logged in general accordance with BS 5930: Code of practice for ground investigations.									

[illegible]

RIDGE		Ridge and Partners LLP www.ridge.co.uk		WLS Borehole Log				Borehole No. WS104 Sheet 1 of 1		
Project Name: Tan Yard Brow				Client: John Stephens & Co		Contractor: D & I Drilling		Logged By: SD		
Location: Tan Yard Brow, Gorton, Manchester, M18 7FN				Equipment: Archway Dart		Depth: 3.13m		Hole Type: WLS		
Project ID: 5025143		Date: 03/05/2024		Co-cords: E389171.00 N395963.00		Level:		Scale: 1:25		
Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description		
		Depth (m)	Type	Results						
		0.30 - 0.40	ES		0.60			MADE GROUND: Grass over dark brown sandy silty fine to coarse subangular to subrounded Gravel of sandstone and mudstone with rare cobbles of concrete, occasional roots and rootlets and occasional fragments of brick, plastic and timber. Sand is fine to coarse.	1	
								MADE GROUND: Soft dark brown gravelly sandy Clay with rare fragments of glass. Gravel is fine to coarse subangular to subrounded of coal sandstone and mudstone. Sand is fine to coarse.		
								Stiff brown mottled grey gravelly sandy CLAY. Gravel is fine to coarse subangular to subrounded of coal, sandstone and mudstone. Sand is fine to coarse.		
		1.20	SPT	N=11 (2,2/3,3,3,2)	1.00				2	
		1.80 1.85 1.90 2.00	SPT	HVP=130 HVP=140 N=34 (4,4/9,9,8,8)						
		2.60 - 2.70 2.60 2.65 2.70 2.70	D SPT	HVP=110 HVP=80 HVP=100 N=50 (8,11/50 for 275mm)						
				2.80 2.85 2.90		HVP=60 HVP=90 HVP=70	3.13			3
									End of Borehole at 3.130m	4
										5
Groundwater Information										
Date		Depth Strike		Time Elapsed		Depth Water		Hole Diameter		
								Casing Diameter		
Remarks: 1) Window Sample Borehole terminated at 3.13m bgl upon refusal. 2) No groundwater encountered. 3) Backfilled with arisings upon completion. Logged in general accordance with BS 5930: Code of practice for ground investigations.										

RIDGE		Ridge and Partners LLP www.ridge.co.uk		WLS Borehole Log			Borehole No. WS105 Sheet 1 of 1		
Project Name: Tan Yard Brow				Client: John Stephens & Co		Contractor: D & I Drilling		Logged By: SD	
Location: Tan Yard Brow, Gorton, Manchester, M18 7FN				Equipment: Archway Dart		Depth: 4.44m		Hole Type: WLS	
Project ID: 5025143		Date: 03/05/2024		Co-cords: E389154.00 N395975.00		Level:		Scale: 1:25	
Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.30 - 0.40	ES		0.35			MADE GROUND: Grass over dark brown sandy silty fine to coarse subangular to subrounded Gravel of sandstone and mudstone with rare cobbles of whole brick, occasional roots and rootlets and rare fragments of brick and timber. Sand is fine to coarse.	1
				0.50					
		1.20	SPT	N=14 (2,3/3,3,4,4)					
		1.40							
		1.45		HVP=130					
		1.50		HVP=140					
		2.00	SPT	N=20 (4,5/4,5,5,6)					2
		3.00	SPT	N=41 (5,8/12,10,9,10)					3
		3.70 - 3.90	D						
		4.00	SPT	N=50 (7,7/50 for 285mm)					4
				4.44				End of Borehole at 4.440m	5
Groundwater Information						Hole Diameter		Casing Diameter	
Date	Depth Strike	Time Elapsed	Depth Water	Depth Base	Diameter	Depth Base	Diameter		
Remarks: 1) Window Sample Borehole terminated at 4.44m bgl upon refusal. 2) No groundwater encountered. 3) Backfilled with arisings upon completion. Logged in general accordance with BS 5930: Code of practice for ground investigations.									

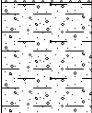
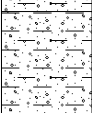
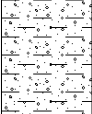
RIDGE		Ridge and Partners LLP www.ridge.co.uk		WLS Borehole Log				Borehole No. WS106 Sheet 1 of 2	
Project Name: Tan Yard Brow				Client: John Stephens & Co		Contractor: D & I Drilling		Logged By: SD	
Location: Tan Yard Brow, Gorton, Manchester, M18 7FN				Equipment: Archway Dart		Depth: 5.45m		Hole Type: WLS	
Project ID: 5025143		Date: 07/05/2024		Co-cords: E389188.00 N395899.00		Level:		Scale: 1:25	
Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.20 - 0.30	ES		0.20			MADE GROUND: Grass over dark brown slightly gravelly sandy Silt with abundant roots and rootlets and rare fragments of brick. Gravel is fine to coarse subangular to subrounded of sandstone and mudstone. Sand is fine to coarse. MADE GROUND: Dark brown sandy silty fine to coarse angular to subangular Gravel of sandstone and flint with occasional fragments of brick, concrete and clinker with rare cobbles of whole brick. Sand is fine to coarse. MADE GROUND: Brown gravelly sandy Clay with occasional fragments of brick, concrete and clinker. Gravel is fine to coarse subangular to subrounded of sandstone and flint. Sand is fine to coarse. Firm light brown mottled light grey slightly gravelly sandy CLAY. Gravel is fine to coarse subangular to subrounded of coal, sandstone and mudstone. Sand is fine to coarse. Firm to stiff brown mottled light grey slightly gravelly slightly sandy CLAY with rare thin lenses of fine to coarse sand. Gravel is fine to coarse subangular to subrounded of coal, sandstone and mudstone. Sand is fine to coarse.	1 2 3 4 5
		0.50 - 0.60	ES		0.40				
		0.70		HVP=80	0.60				
		0.75		HVP=70					
		0.80		HVP=75					
		0.90 - 1.00	D						
		1.20	SPT	N=11 (3,2/3,3,3,2)	1.10				
		1.70		HVP=60					
		1.75		HVP=80					
		1.80		HVP=90					
		2.00	SPT	N=22 (2,5/5,5,6,6)					
		2.50 - 2.60	D						
		2.50		HVP=80					
		2.55		HVP=80					
		2.60		HVP=110					
3.00	SPT	N=35 (6,7/10,8,8,9)							
3.50		HVP=120							
3.55		HVP=110							
3.60		HVP=90							
4.00	SPT	N=30 (9,6/7,6,7,10)							
4.70		HVP=85							
4.75		HVP=95							
4.80		HVP=80							
5.00	SPT	N=36 (8,7/9,9,8,10)							
Groundwater Information						Hole Diameter		Casing Diameter	
Date	Depth Strike	Time Elapsed	Depth Water	Depth Base	Diameter	Depth Base	Diameter		
Remarks:									
1) Window Sample Borehole complete at 5.45m bgl.									
2) No groundwater encountered.									
3) Gas and groundwater standpipe installed with a response zone between 1.00m and 5.00m bgl.									
Logged in general accordance with BS 5930: Code of practice for ground investigations.									

RIDGE		Ridge and Partners LLP www.ridge.co.uk		WLS Borehole Log				Borehole No. WS106 Sheet 2 of 2	
Project Name: Tan Yard Brow				Client: John Stephens & Co		Contractor: D & I Drilling		Logged By: SD	
Location: Tan Yard Brow, Gorton, Manchester, M18 7FN				Equipment: Archway Dart		Depth: 5.45m		Hole Type: WLS	
Project ID: 5025143		Date: 07/05/2024		Co-cords: E389188.00 N395899.00		Level:		Scale: 1:25	
Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
					5.45			Firm to stiff brown mottled light grey slightly gravelly slightly sandy CLAY with rare thin lenses of fine to coarse sand. Gravel is fine to coarse subangular to subrounded of coal, sandstone and mudstone. Sand is fine to coarse.	
								End of Borehole at 5.450m	
									6
									7
									8
									9
									10
Groundwater Information					Hole Diameter		Casing Diameter		
Date	Depth Strike	Time Elapsed	Depth Water	Depth Base	Diameter	Depth Base	Diameter		
Remarks: 1) Window Sample Borehole complete at 5.45m bgl. 2) No groundwater encountered. 3) Gas and groundwater standpipe installed with a response zone between 1.00m and 5.00m bgl. Logged in general accordance with BS 5930: Code of practice for ground investigations.									

RIDGE		Ridge and Partners LLP www.ridge.co.uk		WLS Borehole Log				Borehole No. WS107 Sheet 1 of 1		
Project Name: Tan Yard Brow				Client: John Stephens & Co		Contractor: D & I Drilling		Logged By: SD		
Location: Tan Yard Brow, Gorton, Manchester, M18 7FN				Equipment: Archway Dart		Depth: 3.44m		Hole Type: WLS		
Project ID: 5025143		Date: 07/05/2024		Co-cords: E389189.00 N395923.00		Level:		Scale: 1:25		
Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description		
		Depth (m)	Type	Results						
		0.10 - 0.20	ES		0.10			MADE GROUND: Grass over dark brown slightly gravelly sandy Silt with abundant roots and rootlets and rare fragments of brick. Gravel is fine to coarse subangular to subrounded of sandstone and mudstone. Sand is fine to coarse.		
		0.40 - 0.50	ES	HVP=45 HVP=50 HVP=60	0.30			MADE GROUND: Dark brown sandy silty fine to coarse angular to subangular Gravel of sandstone and flint with occasional fragments of brick, concrete and clinker. Sand is fine to coarse.		
		0.40 0.45 0.50		HVP=90 HVP=75 HVP=80	0.70			Firm light brown mottled light grey slightly gravelly sandy CLAY with occasional organic content. Gravel is fine to coarse subangular to subrounded of coal, sandstone and mudstone. Sand is fine to coarse.		
		0.80 0.85 0.90			1.20			Firm to stiff brown mottled light grey gravelly slightly sandy CLAY. Gravel is fine to coarse subangular to subrounded of sandstone and mudstone. Sand is fine to coarse.		
		1.20	SPT	N=10 (1,2/2,3,3,2)	1.40			Firm brown mottled light grey slightly gravelly very sandy CLAY. Gravel is fine to coarse subangular to subrounded of sandstone and mudstone. Sand is fine to coarse.		
		1.80 - 1.90	D					Brown slightly gravelly fine to coarse SAND. Gravel is fine to coarse subangular to subrounded of sandstone and mudstone.		
		2.00	SPT	N=38 (5,6/7,6,12,13)	2.50			Firm gravelly slightly sandy CLAY with occasional thin lenses of brown fine fine to coarse sand. Gravel is fine to coarse subangular to subrounded of sandstone and mudstone. Sand is fine to coarse.		
		3.00 - 3.44 3.00	D SPT	N=50 (10,12/50 for 285mm)	3.44			End of Borehole at 3.440m		
Groundwater Information						Hole Diameter		Casing Diameter		
Date	Depth Strike	Time Elapsed	Depth Water	Depth Base	Diameter	Depth Base	Diameter			
	2.10									
Remarks:										
1) Window Sample Borehole terminated at 3.44m bgl upon refusal. 2) Groundwater encountered at 2.10m bgl. 3) Backfilled with arisings upon completion.										
Logged in general accordance with BS 5930: Code of practice for ground investigations.										



RIDGE		Ridge and Partners LLP www.ridge.co.uk		WLS Borehole Log				Borehole No. WS108 Sheet 1 of 1	
Project Name: Tan Yard Brow				Client: John Stephens & Co		Contractor: D & I Drilling		Logged By: SD	
Location: Tan Yard Brow, Gorton, Manchester, M18 7FN				Equipment: Archway Dart		Depth: 3.45m		Hole Type: WLS	
Project ID: 5025143		Date: 07/05/2024		Co-cords: E389192.00 N395940.00		Level:		Scale: 1:25	
Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.20 - 0.30	ES		0.10			MADE GROUND: Grass over dark brown slightly gravelly sandy Silt with abundant roots and rootlets and rare fragments of brick. Gravel is fine to coarse subangular to subrounded of sandstone and mudstone. Sand is fine to coarse.	
		0.80 - 0.90	ES		0.30			MADE GROUND: Brown and dark brown slightly gravelly clayey Silt with occasional fragments of brick. Gravel is fine to coarse subangular to subrounded of sandstone and coal. Sand is fine to coarse.	
		1.20 - 1.30	D		1.30			Limited Recovery: Soft light yellow brown lightly gravelly sandy CLAY with occasional organic content. Gravel is fine to coarse subangular to subrounded of coal, sandstone and mudstone. Sand is fine to coarse.	
		1.20	SPT	HVP=60 N=15 (3,3/4,4,3,4)				Coarse sized fragment of brick encountered at 0.90m bgl. Possible land drain or strata is reworked above this.	
		1.25		HVP=65				Firm to stiff brown mottled light grey gravelly sandy CLAY. Gravel is fine to coarse subangular to subrounded of coal, sandstone and mudstone. Sand is fine to coarse.	
		1.30		HVP=65				No Recovery	
		1.80 - 1.90	D		2.00				
		1.80		HVP=75					
		1.85		HVP=85					
		1.90		HVP=80					
2.00	SPT	N=27 (8,7/7,6,7,7)							
		3.00	SPT	N=50 (8,9/50 for 295mm)	3.00			Stiff brown gravelly sandy CLAY. Gravel is fine to coarse subangular to subrounded of sandstone and mudstone. Sand is fine to coarse.	3
					3.45			End of Borehole at 3.450m	4
									5
Groundwater Information						Hole Diameter		Casing Diameter	
Date	Depth Strike	Time Elapsed	Depth Water	Depth Base	Diameter	Depth Base	Diameter		
	2.00								
Remarks: 1) Window Sample Borehole terminated at 3.45m bgl upon refusal. 2) Groundwater likely encountered between 2.00m to 3.00m bgl. 3) Backfilled with arisings upon completion.									AGS
Logged in general accordance with BS 5930: Code of practice for ground investigations.									

RIDGE		Ridge and Partners LLP www.ridge.co.uk		WLS Borehole Log				Borehole No. WS109 Sheet 1 of 1		
Project Name: Tan Yard Brow				Client: John Stephens & Co		Contractor: D & I Drilling		Logged By: SD		
Location: Tan Yard Brow, Gorton, Manchester, M18 7FN				Equipment: Archway Dart		Depth: 3.41m		Hole Type: WLS		
Project ID: 5025143		Date: 07/05/2024		Co-cords: E389193.00 N395952.00		Level:		Scale: 1:25		
Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description		
		Depth (m)	Type	Results						
		0.20 - 0.30	ES		0.10			MADE GROUND: Grass over dark brown slightly gravelly sandy Silt with abundant roots and rootlets. Gravel is fine to coarse subangular to subrounded of sandstone and mudstone. Sand is fine to coarse.		
		0.50		HVP=65	0.30			MADE GROUND: Dark brown sandy silty fine to coarse angular to subangular Gravel of sandstone and flint with occasional fragments of brick, concrete and clinker. Sand is fine to coarse.		
		0.55		HVP=65						
		0.60		HVP=55	0.70			Firm light brown mottled light grey slightly gravelly sandy CLAY with occasional organic content. Gravel is fine to coarse subangular to subrounded of coal, sandstone and mudstone. Sand is fine to coarse.		
		1.10		HVP=75						
		1.15		HVP=65						
		1.20		HVP=90						
		1.20	SPT	N=11 (2,2/2,3,3,3)						
		1.50 - 1.60	D							
		1.85								
2.00	SPT	N=30 (6,5/7,7,8,8)	2.00			Brown slightly gravelly fine to coarse SAND. Gravel is fine to medium subangular to subrounded of sandstone.	2			
2.30 - 2.60	D					Firm brown slightly gravelly sandy CLAY with occasional thin fine to coarse sand lenses. Gravel is fine to coarse subangular to subrounded of sandstone and mudstone. Sand is fine to coarse.				
3.00	SPT	N=50 (8,10/50 for 255mm)						3		
				3.41			End of Borehole at 3.410m	4		
										5
Groundwater Information						Hole Diameter		Casing Diameter		
Date	Depth Strike	Time Elapsed	Depth Water	Depth Base	Diameter	Depth Base	Diameter			
	1.90									
Remarks: 1) Window Sample Borehole terminated at 3.41m bgl upon refusal. 2) Groundwater encountered at 1.90m bgl. 3) Backfilled with arisings upon completion. Logged in general accordance with BS 5930: Code of practice for ground investigations.										

RIDGE		Ridge and Partners LLP www.ridge.co.uk		WLS Borehole Log				Borehole No. WS110 Sheet 1 of 1	
Project Name: Tan Yard Brow				Client: John Stephens & Co		Contractor: D & I Drilling		Logged By: SD	
Location: Tan Yard Brow, Gorton, Manchester, M18 7FN				Equipment: Archway Dart		Depth: 3.44m		Hole Type: WLS	
Project ID: 5025143		Date: 07/05/2024		Co-cords: E389202.00 N395970.00		Level:		Scale: 1:25	
Well	Water Strikes	Sample and In Situ Testing			Depth (m)	Level (m)	Legend	Stratum Description	
		Depth (m)	Type	Results					
		0.30 - 0.40	ES		0.10			MADE GROUND: Grass over dark brown slightly gravelly sandy Silt with abundant roots and rootlets. Gravel is fine to coarse subangular to subrounded of sandstone and mudstone. Sand is fine to coarse.	1
					0.35			MADE GROUND: Dark brown sandy silty fine to coarse angular to subangular Gravel of sandstone and flint with occasional fragments of brick, concrete and clinker. Sand is fine to coarse.	
		0.70 - 0.80	D	HVP=80	0.85			Firm light brown mottled light grey slightly gravelly sandy CLAY. Gravel is fine to coarse subangular to subrounded of coal, sandstone and mudstone. Sand is fine to coarse.	
		0.70		HVP=60					
		0.75		HVP=90					
		0.80							
		1.10	SPT	HVP=85	2.10			Stiff brown mottled light grey slightly gravelly slightly sandy silty CLAY with occasional organic content. Gravel is fine to coarse subangular to subrounded of coal, sandstone and mudstone. Sand is fine to coarse.	
		1.15		HVP=75					
		1.20		HVP=80					
		1.20		N=12 (1,2/3,3,3,3)					
		1.80	D	HVP=85	2.20			From 1.80m to 1.85m bgl a lense of brown slightly gravelly fine to coarse SAND is present. Gravel is fine to coarse subangular to subrounded of sandstone.	
		1.85		HVP=90					
		1.90 - 2.00							
		1.90		HVP=90					
		2.00	SPT	N=31 (5,6/7,7,8,9)		Brown slightly gravelly fine to coarse SAND. Gravel is fine to coarse subangular to subrounded of sandstone.			
					Stiff brown slightly gravelly slightly sandy silty CLAY. Gravel is fine to coarse subangular to subrounded of coal, sandstone and mudstone. Sand is fine to coarse.	3			
3.00	SPT	N=50 (9,10/50 for 285mm)							
				3.44			End of Borehole at 3.440m	4	
Groundwater Information						Hole Diameter		Casing Diameter	
Date	Depth Strike	Time Elapsed	Depth Water	Depth Base	Diameter	Depth Base	Diameter		
Remarks:									
1) Window Sample Borehole terminated at 3.44m bgl upon refusal.									
2) No groundwater encountered.									
3) Backfilled with arisings upon completion.									
Logged in general accordance with BS 5930: Code of practice for ground investigations.									

APPENDIX 8 – LABORATORY ANALYSIS CERTIFICATES



Sophie Davis
Ridge
Partnership House
Moorside Road
Winchester
SO23 7RX

Normec DETS Limited
Unit 1
Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Kent
ME17 2JN
t: 01622 850410

DETS Report No: 24-05418

Site Reference: Tan Yard Brow

Project / Job Ref: 5025143

Order No: 628569

Sample Receipt Date: 10/05/2024

Sample Scheduled Date: 17/05/2024

Report Issue Number: 1

Reporting Date: 24/05/2024

Authorised by:

Steve Knight
Customer Support Manager

Dates of laboratory activities for each tested analyte are available upon request.

Opinions and interpretations are outside the laboratory's scope of ISO 17025 accreditation. This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

For Topsoil and WAC analysis the expanded uncertainty measurement should be considered while evaluating results against compliance values.



Normec DETS Limited
Unit 1, Rose Lane Industrial Estate
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Lenham Heath
Maidstone
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Soil Analysis Certificate						
DETS Report No: 24-05418	~Date Sampled	03/05/24	03/05/24	03/05/24	03/05/24	03/05/24
Ridge	~Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Tan Yard Brow	~TP / BH No	WS101	WS101	WS102	WS103	WS104
~Project / Job Ref: 5025143	~Additional Refs	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Order No: 628569	~Depth (m)	0.20 - 0.30	0.50 - 0.60	0.10 - 0.20	0.30 - 0.40	0.30 - 0.40
Reporting Date: 24/05/2024	DETS Sample No	715671	715672	715673	715674	715675

Determinand	Unit	RL	Accreditation					
Asbestos Screen ^(S)	N/a	N/a	ISO17025	Not Detected	Not Detected	Not Detected	Not Detected	Detected
Sample Matrix ^(S)	Material Type	N/a	NONE					Amosite present in microscopic board
Asbestos Type ^(S)	PLM Result	N/a	ISO17025					Amosite
Asbestos Quantification ^(S)	%	< 0.001	ISO17025					0.038
pH	pH Units	N/a	MCERTS	7.8	7.0	7.5	8.0	7.7
Total Cyanide	mg/kg	< 1	NONE		< 1			
W/S Sulphate as SO ₄ (2:1)	mg/l	< 10	MCERTS	17		17	10	23
W/S Sulphate as SO ₄ (2:1)	g/l	< 0.01	MCERTS	0.02		0.02	0.01	0.02
Organic Matter (SOM)	%	< 0.1	MCERTS	39.6	7.5	28.7	2.6	8.5
Arsenic (As)	mg/kg	< 2	MCERTS	43	12	28	9	13
Cadmium (Cd)	mg/kg	< 0.2	MCERTS	4.7	0.2	1.5	0.3	0.5
Chromium (Cr)	mg/kg	< 2	MCERTS	30	14	105	18	19
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2	< 2	< 2	< 2	< 2
Copper (Cu)	mg/kg	< 4	MCERTS	206	36	410	28	61
Lead (Pb)	mg/kg	< 3	MCERTS	455	315	359	121	260
Mercury (Hg)	mg/kg	< 1	MCERTS	2.1	< 1	1	< 1	1.2
Nickel (Ni)	mg/kg	< 3	MCERTS	36	14	104	19	21
Selenium (Se)	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Vanadium (V)	mg/kg	< 1	MCERTS	56		57	22	25
Zinc (Zn)	mg/kg	< 3	MCERTS	615	60	1040	98	184
Total Phenols (monohydric)	mg/kg	< 2	NONE		< 2			

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C. The Method Description page describes if the test is performed on the dried or as-received portion

Subcontracted analysis (S)

~Sample details provided by customer and can affect the validity of results



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Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410



Soil Analysis Certificate						
DETS Report No: 24-05418	~Date Sampled	03/05/24	07/05/24	07/05/24	07/05/24	07/05/24
Ridge	~Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Tan Yard Brow	~TP / BH No	WS105	WS106	WS107	WS107	WS108
~Project / Job Ref: 5025143	~Additional Refs	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Order No: 628569	~Depth (m)	0.30 - 0.40	0.20 - 0.30	0.10 - 0.20	0.40 - 0.50	0.20 - 0.30
Reporting Date: 24/05/2024	DETS Sample No	715676	715677	715678	715679	715680

Determinand	Unit	RL	Accreditation					
Asbestos Screen ^(S)	N/a	N/a	ISO17025	Not Detected	Not Detected	Not Detected	Not Detected	Not Detected
Sample Matrix ^(S)	Material Type	N/a	NONE					
Asbestos Type ^(S)	PLM Result	N/a	ISO17025					
Asbestos Quantification ^(S)	%	< 0.001	ISO17025					
pH	pH Units	N/a	MCERTS	7.5	8.1	7.6	7.3	7.3
Total Cyanide	mg/kg	< 1	NONE				< 1	
W/S Sulphate as SO ₄ (2:1)	mg/l	< 10	MCERTS	< 10	23	51		< 10
W/S Sulphate as SO ₄ (2:1)	g/l	< 0.01	MCERTS	< 0.01	0.02	0.05		< 0.01
Organic Matter (SOM)	%	< 0.1	MCERTS	11.7	15.1	31.4	2.3	5.9
Arsenic (As)	mg/kg	< 2	MCERTS	28	12	26	10	20
Cadmium (Cd)	mg/kg	< 0.2	MCERTS	0.6	0.8	0.8	< 0.2	0.2
Chromium (Cr)	mg/kg	< 2	MCERTS	28	14	12	27	21
Chromium (hexavalent)	mg/kg	< 2	NONE	< 2	< 2	< 2	< 2	< 2
Copper (Cu)	mg/kg	< 4	MCERTS	119	53	65	11	52
Lead (Pb)	mg/kg	< 3	MCERTS	174	204	164	21	175
Mercury (Hg)	mg/kg	< 1	MCERTS	< 1	< 1	< 1	< 1	< 1
Nickel (Ni)	mg/kg	< 3	MCERTS	29	18	18	14	27
Selenium (Se)	mg/kg	< 2	MCERTS	< 2	< 2	< 2	< 2	< 2
Vanadium (V)	mg/kg	< 1	MCERTS	33	22	27		30
Zinc (Zn)	mg/kg	< 3	MCERTS	174	95	423	50	88
Total Phenols (monohydric)	mg/kg	< 2	NONE				< 2	

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C. The Method Description page describes if the test is performed on the dried or as-received portion

Subcontracted analysis (S)

~Sample details provided by customer and can affect the validity of results



Normec DETS Limited
Unit 1, Rose Lane Industrial Estate
Rose Lane
Lenham Heath
Maidstone
Kent ME17 2JN
Tel : 01622 850410



Soil Analysis Certificate					
DETS Report No: 24-05418		~Date Sampled	07/05/24	07/05/24	
Ridge		~Time Sampled	None Supplied	None Supplied	
~Site Reference: Tan Yard Brow		~TP / BH No	Composite WS102 @ 0.60 - 0.70 + WS103 @ 1.30 - 1.40	Composite WS109 @ 0.20 - 0.30 + WS110 @ 0.30 - 0.40	
~Project / Job Ref: 5025143		~Additional Refs	None Supplied	None Supplied	
~Order No: 628569		~Depth (m)	None Supplied	None Supplied	
Reporting Date: 24/05/2024		DETS Sample No	715681	715682	

Determinand	Unit	RL	Accreditation					
Asbestos Screen ^(S)	N/a	N/a	ISO17025					
Sample Matrix ^(S)	Material Type	N/a	NONE					
Asbestos Type ^(S)	PLM Result	N/a	ISO17025					
Asbestos Quantification ^(S)	%	< 0.001	ISO17025					
pH	pH Units	N/a	MCERTS					
Total Cyanide	mg/kg	< 1	NONE					
W/S Sulphate as SO ₄ (2:1)	mg/l	< 10	MCERTS					
W/S Sulphate as SO ₄ (2:1)	g/l	< 0.01	MCERTS					
Organic Matter (SOM)	%	< 0.1	MCERTS					
Arsenic (As)	mg/kg	< 2	MCERTS					
Cadmium (Cd)	mg/kg	< 0.2	MCERTS					
Chromium (Cr)	mg/kg	< 2	MCERTS					
Chromium (hexavalent)	mg/kg	< 2	NONE					
Copper (Cu)	mg/kg	< 4	MCERTS					
Lead (Pb)	mg/kg	< 3	MCERTS					
Mercury (Hg)	mg/kg	< 1	MCERTS					
Nickel (Ni)	mg/kg	< 3	MCERTS					
Selenium (Se)	mg/kg	< 2	MCERTS					
Vanadium (V)	mg/kg	< 1	MCERTS					
Zinc (Zn)	mg/kg	< 3	MCERTS					
Total Phenols (monohydric)	mg/kg	< 2	NONE					

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C. The Method Description page describes if the test is performed on the dried or as-received portion

Subcontracted analysis (S)

~Sample details provided by customer and can affect the validity of results



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Soil Analysis Certificate - Speciated PAHs						
DETS Report No: 24-05418	~Date Sampled	03/05/24	03/05/24	03/05/24	03/05/24	03/05/24
Ridge	~Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Tan Yard Brow	~TP / BH No	WS101	WS101	WS102	WS103	WS104
~Project / Job Ref: 5025143	~Additional Refs	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Order No: 628569	~Depth (m)	0.20 - 0.30	0.50 - 0.60	0.10 - 0.20	0.30 - 0.40	0.30 - 0.40
Reporting Date: 24/05/2024	DETS Sample No	715671	715672	715673	715674	715675

Determinand	Unit	RL	Accreditation					
Naphthalene	mg/kg	< 0.1	MCERTS	24.30	< 0.1	33.70	< 0.1	1.88
Acenaphthylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	0.79	< 0.1	0.15
Acenaphthene	mg/kg	< 0.1	MCERTS	71.30	< 0.1	91.40	< 0.1	2.26
Fluorene	mg/kg	< 0.1	MCERTS	50.90	< 0.1	67.30	< 0.1	2.06
Phenanthrene	mg/kg	< 0.1	MCERTS	420	0.63	515	0.29	15.70
Anthracene	mg/kg	< 0.1	MCERTS	99.90	0.14	128	< 0.1	3.40
Fluoranthene	mg/kg	< 0.1	MCERTS	548	0.81	514	0.36	20.10
Pyrene	mg/kg	< 0.1	MCERTS	502	0.75	445	0.30	19.30
Benzo(a)anthracene	mg/kg	< 0.1	MCERTS	218	0.33	195	0.18	8.70
Chrysene	mg/kg	< 0.1	MCERTS	194	0.36	165	0.15	7.60
Benzo(b)fluoranthene	mg/kg	< 0.1	MCERTS	183	0.30	143	0.18	7.87
Benzo(k)fluoranthene	mg/kg	< 0.1	MCERTS	41.90	0.15	56.80	< 0.1	1.95
Benzo(a)pyrene	mg/kg	< 0.1	MCERTS	160	0.31	122	0.15	7.19
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	MCERTS	59.90	0.21	47.80	< 0.1	2.69
Dibenz(a,h)anthracene	mg/kg	< 0.1	MCERTS	13.70	< 0.1	7.41	< 0.1	0.63
Benzo(ghi)perylene	mg/kg	< 0.1	MCERTS	49.20	0.17	37.80	< 0.1	2.18
Total EPA-16 PAHs	mg/kg	< 1.6	MCERTS	2640	4.2	2570	1.6	104

~Sample details provided by customer and can affect the validity of results



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Soil Analysis Certificate - Speciated PAHs						
DETS Report No: 24-05418	~Date Sampled	03/05/24	07/05/24	07/05/24	07/05/24	07/05/24
Ridge	~Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Site Reference: Tan Yard Brow	~TP / BH No	WS105	WS106	WS107	WS107	WS108
~Project / Job Ref: 5025143	~Additional Refs	None Supplied	None Supplied	None Supplied	None Supplied	None Supplied
~Order No: 628569	~Depth (m)	0.30 - 0.40	0.20 - 0.30	0.10 - 0.20	0.40 - 0.50	0.20 - 0.30
Reporting Date: 24/05/2024	DETS Sample No	715676	715677	715678	715679	715680

Determinand	Unit	RL	Accreditation					
Naphthalene	mg/kg	< 0.1	MCERTS	< 0.1	1.02	12.30	< 0.1	< 0.1
Acenaphthylene	mg/kg	< 0.1	MCERTS	< 0.1	< 0.1	0.80	< 0.1	< 0.1
Acenaphthene	mg/kg	< 0.1	MCERTS	0.34	9.15	73.50	< 0.1	0.31
Fluorene	mg/kg	< 0.1	MCERTS	0.19	6.03	55.40	< 0.1	0.20
Phenanthrene	mg/kg	< 0.1	MCERTS	2.12	54.80	445	0.35	1.91
Anthracene	mg/kg	< 0.1	MCERTS	0.43	14.80	113	< 0.1	0.45
Fluoranthene	mg/kg	< 0.1	MCERTS	4.46	104	529	0.40	1.88
Pyrene	mg/kg	< 0.1	MCERTS	4.36	103	486	0.36	1.66
Benzo(a)anthracene	mg/kg	< 0.1	MCERTS	1.73	48.80	225	0.16	0.53
Chrysene	mg/kg	< 0.1	MCERTS	1.97	42.20	181	0.19	0.67
Benzo(b)fluoranthene	mg/kg	< 0.1	MCERTS	1.92	47.30	162	0.16	0.48
Benzo(k)fluoranthene	mg/kg	< 0.1	MCERTS	0.42	12.70	45.50	< 0.1	0.15
Benzo(a)pyrene	mg/kg	< 0.1	MCERTS	1.54	42.70	147	0.16	0.40
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.1	MCERTS	0.86	22.20	51.60	< 0.1	0.29
Dibenz(a,h)anthracene	mg/kg	< 0.1	MCERTS	0.22	5.36	6.82	< 0.1	< 0.1
Benzo(ghi)perylene	mg/kg	< 0.1	MCERTS	0.67	17.10	40.80	< 0.1	0.21
Total EPA-16 PAHs	mg/kg	< 1.6	MCERTS	21.2	531	2570	1.8	9.2

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Soil Analysis Certificate - TPH CWG Banded						
DETS Report No: 24-05418	~Date Sampled	03/05/24	07/05/24	07/05/24	07/05/24	
Ridge	~Time Sampled	None Supplied	None Supplied	None Supplied	None Supplied	
~Site Reference: Tan Yard Brow	~TP / BH No	WS101	WS107	Composite WS102 @ 0.60 - 0.70 + WS103 @ 1.30 - 1.40	Composite WS109 @ 0.20 - 0.30 + WS110 @ 0.30 - 0.40	
~Project / Job Ref: 5025143	~Additional Refs	None Supplied	None Supplied	None Supplied	None Supplied	
~Order No: 628569	~Depth (m)	0.50 - 0.60	0.40 - 0.50	None Supplied	None Supplied	
Reporting Date: 24/05/2024	DETS Sample No	715672	715679	715681	715682	

