ATKINS

Member of the SNC-Lavalin Group

Rock Street Glynneath Flood Alleviation Scheme

Geotechnical Interpretive Report

Neath Port Talbot County Borough Council

5 February 2021

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1. Introduction

Atkins, part of the SNC-Lavalin Group, has been commissioned by Neath Port Talbot County Borough Council (NPTCBC) to produce a geotechnical and geo-environmental Ground Investigation Report for a proposed flood alleviation scheme in the vicinity of Rock Street, Glynneath, South Wales. The scheme involves improving the hydraulic conveyance capacity of the existing watercourse, with the installation of approximately 600m precast concrete box culvert, following the current alignment to the north. This consists of the following key components:

- Reprofiling the Gelliceibryn Brook and construction of a new inlet structure within the woodland at the top of Lancaster Close;
- Construction of a 60m length of box-culvert immediately downstream of the new inlet;
- Unblocking two existing 600mm diameter culverts, and;
- Construction of a 25m length of block/brick work wall.

This Ground Investigation Report (GIR) will inform the specification of a Ground Investigation (GI) and an interpretive geotechnical and geo-environmental report based on the findings of the ground investigation.
The area surrounding Glynneath, and Rock Street, have recurring flood issues, that according to local residents is attributed to the inlet on the Gelliceibryn Brook surcharging which then causes the local road network to become inundated with flood water, and, residential properties flooding internally [1].

The Outline Business Case (OBC) identified that in the current situation, 41 residential properties are at risk of flooding in the 50% Annual Exceedance Probability (AEP) flood event and a further 32 properties are at flood risk in the 1% AEP flood event [1].

From the OBC, a preferred option was identified which comprised: reprofile and deepen over 40m of the Gelliceibryn Brook to contain river flows, upgrading of a 60m length of existing culvert with a new box culvert with a new inlet structure; unblocking of twin 0.6m diameter culverts and the design of a new 1m high, 25m long flood wall along the length of the open channel downstream of the twin 0.6m diameter culverts [1].

2. Sources of Information

The sources of information relevant to the Neath Port Talbot flood alleviation scheme (Rock Street) are presented below in Table 2-1. These sources have been used to provide information on the site history and anticipated ground conditions, as well as to assess the likely geotechnical and geo-environmental risks for the design and construction phases of the project.

Table 2-1 – Sources of Information.

Topic	Type	Reference and Additional Comments	Author / Publisher
Mapping / Aerial Photography	Topography	Freely available mapping	
	Historical Maps	Envirocheck Report **[2]**	Landmark Information Group
	Aerial Photographs	Envirocheck Report **[2]**	Landmark Information Group
	Online Database	Atkins Ground Engineering Project Atlas	Atkins
	UXO	Zetica Unexploded Bomb (UXO) risk maps **[3]**	Zetica
Geology	Maps	British Geological Survey (BGS) Geological Map Great Britain. Sheet 231 (Merthyr Tydfil) Solid and Drift Edition, 1:50 000 Series **[4]**	British Geological Survey (BGS)
		Envirocheck Report **[2]**	Landmark Information Group
	Online Database	GeoIndex **[5]**	British Geological Survey (BGS)
		The BGS Lexicon of Named Rocks **[6]**	
		Atkins Ground Engineering Project Atlas	Atkins
	Report	The Coal Authority Landmark Screening Report Reference_51002180467001 **[7]**	The Coal Authority
		Envirocheck Report **[2]**	Landmark Information Group
Land Contamination, Hydrogeology, Hydrology		Envirocheck Report **[2]**	Landmark Information Group
Ground Investigation	Report	2020 Ground Investigation Factual Report **[8]**	Quantum Geotech

3. Site Description

3.1. Introduction

The site is located on Lancaster Close, Glynneath, approximately 25km northeast of Swansea and 40km northwest of Cardiff in south Wales, at approximate Ordnance Survey coordinates 287989E, 206562N. The study area extends in a southwest direction located within a residential area, as shown in Figure 3-1 below and in Figure 1 enclosed in Appendix A.1. The site is 500m north of the river Neath and approximately 500m west of the A4109. Directly north of the site is a heavily wooded area which extends up the northern valley side of Glynneath. The nearest postcode to the site is SA11 5EE.

