

PHOTOGRAPHIC LOG

Site Location: Swansea University Bay Campus, Swansea

Photo No.
21

Date:
22/01/2020

General view of arisings from WS2. Note liner split during drilling.



Photo No.
22

Date:
22/01/2020

General view failed hand pit for WS3. Note concrete in centre of pit



PHOTOGRAPHIC LOG

Site Location: Swansea University Bay Campus, Swansea

Photo No.
23

Date:
22/01/2020

General view of arisings from WS3 between 1.2m and 2.2m.



Photo No.
24

Date:
22/01/2020

General view of arisings from WS3 between 2.2m and 3.2m



PHOTOGRAPHIC LOG

Site Location: Swansea University Bay Campus, Swansea

Photo No.
25

Date:
22/01/2020

General view of arisings from WS3 between 3.2m and 4.2m



Photo No.
26

Date:
22/01/2020

General view of attempted hand pits for WS4. All failed at similar depths on concrete.



PHOTOGRAPHIC LOG

Site Location: Swansea University Bay Campus, Swansea

Photo No.
27

Date:
22/01/2020

General
view of
arising
WS4.



Photo No.
28

Date:
22/01/2020

General
view failed
hand pit for
WS4. Note
concrete in
centre of pit.



APPENDIX D

RISK ASSESSMENT METHODOLOGY

CLR11 outlines the framework to be followed for risk assessment in the UK. The framework is designed to be consistent with UK legislation and policies including planning. Under CLR11, three stages of risk assessment exist: preliminary, generic quantitative and detailed quantitative. An outline conceptual model should be formed at the preliminary risk assessment stage that collates all the existing information pertaining to a site in text, tabular or diagrammatic form. The outline conceptual model identifies potentially complete (termed possible) pollutant linkages (source–pathway–receptor) and is used as the basis for the design of the site investigation. The outline conceptual model is updated as further information becomes available, for example as a result of the site investigation.

Production of a conceptual model requires an assessment of risk to be made. Risk is a combination of the likelihood of an event occurring and the magnitude of its consequences. Therefore, both the likelihood and the consequences of an event must be taken into account when assessing risk. RSK has adopted guidance provided in CIRIA C552 for use in the production of conceptual models.

The likelihood of an event can be classified on a four-point system using the following terms and definitions based on CIRIA C552:

- highly likely: the event appears very likely in the short term and almost inevitable over the long term or there is evidence at the receptor of harm or pollution
- likely: it is probable that an event will occur or circumstances are such that the event is not inevitable, but possible in the short term and likely over the long term
- low likelihood: circumstances are possible under which an event could occur, but it is not certain even in the long term that an event would occur and it is less likely in the short term
- unlikely: circumstances are such that it is improbable the event would occur even in the long term.

The severity can be classified using a similar system also based on CIRIA C552. The terms and definitions relating to severity are:

- severe: short term (acute) risk to human health likely to result in ‘significant harm’ as defined by the Environment Protection Act 1990, Part IIA. Short-term risk of pollution of sensitive water resources. Catastrophic damage to buildings or property. Short-term risk to an ecosystem or organism forming part of that ecosystem (note definition of ecosystem in ‘Draft Circular on Contaminated Land’, DETR 2000)
- medium: chronic damage to human health (‘significant harm’ as defined in ‘Draft Circular on Contaminated Land’, DETR 2000), pollution of sensitive water resources, significant change in an ecosystem or organism forming part of that ecosystem (note definition of ecosystem in ‘Draft Circular on Contaminated Land’, DETR 2000)
- mild: pollution of non-sensitive water resources. Significant damage to crops, buildings, structures and services (‘significant harm’ as defined in ‘Draft Circular on Contaminated Land’, DETR 2000). Damage to sensitive buildings, structures or the environment

- minor: harm, not necessarily significant, but that could result in financial loss or expenditure to resolve. Non-permanent human health effects easily prevented by use of personal protective clothing. Easily repairable damage to buildings, structures and services.

Once the likelihood of an event occurring and its severity have been classified, a risk category can be assigned the table below.

		Consequences			
		Severe	Medium	Mild	Minor
Probability	Highly likely	Very high	High	Moderate	Moderate/low
	Likely	High	Moderate	Moderate/low	Low
	Low likelihood	Moderate	Moderate/low	Low	Very low
	Unlikely	Moderate/low	Low	Very low	Very low

Definitions of these risk categories are as follows together with an assessment of the further work that may be required:

- Very high: there is a high probability that severe harm could occur or there is evidence that severe harm is currently happening. This risk, if realised, could result in substantial liability; urgent investigation and remediation are likely to be required.
- High: harm is likely to occur. Realisation of the risk is likely to present a substantial liability. Urgent investigation is required. Remedial works may be necessary in the short term and are likely over the long term.
- Moderate: it is possible that harm could arise, but it is unlikely that the harm would be severe and it is more likely that the harm would be relatively mild. Investigation is normally required to clarify the risk and determine the liability. Some remedial works may be required in the longer term.
- Low: it is possible that harm could occur, but it is likely that if realised this harm would at worst normally be mild.
- Very low: there is a low possibility that harm could occur and if realised the harm is unlikely to be severe.



APPENDIX E GROUNDSURE ENVIRONMENTAL DATABASE REPORT



RSK Environment Ltd

STRUCTURAL SOILS LTD, THE OLD SCHOOL,
STILLHOUSE LANE, BEDMINSTER,
BRISTOL, BS3 4EB

Groundsure
Reference:

GS-6521934

Your Reference: 314617

Report Date 17 Dec 2019

Report Delivery Method: Email - pdf

Enviro Insight

Address: Crymlyn Way, Skewen Swansea, SA1 8QB

Dear Sir/ Madam,

Thank you for placing your order with Groundsure. Please find enclosed the **Groundsure Enviro Insight** as requested.

If you need any further assistance, please do not hesitate to contact our helpline on 08444 159000 quoting the above Groundsure reference number.

Yours faithfully,

Managing Director
Groundsure Limited

Enc.
Groundsure Enviroinsight

Address: Crymlyn Way, Skewen Swansea, SA1 8QB

Date: 17 Dec 2019

Reference: GS-6521934

Client: RSK Environment Ltd

NW

N

NE

W

E



SW

S

SE

Aerial Photograph Capture date: 26-May-2017

Grid Reference: 270217,192869

Site Size: 0.2364ha

Report Reference: GS-6521934

Client Reference: 314617

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Overview of Findings

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Section 1: Historical Industrial Sites	On-site	0-50	51-250	251-500
1.1 Potentially Contaminative Uses identified from 1:10,000 scale mapping	3	4	15	42
1.2 Additional Information – Historical Tank Database	8	4	18	35
1.3 Additional Information – Historical Energy Features Database	0	0	2	1
1.4 Additional Information – Historical Petrol and Fuel Site Database	0	0	4	0
1.5 Additional Information – Historical Garage and Motor Vehicle Repair Database	0	0	0	0
1.6 Historical military sites	0	0	0	0
1.7 Potentially Infilled Land	0	3	0	7
Section 2: Environmental Permits, Incidents and Registers	On-site	0-50m	51-250	251-500
2.1 Industrial Sites Holding Environmental Permits and/or Authorisations				
2.1.1 Records of historic IPC Authorisations	0	0	0	0
2.1.2 Records of Part A(1) and IPPC Authorised Activities	0	0	0	0
2.1.3 Records of Red List Discharge Consents	0	0	0	0
2.1.4 Records of List 1 Dangerous Substances Inventory sites	0	0	0	0
2.1.5 Records of List 2 Dangerous Substances Inventory sites	0	0	0	1
2.1.6 Records of Part A(2) and Part B Activities and Enforcements	0	0	0	0
2.1.7 Records of Category 3 or 4 Radioactive Substances Authorisations	0	0	0	0
2.1.8 Records of Licensed Discharge Consents	0	0	4	7
2.1.9 Records of Water Industry Referrals	0	0	0	0
2.1.10 Records of Planning Hazardous Substance Consents and Enforcements within 500m of the study site	0	0	0	2
2.2 Records of COMAH and NIHHS sites	1	0	1	0
2.3 Environment Agency/Natural Resources Wales Recorded Pollution Incidents				
2.3.1 National Incidents Recording System, List 2	0	1	19	21
2.3.2 National Incidents Recording System, List 1	0	0	0	0
2.4 Sites Determined as Contaminated Land under Part 2A EPA 1990	0	0	0	0

Section 3: Landfill and Other Waste Sites	On-site	0-50m	51-250	251-500	501-1000	1000-1500
3.1 Landfill Sites						
3.1.1 Environment Agency/Natural Resources Wales Registered Landfill Sites	0	0	0	0	0	Not searched
3.1.2 Environment Agency/Natural Resources Wales Historic Landfill Sites	0	0	0	0	1	1
3.1.3 BGS/DoE Landfill Site Survey	0	0	0	0	1	0
3.1.4 Records of Landfills in Local Authority and Historical Mapping Records	0	0	0	0	0	0
3.2 Landfill and Other Waste Sites Findings						
3.2.1 Operational and Non-Operational Waste Treatment, Transfer and Disposal Sites	0	0	0	1	Not searched	Not searched
3.2.2 Environment Agency/Natural Resources Wales Licensed Waste Sites	0	0	0	9	21	1

Section 4: Current Land Use	On-site	0-50m	51-250	251-500
4.1 Current Industrial Sites Data	0	3	7	Not searched
4.2 Records of Petrol and Fuel Sites	0	0	1	0
4.3 National Grid Underground Electricity Cables	0	0	0	0
4.4 National Grid Gas Transmission Pipelines	0	0	0	0

Section 5: Geology	
5.1 Records of Artificial Ground and Made Ground present beneath the study site	Identified
5.2 Records of Superficial Ground and Drift Geology present beneath the study site	Identified
5.3 For records of Bedrock and Solid Geology beneath the study site see the detailed findings section.	

Section 6: Hydrogeology and Hydrology				0-500m		
6.1 Records of Strata Classification in the Superficial Geology within 500m of the study site				Identified		
6.2 Records of Strata Classification in the Bedrock Geology within 500m of the study site				Identified		
	On-site	0-50m	51-250	251-500	501-1000	1000-2000
6.3 Groundwater Abstraction Licences (within 2000m of the study site)	0	0	0	0	0	0
6.4 Surface Water Abstraction Licences (within 2000m of the study site)	0	0	0	0	0	3
6.5 Potable Water Abstraction Licences (within 2000m of the study site)	0	0	0	0	0	0
6.6 Source Protection Zones (within 500m of the study site)	0	0	0	0	Not searched	Not searched
6.7 Source Protection Zones within Confined Aquifer	0	0	0	0	Not searched	Not searched
6.8 Groundwater Vulnerability and Soil Leaching Potential (within 500m of the study site)	1	1	1	0	Not searched	Not searched

Section 6: Hydrogeology and Hydrology

0-500m

	On-site	0-50m	51-250	251-500	501-1000	1000-1500
6.9 Environment Agency/Natural Resources Wales information on river quality within 1500m of the study site	No	No	No	No	No	Yes
6.10 Ordnance Survey MasterMap Water Network entries within 500m of the site	0	0	22	16	Not searched	Not searched
6.11 Surface water features within 250m of the study site	No	No	Yes	Not searched	Not searched	Not searched

Section 7: Flooding

7.1 Environment Agency Zone 2 floodplains within 250m of the study site	Identified					
7.2 Environment Agency/Natural Resources Wales Zone 3 floodplains within 250m of the study site	Identified					
7.3 Risk of flooding from Rivers and the Sea (RoFRaS) rating for the study site	Low					
7.4 Flood Defences within 250m of the study site	None identified					
7.5 Areas benefiting from Flood Defences within 250m of the study site	None identified					
7.6 Areas used for Flood Storage within 250m of the study site	None identified					
7.7 Maximum BGS Groundwater Flooding susceptibility within 50m of the study site	Potential at Surface					
7.8 BGS confidence rating for the Groundwater Flooding susceptibility areas	Moderate					

Section 8: Designated Environmentally Sensitive Sites

	On-site	0-50m	51-250	251-500	501-1000	1000-2000
8.1 Records of Sites of Special Scientific Interest (SSSI)	0	1	0	1	2	1
8.2 Records of National Nature Reserves (NNR)	0	0	0	0	2	2
8.3 Records of Special Areas of Conservation (SAC)	0	0	0	0	3	1
8.4 Records of Special Protection Areas (SPA)	0	0	0	0	0	0
8.5 Records of Ramsar sites	0	0	0	0	2	1
8.6 Records of Ancient Woodlands	0	0	0	0	0	17
8.7 Records of Local Nature Reserves (LNR)	0	0	0	0	0	1
8.8 Records of World Heritage Sites	0	0	0	0	0	0
8.9 Records of Environmentally Sensitive Areas	0	0	0	0	0	0

Section 8: Designated Environmentally Sensitive Sites	On-site	0-50m	51-250	251-500	501-1000	1000-2000
8.10 Records of Areas of Outstanding Natural Beauty (AONB)	0	0	0	0	0	0
8.11 Records of National Parks	0	0	0	0	0	0
8.12 Records of Nitrate Sensitive Areas	0	0	0	0	0	0
8.13 Records of Nitrate Vulnerable Zones	0	0	0	0	0	0
8.14 Records of Green Belt land	0	0	0	0	0	0

Section 9: Natural Hazards	
9.1 Maximum risk of natural ground subsidence	Negligible
9.1.1 Maximum Shrink-Swell hazard rating identified on the study site	Negligible
9.1.2 Maximum Landslides hazard rating identified on the study site	Very Low
9.1.3 Maximum Soluble Rocks hazard rating identified on the study site	Negligible
9.1.4 Maximum Compressible Ground hazard rating identified on the study site	Negligible
9.1.5 Maximum Collapsible Rocks hazard rating identified on the study site	Negligible
9.1.6 Maximum Running Sand hazard rating identified on the study site	Negligible
9.2 Radon	
9.2.1 Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level?	The site is in a Radon Affected Area, as between 1 and 3% of properties are above the Action Level.
9.2.2 Is the property in an area where Radon Protection are required for new properties or extensions to existing ones as described in publication BR211 by the Building Research Establishment?	No radon protective measures are necessary.

Section 10: Mining	
10.1 Coal mining areas within 75m of the study site	Identified
10.2 Non-Coal Mining areas within 50m of the study site boundary	None identified
10.3 Brine affected areas within 75m of the study site	None identified

Using this report

The following report is designed by Environmental Consultants for Environmental Professionals bringing together the most up-to-date market leading environmental data. This report is provided under and subject to the Terms & Conditions agreed between Groundsure and the Client. The document contains the following sections:

1. Historical Industrial Sites

Provides information on past land uses that may pose a risk to the study site in terms of potential contamination from activities or processes. Potentially Infilled Land features are also included. This search is conducted using radii of up to 500m.

2. Environmental Permits, Incidents and Registers

Provides information on Regulated Industrial Activities and Pollution Incidents as recorded by Regulatory Authorities, and sites determined as Contaminated Land. This search is conducted using radii up to 500m.

3. Landfills and Other Waste Sites

Provides information on landfills and other waste sites that may pose a risk to the study site. This search is conducted using radii up to 1500m.

4. Current Land Uses

Provides information on current land uses that may pose a risk to the study site in terms of potential contamination from activities or processes. These searches are conducted using radii of up to 500m. This includes information on potentially contaminative industrial sites, petrol stations and fuel sites as well as high pressure gas pipelines and underground electricity transmission lines.

5. Geology

Provides information on artificial and superficial deposits and bedrock beneath the study site.

6. Hydrogeology and Hydrology

Provides information on productive strata within the bedrock and superficial geological layers, abstraction licences, Source Protection Zones (SPZs) and river quality. These searches are conducted using radii of up to 2000m.

7. Flooding

Provides information on river and coastal flooding, flood defences, flood storage areas and groundwater flood areas. This search is conducted using radii of up to 250m.

8. Designated Environmentally Sensitive Sites

Provides information on the Sites of Special Scientific Interest (SSSI), National Nature Reserves (NNR), Special Areas of Conservation (SAC), Special Protection Areas (SPA), Ramsar sites, Local Nature Reserves (LNR), Areas of Outstanding Natural Beauty (AONB), National Parks (NP), Environmentally Sensitive Areas, Nitrate Sensitive Areas, Nitrate Vulnerable Zones and World Heritage Sites and Scheduled Ancient Woodland. These searches are conducted using radii of up to 2000m.

9. Natural Hazards

Provides information on a range of natural hazards that may pose a risk to the study site. These factors include natural ground subsidence and radon..

10. Mining

Provides information on areas of coal and non-coal mining and brine affected areas.

11. Contacts

This section of the report provides contact points for statutory bodies and data providers that may be able to provide further information on issues raised within this report. Alternatively, Groundsure provide a free Technical Helpline (08444 159000) for further information and guidance.

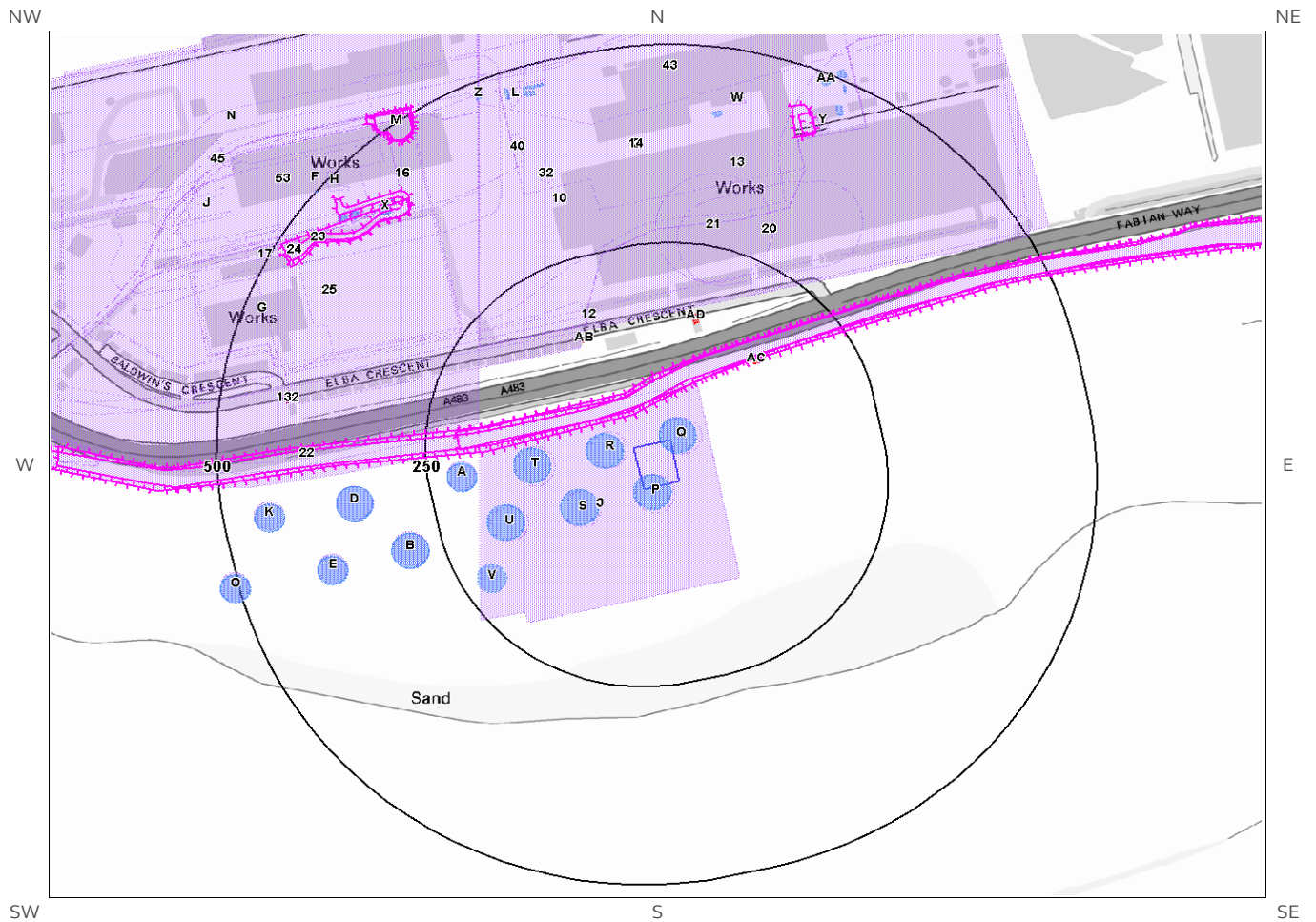
Note: Maps

Only certain features are placed on the maps within the report. All features represented on maps found within this search are given an identification number. This number identifies the feature on the mapping and correlates it to the additional information provided below. This identification number precedes all other information and takes the following format -Id: 1, Id: 2, etc. Where numerous features on the same map are in such close proximity that the numbers would obscure each other a letter identifier is used instead to represent the features. (e.g. Three features which overlap may be given the identifier "A" on the map and would be identified separately as features 1A, 3A, 10A on the data tables provided).

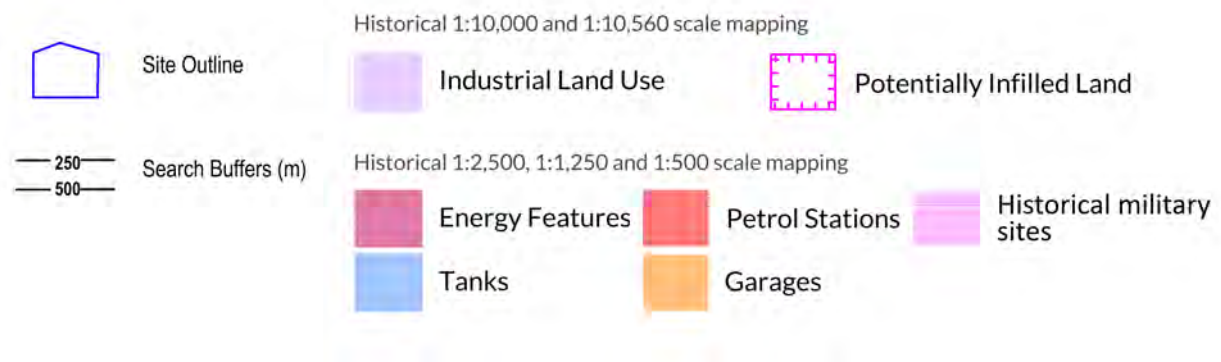
Where a feature is reported in the data tables to a distance greater than the map area, it is noted in the data table as "Not Shown".

All distances given in this report are in Metres (m). Directions are given as compass headings such as N: North, E: East, NE: North East from the nearest point of the study site boundary.

1. Historical Land Use



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1. Historical Industrial Sites

1.1 Potentially Contaminative Uses identified from 1:10,000 scale Mapping

The systematic analysis of data extracted from standard 1:10,560 and 1:10,000 scale historical maps provides the following information:

Records of sites with a potentially contaminative past land use within 500m of the search boundary: 64

ID	Distance [m]	Direction	Use	Date
1P	0	On Site	Unspecified Tank	1978
2Q	0	On Site	Unspecified Tank	1978
3	0	On Site	Oil Storage Depot	1978
4R	8	W	Unspecified Tank	1978
5AE	40	N	Unspecified Heap	1921
6AF	46	N	Unspecified Heap	1914
7AG	48	N	Unspecified Heap	1948
8S	56	W	Unspecified Tank	1978
9T	97	W	Unspecified Tank	1978
10	142	NW	Dock Works	1938
11U	144	W	Unspecified Tank	1978
12	158	N	Railway Sidings	1938
13	162	N	Unspecified Works	1978
14	165	N	Railway Sidings	1962
15C	165	N	Unspecified Works	1962
16	177	N	Railway Sidings	1948
17	189	W	Railway Sidings	1963
18A	193	W	Unspecified Tank	1977
19A	193	W	Unspecified Tank	1988
20	203	N	Rifle Range	1948
21	204	N	Rifle Range	1962
22	231	W	Railway Sidings	1948
23	254	NW	Tin Plate Works	1921
24	255	NW	Tin Plate Works	1914
25	256	NW	Tin Plate Works	1948
26B	268	W	Unspecified Tank	1977
27B	268	W	Unspecified Tank	1988
28C	303	N	Tin Plate Works	1948
29D	320	W	Unspecified Tank	1977
30D	320	W	Unspecified Tank	1988
31F	342	NW	Unspecified Works	1963
32	350	N	Railway Building	1962
33E	367	W	Unspecified Tank	1977
34E	367	W	Unspecified Tank	1988

35F	375	NW	Unspecified Works	1977
36H	375	NW	Unspecified Works	1988
37G	376	W	Unspecified Works	1977
38G	376	W	Unspecified Works	1988
39H	377	NW	Tin Plate Works	1948
40	380	N	Railway Building	1962
41I	402	NW	Unspecified Ground Workings	1914
42I	403	NW	Unspecified Heap	1921
43	410	N	Railway Sidings	1978
44J	417	NW	Railway Sidings	1914
45	417	NW	Railway Sidings	1921
46J	417	NW	Railway Sidings	1914
47K	428	W	Unspecified Tank	1977
48K	428	W	Unspecified Tank	1988
49W	428	N	Railway Building	1962
50Y	429	NE	Railway Building	1962
51I	442	NW	Unspecified Tanks	1977
52I	442	NW	Unspecified Tanks	1988
53	443	NW	Railway Buildings	1914
54L	455	N	Railway Building	1962
55N	464	NW	Railway Sidings	1988
56L	471	N	Railway Building	1962
57H	473	NW	Railway Sidings	1914
58M	474	NW	Refuse Heap	1914
59M	476	NW	Refuse Heap	1921
60M	477	NW	Refuse Heap	1914
61Z	479	N	Unspecified Tanks	1948
62N	484	NW	Railway Sidings	1977
63O	487	W	Unspecified Tank	1977
64O	487	W	Unspecified Tank	1988

1.2 Additional Information – Historical Tank Database

The systematic analysis of data extracted from High Detailed 1:1,250 and 1:2,500 scale historical maps provides the following information.

