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Groundsure  
Reference:

HMD-165-2670335

Your Reference: E0756

Report Date 6 Jan 2016

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## Groundsure Enviroinsight

Address: HANSON BRICK LTD, SEIONT WORKS, SEIONT MILL ROAD, CAERNARFON, LL55 2YL

Dear Sir/ Madam,

Thank you for placing your order with Groundsure. Please find enclosed the **Groundsure Enviroinsight** 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

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Address: HANSON BRICK LTD, SEIONT WORKS, SEIONT MILL ROAD, CAERNARFON, LL55 2YL

Date: 6 Jan 2016

Reference: HMD-165-2670335

Client: E-Geo Solutions Ltd



Aerial Photograph Capture date: 04-Jun-2013

Grid Reference: 248855,361481

Site Size: 4.29ha

Report Reference: HMD-165-2670335

Client Reference: E0756

# Contents Page

Contents Page	3
Overview of Findings	6
Using this report	10
1. Historical Land Use	11
1. Historical Industrial Sites	12
1.1 Potentially Contaminative Uses identified from 1:10,000 scale Mapping	12
1.2 Additional Information – Historical Tank Database	14
1.3 Additional Information – Historical Energy Features Database	15
1.4 Additional Information – Historical Petrol and Fuel Site Database	15
1.5 Additional Information – Historical Garage and Motor Vehicle Repair Database	16
1.6 Potentially Infilled Land	16
2. Environmental Permits, Incidents and Registers Map	18
2. Environmental Permits, Incidents and Registers	19
2.1 Industrial Sites Holding Licences and/or Authorisations	19
2.1.1 Records of historic IPC Authorisations within 500m of the study site	19
2.1.2 Records of Part A(1) and IPPC Authorised Activities within 500m of the study site	19
2.1.3 Records of Red List Discharge Consents (potentially harmful discharges to controlled waters) within 500m of the study site	19
2.1.4 Records of List 1 Dangerous Substances Inventory Sites within 500m of the study site	19
2.1.5 Records of List 2 Dangerous Substance Inventory Sites within 500m of the study site	19
2.1.6 Records of Part A(2) and Part B Activities and Enforcements within 500m of the study site	20
2.1.7 Records of Category 3 or 4 Radioactive Substances Authorisations	20
2.1.8 Records of Licensed Discharge Consents within 500m of the study site	20
2.1.9 Records of Water Industry Referrals (potentially harmful discharges to the public sewer) within 500m of the study site	22
2.1.10 Records of Planning Hazardous Substance Consents and Enforcements within 500m of the study site	22
2.2 Dangerous or Hazardous Sites	22
2.3 Environment Agency Recorded Pollution Incidents	22
2.3.1 Records of National Incidents Recording System, List 2 within 500m of the study site	22
2.3.2 Records of National Incidents Recording System, List 1 within 500m of the study site	23
2.4 Sites Determined as Contaminated Land under Part 2A EPA 1990	23
3. Landfill and Other Waste Sites Map	24
3. Landfill and Other Waste Sites	25
3.1 Landfill Sites	25
3.1.1 Records from Environment Agency landfill data within 1000m of the study site	25
3.1.2 Records of Environment Agency historic landfill sites within 1500m of the study site	25
3.1.3 Records of BGS/DoE non-operational landfill sites within 1500m of the study site	25
3.1.4 Records of Landfills from Local Authority and Historical Mapping Records within 1500m of the study site	26
3.2 Other Waste Sites	26
3.2.1 Records of waste treatment, transfer or disposal sites within 500m of the study site	26
3.2.2 Records of Environment Agency licensed waste sites within 1500m of the study site	26
4. Current Land Use Map	28
4. Current Land Uses	29
4.1 Current Industrial Data	29
4.2 Petrol and Fuel Sites	29
4.3 National Grid High Voltage Underground Electricity Transmission Cables	30
4.4 National Grid High Pressure Gas Transmission Pipelines	30
5. Geology	31
5.1 Artificial Ground and Made Ground	31

5.2 Superficial Ground and Drift Geology .....	31
5.3 Bedrock and Solid Geology .....	31
6 Hydrogeology and Hydrology .....	32
6a. Aquifer Within Superficial Geology .....	32
6b. Aquifer Within Bedrock Geology and Abstraction Licenses .....	33
6c. Hydrogeology – Source Protection Zones and Potable Water Abstraction Licenses .....	34
6d. Hydrogeology – Source Protection Zones within confined aquifer .....	35
6e. Hydrology – Detailed River Network and River Quality .....	36
6. Hydrogeology and Hydrology .....	37
6.1 Aquifer within Superficial Deposits.....	37
6.2 Aquifer within Bedrock Deposits.....	37
6.3 Groundwater Abstraction Licences.....	37
6.4 Surface Water Abstraction Licences.....	38
6.5 Potable Water Abstraction Licences.....	39
6.6 Source Protection Zones.....	39
6.7 Source Protection Zones within Confined Aquifer.....	39
6.8 Groundwater Vulnerability and Soil Leaching Potential.....	40
6.9 River Quality.....	40
6.9.1 Biological Quality:.....	40
6.9.2 Chemical Quality:.....	41
6.10 Detailed River Network.....	41
6.11 Surface Water Features.....	43
7a. Environment Agency Flood Map for Planning (from rivers and the sea) .....	44
7b. Environment Agency Risk of Flooding from Rivers and the Sea (RoFRaS) Map .....	45
7 Flooding .....	46
7.1 River and Coastal Zone 2 Flooding.....	46
7.2 River and Coastal Zone 3 Flooding.....	46
7.3 Risk of Flooding from Rivers and the Sea (RoFRaS) Flood Rating.....	46
7.4 Flood Defences.....	47
7.5 Areas benefiting from Flood Defences.....	47
7.6 Areas benefiting from Flood Storage.....	47
7.7 Groundwater Flooding Susceptibility Areas.....	47
7.7.1 Are there any British Geological Survey groundwater flooding susceptibility areas within 50m of the boundary of the study site? Yes.....	47
7.7.2 What is the highest susceptibility to groundwater flooding in the search area based on the underlying geological conditions?.....	48
7.8 Groundwater Flooding Confidence Areas.....	48
8. Designated Environmentally Sensitive Sites Map .....	49
8. Designated Environmentally Sensitive Sites .....	50
8.1 Records of Sites of Special Scientific Interest (SSSI) within 2000m of the study site:.....	50
8.2 Records of National Nature Reserves (NNR) within 2000m of the study site:.....	50
8.3 Records of Special Areas of Conservation (SAC) within 2000m of the study site:.....	50
8.4 Records of Special Protection Areas (SPA) within 2000m of the study site:.....	51
8.5 Records of Ramsar sites within 2000m of the study site:.....	51
8.6 Records of Ancient Woodland within 2000m of the study site: .....	52
8.7 Records of Local Nature Reserves (LNR) within 2000m of the study site:.....	54
8.8 Records of World Heritage Sites within 2000m of the study site:.....	55
8.9 Records of Environmentally Sensitive Areas within 2000m of the study site: .....	55
8.10 Records of Areas of Outstanding Natural Beauty (AONB) within 2000m of the study site: .....	55
8.11 Records of National Parks (NP) within 2000m of the study site: .....	55
8.12 Records of Nitrate Sensitive Areas within 2000m of the study site:.....	55
8.13 Records of Nitrate Vulnerable Zones within 2000m of the study site:.....	55



8.14 Records of Green Belt land within 2000m of the study site:.....	56
9. Natural Hazards Findings.....	57
9.1 Detailed BGS GeoSure Data.....	57
9.1.1 Shrink Swell.....	57
9.1.2 Landslides.....	57
9.1.3 Soluble Rocks.....	57
9.1.4 Compressible Ground.....	58
9.1.5 Collapsible Rocks.....	58
9.1.6 Running Sand.....	58
9.2 Radon.....	58
9.2.1 Radon Affected Areas.....	58
9.2.2 Radon Protection.....	59
10. Mining.....	60
10.1 Coal Mining.....	60
10.2 Non-Coal Mining.....	60
10.3 Brine Affected Areas .....	60
Contact Details.....	61
Standard Terms and Conditions.....	63

# Overview of Findings

For further details on each dataset, please refer to each individual section in the main 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: Historical Industrial Sites	On-site	0-50	51-250	251-500
1.1 Potentially Contaminative Uses identified from 1:10,000 scale mapping	8	30	22	54
1.2 Additional Information – Historical Tank Database	4	1	2	7
1.3 Additional Information – Historical Energy Features Database	0	0	4	7
1.4 Additional Information – Historical Petrol and Fuel Site Database	0	0	0	0
1.5 Additional Information – Historical Garage and Motor Vehicle Repair Database	0	0	0	0
1.6 Potentially Infilled Land	7	10	8	31
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	0
2.1.6 Records of Part A(2) and Part B Activities and Enforcements	2	0	1	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	2	3	1	5
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	0
2.2 Records of COMAH and NIHHS sites	0	0	0	0
2.3 Environment Agency Recorded Pollution Incidents				
2.3.1 National Incidents Recording System, List 2	1	2	1	1
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 Registered Landfill Sites	0	0	0	0	0	Not searched
3.1.2 Environment Agency Historic Landfill Sites	0	0	1	0	2	0
3.1.3 BGS/DoE Landfill Site Survey	0	0	0	0	0	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	0	Not searched	Not searched
3.2.2 Environment Agency Licensed Waste Sites	0	0	0	0	0	7

Section 4: Current Land Use	On-site	0-50m	51-250	251-500
4.1 Current Industrial Sites Data	2	0	9	Not searched
4.2 Records of Petrol and Fuel Sites	0	0	0	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 Are there any records of Artificial Ground and Made Ground present beneath the study site?	No
5.2 Are there any records of Superficial Ground and Drift Geology present beneath the study site?	None
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 Are there any records of Strata Classification in the Superficial Geology within 500m of the study site?	Yes					
6.2 Are there any records of Strata Classification in the Bedrock Geology within 500m of the study site?	Yes					
	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)	1	2	1	0	0	2
6.5 Potable Water Abstraction Licences (within 2000m of the study site)	0	0	0	0	0	1
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	0	1	1	Not searched	Not searched
	On-site	0-50m	51-250	251-500	501-1000	1000-1500

## Section 6: Hydrogeology and Hydrology

0-500m

6.9 Is there any Environment Agency information on river quality within 1500m of the study site?	No	No	No	Yes	Yes	No
6.10 Detailed River Network entries within 500m of the site	0	7	7	14	Not searched	Not searched
6.11 Surface water features within 250m of the study site	Yes	Yes	Yes	Not searched	Not searched	Not searched

## Section 7: Flooding

7.1 Are there any Environment Agency Zone 2 floodplains within 250m of the study site?	Yes
7.2 Are there any Environment Agency Zone 3 floodplains within 250m of the study site	Yes
7.3 What is the Risk of flooding from Rivers and the Sea (RoFRaS) rating for the study site?	High
7.4 Are there any Flood Defences within 250m of the study site?	No
7.5 Are there any areas benefiting from Flood Defences within 250m of the study site?	No
7.6 Are there any areas used for Flood Storage within 250m of the study site?	No
7.7 What is the maximum BGS Groundwater Flooding susceptibility within 50m of the study site?	Potential at Surface
7.8 What is the BGS confidence rating for the Groundwater Flooding susceptibility areas?	High

## 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	0	0	1	1	1
8.2 Records of National Nature Reserves (NNR)	0	0	0	0	0	0
8.3 Records of Special Areas of Conservation (SAC)	0	0	0	0	0	2
8.4 Records of Special Protection Areas (SPA)	0	0	0	0	0	0
8.5 Records of Ramsar sites	0	0	0	0	0	0
8.6 Records of Ancient Woodlands	0	1	3	3	3	38
8.7 Records of Local Nature Reserves (LNR)	0	0	0	0	0	0
8.8 Records of World Heritage Sites	0	0	0	0	0	1
8.9 Records of Environmentally Sensitive Areas	0	0	0	0	0	0
8.10 Records of Areas of Outstanding Natural Beauty (AONB)	0	0	0	0	0	0



Section 8: Designated Environmentally Sensitive Sites	On-site	0-50m	51-250	251-500	501-1000	1000-2000
8.11 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 What is the maximum risk of natural ground subsidence?	Low
9.1.1 What is the maximum Shrink-Swell hazard rating identified on the study site?	Low
9.1.2 What is the maximum Landslides hazard rating identified on the study site?	Very Low
9.1.3 What is the maximum Soluble Rocks hazard rating identified on the study site?	Negligible
9.1.4 What is the maximum Compressible Ground hazard rating identified on the study site?	Low
9.1.5 What is the maximum Collapsible Rocks hazard rating identified on the study site?	Very Low
9.1.6 What is the maximum Running Sand hazard rating identified on the study site?	Low
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 property is not in a Radon Affected Area, as less than 1% 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 Are there any coal mining areas within 75m of the study site?	No
10.2 Are there any Non-Coal Mining areas within 50m of the study site boundary?	Yes
10.3 Are there any brine affected areas within 75m of the study site?	No

# 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 licenses, 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.

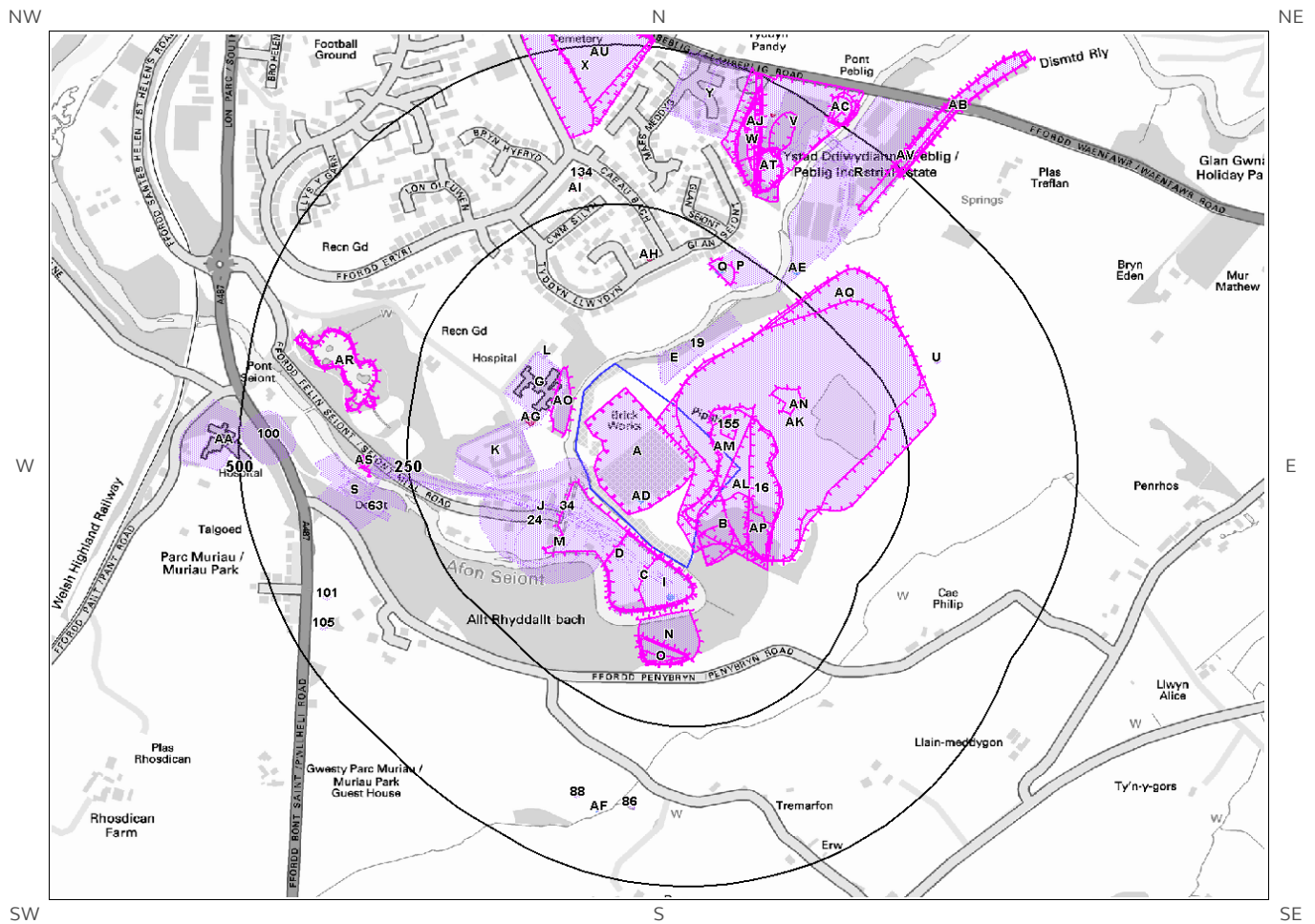
## Note: Maps

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: 114

ID	Distance [m]	Direction	Use	Date
1A	0	On Site	Brick Works	1976
2A	0	On Site	Brick Works	1990
3AN	0	On Site	Clay Pit	1976
4AK	0	On Site	Clay Pit	1990
5AL	0	On Site	Unspecified Quarry	1959
6AM	0	On Site	Unspecified Quarry	1949
7B	0	On Site	Clay Pit	1938
8J	0	On Site	Unspecified Commercial/Industrial	1888
9B	5	E	Clay Pit	1899
10C	6	SW	Brick Works	1938
11C	6	SW	Brick Works	1938
12I	6	SW	Brick Works	1888
13D	6	SW	Brick Works	1949
14C	7	SW	Brick Works	1899
15D	11	SW	Unspecified Works	1959
16	14	E	Unspecified Quarry	1949
17AO	14	W	Unspecified Pit	1888
18F	15	SW	Railway Sidings	1949
19	16	NE	Tannery	1938
20E	17	NE	Tannery	1899
21E	17	NE	Tannery	1888
22F	23	SW	Railway Sidings	1959
23H	25	SW	Railway Sidings	1899
24	26	SW	Unspecified Mill	1899
25G	27	NW	Infirmity	1938
26G	29	NW	Hospital	1990
27G	29	NW	Hospital	1976
28G	29	NW	Hospital	1959
29C	30	SW	Unspecified Tank	1888
30H	30	SW	Railway Sidings	1938
31M	31	SW	Corn Mill	1888
32	35	SW	Railway Sidings	1888
33AP	38	SE	Unspecified Pit	1913