The site is an at approximate elevation of 55m above Ordnance Datum (AOD). However, towards the northern site boundary, the elevation increases sharply to 70m AOD over a distance of 60m. The topography of the whole study area is more variable, with elevation decreasing in a southwest direction. The site is located in a river valley, bound by steep slopes to the north and south exceeding 100m AOD.

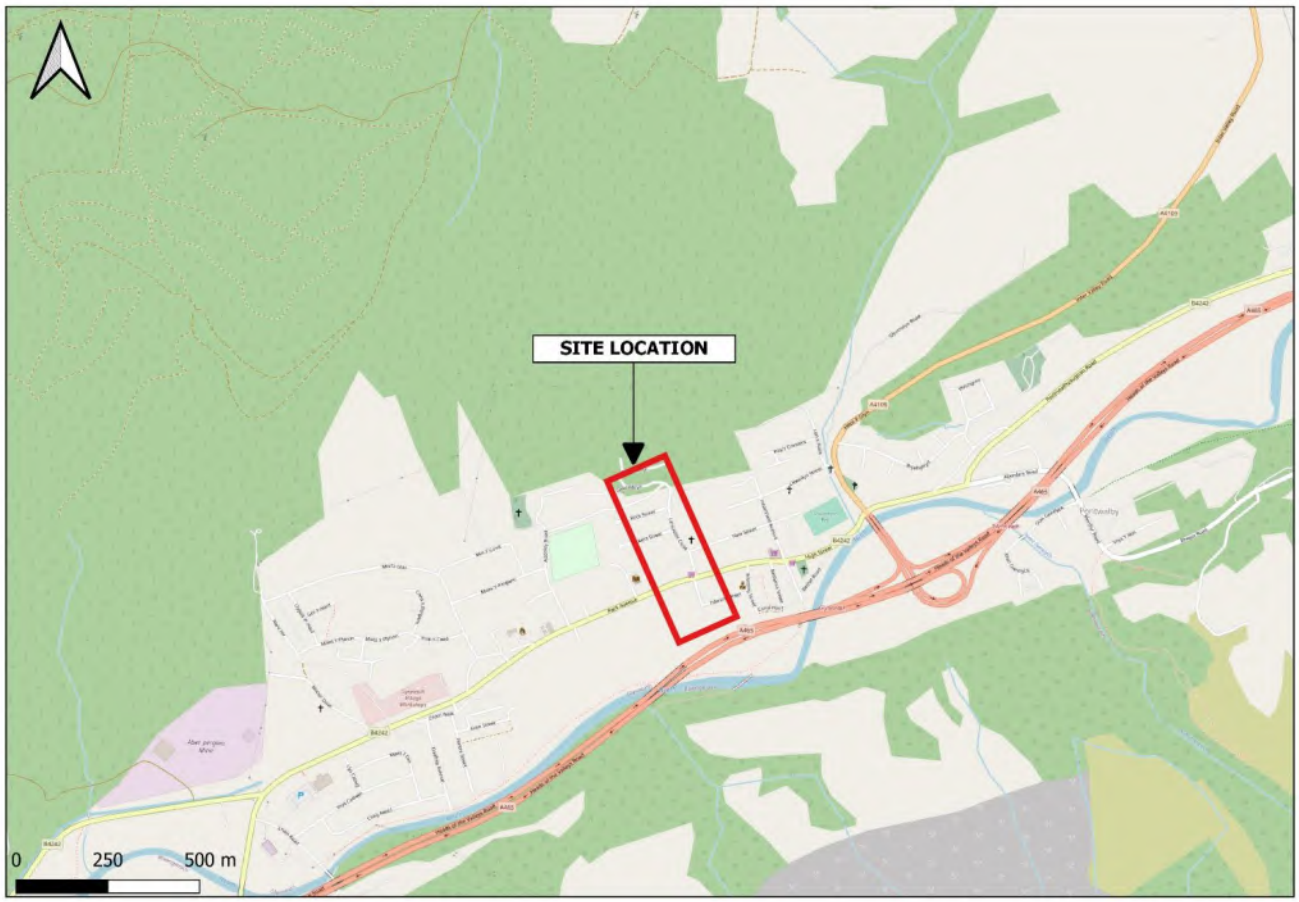


Figure 3-1 –Site Location (©OpenStreetMap Contributions).