Determinand	Unit	RL	Accreditation				
Aliphatic >C5 - C6 : HS_1D_MS_AL	mg/kg	< 0.01	NONE	< 0.01	< 0.01		
Aliphatic >C6 - C8 : HS_1D_MS_AL	mg/kg	< 0.05	NONE	< 0.05	< 0.05		
Aliphatic >C8 - C10 : EH_CU_1D_AL	mg/kg	< 2	MCERTS	< 2	< 2		
Aliphatic >C10 - C12 : EH_CU_1D_AL	mg/kg	< 2	MCERTS	< 2	< 2		
Aliphatic >C12 - C16 : EH_CU_1D_AL	mg/kg	< 3	MCERTS	< 3	< 3		
Aliphatic >C16 - C21 : EH_CU_1D_AL	mg/kg	< 3	MCERTS	< 3	< 3		
Aliphatic >C21 - C34 : EH_CU_1D_AL	mg/kg	< 10	MCERTS	< 10	< 10		
Aliphatic (C5 - C34) : HS_1D_MS+EH_CU_1D_AL	mg/kg	< 21	NONE	< 21	< 21		
Aromatic >C5 - C7 : HS_1D_MS_AR	mg/kg	< 0.01	NONE	< 0.01	< 0.01		
Aromatic >C7 - C8 : HS_1D_MS_AR	mg/kg	< 0.05	NONE	< 0.05	< 0.05		
Aromatic >C8 - C10 : EH_CU_1D_AR	mg/kg	< 2	MCERTS	< 2	< 2		
Aromatic >C10 - C12 : EH_CU_1D_AR	mg/kg	< 2	MCERTS	< 2	< 2		
Aromatic >C12 - C16 : EH_CU_1D_AR	mg/kg	< 2	MCERTS	< 2	< 2		
Aromatic >C16 - C21 : EH_CU_1D_AR	mg/kg	< 3	MCERTS	< 3	< 3		
Aromatic >C21 - C35 : EH_CU_1D_AR	mg/kg	< 10	MCERTS	< 10	< 10		
Aromatic (C5 - C35) : HS_1D_MS+EH_CU_1D_AR	mg/kg	< 21	NONE	< 21	< 21		
Total >C5 - C35 : HS_1D_MS+EH_CU_1D_Tot al	mg/kg	< 42	NONE	< 42	< 42		

~Sample details provided by customer and can affect the validity of results



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Soil Analysis Certificate - BTEX / MTBE						
DETS Report No: 24-05418	~Date Sampled	03/05/24	07/05/24			
Ridge	~Time Sampled	None Supplied	None Supplied			
~Site Reference: Tan Yard Brow	~TP / BH No	WS101	WS107			
~Project / Job Ref: 5025143	~Additional Refs	None Supplied	None Supplied			
~Order No: 628569	~Depth (m)	0.50 - 0.60	0.40 - 0.50			
Reporting Date: 24/05/2024	DETS Sample No	715672	715679			

Determinand	Unit	RL	Accreditation				
Benzene : HS 1D MS	ug/kg	< 2	MCERTS	< 2	< 2		
Toluene : HS 1D MS	ug/kg	< 5	MCERTS	< 5	< 5		
Ethylbenzene : HS 1D MS	ug/kg	< 2	MCERTS	25	< 2		
p & m-xylene : HS 1D MS	ug/kg	< 2	MCERTS	19	< 2		
o-xylene : HS 1D MS	ug/kg	< 2	MCERTS	< 2	< 2		
MTBE : HS 1D MS	ug/kg	< 5	MCERTS	< 5	< 5		

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Waste Acceptance Criteria Analytical Certificate																																							
DETS Report No: 24-05418		~Date Sampled	07/05/24		<table border="1"> <thead> <tr> <th colspan="3">Landfill Waste Acceptance Criteria Limits</th> </tr> <tr> <th>Inert Waste Landfill</th> <th>Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill</th> <th>Hazardous Waste Landfill</th> </tr> </thead> <tbody> <tr> <td>3%</td> <td>5%</td> <td>6%</td> </tr> <tr> <td>--</td> <td>--</td> <td>10%</td> </tr> <tr> <td>6</td> <td>--</td> <td>--</td> </tr> <tr> <td>1</td> <td>--</td> <td>--</td> </tr> <tr> <td>500</td> <td>--</td> <td>--</td> </tr> <tr> <td>100</td> <td>--</td> <td>--</td> </tr> <tr> <td>--</td> <td>>6</td> <td>--</td> </tr> <tr> <td>--</td> <td>To be evaluated</td> <td>To be evaluated</td> </tr> </tbody> </table>					Landfill Waste Acceptance Criteria Limits			Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill	3%	5%	6%	--	--	10%	6	--	--	1	--	--	500	--	--	100	--	--	--	>6	--	--	To be evaluated	To be evaluated
Landfill Waste Acceptance Criteria Limits																																							
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500	--	--																																					
100	--	--																																					
--	>6	--																																					
--	To be evaluated	To be evaluated																																					
Ridge		~Time Sampled	None Supplied																																				
~Site Reference: Tan Yard Brow		~TP / BH No	Composite WS102 @ 0.60 - 0.70																																				
~Project / Job Ref: 5025143		~Additional Refs	None Supplied																																				
~Order No: 628569		~Depth (m)	None Supplied																																				
Reporting Date: 24/05/2024		DETS Sample No	715681																																				
Determinand	Unit	MDL																																					
TOC ^{MU}	%	< 0.1	9.1																																				
Loss on Ignition ^{MU}	%	< 0.01	10.40																																				
BTEX ^{MU}	mg/kg	< 0.05	< 0.05																																				
Sum of PCBs	mg/kg	< 0.1	< 0.1																																				
Mineral Oil ^{MU}	mg/kg	< 10	< 10																																				
Total PAH ^{MU}	mg/kg	< 1.7	38																																				
pH ^{MU}	pH Units	N/a	7.8																																				
Acid Neutralisation Capacity	mol/kg (+/-)	< 1	1.5																																				
Eluate Analysis			2:1 mg/l	8:1 mg/l		Cumulative 10:1 * mg/kg	Limit values for compliance leaching test using BS EN 12457-3 at L/S 10 l/kg (mg/kg)																																
Arsenic ^U			0.0023	0.0028		0.050	0.5	2	25																														
Barium ^U			0.0350	0.0204		0.378	20	100	300																														
Cadmium ^U			< 0.0002	< 0.0002		< 0.002	0.04	1	5																														
Chromium ^U			0.0014	0.0009		0.016	0.5	10	70																														
Copper ^U			0.0096	0.0086		0.156	2	50	100																														
Mercury ^U			0.00038	0.00026		0.0048	0.01	0.2	2																														
Molybdenum ^U			0.0308	0.0082		0.161	0.5	10	30																														
Nickel ^U			0.0007	0.0006		0.0102	0.4	10	40																														
Lead ^U			0.0003	0.0026		0.045	0.5	10	50																														
Antimony ^U			0.0106	< 0.0002		0.006	0.06	0.7	5																														
Selenium ^U			0.0010	0.0004		0.0076	0.1	0.5	7																														
Zinc ^U			0.020	0.018		0.33	4	50	200																														
Chloride ^U			2	1		25	800	15000	25000																														
Fluoride ^U			2.3	1.6		28.8	10	150	500																														
Sulphate ^U			11	4		73	1000	20000	50000																														
TDS			113	63		1169	4000	60000	100000																														
Phenol Index ^U			< 0.01	< 0.01		< 0.5	1	-	-																														
DOC ^U			15.3	5.5		106	500	800	1000																														
Leach Test Information																																							
Sample Mass (kg)			0.11																																				
Dry Matter (%)			75.9																																				
Moisture (%)			31.8																																				
Stage 1																																							
Volume Eluate L2 (litres)			0.15																																				
Filtered Eluate VE1 (litres)			0.05																																				

Analytical results are expressed on a dry weight basis where samples are assisted-dried at less than 30°C. The Samples Descriptions page describes if the test is performed on the dried or as-received portion
 Stated limits are for guidance only and Normec DETS Limited cannot be held responsible for any discrepancies with current legislation
 M Denotes MCERTS accredited test
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Waste Acceptance Criteria Analytical Certificate																																							
DETS Report No: 24-05418		~Date Sampled	07/05/24		<table border="1"> <thead> <tr> <th colspan="3">Landfill Waste Acceptance Criteria Limits</th> </tr> <tr> <th>Inert Waste Landfill</th> <th>Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill</th> <th>Hazardous Waste Landfill</th> </tr> </thead> <tbody> <tr> <td>3%</td> <td>5%</td> <td>6%</td> </tr> <tr> <td>--</td> <td>--</td> <td>10%</td> </tr> <tr> <td>6</td> <td>--</td> <td>--</td> </tr> <tr> <td>1</td> <td>--</td> <td>--</td> </tr> <tr> <td>500</td> <td>--</td> <td>--</td> </tr> <tr> <td>100</td> <td>--</td> <td>--</td> </tr> <tr> <td>--</td> <td>>6</td> <td>--</td> </tr> <tr> <td>--</td> <td>To be evaluated</td> <td>To be evaluated</td> </tr> </tbody> </table>					Landfill Waste Acceptance Criteria Limits			Inert Waste Landfill	Stable Non-reactive HAZARDOUS waste in non-hazardous Landfill	Hazardous Waste Landfill	3%	5%	6%	--	--	10%	6	--	--	1	--	--	500	--	--	100	--	--	--	>6	--	--	To be evaluated	To be evaluated
Landfill Waste Acceptance Criteria Limits																																							
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500	--	--																																					
100	--	--																																					
--	>6	--																																					
--	To be evaluated	To be evaluated																																					
Ridge		~Time Sampled	None Supplied																																				
~Site Reference: Tan Yard Brow		~TP / BH No	Composite WS109 @ 0.30 0.30 0.30																																				
~Project / Job Ref: 5025143		~Additional Refs	None Supplied																																				
~Order No: 628569		~Depth (m)	None Supplied																																				
Reporting Date: 24/05/2024		DETS Sample No	715682																																				
Determinand	Unit	MDL																																					
TOC ^{MU}	%	< 0.1	5.1																																				
Loss on Ignition ^{MU}	%	< 0.01	7.80																																				
BTEX ^{MU}	mg/kg	< 0.05	< 0.05																																				
Sum of PCBs	mg/kg	< 0.1	< 0.1																																				
Mineral Oil ^{MU}	mg/kg	< 10	< 10																																				
Total PAH ^{MU}	mg/kg	< 1.7	49.7																																				
pH ^{MU}	pH Units	N/a	7.6																																				
Acid Neutralisation Capacity	mol/kg (+/-)	< 1	< 1																																				
Eluate Analysis			2:1 mg/l	8:1 mg/l		Cumulative 10:1 * mg/kg	Limit values for compliance leaching test using BS EN 12457-3 at L/S 10 l/kg (mg/kg)																																
Arsenic ^U		0.0018	0.0022		0.039	0.5	2	25																															
Barium ^U		0.0305	0.0139		0.264	20	100	300																															
Cadmium ^U		< 0.0002	< 0.0002		< 0.002	0.04	1	5																															
Chromium ^U		0.0006	0.0004		0.008	0.5	10	70																															
Copper ^U		0.0076	0.0087		0.157	2	50	100																															
Mercury ^U		0.00008	0.00004		0.0008	0.01	0.2	2																															
Molybdenum ^U		0.0126	0.0032		0.065	0.5	10	30																															
Nickel ^U		0.0009	0.0006		0.0109	0.4	10	40																															
Lead ^U		0.0004	0.0015		0.027	0.5	10	50																															
Antimony ^U		< 0.0002	< 0.0002		< 0.002	0.06	0.7	5																															
Selenium ^U		0.0007	0.0004		0.0083	0.1	0.5	7																															
Zinc ^U		0.008	0.015		0.26	4	50	200																															
Chloride ^U		2	< 1		13	800	15000	25000																															
Fluoride ^U		2	1		19.6	10	150	500																															
Sulphate ^U		10	2		43	1000	20000	50000																															
TDS		105	49		932	4000	60000	100000																															
Phenol Index ^U		< 0.01	< 0.01		< 0.5	1	-	-																															
DOC ^U		14.7	8.1		153	500	800	1000																															
Leach Test Information																																							
Sample Mass (kg)			0.11																																				
Dry Matter (%)			81.8																																				
Moisture (%)			22.4																																				
Stage 1																																							
Volume Eluate L2 (litres)			0.16																																				
Filtered Eluate VE1 (litres)			0.07																																				

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Soil Analysis Certificate - Sample Descriptions

DETS Report No: 24-05418	
Ridge	
~Site Reference: Tan Yard Brow	
~Project / Job Ref: 5025143	
~Order No: 628569	
Reporting Date: 24/05/2024	

DETS Sample No	~TP / BH No	~Additional Refs	~Depth (m)	Moisture Content (%)	Sample Matrix Description
\$ 715671	WS101	None Supplied	0.20 - 0.30	17.6	Black loamy sand with stones and concrete
\$ 715672	WS101	None Supplied	0.50 - 0.60	22.3	Brown sandy loam with stones
\$ 715673	WS102	None Supplied	0.10 - 0.20	17.5	Black loamy sand with stones and vegetation
\$ 715674	WS103	None Supplied	0.30 - 0.40	14.5	Brown sandy clay with stones and concrete
\$ 715675	WS104	None Supplied	0.30 - 0.40	17.4	Brown loamy sand with stones and brick
\$ 715676	WS105	None Supplied	0.30 - 0.40	20.9	Brown loamy sand with stones
715677	WS106	None Supplied	0.20 - 0.30	6.8	Black loamy sand with stones and concrete
715678	WS107	None Supplied	0.10 - 0.20	17.3	Black loamy sand with stones and concrete
715679	WS107	None Supplied	0.40 - 0.50	17.5	Light brown sandy clay
715680	WS108	None Supplied	0.20 - 0.30	20.6	Brown loamy sand
715681	Composite WS102 @ 0.60 - 0.70 + WS103 @ 1.30 - 1.40	None Supplied	None Supplied	23.7	Black loamy sand with chalk
715682	Composite WS109 @ 0.20 - 0.30 + WS110 @ 0.30 - 0.40	None Supplied	None Supplied	17.8	Black loamy sand with stones

Moisture content is part of procedure E003 & is not an accredited test

Insufficient Sample ^{1/5}

Unsuitable Sample ^{1/5}

~Sample details provided by customer and can affect the validity of results

\$ samples exceeded recommended holding times



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Tel : 01622 850410



Soil Analysis Certificate - Methodology & Miscellaneous Information

DETS Report No: 24-05418

Ridge

~Site Reference: Tan Yard Brow

~Project / Job Ref: 5025143

~Order No: 628569

Reporting Date: 24/05/2024

Matrix	Analysed On	Determinand	Brief Method Description	Method No
Soil	D	Boron - Water Soluble	Determination of water soluble boron in soil by 2:1 hot water extract followed by ICP-OES	E012
Soil	AR	BTEX	Determination of BTEX by headspace GC-MS	E001
Soil	D	Cations	Determination of cations in soil by aqua-regia digestion followed by ICP-OES	E002
Soil	D	Chloride - Water Soluble (2:1)	Determination of chloride by extraction with water & analysed by ion chromatography	E009
Soil	AR	Chromium - Hexavalent	Determination of hexavalent chromium in soil by extraction in water then by acidification, addition of 1,5 diphénylcarbazine followed by colorimetry	E016
Soil	AR	Cyanide - Complex	Determination of complex cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Free	Determination of free cyanide by distillation followed by colorimetry	E015
Soil	AR	Cyanide - Total	Determination of total cyanide by distillation followed by colorimetry	E015
Soil	D	Cyclohexane Extractable Matter (CEM)	Gravimetrically determined through extraction with cyclohexane	E011
Soil	AR	Diesel Range Organics (C10 - C24)	Determination of hexane/acetone extractable hydrocarbons by GC-FID	E004
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of saturated calcium sulphate followed by electrometric measurement	E022
Soil	AR	Electrical Conductivity	Determination of electrical conductivity by addition of water followed by electrometric measurement	E023
Soil	D	Elemental Sulphur	Determination of elemental sulphur by solvent extraction followed by GC-MS	E020
Soil	AR	EPH (C10 - C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH Product ID	Determination of acetone/hexane extractable hydrocarbons by GC-FID	E004
Soil	AR	EPH TEXAS (C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C40)	Determination of acetone/hexane extractable hydrocarbons by GC-FID for C8 to C40. C6 to C8 by headspace GC-MS	E004
Soil	D	Fluoride - Water Soluble	Determination of Fluoride by extraction with water & analysed by ion chromatography	E009
Soil	D	Fraction Organic Carbon (FOC)	Determination of TOC by combustion analyser.	E027
Soil	D	Organic Matter (SOM)	Determination of TOC by combustion analyser.	E027
Soil	D	TOC (Total Organic Carbon)	Determination of TOC by combustion analyser.	E027
Soil	AR	Exchangeable Ammonium	Determination of ammonium by discrete analyser.	E029
Soil	D	FOC (Fraction Organic Carbon)	Determination of fraction of organic carbon by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	D	Loss on Ignition @ 450°C	Determination of loss on ignition in soil by gravimetrically with the sample being ignited in a muffle furnace	E019
Soil	D	Magnesium - Water Soluble	Determination of water soluble magnesium by extraction with water followed by ICP-OES	E025
Soil	D	Metals	Determination of metals by aqua-regia digestion followed by ICP-OES	E002
Soil	AR	Mineral Oil (C10 - C40)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge	E004
Soil	AR	Moisture Content	Moisture content; determined gravimetrically	E003
Soil	D	Nitrate - Water Soluble (2:1)	Determination of nitrate by extraction with water & analysed by ion chromatography	E009
Soil	D	Organic Matter	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	PAH - Speciated (EPA 16)	Determination of PAH compounds by extraction in acetone and hexane followed by GC-MS with the use of surrogate and internal standards	E005
Soil	AR	PCB - 7 Congeners	Determination of PCB by extraction with acetone and hexane followed by GC-MS	E008
Soil	D	Petroleum Ether Extract (PEE)	Gravimetrically determined through extraction with petroleum ether	E011
Soil	AR	pH	Determination of pH by addition of water followed by electrometric measurement	E007
Soil	AR	Phenols - Total (monohydric)	Determination of phenols by distillation followed by colorimetry	E021
Soil	D	Phosphate - Water Soluble (2:1)	Determination of phosphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Total	Determination of total sulphate by extraction with 10% HCl followed by ICP-OES	E013
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of sulphate by extraction with water & analysed by ion chromatography	E009
Soil	D	Sulphate (as SO4) - Water Soluble (2:1)	Determination of water soluble sulphate by extraction with water followed by ICP-OES	E014
Soil	AR	Sulphide	Determination of sulphide by distillation followed by colorimetry	E018
Soil	D	Sulphur - Total	Determination of total sulphur by extraction with aqua-regia followed by ICP-OES	E024
Soil	AR	SVOC	Determination of semi-volatile organic compounds by extraction in acetone and hexane followed by GC-MS	E006
Soil	AR	Thiocyanate (as SCN)	Determination of thiocyanate by extraction in caustic soda followed by acidification followed by addition of ferric nitrate followed by colorimetry	E017
Soil	D	Toluene Extractable Matter (TEM)	Gravimetrically determined through extraction with toluene	E011
Soil	D	Total Organic Carbon (TOC)	Determination of organic matter by oxidising with potassium dichromate followed by titration with iron (II) sulphate	E010
Soil	AR	TPH CWG (ali: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C34, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C35. C5 to C8 by headspace GC-MS	E004
Soil	AR	TPH LQM (ali: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C35, C35-C44, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35, C35-C44)	Determination of hexane/acetone extractable hydrocarbons by GC-FID fractionating with SPE cartridge for C8 to C44. C5 to C8 by headspace GC-MS	E004
Soil	AR	VOCs	Determination of volatile organic compounds by headspace GC-MS	E001
Soil	AR	VPH (C6-C8 & C8-C10)	Determination of hydrocarbons C6-C8 by headspace GC-MS & C8-C10 by GC-FID	E001

D Dried

AR As Received

~Sample details provided by customer and can affect the validity of results



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Water Analysis Certificate - Methodology & Miscellaneous Information

DETS Report No: 24-05418

Ridge

~Site Reference: Tan Yard Brow

~Project / Job Ref: 5025143

~Order No: 628569

Reporting Date: 24/05/2024

Matrix	Analysed On	Determinand	Brief Method Description	Method No
Water	UF	Alkalinity	Determination of alkalinity by titration against hydrochloric acid using bromocresol green as the end point	E103
Water	F	Ammoniacal Nitrogen	Determination of ammoniacal nitrogen by discrete analyser.	E126
Water	UF	BTEX	Determination of BTEX by headspace GC-MS	E101
Water	F	Cations	Determination of cations by filtration followed by ICP-MS	E102
Water	U	Chemical Oxygen Demand (COD)	Determination using a COD reactor followed by colorimetry	E112
Water	UF	Biological Oxygen Demand (COD)	Determination using BOD sensors measuring the change of pressure	E133
Water	F	Chloride	Determination of chloride by filtration & analysed by ion chromatography	E109
Water	F	Chromium - Hexavalent	Determination of hexavalent chromium by acidification, addition of 1,5 diphenylcarbazide followed by	E116
Water	UF	Cyanide - Complex	Determination of complex cyanide by distillation followed by colorimetry	E115
Water	UF	Cyanide - Free	Determination of free cyanide by distillation followed by colorimetry	E115
Water	UF	Cyanide - Total	Determination of total cyanide by distillation followed by colorimetry	E115
Water	UF	Cyclohexane Extractable Matter (CEM)	Gravimetrically determined through liquid:liquid extraction with cyclohexane	E111
Water	F	Diesel Range Organics (C10 - C24)	Determination of liquid:liquid extraction with hexane followed by GC-FID	E104
Water	F	Dissolved Organic Content (DOC)	Determination of DOC by filtration followed by low heat with persulphate addition followed by IR dete	E110
Water	UF	Electrical Conductivity	Determination of electrical conductivity by electrometric measurement	E123
Water	F	EPH (C10 - C40)	Determination of liquid:liquid extraction with hexane followed by GC-FID	E104
Water	F	EPH TEXAS (C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C40)	Determination of liquid:liquid extraction with hexane followed by GC-FID for C8 to C40. C6 to C8 by headspace GC-MS	E104
Water	F	Fluoride	Determination of Fluoride by filtration & analysed by ion chromatography	E109
Water	F	Hardness	Determination of Ca and Mg by ICP-MS followed by calculation	E102
Leachate	F	Leachate Preparation - NRA	Based on National Rivers Authority leaching test 1994	E301
Leachate	F	Leachate Preparation - WAC	Based on BS EN 12457 Pt1, 2, 3	E302
Water	F	Metals	Determination of metals by filtration followed by ICP-MS	E102
Water	F	Mineral Oil (C10 - C40)	Determination of liquid:liquid extraction with hexane followed by GI-FID	E104
Water	F	Nitrate	Determination of nitrate by filtration & analysed by ion chromatography	E109
Water	UF	Monohydric Phenol	Determination of phenols by distillation followed by colorimetry	E121
Water	F	PAH - Speciated (EPA 16)	Determination of PAH compounds by concentration through SPE cartridge, collection in dichloromethane followed by GC-MS	E105
Water	F	PCB - 7 Congeners	Determination of PCB compounds by concentration through SPE cartridge, collection in dichloromethane followed by GC-MS	E108
Water	UF	Petroleum Ether Extract (PEE)	Gravimetrically determined through liquid:liquid extraction with petroleum ether	E111
Water	UF	pH	Determination of pH by electrometric measurement	E107
Water	F	Phosphate	Determination of phosphate by filtration & analysed by ion chromatography	E109
Water	UF	Redox Potential	Determination of redox potential by electrometric measurement	E113
Water	F	Sulphate (as SO4)	Determination of sulphate by filtration & analysed by ion chromatography	E109
Water	UF	Sulphide	Determination of sulphide by distillation followed by colorimetry	E118
Water	F	SVOC	Determination of semi-volatile organic compounds by concentration through SPE cartridge, collection in dichloromethane followed by GC-MS	E106
Water	UF	Toluene Extractable Matter (TEM)	Gravimetrically determined through liquid:liquid extraction with toluene	E111
Water	UF	Total Organic Carbon (TOC)	Low heat with persulphate addition followed by IR detection	E110
Water	F	TPH CWG (ali: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C34, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35)	Determination of liquid:liquid extraction with hexane, fractionating with SPE followed by GC-FID for C8 to C35. C5 to C8 by headspace GC-MS	E104
Water	F	TPH LQM (ali: C5-C6, C6-C8, C8-C10, C10-C12, C12-C16, C16-C35, C35-C44, aro: C5-C7, C7-C8, C8-C10, C10-C12, C12-C16, C16-C21, C21-C35, C35-C44)	Determination of liquid:liquid extraction with hexane, fractionating with SPE followed by GC-FID for C8 to C44. C5 to C8 by headspace GC-MS	E104
Water	UF	VOCS	Determination of volatile organic compounds by headspace GC-MS	E101
Water	UF	VPH (C6-C8 & C8-C10)	Determination of hydrocarbons C6-C8 by headspace GC-MS & C8-C10 by GC-FID	E101

Key

F Filtered
UF Unfiltered

~Sample details provided by customer and can affect the validity of results



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List of HWOL Acronyms and Operators

DETS Report No: 24-05418

Ridge

~Site Reference: Tan Yard Brow

~Project / Job Ref: 5025143

~Order No: 628569

Reporting Date: 24/05/2024

Acronym	Description
HS	Headspace analysis
EH	Extractable Hydrocarbons - i.e. everything extracted by the solvent
CU	Clean-up - e.g. by florisil, silica gel
1D	GC - Single coil gas chromatography
2D	GC-GC - Double coil gas chromatography
Total	Aliphatics & Aromatics
AL	Aliphatics only
AR	Aromatics only
#1	EH_2D_Total but with humics mathematically subtracted
#2	EH_2D_Total but with fatty acids mathematically subtracted
	Operator - underscore to separate acronyms (exception for +)
+	Operator to indicate cumulative eg. EH+HS_Total or EH_CU+HS_Total
~	Sample details provided by customer and can affect the validity of results

Benzene - HS_1D_MS
Ethylbenzene - HS_1D_MS
MTBE - HS_1D_MS
Mineral Oil (C10 - C40) (BS EN 12457-3) - EH_CU_1D_AL
TPH CWG - Aliphatic >C10 - C12 - EH_CU_1D_AL
TPH CWG - Aliphatic >C12 - C16 - EH_CU_1D_AL
TPH CWG - Aliphatic >C16 - C21 - EH_CU_1D_AL
TPH CWG - Aliphatic >C21 - C34 - EH_CU_1D_AL
TPH CWG - Aliphatic >C5 - C6 - HS_1D_MS_AL
TPH CWG - Aliphatic >C6 - C8 - HS_1D_MS_AL
TPH CWG - Aliphatic >C8 - C10 - EH_CU_1D_AL
TPH CWG - Aliphatic C5 - C34 - HS_1D_MS+EH_CU_1D_AL
TPH CWG - Aromatic >C10 - C12 - EH_CU_1D_AR
TPH CWG - Aromatic >C12 - C16 - EH_CU_1D_AR
TPH CWG - Aromatic >C16 - C21 - EH_CU_1D_AR
TPH CWG - Aromatic >C21 - C35 - EH_CU_1D_AR
TPH CWG - Aromatic >C5 - C35 - HS_1D_MS+EH_CU_1D_AR
TPH CWG - Aromatic >C5 - C7 - HS_1D_MS_AR
TPH CWG - Aromatic >C7 - C8 - HS_1D_MS_AR
TPH CWG - Aromatic >C8 - C10 - EH_CU_1D_AR
TPH CWG - Total >C5 - C35 - HS_1D_MS+EH_CU_1D_Total
Toluene - HS_1D_MS
Total BTEX (BS EN 12457-3) - HS_1D_MS_Total
m & p-xylene - HS_1D_MS
o-Xylene - HS_1D_MS

Parameter	Matrix Type	Expanded Uncertainty Measurement	Unit
TOC	Soil	12.2	%
Loss on Ignition	Soil	22.9	%
BTEX	Soil	11.2	%
Sum of PCBs	Soil	43.4	%
Mineral Oil	Soil	9.0	%
Total PAH	Soil	18.5	%
pH	Soil	0.335	Units
Acid Neutralisation Capacity	Soil	18.0	%
Clay Content	Soil	15.0	%
Silt Content	Soil	14.0	%
Sand Content	Soil	13.0	%
Loss on Ignition	Soil	22.9	%
pH	Soil	0.335	Units
Carbonate	Soil	12.0	%
Total Nitrogen	Soil	12.0	%
Phosphorus (Extractable)	Soil	24.0	%
Potassium (Extractable)	Soil	20.0	%
Magnesium (Extractable)	Soil	26.0	%
Zinc	Soil	21.6	%
Copper	Soil	18.2	%
Nickel	Soil	24.3	%
Available Sodium	Soil	23.0	%
Available Calcium	Soil	23.0	%
Electrical Conductivity	Soil	10.0	%

TEST REPORT

Client Ridge and Partners LLP

Address The Cowyards
Blenheim Park
Oxford Road
Woodstock
OX20 1QR

Contract Tan Yard Brow,
Greater Manchester

Job Number MRN 24047/11

Date of Issue 07 June 2024

Page 1 of 15

Approved Signatories

S J Hutchings, O P Davies

Notes

- 1 All remaining samples and remnants from this contract will be disposed 28 days from the date of this report unless you notify us to the contrary.
- 2 Result certificates, in this report, not bearing a UKAS mark, are not included in our UKAS accreditation schedule.
- 3 Opinions and interpretations expressed herein are outside the scope of our UKAS accreditation.
- 4 Certified that the samples have been examined and tested in accordance with the terms of the contract/order and unless otherwise stated conform to the standards/specifications quoted.
- 5 The results included within the report are representative of the samples submitted for analysis.
- 6 This certificate should not be reproduced, except in full, without the express permission of the laboratory.



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MURRAY RIX

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DUKINFIELD, CHESHIRE SK16 4QX
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TEST CERTIFICATE

DETERMINATION OF THE WATER CONTENT

(OVEN DRY)

BS EN 17892-1:2014+A1:2022

CLIENT	Ridge and Partners LLP
SITE	Tan Yard Brow, Greater Manchester
JOB NUMBER	MRN 24047/11

DATE SAMPLED	03-May-24	DATE RECEIVED	07-May-24
DATE TESTED	03-Jun-24	SAMPLED BY	Client

Laboratory Sample Number	Site Reference	Material	Sample Location	Water Content (%)
470020	WS103 2.1-2.4m	Clay	WS103 2.1-2.4m	18.3
470024	WS106 2.5-2.6m	Clay	WS106 2.5-2.6m	16.5
470026	WS107 3.00-3.45m	Clay	WS107 3.00-3.45m	16.8
470029	WS109 1.5-1.6m	Clay	WS109 1.5-1.6m	17.4
470007	CP101 1.20-1.65m	Clay	CP101 1.20-1.65m	18.5
470009	CP101 3.5-3.7m	Clay	CP101 3.5-3.7m	7.7
470010	CP101 4.40-4.55m	Clay	CP101 4.40-4.55m	15.3
470011	CP107 7.6m	Clay	CP107 7.6m	16.4
470012	CP101 8.50-8.95m	Clay	CP101 8.50-8.95m	12.9
470013	CP101 10.6m	Clay	CP101 10.6m	10.9

COMMENT / ANOMALIES

NAME S.J. Hutchings
(Director)

SIGNED

DATE 07-Jun-24

MURRAY RIX

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DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870



TEST CERTIFICATE

DETERMINATION OF THE WATER CONTENT

(OVEN DRY)

BS EN 17892-1:2014+A1:2022

CLIENT	Ridge and Partners LLP
SITE	Tan Yard Brow, Greater Manchester
JOB NUMBER	MRN 24047/11

DATE SAMPLED	03-May-24	DATE RECEIVED	07-May-24
DATE TESTED	03-Jun-24	SAMPLED BY	Client

Laboratory Sample Number	Site Reference	Material	Sample Location	Water Content (%)
470001	CP101 2.7-3.0m	Clay	CP101 2.7-3.0m	19.4
470002	CP101 3.7-4.0m	Clay	CP101 3.7-4.0m	18.7
470003	CP101 9.0-9.3m	Clay	CP101 9.0-9.3m	15.4
470004	CP101 13.5-13.9m	Clay	CP101 13.5-13.9m	16.1
470014	CP101 11.50-11.95m	Clay	CP101 11.50-11.95m	13.3
470015	CP101 13.2-13.5m	Clay	CP101 13.2-13.5m	13.5

COMMENT / ANOMALIES

NAME S.J. Hutchings
(Director)

SIGNED

DATE 07-Jun-24

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TEST CERTIFICATE

LIQUID LIMIT BS EN ISO 17892-12:2018+A2:2022 Clause 5.3 (30° FALL CONE) 1 POINT METHOD

PLASTIC LIMIT BS EN ISO 17892-12:2018+A2:2022 Clause 5.5

WATER CONTENT METHOD BS EN ISO 17892-1:2014+A1:2022

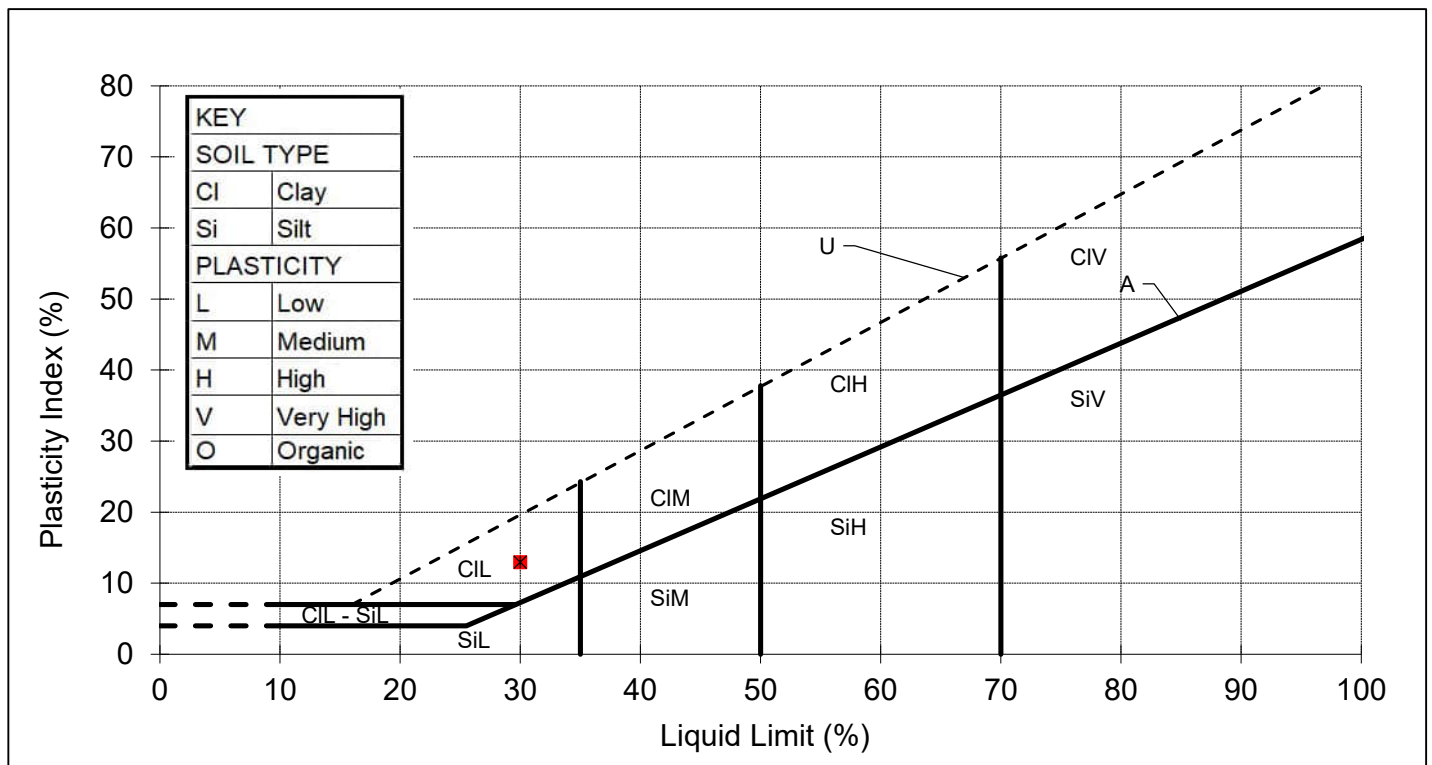
CLIENT	Ridge and Partners LLP
SITE	Tan Yard Brow, Greater Manchester
JOB NUMBER	MRN 24047/11