Records of historical tanks within 500m of the search boundary:

65

ID	Distance (m)	Direction	Use	Date
65P	0	On Site	Unspecified Tank	1993
66P	0	On Site	Unspecified Tank	1970
67P	0	On Site	Unspecified Tank	1993
68P	0	On Site	Unspecified Tank	1993

69Q	0	On Site	Unspecified Tank	1993
70Q	0	On Site	Unspecified Tank	1993
71Q	0	On Site	Unspecified Tank	1993
72Q	0	On Site	Unspecified Tank	1970
73R	13	W	Unspecified Tank	1993
74R	13	W	Unspecified Tank	1993
75R	13	W	Unspecified Tank	1993
76R	14	W	Unspecified Tank	1970
77S	58	W	Unspecified Tank	1993
78S	58	W	Unspecified Tank	1993
79S	58	W	Unspecified Tank	1993
80S	58	W	Unspecified Tank	1970
81T	102	W	Unspecified Tank	1993
82T	102	W	Unspecified Tank	1993
83T	102	W	Unspecified Tank	1993
84T	103	W	Unspecified Tank	1970
85U	148	W	Unspecified Tank	1970
86U	148	W	Unspecified Tank	1993
87U	148	W	Unspecified Tank	1993
88U	148	W	Unspecified Tank	1993
89A	192	W	Unspecified Tank	1993
90A	192	W	Unspecified Tank	1967
91A	192	W	Unspecified Tank	1964
92V	196	SW	Unspecified Tank	1993
93V	196	SW	Unspecified Tank	1993
94V	196	SW	Unspecified Tank	1993
95B	267	W	Unspecified Tank	1993
96B	268	W	Unspecified Tank	1967
97B	268	W	Unspecified Tank	1964
98D	320	W	Unspecified Tank	1967
99D	320	W	Unspecified Tank	1964
100D	320	W	Unspecified Tank	1993
101E	368	W	Unspecified Tank	1993
102E	368	W	Unspecified Tank	1967
103E	369	W	Unspecified Tank	1964
104W	412	N	Tanks	1963
105X	416	NW	Tanks	1971
106X	416	NW	Tanks	1992
107X	423	NW	Tanks	1992
108X	423	NW	Tanks	1971
109K	428	W	Unspecified Tank	1967
110K	428	W	Unspecified Tank	1964
111K	428	W	Unspecified Tank	1993
112I	441	NW	Unspecified Tank	1971
113I	441	NW	Unspecified Tank	1992
114I	449	NW	Unspecified Tank	1992

115I	449	NW	Unspecified Tank	1971
116Y	458	NE	Tanks	1993
117L	462	N	Unspecified Tank	1941
118L	465	N	Unspecified Tank	1941
119L	470	N	Tanks	1941
120Z	477	N	Unspecified Tank	1941
121AA	485	N	Unspecified Tank	1993
122AA	485	NE	Unspecified Tank	1993
123O	487	W	Unspecified Tank	1967
124O	487	W	Unspecified Tank	1964
125AA	487	NE	Tanks	1993
126O	488	W	Unspecified Tank	1993
127F	498	NW	Tanks	1992
128F	499	NW	Tanks	1971
129AA	500	NE	Tanks	1993

1.3 Additional Information – Historical Energy Features Database

The systematic analysis of data extracted from High Detailed 1:1,250 and 1:2,500 scale historical maps provides the following information.

Records of historical energy features within 500m of the search boundary:

3

ID	Distance (m)	Direction	Use	Date
130AB	146	NW	Electricity Substation	1993
131AB	147	NW	Electricity Transformer	1969
132	417	W	Electricity Substation	1993

1.4 Additional Information – Historical Petrol and Fuel Site Database

The systematic analysis of data extracted from High Detailed 1:1,250 and 1:2,500 scale historical maps provides the following information.

Records of historical petrol stations and fuel sites within 500m of the search boundary:

4

ID	Distance (m)	Direction	Use	Date
133AC	139	NE	Filling Station	1969
134AC	139	NE	Filling Station	1968
135AD	149	N	Filling Station	1969
136AD	150	N	Filling Station	1968

1.5 Additional Information – Historical Garage and Motor Vehicle Repair Database

The systematic analysis of data extracted from High Detailed 1:1,250 and 1:2,500 scale historical maps provides the following information.

Records of historical garage and motor vehicle repair sites within 500m of the search boundary: 0

Database searched and no data found.

1.6 Historical military sites

Certain military installations were not noted on historic mapping for security reasons. Whilst not all military land is necessarily of concern, Groundsure has researched and digitised a number of Ordnance Factories and other military industrial features (e.g. Ordnance Depots, Munitions Testing Grounds) which may be of contaminative concern. This research was drawn from a number of different sources, and should not be regarded as a definitive or exhaustive database of potentially contaminative military installations. The boundaries of sites within this database have been estimated from the best evidence available to Groundsure at the time of compilation.

Records of historical military sites within 500m of the search boundary: 0

Database searched and no data found.

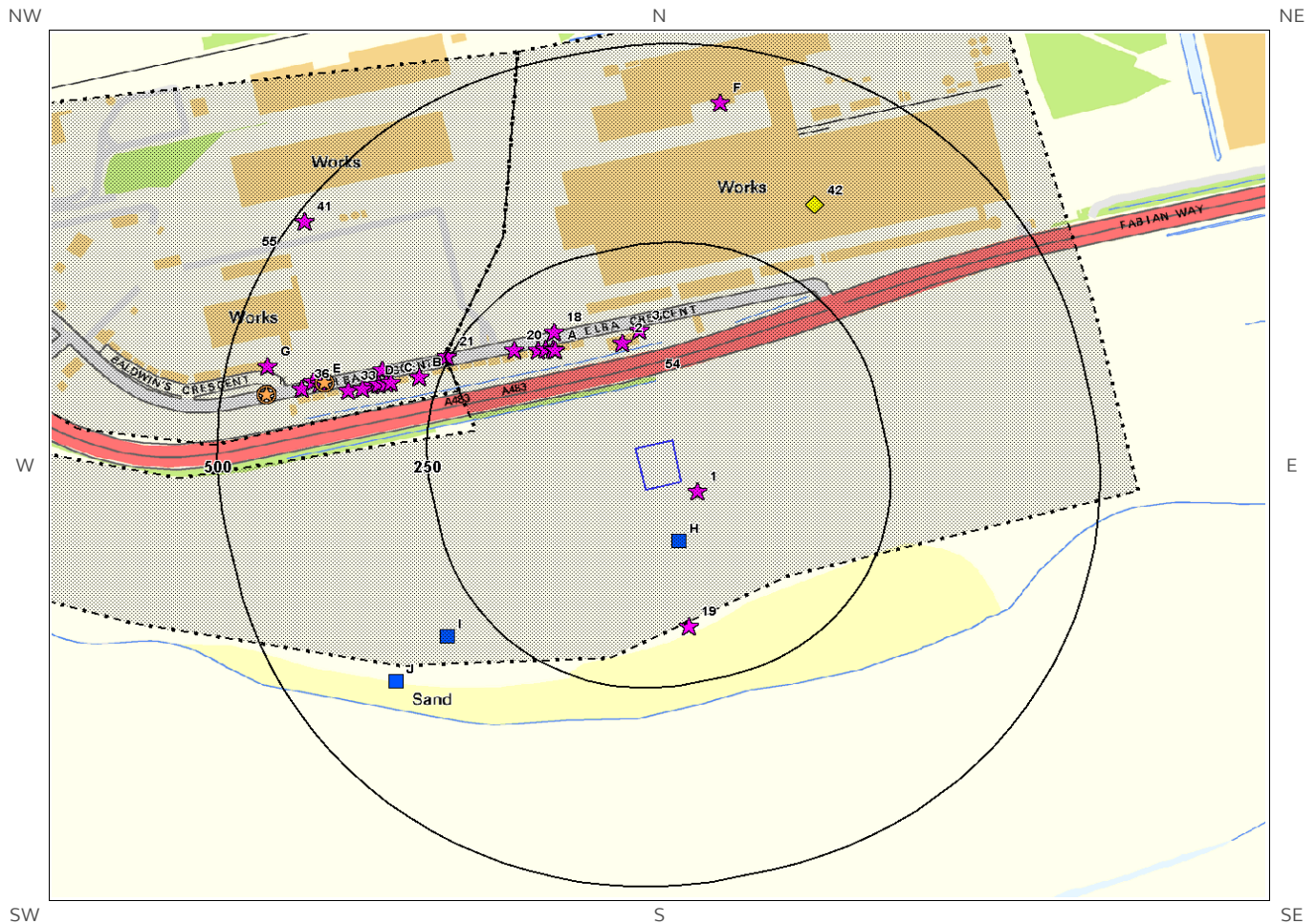
1.7 Potentially Infilled Land

Records of Potentially Infilled Features from 1:10,000 scale mapping within 500m of the study site: 10

The following Historical Potentially Infilled Features derived from the Historical Mapping information is provided by Groundsure:

ID	Distance(m)	Direction	Use	Date
137AE	40	N	Unspecified Heap	1921
138AF	46	N	Unspecified Heap	1914
139AG	48	N	Unspecified Heap	1948
140I	402	NW	Unspecified Ground Workings	1914
141I	403	NW	Unspecified Heap	1921
142Y	410	N	Pond	1948
143Y	415	NE	Pond	1962
144M	474	NW	Refuse Heap	1914
145M	476	NW	Refuse Heap	1921
146M	477	NW	Refuse Heap	1914

2. Environmental Permits, Incidents and Registers Map



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2. Environmental Permits, Incidents and Registers

2.1 Industrial Sites Holding Licences and/or Authorisations

Searches of information provided by the Environment Agency/Natural Resources Wales and Local Authorities reveal the following information:

2.1.1 Records of historic IPC Authorisations within 500m of the study site:

0

Database searched and no data found.

2.1.2 Records of Part A(1) and IPPC Authorised Activities within 500m of the study site:

0

Database searched and no data found.

2.1.3 Records of Red List Discharge Consents (potentially harmful discharges to controlled waters) within 500m of the study site:

0

Database searched and no data found.

2.1.4 Records of List 1 Dangerous Substances Inventory Sites within 500m of the study site:

0

Database searched and no data found.

2.1.5 Records of List 2 Dangerous Substance Inventory Sites within 500m of the study site:

1

The following List 2 Dangerous Substance Inventory Site records are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	NGR	Details	
42	342	NE	270400	Name: Ford Motor Company, Fabian	Authorised Substances: Chromium,

ID	Distance (m)	Direction	NGR	Details
			193200	Way, Swansea Status: Not Active Receiving Water: - Copper, Lead, Nickel, Zinc

2.1.6 Records of Part A(2) and Part B Activities and Enforcements within 500m of the study site:

0

Database searched and no data found.

2.1.7 Records of Category 3 or 4 Radioactive Substances Authorisations:

0

Database searched and no data found.

2.1.8 Records of Licensed Discharge Consents within 500m of the study site:

11

The following Licensed Discharge Consents records are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	NGR	Details
43H	72	S	270238 192777	Address: SWANSEA BAY INNOVATION CAMPUS, SITE OFFICE, ELBA CRESCENT, CRYMLYN BURROWS, SWANSEA, SA1 8QQ Effluent Type: TRADE DISCHARGES - SITE DRAINAGE Permit Number: EPRMB3897TQ Permit Version: 2 Receiving Water: GROUNDWATER Status: SURRENDERED UNDER EPR 2010 Issue date: 09/05/2014 Effective Date: 09-May-2014 Revocation Date: 17/09/2014
44H	72	S	270238 192777	Address: SWANSEA BAY INNOVATION CAMPUS, SITE OFFICE, ELBA CRESCENT, CRYMLYN BURROWS, SWANSEA, SA1 8QQ Effluent Type: TRADE DISCHARGES - SITE DRAINAGE Permit Number: EPRMB3897TQ Permit Version: 2 Receiving Water: GROUNDWATER Status: SURRENDERED UNDER EPR 2010 Issue date: 09/05/2014 Effective Date: 09-May-2014 Revocation Date: 17/09/2014
45H	72	S	270238 192777	Address: SWANSEA BAY INNOVATION CAMPUS, SITE OFFICE, ELBA CRESCENT, CRYMLYN BURROWS, SWANSEA, SA1 8QQ Effluent Type: TRADE DISCHARGES - SITE DRAINAGE Permit Number: EPRMB3897TQ Permit Version: 1 Receiving Water: GROUNDWATER Status: NEW ISSUED UNDER EPR 2010 Issue date: 11/09/2013 Effective Date: 02-Dec-2013 Revocation Date: 13/05/2014
46H	72	S	270238 192777	Address: SWANSEA BAY INNOVATION CAMPUS, SITE OFFICE, ELBA CRESCENT, CRYMLYN BURROWS, SWANSEA, SA1 8QQ Effluent Type: TRADE DISCHARGES - SITE DRAINAGE Permit Number: EPRMB3897TQ Permit Version: 1 Receiving Water: GROUNDWATER Status: NEW ISSUED UNDER EPR 2010 Issue date: 11/09/2013 Effective Date: 02-Dec-2013 Revocation Date: 13/05/2014

ID	Distance (m)	Direction	NGR	Details
47I	301	SW	269961 192657	Address: SWANSEA BAY INNOVATION CAMPUS, SITE OFFICE, ELBA CRESCENT, CRYMLYN BURROWS, SWANSEA, SA1 8QQ Effluent Type: TRADE DISCHARGES - SITE DRAINAGE Permit Number: EPRMB3897TQ Permit Version: 1 Receiving Water: GROUNDWATER Status: NEW ISSUED UNDER EPR 2010 Issue date: 11/09/2013 Effective Date: 02-Dec-2013 Revocation Date: 13/05/2014
48I	301	SW	269961 192657	Address: SWANSEA BAY INNOVATION CAMPUS, SITE OFFICE, ELBA CRESCENT, CRYMLYN BURROWS, SWANSEA, SA1 8QQ Effluent Type: TRADE DISCHARGES - SITE DRAINAGE Permit Number: EPRMB3897TQ Permit Version: 1 Receiving Water: GROUNDWATER Status: NEW ISSUED UNDER EPR 2010 Issue date: 11/09/2013 Effective Date: 02-Dec-2013 Revocation Date: 13/05/2014
49I	301	SW	269961 192657	Address: SWANSEA BAY INNOVATION CAMPUS, SITE OFFICE, ELBA CRESCENT, CRYMLYN BURROWS, SWANSEA, SA1 8QQ Effluent Type: TRADE DISCHARGES - SITE DRAINAGE Permit Number: EPRMB3897TQ Permit Version: 2 Receiving Water: GROUNDWATER Status: SURRENDERED UNDER EPR 2010 Issue date: 09/05/2014 Effective Date: 09-May-2014 Revocation Date: 17/09/2014
50I	301	SW	269961 192657	Address: SWANSEA BAY INNOVATION CAMPUS, SITE OFFICE, ELBA CRESCENT, CRYMLYN BURROWS, SWANSEA, SA1 8QQ Effluent Type: TRADE DISCHARGES - SITE DRAINAGE Permit Number: EPRMB3897TQ Permit Version: 2 Receiving Water: GROUNDWATER Status: SURRENDERED UNDER EPR 2010 Issue date: 09/05/2014 Effective Date: 09-May-2014 Revocation Date: 17/09/2014
51J	384	SW	269900 192600	Address: TEMPORARY INCREASED DIS. FROM, NETAH PORT TALBOT, WALES, UK Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: BE0010502 Permit Version: 1 Receiving Water: SEA OUTFALL Status: Effective Issue date: 08/10/1969 Effective Date: 08-Oct-1969 Revocation Date: -
52J	384	SW	269900 192600	Address: TEMPORARY INCREASED DIS. FROM, NETAH PORT TALBOT, WALES, UK Effluent Type: UNSPECIFIED Permit Number: BE0010503 Permit Version: 1 Receiving Water: SEA OUTFALL Status: CONSENT EXPIRED - TIME LIMIT Issue date: 08/10/1969 Effective Date: 08-Oct-1969 Revocation Date: 20/10/1992
53J	384	SW	269900 192600	Address: TEMPORARY INCREASED DIS. FROM, NETAH PORT TALBOT, WALES, UK Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: BE0010502 Permit Version: 1 Receiving Water: SEA OUTFALL Status: NEW CONSENT, BY APPLICATION (WRA 91, SECTION 88) Issue date: 08/10/1969 Effective Date: 08-Oct-1969 Revocation Date: -

2.1.9 Records of Water Industry Referrals (potentially harmful discharges to the public sewer) within 500m of the study site:

0

Database searched and no data found.

2.1.10 Records of Planning Hazardous Substance Consents and Enforcements within 500m of the study site:

2

The following records are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	Application Reference Number	NGR	Application Status	Application Date	Address	Details	Details of Enforcement Action
58E	382	W	PHS 002	269814 192975	Approved	No Details	Jeremys Oil Distributors Ltd, Elba Crescent, Crymlyn Burrows, Swansea, West Glamorgan, Wales, SA1 8QQ	Storage of butane and propane.	Enforcement: No Enforcement Notified Date of Enforcement: No Enforcement Notified Comment: No Enforcement Notified
59K	447	W	04/813	269745 192961	Historical Consent	20/07/2004	Former Shell Oil Depot, Elba Crescent, Neath, SA11 1NJ	Variation of condition 3 of planning application p/03/1457 which now reads as follows :- no lpg bottles, containers or other hazardous substances to be stored or left within 50m of the application site.	Enforcement: No Enforcement Notified Date of Enforcement: No Enforcement Notified Comment: No Enforcement Notified

2.2 Dangerous or Hazardous Sites

Records of COMAH & NIHHS sites within 500m of the study site:

2

The following COMAH & NIHHS Authorisation records provided by the Health and Safety Executive are represented as polygons or buffered points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	Company	Address	Operational Status	Tier
54	0	On Site	Ford Motor Co	Ford Motor Co, Fabian Way, Crymlyn Burrows, Swansea, SA1 8QJ	Historical NIHHS Site	-
55	222	W	Jeremys Oil Distributors Ltd	Jeremys Oil Distributors Ltd(bottled Gas), Elba Crescent, Crymlyn Burrows, Swansea, SA1 8QQ	Historical NIHHS Site	-

2.3 Environment Agency/Natural Resources Wales Recorded Pollution Incidents

2.3.1 Records of National Incidents Recording System, List 2 within 500m of the study site:

41

The following NIRS List 2 records are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	NGR	Details
1	22	SE	270260.0 192840.0	Incident Date: 21-Jun-2002 Incident Identification: 86463.0 Pollutant: Pollutant Not Identified Pollutant Description: Not Identified Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
2	133	N	270170.0 193026.0	Incident Date: 08-Jul-2003 Incident Identification: 171750.0 Pollutant: Other Pollutant Pollutant Description: Other Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
3	144	N	270191.0 193042.0	Incident Date: 23-Jun-2003 Incident Identification: 167984.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Other Atmospheric Pollutant or Effect Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
4A	157	NW	270090.0 193017.0	Incident Date: 18-Jul-2013 Incident Identification: 1135463.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Other Odour Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 2 (Significant)
5A	160	NW	270087.0 193019.0	Incident Date: 09-Jul-2003 Incident Identification: 172346.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Other Atmospheric Pollutant or Effect Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
6A	160	NW	270087.0 193019.0	Incident Date: 02-Jul-2003 Incident Identification: 170630.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Other Atmospheric Pollutant or Effect Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
7A	160	NW	270087.0 193019.0	Incident Date: 04-Jul-2003 Incident Identification: 170984.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Other Atmospheric Pollutant or Effect Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
8A	160	NW	270087.0 193019.0	Incident Date: 01-Jul-2003 Incident Identification: 170355.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Effects on Humans Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
9A	160	NW	270087.0 193019.0	Incident Date: 06-Aug-2013 Incident Identification: 1144648.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Other Odour Water Impact: - Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
10A	160	NW	270087.0 193019.0	Incident Date: 26-Jul-2013 Incident Identification: 1139856.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Other Odour Water Impact: - Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)

ID	Distance (m)	Direction	NGR	Details	
				Effects	
				Pollutant Description: Other Odour	
11A	160	NW	270087.0 193019.0	Incident Date: 02-Aug-2003 Incident Identification: 178523.0 Pollutant: Other Pollutant Pollutant Description: Noise	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
12A	166	NW	270078.0 193019.0	Incident Date: 09-Feb-2003 Incident Identification: 135833.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Other Atmospheric Pollutant or Effect	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
13A	171	NW	270069.0 193018.0	Incident Date: 31-Jan-2003 Incident Identification: 134257.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Other Atmospheric Pollutant or Effect	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
14A	171	NW	270069.0 193018.0	Incident Date: 30-May-2003 Incident Identification: 162062.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Other Atmospheric Pollutant or Effect	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
15A	171	NW	270069.0 193018.0	Incident Date: 04-Jul-2003 Incident Identification: 171150.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Other Atmospheric Pollutant or Effect	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
16A	171	NW	270069.0 193018.0	Incident Date: 14-May-2003 Incident Identification: 158396.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Other Atmospheric Pollutant or Effect	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
17A	171	NW	270069.0 193018.0	Incident Date: 02-Aug-2003 Incident Identification: 178487.0 Pollutant: Other Pollutant Pollutant Description: Noise	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
18	177	NW	270088.0 193040.0	Incident Date: 02-Jul-2003 Incident Identification: 170604.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Other Atmospheric Pollutant or Effect	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
19	179	S	270250.0 192670.0	Incident Date: 13-May-2003 Incident Identification: 157886.0 Pollutant: Sewage Materials Pollutant Description: Crude Sewage	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
20	192	NW	270041.0 193018.0	Incident Date: 02-Apr-2003 Incident Identification: 148146.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Other Atmospheric Pollutant or Effect	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
21	255	NW	269960.0 193010.0	Incident Date: 11-Aug-2003 Incident Identification: 181197.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Smoke	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
22B	274	W	269928.0	Incident Date: 10-Aug-2003	Water Impact: Category 4 (No Impact)

ID	Distance (m)	Direction	NGR	Details	
			192984.0	Incident Identification: 180776.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Other Atmospheric Pollutant or Effect	Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
23B	274	W	269928.0 192984.0	Incident Date: 23-Aug-2013 Incident Identification: 1151408.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Other Odour	Water Impact: - Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
24C	305	W	269894.0 192977.0	Incident Date: 01-Jul-2003 Incident Identification: 170357.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Effects on Humans	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
25C	310	W	269888.0 192975.0	Incident Date: 10-Oct-2013 Incident Identification: 1166561.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Effects on Humans	Water Impact: - Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
26C	318	W	269879.0 192974.0	Incident Date: 03-Jul-2003 Incident Identification: 170655.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Sulphide Odour	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
27C	320	W	269883.0 192993.0	Incident Date: 11-Aug-2015 Incident Identification: 1363241.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Other Odour	Water Impact: - Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
28D	326	W	269871.0 192973.0	Incident Date: 09-Sep-2013 Incident Identification: 1157628.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Other Odour	Water Impact: - Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
29D	326	W	269871.0 192973.0	Incident Date: 05-Jul-2003 Incident Identification: 171228.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Other Atmospheric Pollutant or Effect	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
30D	326	W	269871.0 192973.0	Incident Date: 17-Jul-2013 Incident Identification: 1134839.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Other Odour	Water Impact: - Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
31D	336	W	269860.0 192969.0	Incident Date: 13-Aug-2003 Incident Identification: 181828.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Smoke	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
32D	336	W	269860.0 192969.0	Incident Date: 26-Jul-2003 Incident Identification: 176866.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Other Atmospheric Pollutant or Effect	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
33	352	W	269843.0 192966.0	Incident Date: 04-Sep-2013 Incident Identification: 1156131.0 Pollutant: Atmospheric Pollutants and	Water Impact: - Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)

ID	Distance (m)	Direction	NGR	Details	
				Effects	
				Pollutant Description: Other Odour	
34E	387	W	269809.0 192975.0	Incident Date: 03-Jul-2003 Incident Identification: 170881.0 Pollutant: Other Pollutant Pollutant Description: Noise	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
35E	395	W	269801.0 192978.0	Incident Date: 06-Aug-2013 Incident Identification: 1144677.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Other Odour	Water Impact: - Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
36	407	W	269787.0 192969.0	Incident Date: 02-Feb-2003 Incident Identification: 134520.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Other Atmospheric Pollutant or Effect	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
37F	429	N	270287.0 193329.0	Incident Date: 11-Jul-2003 Incident Identification: 172798.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Other Atmospheric Pollutant or Effect	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
38F	429	N	270287.0 193329.0	Incident Date: 03-Jul-2003 Incident Identification: 170750.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Other Atmospheric Pollutant or Effect	Water Impact: Category 4 (No Impact) Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)
39G	453	W	269746.0 192997.0	Incident Date: 25-Aug-2013 Incident Identification: 1151802.0 Pollutant: Atmospheric Pollutants and Effects Pollutant Description: Other Odour	Water Impact: - Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
40G	453	W	269746.0 192997.0	Incident Date: 29-Jul-2014 Incident Identification: 1262118.0 Pollutant: Pollutant Not Identified Pollutant Description: Not Identified	Water Impact: - Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
41	490	NW	269790.0 193180.0	Incident Date: 16-May-2012 Incident Identification: 991224.0 Pollutant: Other Pollutant Pollutant Description: Other	Water Impact: Category 4 (No Impact) Land Impact: Category 2 (Significant) Air Impact: Category 3 (Minor)

2.3.2 Records of National Incidents Recording System, List 1 within 500m of the study site:

0

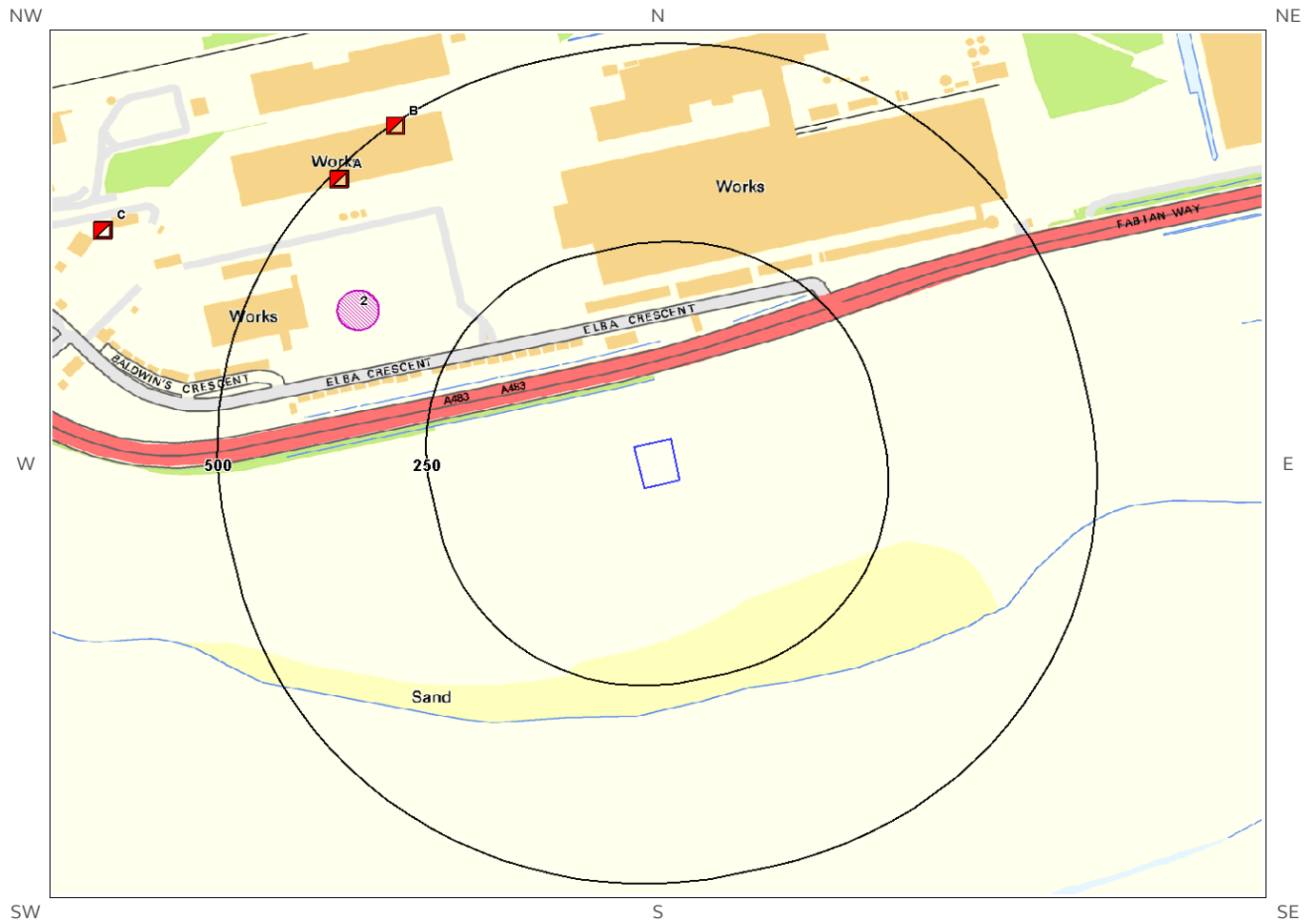
Database searched and no data found.