3.2. Site History

Key notable land use developments of the site and surrounding area within a 500m radius, indicated on historical mapping provided in the Envirocheck Report, are summarised in Table 3-1 below. The full Envirocheck report can be found in Appendix D.

Table 3-1 – Historical development of the site and surrounding area.

Year	The Site	Development in the surrounding area (within 500 m of the site)	Map
1876 - 1877	The site is shown to comprise of mostly fields in the south. The northern half is within woodland with the presence of two waste tips from the local coal pits. A large building named Gelli Ceubren is located in the northwest of the site. A linear feature runs through the site from north-south, which could be a railway/access track.	The area north of the site is mostly covered with vegetation along with numerous embankments that vary in size from approximately 25m to 165m. Numerous old coal pits and levels are present to the north and northeast of the site. The nearest coal pits are located approximately 85m from the site and nearest coal level is approximately 25m from the site. Numerous buildings are present within 500m of the study area, most commonly to the east and south of the study area. Most of the buildings are located approximately 200m southeast of the study area.	OS 1:2500
1884	A well is located at the northern extent of the site.	A canal is present approximately 260m south of the site. An iron and brick works are present 300m to the southeast. A disused school is present, along with a burial ground, approximately 370m to the west of the site. A section of railway is present approximately 430m to the south of the study area in a west-east orientation.	OS 1:10560
1899	The building located in the northwest of the site appears to have decreased in size.	Additional buildings are present in the urban development approximately 200m southeast of the site.	OS 1:2500
1900	No significant changes.	The iron and brick works are now labelled as brick and cement works. A carbon works is now present approximately 310m south of the site.	OS 1:10560
1918 - 1919	A series of railway tracks are present in the east running down to the south from a Coal screening area. The supposed track on the 1876 to 1877 mapping is shown as an old tramway. A gravel pit is present adjacent to the tramway	Coal screens are present adjacent east of the site including a goods shed adjacent to the east. The urban development to the southeast of the site has significantly increased in size towards the site. This includes the construction of a school approximately 40m east of the site.	OS 1:2500

Year	The Site	Development in the surrounding area (within 500 m of the site)	Map
	tracks in the north-east of the site The building in the northwest of the site has increased in size.		
1921	No significant changes.	The brick and cement works are now shown to be disused. The carbon works are no longer present.	OS 1:10560
1938	Rock Street and Robert Street are present extending westwards out of the site. Four small buildings have appeared in the north.	The urban housing development is continuing to increase, extending northwards. A new road has appeared running northeast – southwest approximately 80m south of the site. Several buildings have appeared northwest and west of the site within 250m.	OS 1:10560
1953	The railway tracks have now been removed.	Railway track are no longer present in close proximity to the site, along with the goods shed. Allotments are located 35 m east of the site. A new railway siding is now present approximately 320m south of the site. A small urban housing development has appeared approximately 350m west of the site.	OS 1:10560
1962 - 1964	Five buildings have appeared to the north along with a church to the south. A swimming pool has also appeared to the southeast.	No significant changes.	OS 1:2500
1964	No significant changes.	The urban housing development approximately 350m west of the site has expanded westward.	OS 1:10000
1972 - 1981	Houses are now present east of Lancaster Close. An allotment is now present immediately east of the new houses. A coal yard is now labelled opposite Rock Street, north of the new houses. A large building has also appeared in the southeast.	The A465 has now been upgrade to a dual carriageway and moved 250m south of the site, running in a west – east direction. A fire station is present approximately 430m southeast of the site. The urban development east of the site continues to increase in size eastward.	OS 1:2500
1980	No significant changes.	The railway approximately 430m to the south is labelled as dismantled.	OS 1:10000

Year	The Site	Development in the surrounding area (within 500 m of the site)	Map
1983	No significant changes.	A large building has been constructed immediately west of the site in the southwest corner. The urban development west of the site has increased in size westwards.	OS 1:10000
1993	No significant changes.	No significant changes.	OS 1:2500
1995/1996	No significant changes.	Additional buildings are now present approximately 220m west of the site.	OS 1:2500
2000	No significant changes.	No significant changes.	Aerial imagery.
2000	No significant changes.	No significant changes.	OS 1:10000
2006	No significant changes.	No significant changes.	OS 1:10000
2019	No significant changes.	No significant changes.	OS 1:10000

3.3. Geology

The geology underlying the site is summarised below and is based on the BGS Sheet 231 Solid and Drift Editions,1:50 000 Series geological maps [4], the BGS GeoIndex [5], the Envirocheck report [2] and BGS Lexicon of Named Rocks [6]. The underlying solid geology of the site is presented in Figure 2, and the superficial geology in Figure 3 enclosed in Appendix B.