SAMPLE LABEL	WS102 1.10-1.20m	DATE SAMPLED	03-May-24
SAMPLE No.	470018	DATE RECEIVED	07-May-24
DATE TESTED	05-Jun-24	SAMPLED BY	Client

MATERIAL	Brown mottled grey silty sandy slightly gravelly CLAY.		
ADVISED SOURCE	Site Investigation Sample	WATER CONTENT	Increasing
SAMPLE HISTORY	Natural State	% RET. 425um BY	Wet Sieved

Test Readings mm (average)		Moisture Content %	Correction Factor	Correction factor from Clayton and Jukes 1978
Determination 1 (avg)	16.3	28.5	1.049	
Determination 2 (avg)	16.4	28.7		

Natural Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
17.1	30	17	13	98



REMARKS

SIGNED

NAME

S.J. Hutchings
(Director)

DATE

07-Jun-24

MURRAY RIX

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TEL 0161 475 0870



TEST CERTIFICATE

LIQUID LIMIT BS EN ISO 17892-12:2018+A2:2022 Clause 5.3 (30° FALL CONE) 1 POINT METHOD

PLASTIC LIMIT BS EN ISO 17892-12:2018+A2:2022 Clause 5.5

WATER CONTENT METHOD BS EN ISO 17892-1:2014+A1:2022

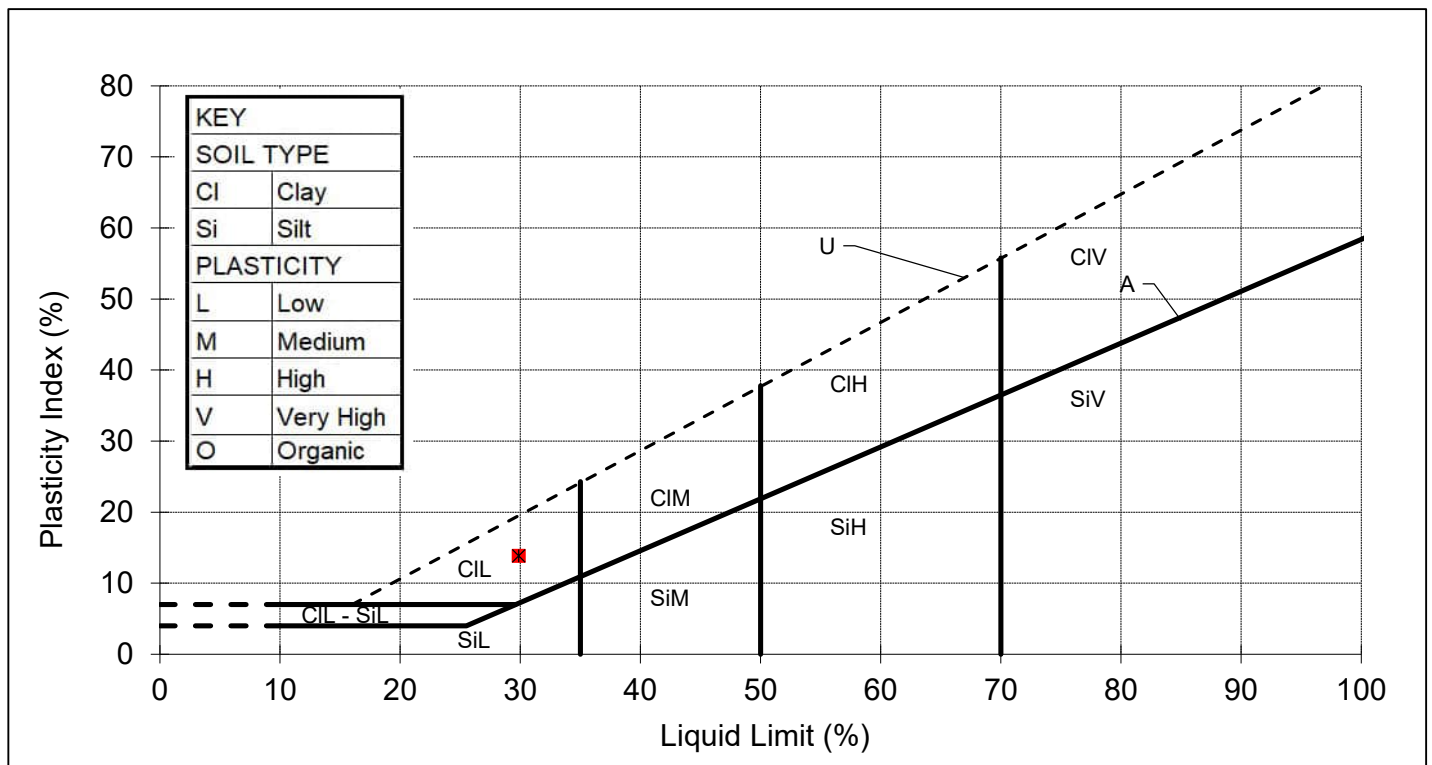
CLIENT	Ridge and Partners LLP		
SITE	Tan Yard Brow, Greater Manchester		
JOB NUMBER	MRN 24047/11		

SAMPLE LABEL	WS104 2.60-2.70m	DATE SAMPLED	03-May-24
SAMPLE No.	470021	DATE RECEIVED	07-May-24
DATE TESTED	05-Jun-24	SAMPLED BY	Client

MATERIAL	Brown mottled grey silty sandy slightly gravelly CLAY.		
ADVISED SOURCE	Site Investigation Sample	WATER CONTENT	Increasing
SAMPLE HISTORY	Natural State	% RET. 425um BY	Wet Sieved

Test Readings mm (average)		Moisture Content %	Correction Factor	Correction factor from Clayton and Jukes 1978
Determination 1 (avg)	16.1	28.4	1.050	
Determination 2 (avg)	16.3	28.5		

Natural Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
17.6	30	16	14	98



REMARKS

SIGNED

NAME S.J. Hutchings
(Director)

DATE 07-Jun-24

MURRAY RIX

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DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870



TEST CERTIFICATE

LIQUID LIMIT BS EN ISO 17892-12:2018+A2:2022 Clause 5.3 (30° FALL CONE) 1 POINT METHOD

PLASTIC LIMIT BS EN ISO 17892-12:2018+A2:2022 Clause 5.5

WATER CONTENT METHOD BS EN ISO 17892-1:2014+A1:2022

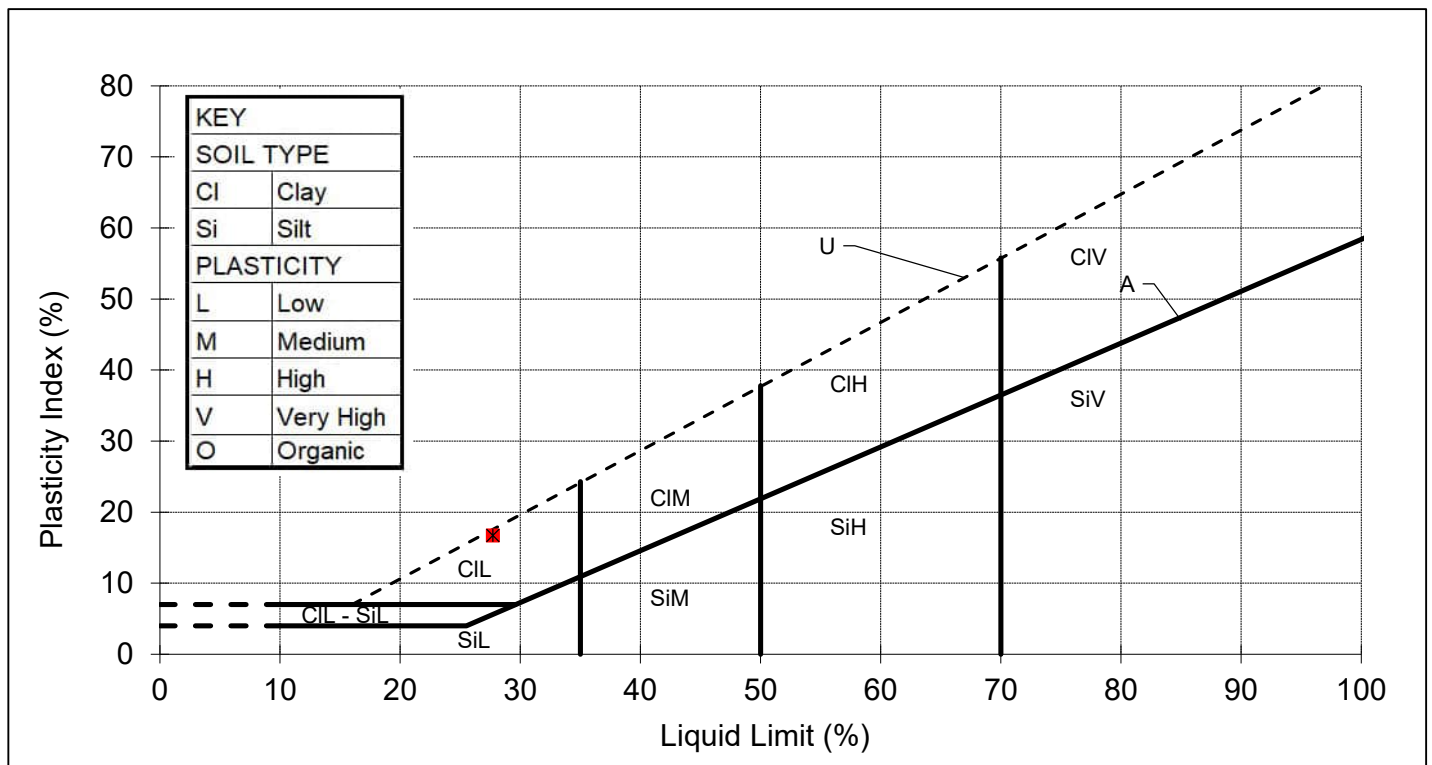
CLIENT	Ridge and Partners LLP		
SITE	Tan Yard Brow, Greater Manchester		
JOB NUMBER	MRN 24047/11		

SAMPLE LABEL	WS105 3.7-3.8m	DATE SAMPLED	03-May-24
SAMPLE No.	470022	DATE RECEIVED	07-May-24
DATE TESTED	05-Jun-24	SAMPLED BY	Client

MATERIAL	Dark brown mottled grey silty sandy slightly gravelly CLAY.		
ADVISED SOURCE	Site Investigation Sample	WATER CONTENT	Increasing
SAMPLE HISTORY	Natural State	% RET. 425um BY	Wet Sieved

Test Readings mm (average)		Moisture Content %	Correction Factor	Correction factor from Clayton and Jukes 1978
Determination 1 (avg)	16.1	26.5	1.050	
Determination 2 (avg)	16.3	26.3		

Natural Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
14.0	28	11	17	98



REMARKS

SIGNED

NAME

S.J. Hutchings
(Director)

DATE

07-Jun-24

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TEL 0161 475 0870



TEST CERTIFICATE

LIQUID LIMIT BS EN ISO 17892-12:2018+A2:2022 Clause 5.3 (30° FALL CONE) 1 POINT METHOD

PLASTIC LIMIT BS EN ISO 17892-12:2018+A2:2022 Clause 5.5

WATER CONTENT METHOD BS EN ISO 17892-1:2014+A1:2022

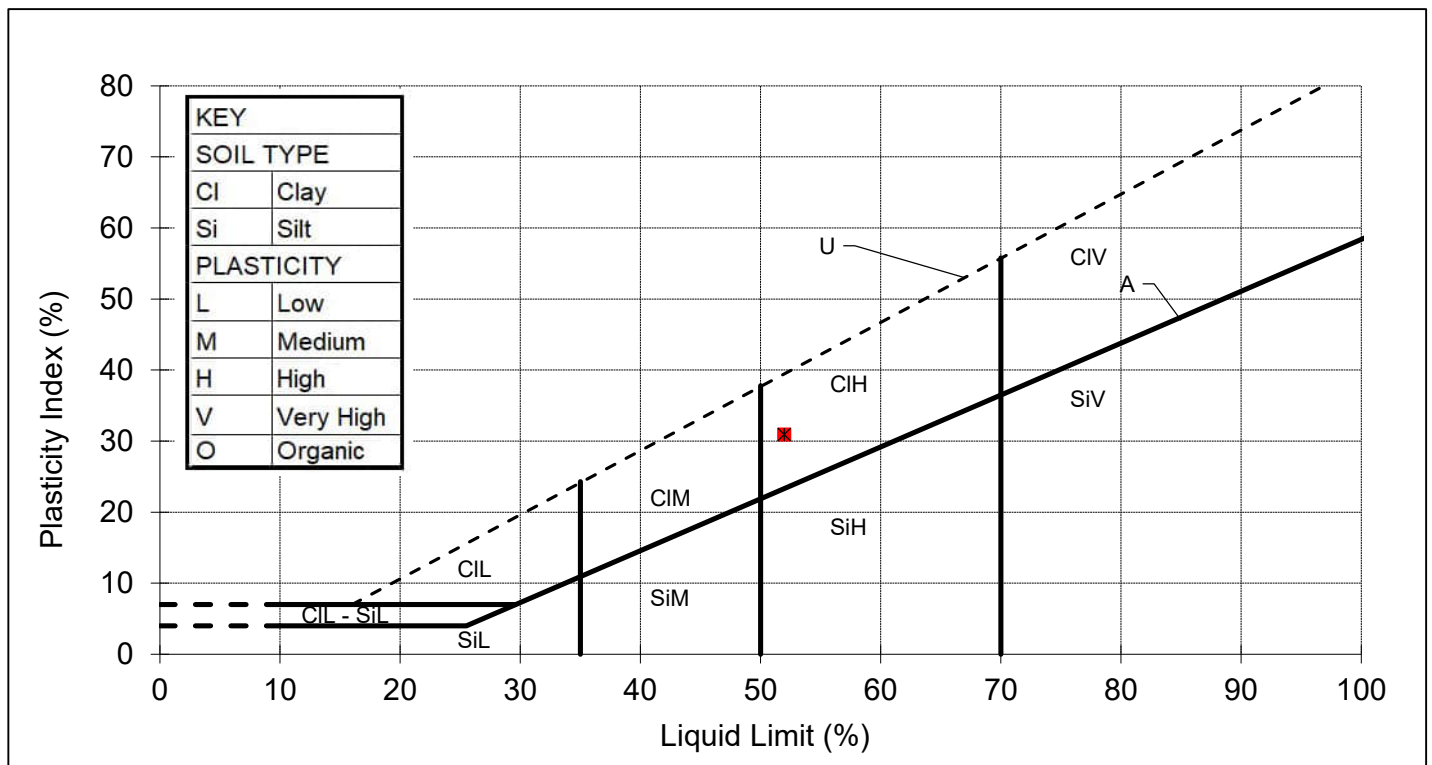
CLIENT	Ridge and Partners LLP
SITE	Tan Yard Brow, Greater Manchester
JOB NUMBER	MRN 24047/11

SAMPLE LABEL	WS106 0.9-1.0m	DATE SAMPLED	03-May-24
SAMPLE No.	470023	DATE RECEIVED	07-May-24
DATE TESTED	05-Jun-24	SAMPLED BY	Client

MATERIAL	Brown mottled grey silty slightly sandy slightly gravelly CLAY.		
ADVISED SOURCE	Site Investigation Sample	WATER CONTENT	Increasing
SAMPLE HISTORY	Natural State	% RET. 425um BY	Wet Sieved

Test Readings mm (average)		Moisture Content %	Correction Factor	Correction factor from Clayton and Jukes 1978
Determination 1 (avg)	19.8	51.7	1.007	
Determination 2 (avg)	19.5	51.5		

Natural Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
23.6	52	21	31	99



REMARKS

SIGNED

NAME

S.J. Hutchings
(Director)

DATE

07-Jun-24

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870



TEST CERTIFICATE

LIQUID LIMIT BS EN ISO 17892-12:2018+A2:2022 Clause 5.3 (30° FALL CONE) 1 POINT METHOD

PLASTIC LIMIT BS EN ISO 17892-12:2018+A2:2022 Clause 5.5

WATER CONTENT METHOD BS EN ISO 17892-1:2014+A1:2022

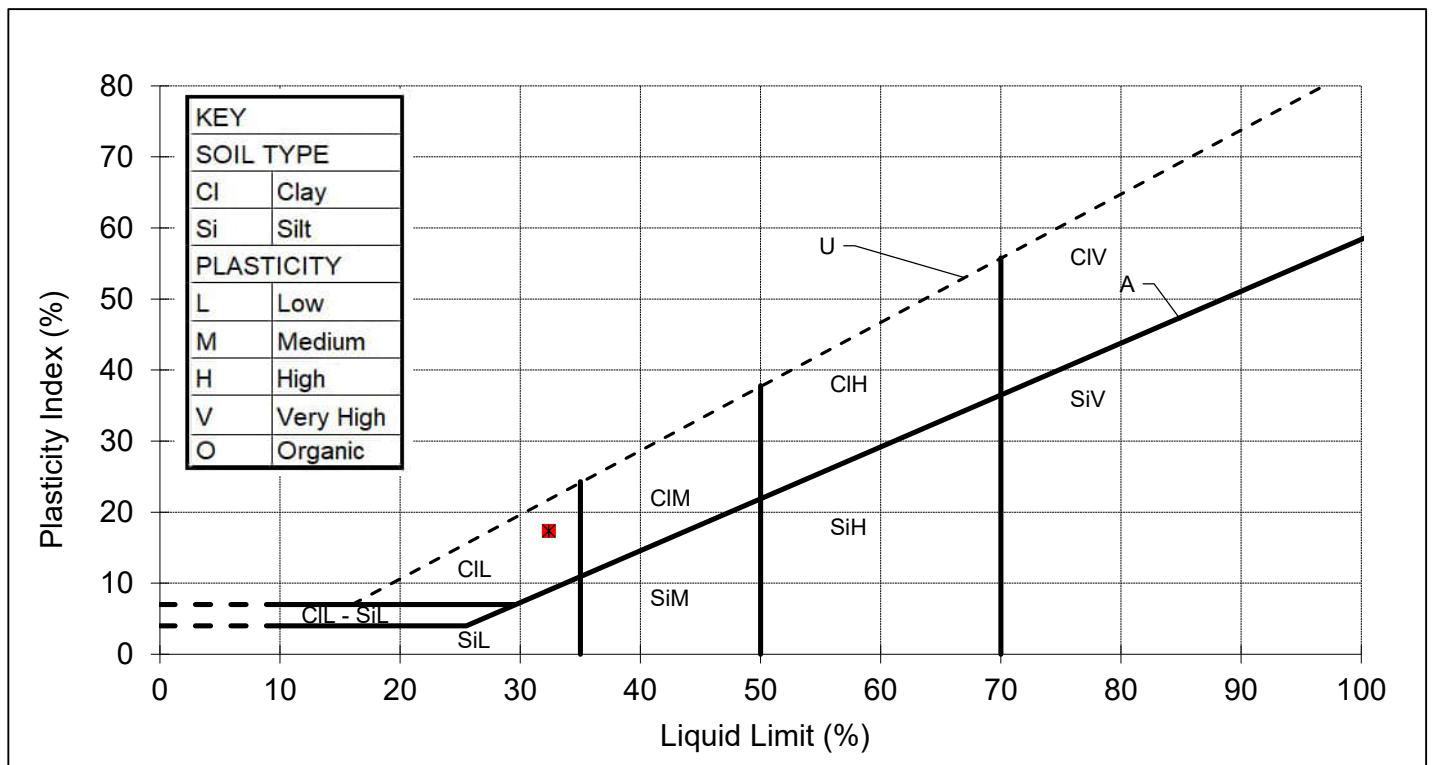
CLIENT	Ridge and Partners LLP		
SITE	Tan Yard Brow, Greater Manchester		
JOB NUMBER	MRN 24047/11		

SAMPLE LABEL	WS108 1.2-1.3m	DATE SAMPLED	03-May-24
SAMPLE No.	470027	DATE RECEIVED	07-May-24
DATE TESTED	05-Jun-24	SAMPLED BY	Client

MATERIAL	Brown mottled grey silty sandy slightly gravelly CLAY.		
ADVISED SOURCE	Site Investigation Sample	WATER CONTENT	Increasing
SAMPLE HISTORY	Natural State	% RET. 425um BY	Wet Sieved

Test Readings mm (average)		Moisture Content %	Correction Factor	Correction factor from Clayton and Jukes 1978
Determination 1 (avg)	22.4	33.6	0.968	
Determination 2 (avg)	22.3	33.3		

Natural Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
18.5	32	15	17	98



REMARKS

SIGNED

NAME

S.J. Hutchings
(Director)

DATE

07-Jun-24

MURRAY RIX

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DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870



TEST CERTIFICATE

LIQUID LIMIT BS EN ISO 17892-12:2018+A2:2022 Clause 5.3 (30° FALL CONE) 1 POINT METHOD

PLASTIC LIMIT BS EN ISO 17892-12:2018+A2:2022 Clause 5.5

WATER CONTENT METHOD BS EN ISO 17892-1:2014+A1:2022

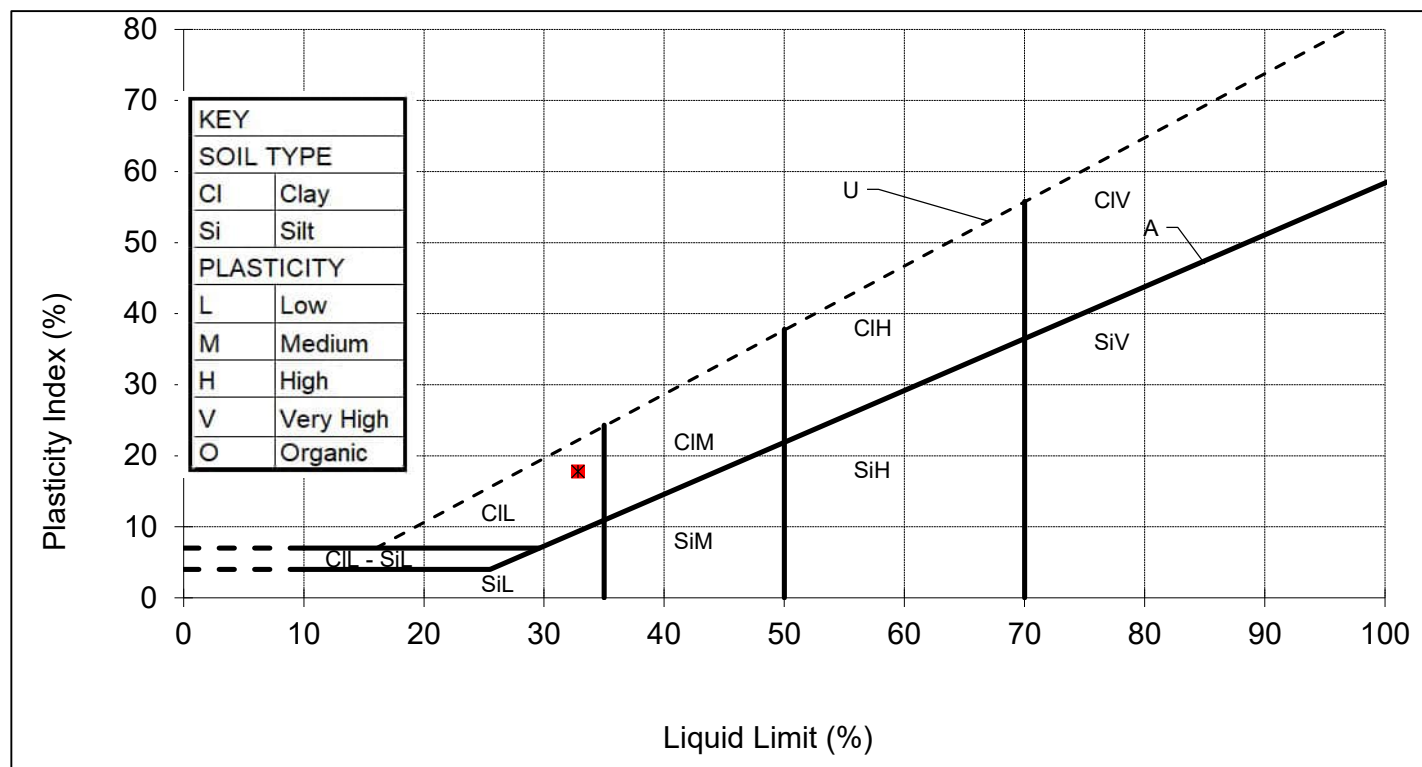
CLIENT	Ridge and Partners LLP
SITE	Tan Yard Brow, Greater Manchester
JOB NUMBER	MRN 24047/11

SAMPLE LABEL	WS108 1.8-1.9m	DATE SAMPLED	03-May-24
SAMPLE No.	470028	DATE RECEIVED	07-May-24
DATE TESTED	05-Jun-24	SAMPLED BY	Client

MATERIAL	Brown mottled grey silty sandy slightly gravelly CLAY.		
ADVISED SOURCE	Site Investigation Sample	WATER CONTENT	Increasing
SAMPLE HISTORY	Natural State	% RET. 425um BY	Wet Sieved

Test Readings mm (average)	Moisture Content %	Correction Factor	Correction factor from Clayton and Jukes 1978
Determination 1 (avg)	22.2	33.8	
Determination 2 (avg)	22.1	33.9	

Natural Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
18.7	33	15	18	99



REMARKS

SIGNED

NAME

S.J. Hutchings
(Director)

DATE

07-Jun-24

MURRAY RIX

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TEL 0161 475 0870



TEST CERTIFICATE

LIQUID LIMIT BS EN ISO 17892-12:2018+A2:2022 Clause 5.3 (30° FALL CONE) 1 POINT METHOD

PLASTIC LIMIT BS EN ISO 17892-12:2018+A2:2022 Clause 5.5

WATER CONTENT METHOD BS EN ISO 17892-1:2014+A1:2022

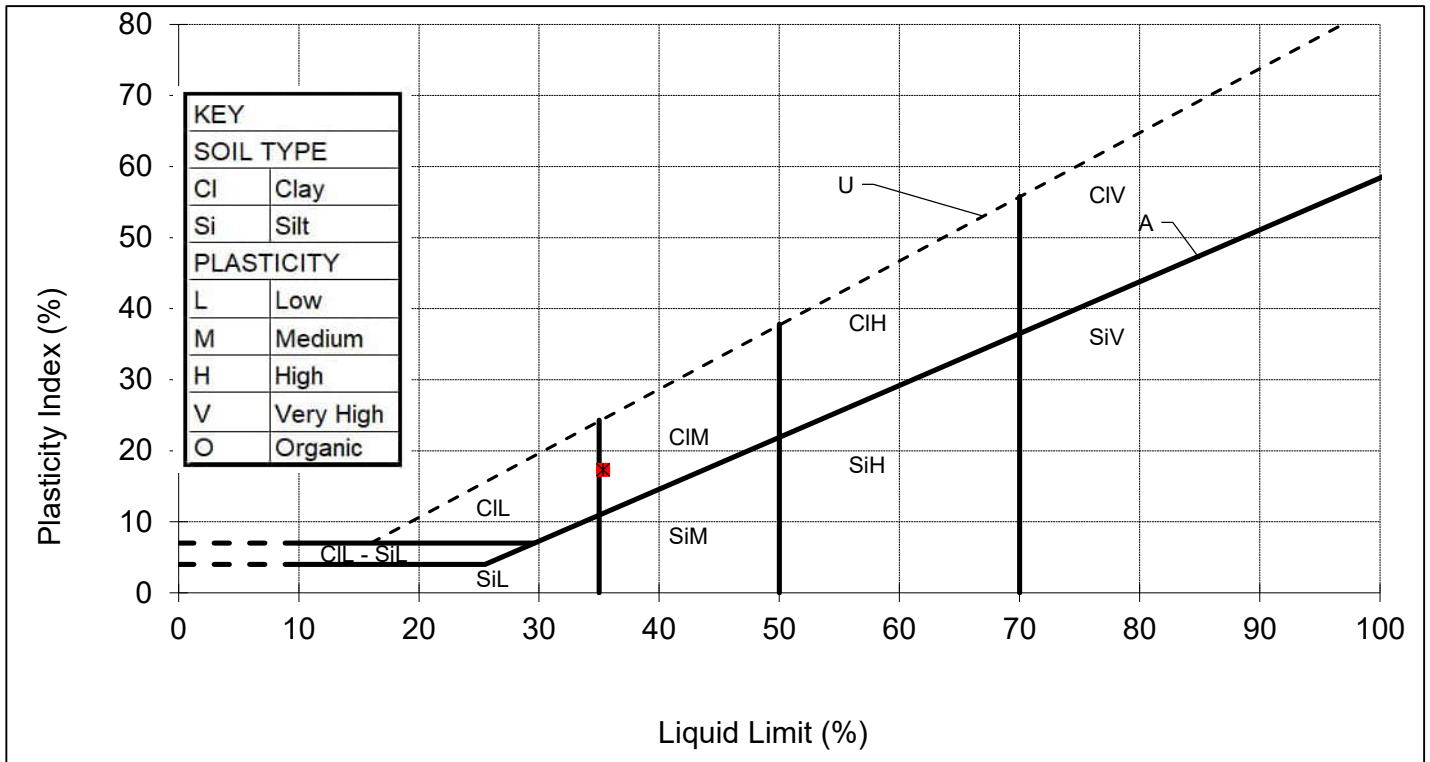
CLIENT	Ridge and Partners LLP		
SITE	Tan Yard Brow, Greater Manchester		
JOB NUMBER	MRN 24047/11		

SAMPLE LABEL	WS109 2.3-2.6m	DATE SAMPLED	03-May-24
SAMPLE No.	470030	DATE RECEIVED	07-May-24
DATE TESTED	05-Jun-24	SAMPLED BY	Client

MATERIAL	Brown mottled grey silty sandy slightly gravelly CLAY.		
ADVISED SOURCE	Site Investigation Sample	WATER CONTENT	Increasing
SAMPLE HISTORY	Natural State	% RET. 425um BY	Wet Sieved

Test Readings mm (average)		Moisture Content %	Correction Factor	Correction factor from Clayton and Jukes 1978
Determination 1 (avg)	22.2	36.8	0.967	
Determination 2 (avg)	22.1	36.3		

Natural Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
20.0	35	18	17	99



REMARKS

SIGNED

NAME

S.J. Hutchings
(Director)

DATE

07-Jun-24

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870



TEST CERTIFICATE

LIQUID LIMIT BS EN ISO 17892-12:2018+A2:2022 Clause 5.3 (30° FALL CONE) 1 POINT METHOD

PLASTIC LIMIT BS EN ISO 17892-12:2018+A2:2022 Clause 5.5

WATER CONTENT METHOD BS EN ISO 17892-1:2014+A1:2022

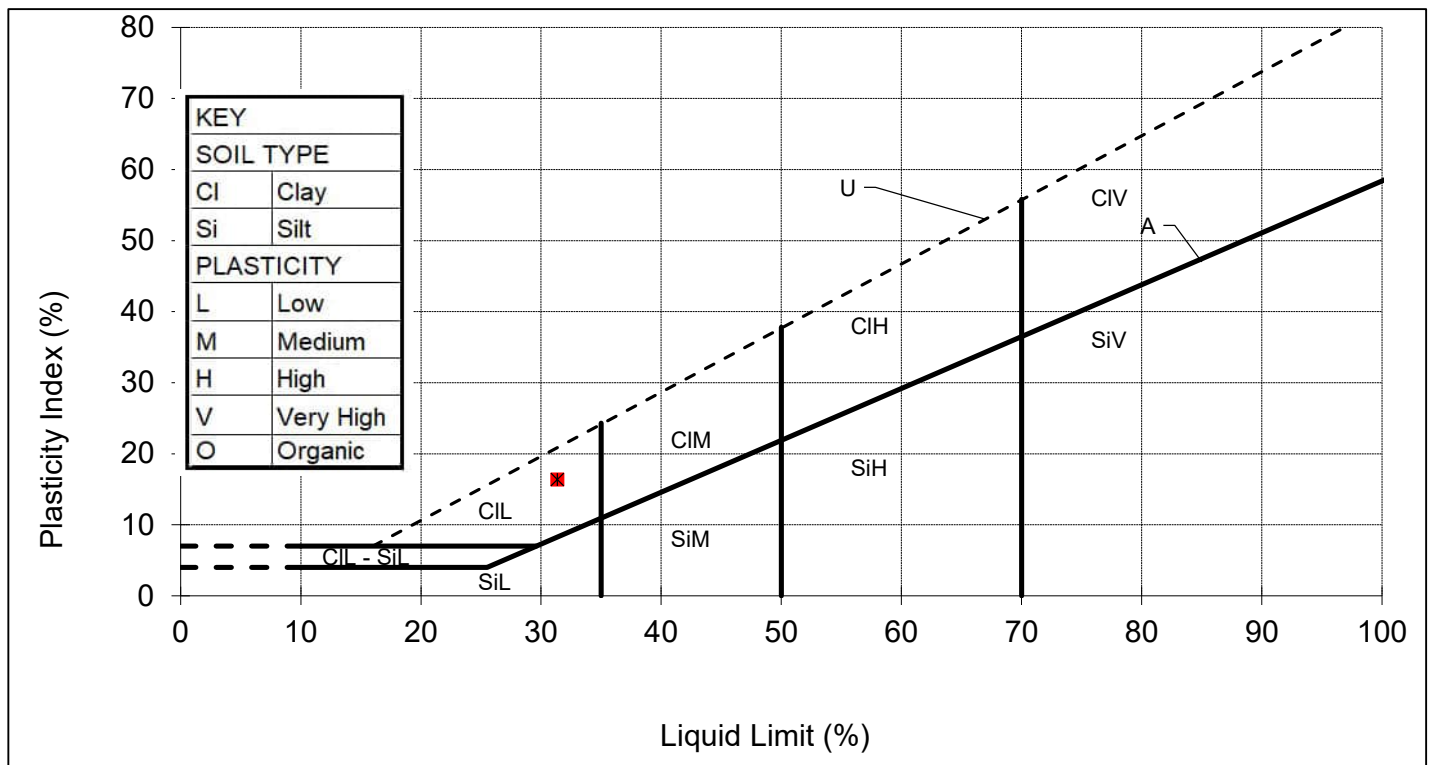
CLIENT	Ridge and Partners LLP		
SITE	Tan Yard Brow, Greater Manchester		
JOB NUMBER	MRN 24047/11		

SAMPLE LABEL	WS110 1.9-2.6m	DATE SAMPLED	03-May-24
SAMPLE No.	470031	DATE RECEIVED	07-May-24
DATE TESTED	05-Jun-24	SAMPLED BY	Client

MATERIAL	Brown mottled grey silty sandy slightly gravelly CLAY.		
ADVISED SOURCE	Site Investigation Sample	WATER CONTENT	Increasing
SAMPLE HISTORY	Natural State	% RET. 425um BY	Wet Sieved

Test Readings mm (average)		Moisture Content %	Correction Factor	Correction factor from Clayton and Jukes 1978
Determination 1 (avg)	22.2	32.5	0.970	
Determination 2 (avg)	22.1	32.2		