2.4 Sites Determined as Contaminated Land under Part 2A EPA 1990

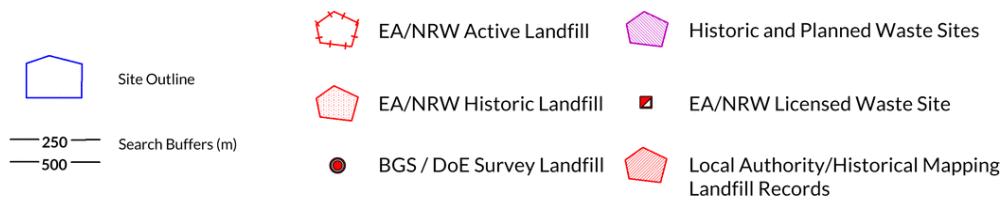
Records of sites determined as contaminated land under Section 78R of the Environmental Protection Act 1990 are there within 500m of the study site 0

Database searched and no data found.

3. Landfill and Other Waste Sites Map



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3. Landfill and Other Waste Sites

3.1 Landfill Sites

3.1.1 Records from Environment Agency/Natural Resources Wales landfill data within 1000m of the study site:

0

Database searched and no data found.

3.1.2 Records of Environment Agency/Natural Resources Wales historic landfill sites within 1500m of the study site:

2

The following landfill records are represented as either points or polygons on the Landfill and Other Waste Sites map:

ID	Distance (m)	Direction	NGR	Details
Not shown	902	NW		Site Address: Aresnic Tip Waste Licence: - Site Reference: - Waste Type: - Environmental Permitting Regulations (Waste) Reference: - Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: - Licence Holder: - First Recorded: - Last Recorded: -
Not shown	1115	NW		Site Address: CEBG Tir John Power Station Waste Licence: - Site Reference: - Waste Type: Industrial, Commercial Environmental Permitting Regulations (Waste) Reference: - Licence Issue: Licence Surrendered: Licence Holder Address: - Operator: Central Electricity Generating Board Licence Holder: - First Recorded: 23-Nov-1953 Last Recorded: -

3.1.3 Records of BGS/DoE non-operational landfill sites within 1500m of the study site:

1

The following landfill records are represented as points on the Landfill and Other Waste Sites map:

ID	Distance (m)	Direction	NGR	Details
Not shown	916	NW	269500.0 193500.0	Address: CEBG Tin John Power Stn, Swansea BGS Number: 1277.0 Risk: No risk to aquifer Waste Type: N/A

3.1.4 Records of Landfills from Local Authority and Historical Mapping Records within 1500m of the study site:

0

Database searched and no data found.

3.2 Other Waste Sites

3.2.1 Records of waste treatment, transfer or disposal sites within 500m of the study site:

1

The following waste treatment, transfer or disposal sites records are represented as points on the Landfill and Other Waste Sites map:

ID	Distance (m)	Direction	NGR	Details		
2	348	NW	269855 193065	Type of Site: Waste Transfer Station Site Address: Workshop, Elba Crescent, Crymlyn Burrows, Swansea, West Glamorgan, SA1 8QQ	Planning Application Reference: P2013/0049 Date: 26/03/2013	Further Details: Scheme comprises construction of extension to building for use as a waste transfer station (Sui-generic Use) non-hazardous waste. Data Source: Historic Planning Application Data Type: Point

3.2.2 Records of Environment Agency/Natural Resources Wales licensed waste sites within 1500m of the study site:

31

The following waste treatment, transfer or disposal sites records are represented as points on the Landfill and Other Waste Sites map:

ID	Distance (m)	Direction	NGR	Details		
5A	490	NW	269833 193233	Site Address: Kings Dock, Trojan Close, Crymlyn Burrows, Swansea, SA1 8QA Type: 75kte WEEE Treatment Facility Size: >= 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: TRO032 EPR reference: DB3993HD/A001 Operator: Trojan Electronics Limited Waste Management licence No: 900136 Annual Tonnage: 75000.0	Issue Date: 04/03/2015 Effective Date: - Modified: - Surrendered Date: 0 Expiry Date: 0 Cancelled Date: 0 Status: Issued Site Name: Trojan Electronics Limited Correspondence Address: -	
6A	490	NW	269832 193232	Site Address: - Type: 75kte WEEE Treatment Facility Size: Unknown Environmental Permitting Regulations (Waste) Licence Number: DB3993HD	Issue Date: 24/05/2016 Effective Date: 24/05/2016 Modified: - Surrendered Date: - Expiry Date: -	

ID	Distance (m)	Direction	NGR	Details	
				EPR reference: - Operator: - Waste Management licence No: 900136 Annual Tonnage: 75000.0	Cancelled Date: - Status: Effective Site Name: - Correspondence Address: -
7A	490	NW	269832 193232	Site Address: Trojan Electronics Limited, Crymlyn Burrows, Swansea, Neath Port Talbot, SA1 8QA Type: - Size: Unknown Environmental Permitting Regulations (Waste) Licence Number: DB3993HD EPR reference: - Operator: Trojan Electronics Limited Waste Management licence No: 0 Annual Tonnage: 75000.0	Issue Date: 04/03/2015 Effective Date: 04/03/2015 Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Effective Site Name: - Correspondence Address: -
8A	490	NW	269832 193232	Site Address: Trojan Electronics Limited, Crymlyn Burrows, Swansea, Neath Port Talbot, SA1 8QA Type: - Size: Unknown Environmental Permitting Regulations (Waste) Licence Number: DB3993HD EPR reference: - Operator: Trojan Electronics Limited Waste Management licence No: 900136 Annual Tonnage: 75000.0	Issue Date: 24/05/2016 Effective Date: 24/05/2016 Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Effective Site Name: - Correspondence Address: -
9A	490	NW	269832 193232	Site Address: Kings Dock, Trojan Close, Crymlyn Burrows, Swansea, SA1 8QA Type: 75kte WEEE Treatment Facility Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: TRO032 EPR reference: EA/EPR/DB3993HD/A001 Operator: Trojan Electronics Limited Waste Management licence No: 900136 Annual Tonnage: 75000.0	Issue Date: 04/03/2015 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Trojan Electronics Limited Correspondence Address: -
10A	490	NW	269832 193232	Site Address: Trojan Electronics Limited, Crymlyn Burrows, , Swansea, , SA1 8QA Type: 75kte WEEE Treatment Facility Size: - Environmental Permitting Regulations (Waste) Licence Number: DB3993HD EPR reference: - Operator: Trojan Electronics Limited Waste Management licence No: 900136 Annual Tonnage: 75000.0	Issue Date: 24/05/2016 Effective Date: 24/05/2016 Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Effective Site Name: - Correspondence Address: -
11A	490	NW	269832 193232	Site Address: Trojan Electronics 2018 Limited, Trojan Electronics 2018 Limited, Kings Dock Building, Trojan Close, Crymlyn Burrows, Swansea, Neath Port Talbot, SA1 8QA Type: 75kte WEEE Treatment Facility Size: - Environmental Permitting Regulations (Waste) Licence Number: DB3993HD EPR reference: - Operator: Trojan Electronics 2018 Limited Waste Management licence No: 900136 Annual Tonnage: 75000.0	Issue Date: 14/02/2019 Effective Date: 14/02/2019 Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Effective Site Name: - Correspondence Address: -
12B	498	NW	269900 193300	Site Address: - Type: Household, Commercial & Industrial Waste T Stn Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: GOW001	Issue Date: 15/11/1993 Effective Date: - Modified: - Surrendered Date: 14/10/2003 Expiry Date: - Cancelled Date: -

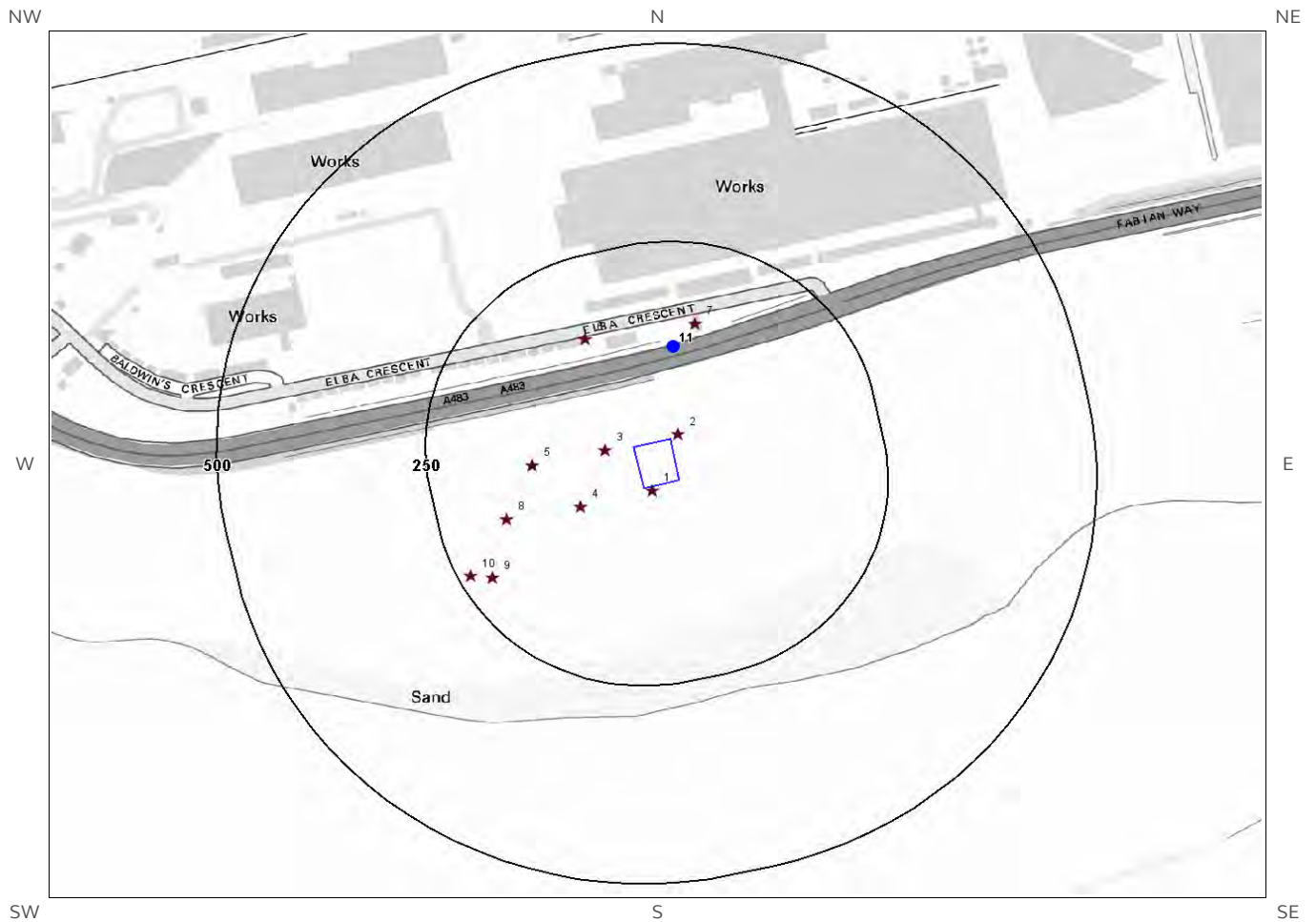
ID	Distance (m)	Direction	NGR	Details
				EPR reference: EA/EPR/MP3298FL/S002 Operator: Gower Chemicals Ltd Waste Management licence No: 34081 Annual Tonnage: 25000.0 Status: Surrendered Site Name: Gower Chemicals Ltd Correspondence Address: -
13B	498	NW	269900 193300	Site Address: - Type: Household, Commercial & Industrial Waste T Stn Size: >= 25000 tonnes < 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: GOW001 EPR reference: MP3298FL/S002 Operator: Gower Chemicals Ltd Waste Management licence No: 34081 Annual Tonnage: 25000.0 Issue Date: 15/11/1993 Effective Date: - Modified: - Surrendered Date: 2.0031e+016 Expiry Date: 0 Cancelled Date: 0 Status: Surrendered Site Name: Gower Chemicals Ltd Correspondence Address: -
14C	694	NW	269550 193168	Site Address: Baldwins Crescent, Crymlyn Burrows, Swansea, SA1 8PZ Type: Material Recycling Treatment Facility Size: >= 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: NEA007 EPR reference: QP3398FT/A001 Operator: Neath Port Talbot Recycling Ltd Waste Management licence No: 34293 Annual Tonnage: 107550.0 Issue Date: 09/05/2002 Effective Date: - Modified: - Surrendered Date: 0 Expiry Date: 0 Cancelled Date: 0 Status: To PPC Site Name: Materials Recovery & Energy Centre Correspondence Address: -
15C	694	NW	269549 193167	Site Address: Materials Recovery & Energy Centre, Crymlyn Burrows, , Swansea, , SA1 8PZ Type: Material Recycling Treatment Facility Size: - Environmental Permitting Regulations (Waste) Licence Number: QP3398FT EPR reference: - Operator: Neath Port Talbot Recycling Ltd Waste Management licence No: 34293 Annual Tonnage: 0.0 Issue Date: 09/05/2002 Effective Date: 09/05/2002 Modified: - Surrendered Date: - Expiry Date: 09/05/2002 Cancelled Date: - Status: Expired Site Name: - Correspondence Address: -
16C	694	NW	269549 193167	Site Address: Materials Recovery & Energy Centre, Crymlyn Burrows, , Swansea, , SA1 8PZ Type: Material Recycling Treatment Facility Size: - Environmental Permitting Regulations (Waste) Licence Number: QP3398FT EPR reference: - Operator: Neath Port Talbot Recycling Ltd Waste Management licence No: 34293 Annual Tonnage: 0.0 Issue Date: 09/05/2002 Effective Date: 09/05/2002 Modified: - Surrendered Date: - Expiry Date: 09/05/2002 Cancelled Date: - Status: Expired Site Name: - Correspondence Address: -
17C	694	NW	269549 193167	Site Address: Baldwins Crescent, Crymlyn Burrows, Swansea, SA1 8PZ Type: Material Recycling Treatment Facility Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: NEA007 EPR reference: EA/EPR/QP3398FT/A001 Operator: Neath Port Talbot Recycling Ltd Waste Management licence No: 34293 Annual Tonnage: 107550.0 Issue Date: 09/05/2002 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: To PPC Site Name: Materials Recovery & Energy Centre Correspondence Address: -
18C	694	NW	269549 193167	Site Address: Materials Recovery & Energy Centre, Crymlyn Burrows, Swansea, Neath Port Talbot, SA1 8PZ Type: - Size: Unknown Issue Date: 09/05/2002 Effective Date: 09/05/2002 Modified: - Surrendered Date: - Expiry Date: 09/05/2002

ID	Distance (m)	Direction	NGR	Details	
				Environmental Permitting Regulations (Waste) Licence Number: QP3398FT EPR reference: - Operator: Neath Port Talbot Recycling Ltd Waste Management licence No: 34293 Annual Tonnage: 0.0	Cancelled Date: - Status: Expired Site Name: - Correspondence Address: -
19C	694	NW	269549 193167	Site Address: - Type: Material Recycling Treatment Facility Size: Unknown Environmental Permitting Regulations (Waste) Licence Number: QP3398FT EPR reference: - Operator: - Waste Management licence No: 34293 Annual Tonnage: 0.0	Issue Date: 09/05/2002 Effective Date: 09/05/2002 Modified: - Surrendered Date: - Expiry Date: 09/05/2002 Cancelled Date: - Status: Expired Site Name: - Correspondence Address: -
20C	694	NW	269549 193167	Site Address: Materials Recovery & Energy Centre, Crymlyn Burrows, Swansea, Neath Port Talbot, SA1 8PZ Type: - Size: Unknown Environmental Permitting Regulations (Waste) Licence Number: QP3398FT EPR reference: - Operator: Neath Port Talbot Recycling Ltd Waste Management licence No: 0 Annual Tonnage: 0.0	Issue Date: 09/05/2002 Effective Date: 09/05/2002 Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Expired Site Name: - Correspondence Address: -
Not shown	719	W	269471 192963	Site Address: Elba Crescent, Crymlyn Burrows, Swansea, SA1 8QQ Type: 75kte HCl Waste Transfer Station Size: Unknown Environmental Permitting Regulations (Waste) Licence Number: STI023 EPR reference: MB3193HZ/A001 Operator: Stiens Haulage Ltd Waste Management licence No: 900076 Annual Tonnage: 0.0	Issue Date: 06/03/2014 Effective Date: - Modified: - Surrendered Date: 0 Expiry Date: 0 Cancelled Date: 0 Status: Issued Site Name: Stiens Skip And Recycling Facility Correspondence Address: -
Not shown	720	W	269470 192962	Site Address: Stiens Skip And Recycling Facility, Elba Crescent, Crymlyn Burrows, Swansea, Neath Port Talbot, SA1 8QQ Type: - Size: Unknown Environmental Permitting Regulations (Waste) Licence Number: MB3193HZ EPR reference: - Operator: Stiens Haulage Ltd Waste Management licence No: 900076 Annual Tonnage: 75000.0	Issue Date: 06/03/2014 Effective Date: 06/03/2014 Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Effective Site Name: - Correspondence Address: -
Not shown	720	W	269470 192962	Site Address: Stiens Skip And Recycling Facility, Elba Crescent, Crymlyn Burrows, , , Swansea, SA1 8QQ Type: Household, Commercial & Industrial Waste T Stn Size: - Environmental Permitting Regulations (Waste) Licence Number: MB3193HZ EPR reference: - Operator: Stiens Haulage Ltd Waste Management licence No: 900076 Annual Tonnage: 75000.0	Issue Date: 06/03/2014 Effective Date: 06/03/2014 Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Effective Site Name: - Correspondence Address: -
Not shown	720	W	269470 192962	Site Address: Elba Crescent, Crymlyn Burrows, Swansea, SA1 8QQ Type: Household, Commercial & Industrial Waste T Stn Size: < 25000 tonnes	Issue Date: 06/03/2014 Effective Date: - Modified: - Surrendered Date: - Expiry Date: -

ID	Distance (m)	Direction	NGR	Details	
				Environmental Permitting Regulations (Waste) Licence Number: STI023 EPR reference: EA/EPR/MB3193HZ/A001 Operator: Stiens Haulage Ltd Waste Management licence No: 900076 Annual Tonnage: 75000.0	Cancelled Date: - Status: Issued Site Name: Stiens Skip And Recycling Facility Correspondence Address: -
Not shown	720	W	269470 192962	Site Address: Elba Crescent, Crymlyn Burrows, Swansea, SA1 8QQ Type: Household, Commercial & Industrial Waste T Stn Size: Unknown Environmental Permitting Regulations (Waste) Licence Number: STI023 EPR reference: MB3193HZ/A001 Operator: Stiens Haulage Ltd Waste Management licence No: 900076 Annual Tonnage: 0.0	Issue Date: 06/03/2014 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Stiens Skip And Recycling Facility Correspondence Address: -
Not shown	720	W	269470 192962	Site Address: Stiens Skip And Recycling Facility, Elba Crescent, Crymlyn Burrows, , , Swansea, SA1 8QQ Type: Household, Commercial & Industrial Waste T Stn Size: - Environmental Permitting Regulations (Waste) Licence Number: MB3193HZ EPR reference: - Operator: Stiens Haulage Ltd Waste Management licence No: 900076 Annual Tonnage: 75000.0	Issue Date: 06/03/2014 Effective Date: 06/03/2014 Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Effective Site Name: - Correspondence Address: -
Not shown	720	W	269470 192962	Site Address: Stiens Skip And Recycling Facility, -, Crymlyn Burrows, Neath Port Talbot, SA1 8QQ Type: - Size: Unknown Environmental Permitting Regulations (Waste) Licence Number: MB3193HZ EPR reference: - Operator: Stiens Haulage Ltd Waste Management licence No: 0 Annual Tonnage: 75000.0	Issue Date: 06/03/2014 Effective Date: 06/03/2014 Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Effective Site Name: - Correspondence Address: -
Not shown	720	W	269470 192962	Site Address: Stiens Skip And Recycling Facility, -, Crymlyn Burrows, Swansea, SA1 8QQ Type: Household, Commercial & Industrial Waste T Stn Size: Unknown Environmental Permitting Regulations (Waste) Licence Number: MB3193HZ EPR reference: - Operator: - Waste Management licence No: 900076 Annual Tonnage: 75000.0	Issue Date: 06/03/2014 Effective Date: 06/03/2014 Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Effective Site Name: - Correspondence Address: -
Not shown	813	W	269401 193101	Site Address: Acid Dilution Terminal, Crymlyn Burrows, Swansea, West Glamorgan, SA1 8PT Type: Physico-Chemical Treatment Facility Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: GOW011 EPR reference: GP3193LE/A001 Operator: Gower Chemicals Ltd Waste Management licence No: 101466 Annual Tonnage: 4999.0	Issue Date: 21/01/2011 Effective Date: - Modified: - Surrendered Date: 0 Expiry Date: 0 Cancelled Date: 0 Status: Issued Site Name: Gower Chemicals Ltd Correspondence Address: -
Not shown	814	W	269400 193100	Site Address: Gower Chemicals Ltd, Acid Dilution Terminal, Crymlyn Burrows,	Issue Date: 21/01/2011 Effective Date: 21/01/2011

ID	Distance (m)	Direction	NGR	Details
				Swansea, West Glamorgan, SA1 8PT Type: Physico-Chemical Treatment Facility Size: Unknown Environmental Permitting Regulations (Waste) Licence Number: GP3193LE EPR reference: - Operator: - Waste Management licence No: 101466 Annual Tonnage: 4999.0 Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Effective Site Name: - Correspondence Address: -
Not shown	814	W	269400 193100	Site Address: Gower Chemicals Ltd, Acid Dilution Terminal, Crymlyn Burrows, , Swansea, West Glamorgan, SA1 8PT Type: Physico-Chemical Treatment Facility Size: - Environmental Permitting Regulations (Waste) Licence Number: GP3193LE EPR reference: - Operator: Gower Chemicals Ltd Waste Management licence No: 101466 Annual Tonnage: 4999.0 Issue Date: 21/01/2011 Effective Date: 21/01/2011 Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Effective Site Name: - Correspondence Address: -
Not shown	814	W	269400 193100	Site Address: Gower Chemicals Ltd, Acid Dilution Terminal, Crymlyn Burrows, , Swansea, West Glamorgan, SA1 8PT Type: Physico-Chemical Treatment Facility Size: - Environmental Permitting Regulations (Waste) Licence Number: GP3193LE EPR reference: - Operator: Gower Chemicals Ltd Waste Management licence No: 101466 Annual Tonnage: 4999.0 Issue Date: 21/01/2011 Effective Date: 21/01/2011 Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Effective Site Name: - Correspondence Address: -
Not shown	814	W	269400 193100	Site Address: Gower Chemicals Ltd, Acid Dilution Terminal, Crymlyn Burrows, West Glamorgan, Swansea, Neath Port Talbot, SA1 8PT Type: - Size: Unknown Environmental Permitting Regulations (Waste) Licence Number: GP3193LE EPR reference: - Operator: Gower Chemicals Ltd Waste Management licence No: 101466 Annual Tonnage: 4999.0 Issue Date: 21/01/2011 Effective Date: 21/01/2011 Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Effective Site Name: - Correspondence Address: -
Not shown	814	W	269400 193100	Site Address: Gower Chemicals Ltd, Acid Dilution Terminal, Crymlyn Burrows, Swansea, Neath Port Talbot, SA1 8PT Type: - Size: Unknown Environmental Permitting Regulations (Waste) Licence Number: GP3193LE EPR reference: - Operator: Gower Chemicals Ltd Waste Management licence No: 0 Annual Tonnage: 4999.0 Issue Date: 21/01/2011 Effective Date: 21/01/2011 Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Effective Site Name: - Correspondence Address: -
Not shown	1468	NW	268900 193600	Site Address: Fabian Way, Port Tennant, Swansea, SA7 9XT Type: Other Landfill Site taking Special Waste Size: >= 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: SWA010 EPR reference: - Operator: Swansea Waste Disposal Co Ltd Waste Management licence No: 34011 Annual Tonnage: 225000.0 Issue Date: 30/03/1985 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Tir John Landfill Correspondence Address: Ferryboat Close, Swansea Enterprise Park, Swansea, SA6 8QN

4. Current Land Use Map



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4. Current Land Uses

4.1 Current Industrial Data

Records of potentially contaminative industrial sites within 250m of the study site:

10

The following records are represented as points on the Current Land Uses map.

ID	Distance (m)	Direction	Company	NGR	Address	Activity	Category
1	5	S	Tank	270209 192839	West Glamorgan, SA10	Tanks (Generic)	Industrial Features
2	11	NE	Tank	270239 192910	West Glamorgan, SA10	Tanks (Generic)	Industrial Features
3	35	W	Tank	270152 192890	West Glamorgan, SA10	Tanks (Generic)	Industrial Features
4	80	W	Tank	270122 192819	West Glamorgan, SA1	Tanks (Generic)	Industrial Features
5	124	W	Tank	270065 192871	West Glamorgan, SA1	Tanks (Generic)	Industrial Features
6	149	NW	Electricity Sub Station	270128 193030	West Glamorgan, SA1	Electrical Features	Infrastructure and Facilities
7	150	N	Corner Park Garage	270260 193050	Fabian Way, Crymlyn Burrows, Swansea, West Glamorgan, SA1 8QB	Secondhand Vehicles	Motoring
8	169	W	Tank	270034 192803	West Glamorgan, SA1	Tanks (Generic)	Industrial Features
9	213	SW	Tank	270017 192729	West Glamorgan, SA1	Tanks (Generic)	Industrial Features
10	235	SW	Tank	269991 192731	West Glamorgan, SA1	Tanks (Generic)	Industrial Features

4.2 Petrol and Fuel Sites

Records of petrol or fuel sites within 500m of the study site:

1

The following petrol or fuel site records provided by Catalist are represented as points on the Current Land Use map:

ID	Distance (m)	Direction	NGR	Company	Address	LPG	Status
11	117	N	270233 193020	OBSOLETE	Fabian Way, Llandarcy, Swansea, Neath Port Talbot, SA1 8QB	Not Applicable	Obsolete

4.3 National Grid High Voltage Underground Electricity Transmission Cables

This dataset identifies the high voltage electricity transmission lines running between generating power plants and electricity substations. The dataset does not include the electricity distribution network (smaller, lower voltage cables distributing power from substations to the local user network). This information has been extracted from databases held by National Grid and is provided for information only with no guarantee as to its completeness or accuracy. National Grid do not offer any warranty as to the accuracy of the available data and are excluded from any liability for any such inaccuracies or errors.