34	42	SW	Railway Building	1899
35I	43	S	Unspecified Tank	1888
36I	46	SW	Unspecified Tank	1938
37I	48	SW	Unspecified Tank	1949
38E	50	NE	Railway Sidings	1888
39I	51	SW	Unspecified Tank	1959
40J	52	W	Railway Building	1899
41K	55	W	Unspecified Workhouse	1888
42K	66	W	Unspecified Workhouse	1899
43N	67	S	Clay Pit	1949
44K	68	W	Hospital	1949
45L	77	NW	Mortuary	1938
46L	78	NW	Mortuary	1949
47L	78	NW	Mortuary	1959
48M	89	SW	Unspecified Mill	1938
49N	125	S	Clay Pit	1938
50N	128	SW	Clay Pit	1899
51O	140	S	Unspecified Pit	1976
52O	140	S	Clay Pit	1959
53AQ	178	NE	Refuse Heap	1990
54P	197	NE	Unspecified Works	1959
55P	201	NE	Sewage Works	1949
56Q	201	NE	Unspecified Tanks	1976
57Q	203	NE	Unspecified Tanks	1959
58Q	206	NE	Unspecified Tanks	1949
59R	235	NE	Unspecified Commercial/Industrial	1990
60R	235	NE	Unspecified Commercial/Industrial	1976
61S	266	W	Unspecified Depot	1990
62AE	270	NE	Unspecified Tank	1976
63	293	W	Railway Sidings	1959
64S	293	W	Unspecified Works	1959
65S	298	W	Slate Works	1938
66S	308	W	Slate Works	1888
67S	308	W	Slate Works	1949
68S	308	W	Slate Works	1899
69AS	308	W	Unspecified Heap	1959
70T	315	NE	Railway Sidings	1888
71T	315	NE	Railway Sidings	1899
72U	332	NE	Unspecified Tank	1913
73U	334	NE	Unspecified Tank	1949
74V	334	NE	Brick Works	1888
75V	334	NE	Brick Works	1899
76V	334	NE	Brick Works	1913
77U	334	NE	Unspecified Tank	1959

78Z	335	NE	Railway Sidings	1913
79W	342	NE	Brick Works	1938
80W	342	NE	Brick Works	1938
81W	344	NE	Unspecified Pit	1949
82W	344	NE	Brick Works	1949
83X	360	N	Cemetery	1990
84W	366	NE	Unspecified Pit	1899
85X	374	N	Cemetery	1976
86	378	S	Unspecified Tank	1959
87Y	383	N	Hospital	1976
88	387	SW	Unspecified Disused Tank	1949
89Y	390	N	Infectious Diseases Hospital	1959
90AJ	391	NE	Clay Pit	1888
91Y	394	N	Infectious Diseases Hospital	1949
92V	400	NE	Clay Pit	1888
93AF	401	S	Unspecified Tank	1938
94AU	403	N	Cemetery	1959
95Y	404	N	Hospital	1938
96Y	404	N	Infectious Diseases Hospital	1899
97AV	411	NE	Cuttings	1888
98V	411	NE	Unspecified Mill	1976
99V	411	NE	Unspecified Commercial/Industrial	1990
100	417	W	Hospital	1949
101	421	SW	Unspecified Tank	1959
102Z	423	NE	Flour Mill	1888
103Z	429	NE	Woollen Factory	1913
104Z	429	NE	Woollen Factory	1899
105	446	SW	Unspecified Tank	1959
106AA	482	W	Hospital	1990
107AA	482	W	Hospital	1976
108AB	490	NE	Cuttings	1913
109AC	492	NE	Unspecified Heap	1888
110AB	495	NE	Cuttings	1949
111AA	496	W	Hospital	1938
112AC	497	NE	Unspecified Heap	1913
113AB	498	NE	Cuttings	1959
114AC	498	NE	Unspecified Heap	1959

## 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:

14

ID	Distance (m)	Direction	Use	Date
115AD	0	On Site	Tanks	1987
116AD	0	On Site	Tanks	1987
117AD	0	On Site	Unspecified Tank	1965
118AD	0	On Site	Tanks	1995
119I	48	SW	Unspecified Tank	1913
120P	202	NE	Tanks	1964
121P	202	NE	Tanks	1965
122AE	272	NE	Unspecified Tank	1964
123AE	272	NE	Unspecified Tank	1965
124U	332	NE	Unspecified Tank	1914
125U	334	NE	Unspecified Tank	1965
126U	334	NE	Unspecified Tank	1987
127U	334	NE	Unspecified Tank	1964
128AF	403	S	Unspecified Tank	1913

### 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:

11

ID	Distance (m)	Direction	Use	Date
129AG	64	W	Electricity Substation	1987
130AG	65	W	Electricity Substation	1995
131AH	168	N	Electricity Substation	1995
132AH	170	N	Electricity Substation	1987
133AI	274	N	Electricity Substation	1987
134	295	N	Electricity Substation	1965
135AI	295	N	Electricity Substation	1995
136AJ	451	NE	Electricity Substation	1995
137AJ	452	NE	Electricity Substation	1994
138AJ	452	NE	Electricity Substation	1986
139AJ	452	NE	Electricity Substation	1982

### 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:

0

Database searched and no data found.

## 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 Potentially Infilled Land

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

56

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

ID	Distance(m)	Direction	Use	Date
140AK	0	On Site	Clay Pit	1990
141B	0	On Site	Clay Pit	1938
142AL	0	On Site	Unspecified Quarry	1959
143A	0	On Site	Brick Works	1990
144A	0	On Site	Brick Works	1976
145AM	0	On Site	Unspecified Quarry	1949
146AN	0	On Site	Clay Pit	1976
147B	5	E	Clay Pit	1899
148I	6	SW	Brick Works	1938
149I	6	SW	Brick Works	1938
150I	6	SW	Brick Works	1888
151D	6	SW	Brick Works	1949
152I	7	SW	Brick Works	1899
153AL	14	E	Unspecified Quarry	1949
154AO	14	W	Unspecified Pit	1888
155	17	NE	Pond	1990
156AP	38	SE	Unspecified Pit	1913
157N	67	S	Clay Pit	1949
158AN	107	NE	Ponds	1990
159N	125	S	Clay Pit	1938
160N	128	SW	Clay Pit	1899
161O	140	S	Clay Pit	1959
162O	140	S	Unspecified Pit	1976
163AQ	178	NE	Refuse Heap	1990

164P	201	NE	Sewage Works	1949
165AR	304	W	Pond	1949
166AR	304	W	Pond	1899
167AR	304	W	Pond	1888
168AR	305	W	Pond	1938
169AR	306	W	Pond	1990
170AR	306	W	Pond	1976
171AR	306	W	Pond	1959
172AS	308	W	Unspecified Heap	1959
173V	334	NE	Brick Works	1888
174V	334	NE	Brick Works	1913
175V	334	NE	Brick Works	1899
176AT	339	NE	Pond	1913
177AT	342	NE	Pond	1959
178W	342	NE	Brick Works	1938
179W	342	NE	Brick Works	1938
180AT	342	NE	Pond	1949
181W	344	NE	Unspecified Pit	1949
182AJ	344	NE	Brick Works	1949
183X	360	N	Cemetery	1990
184AJ	366	NE	Unspecified Pit	1899
185X	374	N	Cemetery	1976
186AJ	391	NE	Clay Pit	1888
187V	400	NE	Clay Pit	1888
188AU	403	N	Cemetery	1959
189AV	411	NE	Cuttings	1888
190AB	490	NE	Cuttings	1913
191AC	492	NE	Unspecified Heap	1888
192AB	495	NE	Cuttings	1949
193AC	497	NE	Unspecified Heap	1913
194AB	498	NE	Cuttings	1959
195AC	498	NE	Unspecified Heap	1959

## 2. Environmental Permits, Incidents and Registers Map



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- |   |   |  |
|---|---|--|
|  Site Outline                  |  Recorded Pollution Incident                   |  RAS 3 & 4 Authorisations                                       |
|  Dangerous Substances (List 1) |  Dangerous Substances (List 2)                 |  Part A(1) Authorised Processes and Historic IPC Authorisations |
|  Water Industry Referrals      |  Licenced Discharge Consents                   |  Part A(2) and Part B Authorised Processes                      |
|  Red List Discharge Consents   |  COMAH / NIHHS Sites                           |  Sites Determined as Contaminated Land                          |
|   |  Hazardous Substance Consents and Enforcements |  |

## 2. Environmental Permits, Incidents and Registers

### 2.1 Industrial Sites Holding Licences and/or Authorisations

Searches of information provided by the Environment Agency 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:

0

Database searched and no data found.

---

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

3

The following Part A(2) and Part B Activities are represented as points on the Environmental Permits, Incidents and Registers Map:

ID	Distance (m)	Direction	NGR	Details
17E	0	On Site	248797 361518	Address: Hanson Brick Ltd, Seiont Brickworks, Caernarfon, LL55 2YL Process: Manufacture Of Heavy Clay Goods And Refractory Goods. Status: Surrendered Permit Type: Part A2 Enforcement: No Enforcement Notified Date of Enforcement: No Enforcement Notified Comment: No Enforcement Notified
18E	0	On Site	248787 361507	Address: Butterley Brick Ltd, Seiont Brickworks, Caernarfon, LL55 2YL Process: Manufacture Of Heavy Clay Goods And Refractory Goods. Status: Historical Permit Permit Type: Part A2 Enforcement: No Enforcement Notified Date of Enforcement: No Enforcement Notified Comment: No Enforcement Notified
19	66	W	248708 361613	Address: Eryri Hospital, Caernarfon, Gwynedd, LL55 2YE Process: Clinical Waste Incineration Process Under 1 Tonne/hr. Status: Historical Permit Permit Type: Part B Enforcement: No Enforcement Notified Date of Enforcement: No Enforcement Notified Comment: No Enforcement Notified

## 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
6A	0	On Site	248800 361600	Address: SEIONT BRICK WORKS CAERNARFON, SEIONT BRICK WORKS, CAERNARFON, GWYNEDD, LL55 2YL Effluent Type: TRADE DISCHARGES - UNSPECIFIED Permit Number: CG0092101 Permit Version: 3 Receiving Water: Status: NEW CONSENT, BY APPLICATION (WRA 91, SECTION 88) Issue date: 22/09/1993 Effective Date: 22-Sep-1993 Revocation Date: 16/08/2001
7A	0	On Site	248800 361600	Address: SEIONT BRICK WORKS CAERNARFON, SEIONT BRICK WORKS, CAERNARFON, GWYNEDD, LL55 2YL Effluent Type: TRADE DISCHARGES - SITE DRAINAGE Permit Number: CG0092101 Permit Version: 4 Receiving Water: Status: VARIED BY APPLICATION - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 16/08/2001 Effective Date: 17-Aug-2001 Revocation Date: 03/09/2001



ID	Distance (m)	Direction	NGR	Details	
8	1	NW	248800 361630	Address: SEIONT BRICK WORKS CAERNARFON, SEIONT BRICK WORKS, CAERNARFON, GWYNEDD, LL55 2YL Effluent Type: TRADE DISCHARGES - SITE DRAINAGE Permit Number: CG0092101 Permit Version: 5	Receiving Water: Status: MODIFIED - (WRA 91 SCHED 10 - AS AMENDED BY ENV ACT 1995) Issue date: 03/09/2001 Effective Date: 04-Sep-2001 Revocation Date: -
9B	33	SW	248900 361300	Address: SEIONT BRICK WORKS CAERNARFON, SEIONT BRICK WORKS, CAERNARFON, GWYNEDD, LL55 2YL Effluent Type: UNSPECIFIED Permit Number: CG0092101 Permit Version: 2	Receiving Water: Status: REVOKED - UNSPECIFIED Issue date: 05/01/1987 Effective Date: 05-Jan-1987 Revocation Date: 21/09/1993
10B	33	SW	248900 361300	Address: SEIONT BRICK WORKS CAERNARFON, SEIONT BRICK WORKS, CAERNARFON, GWYNEDD, LL55 2YL Effluent Type: UNSPECIFIED Permit Number: CG0092101 Permit Version: 1	Receiving Water: Status: REVOKED - UNSPECIFIED Issue date: 09/06/1976 Effective Date: 09-Jun-1976 Revocation Date: 04/01/1987
11	96	SW	248860 361250	Address: HANSON BRICK LTD SEIONT WORKS, HANSON BRICK LTD, SEIONT WORKS, CAERNARFON, GWYNEDD, LL55 2YL Effluent Type: TRADE DISCHARGES - SITE DRAINAGE Permit Number: CG0396001 Permit Version: 1	Receiving Water: Status: REVOKED (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV ACT 1995) Issue date: 18/10/2001 Effective Date: 18-Oct-2001 Revocation Date: 14/08/2007
12	346	NE	249080 361880	Address: CAERNARFON - HOUSING ESTATE GA, CAERNARFON - HOUSING ESTATE GA, UNKNOWN, UNKNOWN, UNKNOWN, UNKNOWN Effluent Type: UNSPECIFIED Permit Number: CG0181001 Permit Version: 1	Receiving Water: Status: CONSENT EXPIRED - TIME LIMIT Issue date: 19/09/1989 Effective Date: 19-Sep-1989 Revocation Date: 02/02/1994
13C	483	W	248300 361700	Address: CAERNARFON PONT SEIONT PS, CAERNARFON PONT SEIONT PS, UNKNOWN, UNKNOWN, UNKNOWN, UNKNOWN Effluent Type: SEWAGE DISCHARGES - PUMPING STATION - WATER COMPANY Permit Number: CG0163801 Permit Version: 1	Receiving Water: Status: NEW CONSENT, BY APPLICATION (WRA 91, SECTION 88) Issue date: 19/10/1989 Effective Date: 19-Oct-1989 Revocation Date: 07/09/2010
14C	483	W	248300 361700	Address: CAERNARFON PONT SEIONT PS, CAERNARFON PONT SEIONT PS, UNKNOWN, UNKNOWN, UNKNOWN, UNKNOWN Effluent Type: SEWAGE DISCHARGES - PUMPING STATION - WATER COMPANY Permit Number: CG0163801 Permit Version: 2	Receiving Water: Status: VARIED UNDER EPR 2010 Issue date: 08/09/2010 Effective Date: 08-Sep-2010 Revocation Date: -
15D	486	NE	249157 361997	Address: PEBLIG INDUSTRIAL ESTATE CSO, PEBLIG MILL, FFORDD LLANBEBLIG, CAEATHRO, CAERNARFON, LL55 2SE Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: EPRDB3393HK Permit Version: 1	Receiving Water: Status: NEW ISSUED UNDER EPR 2020 Issue date: 18/09/2015 Effective Date: 18-Sep-2015 Revocation Date: -

ID	Distance (m)	Direction	NGR	Details
16D	486	NE	249157 361997	<p>Address: PEBLIG INDUSTRIAL ESTATE CSO, PEBLIG MILL, FFORDD LLANBEBLIG, CAEATHRO, CAERNARFON, LL55 2SE Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: EPRDB3393HK Permit Version: 1</p> <p>Receiving Water: Status: NEW ISSUED UNDER EPR 2021 Issue date: 18/09/2015 Effective Date: 18-Sep-2015 Revocation Date: -</p>

### 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:

0

Database searched and no data found.

## 2.2 Dangerous or Hazardous Sites

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

0

Database searched and no data found.

## 2.3 Environment Agency Recorded Pollution Incidents

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

5

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	0	On Site	248888 361352	<p>Incident Date: 10-Sep-2004 Incident Identification: 265918 Pollutant: Contaminated Water Pollutant Description: Suspended Solids</p> <p>Water Impact: Category 2 (Significant) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)</p>
2	18	SW	248758 361467	<p>Incident Date: 12-Jun-2001 Incident Identification: 8854 Pollutant: Pollutant Not Identified Pollutant Description: Not Identified</p> <p>Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)</p>

ID	Distance (m)	Direction	NGR	Details	
3	21	SW	248800 361400	Incident Date: 03-Jul-2003 Incident Identification: 170758 Pollutant: Inert Materials and Wastes Pollutant Description: Soils and Clay	Water Impact: Category 2 (Significant) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
4	238	W	248536 361425	Incident Date: 07-Jul-2003 Incident Identification: 171709 Pollutant: Sewage Materials Pollutant Description: Storm Sewage	Water Impact: Category 2 (Significant) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
5	360	W	248400 361515	Incident Date: 24-May-2001 Incident Identification: 6632 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)

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

0

Database searched and no data found.

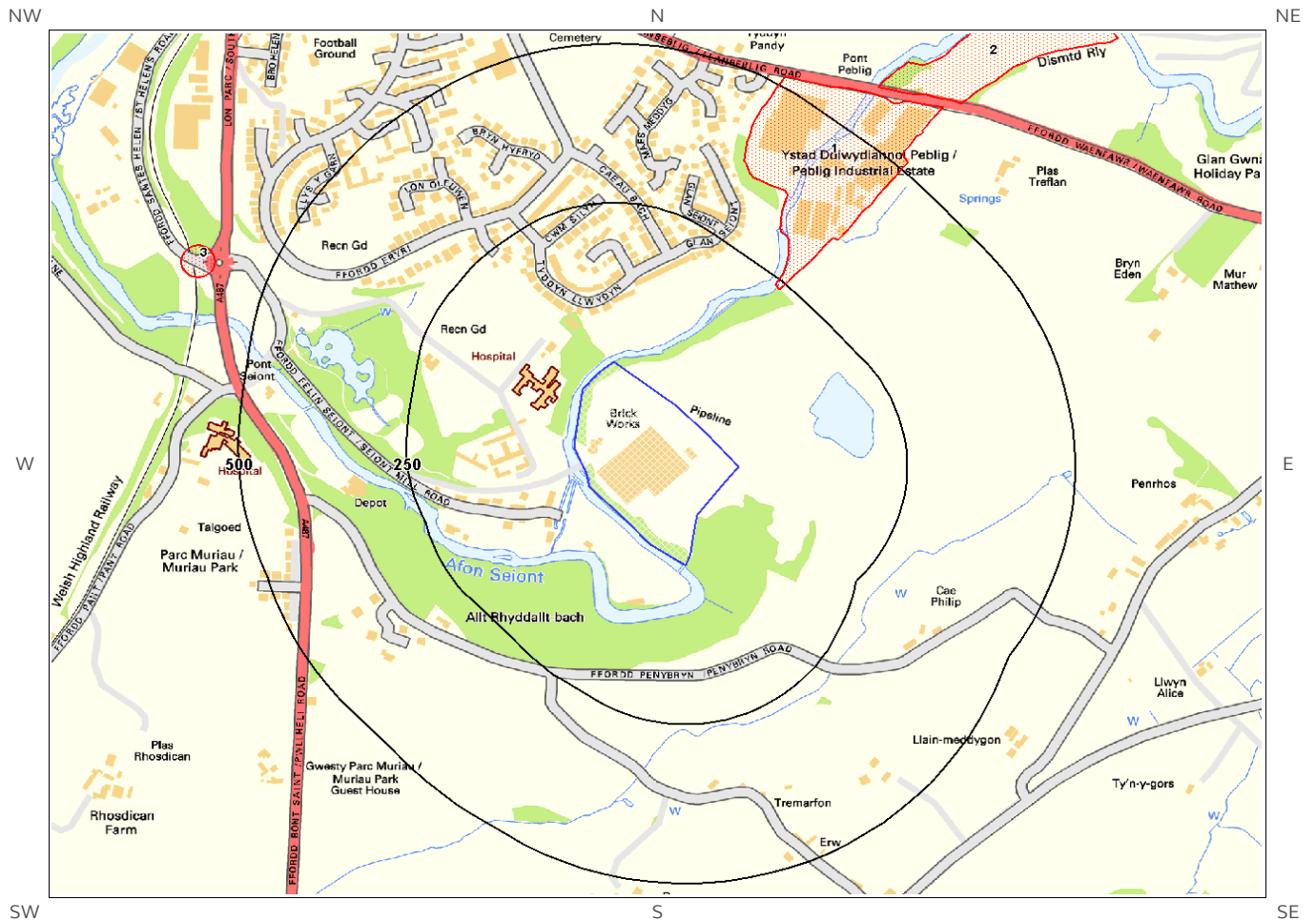
## 2.4 Sites Determined as Contaminated Land under Part 2A EPA 1990

How many records of sites determined as contaminated land under Section 78R of the Environmental Protection Act 1990 are there within 500m of the study site?