Natural Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
17.7	31	15	16	98



REMARKS

SIGNED

NAME

S.J. Hutchings
(Director)

DATE

07-Jun-24

MURRAY RIX

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DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870



TEST CERTIFICATE

LIQUID LIMIT BS EN ISO 17892-12:2018+A2:2022 Clause 5.3 (30° FALL CONE) 1 POINT METHOD

PLASTIC LIMIT BS EN ISO 17892-12:2018+A2:2022 Clause 5.5

WATER CONTENT METHOD BS EN ISO 17892-1:2014+A1:2022

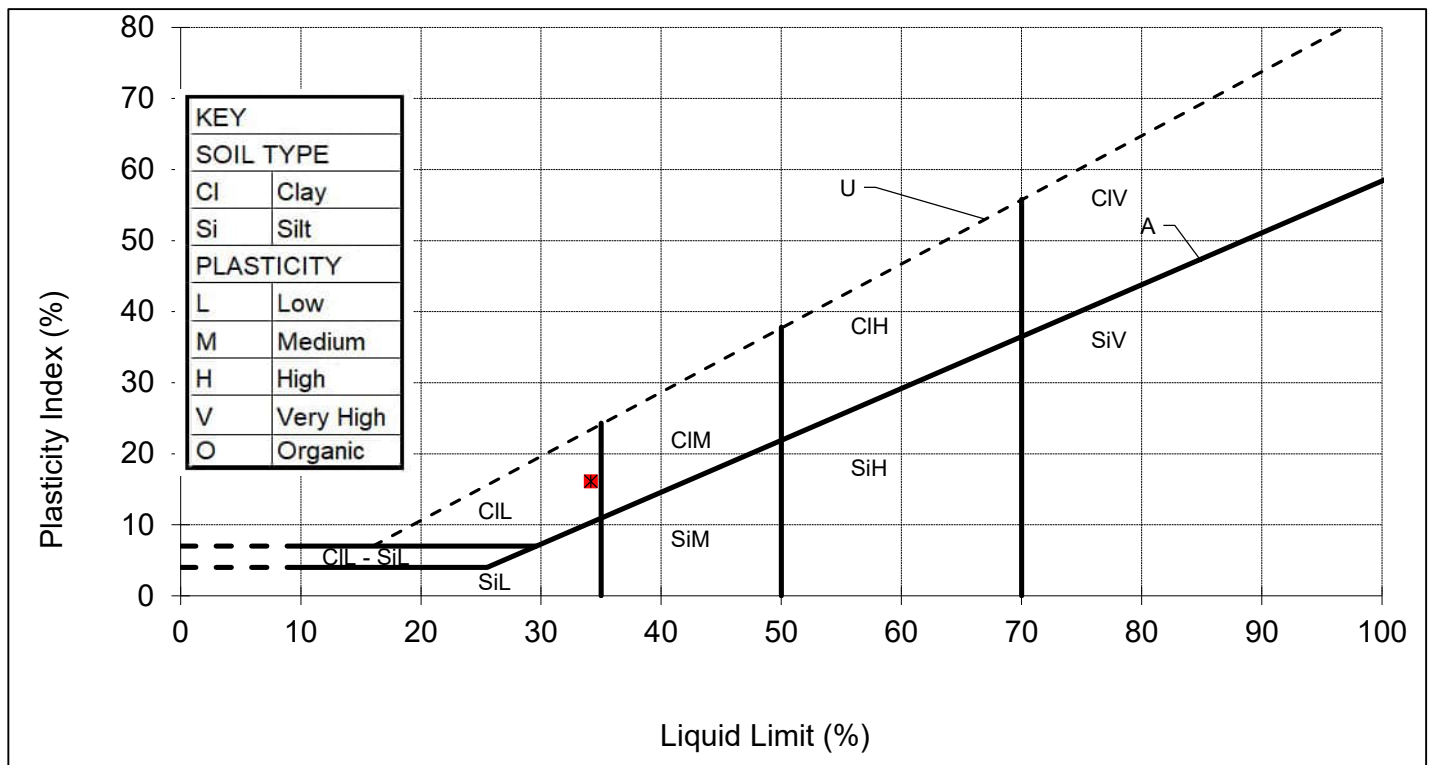
CLIENT	Ridge and Partners LLP
SITE	Tan Yard Brow, Greater Manchester
JOB NUMBER	MRN 24047/11

SAMPLE LABEL	WS110 0.7-0.8	DATE SAMPLED	04-May-24
SAMPLE No.	470032	DATE RECEIVED	07-May-24
DATE TESTED	05-Jun-24	SAMPLED BY	Client

MATERIAL	Brown mottled grey silty sandy slightly gravelly CLAY.		
ADVISED SOURCE	Site Investigation Sample	WATER CONTENT	Increasing
SAMPLE HISTORY	Natural State	% RET. 425um BY	Wet Sieved

Test Readings mm (average)		Moisture Content %	Correction Factor	Correction factor from Clayton and Jukes 1978
Determination 1 (avg)	22.7	35.3	0.963	
Determination 2 (avg)	22.8	35.6		

Natural Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
20.0	34	18	16	99



REMARKS

SIGNED

NAME

S.J. Hutchings
(Director)

DATE

07-Jun-24

MURRAY RIX

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DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870



TEST CERTIFICATE

LIQUID LIMIT BS EN ISO 17892-12:2018+A2:2022 Clause 5.3 (30° FALL CONE) 1 POINT METHOD

PLASTIC LIMIT BS EN ISO 17892-12:2018+A2:2022 Clause 5.5

WATER CONTENT METHOD BS EN ISO 17892-1:2014+A1:2022

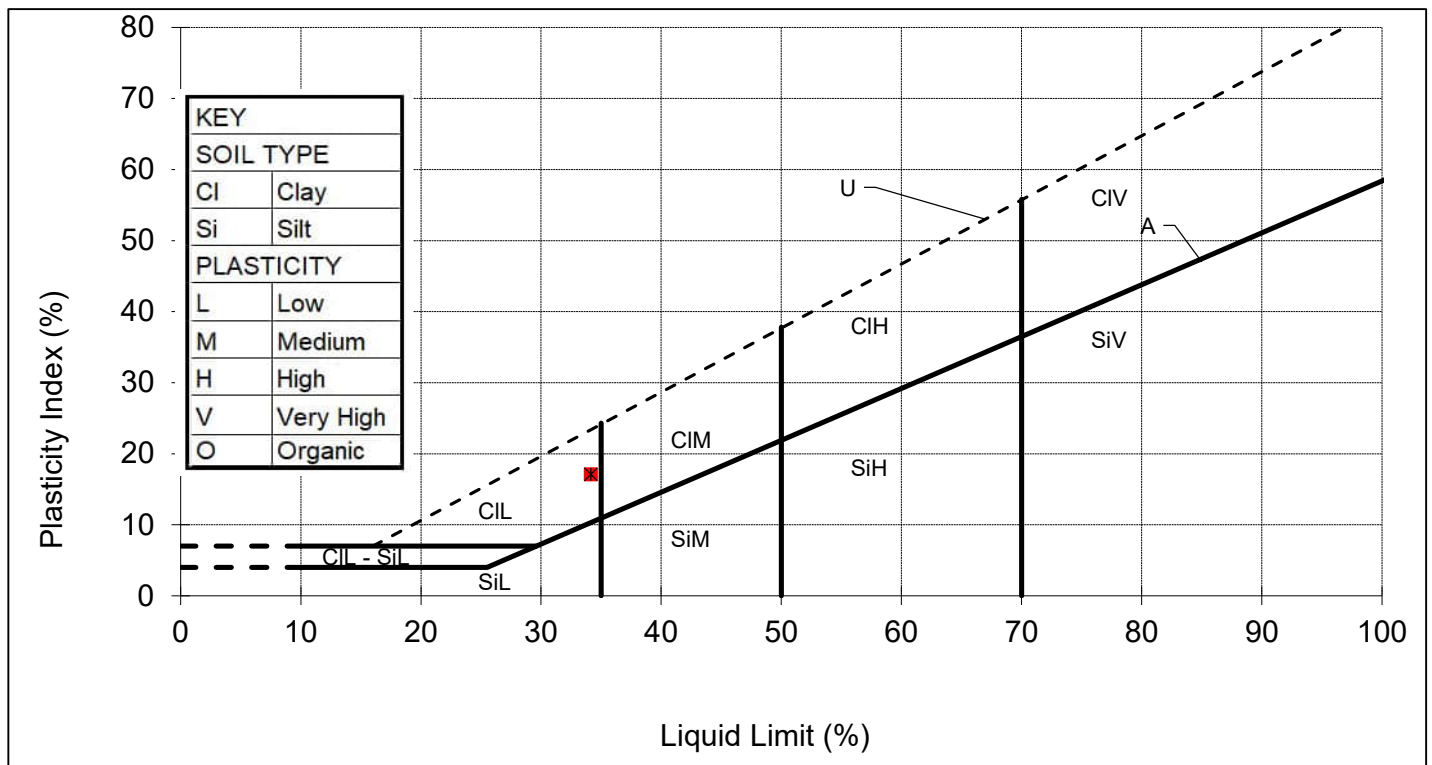
CLIENT	Ridge and Partners LLP
SITE	Tan Yard Brow, Greater Manchester
JOB NUMBER	MRN 24047/11

SAMPLE LABEL	CP101 2.2-2.65m	DATE SAMPLED	03-May-24
SAMPLE No.	470008	DATE RECEIVED	07-May-24
DATE TESTED	05-Jun-24	SAMPLED BY	Client

MATERIAL	Brown mottled grey silty sandy slightly gravelly CLAY.		
ADVISED SOURCE	Site Investigation Sample	WATER CONTENT	Increasing
SAMPLE HISTORY	Natural State	% RET. 425um BY	Wet Sieved

Test Readings mm (average)		Moisture Content %	Correction Factor	Correction factor from Clayton and Jukes 1978
Determination 1 (avg)	22.7	35.3	0.963	
Determination 2 (avg)	22.8	35.6		

Natural Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	Passing 425 micron (%)
20.0	34	17	17	97



REMARKS

SIGNED

NAME

S.J. Hutchings
(Director)

DATE

07-Jun-24

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870



TEST CERTIFICATE

UNDRAINED SHEAR STRENGTH IN TRIAXIAL COMPRESSION
BS EN ISO 17892-8:2018

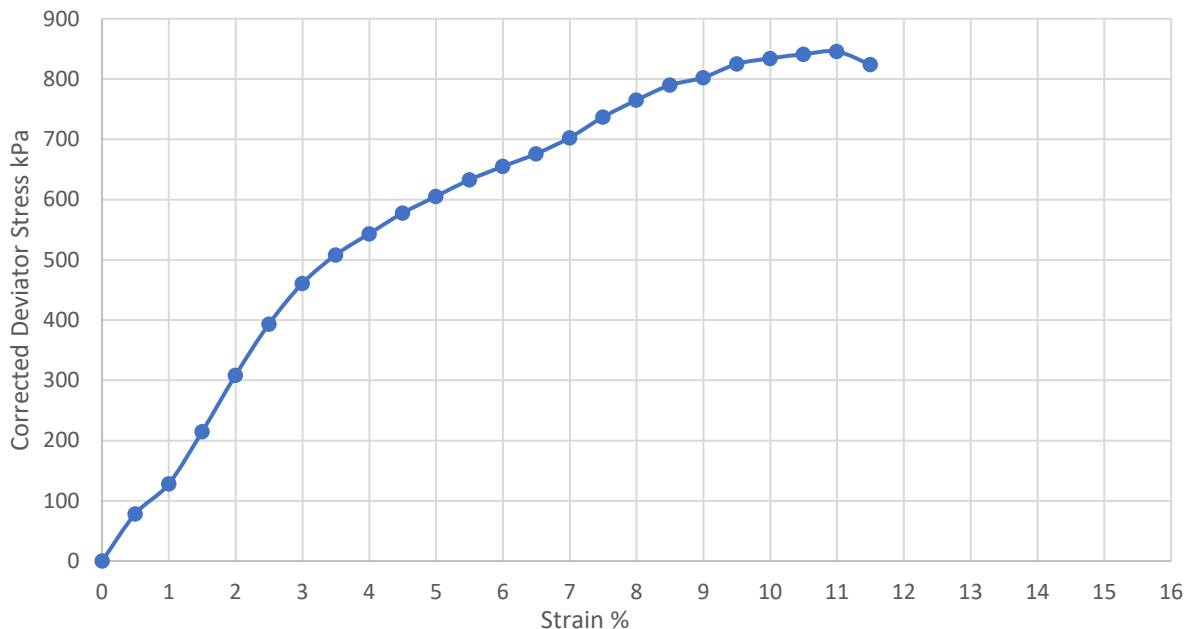
CLIENT	Ridge and Partners LLP
SITE	Tan Yard Brow, Greater Manchester
JOB NUMBER	MRN 24047/11

SAMPLE LABEL	CP101 7.10-7.55m	DATE SAMPLED	03-May-24
LAB SAMPLE No.	470005	DATE RECEIVED	07-May-24
DATE TESTED	22-May-24	SAMPLED BY	Client
MATERIAL	Brown silty slightly sandy slightly gravelly CLAY		
ADVISED SOURCE	Site Investigation Sample		

INITIAL CONDITIONS

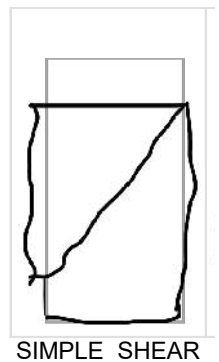
Specimen Location		Sample Length (mm)	440	Specimen depth from top of Sample (mm)	60
		Sample Orientation	Vertical	Specimen Condition	Undisturbed
		Specimen Length (mm)	201	Specimen Water Content (%)	7.8
		Specimen Diameter (mm)	100	Specimen Bulk Density (Mg/m3)	2.42
		Membrane Thickness (mm)	0.4	Specimen Dry Density (Mg/m3)	2.24
		Membrane Correction	3.39		

CORRECTED DEVIATOR STRESS vs AXIAL STRAIN



TEST TYPE
SINGLE STAGE

SKETCH OF
SPECIMEN AT
FAILURE



Cell Pressure (kPa)	Failure Strain (%)	Rate of Strain (%/min)	Corrected Deviator Stress (kPa)	Shear Strength Cu (kPa)
142	11.0	2.0	846	423

Remarks/Abnormalities

Name S.J. Hutchings
(Director)

Signed

Date 07 June 2024

MURRAY RIX

ANDREW HOUSE, HADFIELD STREET,
DUKINFIELD, CHESHIRE SK16 4QX
TEL 0161 475 0870



TEST CERTIFICATE

UNDRAINED SHEAR STRENGTH IN TRIAXIAL COMPRESSION
BS EN ISO 17892-8:2018

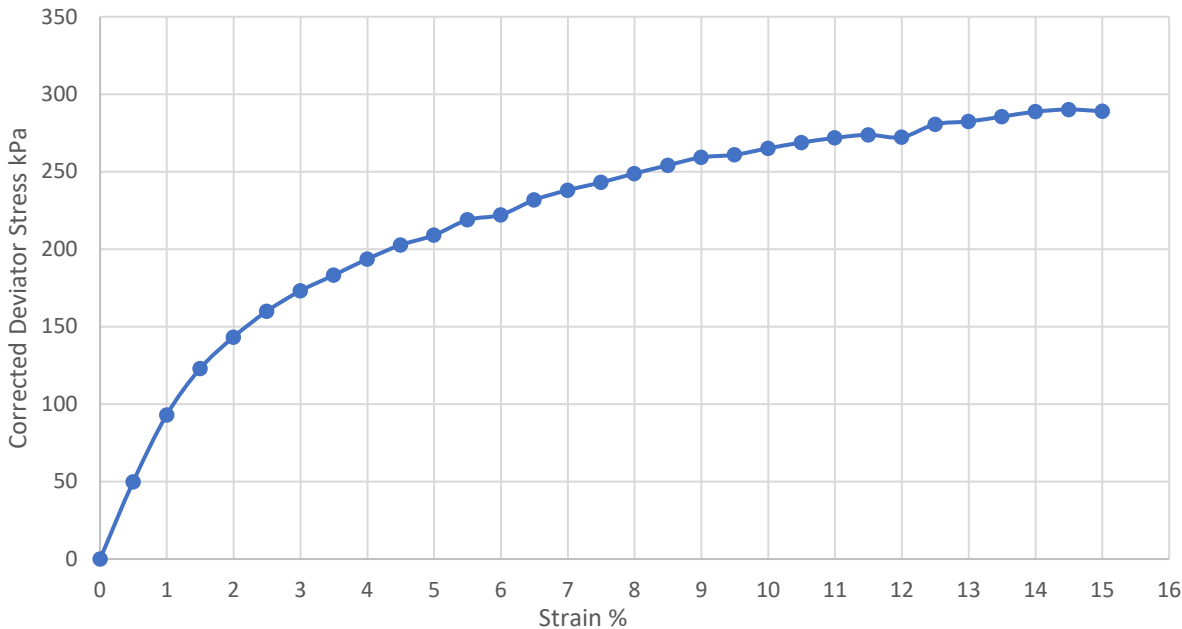
CLIENT	Ridge and Partners LLP
SITE	Tan Yard Brow, Greater Manchester
JOB NUMBER	MRN 24047/11

SAMPLE LABEL	CP101 10.10-10.55m	DATE SAMPLED	03-May-24
LAB SAMPLE No.	470006	DATE RECEIVED	07-May-24
DATE TESTED	22-May-24	SAMPLED BY	Client
MATERIAL	Brown silty slightly sandy slightly gravelly CLAY		
ADVISED SOURCE	Site Investigation Sample		

INITIAL CONDITIONS

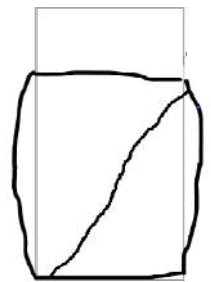
Specimen Location		Sample Length (mm)	420	Specimen depth from top of Sample (mm)	80
		Sample Orientation	Vertical	Specimen Condition	Undisturbed
		Specimen Length (mm)	201	Specimen Water Content (%)	14.2
		Specimen Diameter (mm)	101	Specimen Bulk Density (Mg/m3)	2.27
		Membrane Thickness (mm)	0.4	Specimen Dry Density (Mg/m3)	1.99
		Membrane Correction	3.39		

CORRECTED DEVIATOR STRESS vs AXIAL STRAIN



TEST TYPE
SINGLE STAGE

SKETCH OF
SPECIMEN AT
FAILURE



COMBINED

Cell Pressure (kPa)	Failure Strain (%)	Rate of Strain (%/min)	Corrected Deviator Stress (kPa)	Shear Strength Cu (kPa)
202	14.5	2.0	290	145

Remarks/Abnormalities

Name S.J. Hutchings
(Director)

Signed

Date 07 June 2024

APPENDIX 9 – HAZ-WASTE ONLINE OUTPUT SHEET

Waste Classification Report

HazWasteOnline™ classifies waste as either **hazardous** or **non-hazardous** based on its chemical composition, related legislation and the rules and data defined in the current UK or EU technical guidance (Appendix C) (note that HP 9 Infectious is not assessed). It is the responsibility of the classifier named below to:

- understand the origin of the waste
- select the correct List of Waste code(s)
- confirm that the list of determinands, results and sampling plan are fit for purpose
- select and justify the chosen metal species (Appendix B)
- correctly apply moisture correction and other available corrections
- add the meta data for their user-defined substances (Appendix A)
- check that the classification engine is suitable with respect to the national destination of the waste (Appendix C)



GYL95-ZC1D2-RO00Z

To aid the reviewer, the laboratory results, assumptions and justifications managed by the classifier are highlighted in pale yellow.

Job name

5025143 - Tan Yard Brow

Description/Comments

The following report provides classification of typical soil materials identified on site during the recent Ground Investigation.

Waste classification should be based on analyses that are representative of the particular waste load, so it is normally not possible to classify the soils at the investigation stage, since the materials that will become waste have generally not been defined yet.

Ground investigation data can however provide a useful guide to the likely waste classification and can indicate the scale of the classification analyses that will be required after the waste has been defined and before it is generated.

DETS Lab Files: 24-05418.1

Project

5025143

Site

Tan Yard Brow

Classified by

Name:
Max Smeeth
Date:
03 Jun 2024 11:18 GMT
Telephone:
07824692661

Company:
Ridge & Partners LLP
Ridge and Partners LLP
1 Royal Court
Kings Worthy
SO23 7TW

HazWasteOnline™ provides a two day, hazardous waste classification course that covers the use of the software and both basic and advanced waste classification techniques. Certification has to be renewed every 3 years.

HazWasteOnline™ Certification:**CERTIFIED****Course**

Hazardous Waste Classification

Date

09 Feb 2023

Next 3 year Refresher due by Feb 2026

Purpose of classification

2 - Material Characterisation

Address of the waste

Land off Tan Yard Brow

Post Code M18 8UJ

SIC for the process giving rise to the waste

43999 Other specialised construction activities n.e.c.

Description of industry/producer giving rise to the waste

Likely residential development.

Description of the specific process, sub-process and/or activity that created the waste

Foundation excavation and possible levelling of site.

Description of the waste

Made Ground consisting of sandy gravelly Silt OR silty gravel of mudstone, brick, concrete, metal and glass. OR a variable gravelly sandy Silt/ Clay with gravel of coal, sandstone and mudstone with fragments of rare glass and bricks.

Job summary

#	Sample name	Depth [m]	Classification Result	Hazard properties	WAC Results			Page
					Inert	SNRHW	Hazardous	
1	WS101-0.20 - 0.30-03/05/2024	0.20 - 0.30	Non Hazardous		-	-	N/A	3
2	WS101-0.50 - 0.60-03/05/2024	0.50 - 0.60	Non Hazardous		-	-	N/A	6
3	WS102-0.10 - 0.20-03/05/2024	0.10 - 0.20	Non Hazardous		-	-	N/A	10
4	WS103-0.30 - 0.40-03/05/2024	0.30 - 0.40	Non Hazardous		-	-	N/A	13
5	WS104-0.30 - 0.40-03/05/2024	0.30 - 0.40	Non Hazardous		-	-	N/A	16
6	WS105-0.30 - 0.40-03/05/2024	0.30 - 0.40	Non Hazardous		-	-	N/A	19
7	WS106-0.20 - 0.30-07/05/2024	0.20 - 0.30	Non Hazardous		-	-	N/A	22
8	WS107-0.10 - 0.20-07/05/2024	0.10 - 0.20	Non Hazardous		-	-	N/A	25
9	WS107-0.40 - 0.50-07/05/2024	0.40 - 0.50	Non Hazardous		-	-	N/A	28
10	WS108-0.20 - 0.30-07/05/2024	0.20 - 0.30	Non Hazardous		-	-	N/A	31
11	Composite WS102 @ 0.60 - 0.70 + WS103 @ 1.30 - 1.40--07/05/2024		Non Hazardous		Fail	Fail	N/A	34
12	Composite WS109 @ 0.20 - 0.30 + WS110 @ 0.30 - 0.40--07/05/2024		Non Hazardous		Fail	Fail	N/A	36

Related documents

#	Name	Description
1	24-05418.1.hwol	DETS South .hwol file used to populate the Job
2	Example waste stream template for contaminated soils	waste stream template used to create this Job

WAC results

WAC Settings: samples in this Job constitute a single population.

WAC limits used to evaluate the samples in this Job: "UK"

The WAC used in this report are the WAC defined for the inert, stable non-reactive hazardous and hazardous classes of landfill in the UK. You should check the actual acceptance criteria when the disposal site is identified as they may differ from the generic WAC used in this report.

Report

Created by: Max Smeeth

Created date: 03 Jun 2024 11:18 GMT

Appendices	Page
Appendix A: Classifier defined and non GB MCL determinands	38
Appendix B: Rationale for selection of metal species	39
Appendix C: Version	40

Classification of sample: WS101-0.20 - 0.30-03/05/2024

✔ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:	LoW Code:
WS101-0.20 - 0.30-03/05/2024	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.20 - 0.30 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
17.6%	
(wet weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 17.6% Wet Weight Moisture Correction applied (MC)

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number								
1		arsenic { arsenic trioxide }				43 mg/kg	1.32	46.782 mg/kg	0.00468 %	✓		
		033-003-00-0	215-481-4	1327-53-3								
2		cadmium { cadmium oxide }				4.7 mg/kg	1.142	4.424 mg/kg	0.000442 %	✓		
		048-002-00-0	215-146-2	1306-19-0								
3		chromium in chromium(III) compounds {  chromium(III) oxide (worst case) }				30 mg/kg	1.462	36.13 mg/kg	0.00361 %	✓		
			215-160-9	1308-38-9								
4		chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }				<2 mg/kg	2.27	<4.54 mg/kg	<0.000454 %		<LOD	
		024-017-00-8										
5		copper { dicopper oxide; copper (I) oxide }				206 mg/kg	1.126	191.113 mg/kg	0.0191 %	✓		
		029-002-00-X	215-270-7	1317-39-1								
6		lead { lead chromate }			1	455 mg/kg	1.56	584.806 mg/kg	0.0375 %	✓		
		082-004-00-2	231-846-0	7758-97-6								
7		mercury { mercury dichloride }				2.1 mg/kg	1.353	2.342 mg/kg	0.000234 %	✓		
		080-010-00-X	231-299-8	7487-94-7								
8		nickel { nickel chromate }				36 mg/kg	2.976	88.288 mg/kg	0.00883 %	✓		
		028-035-00-7	238-766-5	14721-18-7								
9		selenium { nickel selenate }				<2 mg/kg	2.554	<5.108 mg/kg	<0.000511 %		<LOD	
		028-031-00-5	239-125-2	15060-62-5								
10		zinc { zinc chloride }				615 mg/kg	2.085	1056.352 mg/kg	0.106 %	✓		
		030-003-00-2	231-592-0	7646-85-7								
11		pH				7.8 pH		7.8 pH	7.8 pH			
				pH								
12		naphthalene				24.3 mg/kg		20.023 mg/kg	0.002 %	✓		
		601-052-00-2	202-049-5	91-20-3								
13		acenaphthylene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD	
			205-917-1	208-96-8								
14		acenaphthene				71.3 mg/kg		58.751 mg/kg	0.00588 %	✓		
			201-469-6	83-32-9								
15		fluorene				50.9 mg/kg		41.942 mg/kg	0.00419 %	✓		
			201-695-5	86-73-7								

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
16	phenanthrene	201-581-5	85-01-8		420 mg/kg		346.08 mg/kg	0.0346 %	✓	
17	anthracene	204-371-1	120-12-7		99.9 mg/kg		82.318 mg/kg	0.00823 %	✓	
18	fluoranthene	205-912-4	206-44-0		548 mg/kg		451.552 mg/kg	0.0452 %	✓	
19	pyrene	204-927-3	129-00-0		502 mg/kg		413.648 mg/kg	0.0414 %	✓	
20	benzo[a]anthracene	601-033-00-9	200-280-6		218 mg/kg		179.632 mg/kg	0.018 %	✓	
21	chrysene	601-048-00-0	205-923-4		194 mg/kg		159.856 mg/kg	0.016 %	✓	
22	benzo[b]fluoranthene	601-034-00-4	205-911-9		183 mg/kg		150.792 mg/kg	0.0151 %	✓	
23	benzo[k]fluoranthene	601-036-00-5	205-916-6		41.9 mg/kg		34.526 mg/kg	0.00345 %	✓	
24	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5		160 mg/kg		131.84 mg/kg	0.0132 %	✓	
25	indeno[123-cd]pyrene	205-893-2	193-39-5		59.9 mg/kg		49.358 mg/kg	0.00494 %	✓	
26	dibenz[a,h]anthracene	601-041-00-2	200-181-8		13.7 mg/kg		11.289 mg/kg	0.00113 %	✓	
27	benzo[ghi]perylene	205-883-8	191-24-2		49.2 mg/kg		40.541 mg/kg	0.00405 %	✓	
28	vanadium { divanadium pentaoxide; vanadium pentoxide }	023-001-00-8	215-239-8		56 mg/kg	1.785	82.376 mg/kg	0.00824 %	✓	
Total:								0.406 %		

Key

User supplied data

Determinand values ignored for classification, see column 'Conc. Not Used' for reason

Determinand defined or amended by HazWasteOnline (see Appendix A)

Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration

Below limit of detection

Only the metal concentration has been used for classification

WAC results for sample: WS101-0.20 - 0.30-03/05/2024

WAC Settings: samples in this Job constitute a single population.

WAC limits used to evaluate this sample: "UK"

The WAC used in this report are the WAC defined for the inert, stable non-reactive hazardous and hazardous classes of landfill in the UK. You should check the actual acceptance criteria when the disposal site is identified as they may differ from the generic WAC used in this report.

The sample cannot be evaluated against the Inert (Inert waste landfill) criteria because of missing determinand values.

The sample cannot be evaluated against the SNRHW (Stable non-reactive hazardous waste in non-hazardous landfill) criteria because of missing determinand values.

WAC Determinands

Solid Waste Analysis				Landfill Waste Acceptance Criteria Limits		
#	Determinand		User entered data	Inert waste landfill	Stable non-reactive hazardous waste in non-hazardous landfill	Hazardous waste landfill
1	TOC (total organic carbon)	%		3	5	6
2	LOI (loss on ignition)	%		-	-	10
3	BTEX (benzene, toluene, ethylbenzene and xylenes)	mg/kg		6	-	-
4	PCBs (polychlorinated biphenyls, 7 congeners)	mg/kg		1	-	-
5	Mineral oil (C10 to C40)	mg/kg		500	-	-
6	PAHs (polycyclic aromatic hydrocarbons)	mg/kg		100	-	-
7	pH	pH	7.8	-	>6	-
8	ANC (acid neutralisation capacity)	mol/kg		-	-	-
Eluate Analysis 10:1						
9	arsenic	mg/kg		0.5	2	25
10	barium	mg/kg		20	100	300
11	cadmium	mg/kg		0.04	1	5
12	chromium	mg/kg		0.5	10	70
13	copper	mg/kg		2	50	100
14	mercury	mg/kg		0.01	0.2	2
15	molybdenum	mg/kg		0.5	10	30
16	nickel	mg/kg		0.4	10	40
17	lead	mg/kg		0.5	10	50
18	antimony	mg/kg		0.06	0.7	5
19	selenium	mg/kg		0.1	0.5	7
20	zinc	mg/kg		4	50	200
21	chloride	mg/kg		800	15,000	25,000
22	fluoride	mg/kg		10	150	500
23	sulphate	mg/kg		1,000	20,000	50,000
24	phenol index	mg/kg		1	-	-
25	DOC (dissolved organic carbon)	mg/kg		500	800	1,000
26	TDS (total dissolved solids)	mg/kg		4,000	60,000	100,000

Key

	User supplied data
	Not applicable
	Missing WAC determinand value

Classification of sample: WS101-0.50 - 0.60-03/05/2024


Non Hazardous Waste
 Classified as **17 05 04**
 in the List of Waste

Sample details

Sample name:	LoW Code:
WS101-0.50 - 0.60-03/05/2024	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0.50 - 0.60 m	
Moisture content:	
22.3%	
(wet weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 22.3% Wet Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
1	arsenic { arsenic trioxide }				12 mg/kg	1.32	12.311 mg/kg	0.00123 %	✓	
	033-003-00-0	215-481-4	1327-53-3							
2	cadmium { cadmium oxide }				0.2 mg/kg	1.142	0.178 mg/kg	0.0000178 %	✓	
	048-002-00-0	215-146-2	1306-19-0							
3	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				14 mg/kg	1.462	15.899 mg/kg	0.00159 %	✓	
		215-160-9	1308-38-9							
4	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }				<2 mg/kg	2.27	<4.54 mg/kg	<0.000454 %		<LOD
	024-017-00-8									
5	copper { dicopper oxide; copper (I) oxide }				36 mg/kg	1.126	31.493 mg/kg	0.00315 %	✓	
	029-002-00-X	215-270-7	1317-39-1							
6	lead { lead chromate }			1	315 mg/kg	1.56	381.773 mg/kg	0.0245 %	✓	
	082-004-00-2	231-846-0	7758-97-6							
7	mercury { mercury dichloride }				<1 mg/kg	1.353	<1.353 mg/kg	<0.000135 %		<LOD
	080-010-00-X	231-299-8	7487-94-7							
8	nickel { nickel chromate }				14 mg/kg	2.976	32.376 mg/kg	0.00324 %	✓	
	028-035-00-7	238-766-5	14721-18-7							
9	selenium { nickel selenate }				<2 mg/kg	2.554	<5.108 mg/kg	<0.000511 %		<LOD
	028-031-00-5	239-125-2	15060-62-5							
10	zinc { zinc chloride }				60 mg/kg	2.085	97.18 mg/kg	0.00972 %	✓	
	030-003-00-2	231-592-0	7646-85-7							
11	TPH (C6 to C40) petroleum group				<42 mg/kg		<42 mg/kg	<0.0042 %		<LOD
			TPH							
12	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
	603-181-00-X	216-653-1	1634-04-4							
13	benzene				<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %		<LOD
	601-020-00-8	200-753-7	71-43-2							
14	toluene				<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
	601-021-00-3	203-625-9	108-88-3							
15	ethylbenzene				0.025 mg/kg		0.0194 mg/kg	0.00000194 %	✓	
	601-023-00-4	202-849-4	100-41-4							

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number							
16		xylene				0.019 mg/kg		0.0148 mg/kg	0.00000148 %	✓	
		601-022-00-9	202-422-2 [1]	95-47-6 [1]							
			203-396-5 [2]	106-42-3 [2]							
			203-576-3 [3]	108-38-3 [3]							
			215-535-7 [4]	1330-20-7 [4]							
17		cyanides {  salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<1 mg/kg	1.884	<1.884 mg/kg	<0.000188 %		<LOD
		006-007-00-5									
18		pH				7 pH		7 pH	7pH		
19		naphthalene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		601-052-00-2	202-049-5	91-20-3							
20		acenaphthylene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
			205-917-1	208-96-8							
21		acenaphthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
			201-469-6	83-32-9							
22		fluorene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
			201-695-5	86-73-7							
23		phenanthrene				0.63 mg/kg		0.49 mg/kg	0.000049 %	✓	
			201-581-5	85-01-8							
24		anthracene				0.14 mg/kg		0.109 mg/kg	0.0000109 %	✓	
			204-371-1	120-12-7							
25		fluoranthene				0.81 mg/kg		0.629 mg/kg	0.0000629 %	✓	
			205-912-4	206-44-0							
26		pyrene				0.75 mg/kg		0.583 mg/kg	0.0000583 %	✓	
			204-927-3	129-00-0							
27		benzo[a]anthracene				0.33 mg/kg		0.256 mg/kg	0.0000256 %	✓	
		601-033-00-9	200-280-6	56-55-3							
28		chrysene				0.36 mg/kg		0.28 mg/kg	0.000028 %	✓	
		601-048-00-0	205-923-4	218-01-9							
29		benzo[b]fluoranthene				0.3 mg/kg		0.233 mg/kg	0.0000233 %	✓	
		601-034-00-4	205-911-9	205-99-2							
30		benzo[k]fluoranthene				0.15 mg/kg		0.117 mg/kg	0.0000117 %	✓	
		601-036-00-5	205-916-6	207-08-9							
31		benzo[a]pyrene; benzo[def]chrysene				0.31 mg/kg		0.241 mg/kg	0.0000241 %	✓	
		601-032-00-3	200-028-5	50-32-8							
32		indeno[123-cd]pyrene				0.21 mg/kg		0.163 mg/kg	0.0000163 %	✓	
			205-893-2	193-39-5							
33		dibenz[a,h]anthracene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		601-041-00-2	200-181-8	53-70-3							
34		benzo[ghi]perylene				0.17 mg/kg		0.132 mg/kg	0.0000132 %	✓	
			205-883-8	191-24-2							
35		monohydric phenols				<2 mg/kg		<2 mg/kg	<0.0002 %		<LOD
				P1186							
Total:									0.0495 %		

Key

User supplied data

Determinand values ignored for classification, see column 'Conc. Not Used' for reason

Determinand defined or amended by HazWasteOnline (see Appendix A)

Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration

<LOD Below limit of detection

CLP: Note 1 Only the metal concentration has been used for classification

Supplementary Hazardous Property Information

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Force this Hazardous property to non hazardous because No evident free draining liquid phase. Limit values determined in accordance with WM3.