3.3.1. Made Ground

No Made Ground is indicated to be present from the available BGS mapping information. However, due to the industrial past of the site, significant made ground is expected.

3.3.2. Superficial Deposits

Published information from the BGS indicates that superficial deposits underlie the site and comprise Glacial Till (Devensian Till), Alluvium and Alluvial Fan Deposits.

The Devensian Till is described by the BGS as *'a variable lithology, usually sandy, silty clay with pebbles, but can contain gravel-rich, or laminated sand layers; varied colour and consistency*' [6]. The Alluvium is described as *'unconsolidated detrital material deposited by a river, or any body of running water, as a sorted, or semi-sorted, sediment consisting of clay, silt and gravel'* [6]. The Alluvial Fan Deposits are described as *'low, outspread, relatively flat to gently sloping masses of loose rock material'* [6].

3.3.3. Bedrock Geology

Published information from the BGS indicates that the site is underlain by the South Wales Lower Coal Measures Formation. This is described by the BGS as *'grey, coal bearing mudstones/siltstones, with seatearths and minor sandstones'* [6]. This formation is part of the South Wales Coal Measures Group and has a maximum thickness of 300m in the Swansea area [6].

3.3.4. Structural Geology

The regional dip of the area is 35° to the northwest [4]. A coal seam crops immediately north of the site, orientated in a northeast-southwest direction (strike) [4]. It is anticipated that the seam has a dip direction to the northwest, following the regional dip direction of the area. In addition to this, two faults can be observed within close proximity to the study area, orientated in an east northeast-west southwest direction [4]. One of the faults presents is the Neath disturbance [4].

3.4. Existing Ground Investigation Data

3.4.1. BGS Borehole Records

There are no available historical Ground Investigation Reports for the site. The BGS GeoIndex only contains records of boreholes outside of the site boundary, with the nearest borehole to the proposed new inlet and culvert located approximately 400m to the south. These exploratory holes are considered to be too far from the site and unlikely to accurately reflect the ground conditions on site therefore are not discussed further in this report.

3.5. Coal Mining

The historical coal mining activity within the site area, as reported in the Coal Authority Envirocheck Screening Report, attached in 10.Appendix E, is summarised in Table 3-2.

Table 3-2 – Coal Authority report summary.

Coal Mining Activity/ Hazard	Description
Underground coal mining	The site is in a surface area that could be affected by underground mining in 1 seam of coal at shallow depth, and last worked in 1912. The site is not within a surface area that could be affected by present underground mining. The site is not in an area likely to be affected from any planned future underground coal mining. However, reserves of coal exist in the local area which could be worked at some time in the future.
Mine entries	There are two known mine entries within 20m of the site boundary. The approximate locations of these entries can be found in the Coal Authority report in 10.Appendix E.
Coal mining geology	The Coal Authority is not aware of any damage due to geological faults or other lines of weakness that have been affected by coal mining.
Opencast mining	The property is not within the boundary of an opencast site from which coal has been removed and does not lie within 200m of a present opencast site. There are no licence requests outstanding to remove coal by opencast methods within 800m of the boundary.
Coal mining subsidence	The Coal Authority has not received a damage notice or claim for the subject property, or any property within 50m of the enquiry boundary, since 31 October 1994. There is no current Stop Notice delaying the start of remedial works or repairs to the property. The Coal Authority is not aware of any request having been made to carry out preventive works before coal is worked under section 33 of the Coal Mining Subsidence Act 1991.
Mine gas	The coal authority has no record of mine gas emission requiring action.

3.6. Radon Affected Areas

The site is in a lower probability radon area, in Quadrants Ref: A13NW(NW) and A13SE(SE), less than 1% of homes are estimated to be at or above the Action Level, and in Quadrant Ref: A13NW(SE), 1 to 3% of homes are estimated to be at or above the Action Level. Even though radon potential is reported on site, it is mentioned that no radon protective measures are necessary in the construction of new dwellings or extensions in any of the quadrants.