Records of National Grid high voltage underground electricity transmission cables within 500m of the study site:

0

Database searched and no data found.

4.4 National Grid High Pressure Gas Transmission Pipelines

This dataset identifies high-pressure, large diameter pipelines which carry gas between gas terminals, power stations, compressors and storage facilities. The dataset does not include the Local Transmission System (LTS) which supplies gas directly into homes and businesses. This information has been extracted from databases held by National Grid and is provided for information only with no guarantee as to its completeness or accuracy. National Grid do not offer any warranty as to the accuracy of the available data and are excluded from any liability for any such inaccuracies or errors.

Records of National Grid high pressure gas transmission pipelines within 500m of the study site:

0

Database searched and no data found.

5. Geology

5.1 Artificial Ground and Made Ground

The database has been searched on site, including a 50m buffer.

Lex Code	Description	Rock Type
LSGR-ARTGR	LANDSCAPED GROUND (UNDIVIDED)	ARTIFICIALLY MODIFIED GROUND

5.2 Superficial Ground and Drift Geology

The database has been searched on site, including a 50m buffer.

Lex Code	Description	Rock Type
BSA-S	BLOWN SAND	SAND

5.3 Bedrock and Solid Geology

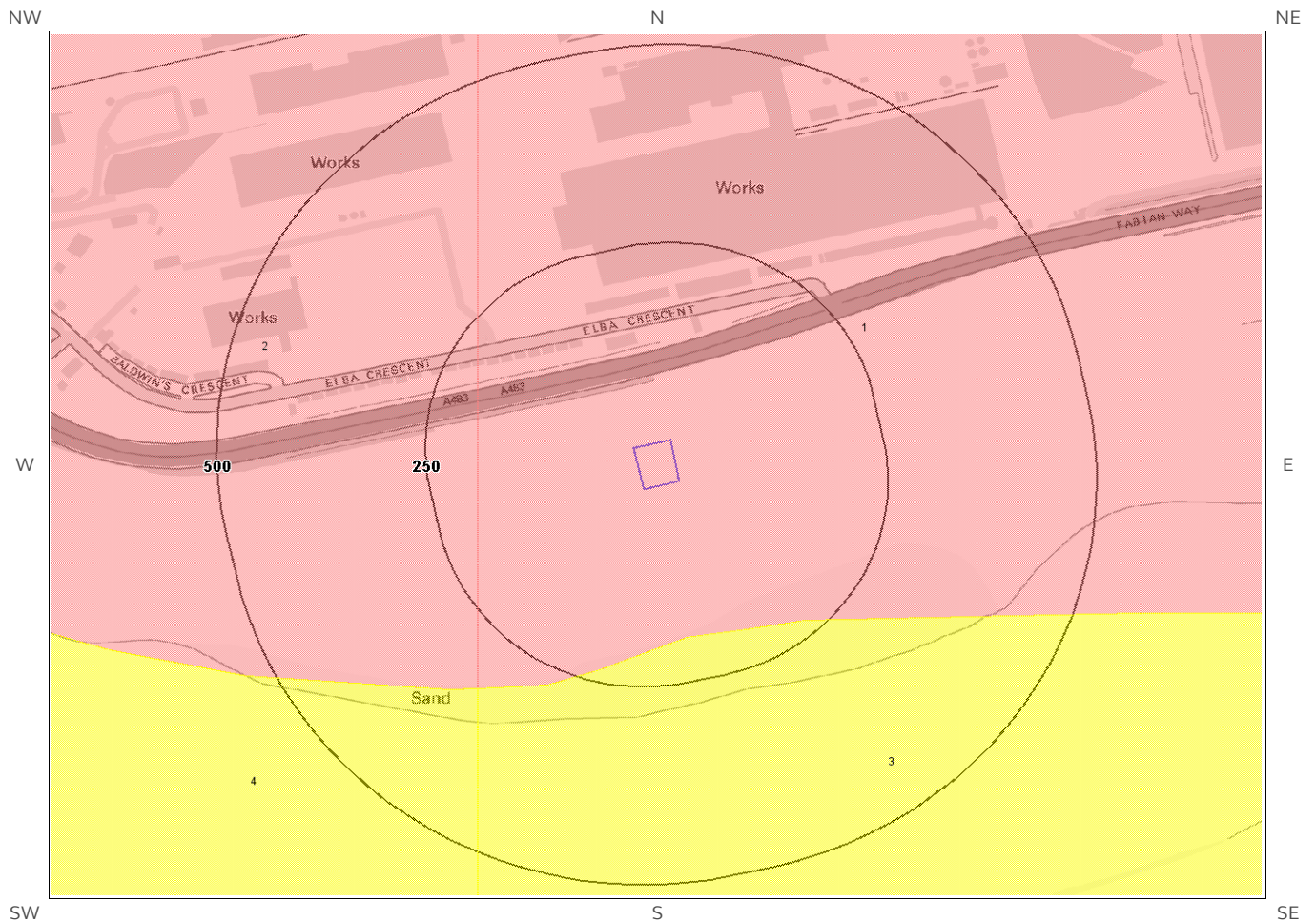
The database has been searched on site, including a 50m buffer.

Lex Code	Description	Rock Type
SWMCM-MDSS	SOUTH WALES MIDDLE COAL MEASURES FORMATION	MUDSTONE, SILTSTONE AND SANDSTONE
SWMCM-MDSS	SOUTH WALES MIDDLE COAL MEASURES FORMATION	MUDSTONE, SILTSTONE AND SANDSTONE

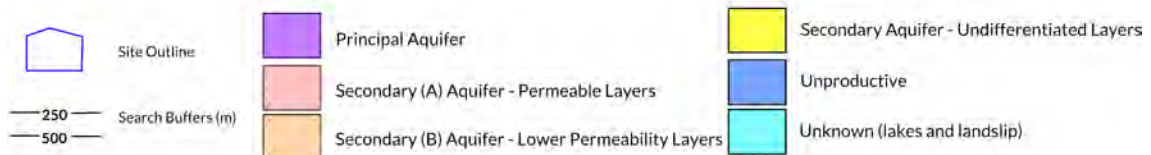
(Derived from the BGS 1:50,000 Digital Geological Map of Great Britain)

6 Hydrogeology and Hydrology

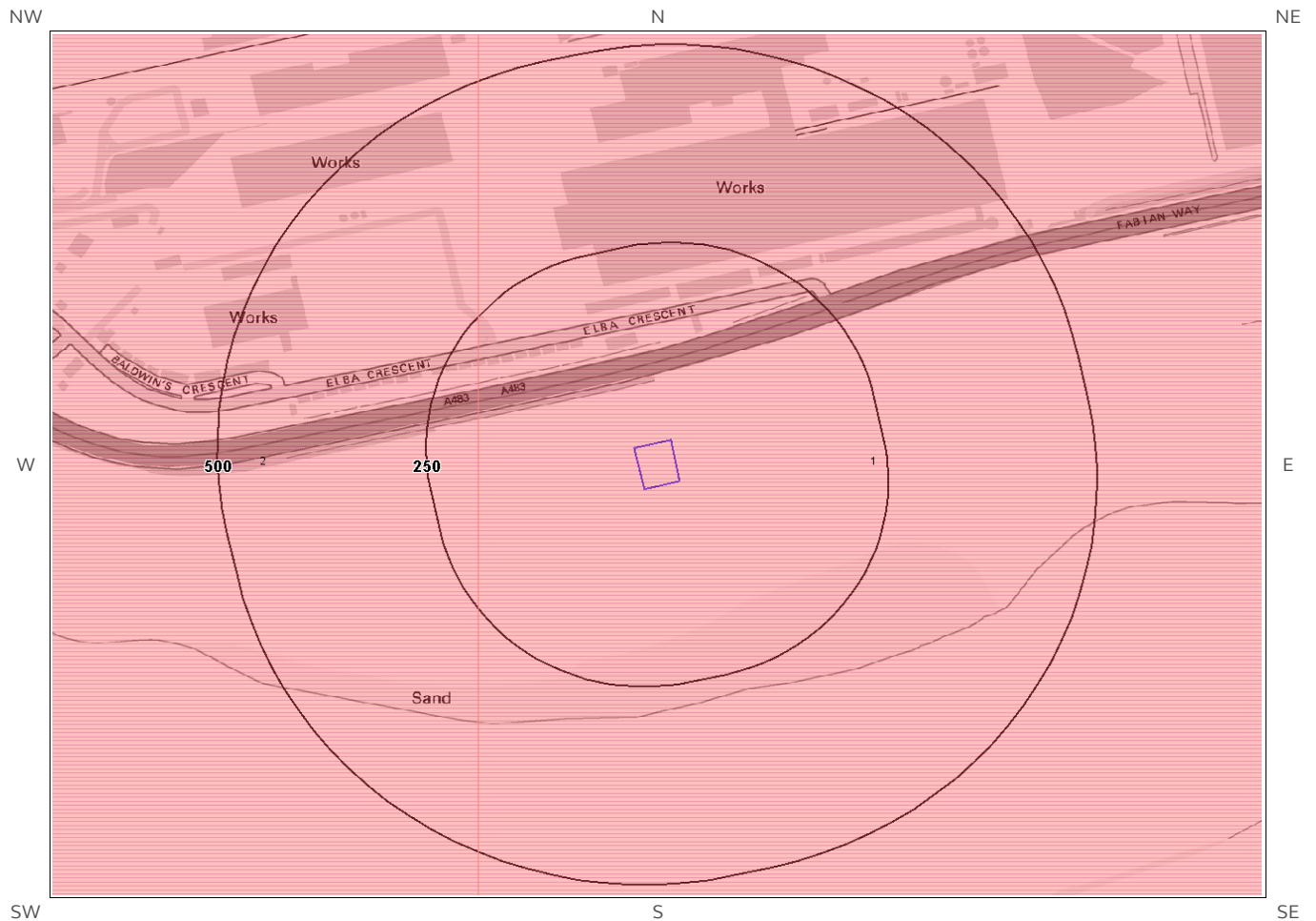
6a. Aquifer Within Superficial Geology



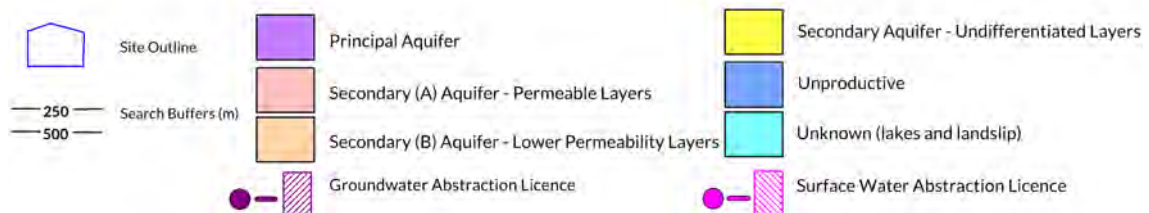
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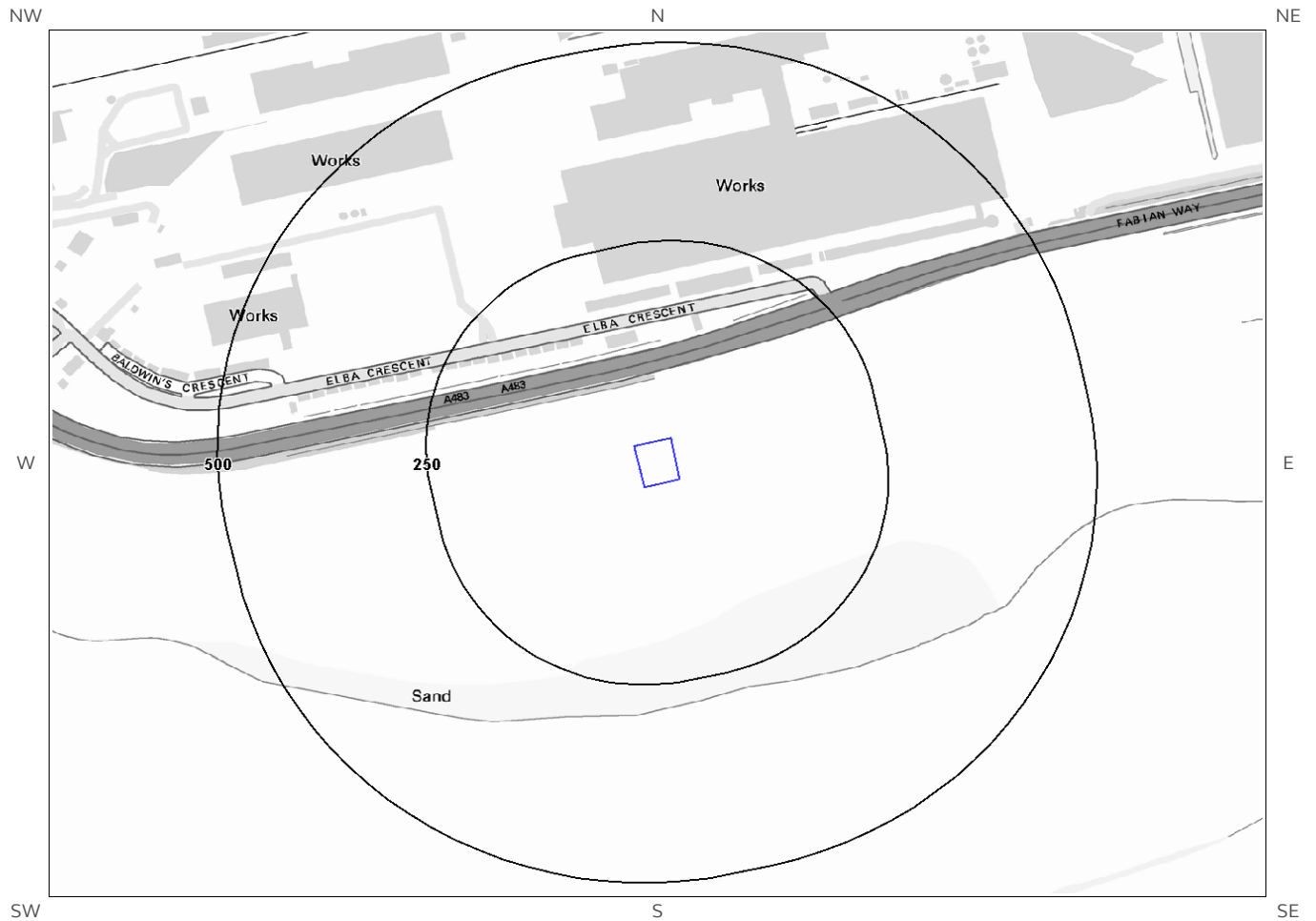
6b. Aquifer Within Bedrock Geology and Abstraction Licences



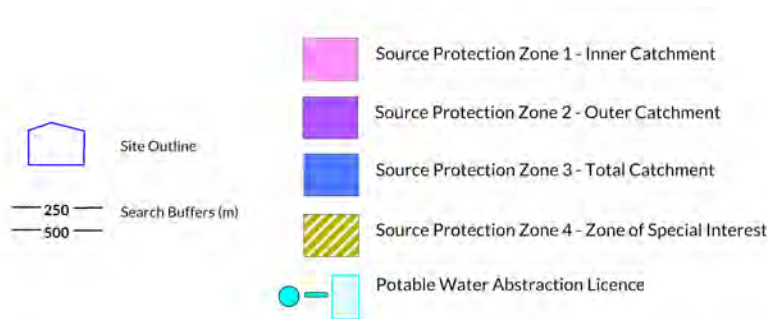
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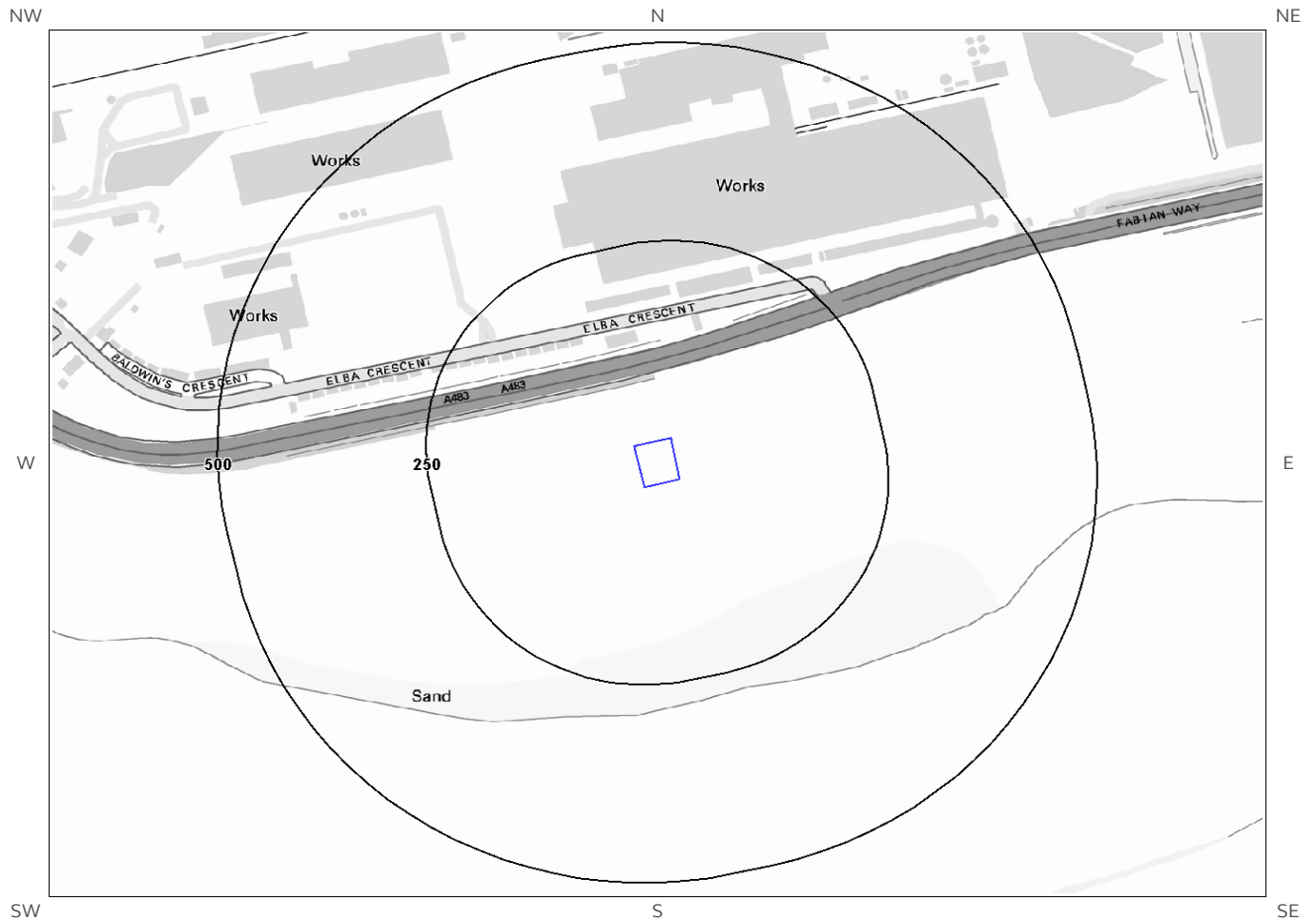
6c. Hydrogeology – Source Protection Zones and Potable Water Abstraction Licences



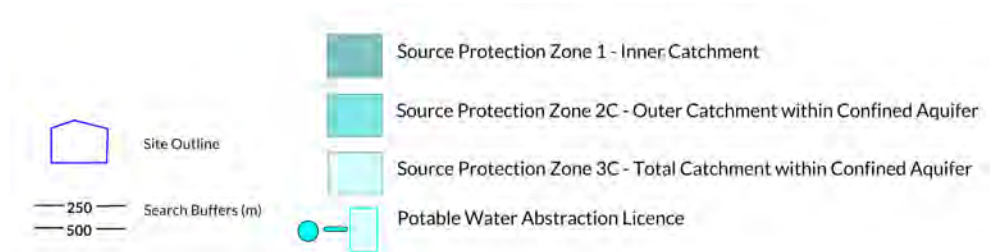
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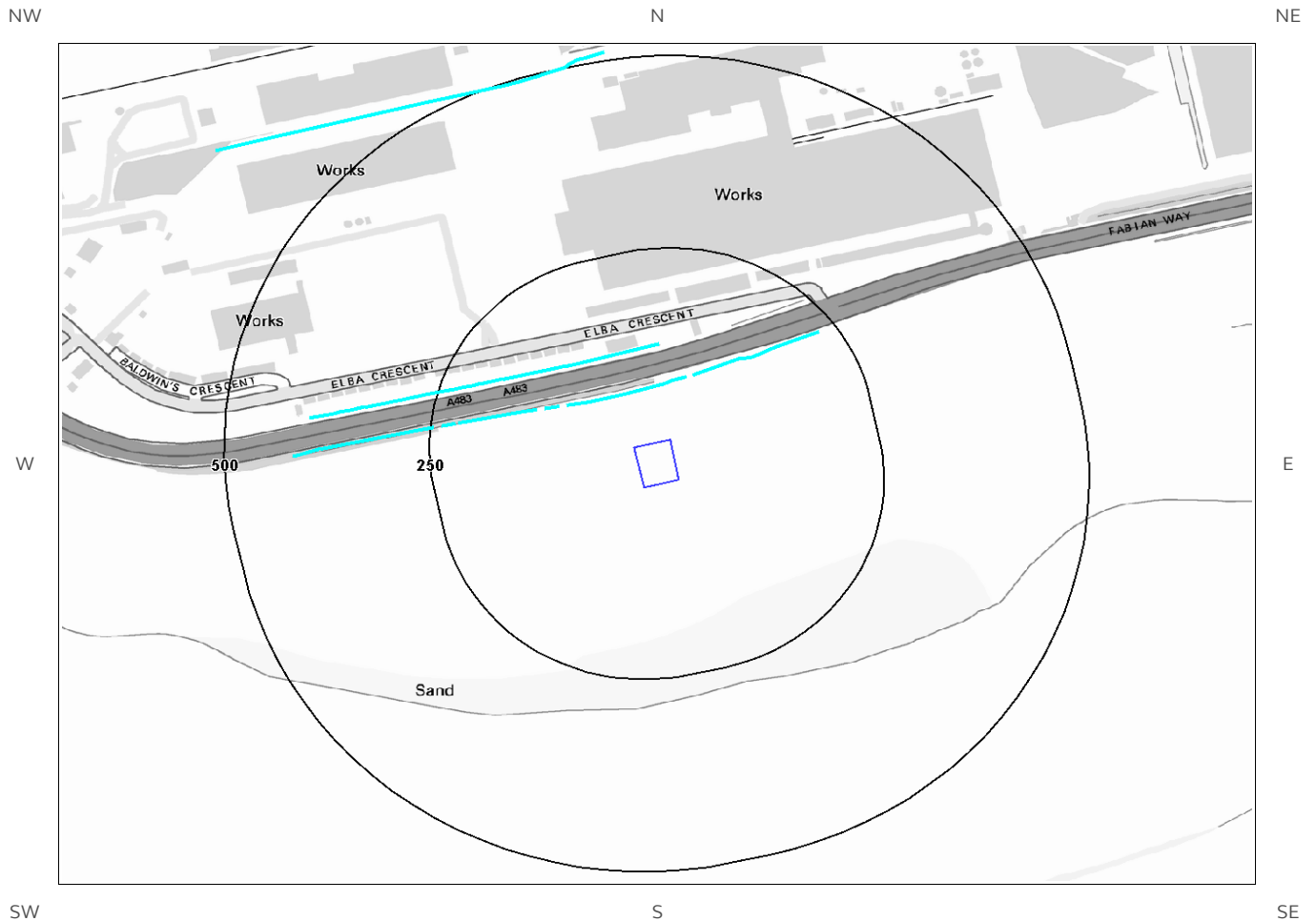
6d. Hydrogeology – Source Protection Zones within confined aquifer



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6e. Hydrology – Watercourse Network and River Quality



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6. Hydrogeology and Hydrology

6.1 Aquifer within Superficial Deposits

Records of strata classification within the superficial geology at or in proximity to the property Yes

From 1 April 2010, the Environment Agency/Natural Resources Wales's Groundwater Protection Policy has been using aquifer designations consistent with the Water Framework Directive. For further details on the designation and interpretation of this information, please refer to the Groundsure Enviro Insight User Guide.

The following aquifer records are shown on the Aquifer within Superficial Geology Map (6a):

ID	Distance (m)	Direction	Designation	Description
1	0	On Site	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
2	187	W	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
3	194	S	Secondary (undifferentiated)	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type
4	321	SW	Secondary (undifferentiated)	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type

6.2 Aquifer within Bedrock Deposits

Records of strata classification within the bedrock geology at or in proximity to the property Yes

From 1 April 2010, the Environment Agency/Natural Resources Wales's Groundwater Protection Policy has been using aquifer designations consistent with the Water Framework Directive. For further details on the designation and interpretation of this information, please refer to the Groundsure Enviro Insight User Guide.

The following aquifer records are shown on the Aquifer within Bedrock Geology Map (6b):

ID	Distance (m)	Direction	Designation	Description
1	0	On Site	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
2	187	W	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

6.3 Groundwater Abstraction Licences

Groundwater Abstraction Licences within 2000m of the study site

None identified

Database searched and no data found.

6.4 Surface Water Abstraction Licences

Surface Water Abstraction Licences within 2000m of the study site

Identified

The following Surface Water Abstraction Licences records are represented as points, lines and regions on the Aquifer within Bedrock Geology Map (6b):

ID	Distance (m)	Direction	NGR	Details
Not shown	1720	N	269973 194604	Status: Historical Licence No: WA/059/0001/001 Details: Make-Up Or Top Up Water Direct Source: EAW Surface Water Point: POND NO.29, LOWER END OF FREEMANS BUND STREAM, NEATH Data Type: Point Name: Hawk Plant Hire Limited Annual Volume (m³): - Max Daily Volume (m³): - Application No: - Original Start Date: 29/09/2010 Expiry Date: 25/10/2010 Issue No: 1 Version Start Date: 29/09/2010 Version End Date:
Not shown	1762	N	269880 194630	Status: Historical Licence No: 22/59/5/0007 Details: Process Water Direct Source: EAW Surface Water Point: FREEMANS BUND Data Type: Point Name: St Mowden Properties PLC Annual Volume (m³): 205 Max Daily Volume (m³): - Application No: - Original Start Date: 30/06/1997 Expiry Date: - Issue No: 102 Version Start Date: 29/07/2010 Version End Date:
Not shown	1762	N	269880 194630	Status: Active Licence No: 22/59/5/0007 Details: Process Water - Medium Direct Source: - Point: - Data Type: Point Name: - Annual Volume (m³): 205 Max Daily Volume (m³): - Application No: - Original Start Date: Jul 29 2010 12:00AM Expiry Date: - Issue No: - Version Start Date: - Version End Date:

6.5 Potable Water Abstraction Licences

Potable Water Abstraction Licences within 2000m of the study site

None identified

Database searched and no data found.