Hazard Statements hit:

Flam. Liq. 2; H225 "Highly flammable liquid and vapour."

Because of determinand:

ethylbenzene: (conc.: 1.94e-06%)

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

xylene: (conc.: 1.48e-06%)

WAC results for sample: WS101-0.50 - 0.60-03/05/2024

WAC Settings: samples in this Job constitute a single population.

WAC limits used to evaluate this sample: "UK"

The WAC used in this report are the WAC defined for the inert, stable non-reactive hazardous and hazardous classes of landfill in the UK. You should check the actual acceptance criteria when the disposal site is identified as they may differ from the generic WAC used in this report.

The sample cannot be evaluated against the Inert (Inert waste landfill) criteria because of missing determinand values.

The sample cannot be evaluated against the SNRHW (Stable non-reactive hazardous waste in non-hazardous landfill) criteria because of missing determinand values.

WAC Determinands

Solid Waste Analysis				Landfill Waste Acceptance Criteria Limits		
#	Determinand		User entered data	Inert waste landfill	Stable non-reactive hazardous waste in non-hazardous landfill	Hazardous waste landfill
1	TOC (total organic carbon)	%		3	5	6
2	LOI (loss on ignition)	%		-	-	10
3	BTEX (benzene, toluene, ethylbenzene and xylenes)	mg/kg		6	-	-
4	PCBs (polychlorinated biphenyls, 7 congeners)	mg/kg		1	-	-
5	Mineral oil (C10 to C40)	mg/kg		500	-	-
6	PAHs (polycyclic aromatic hydrocarbons)	mg/kg		100	-	-
7	pH	pH	7	-	>6	-
8	ANC (acid neutralisation capacity)	mol/kg		-	-	-
Eluate Analysis 10:1						
9	arsenic	mg/kg		0.5	2	25
10	barium	mg/kg		20	100	300
11	cadmium	mg/kg		0.04	1	5
12	chromium	mg/kg		0.5	10	70
13	copper	mg/kg		2	50	100
14	mercury	mg/kg		0.01	0.2	2
15	molybdenum	mg/kg		0.5	10	30
16	nickel	mg/kg		0.4	10	40
17	lead	mg/kg		0.5	10	50
18	antimony	mg/kg		0.06	0.7	5
19	selenium	mg/kg		0.1	0.5	7
20	zinc	mg/kg		4	50	200
21	chloride	mg/kg		800	15,000	25,000
22	fluoride	mg/kg		10	150	500
23	sulphate	mg/kg		1,000	20,000	50,000
24	phenol index	mg/kg		1	-	-
25	DOC (dissolved organic carbon)	mg/kg		500	800	1,000
26	TDS (total dissolved solids)	mg/kg		4,000	60,000	100,000

Key

	User supplied data
	Not applicable
	Missing WAC determinand value

Classification of sample: WS102-0.10 - 0.20-03/05/2024

✔

Non Hazardous Waste

Classified as 17 05 04

in the List of Waste

Sample details

Sample name:	LoW Code:
WS102-0.10 - 0.20-03/05/2024	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0.10 - 0.20 m	
Moisture content:	
17.5%	
(wet weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 17.5% Wet Weight Moisture Correction applied (MC)

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used	
		EU CLP index number	EC Number	CAS Number									
1		arsenic { arsenic trioxide }			28	mg/kg	1.32	30.5	mg/kg	0.00305 %	✓		
		033-003-00-0	215-481-4	1327-53-3									
2		cadmium { cadmium oxide }			1.5	mg/kg	1.142	1.414	mg/kg	0.000141 %	✓		
		048-002-00-0	215-146-2	1306-19-0									
3		chromium in chromium(III) compounds { chromium(III) oxide (worst case) }			105	mg/kg	1.462	126.607	mg/kg	0.0127 %	✓		
			215-160-9	1308-38-9									
4		chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }			<2	mg/kg	2.27	<4.54	mg/kg	<0.000454 %		<LOD	
		024-017-00-8											
5		copper { dicopper oxide; copper (I) oxide }			410	mg/kg	1.126	380.832	mg/kg	0.0381 %	✓		
		029-002-00-X	215-270-7	1317-39-1									
6		lead { lead chromate }			1	359	mg/kg	1.56	461.978	mg/kg	0.0296 %	✓	
		082-004-00-2	231-846-0	7758-97-6									
7		mercury { mercury dichloride }			1	mg/kg	1.353	1.117	mg/kg	0.000112 %	✓		
		080-010-00-X	231-299-8	7487-94-7									
8		nickel { nickel chromate }			104	mg/kg	2.976	255.364	mg/kg	0.0255 %	✓		
		028-035-00-7	238-766-5	14721-18-7									
9		selenium { nickel selenate }			<2	mg/kg	2.554	<5.108	mg/kg	<0.000511 %		<LOD	
		028-031-00-5	239-125-2	15060-62-5									
10		zinc { zinc chloride }			1040	mg/kg	2.085	1788.519	mg/kg	0.179 %	✓		
		030-003-00-2	231-592-0	7646-85-7									
11		pH			7.5	pH		7.5	pH	7.5 pH			
				PH									
12		naphthalene			33.7	mg/kg		27.803	mg/kg	0.00278 %	✓		
		601-052-00-2	202-049-5	91-20-3									
13		acenaphthylene			0.79	mg/kg		0.652	mg/kg	0.0000652 %	✓		
			205-917-1	208-96-8									
14		acenaphthene			91.4	mg/kg		75.405	mg/kg	0.00754 %	✓		
			201-469-6	83-32-9									
15		fluorene			67.3	mg/kg		55.523	mg/kg	0.00555 %	✓		
			201-695-5	86-73-7									

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
16	phenanthrene	201-581-5	85-01-8		515 mg/kg		424.875 mg/kg	0.0425 %	✓	
17	anthracene	204-371-1	120-12-7		128 mg/kg		105.6 mg/kg	0.0106 %	✓	
18	fluoranthene	205-912-4	206-44-0		514 mg/kg		424.05 mg/kg	0.0424 %	✓	
19	pyrene	204-927-3	129-00-0		445 mg/kg		367.125 mg/kg	0.0367 %	✓	
20	benzo[a]anthracene	200-033-00-9	200-280-6		195 mg/kg		160.875 mg/kg	0.0161 %	✓	
21	chrysene	601-048-00-0	205-923-4		165 mg/kg		136.125 mg/kg	0.0136 %	✓	
22	benzo[b]fluoranthene	601-034-00-4	205-911-9		143 mg/kg		117.975 mg/kg	0.0118 %	✓	
23	benzo[k]fluoranthene	601-036-00-5	205-916-6		56.8 mg/kg		46.86 mg/kg	0.00469 %	✓	
24	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5		122 mg/kg		100.65 mg/kg	0.0101 %	✓	
25	indeno[123-cd]pyrene	205-893-2	193-39-5		47.8 mg/kg		39.435 mg/kg	0.00394 %	✓	
26	dibenz[a,h]anthracene	601-041-00-2	200-181-8		7.41 mg/kg		6.113 mg/kg	0.000611 %	✓	
27	benzo[ghi]perylene	205-883-8	191-24-2		37.8 mg/kg		31.185 mg/kg	0.00312 %	✓	
28	vanadium { divanadium pentaoxide; vanadium pentoxide }	203-001-00-8	215-239-8		57 mg/kg	1.785	83.948 mg/kg	0.00839 %	✓	
Total:								0.509 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
•	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

WAC results for sample: WS102-0.10 - 0.20-03/05/2024

WAC Settings: samples in this Job constitute a single population.

WAC limits used to evaluate this sample: "UK"

The WAC used in this report are the WAC defined for the inert, stable non-reactive hazardous and hazardous classes of landfill in the UK. You should check the actual acceptance criteria when the disposal site is identified as they may differ from the generic WAC used in this report.

The sample cannot be evaluated against the Inert (Inert waste landfill) criteria because of missing determinand values.

The sample cannot be evaluated against the SNRHW (Stable non-reactive hazardous waste in non-hazardous landfill) criteria because of missing determinand values.

WAC Determinands

Solid Waste Analysis				Landfill Waste Acceptance Criteria Limits		
#	Determinand		User entered data	Inert waste landfill	Stable non-reactive hazardous waste in non-hazardous landfill	Hazardous waste landfill
1	TOC (total organic carbon)	%		3	5	6
2	LOI (loss on ignition)	%		-	-	10
3	BTEX (benzene, toluene, ethylbenzene and xylenes)	mg/kg		6	-	-
4	PCBs (polychlorinated biphenyls, 7 congeners)	mg/kg		1	-	-
5	Mineral oil (C10 to C40)	mg/kg		500	-	-
6	PAHs (polycyclic aromatic hydrocarbons)	mg/kg		100	-	-
7	pH	pH	7.5	-	>6	-
8	ANC (acid neutralisation capacity)	mol/kg		-	-	-
Eluate Analysis 10:1						
9	arsenic	mg/kg		0.5	2	25
10	barium	mg/kg		20	100	300
11	cadmium	mg/kg		0.04	1	5
12	chromium	mg/kg		0.5	10	70
13	copper	mg/kg		2	50	100
14	mercury	mg/kg		0.01	0.2	2
15	molybdenum	mg/kg		0.5	10	30
16	nickel	mg/kg		0.4	10	40
17	lead	mg/kg		0.5	10	50
18	antimony	mg/kg		0.06	0.7	5
19	selenium	mg/kg		0.1	0.5	7
20	zinc	mg/kg		4	50	200
21	chloride	mg/kg		800	15,000	25,000
22	fluoride	mg/kg		10	150	500
23	sulphate	mg/kg		1,000	20,000	50,000
24	phenol index	mg/kg		1	-	-
25	DOC (dissolved organic carbon)	mg/kg		500	800	1,000
26	TDS (total dissolved solids)	mg/kg		4,000	60,000	100,000

Key

	User supplied data
	Not applicable
	Missing WAC determinand value

Classification of sample: WS103-0.30 - 0.40-03/05/2024

✔ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:	LoW Code:
WS103-0.30 - 0.40-03/05/2024	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.30 - 0.40 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
14.5%	
(wet weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 14.5% Wet Weight Moisture Correction applied (MC)

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number								
1		arsenic { arsenic trioxide }				9 mg/kg	1.32	10.16 mg/kg	0.00102 %	✓		
		033-003-00-0	215-481-4	1327-53-3								
2		cadmium { cadmium oxide }				0.3 mg/kg	1.142	0.293 mg/kg	0.0000293 %	✓		
		048-002-00-0	215-146-2	1306-19-0								
3		chromium in chromium(III) compounds {  chromium(III) oxide (worst case) }				18 mg/kg	1.462	22.493 mg/kg	0.00225 %	✓		
			215-160-9	1308-38-9								
4		chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }				<2 mg/kg	2.27	<4.54 mg/kg	<0.000454 %		<LOD	
		024-017-00-8										
5		copper { dicopper oxide ; copper (I) oxide }				28 mg/kg	1.126	26.954 mg/kg	0.0027 %	✓		
		029-002-00-X	215-270-7	1317-39-1								
6		lead { lead chromate }			1	121 mg/kg	1.56	161.371 mg/kg	0.0103 %	✓		
		082-004-00-2	231-846-0	7758-97-6								
7		mercury { mercury dichloride }				<1 mg/kg	1.353	<1.353 mg/kg	<0.000135 %		<LOD	
		080-010-00-X	231-299-8	7487-94-7								
8		nickel { nickel chromate }				19 mg/kg	2.976	48.349 mg/kg	0.00483 %	✓		
		028-035-00-7	238-766-5	14721-18-7								
9		selenium { nickel selenate }				<2 mg/kg	2.554	<5.108 mg/kg	<0.000511 %		<LOD	
		028-031-00-5	239-125-2	15060-62-5								
10		zinc { zinc chloride }				98 mg/kg	2.085	174.662 mg/kg	0.0175 %	✓		
		030-003-00-2	231-592-0	7646-85-7								
11		pH				8 pH		8 pH	8pH			
				PH								
12		naphthalene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD	
		601-052-00-2	202-049-5	91-20-3								
13		acenaphthylene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD	
			205-917-1	208-96-8								
14		acenaphthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD	
			201-469-6	83-32-9								
15		fluorene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD	
			201-695-5	86-73-7								

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
16	phenanthrene	201-581-5	85-01-8		0.29 mg/kg		0.248 mg/kg	0.0000248 %	✓	
17	anthracene	204-371-1	120-12-7		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
18	fluoranthene	205-912-4	206-44-0		0.36 mg/kg		0.308 mg/kg	0.0000308 %	✓	
19	pyrene	204-927-3	129-00-0		0.3 mg/kg		0.257 mg/kg	0.0000257 %	✓	
20	benzo[a]anthracene	601-033-00-9	200-280-6		0.18 mg/kg		0.154 mg/kg	0.0000154 %	✓	
21	chrysene	601-048-00-0	205-923-4		0.15 mg/kg		0.128 mg/kg	0.0000128 %	✓	
22	benzo[b]fluoranthene	601-034-00-4	205-911-9		0.18 mg/kg		0.154 mg/kg	0.0000154 %	✓	
23	benzo[k]fluoranthene	601-036-00-5	205-916-6		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
24	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5		0.15 mg/kg		0.128 mg/kg	0.0000128 %	✓	
25	indeno[123-cd]pyrene	205-893-2	193-39-5		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
26	dibenz[a,h]anthracene	601-041-00-2	200-181-8		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
27	benzo[ghi]perylene	205-883-8	191-24-2		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
28	vanadium { divanadium pentaoxide; vanadium pentoxide }	023-001-00-8	215-239-8		22 mg/kg	1.785	33.579 mg/kg	0.00336 %	✓	
Total:								0.0433 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

WAC results for sample: WS103-0.30 - 0.40-03/05/2024

WAC Settings: samples in this Job constitute a single population.

WAC limits used to evaluate this sample: "UK"

The WAC used in this report are the WAC defined for the inert, stable non-reactive hazardous and hazardous classes of landfill in the UK. You should check the actual acceptance criteria when the disposal site is identified as they may differ from the generic WAC used in this report.

The sample cannot be evaluated against the Inert (Inert waste landfill) criteria because of missing determinand values.

The sample cannot be evaluated against the SNRHW (Stable non-reactive hazardous waste in non-hazardous landfill) criteria because of missing determinand values.

WAC Determinands

Solid Waste Analysis				Landfill Waste Acceptance Criteria Limits		
#	Determinand		User entered data	Inert waste landfill	Stable non-reactive hazardous waste in non-hazardous landfill	Hazardous waste landfill
1	TOC (total organic carbon)	%		3	5	6
2	LOI (loss on ignition)	%		-	-	10
3	BTEX (benzene, toluene, ethylbenzene and xylenes)	mg/kg		6	-	-
4	PCBs (polychlorinated biphenyls, 7 congeners)	mg/kg		1	-	-
5	Mineral oil (C10 to C40)	mg/kg		500	-	-
6	PAHs (polycyclic aromatic hydrocarbons)	mg/kg		100	-	-
7	pH	pH	8	-	>6	-
8	ANC (acid neutralisation capacity)	mol/kg		-	-	-
Eluate Analysis 10:1						
9	arsenic	mg/kg		0.5	2	25
10	barium	mg/kg		20	100	300
11	cadmium	mg/kg		0.04	1	5
12	chromium	mg/kg		0.5	10	70
13	copper	mg/kg		2	50	100
14	mercury	mg/kg		0.01	0.2	2
15	molybdenum	mg/kg		0.5	10	30
16	nickel	mg/kg		0.4	10	40
17	lead	mg/kg		0.5	10	50
18	antimony	mg/kg		0.06	0.7	5
19	selenium	mg/kg		0.1	0.5	7
20	zinc	mg/kg		4	50	200
21	chloride	mg/kg		800	15,000	25,000
22	fluoride	mg/kg		10	150	500
23	sulphate	mg/kg		1,000	20,000	50,000
24	phenol index	mg/kg		1	-	-
25	DOC (dissolved organic carbon)	mg/kg		500	800	1,000
26	TDS (total dissolved solids)	mg/kg		4,000	60,000	100,000

Key

	User supplied data
	Not applicable
	Missing WAC determinand value

Classification of sample: WS104-0.30 - 0.40-03/05/2024


Non Hazardous Waste
 Classified as **17 05 04**
 in the List of Waste

Sample details

Sample name:	LoW Code:
WS104-0.30 - 0.40-03/05/2024	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0.30 - 0.40 m	
Moisture content:	
17.4%	
(wet weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 17.4% Wet Weight Moisture Correction applied (MC)

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number								
1		arsenic { arsenic trioxide }				13 mg/kg	1.32	14.178 mg/kg	0.00142 %	✓		
		033-003-00-0	215-481-4	1327-53-3								
2		cadmium { cadmium oxide }				0.5 mg/kg	1.142	0.472 mg/kg	0.0000472 %	✓		
		048-002-00-0	215-146-2	1306-19-0								
3		chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				19 mg/kg	1.462	22.938 mg/kg	0.00229 %	✓		
			215-160-9	1308-38-9								
4		chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }				<2 mg/kg	2.27	<4.54 mg/kg	<0.000454 %		<LOD	
		024-017-00-8										
5		copper { dicopper oxide; copper (I) oxide }				61 mg/kg	1.126	56.729 mg/kg	0.00567 %	✓		
		029-002-00-X	215-270-7	1317-39-1								
6		lead { lead chromate }			1	260 mg/kg	1.56	334.986 mg/kg	0.0215 %	✓		
		082-004-00-2	231-846-0	7758-97-6								
7		mercury { mercury dichloride }				1.2 mg/kg	1.353	1.342 mg/kg	0.000134 %	✓		
		080-010-00-X	231-299-8	7487-94-7								
8		nickel { nickel chromate }				21 mg/kg	2.976	51.626 mg/kg	0.00516 %	✓		
		028-035-00-7	238-766-5	14721-18-7								
9		selenium { nickel selenate }				<2 mg/kg	2.554	<5.108 mg/kg	<0.000511 %		<LOD	
		028-031-00-5	239-125-2	15060-62-5								
10		zinc { zinc chloride }				184 mg/kg	2.085	316.814 mg/kg	0.0317 %	✓		
		030-003-00-2	231-592-0	7646-85-7								
11		pH				7.7 pH		7.7 pH	7.7 pH			
				PH								
12		naphthalene				1.88 mg/kg		1.553 mg/kg	0.000155 %	✓		
		601-052-00-2	202-049-5	91-20-3								
13		acenaphthylene				0.15 mg/kg		0.124 mg/kg	0.0000124 %	✓		
			205-917-1	208-96-8								
14		acenaphthene				2.26 mg/kg		1.867 mg/kg	0.000187 %	✓		
			201-469-6	83-32-9								
15		fluorene				2.06 mg/kg		1.702 mg/kg	0.00017 %	✓		
			201-695-5	86-73-7								

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
16	phenanthrene	201-581-5	85-01-8		15.7 mg/kg		12.968 mg/kg	0.0013 %	✓	
17	anthracene	204-371-1	120-12-7		3.4 mg/kg		2.808 mg/kg	0.000281 %	✓	
18	fluoranthene	205-912-4	206-44-0		20.1 mg/kg		16.603 mg/kg	0.00166 %	✓	
19	pyrene	204-927-3	129-00-0		19.3 mg/kg		15.942 mg/kg	0.00159 %	✓	
20	benzo[a]anthracene	200-033-00-9	200-280-6		8.7 mg/kg		7.186 mg/kg	0.000719 %	✓	
21	chrysene	205-048-00-0	205-923-4		7.6 mg/kg		6.278 mg/kg	0.000628 %	✓	
22	benzo[b]fluoranthene	205-034-00-4	205-911-9		7.87 mg/kg		6.501 mg/kg	0.00065 %	✓	
23	benzo[k]fluoranthene	205-036-00-5	205-916-6		1.95 mg/kg		1.611 mg/kg	0.000161 %	✓	
24	benzo[a]pyrene; benzo[def]chrysene	200-032-00-3	200-028-5		7.19 mg/kg		5.939 mg/kg	0.000594 %	✓	
25	indeno[123-cd]pyrene	205-893-2	193-39-5		2.69 mg/kg		2.222 mg/kg	0.000222 %	✓	
26	dibenz[a,h]anthracene	200-041-00-2	200-181-8		0.63 mg/kg		0.52 mg/kg	0.000052 %	✓	
27	benzo[ghi]perylene	205-883-8	191-24-2		2.18 mg/kg		1.801 mg/kg	0.00018 %	✓	
28	vanadium { divanadium pentaoxide; vanadium pentoxide }	215-023-00-8	215-239-8		25 mg/kg	1.785	36.864 mg/kg	0.00369 %	✓	
29	asbestos	650-013-00-6	12001-28-4 132207-32-0 12172-73-5 77536-66-4 77536-68-6 77536-67-5 12001-29-5		380 mg/kg		380 mg/kg	0.038 %		
Total:								0.119 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
•	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

WAC results for sample: WS104-0.30 - 0.40-03/05/2024

WAC Settings: samples in this Job constitute a single population.

WAC limits used to evaluate this sample: "UK"

The WAC used in this report are the WAC defined for the inert, stable non-reactive hazardous and hazardous classes of landfill in the UK. You should check the actual acceptance criteria when the disposal site is identified as they may differ from the generic WAC used in this report.

The sample cannot be evaluated against the Inert (Inert waste landfill) criteria because of missing determinand values.

The sample cannot be evaluated against the SNRHW (Stable non-reactive hazardous waste in non-hazardous landfill) criteria because of missing determinand values.

WAC Determinands

Solid Waste Analysis				Landfill Waste Acceptance Criteria Limits		
#	Determinand		User entered data	Inert waste landfill	Stable non-reactive hazardous waste in non-hazardous landfill	Hazardous waste landfill
1	TOC (total organic carbon)	%		3	5	6
2	LOI (loss on ignition)	%		-	-	10
3	BTEX (benzene, toluene, ethylbenzene and xylenes)	mg/kg		6	-	-
4	PCBs (polychlorinated biphenyls, 7 congeners)	mg/kg		1	-	-
5	Mineral oil (C10 to C40)	mg/kg		500	-	-
6	PAHs (polycyclic aromatic hydrocarbons)	mg/kg		100	-	-
7	pH	pH	7.7	-	>6	-
8	ANC (acid neutralisation capacity)	mol/kg		-	-	-
Eluate Analysis 10:1						
9	arsenic	mg/kg		0.5	2	25
10	barium	mg/kg		20	100	300
11	cadmium	mg/kg		0.04	1	5
12	chromium	mg/kg		0.5	10	70
13	copper	mg/kg		2	50	100
14	mercury	mg/kg		0.01	0.2	2
15	molybdenum	mg/kg		0.5	10	30
16	nickel	mg/kg		0.4	10	40
17	lead	mg/kg		0.5	10	50
18	antimony	mg/kg		0.06	0.7	5
19	selenium	mg/kg		0.1	0.5	7
20	zinc	mg/kg		4	50	200
21	chloride	mg/kg		800	15,000	25,000
22	fluoride	mg/kg		10	150	500
23	sulphate	mg/kg		1,000	20,000	50,000
24	phenol index	mg/kg		1	-	-
25	DOC (dissolved organic carbon)	mg/kg		500	800	1,000
26	TDS (total dissolved solids)	mg/kg		4,000	60,000	100,000

Key

	User supplied data
	Not applicable
	Missing WAC determinand value

Classification of sample: WS105-0.30 - 0.40-03/05/2024

✔ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:	LoW Code:
WS105-0.30 - 0.40-03/05/2024	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.30 - 0.40 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
20.9%	
(wet weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 20.9% Wet Weight Moisture Correction applied (MC)

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number								
1		arsenic { arsenic trioxide }				28 mg/kg	1.32	29.243 mg/kg	0.00292 %	✓		
		033-003-00-0	215-481-4	1327-53-3								
2		cadmium { cadmium oxide }				0.6 mg/kg	1.142	0.542 mg/kg	0.0000542 %	✓		
		048-002-00-0	215-146-2	1306-19-0								
3		chromium in chromium(III) compounds {  chromium(III) oxide (worst case) }				28 mg/kg	1.462	32.371 mg/kg	0.00324 %	✓		
			215-160-9	1308-38-9								
4		chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }				<2 mg/kg	2.27	<4.54 mg/kg	<0.000454 %		<LOD	
		024-017-00-8										
5		copper { dicopper oxide ; copper (I) oxide }				119 mg/kg	1.126	105.979 mg/kg	0.0106 %	✓		
		029-002-00-X	215-270-7	1317-39-1								
6		lead { lead chromate }			1	174 mg/kg	1.56	214.684 mg/kg	0.0138 %	✓		
		082-004-00-2	231-846-0	7758-97-6								
7		mercury { mercury dichloride }				<1 mg/kg	1.353	<1.353 mg/kg	<0.000135 %		<LOD	
		080-010-00-X	231-299-8	7487-94-7								
8		nickel { nickel chromate }				29 mg/kg	2.976	68.273 mg/kg	0.00683 %	✓		
		028-035-00-7	238-766-5	14721-18-7								
9		selenium { nickel selenate }				<2 mg/kg	2.554	<5.108 mg/kg	<0.000511 %		<LOD	
		028-031-00-5	239-125-2	15060-62-5								
10		zinc { zinc chloride }				174 mg/kg	2.085	286.901 mg/kg	0.0287 %	✓		
		030-003-00-2	231-592-0	7646-85-7								
11		pH				7.5 pH		7.5 pH	7.5 pH			
				pH								
12		naphthalene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD	
		601-052-00-2	202-049-5	91-20-3								
13		acenaphthylene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD	
			205-917-1	208-96-8								
14		acenaphthene				0.34 mg/kg		0.269 mg/kg	0.0000269 %	✓		
			201-469-6	83-32-9								
15		fluorene				0.19 mg/kg		0.15 mg/kg	0.000015 %	✓		
			201-695-5	86-73-7								

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
16	phenanthrene	201-581-5	85-01-8		2.12 mg/kg		1.677 mg/kg	0.000168 %	✓	
17	anthracene	204-371-1	120-12-7		0.43 mg/kg		0.34 mg/kg	0.000034 %	✓	
18	fluoranthene	205-912-4	206-44-0		4.46 mg/kg		3.528 mg/kg	0.000353 %	✓	
19	pyrene	204-927-3	129-00-0		4.36 mg/kg		3.449 mg/kg	0.000345 %	✓	
20	benzo[a]anthracene	601-033-00-9	200-280-6		1.73 mg/kg		1.368 mg/kg	0.000137 %	✓	
21	chrysene	601-048-00-0	205-923-4		1.97 mg/kg		1.558 mg/kg	0.000156 %	✓	
22	benzo[b]fluoranthene	601-034-00-4	205-911-9		1.92 mg/kg		1.519 mg/kg	0.000152 %	✓	
23	benzo[k]fluoranthene	601-036-00-5	205-916-6		0.42 mg/kg		0.332 mg/kg	0.0000332 %	✓	
24	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5		1.54 mg/kg		1.218 mg/kg	0.000122 %	✓	
25	indeno[123-cd]pyrene	205-893-2	193-39-5		0.86 mg/kg		0.68 mg/kg	0.000068 %	✓	
26	dibenz[a,h]anthracene	601-041-00-2	200-181-8		0.22 mg/kg		0.174 mg/kg	0.0000174 %	✓	
27	benzo[ghi]perylene	205-883-8	191-24-2		0.67 mg/kg		0.53 mg/kg	0.000053 %	✓	
28	vanadium { divanadium pentaoxide; vanadium pentoxide }	023-001-00-8	215-239-8		33 mg/kg	1.785	46.599 mg/kg	0.00466 %	✓	
Total:								0.0736 %		

Key

User supplied data

Determinand values ignored for classification, see column 'Conc. Not Used' for reason

Determinand defined or amended by HazWasteOnline (see Appendix A)

Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration

<LOD

Below limit of detection

CLP: Note 1

Only the metal concentration has been used for classification

WAC results for sample: WS105-0.30 - 0.40-03/05/2024

WAC Settings: samples in this Job constitute a single population.

WAC limits used to evaluate this sample: "UK"

The WAC used in this report are the WAC defined for the inert, stable non-reactive hazardous and hazardous classes of landfill in the UK. You should check the actual acceptance criteria when the disposal site is identified as they may differ from the generic WAC used in this report.

The sample cannot be evaluated against the Inert (Inert waste landfill) criteria because of missing determinand values.

The sample cannot be evaluated against the SNRHW (Stable non-reactive hazardous waste in non-hazardous landfill) criteria because of missing determinand values.

WAC Determinands

Solid Waste Analysis				Landfill Waste Acceptance Criteria Limits		
#	Determinand		User entered data	Inert waste landfill	Stable non-reactive hazardous waste in non-hazardous landfill	Hazardous waste landfill
1	TOC (total organic carbon)	%		3	5	6
2	LOI (loss on ignition)	%		-	-	10
3	BTEX (benzene, toluene, ethylbenzene and xylenes)	mg/kg		6	-	-
4	PCBs (polychlorinated biphenyls, 7 congeners)	mg/kg		1	-	-
5	Mineral oil (C10 to C40)	mg/kg		500	-	-
6	PAHs (polycyclic aromatic hydrocarbons)	mg/kg		100	-	-
7	pH	pH	7.5	-	>6	-
8	ANC (acid neutralisation capacity)	mol/kg		-	-	-
Eluate Analysis 10:1						
9	arsenic	mg/kg		0.5	2	25
10	barium	mg/kg		20	100	300
11	cadmium	mg/kg		0.04	1	5
12	chromium	mg/kg		0.5	10	70
13	copper	mg/kg		2	50	100
14	mercury	mg/kg		0.01	0.2	2
15	molybdenum	mg/kg		0.5	10	30
16	nickel	mg/kg		0.4	10	40
17	lead	mg/kg		0.5	10	50
18	antimony	mg/kg		0.06	0.7	5
19	selenium	mg/kg		0.1	0.5	7
20	zinc	mg/kg		4	50	200
21	chloride	mg/kg		800	15,000	25,000
22	fluoride	mg/kg		10	150	500
23	sulphate	mg/kg		1,000	20,000	50,000
24	phenol index	mg/kg		1	-	-
25	DOC (dissolved organic carbon)	mg/kg		500	800	1,000
26	TDS (total dissolved solids)	mg/kg		4,000	60,000	100,000

Key

	User supplied data
	Not applicable
	Missing WAC determinand value

Classification of sample: WS106-0.20 - 0.30-07/05/2024

Non Hazardous Waste

Classified as 17 05 04

in the List of Waste

Sample details

Sample name:	LoW Code:
WS106-0.20 - 0.30-07/05/2024	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0.20 - 0.30 m	
Moisture content:	
6.8%	
(wet weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 6.8% Wet Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used	
	EU CLP index number	EC Number	CAS Number									
1	 arsenic { arsenic trioxide }				12	mg/kg	1.32	14.767	mg/kg	0.00148 %	✓	
	033-003-00-0	215-481-4	1327-53-3									
2	 cadmium { cadmium oxide }				0.8	mg/kg	1.142	0.852	mg/kg	0.0000852 %	✓	
	048-002-00-0	215-146-2	1306-19-0									
3	 chromium in chromium(III) compounds {  chromium(III) oxide (worst case) }				14	mg/kg	1.462	19.07	mg/kg	0.00191 %	✓	
		215-160-9	1308-38-9									
4	 chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }				<2	mg/kg	2.27	<4.54	mg/kg	<0.000454 %		<LOD
	024-017-00-8											
5	 copper { dicopper oxide; copper (I) oxide }				53	mg/kg	1.126	55.614	mg/kg	0.00556 %	✓	
	029-002-00-X	215-270-7	1317-39-1									
6	 lead { lead chromate }			1	204	mg/kg	1.56	296.565	mg/kg	0.019 %	✓	
	082-004-00-2	231-846-0	7758-97-6									
7	 mercury { mercury dichloride }				<1	mg/kg	1.353	<1.353	mg/kg	<0.000135 %		<LOD
	080-010-00-X	231-299-8	7487-94-7									
8	 nickel { nickel chromate }				18	mg/kg	2.976	49.93	mg/kg	0.00499 %	✓	
	028-035-00-7	238-766-5	14721-18-7									
9	 selenium { nickel selenate }				<2	mg/kg	2.554	<5.108	mg/kg	<0.000511 %		<LOD
	028-031-00-5	239-125-2	15060-62-5									
10	 zinc { zinc chloride }				95	mg/kg	2.085	184.564	mg/kg	0.0185 %	✓	
	030-003-00-2	231-592-0	7646-85-7									
11	 pH		PH		8.1	pH		8.1	pH	8.1 pH		
12	naphthalene				1.02	mg/kg		0.951	mg/kg	0.0000951 %	✓	
	601-052-00-2	202-049-5	91-20-3									
13	 acenaphthylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		205-917-1	208-96-8									
14	 acenaphthene				9.15	mg/kg		8.528	mg/kg	0.000853 %	✓	
		201-469-6	83-32-9									
15	 fluorene				6.03	mg/kg		5.62	mg/kg	0.000562 %	✓	
		201-695-5	86-73-7									

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
16	phenanthrene	201-581-5	85-01-8		54.8 mg/kg		51.074 mg/kg	0.00511 %	✓	
17	anthracene	204-371-1	120-12-7		14.8 mg/kg		13.794 mg/kg	0.00138 %	✓	
18	fluoranthene	205-912-4	206-44-0		104 mg/kg		96.928 mg/kg	0.00969 %	✓	
19	pyrene	204-927-3	129-00-0		103 mg/kg		95.996 mg/kg	0.0096 %	✓	
20	benzo[a]anthracene	200-033-0	56-55-3		48.8 mg/kg		45.482 mg/kg	0.00455 %	✓	
21	chrysene	205-048-0	218-01-9		42.2 mg/kg		39.33 mg/kg	0.00393 %	✓	
22	benzo[b]fluoranthene	205-034-0	205-99-2		47.3 mg/kg		44.084 mg/kg	0.00441 %	✓	
23	benzo[k]fluoranthene	205-036-0	207-08-9		12.7 mg/kg		11.836 mg/kg	0.00118 %	✓	
24	benzo[a]pyrene; benzo[def]chrysene	200-032-0	50-32-8		42.7 mg/kg		39.796 mg/kg	0.00398 %	✓	
25	indeno[123-cd]pyrene	205-893-2	193-39-5		22.2 mg/kg		20.69 mg/kg	0.00207 %	✓	
26	dibenz[a,h]anthracene	200-041-0	53-70-3		5.36 mg/kg		4.996 mg/kg	0.0005 %	✓	
27	benzo[ghi]perylene	205-883-8	191-24-2		17.1 mg/kg		15.937 mg/kg	0.00159 %	✓	
28	vanadium { divanadium pentaoxide; vanadium pentoxide }	215-003-0	1314-62-1		22 mg/kg	1.785	36.603 mg/kg	0.00366 %	✓	
Total:								0.106 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
•	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

WAC results for sample: WS106-0.20 - 0.30-07/05/2024

WAC Settings: samples in this Job constitute a single population.