3.7. Contemporary Trade Directory Entries

The Envirocheck contains a list of historical and active contemporary trades registered within the 500m of the site. A summary of the trades considered to be active potential contamination sources and likely to affect the site is provided in Table 3-3 below.

Table 3-3 – Contemporary Directory Entries.

Category	Distance From Site (m)	Direction
Allotments	49	East
Coal Merchants	55	East
Laundrette	89	South
Car Garage	112	North East
Vehicle repair Garage	296	South East
Petrol Station	360	South West
Fire Station	421	South West

3.8. Unexploded Ordnance

Freely available online Unexploded Ordnance (UXO) Risk mapping, produced by Zetica [3], provides an estimate of the potential risk associated with unexploded WW2 air dropped Ordnance. The site is identified to be situated in an area assessed as having a low risk from UXO with an estimated bombing density of 15 bombs per 1000acre or less. It should be noted that this assessment does not consider other sources of enemy or allied air dropped or ground UXO. The summary map is attached in 10.Appendix F.

3.9. Hydrogeology

The BGS indicates that the superficial Alluvium stratum is classified as a Secondary A aquifer, which are permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers. The Glacial Till stratum is classified as a Secondary undifferentiated aquifer, which has been assigned in cases where it has not been possible to attribute either category A or B to a rock type. In most cases, this means that the layer in question has previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type.

The bedrock of the Lower Coal Measures is classified as a Secondary A aquifer, which are permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers.

The site is not located on or within 1 km of a groundwater source protection zone.

3.10. Hydrology

The River Neath is approximately 340m south of the site. A spring is present approximately 660m southeast of the site. A concrete culvert containing Gelliceibryn Brook (for which the future works will be considering), runs through the site.

The Envirocheck report indicates that the south and southeast boundaries of the site are at risk of flooding from a 1 in 30-year flood. This area slightly increases for a 1 in 100-year flood, with small areas in the centre of the site now being affected. The 1 in 1000-year flood affects an even greater area, extending northwards, up through the site

3.11. Landfills

There are no historical or current landfills located within 500m of the site as recorded within the Landmark Report [2]. However, in the greater area mining activities and associated areas of landfill are expected. A 100m length of infilled ground related to the historical brickworks is located approximated 270m south of the site.

3.12. Pollution Incidents

There are twenty-six additional pollution incidents located within 500m of the site, as described in Table 3-4 below:

Table 3-4 – Controlled Water Pollution Incidents.

Pollutant	Distance from Site	Incident Date	Incident Severity
Light Oil	35m W	4th February 1995	Category 3 - Minor Incident
Oils - Petrol	259m E	18th September 1996	Category 3 - Minor Incident
Light Oil	259m S	25th April 1991	Category 2 - Significant Incident
Crude Sewage	262m W	16th September 1996	Category 3 - Minor Incident
None Given (Blocked sewer)	263m S	17th March 1992	Category 3 - Minor Incident
Light Oil	263m W	23rd July 1996	Category 3 - Minor Incident
Crude Sewage	273 m SE	3rd July 1997	Category 3 - Minor Incident
Crude Sewage	275 m SE	25th September 1997	Category 3 - Minor Incident
Unknown	329 m SE	19th March 1992	Category 3 - Minor Incident
Washery Effluent	342 m S	8th April 1991	Category 2 - Significant Incident
Sewage - Treat Effluent	347 m S	19th December 1991	Category 2 - Significant Incident
Light Oil + Polyelectrolyte /Flocculant	358m E	5th June 1996	Category 2 - Significant Incident
Crude Sewage	359m E	23rd February 1998	Category 3 - Minor Incident
Crude Sewage	359m E	16th May 1995	Category 3 - Minor Incident
Crude Sewage	369m SE	12th July 1992	Category 2 - Significant Incident
Crude Sewage	370m SE	5th September 1991	Category 2 - Significant Incident
Crude Sewage	373m E	19th August 1997	Category 3 - Minor Incident
Crude Sewage	374m E	30th April 1998	Category 3 - Minor Incident
Unknown - Blocked Sewer	374m E	12th September 1996	Category 3 - Minor Incident
Crude Sewage	375m SE	5th February 1998	Category 3 - Minor Incident
Sewage - Treat Effluent	387m SE	5th May 1991	Category 2 - Significant Incident
Mud/Clay/Soil	396m E	14th March 1997	Category 2 - Significant Incident
Crude Sewage	397m E	14th November 1996	Category 3 - Minor Incident
Mud/Clay/Soil	401m SW	14th August 1997	Category 3 - Minor Incident
Misc. - Tip Leachate	433m SW	15th October 1994	Category 2 - Significant Incident
Crude Sewage	472m E	13th December 1991	Category 2 - Significant Incident