6.6 Source Protection Zones

Source Protection Zones within 500m of the study site

None identified

Database searched and no data found.

6.7 Source Protection Zones within Confined Aquifer

Source Protection Zones within the Confined Aquifer within 500m of the study site

None identified

Historically, Source Protection Zone maps have been focused on regulation of activities which occur at or near the ground surface, such as prevention of point source pollution and bacterial contamination of water supplies. Sources in confined aquifers were often considered to be protected from these surface pressures due to the presence of a low permeability confining layer (e.g. glacial till, clay). The increased interest in subsurface activities such as onshore oil and gas exploration, ground source heating and cooling requires protection zones for confined sources to be marked on SPZ maps where this has not already been done.

Database searched and no data found.

6.8 Groundwater Vulnerability and Soil Leaching Potential

Environment Agency/Natural Resources Wales information on groundwater vulnerability and soil leaching potential within 500m of the study site

Identified

Distance (m)	Direction	Classification	Soil Vulnerability Category	Description
0	On Site	Minor Aquifer/High Leaching Potential	HU	Soil information for urban areas and restored mineral workings. These soils are therefore assumed to be highly permeable in the absence of site-specific information.
9	E	Minor Aquifer/High Leaching Potential	H2	Deep, permeable, coarse textured soils which readily transmit a wide range of pollutants because of their rapid drainage and low attenuation potential.
187	W	Minor Aquifer/High Leaching Potential	HU	Soil information for urban areas and restored mineral workings. These soils are therefore assumed to be highly permeable in the absence of site-specific information.

6.9 River Quality

Environment Agency/Natural Resources Wales information on river quality within 1500m of the study site

Identified

6.9.1 Biological Quality:

Database searched and no data found.

6.9.2 Chemical Quality:

Chemical quality data is based on the General Quality Assessment Headline Indicators scheme (GQAHI). In England, each chemical sample is measured for ammonia and dissolved oxygen. In Wales, the samples are measured for biological oxygen demand (BOD), ammonia and dissolved oxygen. The results are graded from A ('Very Good') to F ('Bad').

The following Chemical Quality records are shown on the Hydrology Map (6e):

ID	Distance (m)	Direction	NGR	River Quality Grade	Chemical Quality Grade				
					2005	2006	2007	2008	2009
Not shown	1321	NE	271200 193800	River Name: Port Tennant Canal Reach: Jersey Marine Br.-tennant Pond End/Start of Stretch: End of Stretch NGR	E	E	E	E	-
Not shown	1357	NE	271181 193872	River Name: Port Tennant Canal Reach: Jersey Marine Br.-tennant Pond End/Start of Stretch: Sample Point NGR	E	E	E	E	-
Not shown	1357	NE	271181 193872	River Name: Port Tennant Canal Reach: Jersey Marine R.b - Neath Abbey End/Start of Stretch: Sample Point NGR	E	E	E	E	-
Not shown	1391	NE	271200 193900	River Name: Port Tennant Canal Reach: Jersey Marine R.b - Neath Abbey End/Start of Stretch: End of Stretch NGR	E	E	E	E	-

6.10 Ordnance Survey MasterMap Water Network

Ordnance Survey MasterMap Water Network entries within 500m of the study site

This watercourse information is provided by Ordnance Survey MasterMap Water Network. The data provides a detailed centre line following the curve of the waterway precisely, so all distances provided in the report should be understood as measurements to the centreline rather than a measurement to the nearest point of the watercourse. Underground watercourses are inferred from entry and exit points so caution is advised in using these to indicate precise locations of underground watercourses when planning site investigation and development.

The following Ordnance Survey MasterMap Water Network records are represented on the Hydrology Map (6e):

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
1	70 N	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Neath Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
8	70 N	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Neath Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
2	78 N	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Neath Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
9	78 N	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Neath Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
3	89 N	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Neath Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
10	89 N	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Neath Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
4	90 NW	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Neath Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
11	90 NW	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Neath Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
5	123 N	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Neath Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
12	123 N	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Neath Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
6	136 NW	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Neath Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
13	136 NW	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Neath Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
7	138 NW	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Neath Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
14	138	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Neath Relationship to Ground Level: On ground surface

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
	NW			Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
8	144 W	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Neath Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
15	144 W	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Neath Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
9	184 NW	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Neath Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
16	184 NW	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Neath Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
10	186 NW	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Neath Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
17	186 NW	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Neath Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
11	217 W	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Neath Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
18	217 W	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Neath Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
12	264 W	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Neath Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
19	264 W	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Neath Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
13	333 W	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Neath Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
20	333 W	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Neath Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions)

ID	Distance/ Direction	Name	Type of Watercourse	Additional Details
				Average Width in Watercourse Section (m): Not Provided
14	337 W	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Neath Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
21	337 W	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Neath Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
15	362 W	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Neath Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	362 W	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Neath Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
16	368 W	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Neath Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	368 W	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Neath Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
17	383 W	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Neath Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	383 W	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Neath Relationship to Ground Level: Underground Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
18	385 W	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Neath Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	385 W	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Neath Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
19	496 N	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Neath Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided
Not shown	496 N	- Alternative Name: -	Inland river not influenced by normal tidal action.	Catchment Area: Neath Relationship to Ground Level: On ground surface Permanence: Watercourse contains water year round (in normal conditions) Average Width in Watercourse Section (m): Not Provided

6.11 Surface Water Features

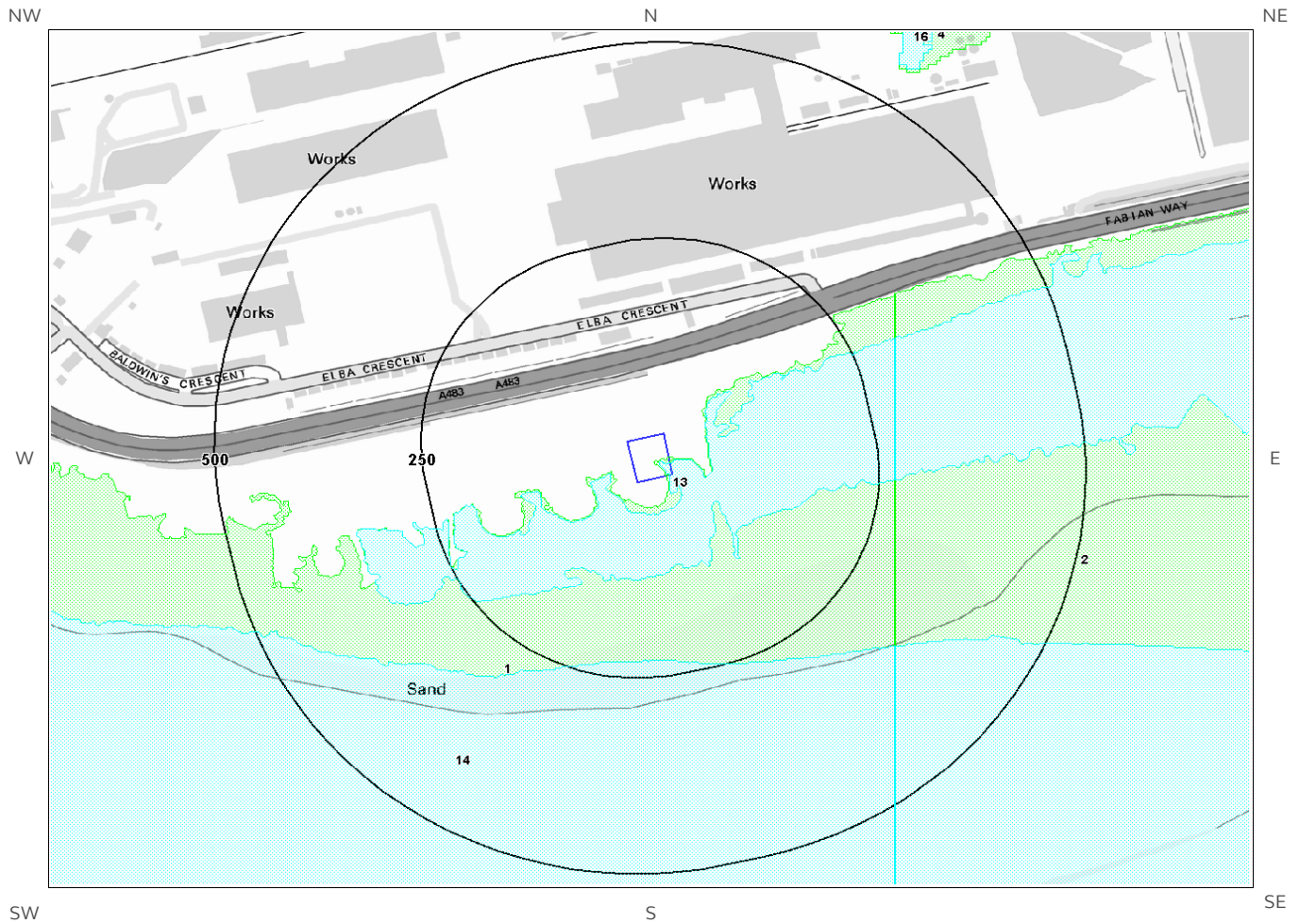
Surface water features within 250m of the study site

Identified

The following surface water records are not represented on mapping:

Distance (m)	Direction
79	N
123	N
138	NW
186	NW

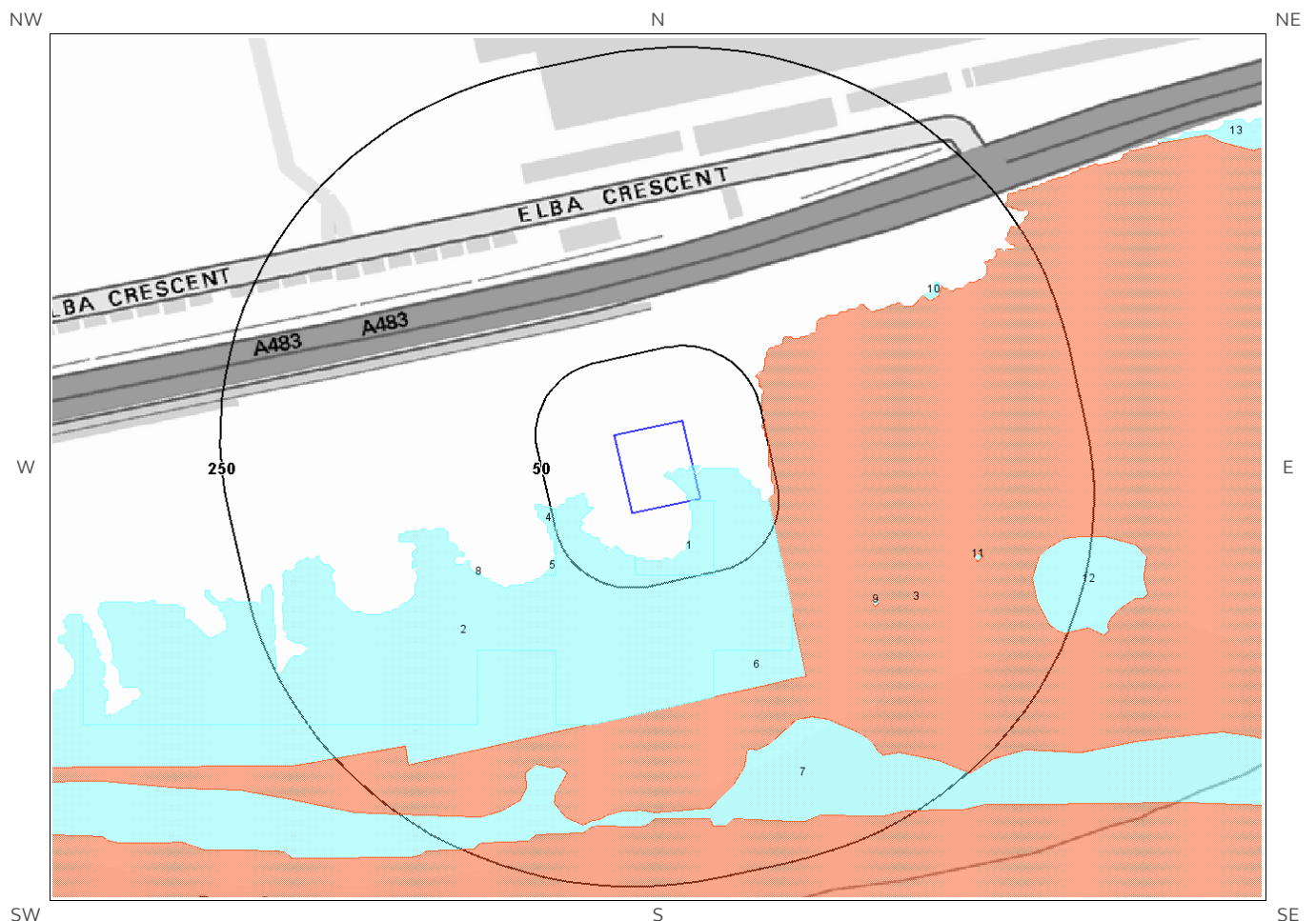
7a. Environment Agency/Natural Resources Wales Flood Map for Planning (from rivers and the sea)



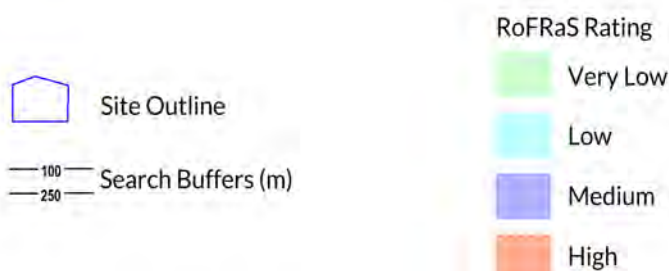
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7b. Environment Agency/Natural Resources Wales Risk of Flooding from Rivers and the Sea (RoFRaS) Map



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7 Flooding

7.1 River and Coastal Zone 2 Flooding

Environment Agency/Natural Resources Wales Zone 2 floodplain within 250m

Identified

Environment Agency/Natural Resources Wales Zone 2 floodplains estimate the annual probability of flooding as between 1 in 1000 (0.1%) and 1 in 100 (1%) from rivers and between 1 in 1000 (0.1%) and 1 in 200 (0.5%) from the sea. Any relevant data is represented on Map 7a – Flood Map for Planning:

ID	Distance (m)	Direction	Update	Type
1	0	On Site	19-Nov-2019	Zone 2 - (Fluvial /Tidal Models)

7.2 River and Coastal Zone 3 Flooding

Environment Agency/Natural Resources Wales Zone 3 floodplain within 250m

Identified

Zone 3 shows the extent of a river flood with a 1 in 100 (1%) or greater chance of occurring in any year or a sea flood with a 1 in 200 (0.5%) or greater chance of occurring in any year. Any relevant data is represented on Map 7a – Flood Map for Planning.

ID	Distance (m)	Direction	Update	Type
1	0	On Site	19-Nov-2019	Zone 3 - (Fluvial Models)
	227	S	19-Nov-2019	Zone 3 - (Fluvial Models)

7.3 Risk of Flooding from Rivers and the Sea (RoFRaS) Flood Rating

Highest risk of flooding onsite

Low

The Environment Agency/Natural Resources Wales RoFRaS database provides an indication of river and coastal flood risk at a national level on a 50m grid with the flood rating at the centre of the grid calculated and given above. The data considers the probability that the flood defences will overtop or breach by considering their location, type, condition and standard of protection.

RoFRaS data for the study site indicates the property is in an area with a Low (greater than 1 in 1000 but less than 1 in 100) chance of flooding in any given year.

Any relevant data within 250m is represented on the RoFRaS Flood map. Data to 50m is reported in the table below.

ID	Distance (m)	Direction	RoFRaS flood Risk
----	--------------	-----------	-------------------

1	0.0	On Site	Low
2	0.0	On Site	Low
3	43.0	E	High
4	47.0	W	Low

7.4 Flood Defences

Flood Defences within 250m of the study site None identified
Database searched and no data found.

7.5 Areas benefiting from Flood Defences

Areas benefiting from Flood Defences within 250m of the study site None identified

7.6 Areas benefiting from Flood Storage

Areas used for Flood Storage within 250m of the study site None identified

7.7 Groundwater Flooding Susceptibility Areas

7.7.1 British Geological Survey groundwater flooding susceptibility areas within 50m of the boundary of the study site Identified

Clearwater Flooding or Superficial Deposits Flooding Superficial Deposits Flooding

Notes: Groundwater flooding may either be associated with shallow unconsolidated sedimentary aquifers which overlie unproductive aquifers (Superficial Deposits Flooding), or with unconfined aquifers (Clearwater Flooding).

7.7.2 Highest susceptibility to groundwater flooding in the search area based on the underlying geological conditions

Potential at Surface

Where potential for groundwater flooding to occur at surface is indicated, this means that given the geological conditions in the area groundwater flooding hazard should be considered in all land-use planning decisions. It is recommended that other relevant information e.g. records of previous incidence of groundwater flooding, rainfall, property type, and land drainage information be investigated in order to establish relative, but not absolute, risk of groundwater flooding.

7.8 Groundwater Flooding Confidence Areas

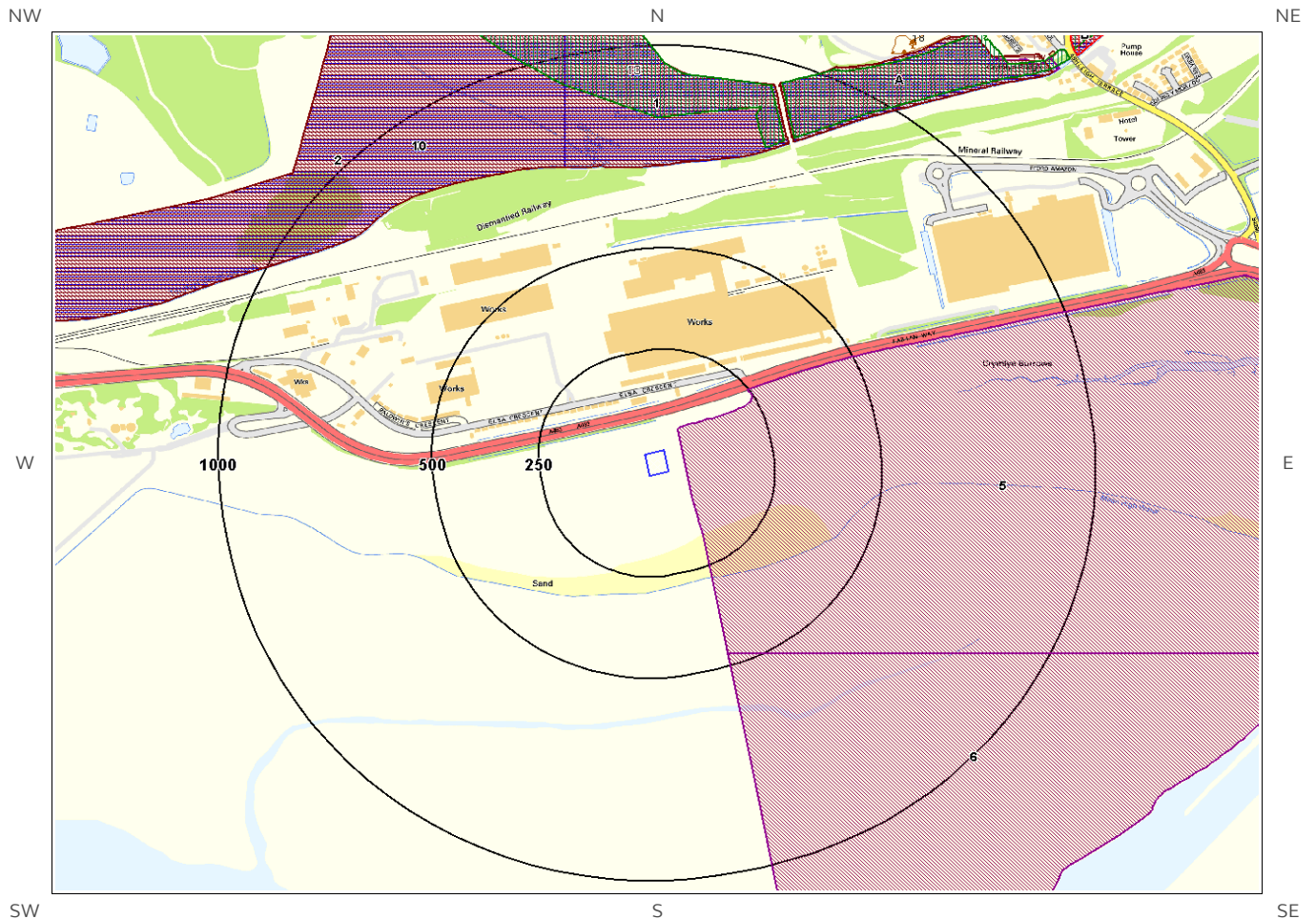
British Geological Survey confidence rating in this result

Moderate

Notes: Groundwater flooding is defined as the emergence of groundwater at the ground surface or the rising of groundwater into man-made ground under conditions where the normal range of groundwater levels is exceeded.

The confidence rating is on a threefold scale - Low, Moderate and High. This provides a relative indication of the BGS confidence in the accuracy of the susceptibility result for groundwater flooding. This is based on the amount and precision of the information used in the assessment. In areas with a relatively lower level of confidence the susceptibility result should be treated with more caution. In other areas with higher levels of confidence the susceptibility result can be used with more confidence.

8. Designated Environmentally Sensitive Sites Map



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8. Designated Environmentally Sensitive Sites

Designated Environmentally Sensitive Sites within 2000m of the study site

Identified

8.1 Records of Sites of Special Scientific Interest (SSSI) within 2000m of the study site:

5

The following Site of Special Scientific Interest (SSSI) records provided by Natural England/Natural Resources Wales are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	SSSI Name	Data Source
5	43	E	Crymlyn Burrows	Natural Resources Wales
6	470	S	Crymlyn Burrows	Natural Resources Wales
7	702	N	Cors Crymlyn / Crymlyn Bog	Natural Resources Wales
8A	820	N	Cors Crymlyn / Crymlyn Bog	Natural Resources Wales
9B	1376	NE	Pant-Y-Sais	Natural Resources Wales

8.2 Records of National Nature Reserves (NNR) within 2000m of the study site:

4

The following National Nature Reserve (NNR) records provided by Natural England/Natural Resources Wales are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	NNR Name	Data Source
13	786	N	CRYMLYN BOG AND PANT Y SAIS	Natural Resources Wales
14A	831	N	CRYMLYN BOG AND PANT Y SAIS	Natural Resources Wales
15B	1378	NE	CRYMLYN BOG AND PANT Y SAIS	Natural Resources Wales
Not shown	1465	NW	CRYMLYN BOG AND PANT Y SAIS	Natural Resources Wales

8.3 Records of Special Areas of Conservation (SAC) within 2000m of the study site:

4

The following Special Area of Conservation (SAC) records provided by Natural England/Natural Resources Wales are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	SAC Name	Data Source
1	702	N	Crymlyn Bog / Cors Crymlyn	Natural Resources Wales
2	733	N	Crymlyn Bog / Cors Crymlyn	Natural Resources Wales
3A	820	N	Crymlyn Bog / Cors Crymlyn	Natural Resources Wales
4B	1376	NE	Crymlyn Bog / Cors Crymlyn	Natural Resources Wales

8.4 Records of Special Protection Areas (SPA) within 2000m of the study site:

0

Database searched and no data found.

8.5 Records of Ramsar sites within 2000m of the study site:

3

The following Ramsar records provided by Natural England/Natural Resources Wales are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	Ramsar Site Name	Ramsar Site Status	Data Source
10	702	N	Crymlyn Bog		Natural Resources Wales
11A	820	N	Crymlyn Bog		Natural Resources Wales
12B	1376	NE	Crymlyn Bog		Natural Resources Wales

8.6 Records of Ancient Woodland within 2000m of the study site:

17

The following records of Designated Ancient Woodland provided by Natural England/Natural Resources Wales are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	Ancient Woodland Name	Data Source
18	1116	NE	Unknown	Ancient Semi Natural Woodland
Not shown	1356	NE	Unknown	Ancient Semi Natural Woodland
Not shown	1422	NE	Unknown	Ancient Semi Natural Woodland
Not shown	1559	NE	Unknown	Ancient Semi Natural Woodland
Not shown	1571	N	Unknown	Ancient Semi Natural Woodland
Not shown	1586	N	Unknown	Ancient Semi Natural Woodland
Not shown	1622	N	Unknown	Ancient Woodland Site of Unknown Category
Not shown	1738	NE	Unknown	Ancient Semi Natural Woodland
Not shown	1764	NE	Unknown	Ancient Semi Natural Woodland
Not shown	1769	N	Unknown	Ancient Woodland Site of Unknown Category
Not shown	1784	N	Unknown	Ancient Semi Natural Woodland
Not shown	1809	NW	Unknown	Ancient Semi Natural Woodland
Not shown	1827	N	Unknown	Ancient Semi Natural Woodland
Not shown	1868	NE	Unknown	Ancient Semi Natural Woodland
Not shown	1874	N	Unknown	Ancient Woodland Site of Unknown Category
Not shown	1877	N	Unknown	Ancient Woodland Site of Unknown Category
Not shown	1992	N	Unknown	Ancient Woodland Site of Unknown Category

8.7 Records of Local Nature Reserves (LNR) within 2000m of the study site:

1

The following Local Nature Reserve (LNR) records provided by Natural England/Natural Resources Wales are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	LNR Name	Data Source
17B	1376	NE	PANT-Y-SAIS	Natural Resources Wales

8.8 Records of World Heritage Sites within 2000m of the study site:

0

Database searched and no data found.

8.9 Records of Environmentally Sensitive Areas within 2000m of the study site:

0

Database searched and no data found.

8.10 Records of Areas of Outstanding Natural Beauty (AONB) within 2000m of the study site:

0

Database searched and no data found.

8.11 Records of National Parks (NP) within 2000m of the study site:

0

Database searched and no data found.

8.12 Records of Nitrate Sensitive Areas within 2000m of the study site:

0

Database searched and no data found.

8.13 Records of Nitrate Vulnerable Zones within 2000m of the study site:

0

Database searched and no data found.

8.14 Records of Green Belt land within 2000m of the study site:

0

Database searched and no data found.

9. Natural Hazards Findings

9.1 Detailed BGS GeoSure Data

BGS GeoSure Data has been searched to 50m. The data is included in tabular format. If you require further information on geology and ground stability, please obtain a **Groundsure Geo Insight**, available from our **website**. The following information has been found:

9.1.1 Shrink Swell

Maximum Shrink-Swell** hazard rating identified on the study site Negligible

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
Ground conditions predominantly non-plastic. No special actions required to avoid problems due to shrink-swell clays. No special ground investigation required, and increased construction costs or increased financial risks are unlikely likely due to potential problems with shrink-swell clays.