WAC limits used to evaluate this sample: "UK"

The WAC used in this report are the WAC defined for the inert, stable non-reactive hazardous and hazardous classes of landfill in the UK. You should check the actual acceptance criteria when the disposal site is identified as they may differ from the generic WAC used in this report.

The sample cannot be evaluated against the Inert (Inert waste landfill) criteria because of missing determinand values.

The sample cannot be evaluated against the SNRHW (Stable non-reactive hazardous waste in non-hazardous landfill) criteria because of missing determinand values.

WAC Determinands

Solid Waste Analysis				Landfill Waste Acceptance Criteria Limits		
#	Determinand		User entered data	Inert waste landfill	Stable non-reactive hazardous waste in non-hazardous landfill	Hazardous waste landfill
1	TOC (total organic carbon)	%		3	5	6
2	LOI (loss on ignition)	%		-	-	10
3	BTEX (benzene, toluene, ethylbenzene and xylenes)	mg/kg		6	-	-
4	PCBs (polychlorinated biphenyls, 7 congeners)	mg/kg		1	-	-
5	Mineral oil (C10 to C40)	mg/kg		500	-	-
6	PAHs (polycyclic aromatic hydrocarbons)	mg/kg		100	-	-
7	pH	pH	8.1	-	>6	-
8	ANC (acid neutralisation capacity)	mol/kg		-	-	-
Eluate Analysis 10:1						
9	arsenic	mg/kg		0.5	2	25
10	barium	mg/kg		20	100	300
11	cadmium	mg/kg		0.04	1	5
12	chromium	mg/kg		0.5	10	70
13	copper	mg/kg		2	50	100
14	mercury	mg/kg		0.01	0.2	2
15	molybdenum	mg/kg		0.5	10	30
16	nickel	mg/kg		0.4	10	40
17	lead	mg/kg		0.5	10	50
18	antimony	mg/kg		0.06	0.7	5
19	selenium	mg/kg		0.1	0.5	7
20	zinc	mg/kg		4	50	200
21	chloride	mg/kg		800	15,000	25,000
22	fluoride	mg/kg		10	150	500
23	sulphate	mg/kg		1,000	20,000	50,000
24	phenol index	mg/kg		1	-	-
25	DOC (dissolved organic carbon)	mg/kg		500	800	1,000
26	TDS (total dissolved solids)	mg/kg		4,000	60,000	100,000

Key

	User supplied data
	Not applicable
	Missing WAC determinand value

Classification of sample: WS107-0.10 - 0.20-07/05/2024

**Non Hazardous Waste**Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:	LoW Code:
WS107-0.10 - 0.20-07/05/2024	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.10 - 0.20 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
17.3%	
(wet weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 17.3% Wet Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
1	arsenic { arsenic trioxide }				26 mg/kg	1.32	28.39 mg/kg		0.00284 %	✓	
	033-003-00-0	215-481-4	1327-53-3								
2	cadmium { cadmium oxide }				0.8 mg/kg	1.142	0.756 mg/kg		0.0000756 %	✓	
	048-002-00-0	215-146-2	1306-19-0								
3	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				12 mg/kg	1.462	14.504 mg/kg		0.00145 %	✓	
		215-160-9	1308-38-9								
4	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }				<2 mg/kg	2.27	<4.54 mg/kg		<0.000454 %		<LOD
	024-017-00-8										
5	copper { dicopper oxide; copper (I) oxide }				65 mg/kg	1.126	60.522 mg/kg		0.00605 %	✓	
	029-002-00-X	215-270-7	1317-39-1								
6	lead { lead chromate }			1	164 mg/kg	1.56	211.555 mg/kg		0.0136 %	✓	
	082-004-00-2	231-846-0	7758-97-6								
7	mercury { mercury dichloride }				<1 mg/kg	1.353	<1.353 mg/kg		<0.000135 %		<LOD
	080-010-00-X	231-299-8	7487-94-7								
8	nickel { nickel chromate }				18 mg/kg	2.976	44.305 mg/kg		0.00443 %	✓	
	028-035-00-7	238-766-5	14721-18-7								
9	selenium { nickel selenate }				<2 mg/kg	2.554	<5.108 mg/kg		<0.000511 %		<LOD
	028-031-00-5	239-125-2	15060-62-5								
10	zinc { zinc chloride }				423 mg/kg	2.085	729.209 mg/kg		0.0729 %	✓	
	030-003-00-2	231-592-0	7646-85-7								
11	pH				7.6 pH		7.6 pH		7.6 pH		
			pH								
12	naphthalene				12.3 mg/kg		10.172 mg/kg		0.00102 %	✓	
	601-052-00-2	202-049-5	91-20-3								
13	acenaphthylene				0.8 mg/kg		0.662 mg/kg		0.0000662 %	✓	
		205-917-1	208-96-8								
14	acenaphthene				73.5 mg/kg		60.785 mg/kg		0.00608 %	✓	
		201-469-6	83-32-9								
15	fluorene				55.4 mg/kg		45.816 mg/kg		0.00458 %	✓	
		201-695-5	86-73-7								

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
16	phenanthrene	201-581-5	85-01-8		445 mg/kg		368.015 mg/kg	0.0368 %	✓	
17	anthracene	204-371-1	120-12-7		113 mg/kg		93.451 mg/kg	0.00935 %	✓	
18	fluoranthene	205-912-4	206-44-0		529 mg/kg		437.483 mg/kg	0.0437 %	✓	
19	pyrene	204-927-3	129-00-0		486 mg/kg		401.922 mg/kg	0.0402 %	✓	
20	benzo[a]anthracene	601-033-00-9	200-280-6		225 mg/kg		186.075 mg/kg	0.0186 %	✓	
21	chrysene	601-048-00-0	205-923-4		181 mg/kg		149.687 mg/kg	0.015 %	✓	
22	benzo[b]fluoranthene	601-034-00-4	205-911-9		162 mg/kg		133.974 mg/kg	0.0134 %	✓	
23	benzo[k]fluoranthene	601-036-00-5	205-916-6		45.5 mg/kg		37.629 mg/kg	0.00376 %	✓	
24	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5		147 mg/kg		121.569 mg/kg	0.0122 %	✓	
25	indeno[123-cd]pyrene	205-893-2	193-39-5		51.6 mg/kg		42.673 mg/kg	0.00427 %	✓	
26	dibenz[a,h]anthracene	601-041-00-2	200-181-8		6.82 mg/kg		5.64 mg/kg	0.000564 %	✓	
27	benzo[ghi]perylene	205-883-8	191-24-2		40.8 mg/kg		33.742 mg/kg	0.00337 %	✓	
28	vanadium { divanadium pentaoxide; vanadium pentoxide }	023-001-00-8	215-239-8		27 mg/kg	1.785	39.861 mg/kg	0.00399 %	✓	
Total:								0.319 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

WAC results for sample: WS107-0.10 - 0.20-07/05/2024

WAC Settings: samples in this Job constitute a single population.

WAC limits used to evaluate this sample: "UK"

The WAC used in this report are the WAC defined for the inert, stable non-reactive hazardous and hazardous classes of landfill in the UK. You should check the actual acceptance criteria when the disposal site is identified as they may differ from the generic WAC used in this report.

The sample cannot be evaluated against the Inert (Inert waste landfill) criteria because of missing determinand values.

The sample cannot be evaluated against the SNRHW (Stable non-reactive hazardous waste in non-hazardous landfill) criteria because of missing determinand values.

WAC Determinands

Solid Waste Analysis				Landfill Waste Acceptance Criteria Limits		
#	Determinand		User entered data	Inert waste landfill	Stable non-reactive hazardous waste in non-hazardous landfill	Hazardous waste landfill
1	TOC (total organic carbon)	%		3	5	6
2	LOI (loss on ignition)	%		-	-	10
3	BTEX (benzene, toluene, ethylbenzene and xylenes)	mg/kg		6	-	-
4	PCBs (polychlorinated biphenyls, 7 congeners)	mg/kg		1	-	-
5	Mineral oil (C10 to C40)	mg/kg		500	-	-
6	PAHs (polycyclic aromatic hydrocarbons)	mg/kg		100	-	-
7	pH	pH	7.6	-	>6	-
8	ANC (acid neutralisation capacity)	mol/kg		-	-	-
Eluate Analysis 10:1						
9	arsenic	mg/kg		0.5	2	25
10	barium	mg/kg		20	100	300
11	cadmium	mg/kg		0.04	1	5
12	chromium	mg/kg		0.5	10	70
13	copper	mg/kg		2	50	100
14	mercury	mg/kg		0.01	0.2	2
15	molybdenum	mg/kg		0.5	10	30
16	nickel	mg/kg		0.4	10	40
17	lead	mg/kg		0.5	10	50
18	antimony	mg/kg		0.06	0.7	5
19	selenium	mg/kg		0.1	0.5	7
20	zinc	mg/kg		4	50	200
21	chloride	mg/kg		800	15,000	25,000
22	fluoride	mg/kg		10	150	500
23	sulphate	mg/kg		1,000	20,000	50,000
24	phenol index	mg/kg		1	-	-
25	DOC (dissolved organic carbon)	mg/kg		500	800	1,000
26	TDS (total dissolved solids)	mg/kg		4,000	60,000	100,000

Key

	User supplied data
	Not applicable
	Missing WAC determinand value

Classification of sample: WS107-0.40 - 0.50-07/05/2024


Non Hazardous Waste
 Classified as **17 05 04**
 in the List of Waste

Sample details

Sample name:	LoW Code:
WS107-0.40 - 0.50-07/05/2024	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0.40 - 0.50 m	
Moisture content:	
17.5%	
(wet weight correction)	

Hazard properties

None identified

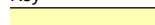
Determinands

Moisture content: 17.5% Wet Weight Moisture Correction applied (MC)

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number							
1		arsenic { arsenic trioxide }				10 mg/kg	1.32	10.893 mg/kg	0.00109 %	✓	
		033-003-00-0	215-481-4	1327-53-3							
2		cadmium { cadmium oxide }				<0.2 mg/kg	1.142	<0.228 mg/kg	<0.0000228 %		<LOD
		048-002-00-0	215-146-2	1306-19-0							
3		chromium in chromium(III) compounds {  chromium(III) oxide (worst case) }				27 mg/kg	1.462	32.556 mg/kg	0.00326 %	✓	
			215-160-9	1308-38-9							
4		chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }				<2 mg/kg	2.27	<4.54 mg/kg	<0.000454 %		<LOD
		024-017-00-8									
5		copper { dicopper oxide ; copper (I) oxide }				11 mg/kg	1.126	10.217 mg/kg	0.00102 %	✓	
		029-002-00-X	215-270-7	1317-39-1							
6		lead { lead chromate }			1	21 mg/kg	1.56	27.024 mg/kg	0.00173 %	✓	
		082-004-00-2	231-846-0	7758-97-6							
7		mercury { mercury dichloride }				<1 mg/kg	1.353	<1.353 mg/kg	<0.000135 %		<LOD
		080-010-00-X	231-299-8	7487-94-7							
8		nickel { nickel chromate }				14 mg/kg	2.976	34.376 mg/kg	0.00344 %	✓	
		028-035-00-7	238-766-5	14721-18-7							
9		selenium { nickel selenate }				<2 mg/kg	2.554	<5.108 mg/kg	<0.000511 %		<LOD
		028-031-00-5	239-125-2	15060-62-5							
10		zinc { zinc chloride }				50 mg/kg	2.085	85.987 mg/kg	0.0086 %	✓	
		030-003-00-2	231-592-0	7646-85-7							
11		TPH (C6 to C40) petroleum group				<42 mg/kg		<42 mg/kg	<0.0042 %		<LOD
				TPH							
12		tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
		603-181-00-X	216-653-1	1634-04-4							
13		benzene				<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %		<LOD
		601-020-00-8	200-753-7	71-43-2							
14		toluene				<0.005 mg/kg		<0.005 mg/kg	<0.0000005 %		<LOD
		601-021-00-3	203-625-9	108-88-3							
15		ethylbenzene				<0.002 mg/kg		<0.002 mg/kg	<0.0000002 %		<LOD
		601-023-00-4	202-849-4	100-41-4							

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
16	xylene									
	601-022-00-9	202-422-2 [1]	95-47-6 [1]		<0.004 mg/kg		<0.004 mg/kg	<0.0000004 %		<LOD
		203-396-5 [2]	106-42-3 [2]							
		203-576-3 [3]	108-38-3 [3]							
		215-535-7 [4]	1330-20-7 [4]							
17	cyanides {  salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<1 mg/kg	1.884	<1.884 mg/kg	<0.000188 %		<LOD
	006-007-00-5									
18	pH				7.3 pH		7.3 pH	7.3 pH		
			P1186							
19	naphthalene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-052-00-2	202-049-5	91-20-3							
20	acenaphthylene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		205-917-1	208-96-8							
21	acenaphthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		201-469-6	83-32-9							
22	fluorene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		201-695-5	86-73-7							
23	phenanthrene				0.35 mg/kg		0.289 mg/kg	0.0000289 %	✓	
		201-581-5	85-01-8							
24	anthracene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		204-371-1	120-12-7							
25	fluoranthene				0.4 mg/kg		0.33 mg/kg	0.000033 %	✓	
		205-912-4	206-44-0							
26	pyrene				0.36 mg/kg		0.297 mg/kg	0.0000297 %	✓	
		204-927-3	129-00-0							
27	benzo[a]anthracene				0.16 mg/kg		0.132 mg/kg	0.0000132 %	✓	
	601-033-00-9	200-280-6	56-55-3							
28	chrysene				0.19 mg/kg		0.157 mg/kg	0.0000157 %	✓	
	601-048-00-0	205-923-4	218-01-9							
29	benzo[b]fluoranthene				0.16 mg/kg		0.132 mg/kg	0.0000132 %	✓	
	601-034-00-4	205-911-9	205-99-2							
30	benzo[k]fluoranthene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-036-00-5	205-916-6	207-08-9							
31	benzo[a]pyrene; benzo[def]chrysene				0.16 mg/kg		0.132 mg/kg	0.0000132 %	✓	
	601-032-00-3	200-028-5	50-32-8							
32	indeno[123-cd]pyrene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		205-893-2	193-39-5							
33	dibenz[a,h]anthracene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
	601-041-00-2	200-181-8	53-70-3							
34	benzo[ghi]perylene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
		205-883-8	191-24-2							
35	monohydric phenols				<2 mg/kg		<2 mg/kg	<0.0002 %		<LOD
			P1186							
Total:								0.0251 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

WAC results for sample: WS107-0.40 - 0.50-07/05/2024

WAC Settings: samples in this Job constitute a single population.

WAC limits used to evaluate this sample: "UK"

The WAC used in this report are the WAC defined for the inert, stable non-reactive hazardous and hazardous classes of landfill in the UK. You should check the actual acceptance criteria when the disposal site is identified as they may differ from the generic WAC used in this report.

The sample cannot be evaluated against the Inert (Inert waste landfill) criteria because of missing determinand values.

The sample cannot be evaluated against the SNRHW (Stable non-reactive hazardous waste in non-hazardous landfill) criteria because of missing determinand values.

WAC Determinands

Solid Waste Analysis				Landfill Waste Acceptance Criteria Limits		
#	Determinand		User entered data	Inert waste landfill	Stable non-reactive hazardous waste in non-hazardous landfill	Hazardous waste landfill
1	TOC (total organic carbon)	%		3	5	6
2	LOI (loss on ignition)	%		-	-	10
3	BTEX (benzene, toluene, ethylbenzene and xylenes)	mg/kg		6	-	-
4	PCBs (polychlorinated biphenyls, 7 congeners)	mg/kg		1	-	-
5	Mineral oil (C10 to C40)	mg/kg		500	-	-
6	PAHs (polycyclic aromatic hydrocarbons)	mg/kg		100	-	-
7	pH	pH	7.3	-	>6	-
8	ANC (acid neutralisation capacity)	mol/kg		-	-	-
Eluate Analysis 10:1						
9	arsenic	mg/kg		0.5	2	25
10	barium	mg/kg		20	100	300
11	cadmium	mg/kg		0.04	1	5
12	chromium	mg/kg		0.5	10	70
13	copper	mg/kg		2	50	100
14	mercury	mg/kg		0.01	0.2	2
15	molybdenum	mg/kg		0.5	10	30
16	nickel	mg/kg		0.4	10	40
17	lead	mg/kg		0.5	10	50
18	antimony	mg/kg		0.06	0.7	5
19	selenium	mg/kg		0.1	0.5	7
20	zinc	mg/kg		4	50	200
21	chloride	mg/kg		800	15,000	25,000
22	fluoride	mg/kg		10	150	500
23	sulphate	mg/kg		1,000	20,000	50,000
24	phenol index	mg/kg		1	-	-
25	DOC (dissolved organic carbon)	mg/kg		500	800	1,000
26	TDS (total dissolved solids)	mg/kg		4,000	60,000	100,000

Key

	User supplied data
	Not applicable
	Missing WAC determinand value

Classification of sample: WS108-0.20 - 0.30-07/05/2024

✔ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample name:	LoW Code:
WS108-0.20 - 0.30-07/05/2024	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.20 - 0.30 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
20.6%	
(wet weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 20.6% Wet Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number									
1	arsenic { arsenic trioxide }				20	mg/kg	1.32	20.967	mg/kg	0.0021 %	✓	
	033-003-00-0	215-481-4	1327-53-3									
2	cadmium { cadmium oxide }				0.2	mg/kg	1.142	0.181	mg/kg	0.0000181 %	✓	
	048-002-00-0	215-146-2	1306-19-0									
3	chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				21	mg/kg	1.462	24.37	mg/kg	0.00244 %	✓	
		215-160-9	1308-38-9									
4	chromium in chromium(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }				<2	mg/kg	2.27	<4.54	mg/kg	<0.000454 %		<LOD
	024-017-00-8											
5	copper { dicopper oxide; copper (I) oxide }				52	mg/kg	1.126	46.486	mg/kg	0.00465 %	✓	
	029-002-00-X	215-270-7	1317-39-1									
6	lead { lead chromate }			1	175	mg/kg	1.56	216.736	mg/kg	0.0139 %	✓	
	082-004-00-2	231-846-0	7758-97-6									
7	mercury { mercury dichloride }				<1	mg/kg	1.353	<1.353	mg/kg	<0.000135 %		<LOD
	080-010-00-X	231-299-8	7487-94-7									
8	nickel { nickel chromate }				27	mg/kg	2.976	63.805	mg/kg	0.00638 %	✓	
	028-035-00-7	238-766-5	14721-18-7									
9	selenium { nickel selenate }				<2	mg/kg	2.554	<5.108	mg/kg	<0.000511 %		<LOD
	028-031-00-5	239-125-2	15060-62-5									
10	zinc { zinc chloride }				88	mg/kg	2.085	145.65	mg/kg	0.0146 %	✓	
	030-003-00-2	231-592-0	7646-85-7									
11	pH				7.3	pH		7.3	pH	7.3 pH		
			pH									
12	naphthalene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
	601-052-00-2	202-049-5	91-20-3									
13	acenaphthylene				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		205-917-1	208-96-8									
14	acenaphthene				0.31	mg/kg		0.246	mg/kg	0.0000246 %	✓	
		201-469-6	83-32-9									
15	fluorene				0.2	mg/kg		0.159	mg/kg	0.0000159 %	✓	
		201-695-5	86-73-7									

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
16	phenanthrene	201-581-5	85-01-8		1.91 mg/kg		1.517 mg/kg	0.000152 %	✓	
17	anthracene	204-371-1	120-12-7		0.45 mg/kg		0.357 mg/kg	0.0000357 %	✓	
18	fluoranthene	205-912-4	206-44-0		1.88 mg/kg		1.493 mg/kg	0.000149 %	✓	
19	pyrene	204-927-3	129-00-0		1.66 mg/kg		1.318 mg/kg	0.000132 %	✓	
20	benzo[a]anthracene	601-033-00-9	200-280-6		0.53 mg/kg		0.421 mg/kg	0.0000421 %	✓	
21	chrysene	601-048-00-0	205-923-4		0.67 mg/kg		0.532 mg/kg	0.0000532 %	✓	
22	benzo[b]fluoranthene	601-034-00-4	205-911-9		0.48 mg/kg		0.381 mg/kg	0.0000381 %	✓	
23	benzo[k]fluoranthene	601-036-00-5	205-916-6		0.15 mg/kg		0.119 mg/kg	0.0000119 %	✓	
24	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5		0.4 mg/kg		0.318 mg/kg	0.0000318 %	✓	
25	indeno[123-cd]pyrene	205-893-2	193-39-5		0.29 mg/kg		0.23 mg/kg	0.000023 %	✓	
26	dibenz[a,h]anthracene	601-041-00-2	200-181-8		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %		<LOD
27	benzo[ghi]perylene	205-883-8	191-24-2		0.21 mg/kg		0.167 mg/kg	0.0000167 %	✓	
28	vanadium { divanadium pentaoxide; vanadium pentoxide }	023-001-00-8	215-239-8		30 mg/kg	1.785	42.523 mg/kg	0.00425 %	✓	
Total:								0.0501 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

WAC results for sample: WS108-0.20 - 0.30-07/05/2024

WAC Settings: samples in this Job constitute a single population.

WAC limits used to evaluate this sample: "UK"

The WAC used in this report are the WAC defined for the inert, stable non-reactive hazardous and hazardous classes of landfill in the UK. You should check the actual acceptance criteria when the disposal site is identified as they may differ from the generic WAC used in this report.

The sample cannot be evaluated against the Inert (Inert waste landfill) criteria because of missing determinand values.

The sample cannot be evaluated against the SNRHW (Stable non-reactive hazardous waste in non-hazardous landfill) criteria because of missing determinand values.

WAC Determinands

Solid Waste Analysis				Landfill Waste Acceptance Criteria Limits		
#	Determinand		User entered data	Inert waste landfill	Stable non-reactive hazardous waste in non-hazardous landfill	Hazardous waste landfill
1	TOC (total organic carbon)	%		3	5	6
2	LOI (loss on ignition)	%		-	-	10
3	BTEX (benzene, toluene, ethylbenzene and xylenes)	mg/kg		6	-	-
4	PCBs (polychlorinated biphenyls, 7 congeners)	mg/kg		1	-	-
5	Mineral oil (C10 to C40)	mg/kg		500	-	-
6	PAHs (polycyclic aromatic hydrocarbons)	mg/kg		100	-	-
7	pH	pH	7.3	-	>6	-
8	ANC (acid neutralisation capacity)	mol/kg		-	-	-
Eluate Analysis 10:1						
9	arsenic	mg/kg		0.5	2	25
10	barium	mg/kg		20	100	300
11	cadmium	mg/kg		0.04	1	5
12	chromium	mg/kg		0.5	10	70
13	copper	mg/kg		2	50	100
14	mercury	mg/kg		0.01	0.2	2
15	molybdenum	mg/kg		0.5	10	30
16	nickel	mg/kg		0.4	10	40
17	lead	mg/kg		0.5	10	50
18	antimony	mg/kg		0.06	0.7	5
19	selenium	mg/kg		0.1	0.5	7
20	zinc	mg/kg		4	50	200
21	chloride	mg/kg		800	15,000	25,000
22	fluoride	mg/kg		10	150	500
23	sulphate	mg/kg		1,000	20,000	50,000
24	phenol index	mg/kg		1	-	-
25	DOC (dissolved organic carbon)	mg/kg		500	800	1,000
26	TDS (total dissolved solids)	mg/kg		4,000	60,000	100,000

Key

	User supplied data
	Not applicable
	Missing WAC determinand value

Classification of sample: Composite WS102 @ 0.60 - 0.70 + WS103 @ 1.30 - 1.40--07/05/2024

✔

Non Hazardous Waste

Classified as 17 05 04

in the List of Waste

Sample details

Sample name:	LoW Code:
Composite WS102 @ 0.60 - 0.70 + WS103 @ 1.30 - 1.40--07/05/2024	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Moisture content:	Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)
23.7%	
(wet weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 23.7% Wet Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
1	● pH		PH		7.8 pH		7.8 pH		7.8 pH		
2	● polychlorobiphenyls; PCB				<0.1 mg/kg		<0.1 mg/kg		<0.00001 %		<LOD
	602-039-00-4	215-648-1	1336-36-3								
Total:									0.00001 %		

Key	
	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
●	Determinand defined or amended by HazWasteOnline (see Appendix A)
<LOD	Below limit of detection

WAC results for sample: Composite WS102 @ 0.60 - 0.70 + WS103 @ 1.30 - 1.40--07/05/2024

WAC Settings: samples in this Job constitute a single population.

WAC limits used to evaluate this sample: "UK"

The WAC used in this report are the WAC defined for the inert, stable non-reactive hazardous and hazardous classes of landfill in the UK. You should check the actual acceptance criteria when the disposal site is identified as they may differ from the generic WAC used in this report.

The sample FAILS the Inert (Inert waste landfill) criteria.

The sample FAILS the SNRHW (Stable non-reactive hazardous waste in non-hazardous landfill) criteria.

WAC Determinands

Solid Waste Analysis				Landfill Waste Acceptance Criteria Limits		
#	Determinand		User entered data	Inert waste landfill	Stable non-reactive hazardous waste in non-hazardous landfill	Hazardous waste landfill
1	TOC (total organic carbon)	%	9.1	3	5	6
2	LOI (loss on ignition)	%	10.4	-	-	10
3	BTEX (benzene, toluene, ethylbenzene and xylenes)	mg/kg	<0.05	6	-	-
4	PCBs (polychlorinated biphenyls, 7 congeners)	mg/kg	<0.1	1	-	-
5	Mineral oil (C10 to C40)	mg/kg	<10	500	-	-
6	PAHs (polycyclic aromatic hydrocarbons)	mg/kg	38	100	-	-
7	pH	pH	7.8	-	>6	-
8	ANC (acid neutralisation capacity)	mol/kg	1.5	-	-	-
Eluate Analysis 10:1						
9	arsenic	mg/kg	0.05	0.5	2	25
10	barium	mg/kg	0.378	20	100	300
11	cadmium	mg/kg	<0.002	0.04	1	5
12	chromium	mg/kg	0.016	0.5	10	70
13	copper	mg/kg	0.156	2	50	100
14	mercury	mg/kg	0.0048	0.01	0.2	2
15	molybdenum	mg/kg	0.161	0.5	10	30
16	nickel	mg/kg	0.0102	0.4	10	40
17	lead	mg/kg	0.045	0.5	10	50
18	antimony	mg/kg	0.006	0.06	0.7	5
19	selenium	mg/kg	0.0076	0.1	0.5	7
20	zinc	mg/kg	0.33	4	50	200
21	chloride	mg/kg	25	800	15,000	25,000
22	fluoride	mg/kg	28.8	10	150	500
23	sulphate	mg/kg	73	1,000	20,000	50,000
24	phenol index	mg/kg	<0.5	1	-	-
25	DOC (dissolved organic carbon)	mg/kg	106	500	800	1,000
26	TDS (total dissolved solids)	mg/kg	1169	4,000	60,000	100,000

Key

	User supplied data
	Not applicable
	Inert WAC criteria fail
	SNRHW WAC criteria fail

Classification of sample: Composite WS109 @ 0.20 - 0.30 + WS110 @ 0.30 - 0.40--07/05/2024

✔

Non Hazardous Waste

Classified as 17 05 04

in the List of Waste

Sample details

Sample name:	LoW Code:
Composite WS109 @ 0.20 - 0.30 + WS110 @ 0.30 - 0.40--07/05/2024	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Moisture content:	Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)
17.8%	
(wet weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 17.8% Wet Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
1	● pH		PH		7.6 pH		7.6	pH	7.6 pH		
2	● polychlorobiphenyls; PCB				<0.1 mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
	602-039-00-4	215-648-1	1336-36-3								
Total:									0.00001 %		

Key	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
●	Determinand defined or amended by HazWasteOnline (see Appendix A)
<LOD	Below limit of detection

WAC results for sample: Composite WS109 @ 0.20 - 0.30 + WS110 @ 0.30 - 0.40--07/05/2024

WAC Settings: samples in this Job constitute a single population.

WAC limits used to evaluate this sample: "UK"

The WAC used in this report are the WAC defined for the inert, stable non-reactive hazardous and hazardous classes of landfill in the UK. You should check the actual acceptance criteria when the disposal site is identified as they may differ from the generic WAC used in this report.

The sample FAILS the Inert (Inert waste landfill) criteria.

The sample FAILS the SNRHW (Stable non-reactive hazardous waste in non-hazardous landfill) criteria.

WAC Determinands

Solid Waste Analysis				Landfill Waste Acceptance Criteria Limits		
#	Determinand		User entered data	Inert waste landfill	Stable non-reactive hazardous waste in non-hazardous landfill	Hazardous waste landfill
1	TOC (total organic carbon)	%	5.1	3	5	6
2	LOI (loss on ignition)	%	7.8	-	-	10
3	BTEX (benzene, toluene, ethylbenzene and xylenes)	mg/kg	<0.05	6	-	-
4	PCBs (polychlorinated biphenyls, 7 congeners)	mg/kg	<0.1	1	-	-
5	Mineral oil (C10 to C40)	mg/kg	<10	500	-	-
6	PAHs (polycyclic aromatic hydrocarbons)	mg/kg	49.7	100	-	-
7	pH	pH	7.6	-	>6	-
8	ANC (acid neutralisation capacity)	mol/kg	<1	-	-	-
Eluate Analysis 10:1						
9	arsenic	mg/kg	0.039	0.5	2	25
10	barium	mg/kg	0.264	20	100	300
11	cadmium	mg/kg	<0.002	0.04	1	5
12	chromium	mg/kg	0.008	0.5	10	70
13	copper	mg/kg	0.157	2	50	100
14	mercury	mg/kg	0.0008	0.01	0.2	2
15	molybdenum	mg/kg	0.065	0.5	10	30
16	nickel	mg/kg	0.0109	0.4	10	40
17	lead	mg/kg	0.027	0.5	10	50
18	antimony	mg/kg	<0.002	0.06	0.7	5
19	selenium	mg/kg	0.0083	0.1	0.5	7
20	zinc	mg/kg	0.26	4	50	200
21	chloride	mg/kg	13	800	15,000	25,000
22	fluoride	mg/kg	19.6	10	150	500
23	sulphate	mg/kg	43	1,000	20,000	50,000
24	phenol index	mg/kg	<0.5	1	-	-
25	DOC (dissolved organic carbon)	mg/kg	153	500	800	1,000
26	TDS (total dissolved solids)	mg/kg	932	4,000	60,000	100,000

Key

	User supplied data
	Not applicable
	Inert WAC criteria fail
	SNRHW WAC criteria fail

Appendix A: Classifier defined and non GB MCL determinands

chromium(III) oxide (worst case) (EC Number: 215-160-9, CAS Number: 1308-38-9)

Description/Comments: Data from C&L Inventory Database
 Data source: <https://echa.europa.eu/information-on-chemicals/cl-inventory-database/-/discli/details/33806>
 Data source date: 17 Jul 2015
 Hazard Statements: Acute Tox. 4; H332 , Acute Tox. 4; H302 , Eye Irrit. 2; H319 , STOT SE 3; H335 , Skin Irrit. 2; H315 , Resp. Sens. 1; H334 , Skin Sens. 1; H317 , Repr. 1B; H360FD , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

pH (CAS Number: PH)

Description/Comments: Appendix C4
 Data source: WM3 1st Edition 2015
 Data source date: 25 May 2015
 Hazard Statements: None.

acenaphthylene (EC Number: 205-917-1, CAS Number: 208-96-8)

Description/Comments: Data from C&L Inventory Database
 Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
 Data source date: 17 Jul 2015
 Hazard Statements: Acute Tox. 4; H302 , Acute Tox. 1; H330 , Acute Tox. 1; H310 , Eye Irrit. 2; H319 , STOT SE 3; H335 , Skin Irrit. 2; H315

acenaphthene (EC Number: 201-469-6, CAS Number: 83-32-9)

Description/Comments: Data from C&L Inventory Database
 Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
 Data source date: 17 Jul 2015
 Hazard Statements: Eye Irrit. 2; H319 , STOT SE 3; H335 , Skin Irrit. 2; H315 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410 , Aquatic Chronic 2; H411

fluorene (EC Number: 201-695-5, CAS Number: 86-73-7)

Description/Comments: Data from C&L Inventory Database
 Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
 Data source date: 06 Aug 2015
 Hazard Statements: Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

phenanthrene (EC Number: 201-581-5, CAS Number: 85-01-8)

Description/Comments: Data from C&L Inventory Database
 Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
 Data source date: 06 Aug 2015
 Hazard Statements: Acute Tox. 4; H302 , Eye Irrit. 2; H319 , STOT SE 3; H335 , Carc. 2; H351 , Skin Sens. 1; H317 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410 , Skin Irrit. 2; H315

anthracene (EC Number: 204-371-1, CAS Number: 120-12-7)

Description/Comments: Data from C&L Inventory Database
 Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
 Data source date: 17 Jul 2015
 Hazard Statements: Eye Irrit. 2; H319 , STOT SE 3; H335 , Skin Irrit. 2; H315 , Skin Sens. 1; H317 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

fluoranthene (EC Number: 205-912-4, CAS Number: 206-44-0)

Description/Comments: Data from C&L Inventory Database
 Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
 Data source date: 21 Aug 2015
 Hazard Statements: Acute Tox. 4; H302 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

pyrene (EC Number: 204-927-3, CAS Number: 129-00-0)

Description/Comments: Data from C&L Inventory Database; SDS Sigma Aldrich 2014
 Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
 Data source date: 21 Aug 2015
 Hazard Statements: Skin Irrit. 2; H315 , Eye Irrit. 2; H319 , STOT SE 3; H335 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

indeno[123-cd]pyrene (EC Number: 205-893-2, CAS Number: 193-39-5)

Description/Comments: Data from C&L Inventory Database
 Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
 Data source date: 06 Aug 2015
 Hazard Statements: Carc. 2; H351

▪ **benzo[ghi]perylene** (EC Number: 205-883-8, CAS Number: 191-24-2)

Description/Comments: Data from C&L Inventory Database; SDS Sigma Aldrich 28/02/2015
Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>
Data source date: 23 Jul 2015
Hazard Statements: Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

▪ **polychlorobiphenyls; PCB** (EC Number: 215-648-1, CAS Number: 1336-36-3)

GB MCL index number: 602-039-00-4
Description/Comments: Worst Case: IARC considers PCB Group 1; Carcinogenic to humans;

POP specific threshold from ATP1 (Regulation 756/2010/EU) to POPs Regulation (Regulation 850/2004/EC). Where applicable, the calculation method laid down in European standards EN 12766-1 and EN 12766-2 shall be applied.