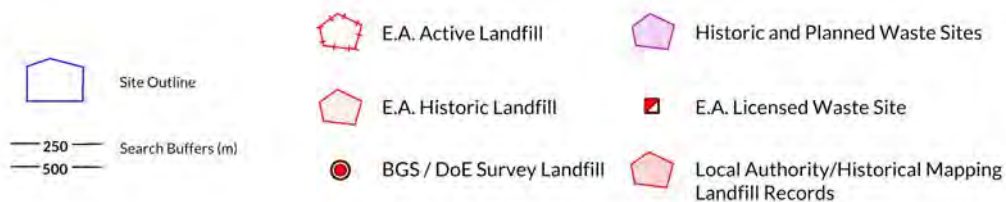
0

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 landfill data within 1000m of the study site:

0

Database searched and no data found.

### 3.1.2 Records of Environment Agency historic landfill sites within 1500m of the study site:

3

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
1	238	NE	249100 361900	Site Address: Pubic Mill Tip, Caernarfon, Gwynedd Waste Licence: - Site Reference: - Waste Type: Inert, Industrial, Household Environmental Permitting Regulations (Waste) Reference: - Licence Issue: Licence Surrendered: Licence Hold Address: - Operator: - First Recorded: - Last Recorded: 31-Dec-1990
2	580	NE	249400 362100	Site Address: Peblig Mill Tip, Caernarfon, Gwynedd Waste Licence: - Site Reference: - Waste Type: Inert, Industrial Environmental Permitting Regulations (Waste) Reference: - Licence Issue: Licence Surrendered: Licence Hold Address: - Operator: - First Recorded: 31-Dec-1981 Last Recorded: 31-Dec-1990
3	582	W	248200 361800	Site Address: St Helens Road, Caernarfon, Gwynedd Waste Licence: - Site Reference: - Waste Type: - Environmental Permitting Regulations (Waste) Reference: - Licence Issue: Licence Surrendered: Licence Hold Address: - Operator: - First Recorded: 31-Dec-1950 Last Recorded: 31-Dec-1960

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

0

Database searched and no data found.

### 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:

0

Database searched and no data found.

### 3.2.2 Records of Environment Agency licensed waste sites within 1500m of the study site:

7

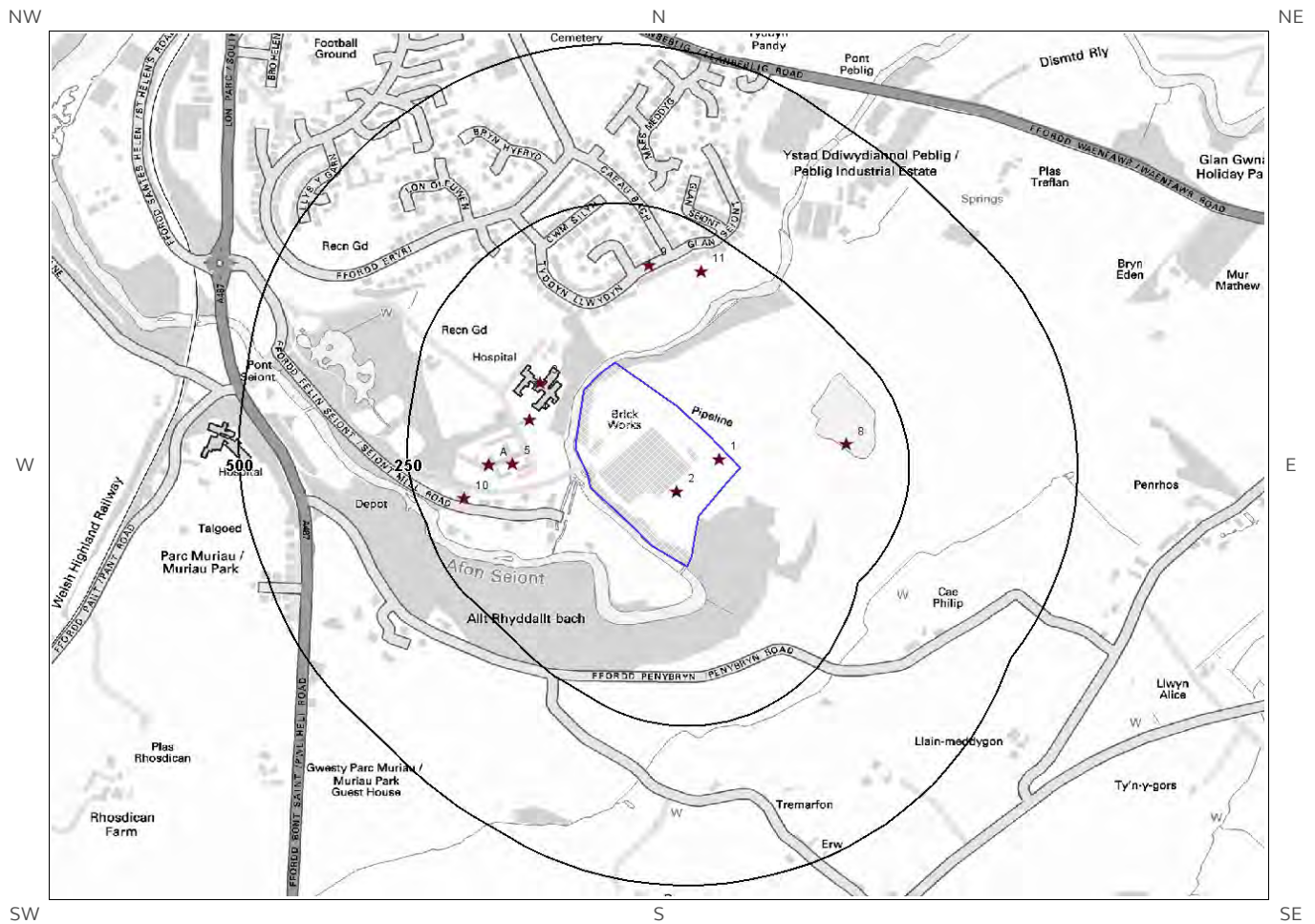
The following waste treatment, transfer or disposal sites records are represented as points on the Landfill and Other Waste Sites map:

ID	Distance (m)	Direction	NGR	Details
Not shown	1466	NE	249850 362700	<p>Site Address: Lon Hen Felin, Cibyn Ind Est, Caernarfon, Gwynedd, LL55 2BD Type: Household, Commercial &amp; Industrial Waste T Stn Size: &lt; 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: GWY005 EPR reference: - Operator: Gwynedd Skip Hire Ltd Waste Management licence No: 37229 Annual Tonnage: 0.0</p> <p>Issue Date: 1/24/2002 Effective Date: - Modified: 9/4/2008 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Gwynedd Skip Hire Ltd Correspondence Address: -, Lon Hen Felin, Cibyn Ind Est, Caernarfon, Gwynedd, LL65 2BD</p>
Not shown	1466	NE	249850 362700	<p>Site Address: Lon Hen Felin, Cibyn Ind Est, Caernarfon, Gwynedd, LL55 2BD Type: Household, Commercial &amp; Industrial Waste T Stn Size: &gt;= 25000 tonnes &lt; 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: GWY005 EPR reference: EA/EPR/BP3196LV/V007 Operator: Gwynedd Skip Hire Ltd Waste Management licence No: 37229 Annual Tonnage: 0.0</p> <p>Issue Date: 1/24/2002 Effective Date: - Modified: 9/4/2008 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Gwynedd Skip Hire Ltd Correspondence Address: -, Lon Hen Felin, Cibyn Ind Est, Caernarfon, Gwynedd, LL65 2BD</p>
Not shown	1466	NE	249850 362700	<p>Site Address: Gwynedd Skip Hire Limited, Lon Hen Felin, Cibyn Industrial Estat, Caernarfon, Gwynedd, LL55 2BD Type: Household, Commercial &amp; Industrial Waste T Stn Size: &lt; 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: GWY005 EPR reference: - Operator: Gwynedd Skip Hire Limited Waste Management licence No: 37229 Annual Tonnage: 0.0</p> <p>Issue Date: 24/01/2002 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued Site Name: Gwynedd Skip Hire Limited Correspondence Address: -, Gwynedd Skip Hire Limited, Lon Hen Felin, Cibyn Industrial Estate, Caernarfon, Gwynedd, LL55 2BD</p>



ID	Distance (m)	Direction	NGR	Details	
Not shown	1466	NE	249850 362700	Site Address: Lon Hen Felin, Cibyn Ind Est, Caernarfon, Gwynedd, LL55 2BD Type: HCI Waste TS + treatment + asbestos Size: >= 25000 tonnes < 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: GWY035 EPR reference: EA/EPR/CB3237AP/T001 Operator: Gwynedd Skip And Plant Hire Ltd Waste Management licence No: 37229 Annual Tonnage: 74999.0	Issue Date: 24/01/2002 Effective Date: 27/09/2011 Modified: 15/09/2011 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Transferred Site Name: Gwynedd Skip And Plant Hire Ltd Correspondence Address: -, -
Not shown	1466	NE	249850 362700	Site Address: Gwynedd Skip Hire Limited, Lon Hen Felin, Cibyn Industrial Estat, Caernarfon, Gwynedd, LL55 2BD Type: Household, Commercial & Industrial Waste T Stn Size: < 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: GWY005 EPR reference: - Operator: Gwynedd Skip Hire Limited Waste Management licence No: 37229 Annual Tonnage: 367905.0	Issue Date: 24/01/2002 Effective Date: - Modified: 10/03/2006 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Gwynedd Skip Hire Limited Correspondence Address: -, Gwynedd Skip Hire Limited, Lon Hen Felin, Cibyn Industrial Estate, Caernarfon, Gwynedd, LL55 2BD
Not shown	1466	NE	249850 362700	Site Address: Lon Hen Felin, Cibyn Ind Est, Caernarfon, Gwynedd, LL55 2BD Type: HCI Waste TS + treatment + asbestos Size: >= 25000 tonnes < 75000 tonnes Environmental Permitting Regulations (Waste) Licence Number: GWY005 EPR reference: EA/EPR/BP3196LV/V008 Operator: Gwynedd Skip Hire Ltd Waste Management licence No: 37229 Annual Tonnage: 74999.0	Issue Date: 24/01/2002 Effective Date: - Modified: 15/09/2011 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Modified Site Name: Gwynedd Skip Hire Ltd Correspondence Address: -, -
Not shown	1466	NE	249850 362700	Site Address: Lon Hen Felin, Cibyn Ind Est, Caernarfon, Gwynedd, LL55 2BD Type: HCI Waste TS + treatment + asbestos Size: Unknown Environmental Permitting Regulations (Waste) Licence Number: GWY035 EPR reference: CB3237AP/T001 Operator: Gwynedd Skip And Plant Hire Ltd Waste Management licence No: 37229 Annual Tonnage: 0.0	Issue Date: 24/01/2002 Effective Date: 27/09/2011 Modified: 15/09/2011 Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Transferred Site Name: Gwynedd Skip And Plant Hire Ltd Correspondence Address: -, -

## 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:

11

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

ID	Distance (m)	Direction	Company	NGR	Address	Activity	Category
1	0	On Site	Clay Pit	248973 361492	LL55	Sand, Gravel and Clay Extraction and Merchants	Extractive Industries
2	0	On Site	Conveyor	248909 361441	LL55	Conveyors	Industrial Features
3	67	W	Eryri Hospital	248706 361611	The Park, Caernarfon, LL55 2YE	Hospitals	Health Practitioners and Establishments
4	73	W	Electricity Sub Station	248691 361554	LL55	Electrical Features	Infrastructure and Facilities
5	97	W	Mast	248665 361485	LL55	Telecommunications Features	Infrastructure and Facilities
6A	132	W	Mast	248630 361482	LL55	Telecommunications Features	Infrastructure and Facilities
7A	132	W	Pylon	248630 361483	LL55	Electrical Features	Infrastructure and Facilities
8	160	E	Clay Pit	249161 361515	LL55	Sand, Gravel and Clay Extraction and Merchants	Extractive Industries
9	162	N	Electricity Sub Station	248868 361796	LL55	Electrical Features	Infrastructure and Facilities
10	182	SW	Surefix Construction	248593 361430	Coed Awelon, Seiont Mill Road, Caernarfon, LL55 2YL	Concrete Products	Industrial Products
11	191	NE	Filter Beds (Disused)	248946 361786	LL55	Waste Storage, Processing and Disposal	Infrastructure and Facilities

### 4.2 Petrol and Fuel Sites

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

0

Database searched and no data found.

### 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

Database searched and no data found.

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

---

## 5.2 Superficial Ground and Drift Geology

Database searched and no data found.

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

---

## 5.3 Bedrock and Solid Geology

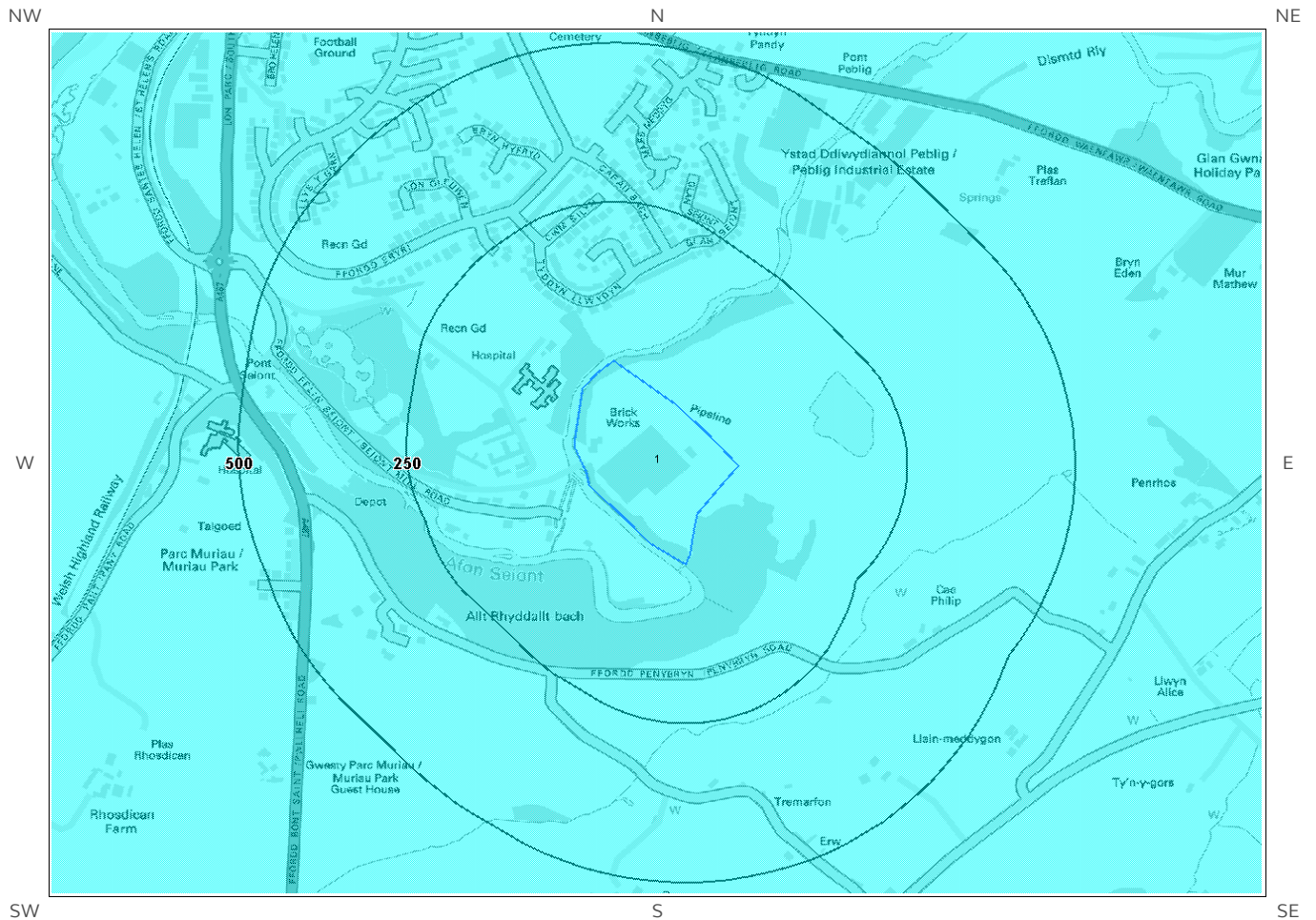
Database searched and no data found.