3.12.1. Summary of In-Situ testing

Standard Penetration Testing (SPTs) were undertaken within all boreholes, at intervals between 1m and 1.5m. A summary of the number of SPT's and the strata in which there were performed can be seen in Table 3-5 below, and on the exploratory hole logs appended to the factual report in Appendix G.

Table 3-5 – Summary of In-Situ testing in all exploratory holes.

Strata	RS-BH01	RS-BH02	RS-BH03	RS-BH04
Made Ground	1	-	7	-

Glacial Till	2	4	-	5

3.12.2. Summary of Geotechnical Laboratory Testing

All the geotechnical laboratory testing was scheduled by Atkins and carried out by GSTL Service, an UKAS accredited laboratory in Llanelli.

Results of the Geotechnical laboratory testing can be found in the factual report in Appendix G. The geotechnical laboratory testing carried out in the samples is summarised in Table 3-6 below.

Table 3-6 – Summary of Geotechnical Laboratory Testing.

Test Type	Strata	Depth (mBGL)	Number of tests
Moisture content	Made Ground	1.50 – 3.00	2
	Glacial Till	0.50 – 2.10	4
Atterberg Limits	Made Ground	1.50 – 3.00	2
	Glacial Till	0.50 – 2.10	4
Particle size distribution	Made Ground	1.50 – 3.00	2
	Glacial Till	0.50 – 3.00	11
Sedimentation Analysis	Made Ground	1.50 – 3.00	2
	Glacial Till	0.50 – 2.10	4
BRE SD1	Made Ground	1.50 – 3.00	3
	Glacial Till	0.50 – 1.00	2

3.13. IPPC Permits

There are no Integrated Pollution Prevention and Control permits within 500m of site according to the Landmark Report [2].

3.14. Environmental Constraints

The Envirocheck report indicates that there are a small number of unnamed ancient woodlands to the north of Lancaster Close.

There are no RAMSAR, SSSI, special area of conservation or world heritage sites within 500m of the site.

The detailed design document provided by Neath Port Talbot Council identifies that the site is in a Site of Importance for Nature Conservation (SINC) and there is the potential for Japanese Knotweed to be present in the area.

4. Field Work

4.1. Ground Investigation

Quantum Geotech were instructed by Atkins to undertake an intrusive ground investigation to obtain geotechnical and geo-environmental information for the proposed development. The ground investigation was carried out between the 9th and 23rd September 2020 and comprised:

- 6 no. Percussive Rotary Boreholes.
- 15 no. Hand Excavated Trial Pits.
- 8 no. Machine Excavated Trial Pits.
- In-Situ testing and sampling.
- Post fieldwork groundwater and ground gas monitoring.
- PAS-B survey at exploratory hole locations.
- GPR Survey along central section of Lancaster Close.

The ground investigation was supervised by an Atkins Senior Engineer Geologist. The ground investigation was undertaken to:

- Characterise the nature and thickness of any Made Ground, Superficial Deposits and depth to solid geology underlying the site;
- provide groundwater and soil samples for in-situ and laboratory geotechnical and geo-environmental testing;
- characterise the groundwater regime; and
- identify and prove locations of existing services.

A second phase of ground investigation was undertaken between 19 and 22 January 2021, which comprised the excavation of five hand excavated trial pits to provide additional information regarding the locations of existing services along Lancaster Close.