Additional Hazard Statement(s): Carc. 1A; H350

Reason for additional Hazards Statement(s):

20 Nov 2021 - Carc. 1A; H350 hazard statement sourced from: IARC Group 1 (23, Sup 7, 100C) 2012

▪ **TPH (C6 to C40) petroleum group** (CAS Number: TPH)

Description/Comments: Hazard statements taken from WM3 1st Edition 2015; Risk phrases: WM2 3rd Edition 2013
Data source: WM3 1st Edition 2015
Data source date: 25 May 2015
Hazard Statements: Flam. Liq. 3; H226 , Asp. Tox. 1; H304 , STOT RE 2; H373 , Muta. 1B; H340 , Carc. 1B; H350 , Repr. 2; H361d , Aquatic Chronic 2; H411

▪ **ethylbenzene** (EC Number: 202-849-4, CAS Number: 100-41-4)

GB MCL index number: 601-023-00-4
Description/Comments:
Additional Hazard Statement(s): Carc. 2; H351
Reason for additional Hazards Statement(s):
20 Nov 2021 - Carc. 2; H351 hazard statement sourced from: IARC Group 2B (77) 2000

▪ **salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex**

GB MCL index number: 006-007-00-5
Description/Comments: Conversion factor based on a worst case compound: sodium cyanide
Additional Hazard Statement(s): EUH032 >= 0.2 %
Reason for additional Hazards Statement(s):
20 Nov 2021 - EUH032 >= 0.2 % hazard statement sourced from: WM3, Table C12.2

▪ **monohydric phenols** (CAS Number: P1186)

Description/Comments: Combined hazards statements from harmonised entries in CLP for phenol, cresols and xylenols (604-001-00-2, 604-004-00-9, 604-006-00-X)
Data source: CLP combined data
Data source date: 26 Mar 2019
Hazard Statements: Muta. 2; H341 , Acute Tox. 3; H331 , Acute Tox. 3; H311 , Acute Tox. 3; H301 , STOT RE 2; H373 , Skin Corr. 1B; H314 , Skin Corr. 1B; H314 >= 3 % , Skin Irrit. 2; H315 1 <= conc. < 3 % , Eye Irrit. 2; H319 1 <= conc. < 3 % , Aquatic Chronic 2; H411

Appendix B: Rationale for selection of metal species

arsenic {arsenic trioxide}

Reasonable case CLP species based on hazard statements/molecular weight and most common (stable) oxide of arsenic. Industrial sources include: smelting; main precursor to other arsenic compounds (edit as required)

cadmium {cadmium oxide}

Reasonable case CLP species based on hazard statements/molecular weight, very low solubility in water. Industrial sources include: electroplating baths, electrodes for storage batteries, catalysts, ceramic glazes, phosphors, pigments and nematocides. (edit as required) Worst case compounds in CLP: cadmium sulphate, chloride, fluoride & iodide not expected as either very soluble and/or compound's industrial usage not related to site history (edit as required)

chromium in chromium(III) compounds {chromium(III) oxide (worst case)}

Reasonable case species based on hazard statements/molecular weight. Industrial sources include: tanning, pigment in paint, inks and glass (edit as required)

chromium in chromium(VI) compounds {chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex}

Worst case species based on hazard statements/molecular weight (edit as required)

copper {dicopper oxide; copper (I) oxide}

Reasonable case CLP species based on hazard statements/molecular weight and insolubility in water. Industrial sources include: oxidised copper metal, brake pads, pigments, antifouling paints, fungicide. (edit as required) Worse case copper sulphate is very soluble and likely to have been leached away if ever present and/or not enough soluble sulphate detected. (edit as required)

lead {lead chromate}

Worst case CLP species based on hazard statements/molecular weight (edit as required)

mercury {mercury dichloride}

Worst case CLP species based on hazard statements/molecular weight (edit as required)

nickel {nickel chromate}

Worst case CLP species based on hazard statements/molecular weight (edit as required)

selenium {nickel selenate}

Worst case CLP species based on hazard statements/molecular weight (edit as required)

zinc {zinc chloride}

There isn't enough Cr(VI) to make hazardous levels of the Metal chromate. Site history includes tannery and railway line.

vanadium {divanadium pentaoxide; vanadium pentoxide}

Most applicable species following review of site investigation data and an understanding of the sites history.

cyanides {salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex}

Harmonised group entry used as most reasonable case as complex cyanides and those specified elsewhere in the annex are not likely to be present in this soil: [Note conversion factor based on a worst case compound: sodium cyanide] (edit as required)

Appendix C: Version

HazWasteOnline Classification Engine: WM3 1st Edition v1.2.GB - Oct 2021

HazWasteOnline Classification Engine Version: 2024.149.6082.11243 (28 May 2024)

HazWasteOnline Database: 2024.149.6082.11243 (28 May 2024)

This classification utilises the following guidance and legislation:

WM3 v1.2.GB - Waste Classification - 1st Edition v1.2.GB - Oct 2021

CLP Regulation - Regulation 1272/2008/EC of 16 December 2008

1st ATP - Regulation 790/2009/EC of 10 August 2009

2nd ATP - Regulation 286/2011/EC of 10 March 2011

3rd ATP - Regulation 618/2012/EU of 10 July 2012

4th ATP - Regulation 487/2013/EU of 8 May 2013

Correction to 1st ATP - Regulation 758/2013/EU of 7 August 2013

5th ATP - Regulation 944/2013/EU of 2 October 2013

6th ATP - Regulation 605/2014/EU of 5 June 2014

WFD Annex III replacement - Regulation 1357/2014/EU of 18 December 2014

Revised List of Waste 2014 - Decision 2014/955/EU of 18 December 2014

7th ATP - Regulation 2015/1221/EU of 24 July 2015

8th ATP - Regulation (EU) 2016/918 of 19 May 2016

9th ATP - Regulation (EU) 2016/1179 of 19 July 2016

10th ATP - Regulation (EU) 2017/776 of 4 May 2017

HP14 amendment - Regulation (EU) 2017/997 of 8 June 2017

13th ATP - Regulation (EU) 2018/1480 of 4 October 2018

14th ATP - Regulation (EU) 2020/217 of 4 October 2019

15th ATP - Regulation (EU) 2020/1182 of 19 May 2020

The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use)(Amendment etc.) (EU Exit)

Regulations 2020 - UK: 2020 No. 1567 of 16th December 2020

The Waste and Environmental Permitting etc. (Legislative Functions and Amendment etc.) (EU Exit) Regulations 2020 - UK: 2020 No. 1540 of 16th December 2020

GB MCL List - version 1.1 of 09 June 2021

GB MCL List v2.0 - version 2.0 of 20th October 2023

GB MCL List v3.0 - version 3.0 of 11th January 2024

GB MCL List v4.0 - version 4.0 of 2nd March 2024

APPENDIX 10 – FALLING HEAD TEST RESULTS

RIDGE

VARIABLE HEAD PERMEABILITY TEST

SITE	Tan Yard Brow
REF	5025143
BH REF	WS106

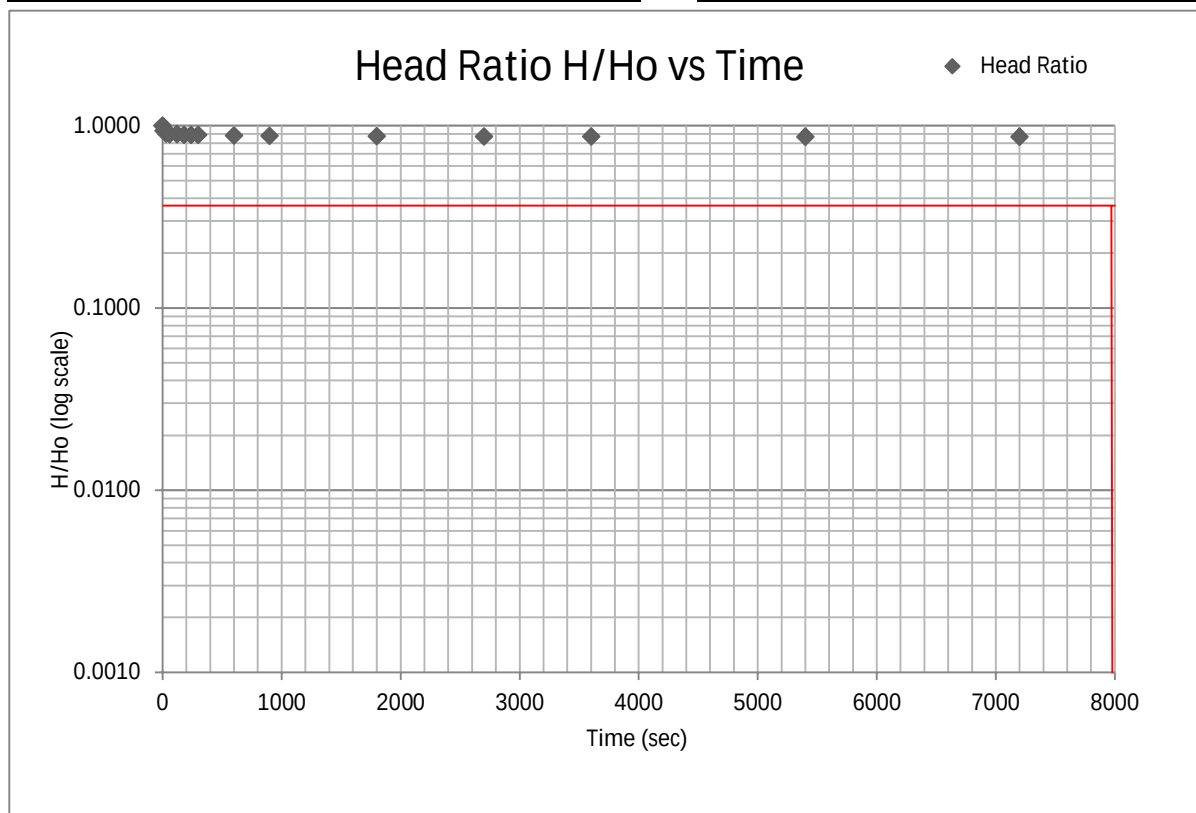
TYPE OF TEST	FALLING HEAD
STRATA	Made Ground to 0.60m, clay to 5.45m
DATE OF TEST	
STAFF	SD/JT

CONDITIONS OF TEST ZONE (BS5930:1999 Figure 6)	
Select 'Case' from Figure 6	D ▼
Diameter of Borehole (D)	50 mm
L (see BS5930:1999 Figure 6)	3950 mm
Intake Factor (F)	#REF!

Initial GW Depth	4.16 mbgl
Base of Installation	4.95 mbgl
Standpipe Diameter	50 mm
Standpipe X sec Area (A)	1.97E-03 m2
Depth to response zone	1 m
BASIC TIME LAG (T) (from Plot)	seconds

CALCULATED VALUES	
Permeability $k = A/F \times T$	
k =	TEST FAILED m/sec

FIELD MEASUREMENTS			
Time	Depth	Head H	Head Ratio
seconds	mbgl	m	H/Ho
0	0	4.160	1.0000
10	0.25	3.910	0.9399
30	0.39	3.770	0.9063
60	0.41	3.750	0.9014
120	0.42	3.740	0.8990
180	0.45	3.710	0.8918
240	0.45	3.710	0.8918
300	0.46	3.700	0.8894
600	0.48	3.680	0.8846
900	0.49	3.670	0.8822
1800	0.51	3.650	0.8774
2700	0.52	3.640	0.8750
3600	0.52	3.640	0.8750
5400	0.53	3.630	0.8726
7200	0.54	3.620	0.8702



RIDGE

VARIABLE HEAD PERMEABILITY TEST

SITE REF	Tan Yard Brow
BH REF	5025143
	WS101

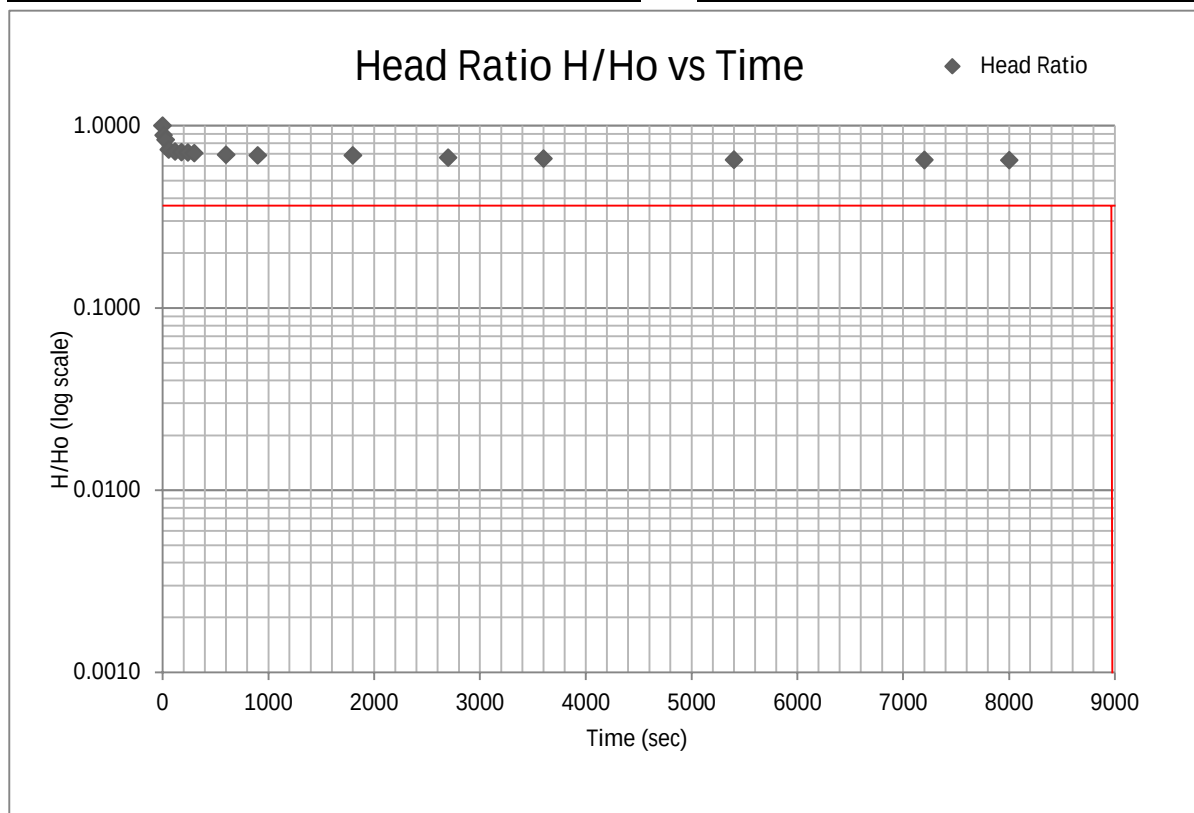
TYPE OF TEST	FALLING HEAD
STRATA	Made Ground to 0.60m, variable sand and clay to 4.45m
DATE OF TEST	
STAFF	SD/JT

CONDITIONS OF TEST ZONE (BS5930:1999 Figure 6)	
Select 'Case' from Figure 6	D ▼
Diameter of Borehole (D)	50 mm
L (see BS5930:1999 Figure 6)	2710 mm
Intake Factor (F)	#REF!

Initial GW Depth	3.16 mbgl
Base of Installation	3.71 mbgl
Standpipe Diameter	50 mm
Standpipe X sec Area (A)	1.97E-03 m2
Depth to response zone	1 m
BASIC TIME LAG (T) (from Plot)	seconds

CALCULATED VALUES	
Permeability $k = A/F \times T$	
k =	TEST FAILED m/sec

FIELD MEASUREMENTS			
Time	Depth	Head H	Head Ratio
seconds	mbgl	m	H/Ho
0	0	3.160	1.0000
10	0.36	2.800	0.8861
30	0.52	2.640	0.8354
60	0.82	2.340	0.7405
120	0.88	2.280	0.7215
180	0.9	2.260	0.7152
240	0.91	2.250	0.7120
300	0.92	2.240	0.7089
600	0.97	2.190	0.6930
900	0.99	2.170	0.6867
1800	0.99	2.170	0.6867
2700	1.05	2.110	0.6677
3600	1.07	2.090	0.6614
5400	1.1	2.060	0.6519
7200	1.11	2.050	0.6487
8000	1.12	2.040	0.6456



RIDGE

VARIABLE HEAD PERMEABILITY TEST

SITE REF	Tan Yard Brow
BH REF	5025143
	WS105

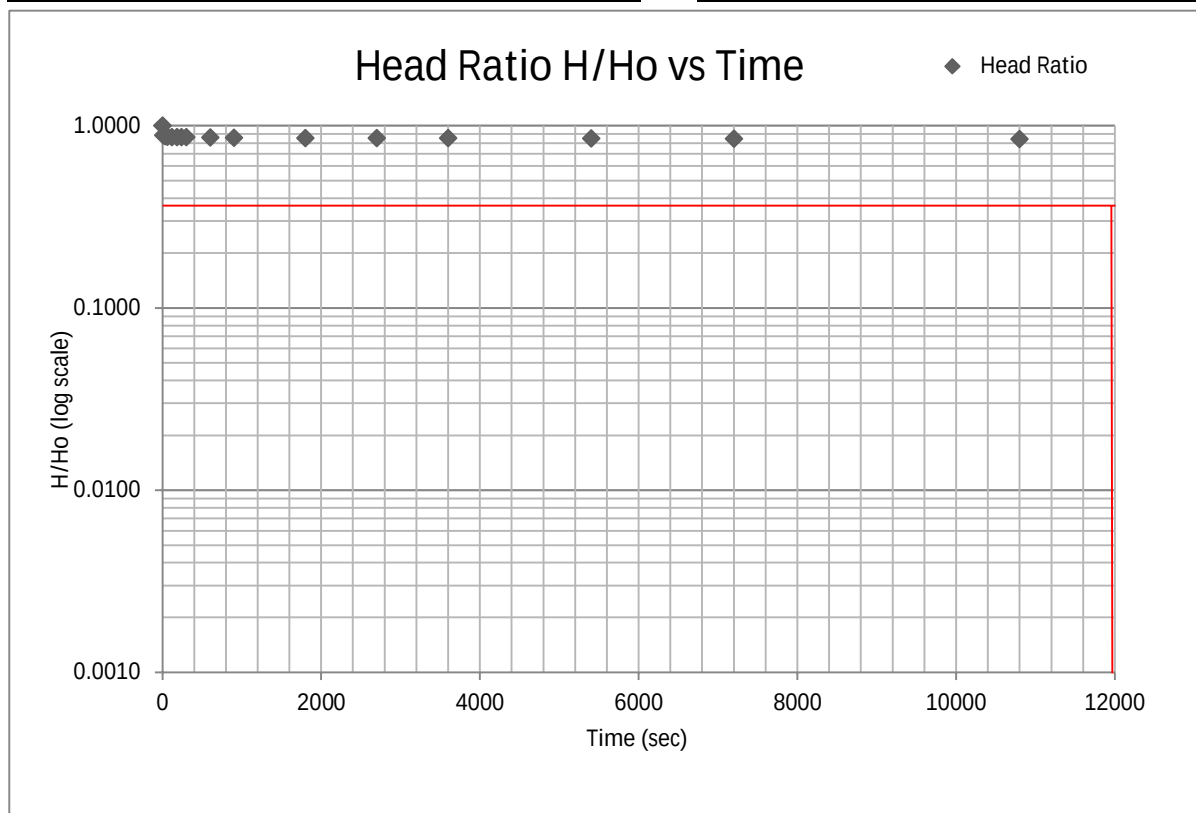
TYPE OF TEST	FALLING HEAD
STRATA	Made Ground to 0.50m, clay to 4.44m
DATE OF TEST	
STAFF	SD/JT

CONDITIONS OF TEST ZONE (BS5930:1999 Figure 6)	
Select 'Case' from Figure 6	D ▼
Diameter of Borehole (D)	50 mm
L (see BS5930:1999 Figure 6)	2840 mm
Intake Factor (F)	#REF!

Initial GW Depth	3.35 mbgl
Base of Installation	3.84 mbgl
Standpipe Diameter	50 mm
Standpipe X sec Area (A)	1.97E-03 m2
Depth to response zone	1 m
BASIC TIME LAG (T) (from Plot)	seconds

CALCULATED VALUES	
Permeability $k = A/F \times T$	
k =	TEST FAILED m/sec

FIELD MEASUREMENTS			
Time	Depth	Head H	Head Ratio
seconds	mbgl	m	H/Ho
0	0	3.350	1.0000
10	0.38	2.970	0.8866
30	0.41	2.940	0.8776
60	0.43	2.920	0.8716
120	0.45	2.900	0.8657
180	0.45	2.900	0.8657
240	0.45	2.900	0.8657
300	0.45	2.900	0.8657
600	0.46	2.890	0.8627
900	0.47	2.880	0.8597
1800	0.48	2.870	0.8567
2700	0.48	2.870	0.8567
3600	0.48	2.870	0.8567
5400	0.49	2.860	0.8537
7200	0.5	2.850	0.8507
10800	0.52	2.830	0.8448



APPENDIX 11 – JIWG ASSESSMENTS

Decision Support Tool for Receptor Risk Ranking

Stage 1 Hazard Identification		Score
Select ACM type (run model for each type to generate 'Worst Case' output)	Unspecified fibrous board	2
Extent of degradation of ACMs	Weathered (Slight degradation in ACM; material still retains its basic integrity)	2
Friability and degree of bonding by matrix (ACM matrix, not ground materials)	Non-friable ACM or ACM with fibres firmly linked in a matrix	0
Distribution of Visible Asbestos Across Affected Area	No visible ACMs/fibre bundles	0
Asbestos fibre type	Mainly amosite (and possible trace tremolite/anthophyllite) with/without chrysotile (no crocidolite)	3
Sub-total		7
Hazard ranking		Low

No warranty, expressed or implied, or reliance, is provided in relation to the use of this tool.
It is contingent on users to satisfy themselves that the output from the tool is relevant and appropriate to the assessment being made.

Stage 2			
Emission Factors		Score	
Amount of asbestos fibre in selected ACM/fibre type as % of host material	Moderate quantities - 0.05 to <0.1 %wt/wt	3	
Respirable fibre index for ACM - RIVM report 711701034 (2003)	Medium	3	
Activity type and effect on deterioration of ACMs	High disturbance, significant deterioration expected	4	
Best description of primary host material matrix	Made Ground - Recycled Aggregate, Track Ballast	4	
Sub-total		14	
Exposure ranking			Medium

Stage 3 Pathway and Receptor Sensitivity		Score	
Receptor category	Residential	No score required	
Age of Receptor	Infant (under 5)	4	
Duration of exposure/site occupancy	>> 10 hours per day (e.g. 24 hour residential exposure)	4	
Receptor ranking		8	High
Combined hazard, exposure and receptor ranking			Medium
Pathway: Distance of Receptor from Source	In or within 10m of area of disturbance	4	
Pathway: Depth to impacted material	Material visible at the surface, very likely to be disturbed by wind erosion and/or human/animal disturbance of	E	
Pathway ranking		4E	High
Overall ranking			High



Joint Industry Working Group
Asbestos in Soil and Construction & Demolition Materials

Project Reference	TYB 5025143
Site Name	Tan Yard Brow
Client	John Stephenson & co
Run by	SD
Date	14th June 2024
Reviewed by	BS
Characterisation of scenario being evaluated	Amosite in microscopic board
Interpretation of scenario ranking by DST	Risk based on current site conditions with the ACM at or near the surface based on SI results

Decision Support Tool for Receptor Risk Ranking

Stage 1 Hazard Identification		Score
Select ACM type (run model for each type to generate 'Worst Case' output)	Unspecified fibrous board	2
Extent of degradation of ACMs	Weathered (Slight degradation in ACM; material still retains its basic integrity)	2
Friability and degree of bonding by matrix (ACM matrix, not ground materials)	Non-friable ACM or ACM with fibres firmly linked in a matrix	0
Distribution of Visible Asbestos Across Affected Area	No visible ACMs/fibre bundles	0
Asbestos fibre type	Mainly amosite (and possible trace tremolite/anthophyllite) with/without chrysotile (no crocidolite)	3
Sub-total		7
Hazard ranking		Low

No warranty, expressed or implied, or reliance, is provided in relation to the use of this tool.
It is contingent on users to satisfy themselves that the output from the tool is relevant and appropriate to the assessment being made.

Stage 2			
Emission Factors		Score	
Amount of asbestos fibre in selected ACM/fibre type as % of host material	Moderate quantities - 0.05 to <0.1 %wt/wt	3	
Respirable fibre index for ACM - RIVM report 711701034 (2003)	Medium	3	
Activity type and effect on deterioration of ACMs	High disturbance, significant deterioration expected	4	
Best description of primary host material matrix	Made Ground - Recycled Aggregate, Track Ballast	4	
Sub-total		14	
Exposure ranking			Medium

Stage 3 Pathway and Receptor Sensitivity		Score	
Receptor category	Residential	No score required	
Age of Receptor	Infant (under 5)	4	
Duration of exposure/site occupancy	>> 10 hours per day (e.g. 24 hour residential exposure)	4	
Receptor ranking		8	High
Combined hazard, exposure and receptor ranking			Medium
Pathway: Distance of Receptor from Source	In or within 10m of area of disturbance	4	
Pathway: Depth to impacted material	Material buried at shallow depth, potential to be disturbed by excavation	C	
Pathway ranking		4C	Low
Overall ranking			Low

Project Reference	TYB 5025143
Site Name	Tan Yard Brow
Client	John Stephenson & co
Run by	SD
Date	14th June 2024
Reviewed by	BS
Characterisation of scenario being evaluated	Amosite in microscopic board
Interpretation of scenario ranking by DST	Low risk based on a 450mm cover system being placed over the asbestos source placing it at 'shallow depth'

APPENDIX 12 – RESLOPE OUTPUT

	Page No 1 Analysis
CADS ReSlope, Version 2.06 Slope stability analysis and design of reinforced soil slopes	Project File Name ss101.rsp"
	Engineer Date 19/06/2024

Soils input data	Density	Phi	Cohesion	Ru	Suction
	kN/m3	degrees	kN/m2	ratio	m (max)
Gravelly CLAY	21.5	30	0	0.00	0.0

Soil strata surface points	X m	Y m
Gravelly CLAY	0.01	0.00
	0.13	0.50
	5.80	1.00
	6.80	1.50
	8.80	3.00
	9.77	3.50
	10.50	4.00
	11.71	4.50
	13.10	5.00

Water input data	Density	9.81 kN/m3
-------------------------	---------	------------

Phreatic surface points	X m	Y m
	1.00	0.00

Piezometric grid was not enabled

Loading input data
No external loading was specified

No soil reinforcement was specified

Partial factors	Serviceability Limit State or conventional analysis
Design code referenced	
Ramifications of failure	fn 1.00
Soil self weight	ffs 1.00
Imposed loads	fq 1.00
Soil tan(phi)values	fms 1.00
Soil cohesion values	fms 1.00
Reinforcing material strength	fm 1.00
Sliding on reinforcement	fs 1.00
Reinforcement pull-out	fp 1.00

Seismic acceleration	
Vertical acceleration factor (x gravity)	0.00
Lateral acceleration factor (x gravity)	0.00

	Page No 2 Analysis
CADS ReSlope, Version 2.06 Slope stability analysis and design of reinforced soil slopes	Project File Name ss101.rsp"
	Engineer Date 19/06/2024

Slip circle definition

Method of analysis used is Bishop simplified (Moment equilibrium)

Minimum number of slices within slip is 5

A valid slip must have a depth greater than 1.00 m

Depth of water filled tension crack is 0.00 m

Grid of centres of circles

X Minimum value 1.0 m

X Maximum value 4.0 m

X Increment value 1.0 m

Y Minimum value 6.0 m

Y Maximum value 9.0 m

Y Increment value 1.0 m

The grid of centres is automatically extended to seek the minimum stability factor

The circles all pass through a line of points defined as follows

X Minimum value -2.6 m

X Maximum value 5.3 m

X Increment value 2.6 m

Y value at ground surface

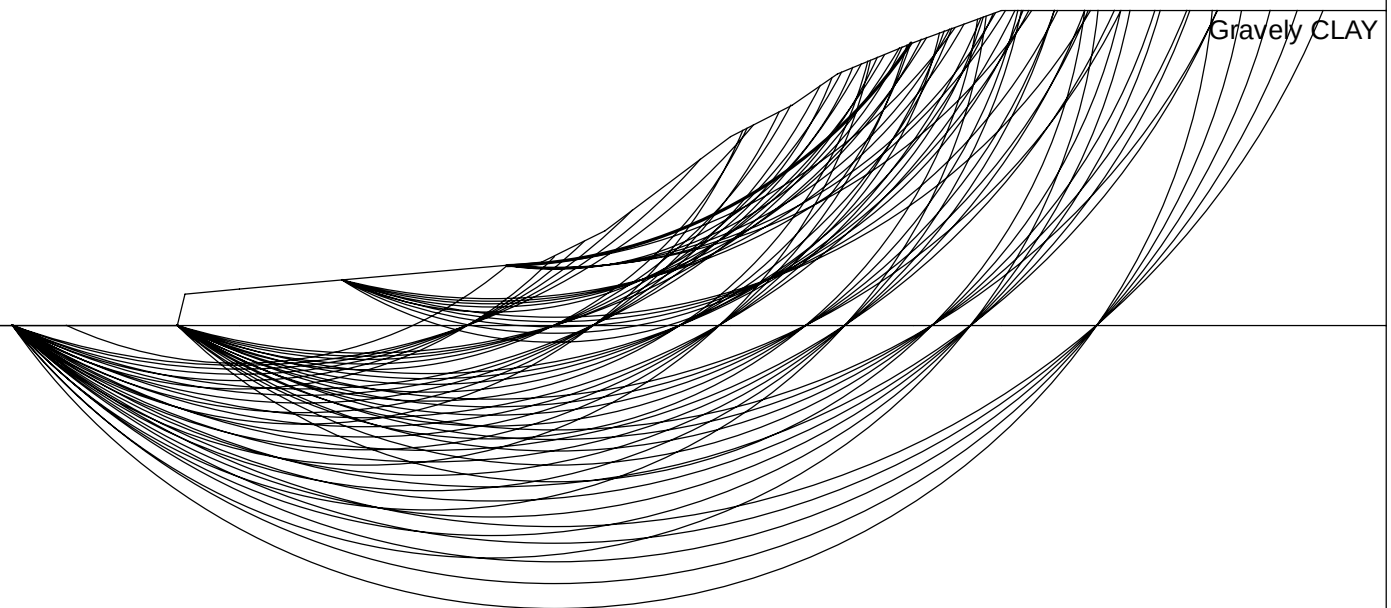
Tabular printout of circular slips

X	Y	Radius	Disturb	Restore	Restore	Stability
m	m	m	kNm/m	Soil	RForce	Factor
				kNm/m	kNm/m	-
1.00	6.00	7.00	157	564	0	3.59
2.00	6.00	7.57	440	1252	0	2.84
3.00	6.00	8.21	1152	2568	0	2.23
4.00	6.00	8.93	2052	4490	0	2.19
5.00	6.00	9.69	3078	7089	0	2.30
6.00	6.00	10.49	3790	10280	0	2.71
1.00	7.00	7.88	174	612	0	3.53
2.00	7.00	8.38	562	1385	0	2.47
3.00	7.00	8.97	1339	2757	0	2.06
4.00	7.00	9.63	2354	4725	0	2.01
5.00	7.00	10.34	3333	7242	0	2.17
6.00	7.00	11.10	4097	10330	0	2.52
1.00	8.00	8.78	198	674	0	3.41
2.00	8.00	9.23	705	1561	0	2.21
3.00	8.00	9.77	1575	3009	0	1.91
4.00	8.00	10.38	2630	5004	0	1.90
5.00	8.00	11.04	3591	7478	0	2.08
6.00	8.00	11.75	4702	10645	0	2.26
1.00	9.00	9.70	243	763	0	3.13
2.00	9.00	10.11	882	1770	0	2.01
3.00	9.00	10.61	1815	3301	0	1.82
4.00	9.00	11.17	2891	5327	0	1.84
5.00	9.00	11.79	3852	7784	0	2.02
6.00	9.00	12.46	4981	10966	0	2.20
1.00	10.00	10.63	329	893	0	2.72
2.00	10.00	11.01	1077	2020	0	1.88
3.00	10.00	11.47	2079	3639	0	1.75
4.00	10.00	11.99	3149	5693	0	1.81
5.00	10.00	12.57	4114	8150	0	1.98
6.00	10.00	13.20	5257	11369	0	2.16
3.00	6.00	6.70	266	746	0	2.81
4.00	6.00	7.21	742	1613	0	2.17
5.00	6.00	7.80	1393	2891	0	2.08
6.00	6.00	8.48	2157	4717	0	2.19
3.00	7.00	7.61	381	913	0	2.39

Critical circle slice details - continued

[illegible]

+	+	+	+	+	+
2.72	1.88	1.75	1.71	1.07	1.23
+	+	+	+	+	+
3.13	2.01	1.82	1.77	1.03	1.19
+	+	+	+	+	+
3.41	2.21	1.91	1.84	1.37	1.15
+	+	+	+	+	+
3.53	2.47	2.06	2.00	1.43	1.13
+	+	+	+	+	+
3.49	2.84	2.23	2.17	1.59	1.11



	Page No 1 Analysis
CADS ReSlope, Version 2.06 Slope stability analysis and design of reinforced soil slopes	Project File Name ss101.rsp"
	Engineer Date 19/06/2024

Soils input data	Density kN/m3	Phi degrees	Cohesion kN/m2	Ru ratio	Suction m (max)
Gravely CLAY	21.5	30	0	0.00	0.0

Soil strata surface points	X m	Y m
Gravely CLAY	0.01	0.00
	0.13	0.50
	5.80	1.00
	6.80	1.50
	8.80	3.00
	9.77	3.50
	10.50	4.00
	11.71	4.50
	13.10	5.00

Water input data	Density	9.81 kN/m3
------------------	---------	------------

Phreatic surface points	X m	Y m
	1.00	0.00

Piezometric grid was not enabled

Loading input data				
Load type	Magnitude	X Min m	X Max m	Y m
Surcharge	100.0 kN/m2	15.10	33.10	3.50

No soil reinforcement was specified

Partial factors		Serviceability Limit State or conventional analysis
Design code referenced		
Ramifications of failure	fn	1.00
Soil self weight	ffs	1.00
Imposed loads	fq	1.00
Soil tan(phi)values	fms	1.00
Soil cohesion values	fms	1.00
Reinforcing material strength	fm	1.00
Sliding on reinforcement	fs	1.00
Reinforcement pull-out	fp	1.00

Seismic acceleration	
Vertical acceleration factor (x gravity)	0.00
Lateral acceleration factor (x gravity)	0.00

	Page No 2 Analysis
CADS ReSlope, Version 2.06 Slope stability analysis and design of reinforced soil slopes	Project File Name ss101.rsp"
	Engineer Date 19/06/2024

Slip circle definition

Method of analysis used is Bishop simplified (Moment equilibrium)