9.1.2 Landslides

Maximum Landslide* hazard rating identified on the study site Very Low

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
Slope instability problems are unlikely to be present. No special actions required to avoid problems due to landslides. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with landslides.

9.1.3 Soluble Rocks

Maximum Soluble Rocks* hazard rating identified on the study site Negligible

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
Soluble rocks are present, but unlikely to cause problems except under exceptional conditions. No special actions required to avoid problems due to soluble rocks. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with soluble rocks.

* This indicates an automatically generated 50m buffer and site.

9.1.4 Compressible Ground

Maximum Compressible Ground* hazard rating identified on the study site

Negligible

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
No indicators for compressible deposits identified. No special actions required to avoid problems due to compressible deposits. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with compressible deposits.

9.1.5 Collapsible Rocks

Maximum Collapsible Rocks* hazard rating identified on the study site

Negligible

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
No indicators for collapsible deposits identified. No actions required to avoid problems due to collapsible deposits. No special ground investigation required, or increased construction costs or increased financial risk due to potential problems with collapsible deposits.

9.1.6 Running Sand

Maximum Running Sand** hazard rating identified on the study site

Negligible

The following natural subsidence information provided by the British Geological Survey is not represented on mapping:

Hazard
No indicators for running sand identified. No special actions required to avoid problems due to running sand. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with running sand.

* This indicates an automatically generated 50m buffer and site.

9.2 Radon

9.2.1 Radon Affected Areas

Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level? The site is in a Radon Affected Area, as between 1 and 3% of properties are above the Action Level.

The radon data in this report is supplied by the BGS/Public Health England and is the definitive map of Radon Affected Areas in Great Britain and Northern Ireland. The dataset was created using long-term radon measurements in over 479,000 homes across Great Britain and 23,000 homes across Northern Ireland, combined with geological data. The dataset is considered accurate to 50m to allow for the margin of error in geological lines, and the findings of this report supercede any answer given in the less accurate Indicative Atlas of Radon in Great Britain, which simplifies the data to give the highest risk within any given 1km grid square. As such, the radon atlas is considered indicative, whereas the data given in this report is considered definitive.

9.2.2 Radon Protection

Is the property in an area where Radon Protection are required for new properties or extensions to existing ones as described in publication BR211 by the Building Research Establishment? No radon protective measures are necessary.

10. Mining

10.1 Coal Mining

Coal mining areas within 75m of the study site

Identified

The following coal mining information provided by the Coal Authority is not represented on Mapping:

Distance (m)	Direction	Details
0	On Site	The site lies in or in proximity to the coal mining reporting area as defined by the Coal Authority

10.2 Non-Coal Mining

Non-Coal Mining areas within 50m of the study site boundary

None identified

Database searched and no data found.

10.3 Brine Affected Areas

Brine affected areas within 75m of the study site

None identified

Guidance: No Guidance Required.

Contact Details

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The Coal Authority

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Ordnance Survey

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<https://www.groundsure.com/terms-and-conditions-feb11-2019>

RSK Environment Ltd

STRUCTURAL SOILS LTD, THE OLD SCHOOL,
STILLHOUSE LANE, BEDMINSTER,
BRISTOL, BS3 4EB

Groundsure
Reference:

GS-6521935

Your Reference: 314617

Report Date 17 Dec 2019

Report Delivery Method: Email - pdf

Geo Insight

Address: Crymlyn Way, Skewen Swansea, SA1 8QB

Dear Sir/ Madam,

Thank you for placing your order with Groundsure. Please find enclosed the **Groundsure Geo Insight** as requested.

If you need any further assistance, please do not hesitate to contact our helpline on 08444 159000 quoting the above Groundsure reference number.

Yours faithfully,



Managing Director
Groundsure Limited

Enc.
Groundsure Geo Insight

Address: Crymlyn Way, Skewen Swansea, SA1 8QB

Date: 17 Dec 2019

Reference: GS-6521935

Client: RSK Environment Ltd



Aerial Photograph Capture date: 26-May-2017
Grid Reference: 270217,192869
Site Size: 0.2364ha

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Overview of Findings

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

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

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

Section 1: Geology 1:10,000 Scale

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

Section 2: Geology 1:50,000 Scale

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

Section 2: Geology 1:50,000 Scale

2.3 Bedrock, Solid Geology and linear features

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

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

Yes

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

Yes

Section 3: Radon

3. Radon

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

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

3.2 Radon Protection

No radon protective measures are necessary.

Section 4: Ground Workings

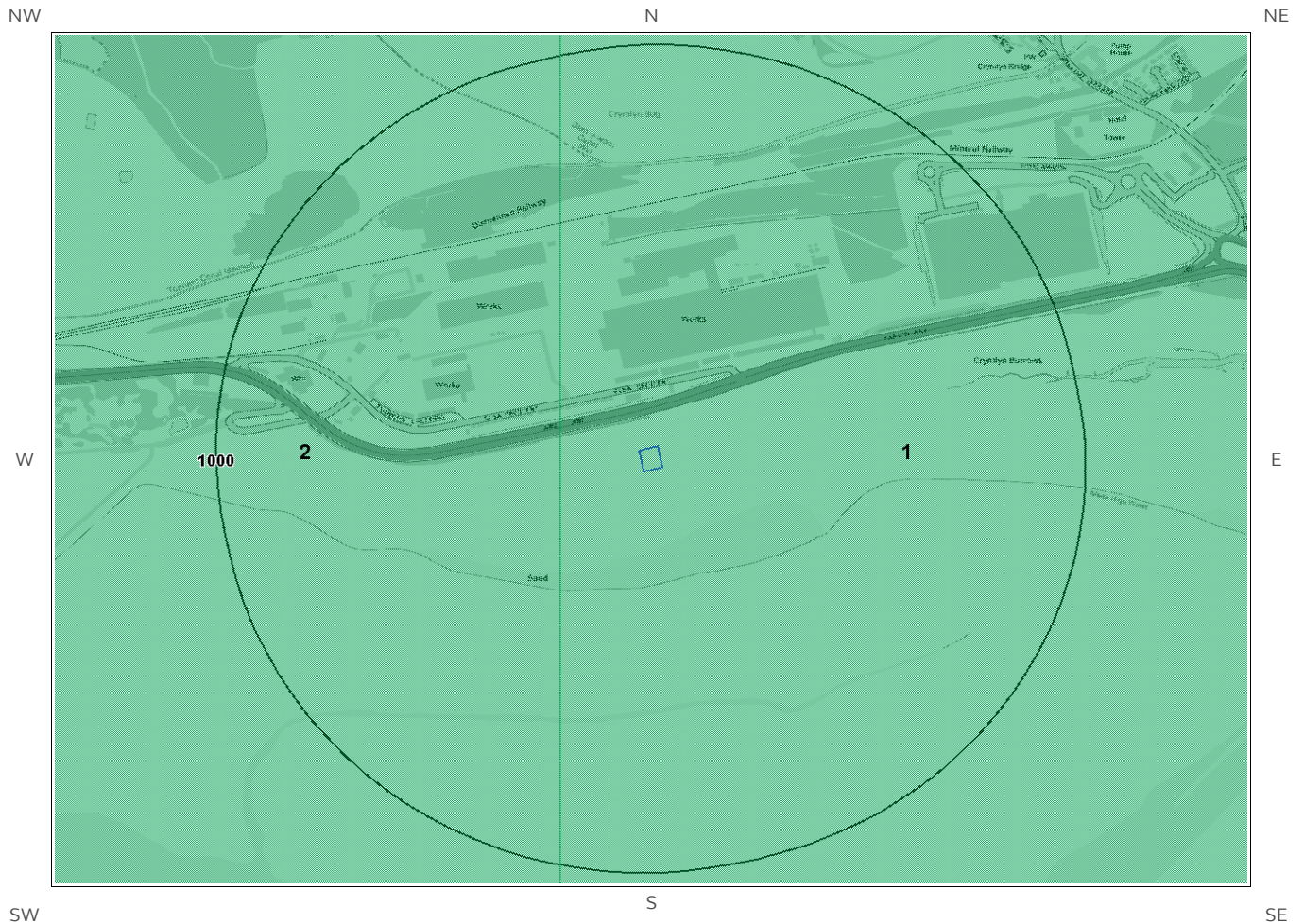
	On-site	0-50m	51-250	251-500	501-1000
4.1 Historical Surface Ground Working Features from Small Scale Mapping	0	3	0	Not Searched	Not Searched
4.2 Historical Underground Workings from Small Scale Mapping	0	0	0	0	0
4.3 Current Ground Workings	0	0	0	0	1

Section 5: Mining, Extraction & Natural Cavities

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

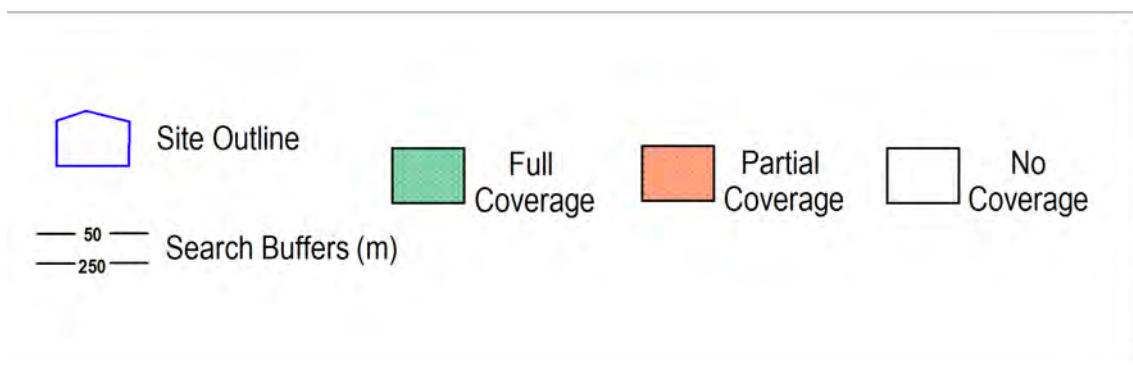
Section 5: Mining, Extraction & Natural Cavities	On-site	0-50m	51-250	251-500	501-1000
5.6 Brine Extraction	0	0	0	0	0
5.7 Gypsum Extraction	0	0	0	0	0
5.8 Cornwall and Devon Metalliferous Mining	0	0	0	0	0
5.9 Clay Mining	0	0	0	0	0
Section 6: Natural Ground Subsidence	On-site				
6.1 Shrink-Swell Clay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

1:10,000 Scale Availability



1_10,000 Availability Legend

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Availability of 1:10,000 Scale Geology Mapping

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

ID	Distance	Artificial Coverage	Superficial Coverage	Bedrock Coverage	Mass Movement Coverage
1	0.0	Some deposits are mapped	Full	Full	No coverage
2	187.0	Some deposits are mapped	Full	Full	No coverage

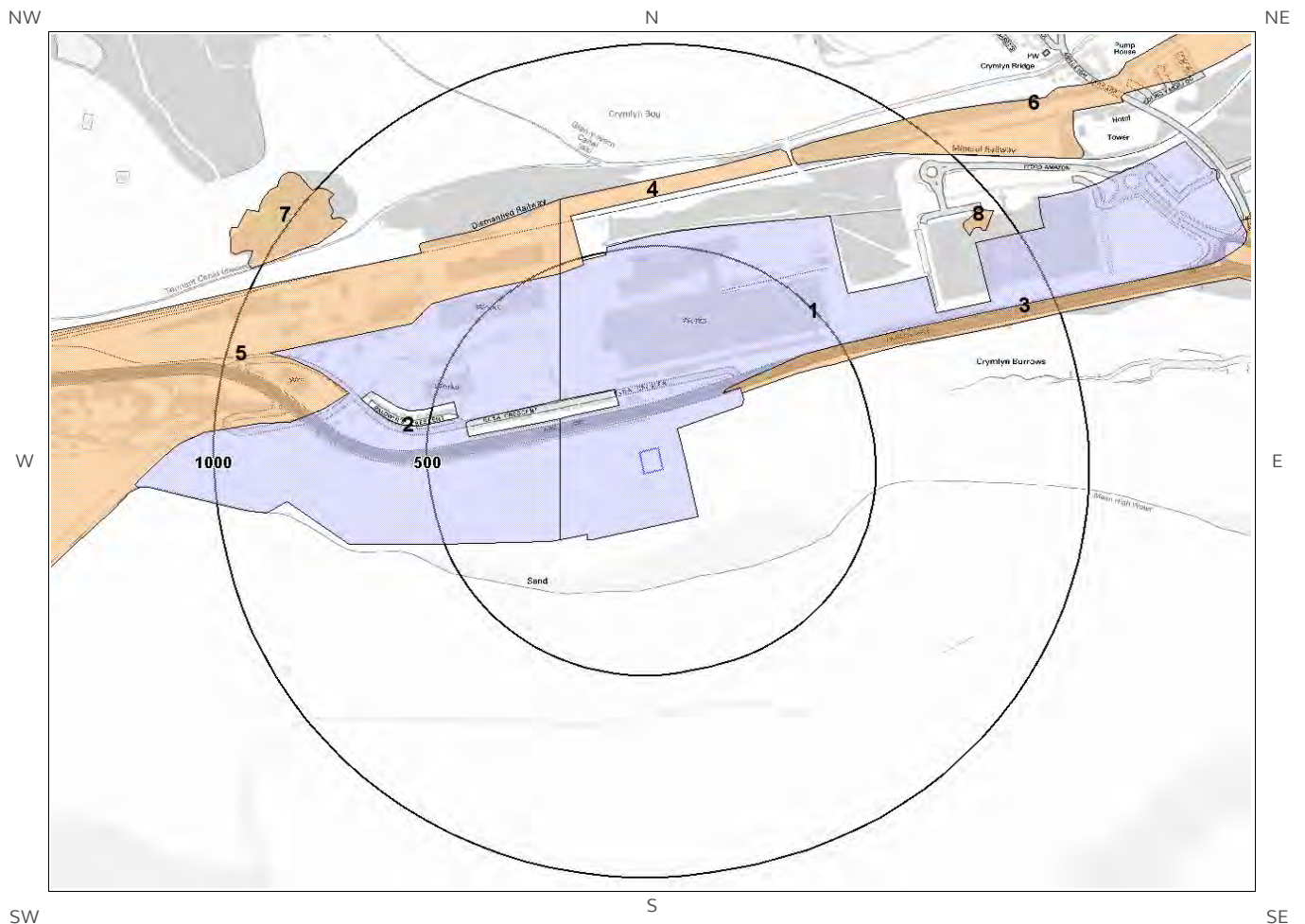
Guidance: The 1:10,000 scale geological interpretation is the most detailed generally available from BGS and is the scale at which most geological surveying is carried out in the field. The database is presented as four types of geology (artificial, mass movement, superficial and bedrock), although not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

The definitions of coverage are as follows:

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

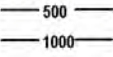
1 Geology (1:10,000 scale).

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



Artificial Ground Legend

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	Site Outline		Made Ground (undivided)		Disturbed Ground (undivided)
	Search Buffers (m)		Worked Ground (undivided)		Landscaped Ground (undivided)
			Infilled Ground		Reclaimed Ground

1. Geology 1:10,000 scale

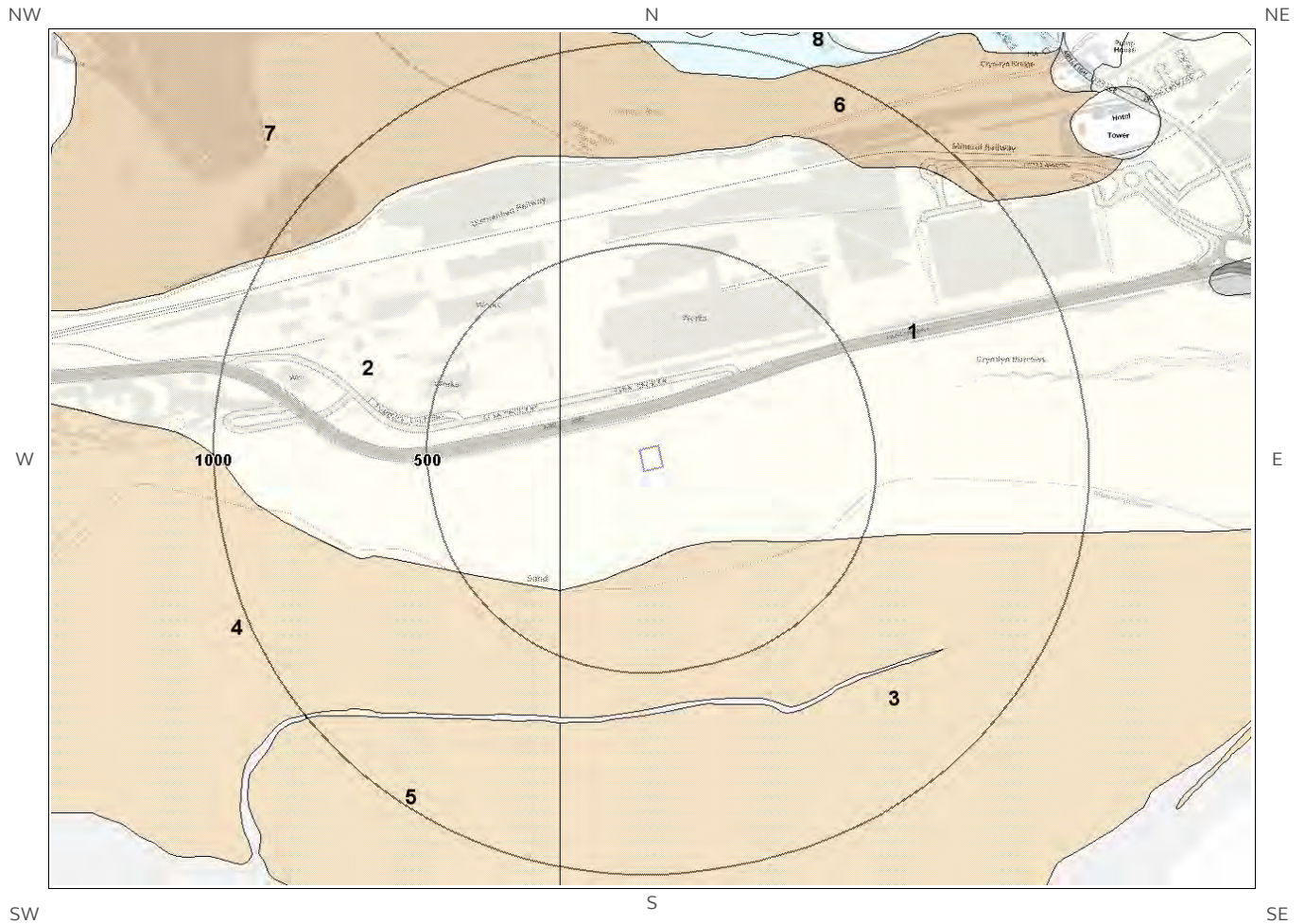
1.1 Artificial Ground

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

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

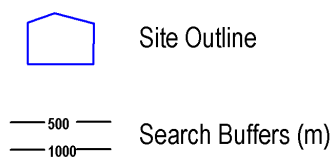
ID	Distance	Direction	LEX Code	Description	Rock Description
1	0.0	On Site	LSGR-UNKNOWN	Landscaped Ground (Undivided)	Unknown/unclassified Entry
2	187.0	W	LSGR-UNKNOWN	Landscaped Ground (Undivided)	Unknown/unclassified Entry
3	205.0	NE	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
4	479.0	N	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit
5	479.0	NW	MGR-ARTDP	Made Ground (Undivided)	Artificial Deposit

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



Artificial Ground Legend

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1.2 Superficial Deposits and Landslips

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

1.2.1 Superficial Deposits/ Drift Geology

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

ID	Distance (m)	Direction	LEX Code	Description	Rock Description
1	0.0	On Site	BSA-S	Blown Sand - Sand	Sand
2	187.0	W	BSA-S	Blown Sand - Sand	Sand
3	204.0	S	BCHD-XCZS	Beach Deposits - Clay, Silt And Sand	Clay, Silt And Sand
4	356.0	SW	BCHD-XCZS	Beach Deposits - Clay, Silt And Sand	Clay, Silt And Sand

1.2.2 Landslip

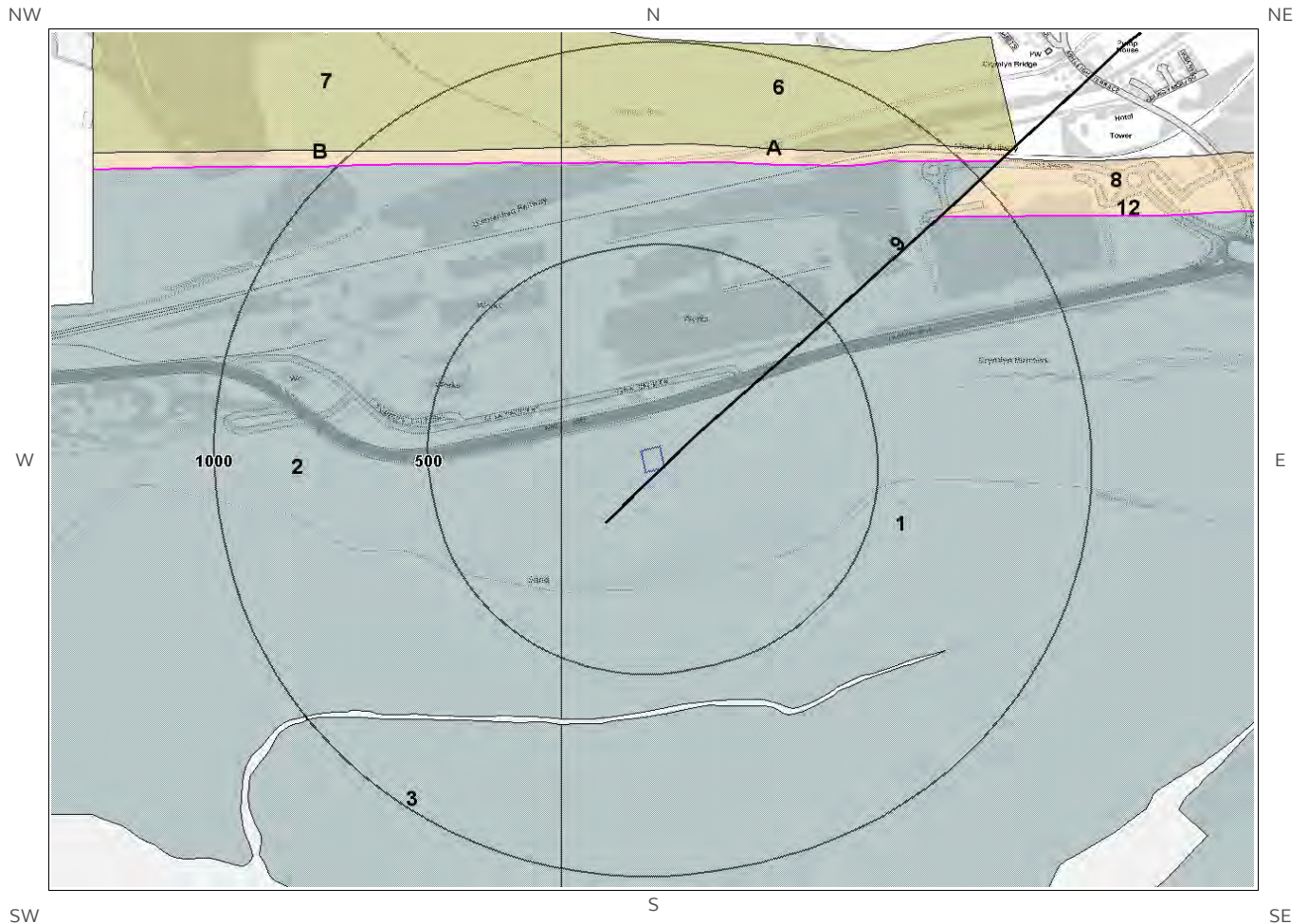
Are there any records of Landslip within 500m of the study site boundary at 1:10,000 scale? No

Database searched and no data found.

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

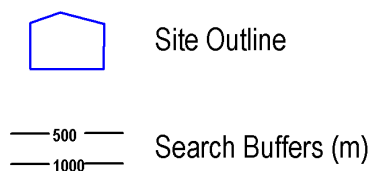
This Geology shows the main components as discrete layers, these are: Artificial / Made Ground, Superficial / Drift Geology and Landslips. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nationwide coverage.

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



Bedrock and linear features Legend

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1.3 Bedrock and linear features

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

1.3.1 Bedrock/ Solid Geology

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

ID	Distance (m)	Direction	LEX Code	Description	Rock Age
1	0.0	On Site	SWMCM-MDSS	South Wales Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age
2	187.0	W	SWMCM-MDSS	South Wales Middle Coal Measures Formation - Mudstone, Siltstone And Sandstone	Bolsovian Sub-age - Duckmantian Sub-age

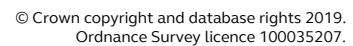
1.3.2 Linear features

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

ID	Distance (m)	Direction	Category Description	Feature Description
9	0.0	On Site	FAULT	Normal fault, inferred

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

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



2. Geology 1:50,000 scale

2.1 Artificial Ground

The following geological information represented on the mapping is derived from 1:50,000 scale BGS Geological mapping, Sheet No: 247

2.1.1 Artificial/ Made Ground

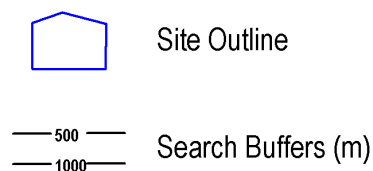
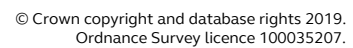
Are there any records of Artificial/ Made Ground within 500m of the study site boundary? Yes

ID	Distance (m)	Direction	LEX Code	Description	Rock Description
1	0.0	On Site	LSGR-ARTGR	LANDSCAPED GROUND (UNDIVIDED)	ARTIFICIALLY MODIFIED GROUND
2	205.0	NE	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT
3	479.0	N	MGR-ARTDP	MADE GROUND (UNDIVIDED)	ARTIFICIAL DEPOSIT

2.1.2 Permeability of Artificial Ground

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

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



2.2 Superficial Deposits and Landslips

2.2.1 Superficial Deposits/ Drift Geology

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

ID	Distance	Direction	LEX Code	Description	Rock Description
1	0.0	On Site	BSA-S	BLOWN SAND	SAND
2	204.0	S	MBD-S	MARINE BEACH DEPOSITS	SAND

2.2.2 Permeability of Superficial Ground

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

Distance (m)	Direction	Flow Type	Maximum Permeability	Minimum Permeability
0.0	On Site	Intergranular	High	High

2.2.3 Landslip

Are there any records of Landslip within 500m of the study site boundary? No

Database searched and no data found.