A plan indicating the position of all exploratory holes is provided in Figure 4-1 below:

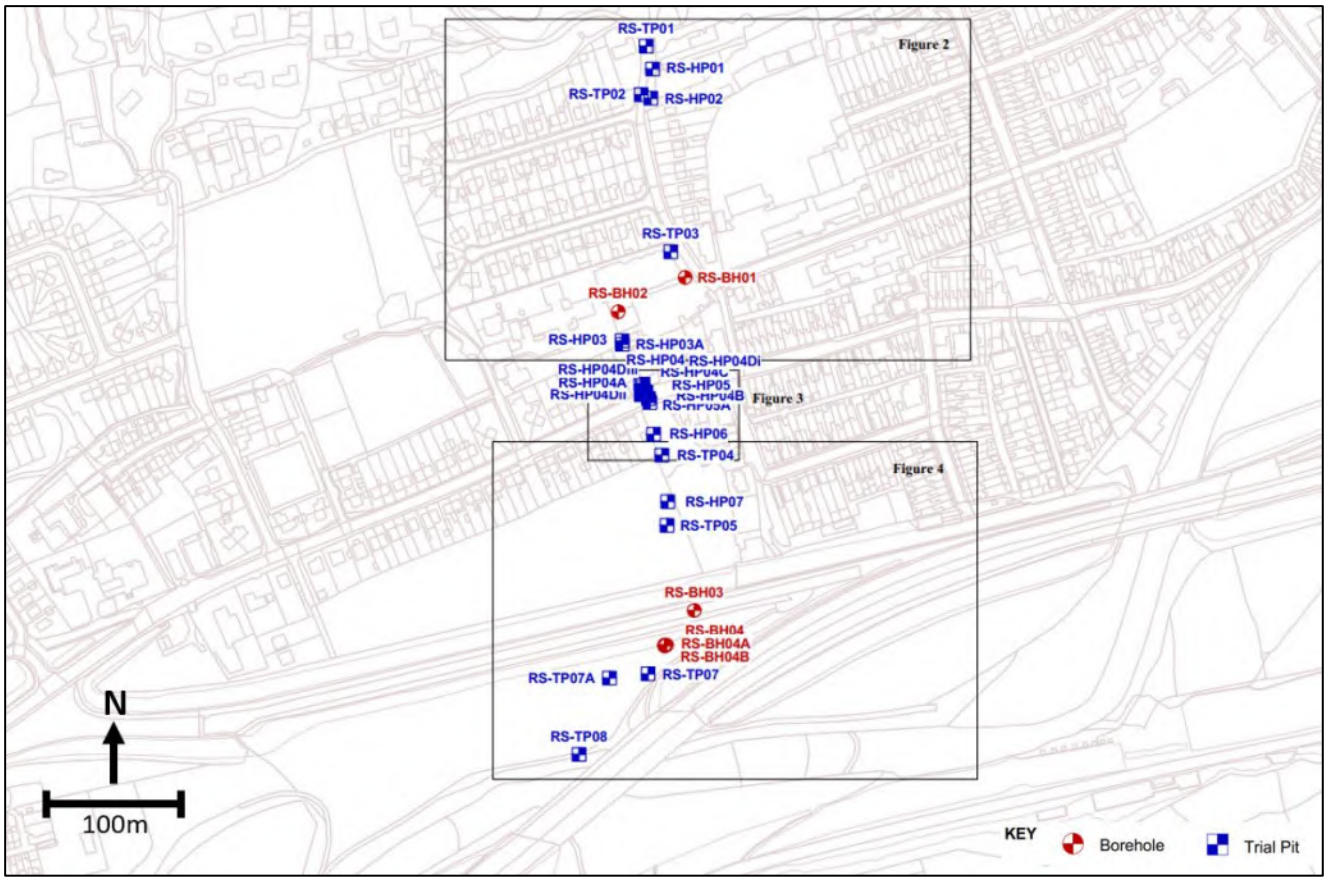


Figure 4-1 –Exploratory Hole Plan. See Quantum factual report (Appendix G) for inset details.

4.1.1. Factual Report

A copy of the factual report produced by Quantum Geotech is provided in Appendix G. The factual report includes both phases of ground investigation.

5. Ground Summary

5.1. Ground Model

The desk study information has been integrated with the findings from the recent ground investigation [8] to develop a ground model for the site, see Table 5-1 below for details.

Table 5-1 – Ground Model.