Minimum number of slices within slip is 5

A valid slip must have a depth greater than 1.00 m

Depth of water filled tension crack is 0.00 m

Grid of centres of circles

X Minimum value 1.0 m

X Maximum value 4.0 m

X Increment value 1.0 m

Y Minimum value 6.0 m

Y Maximum value 9.0 m

Y Increment value 1.0 m

The grid of centres is automatically extended to seek the minimum stability factor

The circles all pass through a line of points defined as follows

X Minimum value -2.6 m

X Maximum value 5.3 m

X Increment value 2.6 m

Y value at ground surface

Tabular printout of circular slips

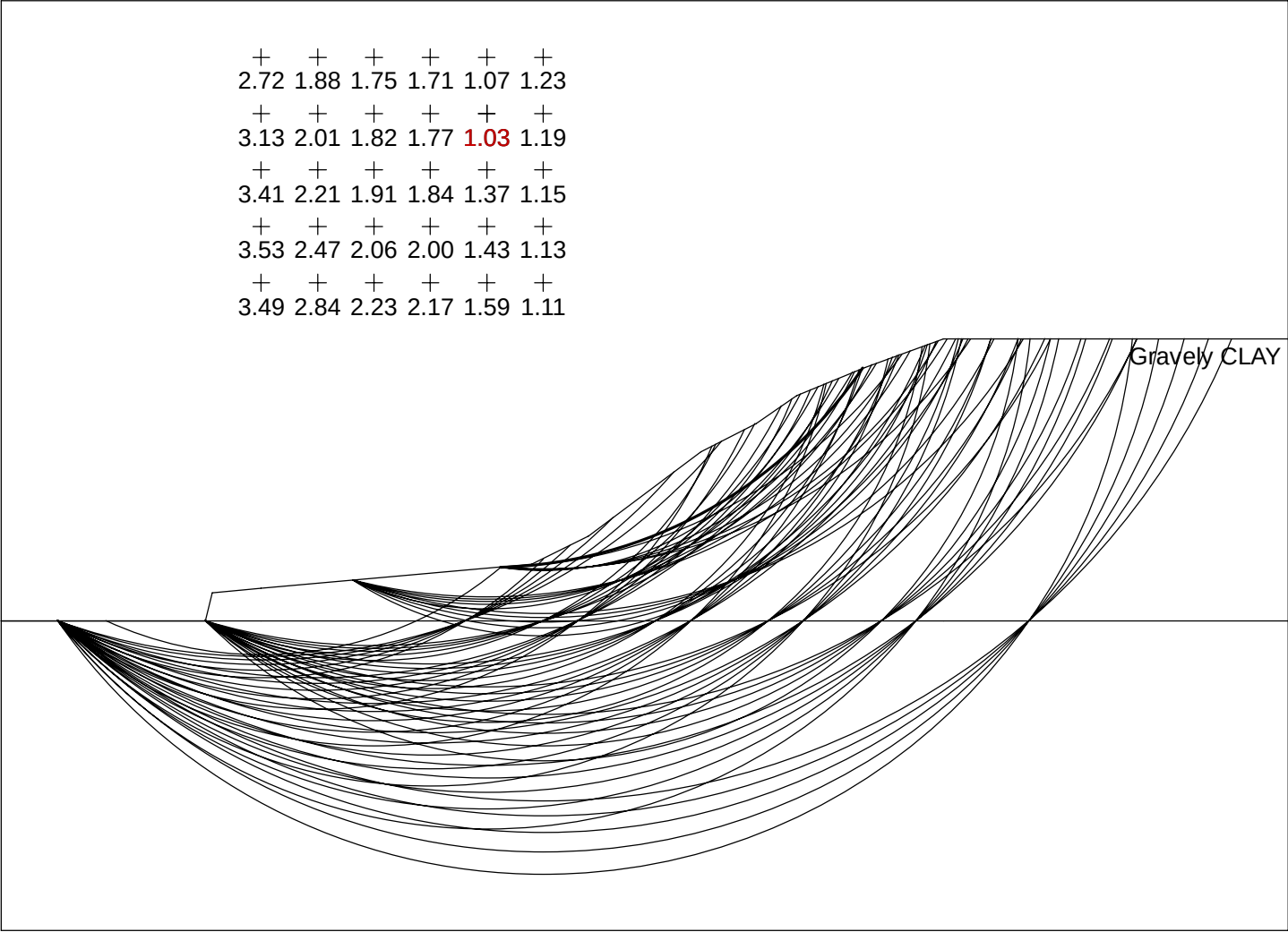
X	Y	Radius	Disturb	Restore	Restore	Stability
m	m	m	kNm/m	Soil	RForce	Factor
				kNm/m	kNm/m	-
1.00	6.00	7.00	157	564	0	3.59
2.00	6.00	7.57	440	1252	0	2.84
3.00	6.00	8.21	1152	2568	0	2.23
4.00	6.00	8.93	2052	4490	0	2.19
5.00	6.00	9.69	3078	7089	0	2.30
6.00	6.00	10.49	5106	11374	0	2.23
1.00	7.00	7.88	174	612	0	3.53
2.00	7.00	8.38	562	1385	0	2.47
3.00	7.00	8.97	1339	2757	0	2.06
4.00	7.00	9.63	2354	4725	0	2.01
5.00	7.00	10.34	3378	7277	0	2.15
6.00	7.00	11.10	5913	11719	0	1.98
1.00	8.00	8.78	198	674	0	3.41
2.00	8.00	9.23	705	1561	0	2.21
3.00	8.00	9.77	1575	3009	0	1.91
4.00	8.00	10.38	2630	5004	0	1.90
5.00	8.00	11.04	4136	7867	0	1.90
6.00	8.00	11.75	7018	12542	0	1.79
1.00	9.00	9.70	243	763	0	3.13
2.00	9.00	10.11	882	1770	0	2.01
3.00	9.00	10.61	1815	3301	0	1.82
4.00	9.00	11.17	2891	5327	0	1.84
5.00	9.00	11.79	4897	8494	0	1.73
6.00	9.00	12.46	7797	13149	0	1.69
1.00	10.00	10.63	329	893	0	2.72
2.00	10.00	11.01	1077	2020	0	1.88
3.00	10.00	11.47	2079	3639	0	1.75
4.00	10.00	11.99	3149	5693	0	1.81
5.00	10.00	12.57	5660	9177	0	1.62
6.00	10.00	13.20	8574	13871	0	1.62
3.00	6.00	6.70	266	746	0	2.81
4.00	6.00	7.21	742	1613	0	2.17
5.00	6.00	7.80	1393	2891	0	2.08
6.00	6.00	8.48	2157	4717	0	2.19
3.00	7.00	7.61	381	913	0	2.39

	Page No 4 Analysis
CADS ReSlope, Version 2.06 Slope stability analysis and design of reinforced soil slopes	Project File Name ss101.rsp"
	Engineer Date 19/06/2024

Critical circle slice details - continued

X	Top Y	Btm Y	Base Angle deg.	Soil Cu/C'	Soil TanPhi	Total Weight kN	Vert Load kN	Lat' Load kN	Top Water kN/m2	Base Water kN/m2	Normal Force kN
9.77	3.50	2.51									
			39.7	0.0	0.577	14.7	0.0	0.0	0.0	0.0	13.0
10.50	4.00	3.12									
			49.5	0.0	0.577	11.0	0.0	0.0	0.0	0.0	10.3
11.67	4.48	4.48									

Diagram showing all circles



	Page No 1 Analysis
CADS ReSlope, Version 2.06 Slope stability analysis and design of reinforced soil slopes	Project File Name ss102.rsp"
	Engineer Date 19/06/2024

Soils input data	Density	Phi	Cohesion	Ru	Suction
	kN/m3	degrees	kN/m2	ratio	m (max)
Gravelly CLAY	21.5	30	0	0.00	0.0

Soil strata surface points	X m	Y m
Gravelly CLAY	0.00	0.00
	0.19	0.50
	0.60	1.00
	2.13	1.50
	3.31	2.00
	4.31	2.50
	5.02	3.00
	5.72	3.50
	6.42	4.00
	7.12	4.50
	7.81	5.00
	8.50	5.50
	9.42	6.00
	10.49	6.50
	11.68	7.00
	12.87	7.50
	14.11	8.00

Water input data	Density	9.81 kN/m3
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Phreatic surface points	X m	Y m
	0.50	0.00

Piezometric grid was not enabled

Loading input data
No external loading was specified

No soil reinforcement was specified

Partial factors		Serviceability Limit State or conventional analysis
Design code referenced	fn	1.00
Ramifications of failiure	ffs	1.00
Soil self weight	fq	1.00
Imposed loads	fms	1.00
Soil tan(phi)values	fms	1.00
Soil cohesion values	fm	1.00
Reinforcing material strength	fs	1.00
Sliding on reinforcement	fp	1.00
Reinforcement pull-out		

Seismic acceleration	
Vertical acceleration factor (x gravity)	0.00
Lateral acceleration factor (x gravity)	0.00

	Page No 2 Analysis
CADS ReSlope, Version 2.06 Slope stability analysis and design of reinforced soil slopes	Project File Name ss102.rsp"
	Engineer Date 19/06/2024

Slip circle definition

Method of analysis used is Bishop simplified (Moment equilibrium)

Minimum number of slices within slip is 5

A valid slip must have a depth greater than 1.00 m

Depth of water filled tension crack is 0.00 m

Grid of centres of circles

X Minimum value 1.0 m

X Maximum value 4.0 m

X Increment value 1.0 m

Y Minimum value 9.0 m

Y Maximum value 12.0 m

Y Increment value 1.0 m

The grid of centres is automatically extended to seek the minimum stability factor

The circles all pass through a line of points defined as follows

X Minimum value -2.8 m

X Maximum value 5.6 m

X Increment value 2.8 m

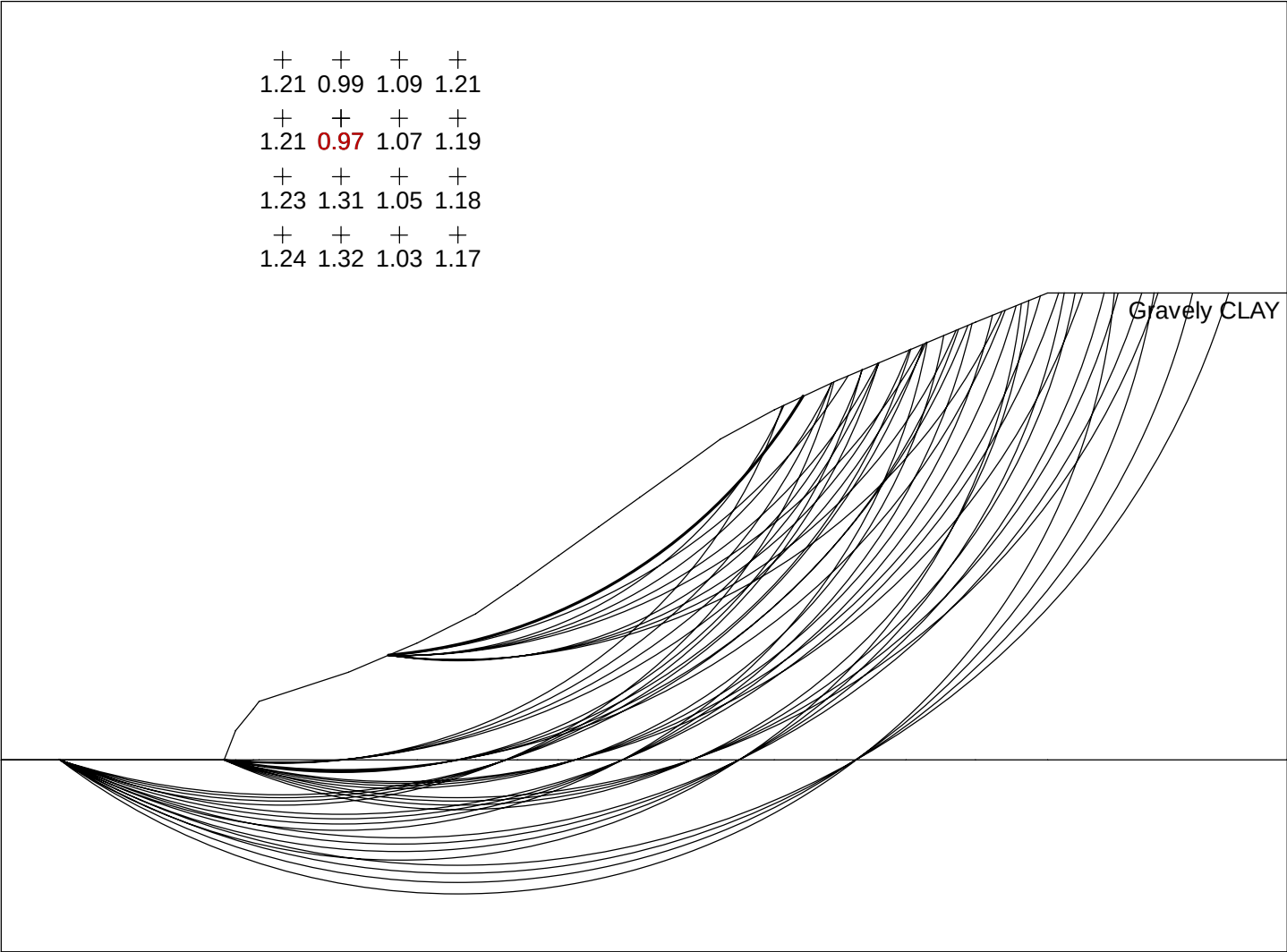
Y value at ground surface

Tabular printout of circular slips

X	Y	Radius	Disturb	Restore	Restore	Stability
m	m	m	kNm/m	Soil	RForce	Factor
				kNm/m	kNm/m	-
1.00	9.00	9.78	2250	2876	0	1.28
2.00	9.00	10.21	3441	4674	0	1.36
3.00	9.00	10.72	4816	7083	0	1.47
4.00	9.00	11.29	6331	10171	0	1.61
1.00	10.00	10.70	2735	3432	0	1.26
2.00	10.00	11.10	3994	5361	0	1.34
3.00	10.00	11.57	5509	7928	0	1.44
4.00	10.00	12.10	6963	11044	0	1.59
1.00	11.00	11.64	3253	4041	0	1.24
2.00	11.00	12.01	4642	6151	0	1.33
3.00	11.00	12.44	6198	8830	0	1.42
4.00	11.00	12.94	7599	11983	0	1.58
1.00	12.00	12.59	3819	4737	0	1.24
2.00	12.00	12.93	5311	7011	0	1.32
3.00	12.00	13.34	6857	9780	0	1.43
4.00	12.00	13.80	8242	12987	0	1.58
1.00	9.00	9.06	1353	1683	0	1.24
2.00	9.00	9.22	2027	2677	0	1.32
3.00	9.00	9.49	2830	4032	0	1.42
4.00	9.00	9.85	3770	5842	0	1.55
1.00	10.00	10.05	1768	2167	0	1.23
2.00	10.00	10.20	2518	3295	0	1.31
3.00	10.00	10.44	3426	4807	0	1.40
4.00	10.00	10.77	4483	6780	0	1.51
1.00	11.00	11.05	2245	2727	0	1.21
2.00	11.00	11.18	3082	4002	0	1.30
3.00	11.00	11.40	4064	5663	0	1.39
4.00	11.00	11.70	5155	7755	0	1.50
1.00	12.00	12.04	2765	3358	0	1.21
2.00	12.00	12.17	3697	4788	0	1.30
3.00	12.00	12.37	4770	6609	0	1.39
4.00	12.00	12.65	5809	8778	0	1.51
3.00	9.00	7.21	478	491	0	1.03
4.00	9.00	7.30	841	982	0	1.17
3.00	10.00	8.21	690	722	0	1.05

	Page No 4 Analysis
CADS ReSlope, Version 2.06 Slope stability analysis and design of reinforced soil slopes	Project File Name ss102.rsp"
	Engineer Date 19/06/2024

Diagram showing all circles



+

1.24

+

1.32

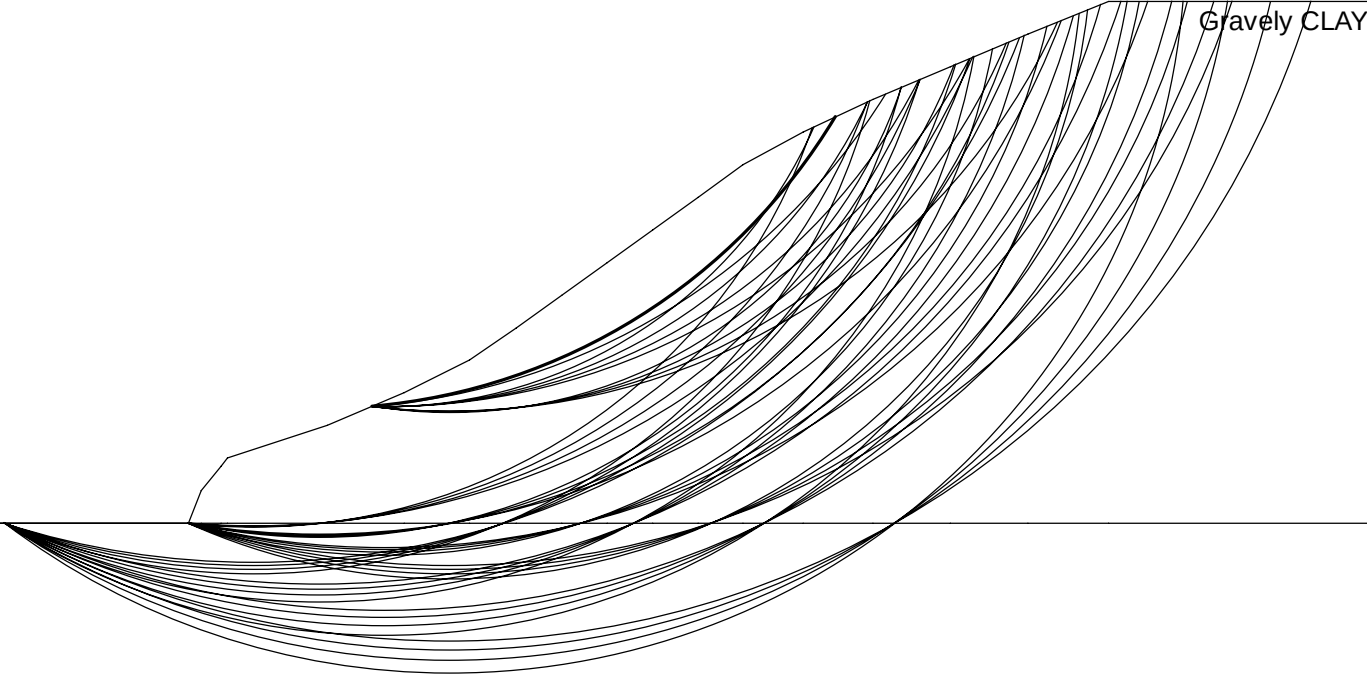
+

1.03

+

1.17

Gravelly CLAY



	Page No 1 Analysis
CADS ReSlope, Version 2.06 Slope stability analysis and design of reinforced soil slopes	Project File Name ss102.rsp"
	Engineer Date 19/06/2024

Soils input data	Density kN/m3	Phi degrees	Cohesion kN/m2	Ru ratio	Suction m (max)
Gravelly CLAY	21.5	30	0	0.00	0.0

Soil strata surface points	X m	Y m
Gravelly CLAY	0.00	0.00
	0.19	0.50
	0.60	1.00
	2.13	1.50
	3.31	2.00
	4.31	2.50
	5.02	3.00
	5.72	3.50
	6.42	4.00
	7.12	4.50
	7.81	5.00
	8.50	5.50
	9.42	6.00
	10.49	6.50
	11.68	7.00
	12.87	7.50
	14.11	8.00

Water input data	Density	9.81 kN/m3
------------------	---------	------------

Phreatic surface points	X m	Y m
	0.50	0.00

Piezometric grid was not enabled

Loading input data	Magnitude	X Min m	X Max m	Y m
Load type				
Surcharge	100.0 kN/m2	16.00	34.11	6.50

No soil reinforcement was specified

Partial factors		Serviceability Limit State or conventional analysis
Design code referenced	fn	1.00
Ramifications of failure	ffs	1.00
Soil self weight	fq	1.00
Imposed loads	fms	1.00
Soil tan(phi)values	fms	1.00
Soil cohesion values	fm	1.00
Reinforcing material strength	fs	1.00
Sliding on reinforcement	fp	1.00
Reinforcement pull-out		

Seismic acceleration	
Vertical acceleration factor (x gravity)	0.00
Lateral acceleration factor (x gravity)	0.00

	Page No 2 Analysis
CADS ReSlope, Version 2.06 Slope stability analysis and design of reinforced soil slopes	Project File Name ss102.rsp"
	Engineer Date 19/06/2024

Slip circle definition

Method of analysis used is Bishop simplified (Moment equilibrium)

Minimum number of slices within slip is 5

A valid slip must have a depth greater than 1.00 m

Depth of water filled tension crack is 0.00 m

Grid of centres of circles

X Minimum value 1.0 m

X Maximum value 4.0 m

X Increment value 1.0 m

Y Minimum value 9.0 m

Y Maximum value 12.0 m

Y Increment value 1.0 m

The grid of centres is automatically extended to seek the minimum stability factor

The circles all pass through a line of points defined as follows

X Minimum value -2.8 m

X Maximum value 5.6 m

X Increment value 2.8 m

Y value at ground surface

Tabular printout of circular slips

X	Y	Radius	Disturb	Restore	Restore	Stability
m	m	m	kNm/m	Soil	RForce	Factor
				kNm/m	kNm/m	-
1.00	9.00	9.78	2250	2876	0	1.28
2.00	9.00	10.21	3441	4674	0	1.36
3.00	9.00	10.72	4816	7083	0	1.47
4.00	9.00	11.29	6331	10171	0	1.61
1.00	10.00	10.70	2735	3432	0	1.26
2.00	10.00	11.10	3994	5361	0	1.34
3.00	10.00	11.57	5509	7928	0	1.44
4.00	10.00	12.10	6963	11044	0	1.59
1.00	11.00	11.64	3253	4041	0	1.24
2.00	11.00	12.01	4642	6151	0	1.33
3.00	11.00	12.44	6198	8830	0	1.42
4.00	11.00	12.94	8325	12450	0	1.50
1.00	12.00	12.59	3819	4737	0	1.24
2.00	12.00	12.93	5311	7011	0	1.32
3.00	12.00	13.34	6857	9780	0	1.43
4.00	12.00	13.80	9767	13930	0	1.43
1.00	9.00	9.06	1353	1683	0	1.24
2.00	9.00	9.22	2027	2677	0	1.32
3.00	9.00	9.49	2830	4032	0	1.42
4.00	9.00	9.85	3770	5842	0	1.55
1.00	10.00	10.05	1768	2167	0	1.23
2.00	10.00	10.20	2518	3295	0	1.31
3.00	10.00	10.44	3426	4807	0	1.40
4.00	10.00	10.77	4483	6780	0	1.51
1.00	11.00	11.05	2245	2727	0	1.21
2.00	11.00	11.18	3082	4002	0	1.30
3.00	11.00	11.40	4064	5663	0	1.39
4.00	11.00	11.70	5155	7755	0	1.50
1.00	12.00	12.04	2765	3358	0	1.21
2.00	12.00	12.17	3697	4788	0	1.30
3.00	12.00	12.37	4770	6609	0	1.39
4.00	12.00	12.65	5809	8778	0	1.51
3.00	9.00	7.21	478	491	0	1.03
4.00	9.00	7.30	841	982	0	1.17
3.00	10.00	8.21	690	722	0	1.05

	Page No 1 Analysis
CADS ReSlope, Version 2.06 Slope stability analysis and design of reinforced soil slopes	Project File Name ss103.rsp"
	Engineer Date 19/06/2024

Soils input data	Density	Phi	Cohesion	Ru	Suction
	kN/m3	degrees	kN/m2	ratio	m (max)
Gravelly CLAY	21.5	30	0	0.00	0.0

Soil strata surface points	X m	Y m
Gravelly CLAY	0.01	0.00
	0.61	0.50
	1.20	1.00
	1.79	1.50
	2.76	2.00
	3.73	2.50
	4.73	3.00
	5.73	3.50
	6.76	4.00
	8.06	4.50
	9.37	5.00
	10.65	5.50
	11.93	6.00
	13.21	6.50
	14.49	7.00
	15.71	7.50

Water input data Density 9.81 kN/m3

Piezometric grid was not enabled

Loading input data
No external loading was specified

No soil reinforcement was specified

Partial factors

Design code referenced	Serviceability Limit State or conventional analysis	
Ramifications of failure	fn	1.00
Soil self weight	ffs	1.00
Imposed loads	fq	1.00
Soil tan(phi)values	fms	1.00
Soil cohesion values	fms	1.00
Reinforcing material strength	fm	1.00
Sliding on reinforcement	fs	1.00
Reinforcement pull-out	fp	1.00

Seismic acceleration

Vertical acceleration factor (x gravity)	0.00
Lateral acceleration factor (x gravity)	0.00

	Page No 2 Analysis
CADS ReSlope, Version 2.06 Slope stability analysis and design of reinforced soil slopes	Project File Name ss103.rsp"
	Engineer Date 19/06/2024

Slip circle definition

Method of analysis used is Bishop simplified (Moment equilibrium)

Minimum number of slices within slip is 10

A valid slip must have a depth greater than 1.00 m

Depth of water filled tension crack is 0.00 m

Grid of centres of circles

X Minimum value 1.0 m

X Maximum value 4.0 m

X Increment value 1.0 m

Y Minimum value 8.0 m

Y Maximum value 11.0 m

Y Increment value 1.0 m

The grid of centres is automatically extended to seek the minimum stability factor

The circles all pass through a line of points defined as follows

X Minimum value -3.1 m

X Maximum value 6.3 m

X Increment value 3.1 m

Y value at ground surface

Tabular printout of circular slips

X	Y	Radius	Disturb	Restore	Restore	Stability
m	m	m	kNm/m	Soil	RForce	Factor
				kNm/m	kNm/m	-
-1.00	8.00	8.28	495	631	0	1.27
0.00	8.00	8.59	1019	1469	0	1.44
1.00	8.00	9.00	1721	2780	0	1.62
2.00	8.00	9.50	2572	4672	0	1.82
3.00	8.00	10.08	3617	7328	0	2.03
4.00	8.00	10.72	4922	10961	0	2.23
-1.00	9.00	9.25	651	819	0	1.26
0.00	9.00	9.53	1248	1763	0	1.41
1.00	9.00	9.90	1997	3159	0	1.58
2.00	9.00	10.36	2924	5153	0	1.76
3.00	9.00	10.89	4102	7917	0	1.93
4.00	9.00	11.48	5484	11603	0	2.12
-1.00	10.00	10.22	831	1041	0	1.25
0.00	10.00	10.48	1489	2092	0	1.40
1.00	10.00	10.82	2314	3602	0	1.56
2.00	10.00	11.24	3348	5715	0	1.71
3.00	10.00	11.73	4587	8575	0	1.87
4.00	10.00	12.28	6106	12367	0	2.03
-1.00	11.00	11.20	1040	1309	0	1.26
0.00	11.00	11.44	1770	2475	0	1.40
1.00	11.00	11.75	2668	4104	0	1.54
2.00	11.00	12.14	3778	6336	0	1.68
3.00	11.00	12.59	5142	9332	0	1.81
4.00	11.00	13.11	6715	13194	0	1.96
-1.00	8.00	8.06	362	390	0	1.08
0.00	8.00	8.00	587	705	0	1.20
1.00	8.00	8.06	894	1201	0	1.34
2.00	8.00	8.24	1294	1959	0	1.51
3.00	8.00	8.54	1808	3086	0	1.71
4.00	8.00	8.94	2454	4712	0	1.92
-1.00	9.00	9.06	505	562	0	1.11
0.00	9.00	9.00	779	953	0	1.22
1.00	9.00	9.05	1136	1540	0	1.36
2.00	9.00	9.22	1592	2400	0	1.51
3.00	9.00	9.48	2182	3648	0	1.67

	Page No Analysis	3
CADS ReSlope, Version 2.06 Slope stability analysis and design of reinforced soil slopes	Project File Name	ss103.rsp"
	Engineer Date	19/06/2024

Tabular printout of circular slips - continued

X	Y	Radius	Disturb	Restore	Restore	Stability
m	m	m	kNm/m	Soil kNm/m	RForce kNm/m	Factor -
4.00	9.00	9.84	2898	5381	0	1.86
-2.00	10.00	10.20	436	460	0	1.05
-1.00	10.00	10.05	678	774	0	1.14
0.00	10.00	10.00	997	1244	0	1.25
1.00	10.00	10.05	1406	1926	0	1.37
2.00	10.00	10.20	1928	2902	0	1.51
3.00	10.00	10.44	2588	4273	0	1.65
4.00	10.00	10.77	3384	6135	0	1.81
-2.00	11.00	11.18	590	640	0	1.08
-1.00	11.00	11.05	876	1025	0	1.17
0.00	11.00	11.00	1243	1581	0	1.27
1.00	11.00	11.04	1707	2363	0	1.38
2.00	11.00	11.18	2301	3462	0	1.50
3.00	11.00	11.40	3023	4950	0	1.64
4.00	11.00	11.70	3937	6977	0	1.77
4.00	8.00	5.86	211	314	0	1.49
4.00	9.00	6.85	294	440	0	1.50
4.00	10.00	7.85	392	591	0	1.51
4.00	11.00	8.84	510	774	0	1.52

Critical circle (minimum stability factor) details

Circle centre X coordinate	-2.00 m
Circle centre Y coordinate	10.00 m
Circle radius	10.20 m
Disturbing moment	436 kNm/m
Restoring moment due to soil shear	460 kNm/m
Restoring moment due to reinforcement	0 kNm/m
Stability factor	1.05

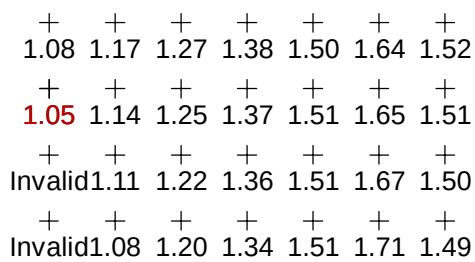
Critical circle slice details

[illegible]

Critical circle slice details - continued

[illegible]

Diagram showing all circles



Gravely CLAY

	Page No 1 Analysis
CADS ReSlope, Version 2.06 Slope stability analysis and design of reinforced soil slopes	Project File Name ss103.rsp"
	Engineer Date 19/06/2024

Soils input data	Density kN/m3	Phi degrees	Cohesion kN/m2	Ru ratio	Suction m (max)
Gravelly CLAY	21.5	30	0	0.00	0.0

Soil strata surface points	X m	Y m
Gravelly CLAY	0.01	0.00
	0.61	0.50
	1.20	1.00
	1.79	1.50
	2.76	2.00
	3.73	2.50
	4.73	3.00
	5.73	3.50
	6.76	4.00
	8.06	4.50
	9.37	5.00
	10.65	5.50
	11.93	6.00
	13.21	6.50
	14.49	7.00
	15.71	7.50

Water input data Density 9.81 kN/m3

Piezometric grid was not enabled

Loading input data	Magnitude	X Min m	X Max m	Y m
Load type				
Surcharge	100.0 kN/m2	17.71	35.71	6.00

No soil reinforcement was specified

Partial factors		Serviceability Limit State or conventional analysis
Design code referenced		
Ramifications of failure	fn	1.00
Soil self weight	ffs	1.00
Imposed loads	fq	1.00
Soil tan(phi)values	fms	1.00
Soil cohesion values	fms	1.00
Reinforcing material strength	fm	1.00
Sliding on reinforcement	fs	1.00
Reinforcement pull-out	fp	1.00

Seismic acceleration	
Vertical acceleration factor (x gravity)	0.00
Lateral acceleration factor (x gravity)	0.00

	Page No 2 Analysis
CADS ReSlope, Version 2.06 Slope stability analysis and design of reinforced soil slopes	Project File Name ss103.rsp"
	Engineer Date 19/06/2024

Slip circle definition

Method of analysis used is Bishop simplified (Moment equilibrium)

Minimum number of slices within slip is 10

A valid slip must have a depth greater than 1.00 m

Depth of water filled tension crack is 0.00 m

Grid of centres of circles

X Minimum value 1.0 m

X Maximum value 4.0 m

X Increment value 1.0 m

Y Minimum value 8.0 m

Y Maximum value 11.0 m

Y Increment value 1.0 m

The grid of centres is automatically extended to seek the minimum stability factor

The circles all pass through a line of points defined as follows

X Minimum value -3.1 m

X Maximum value 6.3 m

X Increment value 3.1 m

Y value at ground surface

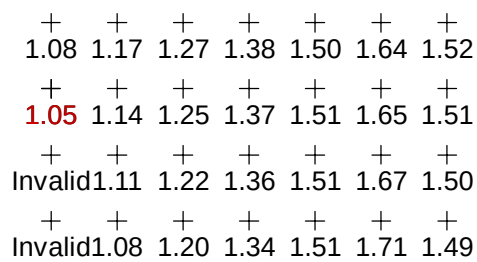
Tabular printout of circular slips

X	Y	Radius	Disturb	Restore	Restore	Stability
m	m	m	kNm/m	Soil	RForce	Factor
				kNm/m	kNm/m	-
-1.00	8.00	8.28	495	631	0	1.27
0.00	8.00	8.59	1019	1469	0	1.44
1.00	8.00	9.00	1721	2780	0	1.62
2.00	8.00	9.50	2572	4672	0	1.82
3.00	8.00	10.08	3617	7328	0	2.03
4.00	8.00	10.72	4922	10961	0	2.23
-1.00	9.00	9.25	651	819	0	1.26
0.00	9.00	9.53	1248	1763	0	1.41
1.00	9.00	9.90	1997	3159	0	1.58
2.00	9.00	10.36	2924	5153	0	1.76
3.00	9.00	10.89	4102	7917	0	1.93
4.00	9.00	11.48	5484	11603	0	2.12
-1.00	10.00	10.22	831	1041	0	1.25
0.00	10.00	10.48	1489	2092	0	1.40
1.00	10.00	10.82	2314	3602	0	1.56
2.00	10.00	11.24	3348	5715	0	1.71
3.00	10.00	11.73	4587	8575	0	1.87
4.00	10.00	12.28	6106	12367	0	2.03
-1.00	11.00	11.20	1040	1309	0	1.26
0.00	11.00	11.44	1770	2475	0	1.40
1.00	11.00	11.75	2668	4104	0	1.54
2.00	11.00	12.14	3778	6336	0	1.68
3.00	11.00	12.59	5142	9332	0	1.81
4.00	11.00	13.11	6715	13194	0	1.96
-1.00	8.00	8.06	362	390	0	1.08
0.00	8.00	8.00	587	705	0	1.20
1.00	8.00	8.06	894	1201	0	1.34
2.00	8.00	8.24	1294	1959	0	1.51
3.00	8.00	8.54	1808	3086	0	1.71
4.00	8.00	8.94	2454	4712	0	1.92
-1.00	9.00	9.06	505	562	0	1.11
0.00	9.00	9.00	779	953	0	1.22
1.00	9.00	9.05	1136	1540	0	1.36
2.00	9.00	9.22	1592	2400	0	1.51
3.00	9.00	9.48	2182	3648	0	1.67

Critical circle slice details - continued

[illegible]

Diagram showing all circles



Gravely CLAY



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