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

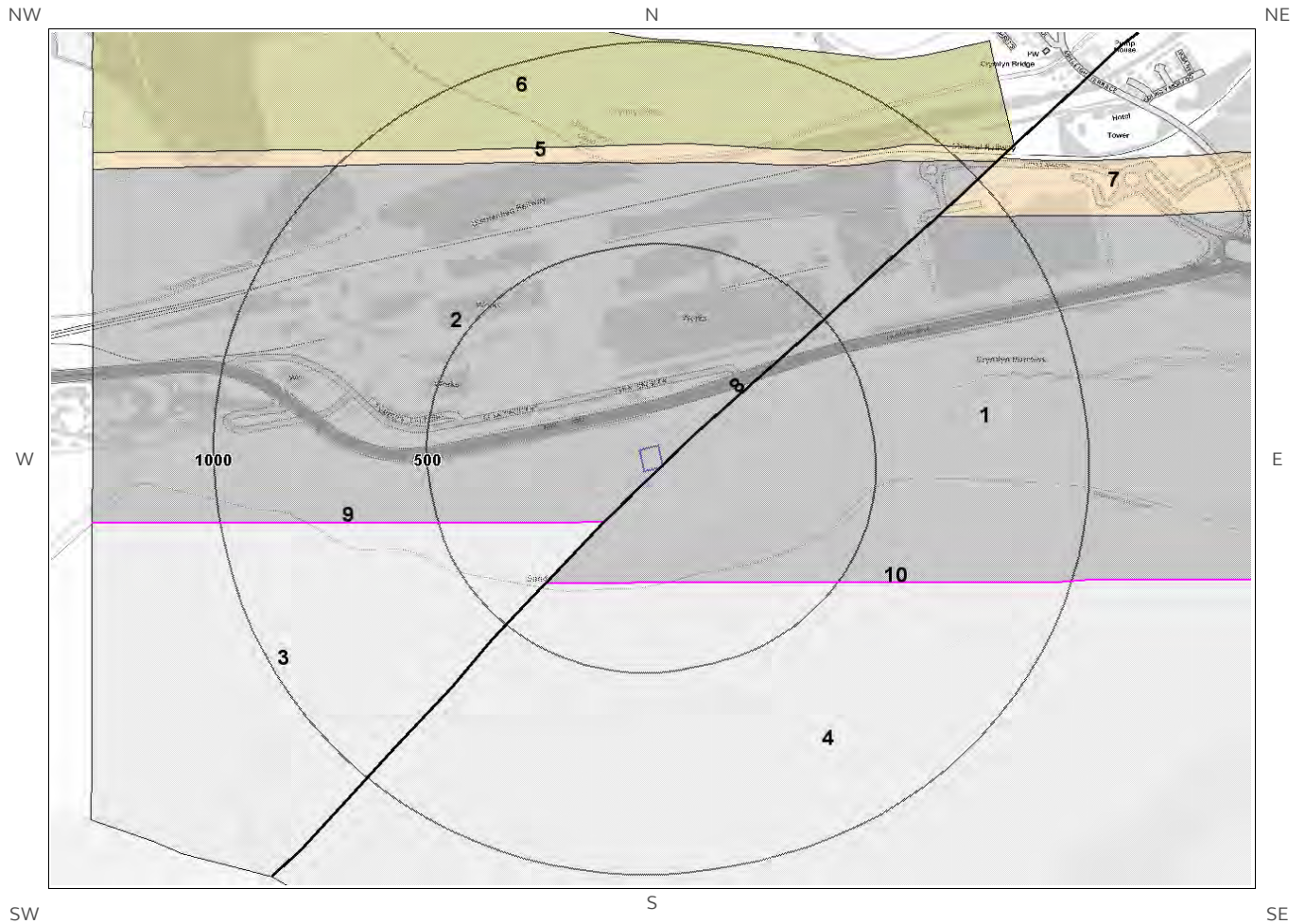
This Geology shows the main components as discrete layers, there are: Artificial/ Made Ground, Superficial/ Drift Geology and Landslips. These are all displayed with the BGS Lexicon code for the rock unit and BGS sheet number. Not all of the main geological components have nationwide coverage.

2.2.4 Landslip Permeability

Are there any records relating to permeability of landslips within the study site boundary? No

Database searched and no data found.

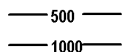
2.3 Bedrock and linear features map (1:50,000 scale)



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Site Outline



Search Buffers (m)

2.3 Bedrock, Solid Geology & linear features

The following geological information represented on the mapping is derived from 1:50,000 scale BGS Geological mapping, Sheet No: 247

2.3.1 Bedrock/Solid Geology

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

ID	Distance	Direction	LEX Code	Rock Description	Rock Age
1	0.0	On Site	SWMCM-MDSS	SOUTH WALES MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
2	0.0	On Site	SWMCM-MDSS	SOUTH WALES MIDDLE COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
3	158.0	SW	SWLCM-MDSS	SOUTH WALES LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN
4	276.0	S	SWLCM-MDSS	SOUTH WALES LOWER COAL MEASURES FORMATION - MUDSTONE, SILTSTONE AND SANDSTONE	WESTPHALIAN

2.3.2 Permeability of Bedrock Ground

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

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

2.3.3 Linear features

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

ID	Distance	Direction	Category Description	Feature Description
8	0.0	On Site	FAULT	Fault, inferred, displacement unknown
9	158.0	SW	FOSSIL_HORIZON	Marine band
10	276.0	S	FOSSIL_HORIZON	Marine band

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

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

3 Radon Data

3.1 Radon Affected Areas

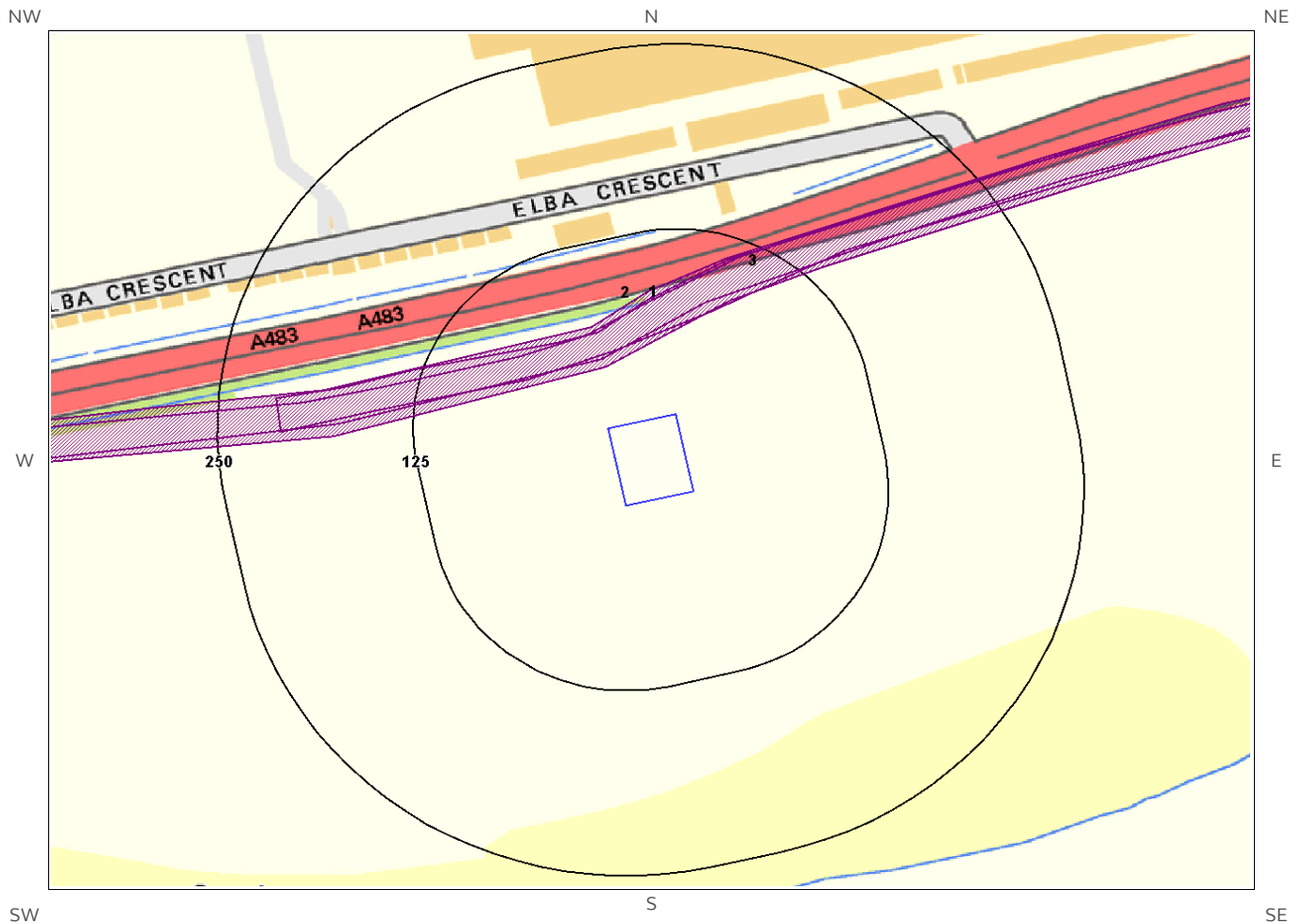
Is the property in a Radon Affected Area as defined by the Health Protection Agency (HPA) and if so what percentage of homes are above the Action Level? The property is in a Radon Affected Area, as between 1 and 3% of properties are above the Action Level.

The radon data in this report is supplied by the BGS/Public Health England and is the definitive map of Radon Affected Areas in Great Britain and Northern Ireland. The dataset was created using long-term radon measurements in over 479,000 homes across Great Britain and 23,000 homes across Northern Ireland, combined with geological data. The dataset is considered accurate to 50m to allow for the margin of error in geological lines, and the findings of this report supercede any answer given in the less accurate Indicative Atlas of Radon in Great Britain, which simplifies the data to give the highest risk within any given 1km grid square. As such, the radon atlas is considered indicative, whereas the data given in this report is considered definitive.

3.2 Radon Protection

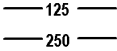
Is the property in an area where Radon Protection are required for new properties or extensions to existing ones as described in publication BR211 by the Building Research Establishment? No radon protective measures are necessary.

4 Ground Workings map



Ground Workings Legend

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- | | | | |
|---|--------------------|---|----------------------------------|
|  | Site Outline |  | Historic Surface Ground Workings |
|  | Search Buffers (m) |  | Historic Underground Workings |
| | |  | Current Ground Workings |

4 Ground Workings

4.1 Historical Surface Ground Working Features derived from Historical Mapping

This dataset is based on Groundsure's unique Historical Land Use Database derived from 1:10,560 and 1:10,000 scale historical mapping

Are there any Historical Surface Ground Working Features within 250m of the study site boundary? Yes

ID	Distance (m)	Direction	NGR	Use	Date
1	40.0	N	270431 193051	Unspecified Heap	1921
2	46.0	N	270436 193057	Unspecified Heap	1914
3	48.0	N	270376 193035	Unspecified Heap	1948

4.2 Historical Underground Working Features derived from Historical Mapping

This data is derived from the Groundsure unique Historical Land Use Database. It contains data derived from 1:10,000 and 1:10,560 historical Ordnance Survey Mapping and includes some natural topographical features (Shake Holes for example) as well as manmade features that may have implications for ground stability. Underground and mining features have been identified from surface features such as shafts. The distance that these extend underground is not shown.

Are there any Historical Underground Working Features within 1000m of the study site boundary? No

Database searched and no data found.

4.3 Current Ground Workings

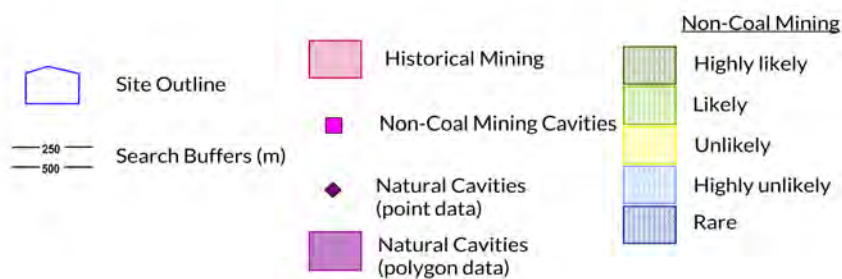
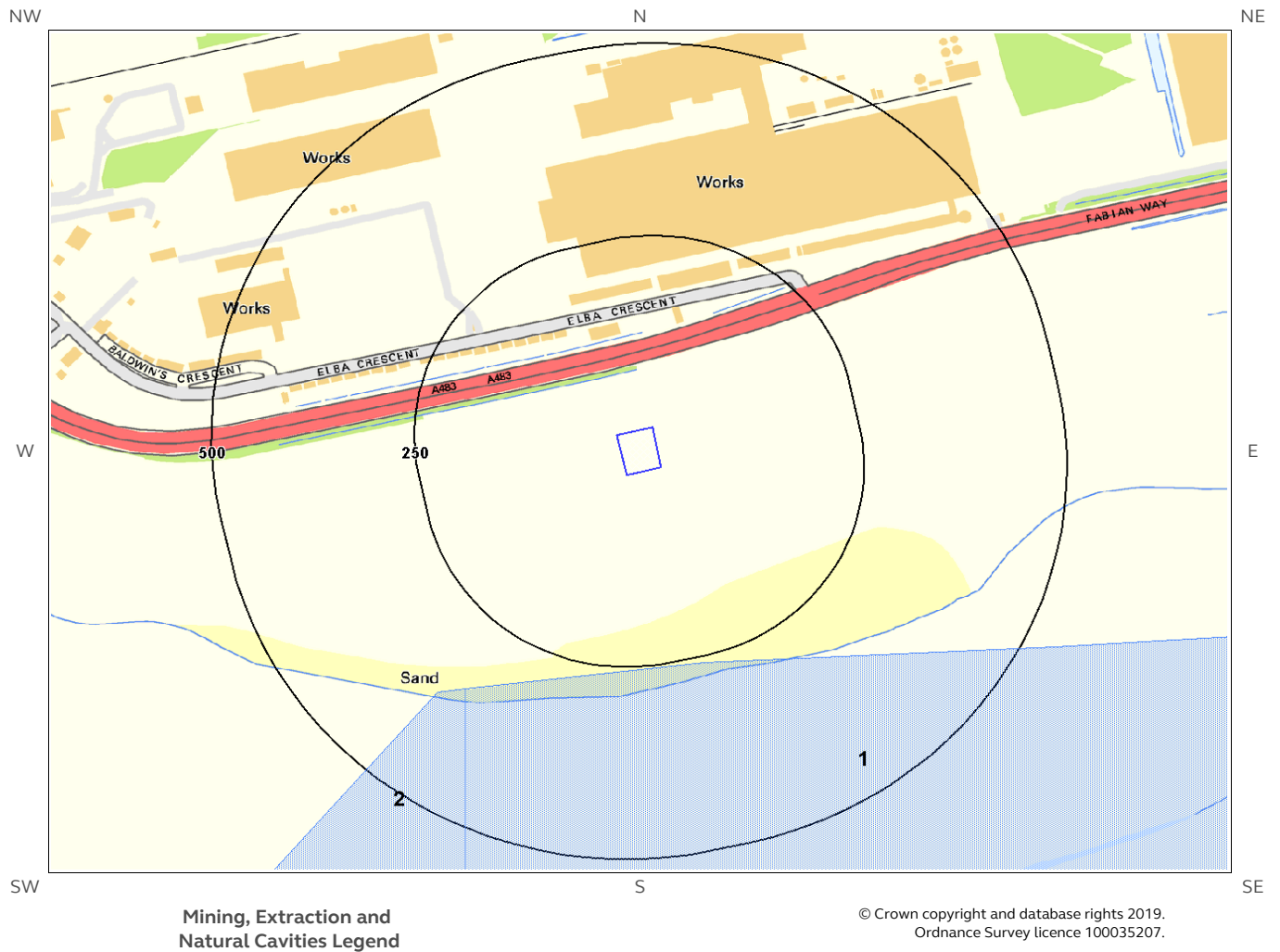
This dataset is derived from the BGS BRITPITS database covering active; inactive mines; quarries; oil wells; gas wells and mineral wharves; and rail deposits throughout the British Isles.

Are there any BGS Current Ground Workings within 1000m of the study site boundary? Yes

The following Current Ground Workings information is provided by British Geological Survey:

ID	Distance (m)	Direction	NGR	Commodity Produced	Pit Name	Type of working	Status
Not shown	795.0	NW	269663 193491	Sand	Halfway House Sand Pit	A surface mineral working. It may be termed Quarry, Sand Pit, Clay Pit or Opencast Coal Site	Ceased

5 Mining, Extraction & Natural Cavities map



5 Mining, Extraction & Natural Cavities

5.1 Historical Mining

This dataset is derived from Groundsure unique Historical Land-use Database that are indicative of mining or extraction activities.

Are there any Historical Mining areas within 1000m of the study site boundary? No

Database searched and no data found.

5.2 Coal Mining

This dataset provides information as to whether the study site lies within a known coal mining affected area as defined by the coal authority.

Are there any Coal Mining areas within 1000m of the study site boundary? Yes

The following Coal Mining information provided by the Coal Authority is not represented on Mapping:

Distance (m)	Direction	Details
0.0	On Site	The site lies in or in proximity to the coal mining reporting area as defined by the Coal Authority

5.3 Johnson Poole and Bloomer

This dataset provides information as to whether the study site lies within an area where JPB hold information relating to mining.

Are there any JPB Mining areas within 1000m of the study site boundary? No

The following information provided by JPB is not represented on mapping: Database searched and no data found.

5.4 Non-Coal Mining

This dataset provides information as to whether the study site lies within an area which may have been subject to non-coal historic mining.

Are there any Non-Coal Mining areas within 1000m of the study site boundary? Yes

The following non-coal mining information is provided by the BGS:

ID	Distance (m)	Direction	Name	Commodity	Assessment of likelihood
1	253.0	S	Not available	Iron Ore (Bedded)	Localised small scale underground mining may have occurred. Potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered

ID	Distance (m)	Direction	Name	Commodity	Assessment of likelihood
2	342.0	SW	Not available	Iron Ore (Bedded)	Localised small scale underground mining may have occurred. Potential for difficult ground conditions are unlikely or localised and are at a level where they need not be considered

5.5 Non-Coal Mining Cavities

This dataset provides information from the Peter Brett Associates (PBA) mining cavities database (compiled for the national study entitled “Review of mining instability in Great Britain, 1990” PBA has also continued adding to this database) on mineral extraction by mining.

Are there any Non-Coal Mining cavities within 1000m of the study site boundary? No

Database searched and no data found.

5.6 Natural Cavities

This dataset provides information based on the Peter Brett Associates natural cavities database. The dataset is made up of points and polygons. Where polygons are used these represent an area in which it is expected the cavities could be found. It does not indicate that cavities are present everywhere within the polygon, and caution should be used in the interpretation of this data.

Are there any Natural Cavities within 1000m of the study site boundary? No

Database searched and no data found.

5.7 Brine Extraction

This data provides information from the Cheshire Brine Subsidence Compensation Board.

Are there any Brine Extraction areas within 1000m of the study site boundary? No

Database searched and no data found.

5.8 Gypsum Extraction

This dataset provides information on Gypsum extraction from British Gypsum records.

Are there any Gypsum Extraction areas within 1000m of the study site boundary? No

Database searched and no data found.

5.9 Cornwall and Devon Metalliferous Mining

This dataset provides information on metalliferous mining areas in Cornwall/Devon and is derived from records held by Mining Searches UK.

Are there any Cornwall and Devon Metalliferous Mining areas within 1000m of the study site boundary? No

Database searched and no data found.

5.10 Clay Mining

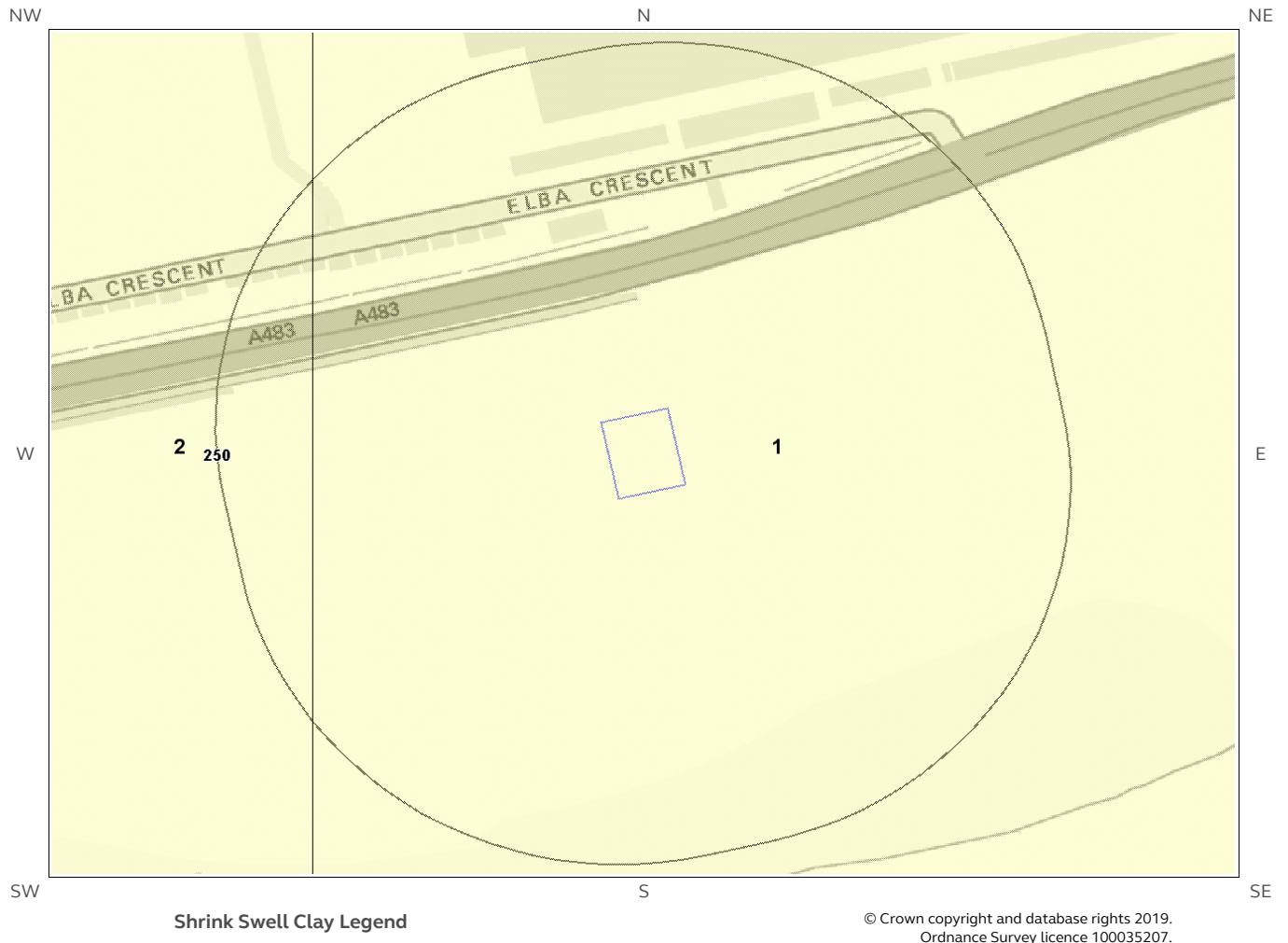
This dataset provides information on Kaolin and Ball Clay mining from relevant mining records.

Are there any Clay Mining areas within 1000m of the study site boundary? No

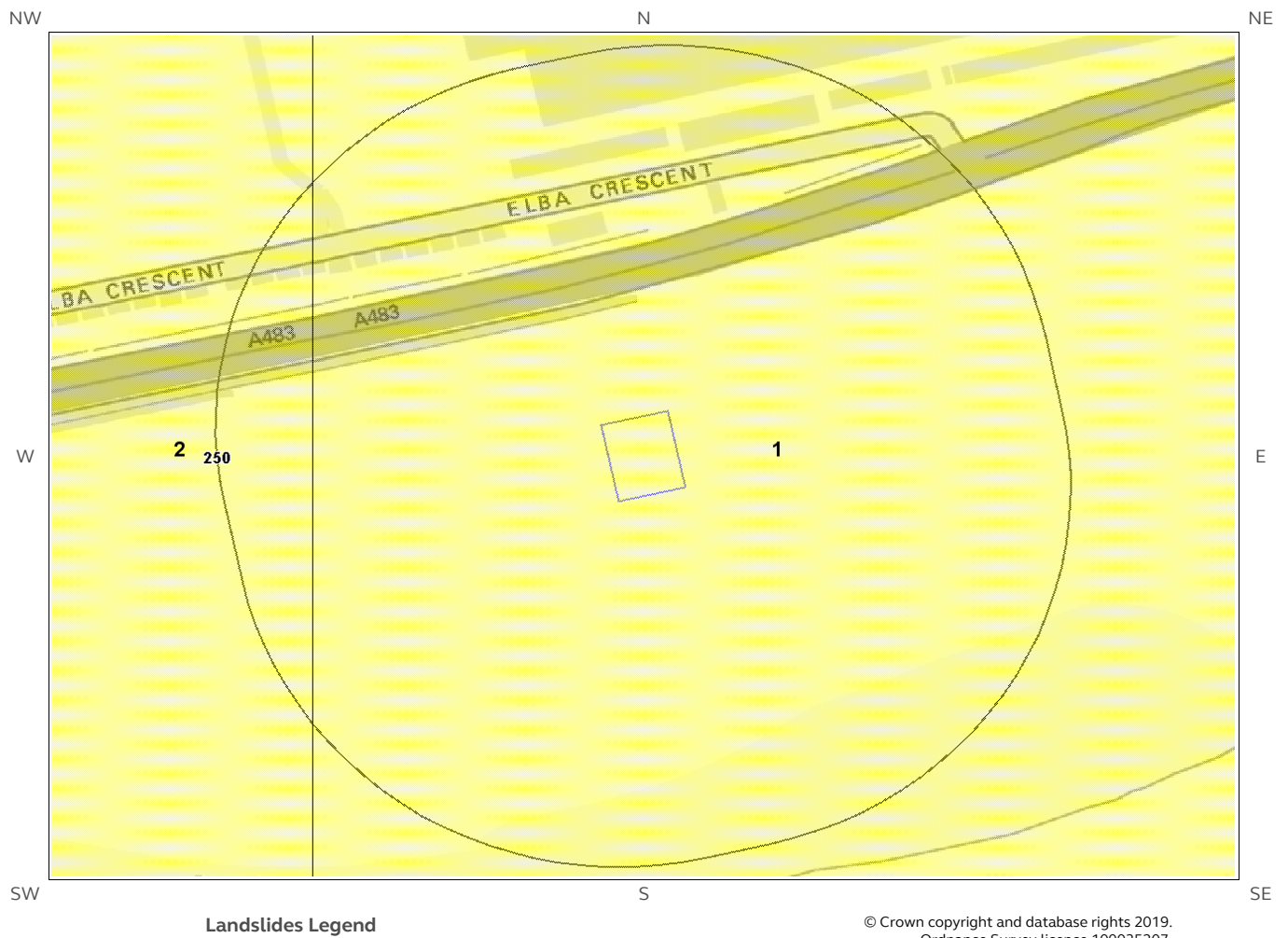
Database searched and no data found.