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

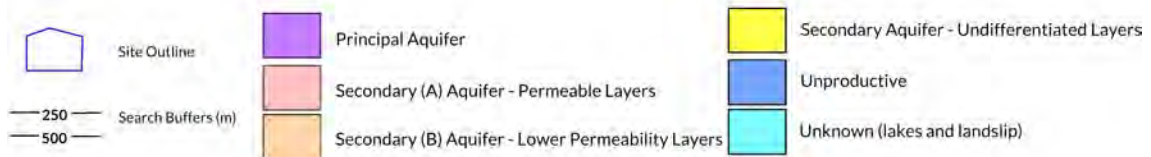
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# 6 Hydrogeology and Hydrology

## 6a. Aquifer Within Superficial Geology

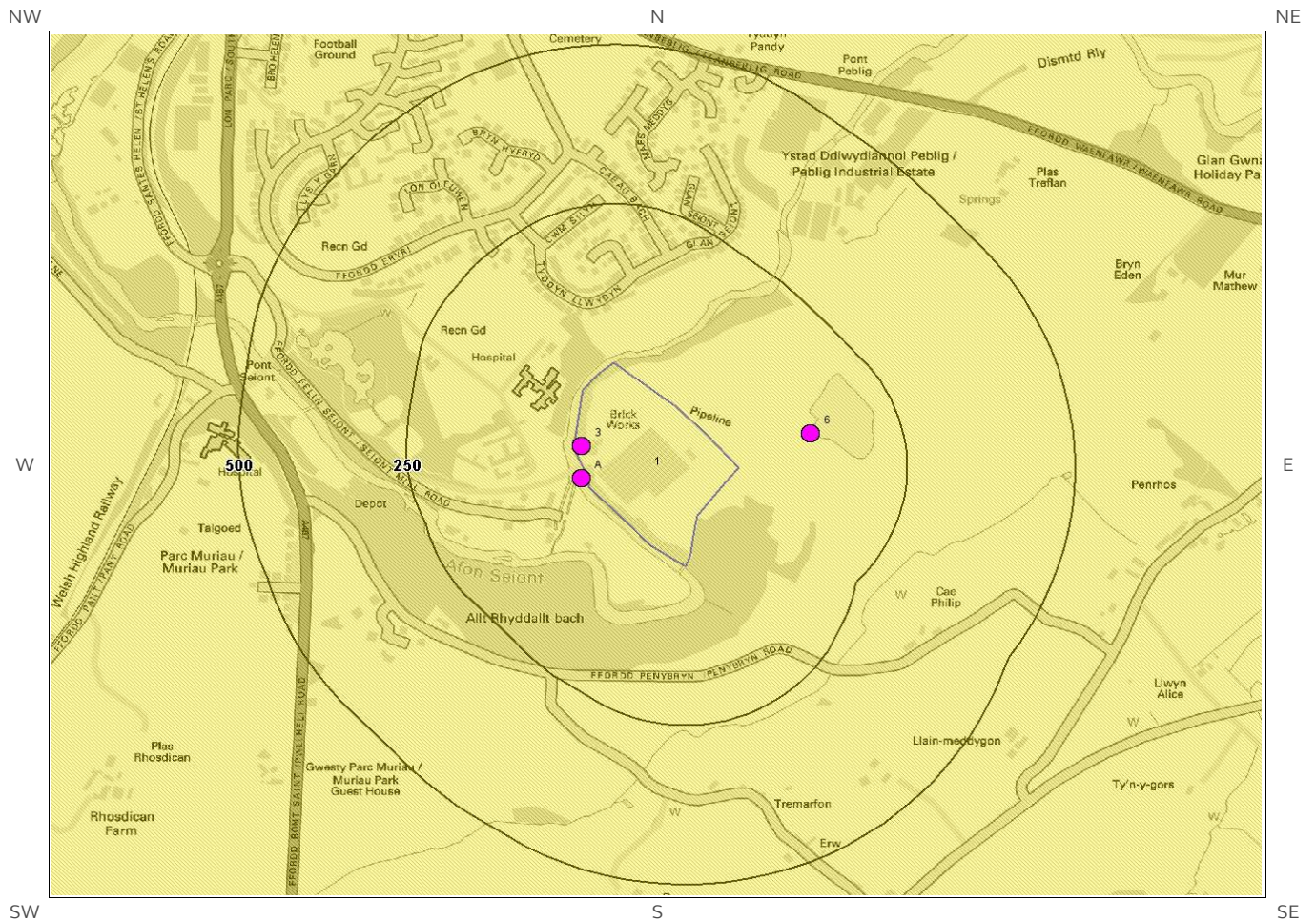


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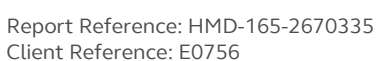
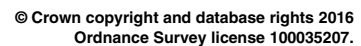




# 6b. Aquifer Within Bedrock Geology and Abstraction Licenses

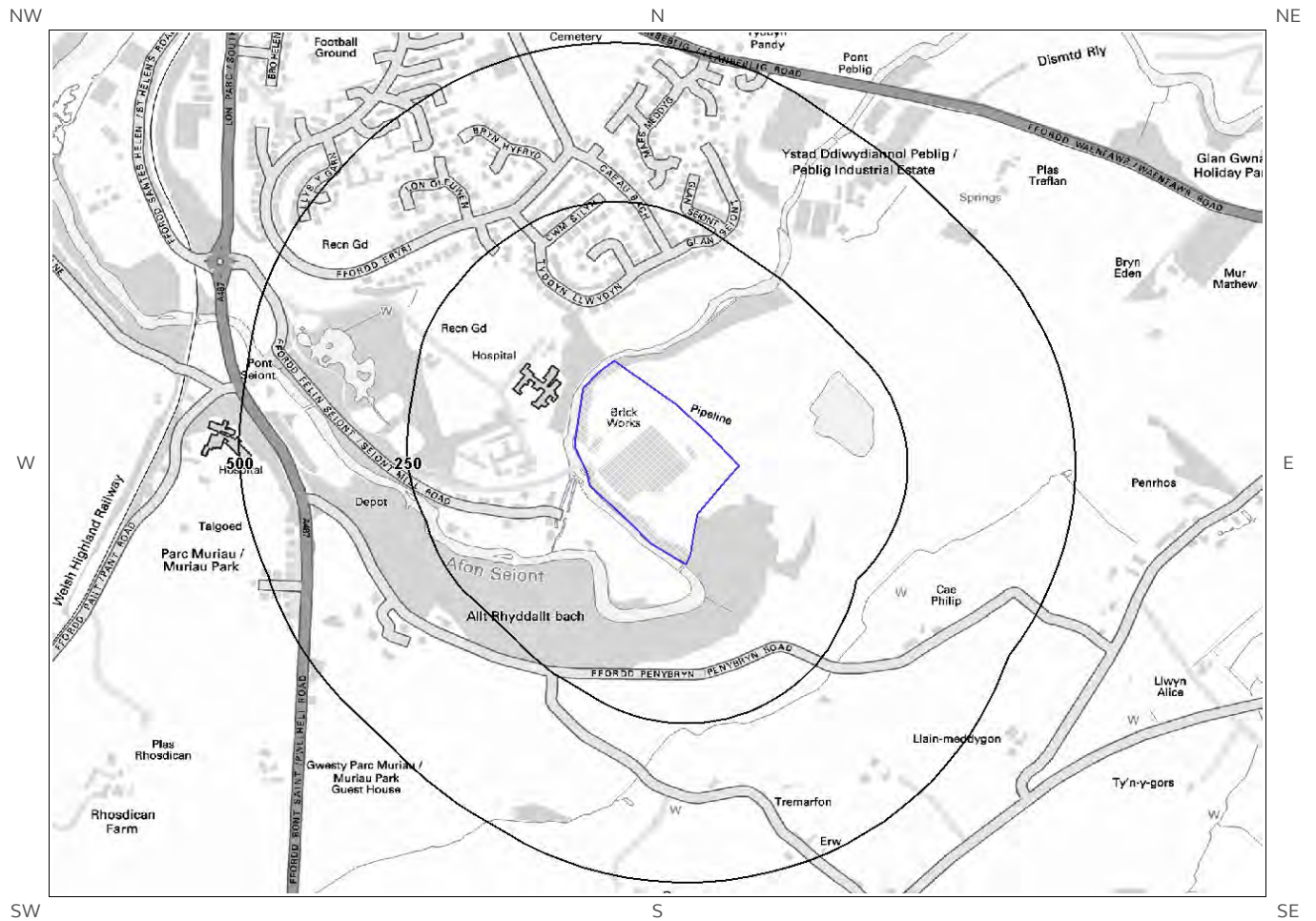


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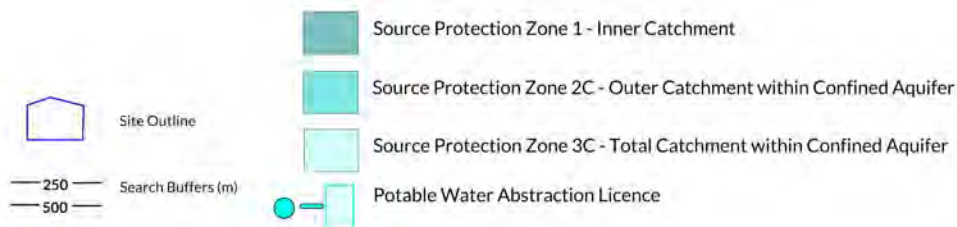




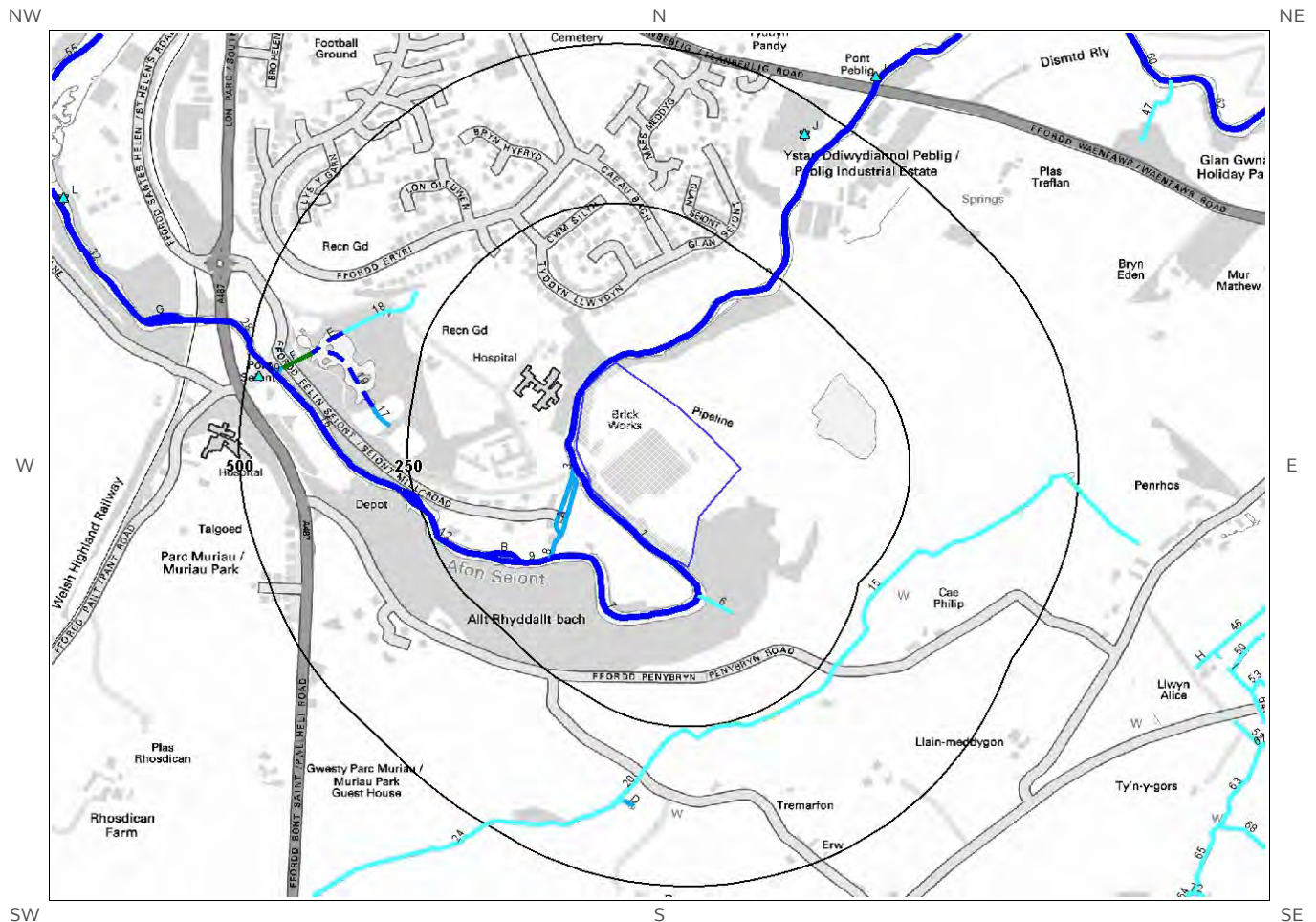
# 6d. Hydrogeology – Source Protection Zones within confined aquifer



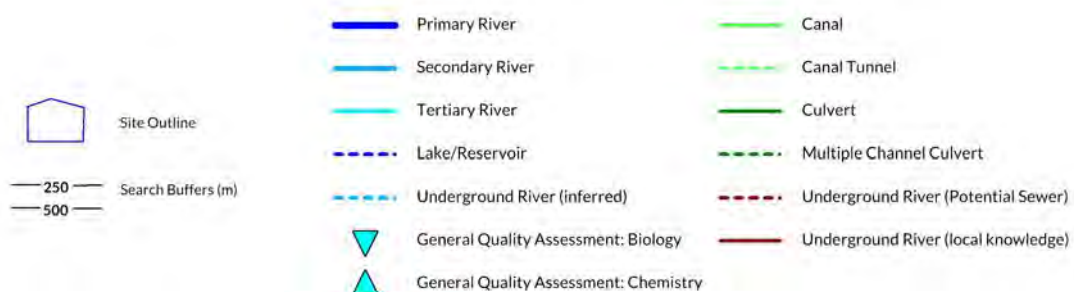
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# 6e. Hydrology – Detailed River Network and River Quality



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# 6. Hydrogeology and Hydrology

## 6.1 Aquifer within Superficial Deposits

Are there records of strata classification within the superficial geology at or in proximity to the property? Yes

From 1 April 2010, the Environment Agency'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 Enviroinsight 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	Unknown	Unknown

## 6.2 Aquifer within Bedrock Deposits

Are there records of strata classification within the bedrock geology at or in proximity to the property? Yes

From 1 April 2010, the Environment Agency'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 Enviroinsight 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 (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

## 6.3 Groundwater Abstraction Licences

Are there any Groundwater Abstraction Licences within 2000m of the study site? No

Database searched and no data found.

## 6.4 Surface Water Abstraction Licences

Are there any Surface Water Abstraction Licences within 2000m of the study site?

Yes

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
3	0	On Site	248770 361510	<p>Status: Active Licence No: 23/65/16/0019 Details: Lake &amp; Pond Throughflow Direct Source: Eaw Surface Water Point: Ornamental Park Lake Data Type: Point Name: Cyngor Gwynedd</p> <p>Annual Volume (m³): 382300.42 Max Daily Volume (m³): 1047.39 Application No: C219/530 Original Start Date: 29/11/1965 Expiry Date: - Issue No: 100 Version Start Date: 1/4/2005 Version End Date:</p>
4A	9	W	248770 361460	<p>Status: Historical Licence No: 23/65/16/0008 Details: Process Water Direct Source: Eaw Surface Water Point: Afon Seiont Data Type: Point Name: Hanson Brick</p> <p>Annual Volume (m³): 6819 Max Daily Volume (m³): 27.27 Application No: C219/43 Original Start Date: 25/10/1965 Expiry Date: - Issue No: 100 Version Start Date: 1/4/2008 Version End Date:</p>
5A	9	W	248770 361460	<p>Status: Historical Licence No: 23/65/16/0008 Details: General Washing/Process Washing Direct Source: Eaw Surface Water Point: River Seiont, Caernarfon Data Type: Point Name: Hanson Brick</p> <p>Annual Volume (m³): - Max Daily Volume (m³): - Application No: C219/43 Original Start Date: 25/10/1965 Expiry Date: - Issue No: 100 Version Start Date: 1/1/2000 Version End Date:</p>
6	117	NE	249110 361530	<p>Status: Historical Licence No: 23/65/16/0070 Details: Process Water Direct Source: Eaw Surface Water Point: On Site Lagoon At Seiont Brickworks Data Type: Point Name: Hanson Brick</p> <p>Annual Volume (m³): 12000 Max Daily Volume (m³): 35 Application No: 2032 Original Start Date: 20/6/2006 Expiry Date: 31/3/2013 Issue No: 1 Version Start Date: 1/4/2008 Version End Date:</p>
Not shown	1636	SW	248100 359910	<p>Status: Active Licence No: 23/65/15/0022 Details: Effluent/Slurry Dilution Direct Source: Eaw Surface Water Point: Afon Gwyrfa Data Type: Point Name: Dwr Cymru Cyfyngedig</p> <p>Annual Volume (m³): 600 Max Daily Volume (m³): 50 Application No: C219/1725 Original Start Date: 27/8/1993 Expiry Date: - Issue No: 100 Version Start Date: 1/4/2005 Version End Date:</p>
Not shown	1648	E	250590 361930	<p>Status: Active Licence No: 23/65/16/0039 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Household Direct Source: Eaw Surface Water Point: Pond At Glan Gwna, Caeathraw Data Type: Point Name: Glan Gwna Holiday Park Ltd</p> <p>Annual Volume (m³): 93502.1 Max Daily Volume (m³): 256.17 Application No: C219/1379 Original Start Date: 24/6/1968 Expiry Date: - Issue No: 100 Version Start Date: 11/9/2006 Version End Date:</p>



## 6.5 Potable Water Abstraction Licences

Are there any Potable Water Abstraction Licences within 2000m of the study site?

Yes

The following Potable Water Abstraction Licences records are represented as points, lines and regions on the SPZ and Potable Water Abstraction Licences Map (6c):

ID	Distance (m)	Direction	NGR	Details
Not shown	1648	E	250590 361930	<p>Status: Active Licence No: 23/65/16/0039 Details: Drinking, Cooking, Sanitary, Washing, (Small Garden) - Household Direct Source: Eaw Surface Water Point: Pond At Glan Gwna, Caeathraw Data Type: Point Name: Glan Gwna Holiday Park Ltd</p> <p>Annual Volume (m<sup>3</sup>): 93502.1 Max Daily Volume (m<sup>3</sup>): 256.17 Original Application No: C219/1379 Original Start Date: 24/6/1968 Expiry Date: - Issue No: 100 Version Start Date: Version End Date:</p>

## 6.6 Source Protection Zones

Are there any Source Protection Zones within 500m of the study site?

No

Database searched and no data found.

## 6.7 Source Protection Zones within Confined Aquifer

Are there any Source Protection Zones within the Confined Aquifer within 500m of the study site?

No

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

Is there any Environment Agency information on groundwater vulnerability and soil leaching potential within 500m of the study site?

Yes

Distance (m)	Direction	Classification	Soil Vulnerability Category	Description
0	On Site	Minor Aquifer/High Leaching Potential	H1	Soils which readily transmit liquid discharges because they are shallow or susceptible to rapid flow directly to rock, gravel or groundwater.
62	SW	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.
406	S	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.

## 6.9 River Quality

Is there any Environment Agency information on river quality within 1500m of the study site?

Yes

### 6.9.1 Biological Quality:

Biological Quality data describes water quality in terms of 83 groups of macroinvertebrates, some of which are pollution sensitive. The results are graded from A ('Very Good') to F ('Bad').

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

ID	Distance (m)	Direction	NGR	River Quality Grade	Biological Quality Grade				
					2005	2006	2007	2008	2009
94J	455	NE	249100 362000	River Name: Seiont Reach: Tidal Limit - D/s A4085 Rd.br. End/Start of Stretch: Start of Stretch NGR	B	B	B	B	B
95J	455	NE	249100 362000	River Name: Seiont Reach: D/s A4085 Rd. Br. - Pont Rug End/Start of Stretch: End of Stretch NGR	C	B	B	B	B
96L	829	W	248000 361900	River Name: Seiont Reach: Tidal Limit - D/s A4085 Rd.br. End/Start of Stretch: End of Stretch NGR	B	B	B	B	B

## 6.9.2 Chemical Quality:

Chemical quality data is based on the General Quality Assessment Headline Indicators scheme (GQAH). 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
97J	455	NE	249100 362000	River Name: Seiont Reach: D/s A4085 Rd. Br. - Pont Rug End/Start of Stretch: End of Stretch NGR	A	A	A	A	-
98J	455	NE	249100 362000	River Name: Seiont Reach: Tidal Limit - D/s A4085 Rd.br. End/Start of Stretch: Start of Stretch NGR	A	A	A	A	-
99	480	W	248290 361620	River Name: Seiont Reach: Tidal Limit - D/s A4085 Rd.br. End/Start of Stretch: Sample Point NGR	A	A	A	A	-
100K	589	NE	249205 362090	River Name: Seiont Reach: D/s A4085 Rd. Br. - Pont Rug End/Start of Stretch: Sample Point NGR	A	A	A	A	-
101K	589	NE	249205 362090	River Name: Seiont Reach: Pont Rug - Llanrug Stw End/Start of Stretch: Sample Point NGR	A	A	A	A	-
102K	589	NE	249205 362090	River Name: Seiont Reach: Llanrug Stw - Pont Rhythallt End/Start of Stretch: Sample Point NGR	A	A	A	A	-
103K	589	NE	249205 362090	River Name: Seiont Reach: Pont Rhythallt-conf.r.aledffrwd End/Start of Stretch: Sample Point NGR	A	A	A	A	-
104L	829	W	248000 361900	River Name: Seiont Reach: Tidal Limit - D/s A4085 Rd.br. End/Start of Stretch: End of Stretch NGR	A	A	A	A	-

## 6.10 Detailed River Network

Are there any Detailed River Network entries within 500m of the study site?

Yes

The following Detailed River Network records are represented on the Hydrology Map (6e):

ID	Distance (m)	Direction	Details
1	4	SW	River Name: Afon Seiont Welsh River Name: - Alternative Name: -  River Type: Primary River Main River Status: Currently Undefined
2	4	NW	River Name: Afon Seiont Welsh River Name: - Alternative Name: -  River Type: Primary River Main River Status: Currently Undefined

ID	Distance (m)	Direction	Details	
3	12	SW	River Name: Mill Stream (dis) Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
4A	20	W	River Name: Mill Stream (dis) Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
5A	23	SW	River Name: Mill Stream (dis) Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
6	47	S	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
7	47	S	River Name: Afon Seiont Welsh River Name: - Alternative Name: -	River Type: Primary River Main River Status: Currently Undefined
8	84	SW	River Name: Mill Stream (dis) Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
9	121	SW	River Name: Afon Seiont Welsh River Name: - Alternative Name: -	River Type: Primary River Main River Status: Currently Undefined
10B	156	SW	River Name: Afon Seiont Welsh River Name: - Alternative Name: -	River Type: Primary River Main River Status: Currently Undefined
11B	156	SW	River Name: Afon Seiont Welsh River Name: - Alternative Name: -	River Type: Primary River Main River Status: Currently Undefined
12	190	SW	River Name: Afon Seiont Welsh River Name: - Alternative Name: -	River Type: Primary River Main River Status: Currently Undefined
13C	247	W	River Name: Afon Seiont Welsh River Name: - Alternative Name: -	River Type: Primary River Main River Status: Currently Undefined
14C	248	W	River Name: Afon Seiont Welsh River Name: - Alternative Name: -	River Type: Primary River Main River Status: Currently Undefined
15	254	S	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
16	266	W	River Name: Afon Seiont Welsh River Name: - Alternative Name: -	River Type: Primary River Main River Status: Currently Undefined
17	278	W	River Name: - Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
18	291	NW	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
19	306	W	River Name: - Welsh River Name: - Alternative Name: -	River Type: Lake/Reservoir Main River Status: Currently Undefined
20	321	S	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
21E	369	W	River Name: - Welsh River Name: - Alternative Name: -	River Type: Lake/Reservoir Main River Status: Currently Undefined

ID	Distance (m)	Direction	Details	
22D	377	S	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
23D	378	S	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
24	384	S	River Name: Drain Welsh River Name: - Alternative Name: -	River Type: Tertiary River Main River Status: Currently Undefined
25E	401	W	River Name: - Welsh River Name: - Alternative Name: -	River Type: Lake/Reservoir Main River Status: Currently Undefined
26F	409	W	River Name: - Welsh River Name: - Alternative Name: -	River Type: Culvert Main River Status: Currently Undefined
27F	449	W	River Name: - Welsh River Name: - Alternative Name: -	River Type: Secondary River Main River Status: Currently Undefined
28	459	W	River Name: Afon Seiont Welsh River Name: - Alternative Name: -	River Type: Primary River Main River Status: Currently Undefined

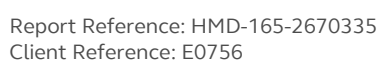
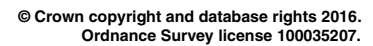
## 6.11 Surface Water Features

Are there any surface water features within 250m of the study site?

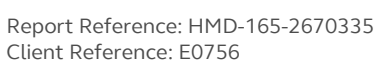
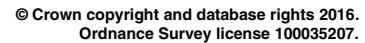
Yes

The following surface water records are not represented on mapping:

Distance (m)	Direction
0	On Site
0	On Site
2	SW
56	SE
124	NE







# 7 Flooding

## 7.1 River and Coastal Zone 2 Flooding

Is the site within 250m of an Environment Agency Zone 2 floodplain? Yes

Environment Agency 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	18-Nov-2015	Zone 2 - (Fluvial /Tidal Models)

## 7.2 River and Coastal Zone 3 Flooding

Is the site within 250m of an Environment Agency Zone 3 floodplain? Yes

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	18-Nov-2015	Zone 3 - (Fluvial Models)
	0	On Site	18-Nov-2015	Zone 3 - (Fluvial Models)

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

What is the highest risk of flooding onsite? High

The Environment Agency 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 High (1 in 30 or greater) 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	Medium
2	0.0	On Site	Medium
3	0.0	On Site	Low
4	0.0	On Site	Medium
5	0.0	On Site	Low
6	0.0	On Site	Low
7	0.0	On Site	Medium
8	0.0	On Site	High
9	4.0	SW	Medium
10	7.0	W	Medium
11	8.0	SW	Low
12	9.0	NW	Low
13	10.0	W	Low
14	12.0	SW	Low
15	13.0	NE	Low
16	16.0	W	Low
17	29.0	NE	Medium
18	38.0	SE	Low

---

## 7.4 Flood Defences

Are there any Flood Defences within 250m of the study site? No  
Database searched and no data found.

---

## 7.5 Areas benefiting from Flood Defences

Are there any areas benefiting from Flood Defences within 250m of the study site? No

---

## 7.6 Areas benefiting from Flood Storage

Are there any areas used for Flood Storage within 250m of the study site? No

---

## 7.7 Groundwater Flooding Susceptibility Areas

7.7.1 Are there any British Geological Survey groundwater flooding susceptibility areas within 50m of the boundary of the study site? Yes

Does this relate to 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 What is the 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

What is the British Geological Survey confidence rating in this result?

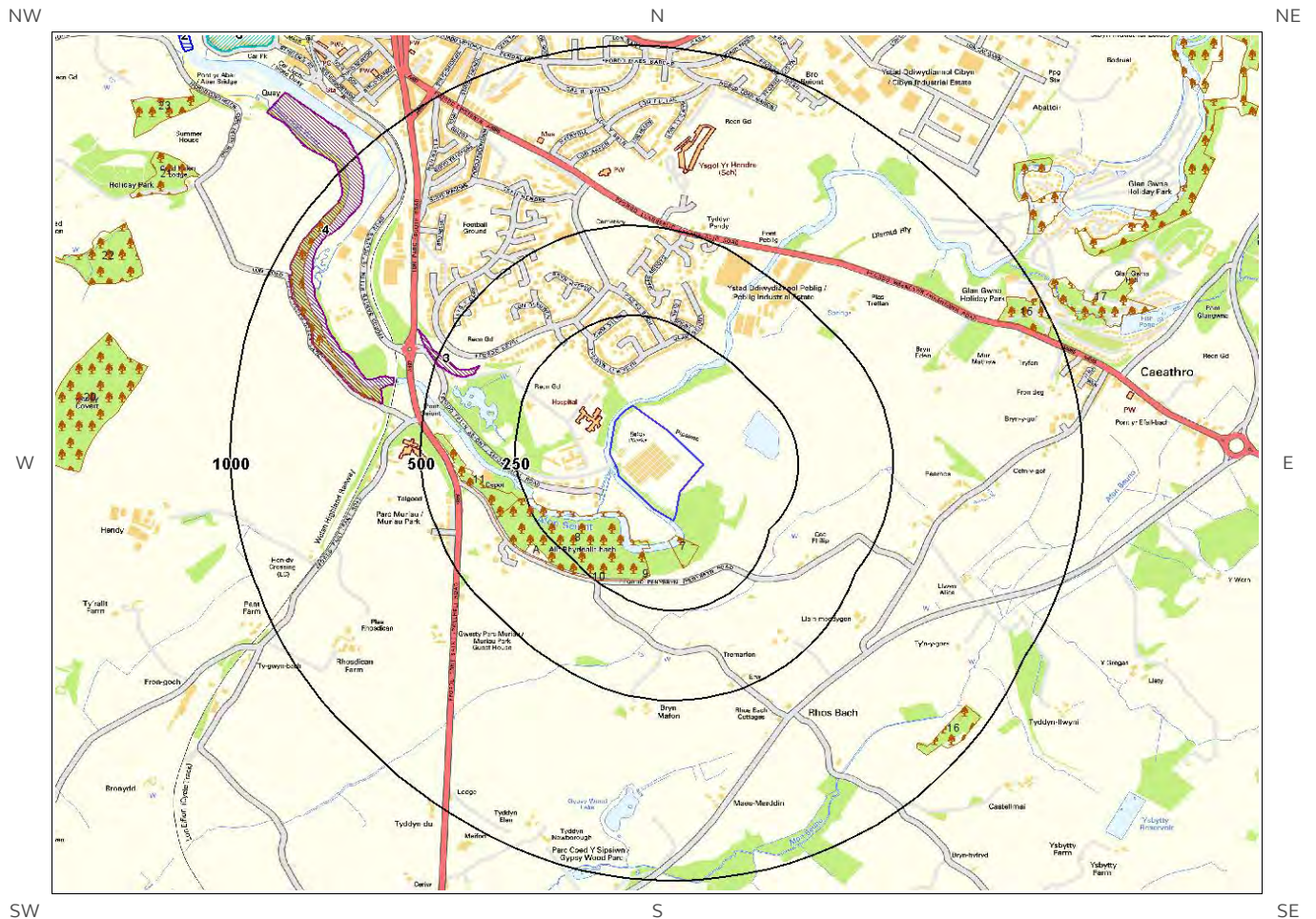
High

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

Presence of Designated Environmentally Sensitive Sites within 2000m of the study site? Yes

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

3

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
3	388	NW	AFON SEIONT	Natural Resources Wales
4	594	W	AFON SEIONT	Natural Resources Wales
Not shown	1419	S	AFON GWYRFAI A LLYN CWELLYN	Natural Resources Wales

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

0

Database searched and no data found.

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

2

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
Not shown	1437	S	Afon Gwyrfaï a Llyn Cwellyn	Natural Resources Wales
2	1516	NW	Y Fenai a Bae Conwy / Menai Strait and Conwy Bay	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:

0

Database searched and no data found.

---

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

48

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
7	41	S	Unknown	Ancient and Semi-Natural Woodland
8	68	SW	Unknown	Restored Ancient Woodland Site
9	163	SW	ALLT RHYDDALT-BACH	Ancient and Semi-Natural Woodland
10	233	SW	ALLT RHYDDALT-BACH	Ancient and Semi-Natural Woodland
11	272	SW	Unknown	Ancient and Semi-Natural Woodland
12A	292	SW	ALLT RHYDDALT-BACH	Ancient and Semi-Natural Woodland
13A	327	SW	ALLT RHYDDALT-BACH	Ancient and Semi-Natural Woodland
14	622	W	Unknown	Ancient and Semi-Natural Woodland
15	872	NE	Unknown	Ancient and Semi-Natural Woodland
16	893	SE	Unknown	Ancient and Semi-Natural Woodland
17	1035	NE	Unknown	Restored Ancient Woodland Site
18	1067	NE	Unknown	Ancient and Semi-Natural Woodland
19	1167	NE	Unknown	Restored Ancient Woodland Site
20	1239	W	Unknown	Restored Ancient Woodland Site
21	1292	NW	Unknown	Ancient and Semi-Natural Woodland
22	1309	W	Unknown	Restored Ancient Woodland Site
23	1394	NW	Unknown	Ancient and Semi-Natural Woodland
Not shown	1549	E	Unknown	Restored Ancient Woodland Site
Not shown	1611	S	Unknown	Ancient and Semi-Natural Woodland
Not shown	1614	S	Unknown	Restored Ancient Woodland Site
Not shown	1619	S	COED PLAS-Y-BRYN	Ancient and Semi-Natural Woodland
Not shown	1623	S	COED PLAS-Y-BRYN	Ancient and Semi-Natural Woodland
Not shown	1631	S	Unknown	Restored Ancient Woodland Site
Not shown	1632	SE	Unknown	Restored Ancient Woodland Site
Not shown	1636	S	COED PLAS-Y-BRYN	Ancient and Semi-Natural Woodland
Not shown	1643	S	COED PLAS-Y-BRYN	Ancient and Semi-Natural Woodland
Not shown	1643	S	COED PLAS-Y-BRYN	Ancient and Semi-Natural Woodland

ID	Distance (m)	Direction	Ancient Woodland Name	Data Source
Not shown	1649	S	COED PLAS-Y-BRYN	Ancient and Semi-Natural Woodland
Not shown	1666	S	COED PLAS-Y-BRYN	Ancient and Semi-Natural Woodland
Not shown	1699	S	COED PLAS-Y-BRYN	Ancient and Semi-Natural Woodland
Not shown	1756	S	COED PLAS-Y-BRYN	Ancient and Semi-Natural Woodland
Not shown	1765	S	COED PLAS-Y-BRYN	Ancient and Semi-Natural Woodland
Not shown	1772	S	COED PLAS-Y-BRYN	Ancient and Semi-Natural Woodland
Not shown	1827	SE	Unknown	Restored Ancient Woodland Site
Not shown	1837	SE	COED GLAN-YR-AFON	Ancient and Semi-Natural Woodland
Not shown	1843	S	COED PLAS-Y-BRYN	Ancient and Semi-Natural Woodland
Not shown	1864	SE	COED GLAN-YR-AFON	Ancient and Semi-Natural Woodland
Not shown	1865	SE	COED GLAN-YR-AFON	Ancient and Semi-Natural Woodland
Not shown	1875	SE	COED GLAN-YR-AFON	Ancient and Semi-Natural Woodland
Not shown	1876	SE	COED GLAN-YR-AFON	Ancient and Semi-Natural Woodland
Not shown	1878	SE	COED GLAN-YR-AFON	Ancient and Semi-Natural Woodland
Not shown	1899	SE	COED GLAN-YR-AFON	Ancient and Semi-Natural Woodland
Not shown	1909	SE	COED GLAN-YR-AFON	Ancient and Semi-Natural Woodland
Not shown	1935	SE	COED GLAN-YR-AFON	Ancient and Semi-Natural Woodland
Not shown	1940	SE	COED GLAN-YR-AFON	Ancient and Semi-Natural Woodland
Not shown	1941	S	Unknown	Ancient and Semi-Natural Woodland
Not shown	1965	SE	Unknown	Restored Ancient Woodland Site
Not shown	1975	S	COED GLAN-YR-AFON	Ancient and Semi-Natural Woodland

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

0

Database searched and no data found.

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

1

The following World Heritage Site records provided by English Heritage and Cadw are represented as polygons on the Designated Environmentally Sensitive Sites Map:

ID	Distance (m)	Direction	World Heritage Site Name	Data Source
6	1382	NW	Caernarfon Castle & Town Walls	CADW

## 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.

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# 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 GeoInsight**, available from our **website**. The following information has been found:

### 9.1.1 Shrink Swell

What is the maximum Shrink-Swell\* hazard rating identified on the study site? Low

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

Hazard
Ground conditions predominantly medium plasticity. Do not plant trees with high soil moisture demands near to buildings. For new build, consideration should be given to advice published by the National House Building Council (NHBC) and the Building Research Establishment (BRE). There is a possible increase in construction cost to reduce potential shrink-swell problems. For existing property, there is a possible increase in insurance risk, especially during droughts or where vegetation with high moisture demands is present.

### 9.1.2 Landslides

What is the 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

What is the 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

What is the maximum Compressible Ground\* hazard rating identified on the study site? Low

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

Hazard
Low potential of compressibility problems. Take technical advice regarding settlement when planning extensions to existing property. For new build Ö consider the possibility of settlement during construction due to compressible deposits. Unlikely to be increase in construction costs due to potential compressibility problems. For existing property Ö no significant increase in insurance risk due to compressibility problems.

### 9.1.5 Collapsible Rocks

What is the maximum Collapsible Rocks\* 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
Deposits with potential to collapse when loaded and saturated are unlikely to be present. 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

What is the maximum Running Sand\*\* hazard rating identified on the study site? Low

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

Hazard
Possibility of running sand problems after major changes in ground conditions. Normal maintenance to avoid leakage of water-bearing services or water bodies (ponds, swimming pools) should reduce likelihood of problems due to running sand. For new build Ö consider possibility of running sand into trenches or excavations if water table is high or sandy strata are exposed to water. Avoid concentrated water inputs to site. Unlikely to be an increase in construction costs due to potential for running sand. For existing property Ö no significant increase in insurance risk due to running sand problems is likely.