6 Natural Ground Subsidence

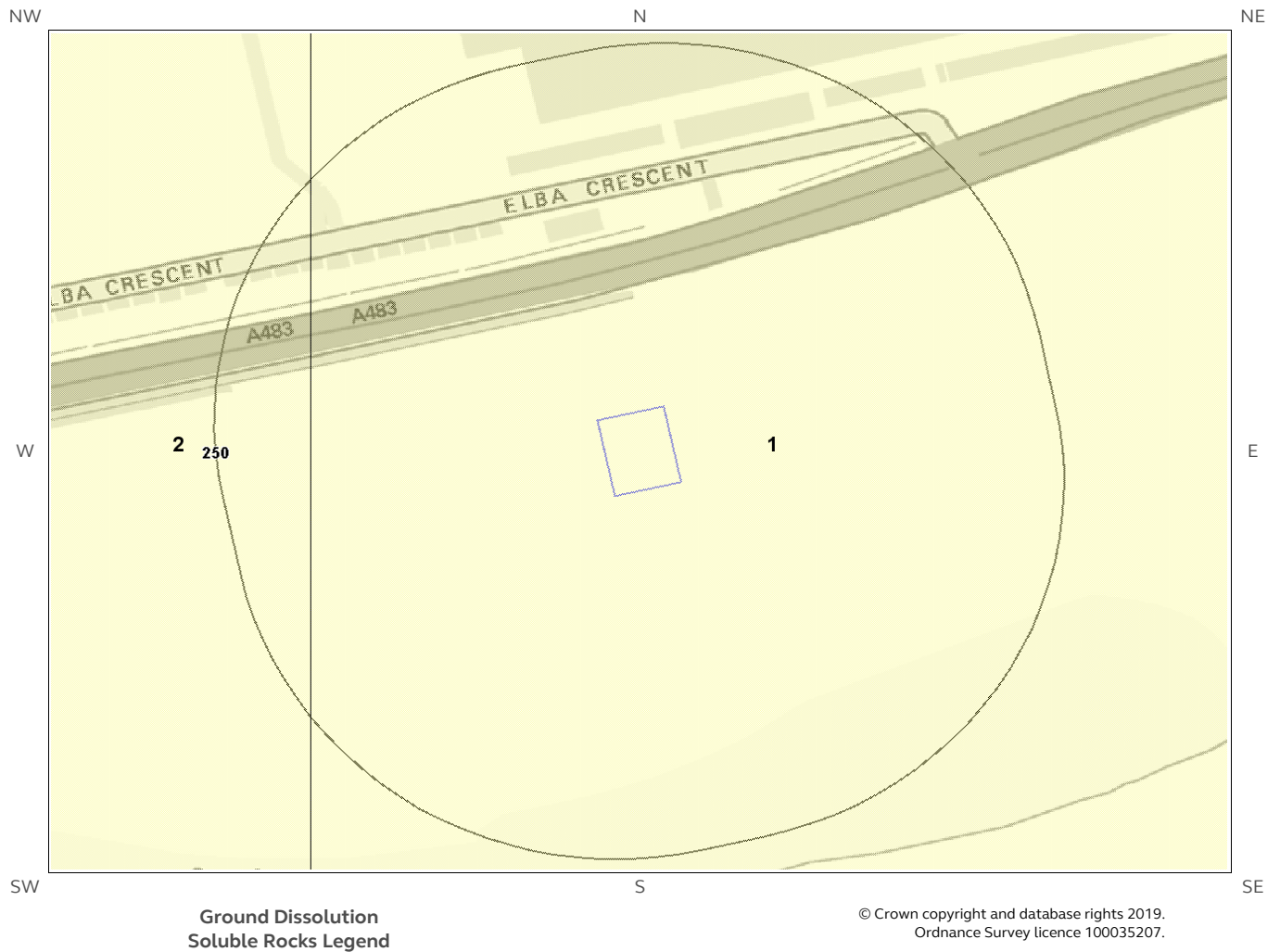
6.1 Shrink-Swell Clay map



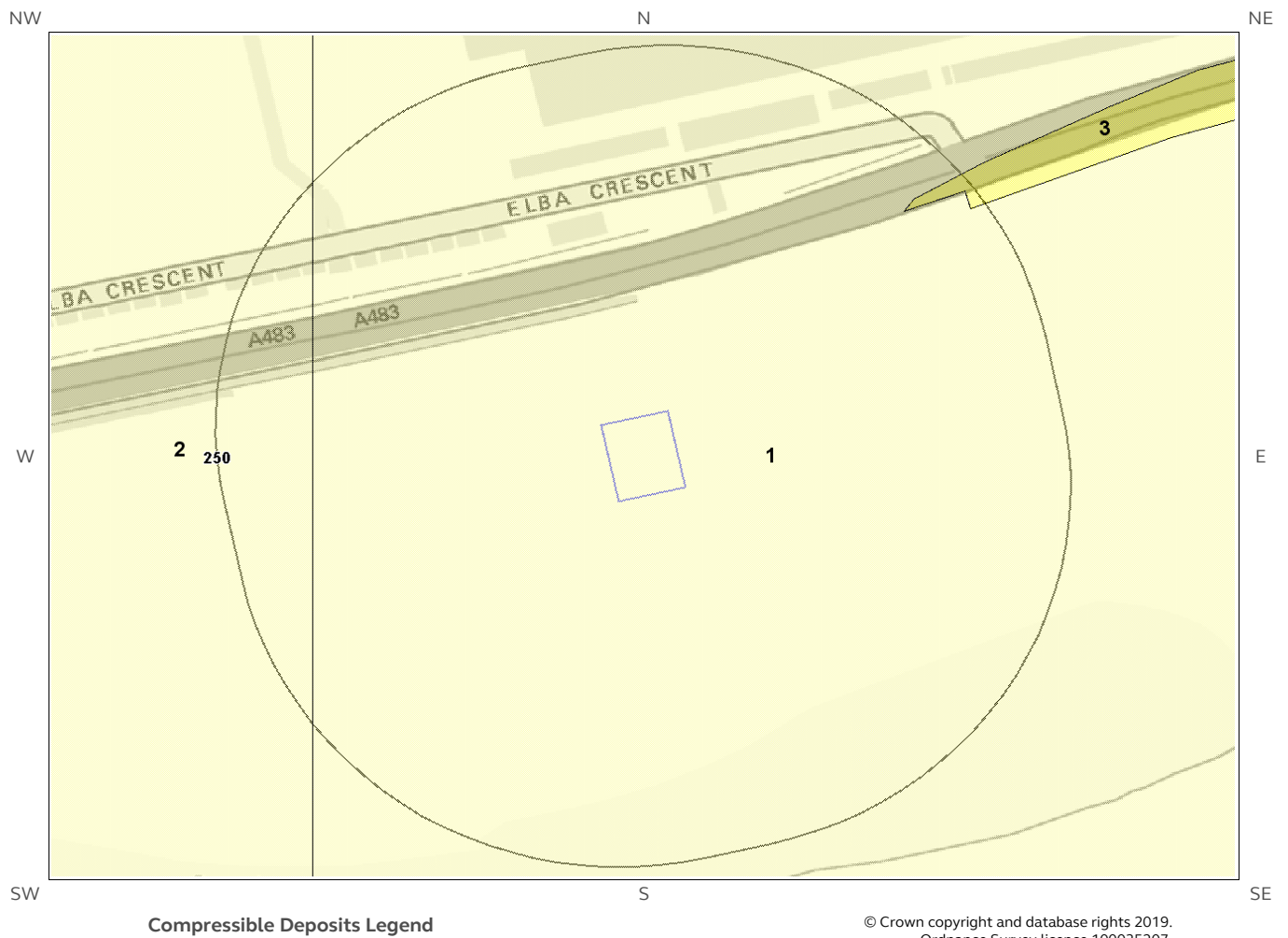
6.2 Landslides map



6.3 Ground Dissolution of Soluble Rocks map



6.4 Compressible Deposits map



6.5 Collapsible Deposits map

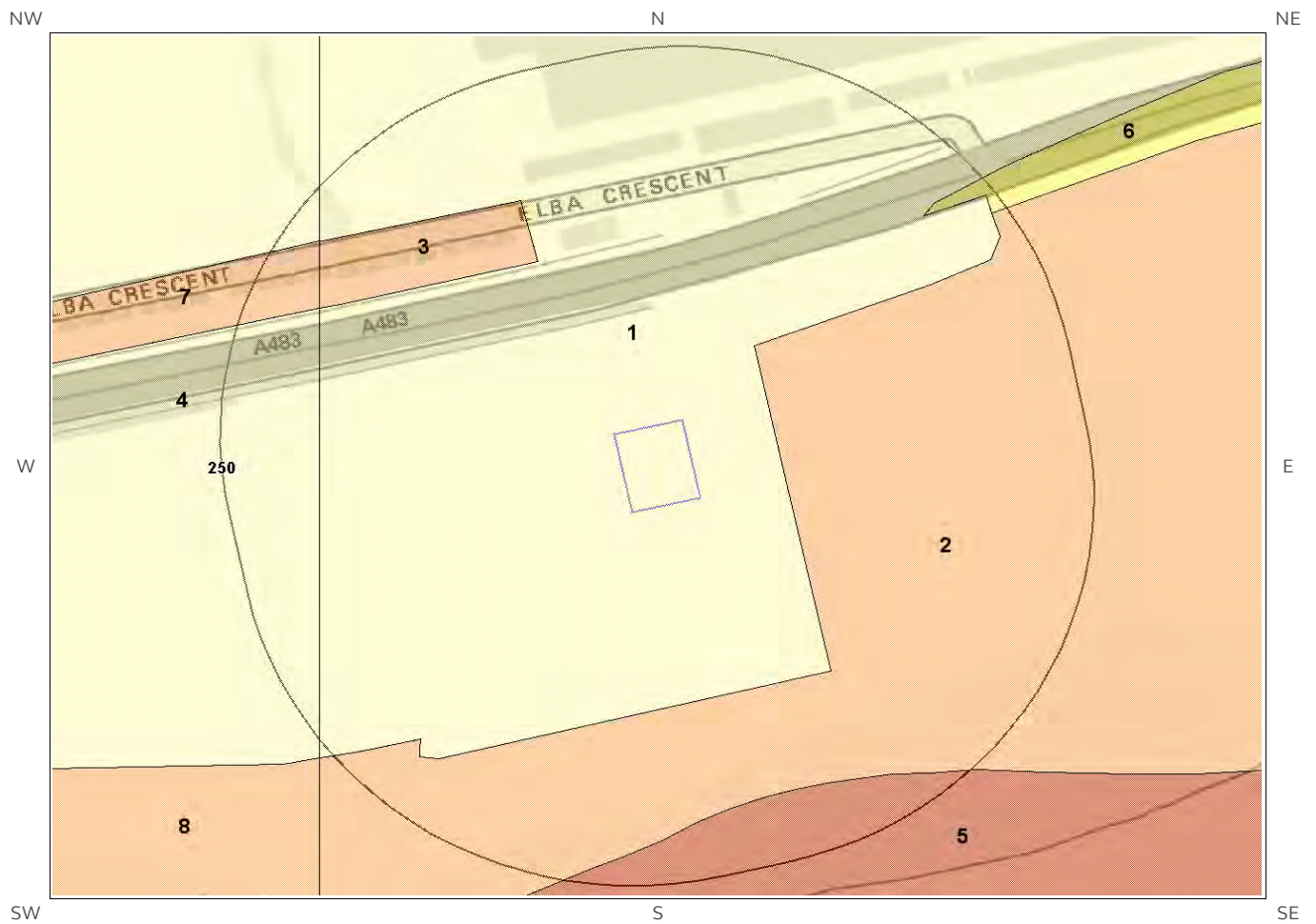


Collapsible Deposits Legend

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6.6 Running Sand map



Running Sand Legend

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6 Natural Ground Subsidence

The National Ground Subsidence rating is obtained through the 6 natural ground stability hazard datasets, which are supplied by the British Geological Survey (BGS).

The following GeoSure data represented on the mapping is derived from the BGS Digital Geological map of Great Britain at 1:50,000 scale.

What is the maximum hazard rating of natural subsidence within the study site** boundary? Very Low

6.1 Shrink-Swell Clays

The following Shrink Swell information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Negligible	Ground conditions predominantly non-plastic. No special actions required to avoid problems due to shrink-swell clays. No special ground investigation required, and increased construction costs or increased financial risks are unlikely likely due to potential problems with shrink-swell clays.

6.2 Landslides

The following Landslides information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Very Low	Slope instability problems are unlikely to be present. No special actions required to avoid problems due to landslides. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with landslides.

6.3 Ground Dissolution of Soluble Rocks

The following Ground Dissolution information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Negligible	Soluble rocks are present, but unlikely to cause problems except under exceptional conditions. No special actions required to avoid problems due to soluble rocks. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with soluble rocks.

* This includes an automatically generated 50m buffer zone around the site

6.4 Compressible Deposits

The following Compressible Deposits information provided by the British Geological Survey:

ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Negligible	No indicators for compressible deposits identified. No special actions required to avoid problems due to compressible deposits. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with compressible deposits.

6.5 Collapsible Deposits

The following Collapsible Rocks information provided by the British Geological Survey:

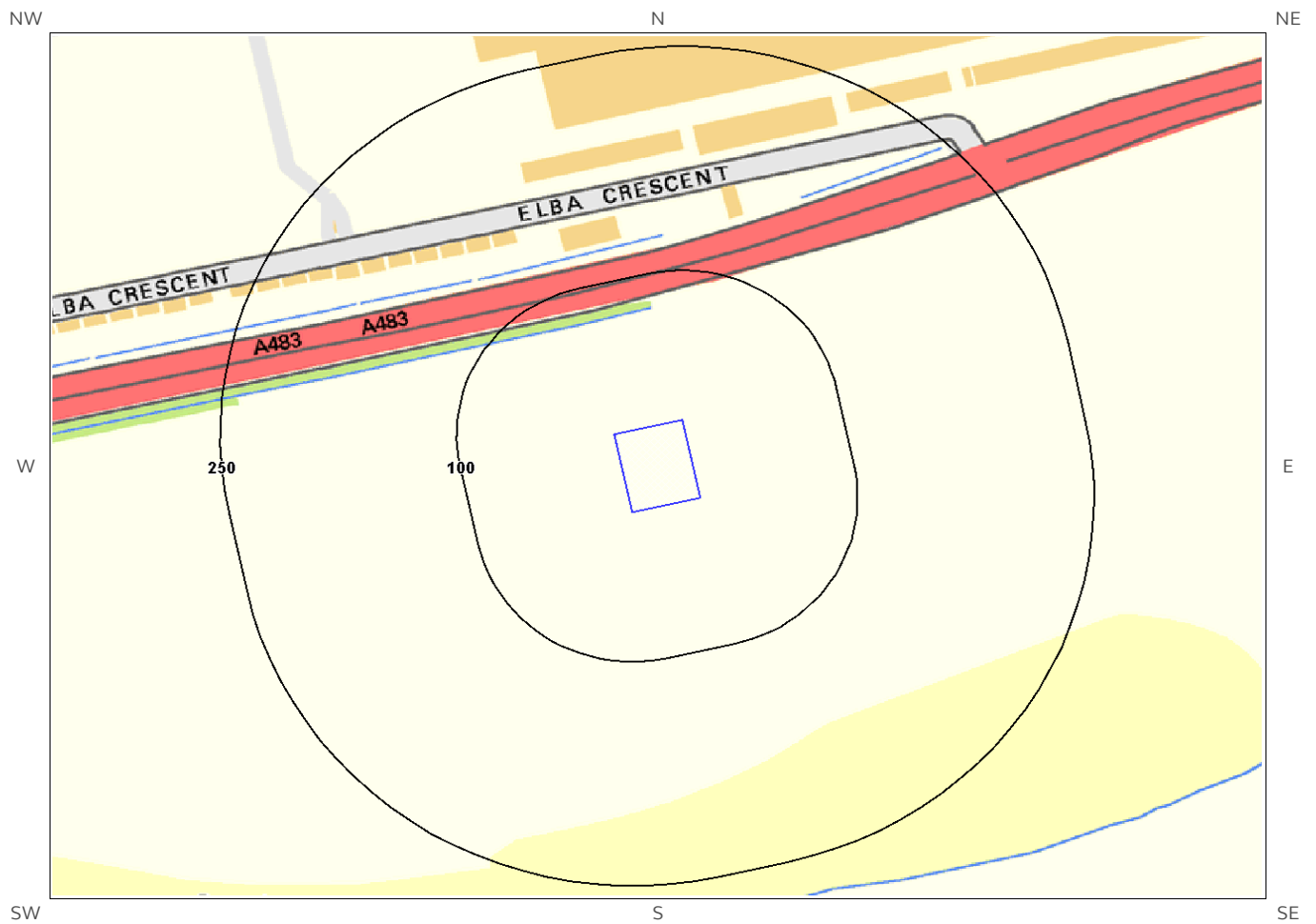
ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Negligible	No indicators for collapsible deposits identified. No actions required to avoid problems due to collapsible deposits. No special ground investigation required, or increased construction costs or increased financial risk due to potential problems with collapsible deposits.

6.6 Running Sands

The following Running Sands information provided by the British Geological Survey:

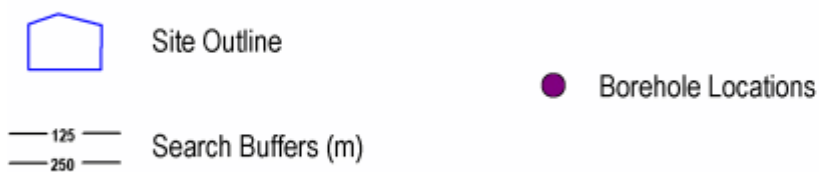
ID	Distance (m)	Direction	Hazard Rating	Details
1	0.0	On Site	Negligible	No indicators for running sand identified. No special actions required to avoid problems due to running sand. No special ground investigation required, and increased construction costs or increased financial risks are unlikely due to potential problems with running sand.

7 Borehole Records map



Borehole Records Legend

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7 Borehole Records

The systematic analysis of data extracted from the BGS Borehole Records database provides the following information.

Records of boreholes within 250m of the study site boundary:

0

Database searched and no data found.

8 Estimated Background Soil Chemistry

Records of background estimated soil chemistry within 250m of the study site boundary:

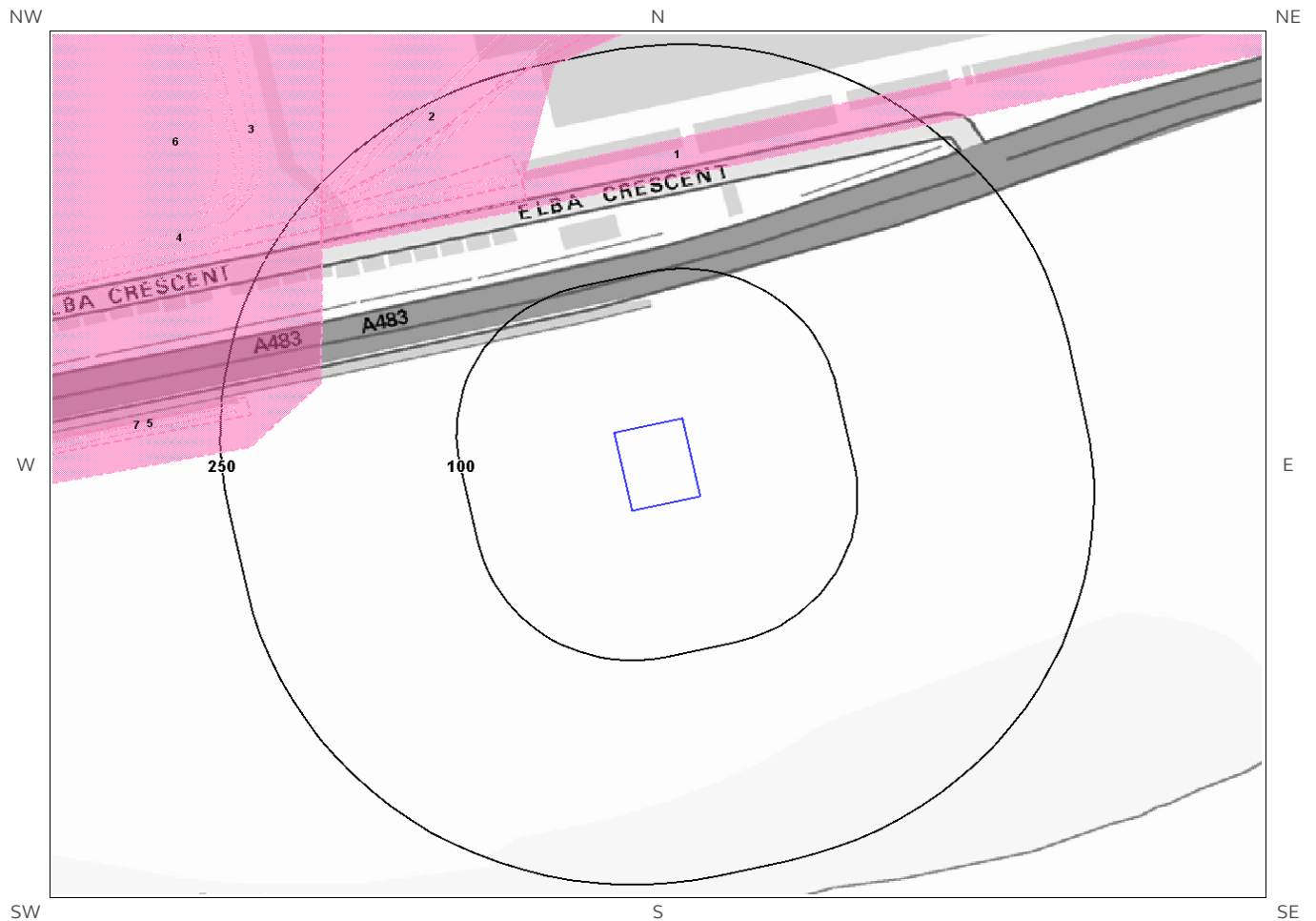
2

For further information on how this data is calculated and limitations upon its use, please see the Groundsure Geo Insight User Guide, available on request.

Distance (m)	Direction	Sample Type	Arsenic (As)	Cadmium (Cd)	Chromium (Cr)	Nickel (Ni)	Lead (Pb)
0.0	On Site	Sediment	25 - 35 mg/kg	2.2 - 3.0 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg
0.0	On Site	Sediment	25 - 35 mg/kg	2.2 - 3.0 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg	<100 mg/kg

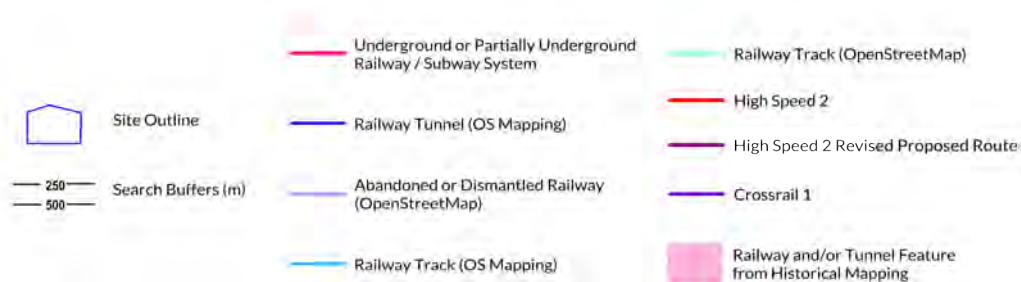
*As this data is based upon underlying 1:50,000 scale geological information, a 50m buffer has been added to the search radius.

9 Railways and Tunnels map



Railways and Tunnels Legend

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9 Railways and Tunnels

9.1 Tunnels

This data is derived from OpenStreetMap and provides information on the possible locations of underground railway systems in the UK - the London Underground, the Tyne & Wear Metro and the Glasgow Subway.

Have any underground railway lines been identified within the study site boundary? No

Have any underground railway lines been identified within 250m of the study site boundary? No

Database searched and no data found.

Any records that have been identified are represented on the Railways and Tunnels map.

This data is derived from Ordnance Survey mapping and provides information on the possible locations of railway tunnels forming part of the UK overground railway network.

Have any other railway tunnels been identified within the site boundary? No

Have any other railway tunnels been identified within 250m of the site boundary? No

Database searched and no data found.

Any records that have been identified are represented on the Railways and Tunnels map.

9.2 Historical Railway and Tunnel Features

This data is derived from Groundsure's unique Historical Land-use Database and contains features relating to tunnels, railway tracks or associated works that have been identified from historical Ordnance Survey mapping.

Have any historical railway or tunnel features been identified within the study site boundary? No

Have any historical railway or tunnel features been identified within 250m of the study site boundary? Yes

ID	Distance (m)	Direction	NGR	Details	Date
1	158	N	270215 193079	Railway Sidings	1938
2	165	N	270224 193369	Railway Sidings	1962
3	177	N	270052 193211	Railway Sidings	1948
6	178	N	269570 193199	Railway Sidings	1941
4	189	W	267973 192902	Railway Sidings	1963
5	231	W	269528 192890	Railway Sidings	1948

ID	Distance (m)	Direction	NGR	Details	Date
7	240	W	269819 192882	Railway Sidings	1964
8	241	W	268247 192742	Railway Sidings	1967

Any records that have been identified are represented on the Railways and Tunnels map.

9.3 Historical Railways

This data is derived from OpenStreetMap and provides information on the possible alignments of abandoned or dismantled railway lines in proximity to the study site.

Have any historical railway lines been identified within the study site boundary? No

Have any historical railway lines been identified within 250m of the study site boundary? No

Database searched and no data found.

Multiple sections of the same track may be listed in the detail above

Any records that have been identified are represented on the Railways and Tunnels map.

9.4 Active Railways

These datasets are derived from Ordnance Survey mapping and OpenStreetMap and provide information on the possible locations of active railway lines in proximity to the study site.

Have any active railway lines been identified within the study site boundary? No

Have any active railway lines been identified within 250m of the study site boundary? No

Database searched and no data found.

Multiple sections of the same track may be listed in the detail above

Any records that have been identified are represented on the Railways and Tunnels map.

9.5 Railway Projects

These datasets provide information on the location of large scale railway projects High Speed 2 and Crossrail 1 .

Is the study site within 5km of the route of the High Speed 2 rail project? No

Is the study site within 500m of the route of the Crossrail 1 rail project? No

Further information on proximity to these routes, the project construction status and associated works can be obtained through the purchase of a Groundsure HS2 and Crossrail 1 Report.

The route data has been digitised from publicly available maps by Groundsure. The route as provided relates to the Crossrail 1 project only, and does not include any details of the Crossrail 2 project, as final details of the route for Crossrail 2 are still under consultation.

Please note that this assessment takes account of both the original Phase 2b proposed route and the amended route proposed in 2016. As the Phase 2b route is still under consultation, Groundsure are providing information on both options until the final route is formally confirmed. Practitioners should take account of this uncertainty when advising clients.

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