## 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 property is not in a Radon Affected Area, as less than 1% of properties are above the Action Level.

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

### 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

Are there any coal mining areas within 75m of the study site? No

Database searched and no data found.

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## 10.2 Non-Coal Mining

Are there any Non-Coal Mining areas within 50m of the study site boundary? Yes

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

Distance (m)	Direction	Name	Commodity	Assessment of likelihood
0.0	On Site	Not available	Vein Mineral	Rare and localised small scale mining may have occurred.

Past underground mine workings may occur. The rock types present in these areas are such that small mineral veins may be present on which it is possible that small scale mining has been undertaken and/or it is possible that limited underground extraction of other materials may have occurred. All such occurrences are likely to be of minor localised extent and infrequent. It should be noted, however, that there is always the possibility of the existence of other sub-surface excavations, such as wells, cess pits, follies, air raid shelters/bunkers and other military structures etc. that could affect surface ground stability but which are outside the scope of this dataset. However, if in a coalfield area you should still consider a Coal Authority mining search for the area of interest.

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## 10.3 Brine Affected Areas

Are there any brine affected areas within 75m of the study site? No

Guidance: No Guidance Required.

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# Contact Details

**Groundsure Helpline**  
Telephone: 08444 159 000  
info@groundsure.com

**British Geological Survey Enquiries**  
Kingsley Dunham Centre  
Keyworth, Nottingham NG12 5GG  
Tel: 0115 936 3143.  
Fax: 0115 936 3276.  
Email:  
Web: [www.bgs.ac.uk](http://www.bgs.ac.uk)

BGS Geological Hazards Reports and general geological enquiries:  
[enquiries@bgs.ac.uk](mailto:enquiries@bgs.ac.uk)

**Environment Agency**  
National Customer Contact Centre, PO Box 544  
Rotherham, S60 1BY  
Tel: 08708 506 506  
Web: [www.environment-agency.gov.uk](http://www.environment-agency.gov.uk)  
Email: [enquiries@environment-agency.gov.uk](mailto:enquiries@environment-agency.gov.uk)

**Public Health England**  
Public information access office  
Public Health England, Wellington House  
133-155 Waterloo Road, London, SE1 8UG  
[www.gov.uk/phe](http://www.gov.uk/phe)  
Email: [enquiries@phe.gov.uk](mailto:enquiries@phe.gov.uk)  
Main switchboard: 020 7654 8000

**The Coal Authority**  
200 Lichfield Lane  
Mansfield  
Notts NG18 4RG  
Tel: 0345 7626 848  
DX 716176 Mansfield 5  
[www.coal.gov.uk](http://www.coal.gov.uk)

**Ordnance Survey**  
Adanac Drive, Southampton  
SO16 0AS  
Tel: 08456 050505

**Local Authority**  
Authority: Gwynedd County Council  
Phone: 01766 771 000  
Web: <http://www.gwynedd.gov.uk>  
Address: Council Offices, Shirehall Street, Caernafon, Gwynedd, LL55

**Gemapping PLC**  
Virginia Villas, High Street, Hartley Witney,  
Hampshire RG27 8NW  
Tel: 01252 845444



Acknowledgements: Site of Special Scientific Interest, National Nature Reserve, Ramsar Site, Special Protection Area, Special Area of Conservation data is provided by, and used with the permission of, Natural England who retain the Copyright and Intellectual Property Rights for the data.

PointX © Database Right/Copyright, Thomson Directories Limited © Copyright Link Interchange Network Limited © Database Right/Copyright and Ordnance Survey © Crown Copyright and/or Database Right. All Rights Reserved. Licence Number [03421028].

This report has been prepared in accordance with the Groundsure Ltd standard Terms and Conditions of business for work of this nature.

## Standard Terms and Conditions

### 1 Definitions

In these terms and conditions unless the context otherwise requires:

**“Beneficiary”** means the person or entity for whose benefit the Client has obtained the Services.

**“Client”** means the party or parties entering into a Contract with Groundsure.

**“Commercial”** means any building or property which is not Residential.

**“Confidential Information”** means the contents of this Contract and all information received from the Client as a result of, or in connection with, this Contract other than

(i) information which the Client can prove was rightfully in its possession prior to disclosure by Groundsure and

(ii) any information which is in the public domain (other than by virtue of a breach of this Contract).

**“Support Services”** means Support Services provided by Groundsure including, without limitation, interpreting third party and in-house environmental data, providing environmental support advice, undertaking environmental audits and assessments, Site investigation, Site monitoring and related items.

**“Contract”** means the contract between Groundsure and the Client for the provision of the Services, and which shall incorporate these terms and conditions, the Order, and the relevant User Guide.

**“Third Party Data Provider”** means any third party providing Third Party Content to Groundsure.

**“Data Reports”** means reports comprising factual data with no accompanying interpretation.

**“Fees”** has the meaning set out in clause 5.1.

**“Groundsure”** means Groundsure Limited, a company registered in England and Wales under number 03421028.

**“Groundsure Materials”** means all materials prepared by Groundsure and provided as part of the Services, including but not limited to Third Party Content, Data Reports, Mapping, and Risk Screening Reports.

**“Intellectual Property”** means any patent, copyright, design rights, trade or service mark, moral rights, data protection rights, know-how or trade mark in each case whether registered or not and including applications for the same or any other rights of a similar nature anywhere in the world.

**“Mapping”** means a map, map data or a combination of historical maps of various ages, time periods and scales.

**“Order”** means an electronic, written or other order form submitted by the Client requesting Services from Groundsure in respect of a specified Site.

**“Ordnance Survey”** means the Secretary of State for Business, Innovation and Skills, acting through Ordnance Survey, Adanac Drive, Southampton, SO16 0AS, UK.

**“Order Website”** means the online platform through which Orders may be placed by the Client and accepted by Groundsure.

**“Report”** means a Risk Screening Report or Data Report for Commercial or Residential property.

**“Residential”** means any building or property used as or intended to be used as a single dwelling.

**“Risk Screening Report”** means a risk screening report comprising factual data with an accompanying interpretation by Groundsure.

**“Services”** means any Report, Mapping and/or Support Services which Groundsure has agreed to provide by accepting an Order pursuant to clause 2.6.

**“Site”** means the area of land in respect of which the Client has requested Groundsure to provide the Services.

**“Third Party Content”** means data, database information or other information which is provided to Groundsure by a Third Party Data Provider.

**“User Guide”** means the user guide, as amended from time to time, available upon request from Groundsure and on the website ([www.Groundsure.com](http://www.Groundsure.com)) and forming part of this Contract.

### 2 Scope of Services, terms and conditions, requests for insurance and quotations

2.1 Groundsure agrees to provide the Services in accordance with the Contract.

2.2 Groundsure shall exercise reasonable skill and care in the provision of the Services.

2.3 Subject to clause 7.3 the Client acknowledges that it has not relied on any statement or representation made by or on behalf of Groundsure which is not set out and expressly agreed in writing in the Contract and all such statements and representations are hereby excluded to the fullest extent permitted by law.

2.4 The Client acknowledges that terms and conditions appearing on a Client’s order form, printed stationery or other communication, or any terms or conditions implied by custom, practice or course of dealing shall be of no effect, and that this Contract shall prevail over all others in relation to the Order.

2.5 If the Client or Beneficiary requests insurance in conjunction with or as a result of the Services, Groundsure shall use reasonable endeavours to recommend such insurance, but makes no warranty that such insurance shall be available from insurers or that it will be offered on reasonable terms. Any insurance purchased by the Client or Beneficiary shall be subject solely to the terms of the policy issued by insurers and Groundsure will have no liability therefor. In addition you acknowledge and agree that Groundsure does not act as an agent or broker for any insurance providers. The Client should take (and ensure that the Beneficiary takes) independent advice to ensure that the insurance policy requested or offered is suitable for its requirements.

2.6 Groundsure's quotations or proposals are valid for a period of 30 days only unless an alternative period of time is explicitly stipulated by Groundsure. Groundsure reserves the right to withdraw any quotation or proposal at any time before an Order is accepted by Groundsure. Groundsure's acceptance of an Order shall be binding only when made in writing and signed by Groundsure's authorised representative or when accepted through the Order Website.

### 3 The Client’s obligations

3.1 The Client shall comply with the terms of this Contract and

(i) procure that the Beneficiary or any third party relying on the Services complies with and acts as if it is bound by the Contract and

(ii) be liable to Groundsure for the acts and omissions of the Beneficiary or any third party relying on the Services as if such acts and omissions were those of the Client.

3.2 The Client shall be solely responsible for ensuring that the Services are appropriate and suitable for its and/or the Beneficiary’s needs.

3.3 The Client shall supply to Groundsure as soon as practicable and without charge all requisite information (and the Client warrants that such information is accurate, complete and appropriate), including without limitation any environmental information relating to the Site and shall give such assistance as Groundsure shall reasonably require in the provision of the Services including, without limitation, access to the Site, facilities and equipment.

3.4 Where the Client’s approval or decision is required to enable Groundsure to carry out work in order to provide the Services, such approval or decision shall be given or procured in reasonable time and so as not to delay or disrupt the performance of the Services.

3.5 Save as expressly permitted by this Contract the Client shall not, and shall procure that the Beneficiary shall not, re-sell, alter, add to, or amend the Groundsure Materials, or use the Groundsure Materials in a manner for which they were not intended. The Client may make the Groundsure Materials available to a third party who is considering acquiring some or all of, or providing funding in relation to, the Site, but such third party cannot rely on the same unless expressly permitted under clause 4.

3.6 The Client is responsible for maintaining the confidentiality of its user name and password if using the Order Website and the Client acknowledges that Groundsure accepts no liability of any kind for any loss or damage suffered by the Client as a consequence of using the Order Website.

### 4 Reliance

4.1 The Client acknowledges that the Services provided by Groundsure consist of the presentation and analysis of Third Party Content and other content and that information obtained from a Third Party Data Provider cannot be guaranteed or warranted by Groundsure to be reliable.

4.2 In respect of Data Reports, Mapping and Risk Screening Reports, the following classes of person and no other are entitled to rely on their contents;

- (i) the Beneficiary,
- (ii) the Beneficiary's professional advisers, (iii) any person providing funding to the Beneficiary in relation to the Site (whether directly or as part of a lending syndicate),
- (iv) the first purchaser or first tenant of the Site, and
- (v) the professional advisers and lenders of the first purchaser or tenant of the Site.

4.3 In respect of Support Services, only the Client, Beneficiary and parties expressly named in a Report and no other parties are entitled to rely on its contents.

4.4 Save as set out in clauses 4.2 and 4.3 and unless otherwise expressly agreed in writing, no other person or entity of any kind is entitled to rely on any Services or Report issued or provided by Groundsure. Any party considering such Reports and Services does so at their own risk.

### 5 Fees and Disbursements

5.1 Groundsure shall charge and the Client shall pay fees at the rate and



frequency specified in the written proposal, Order Website or Order acknowledgement form, plus (in the case of Support Services) all proper disbursements incurred by Groundsure. The Client shall in addition pay all value added tax or other tax payable on such fees and disbursements in relation to the provision of the Services (together "Fees").

5.2 The Client shall pay all outstanding Fees to Groundsure in full without deduction, counterclaim or set off within 30 days of the date of Groundsure's invoice or such other period as may be agreed in writing between Groundsure and the Client ("Payment Date"). Interest on late payments will accrue on a daily basis from the Payment Date until the date of payment (whether before or after judgment) at the rate of 8% per annum.

5.3 The Client shall be deemed to have agreed the amount of any invoice unless an objection is made in writing within 28 days of the date of the invoice. As soon as reasonably practicable after being notified of an objection, without prejudice to clause 5.2 a member of Groundsure's management team will contact the Client and the parties shall then use all reasonable endeavours to resolve the dispute within 15 days.

## 6 Intellectual Property and Confidentiality

### 6.1 Subject to

- (i) full payment of all relevant Fees and
- (ii) compliance with this Contract, the Client is granted (and is permitted to sub-licence to the Beneficiary) a royalty-free, worldwide, non-assignable and (save to the extent set out in this Contract) non-transferable licence to make use of the Groundsure Materials.

6.2 All Intellectual Property in the Groundsure Materials are and shall remain owned by Groundsure or Groundsure's licensors (including without limitation the Third Party Data Providers) the Client acknowledges, and shall procure acknowledgement by the Beneficiary of, such ownership. Nothing in this Contract purports to transfer or assign any rights to the Client or the Beneficiary in respect of such Intellectual Property.

6.3 Third Party Data Providers may enforce any breach of clauses 6.1 and 6.2 against the Client or Beneficiary.

6.4 The Client shall, and shall procure that any recipients of the Groundsure Materials shall:

- (i) not remove, suppress or modify any trade mark, copyright or other proprietary marking belonging to Groundsure or any third party from the Services;
- (ii) use the information obtained as part of the Services in respect of the subject Site only, and shall not store or reuse any information obtained as part of the Services provided in respect of adjacent or nearby sites;
- (iii) not create any product or report which is derived directly or indirectly from the Services (save that those acting in a professional capacity to the Beneficiary may provide advice based upon the Services);
- (iv) not combine the Services with or incorporate such Services into any other information data or service;
- (v) not reformat or otherwise change (whether by modification, addition or enhancement), the Services (save that those acting for the Beneficiary in a professional capacity shall not be in breach of this clause 6.4(v) where such reformatting is in the normal course of providing advice based upon the Services);
- (vi) where a Report and/or Mapping contains material belonging to Ordnance Survey, acknowledge and agree that such content is protected by Crown Copyright and shall not use such content for any purpose outside of receiving the Services; and
- (vii) not copy in whole or in part by any means any map prints or run-on copies containing content belonging to Ordnance Survey (other than that contained within Ordnance Survey's OS Street Map) without first being in possession of a valid Paper Map Copying Licence from Ordnance Survey,

6.5 Notwithstanding clause 6.4, the Client may make reasonable use of the Groundsure Materials in order to advise the Beneficiary in a professional capacity. However, Groundsure shall have no liability in respect of any advice, opinion or report given or provided to Beneficiaries by the Client.

6.6 The Client shall procure that any person to whom the Services are made available shall notify Groundsure of any request or requirement to disclose, publish or disseminate any information contained in the Services in accordance with the Freedom of Information Act 2000, the Environmental Information Regulations 2004 or any associated legislation or regulations in force from time to time.

## 7.Liability: Particular Attention Should Be Paid To This Clause

7.1 This Clause 7 sets out the entire liability of Groundsure, including any liability for the acts or omissions of its employees, agents, consultants, subcontractors and Third Party Content, in respect of:

- (i) any breach of contract, including any deliberate breach of the Contract by Groundsure or its employees, agents or

subcontractors;

- (ii) any use made of the Reports, Services, Materials or any part of them; and
- (iii) any representation, statement or tortious act or omission (including negligence) arising under or in connection with the Contract.

7.2 All warranties, conditions and other terms implied by statute or common law are, to the fullest extent permitted by law, excluded from the Contract.

7.3 Nothing in the Contract limits or excludes the liability of the Supplier for death or personal injury resulting from negligence, or for any damage or liability incurred by the Client or Beneficiary as a result of fraud or fraudulent misrepresentation.

7.4 Groundsure shall not be liable for

- (i) loss of profits;
- (ii) loss of business;
- (iii) depletion of goodwill and/or similar losses;
- (iv) loss of anticipated savings;
- (v) loss of goods;
- (vi) loss of contract;
- (vii) loss of use;
- (viii) loss or corruption of data or information;
- (ix) business interruption;
- (x) any kind of special, indirect, consequential or pure economic loss, costs, damages, charges or expenses;
- (xi) loss or damage that arise as a result of the use of all or part of the Groundsure Materials in breach of the Contract;
- (xii) loss or damage arising as a result of any error, omission or inaccuracy in any part of the Groundsure Materials where such error, omission or inaccuracy is caused by any Third Party Content or any reasonable interpretation of Third Party Content;
- (xiii) loss or damage to a computer, software, modem, telephone or other property; and
- (xiv) loss or damage caused by a delay or loss of use of Groundsure's internet ordering service.

7.5 Groundsure's total liability in relation to or under the Contract shall be limited to £10 million for any claim or claims.

7.6 Groundsure shall procure that the Beneficiary shall be bound by limitations and exclusions of liability in favour of Groundsure which accord with those detailed in clauses 7.4 and 7.5 (subject to clause 7.3) in respect of all claims which the Beneficiary may bring against Groundsure in relation to the Services or other matters arising pursuant to the Contract.

## 8 Groundsure's right to suspend or terminate

8.1 If Groundsure reasonably believes that the Client or Beneficiary has not provided the information or assistance required to enable the proper provision of the Services, Groundsure shall be entitled to suspend all further performance of the Services until such time as any such deficiency has been made good.

8.2 Groundsure shall be entitled to terminate the Contract immediately on written notice in the event that:

- (i) the Client fails to pay any sum due to Groundsure within 30 days of the Payment Date; or
- (ii) the Client (being an individual) has a bankruptcy order made against him or (being a company) shall enter into liquidation whether compulsory or voluntary or have an administration order made against it or if a receiver shall be appointed over the whole or any part of its property assets or undertaking or if the Client is struck off the Register of Companies or dissolved; or
- (iii) the Client being a company is unable to pay its debts within the meaning of Section 123 of the Insolvency Act 1986 or being an individual appears unable to pay his debts within the meaning of Section 268 of the Insolvency Act 1986 or if the Client shall enter into a composition or arrangement with the Client's creditors or shall suffer distress or execution to be levied on his goods; or
- (iv) the Client or the Beneficiary breaches any term of the Contract (including, but not limited to, the obligations in clause 4) which is incapable of remedy or if remediable, is not remedied within five days of notice of the breach.

## 9. Client's Right to Terminate and Suspend

9.1 Subject to clause 10.1, the Client may at any time upon written notice terminate or suspend the provision of all or any of the Services.

9.2 In any event, where the Client is a consumer (and not a business) he/she hereby expressly acknowledges and agrees that:

(i) the supply of Services under this Contract (and therefore the performance of this Contract) commences immediately upon Groundsure's acceptance of the Order; and

(ii) the Reports and/or Mapping provided under this Contract are

- (a) supplied to the Client's specification(s) and in any event
- (b) by their nature cannot be returned.

## 10 Consequences of Withdrawal, Termination or Suspension

10.1 Upon termination of the Contract:

(i) Groundsure shall take steps to bring to an end the Services in an orderly manner, vacate any Site with all reasonable speed and shall deliver to the Client and/or Beneficiary any property of the Client and/or Beneficiary in Groundsure's possession or control; and

(ii) the Client shall pay to Groundsure all and any Fees payable in respect of the performance of the Services up to the date of termination or suspension. In respect of any Support Services provided, the Client shall also pay Groundsure any additional costs incurred in relation to the termination or suspension of the Contract.

## 11 Anti-Bribery

11.1 The Client warrants that it shall:

(i) comply with all applicable laws, statutes and regulations relating to anti-bribery and anti-corruption including but not limited to the Bribery Act 2010;

(ii) comply with such of Groundsure's anti-bribery and anti-corruption policies as are notified to the Client from time to time; and

(iii) promptly report to Groundsure any request or demand for any undue financial or other advantage of any kind received by or on behalf of the Client in connection with the performance of this Contract.

11.2 Breach of this Clause 11 shall be deemed a material breach of this Contract.

## 12 General

12.1 The Mapping contained in the Services is protected by Crown copyright and must not be used for any purpose other than as part of the Services or as specifically provided in the Contract.

12.2 The Client shall be permitted to make one copy only of each Report or Mapping Order. Thereafter the Client shall be entitled to make unlimited copies of the Report or Mapping Order only in accordance with an Ordnance Survey paper map copy license available through Groundsure.

12.3 Groundsure reserves the right to amend or vary this Contract. No amendment or variation to this Contract shall be valid unless signed by an authorised representative of Groundsure.

12.4 No failure on the part of Groundsure to exercise, and no delay in exercising, any right, power or provision under this Contract shall operate as a waiver thereof.

12.5 Save as expressly provided in this Contract, no person other than the persons set out therein shall have any right under the Contract (Rights of Third Parties) Act 1999 to enforce any terms of the Contract.

12.6 The Secretary of State for Business, Innovation and Skills ("BIS") or BIS' successor body, as the case may be, acting through Ordnance Survey may enforce a breach of clause 6.4(vi) and clause 6.4(vii) of these terms and conditions against the Client in accordance with the provisions of the Contracts (Rights of Third Parties) Act 1999.

12.7 Groundsure shall not be liable to the Client if the provision of the Services is delayed or prevented by one or more of the following circumstances:

(i) the Client or Beneficiary's failure to provide facilities, access or information;

(ii) fire, storm, flood, tempest or epidemic;

(iii) Acts of God or the public enemy;

(iv) riot, civil commotion or war;

(v) strikes, labour disputes or industrial action;

(vi) acts or regulations of any governmental or other agency;

(vii) suspension or delay of services at public registries by Third Party Data Providers;

(viii) changes in law; or

(ix) any other reason beyond Groundsure's reasonable control.

In the event that Groundsure is prevented from performing the Services (or any part thereof) in accordance with this clause 12.6 for a period of not less than 30 days then Groundsure shall be entitled to terminate this Contract immediately on written notice to the Client.

12.8 Any notice provided shall be in writing and shall be deemed to be properly given if delivered by hand or sent by first class post, facsimile or by email to the address, facsimile number or email address of the relevant party as may have been notified by each party to the other for such purpose or in the absence of such notification the last known address.

12.9 Such notice shall be deemed to have been received on the day of delivery if delivered by hand, facsimile or email (save to the extent such day is not a working day where it shall be deemed to have been delivered on the next working day) and on the second working day after the day of posting if sent by first class post.

12.10 The Contract constitutes the entire agreement between the parties and shall supersede all previous arrangements between the parties relating to the subject matter hereof.

12.11 Each of the provisions of the Contract is severable and distinct from the others and if one or more provisions is or should become invalid, illegal or unenforceable, the validity and enforceability of the remaining provisions shall not in any way be tainted or impaired.

12.12 This Contract shall be governed by and construed in accordance with English law and any proceedings arising out of or connected with this Contract shall be subject to the exclusive jurisdiction of the English courts.

12.13 Groundsure is an executive member of the Council of Property Search Organisation (CoPSO) and has signed up to the Search Code administered by the Property Codes Compliance Board (PCCB). All Risk Screening Reports shall be supplied in accordance with the provisions of the Search Code.

12.14 If the Client or Beneficiary has a complaint about the Services, written notice should be given to the Compliance Officer at Groundsure who will respond in a timely manner. In the event you are not satisfied with Groundsure's complaints handling process or you are unable to resolve the complaint, at your discretion you may refer the complaint to The Property Ombudsman Scheme at the following URL/email: website [www.tpos.co.uk](http://www.tpos.co.uk) or email: [admin@tpos.co.uk](mailto:admin@tpos.co.uk)

12.15 The Client agrees that it shall, and shall procure that each Beneficiary shall, treat in confidence all Confidential Information and shall not, and shall procure that each Beneficiary shall not (i) disclose any Confidential Information to any third party other than in accordance with the terms of this Contract; and (ii) use Confidential Information for a purpose other than the exercise of its rights and obligations under this Contract. Subject to clause 6.6, nothing shall prevent the Client or any Beneficiary from disclosing Confidential Information to the extent required by law. © Groundsure Limited June 2013

**Appendix 5                      -                      Trial Hole Records**

# TRIAL PIT RECORD

						Trial Pit No: <b>TP1</b>			
Date : 25/11/15						Site: Former Seiont Brickworks			
Excavator : JCB Excavator						e0756			
Pit size : 2.50 x 0.60      Depth : 2.50m						Elev (m aOD):			
TRIAL PIT RECORD						SAMPLE RECORD			
Pit No	Depth From (m)	Depth To (m)	Interval (m)	Strata Description	Depth	Type B U D W	Depth (m)	Number	
TP1	0.00	0.30	0.30	Made Ground - (Medium dense) reddish brown silty gravel and cobbles of crushed brick	0.5	D	0.80		
	0.30	0.50	0.20	Made Ground - (Dense) light brown silty fine to coarse SAND and GRAVEL					
	0.50	0.70	0.20	Made Ground - (Medium dense) reddish brown silty gravel and cobbles of crushed brick					
	0.70	1.10	0.30	Made Ground - Firm light brown very gravely very sandy silty CLAY	1.0				
	1.10	1.70	0.60	Made Ground - Stiff dark grey brown very gravely very sandy CLAY with many brick cobbles	1.5				
	1.70	2.50+	0.70+	Soft to firm light brown gravely silty CLAY with occasional cobbles and boulders	2.0				
					2.5				
<b>Remarks</b> Sidewalls : Pit sides stable and vertical Groundwater : None In-situ testing : Vapour - pid at 0.50-0ppm, 2.50-0ppm Contaminants : None observed Services : None									



# TRIAL PIT RECORD

						Trial Pit No: <b>TP2</b>		
Date : 25/11/15						Site: Former Seiont Brickworks		
Excavator : JCB Excavator						e0756		
Pit size : 2.50 x 0.60      Depth : 3.20m						Elev (m aOD):		
TRIAL PIT RECORD						SAMPLE RECORD		
Pit No	Depth From (m)	Depth To (m)	Interval (m)	Strata Description	Depth	Type B U D W	Depth (m)	Number
TP2	0.00	0.30	0.30	Made Ground - Crushed slate and brick				
	0.30	1.50	1.20	Made Ground - Stiff medium grey brown to brown very gravely sandy silty CLAY with some brick cobbles. Gravel is subangular fine to coarse siltstone and brick	0.5	D	0.50	
					1.0			
	1.50	1.80	0.30	Made Ground - Firm to stiff to stiff light brown and light blue grey gravely silty CLAY with many brick cobbles. Gravel is subangular brick	1.5			
	1.80	3.00	1.20	Made Ground - Firm to stiff light grey brown and light grey and light brown gravel sandy silty CLAY with occasional brick. Gravel is fine to coarse subangular siltstone and brick	2.0			
					2.5			
					3.0			
	3.00	3.20	0.2	Soft to firm light brown gravely silty CLAY with occasional cobbles and boulders				
<b>Remarks</b> Sidewalls : Pit sides stable and vertical Groundwater : None In-situ testing : Vapour - pid at 0.50-0ppm, 2.00-0ppm Contaminants : None observed Services : None								



# TRIAL PIT RECORD

Trial Pit No: **TP3**

Date : 25/11/15  
 Excavator : JCB Excavator  
 Pit size : 2.50 x 0.60      Depth : 2.80m  
 Site: Former Seiont Brickworks  
 e0756  
 Elev (m aOD):

TRIAL PIT RECORD						SAMPLE RECORD			
Pit No	Depth From (m)	Depth To (m)	Interval (m)	Strata Description	Depth	Type B U D W	Depth (m)	Number	
TP3	0.00	0.40	0.40	Made Ground - Crushed slate and brick					
	0.40	2.50	2.10	Made Ground - Stiff medium grey brown to brown very gravely sandy silty CLAY with some brick cobbles. Gravel is subangular fine to coarse siltstone and brick	0.5	D	0.50		
					1.0				
					1.5				
					2.0				
					2.5				
	2.50	2.80+	0.30+	Boulders in a soft brown clay matrix					
		2.80			3.0				

**Remarks**  
 Sidewalls : Pit sides stable and vertical  
 Groundwater : None  
 In-situ testing : Vapour - pid at 0.50-0ppm  
 Contaminants : None observed  
 Services : None





# TRIAL PIT RECORD

						Trial Pit No: <b>TP4</b>		
Date : 25/11/15						Site: Former Seiont Brickworks		
Excavator : JCB Excavator						e0756		
Pit size : 2.50 x 0.60      Depth : 2.80m						Elev (m aOD):		
TRIAL PIT RECORD						SAMPLE RECORD		
Pit No	Depth From (m)	Depth To (m)	Interval (m)	Strata Description	Depth	Type B U D W	Depth (m)	Number
TP4	0.00	0.40	0.40	Made Ground - Crushed slate and brick with many brick cobbles				
	0.40	2.50	2.10	Made Ground - Stiff medium grey brown to brown very gravely sandy silty CLAY with some brick cobbles. Gravel is subangular fine to coarse siltstone and brick	0.5	D	0.75	
					1.0			
					1.5			
	1.50	2.80+	1.30+	(Medium dense) medium grey silty fine to coarse gravel of siltstone and occasional siltstone cobbles	2.0			
					2.5			
		2.80			3.0			
<b>Remarks</b> Sidewalls : Pit sides stable and vertical Groundwater : None In-situ testing : Vapour - pid at 0.75 - 0ppm Contaminants : None observed Services : None								





# TRIAL PIT RECORD

						Trial Pit No: <b>TP5</b>		
Date : 25/11/15						Site: Former Seiont Brickworks		
Excavator : JCB Excavator						e0756		
Pit size : 2.50 x 0.60      Depth : 2.30m						Elev (m aOD):		
TRIAL PIT RECORD						SAMPLE RECORD		
Pit No	Depth From (m)	Depth To (m)	Interval (m)	Strata Description	Depth	Type B U D W	Depth (m)	Number
TP5	0.00	0.20	0.20	Concrete		D	1.00	
	0.20	2.30	2.10	Made Ground - Bricks, crushed brick, cobbles of concrete with occasional metal bar, plastic pipe and occasional wooden post	0.5			
					1.0			
					1.5			
					2.0			
					2.5			
					3.0			
				Concrete base at 2.30				
<b>Remarks</b> Sidewalls : Pit sides collapsing Groundwater : None In-situ testing : Vapour - pid at 1.00 - 5ppm Contaminants : None observed Services : None								



# TRIAL PIT RECORD

						Trial Pit No: <b>TP6</b>			
Date : 25/11/15						Site: Former Seiont Brickworks			
Excavator : JCB Excavator						e0756			
Pit size : 2.50 x 0.60						Depth : 1.50m			
Elev (m aOD):									
<b>TRIAL PIT RECORD</b>						<b>SAMPLE RECORD</b>			
Pit No	Depth From (m)	Depth To (m)	Interval (m)	Strata Description	Depth	Type B U D W	Depth (m)	Number	
TP6	0.00	1.50	1.50	Made Ground - Concrete cobbles and boulders with many brick cobbles in a dark grey silty sand and gravel of crushed brick and concrete with occassional wire, rubber belt and rebar	0.5	D	0.50		
		1.50	Concrete Slab	1.5					
				2.0					
				2.5					
				3.0					

Remarks

Sidewalls :

Groundwater :

In-situ testing :

Contaminants :

Services :

Pit sides collapsing

Water standing at 0.50m

None observed

None



# TRIAL PIT RECORD

						Trial Pit No: <b>TP7</b>		
Date : 25/11/15						Site: Former Seiont Brickworks		
Excavator : JCB Excavator						e0756		
Pit size : 2.50 x 0.60      Depth : 3.00m						Elev (m aOD):		
TRIAL PIT RECORD						SAMPLE RECORD		
Pit No	Depth From (m)	Depth To (m)	Interval (m)	Strata Description	Depth	Type B U D W	Depth (m)	Number
TP7	0.00	0.60	0.60	Made Ground - Soft light grey sandy CLAY with many cobbles of brick	0.5	D	0.75	
				Made Ground - (Dense) orangish red and some medium grey clayey sandy coarse GRAVEL of crushed brick with very occasional rubber sheet and plastic pipe	1.0			
	0.60	3.00+	1.40+		1.5			
					2.0			
					2.5			
					3.0			
	3.00							
<b>Remarks</b> Sidewalls : Pit sides stable and vertical Groundwater : Slight water inflow at 2.30m In-situ testing : Vapour - pid at 0.75 - 0ppm Contaminants : None observed Services : None								



# TRIAL PIT RECORD

						Trial Pit No: <b>TP8</b>			
Date : 25/11/15						Site: Former Seiont Brickworks			
Excavator : JCB Excavator						e0756			
Pit size : 2.50 x 0.60      Depth : 3.20m						Elev (m aOD):			
<b>TRIAL PIT RECORD</b>						<b>SAMPLE RECORD</b>			
Pit No	Depth From (m)	Depth To (m)	Interval (m)	Strata Description	Depth	Type B U D W	Depth (m)	Number	
TP8	0.00	2.00	2.00	Made Ground - Soft light grey sandy CLAY with many cobbles of brick	0.5	D	1.00		
					1.0				
					1.5				
	2.00	3.00	1.00	Made Ground - (Loose) reddish brown and some medium to dark grey clayey sandy coarse GRAVEL of crushed brick with some ash and clinker	2.0				
					2.5				
	3.00	3.20+	0.20+	Firm light grey brown very gravely sandy CLAY with cobbles	3.0				
<b>Remarks</b> Sidewalls : Pit sides stable and vertical Groundwater : None In-situ testing : Vapour - pid at 1.00 - 0ppm Contaminants : None observed Services : None									





# TRIAL PIT RECORD

						Trial Pit No: <b>TP9</b>		
Date : 25/11/15						Site: Former Seiont Brickworks		
Excavator : JCB Excavator						e0756		
Pit size : 2.50 x 0.60      Depth : 2.00m						Elev (m aOD):		
TRIAL PIT RECORD						SAMPLE RECORD		
Pit No	Depth From (m)	Depth To (m)	Interval (m)	Strata Description	Depth	Type B U D W	Depth (m)	Number
TP9	0.00	0.40	0.40	Made Ground - Bricks in fine to coarse sand and gravel of crushed brick				
	0.40	1.30	0.90	Made Ground - Medium dense red and black and dark grey very silty fine to coarse SAND and GRAVEL of crushed brick with some gravel of ash, tarmac and very occasional wood sleeper	0.5	D	0.75	
					1.0			
					1.5			
	1.30	2.00+	0.70+	Soft to firm light brown to light grey brown slightly gravely silty CLAY	2.0			
					2.5			
					3.0			
<b>Remarks</b> Sidewalls : Pit sides stable and vertical Groundwater : None In-situ testing : Vapour - pid at 0.75 - 0ppm Contaminants : None observed Services : None								



# **TRIAL PIT RECORD**

Trial Pit No: **TP10**

Date : 25/11/15  
 Excavator : JCB Excavator  
 Pit size : 2.50 x 0.60      Depth : 2.00m  
 Site: Former Seiont Brickworks  
 e0756  
 Elev (m aOD):

TRIAL PIT RECORD						SAMPLE RECORD			
Pit No	Depth From (m)	Depth To (m)	Interval (m)	Strata Description	Depth	Type B U D W	Depth (m)	Number	
TP10	0.00	0.40	0.40	Made Ground - Bricks in fine to coarse sand and gravel of crushed brick					
	0.40	1.70	1.30	Made Ground - Medium dense red and black and dark grey very silty fine to coarse SAND and GRAVEL of crushed brick	0.5				
				many brick cobbles from 1.30	1.0	D	1.00		
	1.70	2.30+	0.60+	Soft to firm light brown to light grey brown slightly gravelly silty CLAY	1.5				
		2.30			2.0				
					2.5				
					3.0				

**Remarks**  
 Sidewalls : Pit sides stable and vertical  
 Groundwater : None  
 In-situ testing : Vapour - pid at 1.00 - 0ppm  
 Contaminants : None observed  
 Services : None



# TRIAL PIT RECORD

						Trial Pit No: <b>TP11</b>			
Date : 25/11/15						Site: Former Seiont Brickworks			
Excavator : JCB Excavator						e0756			
Pit size : 2.50 x 0.60						Depth : 2.00m			
Elev (m aOD):									
TRIAL PIT RECORD						SAMPLE RECORD			
Pit No	Depth From (m)	Depth To (m)	Interval (m)	Strata Description	Depth	Type B U D W	Depth (m)	Number	
TP11	0.00	0.15	0.15	Crushed brick	0.5 1.0 1.5 2.0 2.5 3.0	D	0.75		
	0.15	0.40	0.25	Made Ground - Dark grey cobbles and slate gravel in a sandy clay					
	0.40	2.30+	1.90+	Dense light brown and light grey brown silty sandy fine to coarse GRAVEL and many cobbles and occasional boulder. Gravel is subrounded quartz, quartzite and rhyolite					
		2.30		Large boulders					
<b>Remarks</b> Sidewalls : Pit sides some collapse in gravel Groundwater : None In-situ testing : Vapour - pid at 0.75 - 0ppm Contaminants : None observed Services : None									







## Certificate of Analysis

Certificate Number 15-52063-1

14-Dec-15

*Client* EGEO Solutions Ltd  
Oak House  
Groes Lwyd  
Abergele  
LL22 7SU

*Our Reference* 15-52063-1

*Client Reference* SEIONT

*Order No* 0756P4

*Contract Title* SEIONT QUARRY

*Description* 11 Soil samples.

*Date Received* 01-Dec-15

*Date Started* 01-Dec-15

*Date Completed* 14-Dec-15

*Test Procedures* Identified by prefix DETSn (details on request).

*Notes* **This report supersedes 15-52063, extra testing.**

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

*Approved By*

A handwritten signature in black ink, appearing to read 'Rob Brown'.

Rob Brown  
Business Manager



# Summary of Chemical Analysis

## Soil Samples

Our Ref 15-52063-1

Client Ref SEIONT

Contract Title SEIONT QUARRY

Lab No	908842	908843	908844	908845	908846	908847	908848
Sample ID	TP1	TP2	TP3	TP4	TP5	TP6	TP7
Depth	0.80	0.50	0.50	0.75	1.00	0.50	0.75
Other ID							
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sampling Date	25/11/15	25/11/15	25/11/15	25/11/15	25/11/15	25/11/15	25/11/15
Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units							
Asbestos Quantification OHR	DETSO 1102	0						Y	Y	
<b>Metals</b>										
Arsenic	DETSO 2301#	0.2	mg/kg	32	22	32	19	20		24
Cadmium	DETSO 2301#	0.1	mg/kg	0.4	0.3	0.2	0.3	0.6		0.3
Chromium	DETSO 2301#	0.15	mg/kg	37	27	27	30	60		27
Copper	DETSO 2301#	0.2	mg/kg	29	29	21	30	110		41
Lead	DETSO 2301#	0.3	mg/kg	56	30	22	28	16		27
Mercury	DETSO 2325#	0.05	mg/kg	0.13	0.06	< 0.05	< 0.05	< 0.05		< 0.05
Nickel	DETSO 2301#	1	mg/kg	23	26	27	30	52		33
Selenium	DETSO 2301#	0.5	mg/kg	2.5	0.9	< 0.5	1.7	< 0.5		0.9
Zinc	DETSO 2301#	1	mg/kg	110	87	83	100	67		190
<b>Inorganics</b>										
pH	DETSO 2008#			6.9	6.9	7.5	7.5	9.4		8.1
Cyanide Total	DETSO 2130#	0.1	mg/kg	0.7	0.3	< 0.1	< 0.1	< 0.1		0.3
Sulphide	DETSO 2024#	10	mg/kg	12	12	< 10	< 10	< 10		< 10
Total Sulphur as S	DETSO 2320	0.01	%	0.06	0.02	0.01	0.01	0.14		0.06
<b>Petroleum Hydrocarbons</b>										
Aliphatic C5-C6	DETSO 3321*	0.01	mg/kg		< 0.01					< 0.01
Aliphatic C6-C8	DETSO 3321*	0.01	mg/kg		< 0.01					< 0.01
Aliphatic C8-C10	DETSO 3321*	0.01	mg/kg		< 0.01					< 0.01
Aliphatic C10-C12	DETSO 3072#	1.5	mg/kg		< 1.5					< 1.5
Aliphatic C12-C16	DETSO 3072#	1.2	mg/kg		< 1.2					< 1.2
Aliphatic C16-C21	DETSO 3072#	1.5	mg/kg		< 1.5					45
Aliphatic C21-C35	DETSO 3072#	3.4	mg/kg		< 3.4					880
Aliphatic C5-C35	DETSO 3072*	10	mg/kg		< 10					920
Aromatic C5-C7	DETSO 3321*	0.01	mg/kg		< 0.01					< 0.01
Aromatic C7-C8	DETSO 3321*	0.01	mg/kg		< 0.01					< 0.01
Aromatic C8-C10	DETSO 3321*	0.01	mg/kg		< 0.01					< 0.01
Aromatic C10-C12	DETSO 3072#	0.9	mg/kg		< 0.9					< 0.9
Aromatic C12-C16	DETSO 3072#	0.5	mg/kg		< 0.5					< 0.5
Aromatic C16-C21	DETSO 3072#	0.6	mg/kg		< 0.6					19
Aromatic C21-C35	DETSO 3072#	1.4	mg/kg		< 1.4					410
Aromatic C5-C35	DETSO 3072*	10	mg/kg		< 10					430
TPH Ali/Aro	DETSO 3072*	10	mg/kg		< 10					1400

# Summary of Chemical Analysis

## Soil Samples

Our Ref 15-52063-1

Client Ref SEIONT

Contract Title SEIONT QUARRY

Lab No	908842	908843	908844	908845	908846	908847	908848
Sample ID	TP1	TP2	TP3	TP4	TP5	TP6	TP7
Depth	0.80	0.50	0.50	0.75	1.00	0.50	0.75
Other ID							
Sample Type	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
Sampling Date	25/11/15	25/11/15	25/11/15	25/11/15	25/11/15	25/11/15	25/11/15
Sampling Time	n/s	n/s	n/s	n/s	n/s	n/s	n/s

Test	Method	LOD	Units							
<b>PAHs</b>										
Naphthalene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03		< 0.03
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03		< 0.03
Acenaphthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03		< 0.03
Fluorene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03		< 0.03
Phenanthrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03		< 0.03
Anthracene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03		< 0.03
Fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03		< 0.03
Pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03		< 0.03
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03		< 0.03
Chrysene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03		< 0.03
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03		< 0.03
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03		< 0.03
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03		< 0.03
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03		< 0.03
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03		< 0.03
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	< 0.03	< 0.03		< 0.03
Total PAH - USEPA 16	DETSC 3303	0.1	mg/kg	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10		< 0.10
<b>Phenols</b>										
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg	0.6	< 0.3	< 0.3	< 0.3	< 0.3		3.0

# Summary of Chemical Analysis

## Soil Samples

Our Ref 15-52063-1

Client Ref SEIONT

Contract Title SEIONT QUARRY

Lab No	908849	908850	908851	908852
Sample ID	TP8	TP9	TP10	TP11
Depth	1.00	0.75	1.00	0.75
Other ID				
Sample Type	SOIL	SOIL	SOIL	SOIL
Sampling Date	25/11/15	25/11/15	25/11/15	25/11/15
Sampling Time	n/s	n/s	n/s	n/s

Test	Method	LOD	Units				
Asbestos Quantification OHR	DETSC 1102	0		Y			Y
<b>Metals</b>							
Arsenic	DETSC 2301#	0.2	mg/kg	37	45	110	
Cadmium	DETSC 2301#	0.1	mg/kg	0.4	0.4	1.5	
Chromium	DETSC 2301#	0.15	mg/kg	41	25	24	
Copper	DETSC 2301#	0.2	mg/kg	42	52	120	
Lead	DETSC 2301#	0.3	mg/kg	38	51	92	
Mercury	DETSC 2325#	0.05	mg/kg	< 0.05	< 0.05	< 0.05	
Nickel	DETSC 2301#	1	mg/kg	48	41	88	
Selenium	DETSC 2301#	0.5	mg/kg	2.2	1.9	1.4	
Zinc	DETSC 2301#	1	mg/kg	160	110	180	
<b>Inorganics</b>							
pH	DETSC 2008#			7.7	7.8	6.6	
Cyanide Total	DETSC 2130#	0.1	mg/kg	0.2	< 0.1	0.6	
Sulphide	DETSC 2024#	10	mg/kg	< 10	< 10	20	
Total Sulphur as S	DETSC 2320	0.01	%	0.09	0.09	0.04	
<b>Petroleum Hydrocarbons</b>							
Aliphatic C5-C6	DETSC 3321*	0.01	mg/kg		0.07		
Aliphatic C6-C8	DETSC 3321*	0.01	mg/kg		0.05		
Aliphatic C8-C10	DETSC 3321*	0.01	mg/kg		0.23		
Aliphatic C10-C12	DETSC 3072#	1.5	mg/kg		5.4		
Aliphatic C12-C16	DETSC 3072#	1.2	mg/kg		56		
Aliphatic C16-C21	DETSC 3072#	1.5	mg/kg		64		
Aliphatic C21-C35	DETSC 3072#	3.4	mg/kg		74		
Aliphatic C5-C35	DETSC 3072*	10	mg/kg		200		
Aromatic C5-C7	DETSC 3321*	0.01	mg/kg		0.01		
Aromatic C7-C8	DETSC 3321*	0.01	mg/kg		< 0.01		
Aromatic C8-C10	DETSC 3321*	0.01	mg/kg		0.08		
Aromatic C10-C12	DETSC 3072#	0.9	mg/kg		< 0.9		
Aromatic C12-C16	DETSC 3072#	0.5	mg/kg		20		
Aromatic C16-C21	DETSC 3072#	0.6	mg/kg		39		
Aromatic C21-C35	DETSC 3072#	1.4	mg/kg		79		
Aromatic C5-C35	DETSC 3072*	10	mg/kg		140		
TPH Ali/Aro	DETSC 3072*	10	mg/kg		340		

# Summary of Chemical Analysis

## Soil Samples

Our Ref 15-52063-1

Client Ref SEIONT

Contract Title SEIONT QUARRY

Lab No	908849	908850	908851	908852
Sample ID	TP8	TP9	TP10	TP11
Depth	1.00	0.75	1.00	0.75
Other ID				
Sample Type	SOIL	SOIL	SOIL	SOIL
Sampling Date	25/11/15	25/11/15	25/11/15	25/11/15
Sampling Time	n/s	n/s	n/s	n/s

Test	Method	LOD	Units				
<b>PAHs</b>							
Naphthalene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	
Acenaphthylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	
Acenaphthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	
Fluorene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	
Phenanthrene	DETSC 3303#	0.03	mg/kg	< 0.03	0.05	< 0.03	
Anthracene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	
Fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	0.07	< 0.03	
Pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	0.07	< 0.03	
Benzo(a)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	
Chrysene	DETSC 3303	0.03	mg/kg	< 0.03	< 0.03	< 0.03	
Benzo(b)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	
Benzo(k)fluoranthene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	
Benzo(a)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	
Indeno(1,2,3-c,d)pyrene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	
Dibenzo(a,h)anthracene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	
Benzo(g,h,i)perylene	DETSC 3303#	0.03	mg/kg	< 0.03	< 0.03	< 0.03	
Total PAH - USEPA 16	DETSC 3303	0.1	mg/kg	< 0.10	0.19	< 0.10	
<b>Phenols</b>							
Phenol - Monohydric	DETSC 2130#	0.3	mg/kg	< 0.3	< 0.3	< 0.3	

## Summary of Asbestos Analysis

### Soil Samples

Our Ref 15-52063-1  
 Client Ref SEIONT  
 Contract Title SEIONT QUARRY

Lab No	Sample ID	Material Type	Result	Comment*	Analyst
908842	TP1 0.80	SOIL	NAD	none	Andrew Little
908843	TP2 0.50	SOIL	NAD	none	Andrew Little
908844	TP3 0.50	SOIL	NAD	none	Andrew Little
908845	TP4 0.75	SOIL	NAD	none	Andrew Little
908846	TP5 1.00	SOIL	Chrysotile	Bundles of Chrysotile fibres present	Andrew Little
908847	TP6 0.50	SOIL	Chrysotile	Clumps of Chrysotile fibres present	Andrew Little
908848	TP7 0.75	SOIL	NAD	none	Andrew Little
908849	TP8 1.00	SOIL	Chrysotile	Bundle of Chrysotile fibres present	Andrew Little
908850	TP9 0.75	SOIL	NAD	none	Andrew Little
908851	TP10 1.00	SOIL	NAD	none	Andrew Little
908852	TP11 0.75	SOIL	Chrysotile	Bundle of Chrysotile fibres present	Andrew Little

Crocidolite = Blue Asbestos, Amosite = Brown Asbestos, Chrysotile = White Asbestos. Anthophyllite, Actinolite and Tremolite are other forms of Asbestos. Samples are analysed by DETSC 1101 using polarised light microscopy in accordance with HSG248 and documented in-house methods. NAD = No Asbestos Detected. Where a sample is NAD, the result is based on analysis of at least 2 sub-samples and should be taken to mean 'no asbestos detected in sample'. Key: \* -not included in laboratory scope of accreditation.



# Summary of Asbestos Quantification Analysis Soil Samples

Our Ref 15-52063-1

Client Ref SEIONT

Contract Title SEIONT QUARRY

Lab No	908846	908847	908849	908852
Sample ID	TP5	TP6	TP8	TP11
Depth	1.00	0.50	1.00	0.75
Other ID				
Sample Type	SOIL	SOIL	SOIL	SOIL
Sampling Date	25/11/15	25/11/15	25/11/15	25/11/15
Sampling Time				

Test	Method	Units				
Total Mass% Asbestos (a+b+c)	DETSC 1102	Mass %	0.006	0.033	0.006	0.006
Gravimetric Quantification (a)	DETSC 1102	Mass %	na	na	na	na
Detailed Gravimetric Quantification (b)	DETSC 1102	Mass %	0.006	0.033	0.006	0.006
Quantification by PCOM (c)	DETSC 1102	Mass %	na	na	na	na
Potentially Respirable Fibres (d)	DETSC 1102	Fibres/g	na	na	na	na
Breakdown of Gravimetric Analysis (a)						
Mass of Sample		g	32.61	225.58	37.10	229.09
ACMs present*		type				
Mass of ACM in sample		g				
% ACM by mass		%				
% asbestos in ACM		%				
% asbestos in sample		%				
Breakdown of Detailed Gravimetric Analysis (b)						
% Amphibole bundles in sample		Mass %	na	na	na	na
% Serpentine bundles in sample		Mass %	0.006	0.033	0.006	0.006
Breakdown of PCOM Analysis (c)						
% Amphibole fibres in sample		Mass %	na	na	na	na
% Serpentine fibres in sample		Mass %	na	na	na	na
Breakdown of Potentially Respirable Fibre Analysis (d)						
Amphibole fibres		Fibres/g	na	na	na	na
Chrysotile fibres		Fibres/g	na	na	na	na

\* Denotes test or material description outside of UKAS accreditation.  
% asbestos in Asbestos Containing Materials (ACMs) is determined by  
by reference to HSG 264.  
Recommended sample size for quantification is approximately 1kg  
# denotes deviating sample

## Information in Support of the Analytical Results

Our Ref 15-52063-1  
Client Ref SEIONT  
Contract SEIONT QUARRY

### Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
908842	TP1 0.80 SOIL	25/11/15	GJ 250ml		
908843	TP2 0.50 SOIL	25/11/15	GJ 250ml		
908844	TP3 0.50 SOIL	25/11/15	GJ 250ml		
908845	TP4 0.75 SOIL	25/11/15	GJ 250ml		
908846	TP5 1.00 SOIL	25/11/15	GJ 250ml, PT 1L		
908847	TP6 0.50 SOIL	25/11/15	GJ 250ml, PT 1L		
908848	TP7 0.75 SOIL	25/11/15	GJ 250ml		
908849	TP8 1.00 SOIL	25/11/15	GJ 250ml, PT 1L		
908850	TP9 0.75 SOIL	25/11/15	GJ 250ml, PT 1L		
908851	TP10 1.00 SOIL	25/11/15	GJ 250ml, PT 1L		
908852	TP11 0.75 SOIL	25/11/15	GJ 250ml, PT 1L		

Key: G-Glass J-Jar P-Plastic T-Tub

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time and/or inappropriate containers are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

### Soil Analysis Notes

Inorganic soil analysis was carried out on a dried sample, crushed to pass a 425µm sieve, in accordance with BS1377.

Organic soil analysis was carried out on an 'as received' sample. Organics results are corrected for moisture and expressed on a dry weight basis.

The Loss on Drying, used to express organics analysis on an air dried basis, is carried out at a temperature of 28°C +/-2°C.

### Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-

Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months



## Certificate of Analysis

Certificate Number 15-52321

09-Dec-15

*Client* EGEO Solutions Ltd  
Oak House  
Groes Lwyd  
Abergele  
LL22 7SU

*Our Reference* 15-52321

*Client Reference* (not supplied)

*Order No* 0756P5

*Contract Title* SEION7 QUARRY

*Description* 2 Water samples.

*Date Received* 03-Dec-15

*Date Started* 03-Dec-15

*Date Completed* 09-Dec-15

*Test Procedures* Identified by prefix DETSn (details on request).

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

*Approved By*

A handwritten signature in black ink, appearing to read 'Rob Brown'.

Rob Brown  
Business Manager



## Summary of Chemical Analysis

### Water Samples

Our Ref 15-52321

Client Ref

Contract Title SEION7 QUARRY

Lab No	910112	910113
Sample ID	SW1	SW2
Depth		
Other ID		
Sample Type	WATER	WATER
Sampling Date	01/12/15	01/12/15
Sampling Time	n/s	n/s

Test	Method	LOD	Units		
<b>Metals</b>					
Arsenic, Dissolved	DETSC 2306	0.16	ug/l	0.22	< 0.16
Cadmium, Dissolved	DETSC 2306	0.03	ug/l	< 0.03	< 0.03
Chromium, Dissolved	DETSC 2306	0.25	ug/l	7.2	7.9
Copper, Dissolved	DETSC 2306	0.4	ug/l	5.4	2.5
Lead, Dissolved	DETSC 2306	0.09	ug/l	0.50	0.41
Mercury, Dissolved	DETSC 2306	0.01	ug/l	< 0.01	< 0.01
Nickel, Dissolved	DETSC 2306	0.5	ug/l	1.1	0.7
Selenium, Dissolved	DETSC 2306	0.25	ug/l	< 0.25	< 0.25
Zinc, Dissolved	DETSC 2306	1.25	ug/l	9.94	7.64
<b>Inorganics</b>					
pH	DETSC 2008			7.7	7.8
Cyanide Total	DETSC 2130	40	ug/l	< 40	< 40
Sulphate as SO4	DETSC 2055	0.1	mg/l	6.9	62
<b>PAHs</b>					
PAH	DETS 074*	0.2	ug/l	< 0.20	< 0.20

## Information in Support of the Analytical Results

Our Ref 15-52321  
Client Ref  
Contract SEION7 QUARRY

### Containers Received & Deviating Samples

Lab No	Sample ID	Date Sampled	Containers Received	Holding time exceeded for tests	Inappropriate container for tests
910112	SW1 WATER	01/12/15	GB to 500ml, PB 500ml		
910113	SW2 WATER	01/12/15	GB to 500ml, PB 500ml		

Key: G-Glass P-Plastic B-Bottle

DETS cannot be held responsible for the integrity of samples received whereby the laboratory did not undertake the sampling. In this instance samples received may be deviating. Deviating Sample criteria are based on British and International standards and laboratory trials in conjunction with the UKAS note 'Guidance on Deviating Samples'. All samples received are listed above. However, those samples that have additional comments in relation to hold time and/or inappropriate containers are deviating due to the reasons stated. This means that the analysis is accredited where applicable, but results may be compromised due to sample deviations. If no sampled date (soils) or date+time (waters) has been supplied then samples are deviating. However, if you are able to supply a sampled date (and time for waters) this will prevent samples being reported as deviating where specific hold times are not exceeded and where the container supplied is suitable.

### Disposal

From the issue date of this test certificate, samples will be held for the following times prior to disposal :-  
Soils - 1 month, Liquids - 2 weeks, Asbestos (test portion) - 6 months