Layer No.	Geology	Typical thickness (m)	Depth to top (mbgl)	Depth to base (mbgl)	Approx. top of unit (mAOD)	General description
1	Tarmac	Min – 0.05 Max – 0.50	0.00	Min – 0.05 Max – 0.50	61.67	Wearing course
2	Topsoil	0.10	0.00	0.10	57.00	Dark brown slightly sandy slightly gravelly Clay.
3	Made Ground	Min – 0.06 Max – 10.00	Min – 0.05 Max – 1.00	Min – 0.06 Max – 10.00	56.00	Typically, yellow, brown and black slightly silty sandy gravel with cobble content of siltstone, sandstone, brick, slate and fine to medium coal.
4	Glacial Till	Min – 0.30 > 2.50	Min – 1.1 Max – 7.50	Not proven	50.00	Normally, brown slightly clayey sandy GRAVEL with low cobble content. Gravel is sub angular to sub rounded fine to coarse sandstone, siltstone, and mudstone.

5.2. Standard Penetration Testing

The results of the in-situ tests conducted during the drilling of the boreholes can be seen in Table 5-2 below:

Table 5-2 – SPT Results from the boreholes.

Test Type	Strata	Hole Reference	Depth (mbgl)	N Value
Standard Penetration Test	Made Ground	RS-BH01	1.50	15
		RS-BH03	1.50	500*
		RS-BH03	3.00	600*
		RS-BH03	4.50	34
		RS-BH03	6.00	135*
		RS-BH03	7.50	153*
		RS-BH03	9.00	215*
		RS-BH03	10.00	80*
	Glacial Till	RS-BH01	4.50	1500*
		RS-BH01	5.00	97*
		RS-BH02	1.20	11
		RS-BH02	3.00	536*
		RS-BH02	4.50	188*
		RS-BH04	1.50	1000*
		RS-BH04	3.00	94*
		RS-BH04	4.50	1500*
		RS-BH04	6.00	75*
		RS-BH04	7.50	750*

* Values extrapolated from SPT blow count at refusal. High values are potentially caused by the presence of cobbles/boulders.

5.3. Groundwater

5.3.1. Summary of Results

Water was encountered in one borehole (RS-BH03), two hand pits (RS-HP02 and RS-HP04C) and in one trial pit (RS-TP01). Table 5-3 below summarises the groundwater strikes recorded on the exploratory hole logs and the stratum at which the strike was encountered. It should be noted that any inflow depths taken from the hand dug inspection trenches will be approximate and recorded from the shallowest evidence of water seepage to ground level. Furthermore, the groundwater levels presented are subjected to diurnal, seasonal and climatic variation.

Table 5-3 – Groundwater level.

Hole ID	Groundwater Strike		Stratum
	m bgl	m AOD	
RS-BH03	6.00 (rose to 5.50m)	51.67 (rose to 52.17)	Made Ground
RS-HP02	1.50	57.27	Made Ground
RS-HP04C	1.00	53.58	Made Ground
RS-TP01	0.80	58.80	Made Ground

5.4. Contaminated Ground

No visual evidence of non-aqueous phase liquids (NAPL) were reported during the site investigation. Visual evidence of contamination within the soil comprised plastic, fragments of red engineering brick and brick, among others. There was no olfactory evidence of contamination reported from the site investigation.

A summary of visual evidence of contamination within soils is presented in Table 5-4 below, and more information can be found in the logs in Appendix G.

Table 5-4 – Contaminated Ground Evidence.

Exploratory Hole Location	Depth (m bgl)	Strata	Visual Evidence of Contamination
RS-BH01	0.00 – 0.06	Made Ground	Red Engineering Brick
RS-BH02	0.00 - 0.35	Made Ground	Plastic and brick
RS-BH02	0.35 – 0.9	Made Ground	Brick
RS-BH02	0.90 – 1.20	Glacial Till	Brick
RS-BH02	1.80 – 4.50	Glacial Till	Brick
RS-BH02	4.50 – 5.00	Glacial Till	Brick
RS-BH04A	0.00 – 0.80	Made Ground	Brick
RS-HP03	0.15 – 0.80	Made Ground	Tile pottery
RS-HP04A	0.25 – 0.45	Made Ground	Brick
RS-HP04C	0.30 – 0.50	Made Ground	Brick
RS-HP05	0.08 – 0.60	Made Ground	Brick, concrete, tile and clay pipe
RS-HP05A	0.80 – 1.05	Made Ground	Clay pipe and concrete
RS-HP07	0.00 – 0.10	Topsoil	Tile, clay pipe, pottery and ash
RS-TP01	0.05 – 1.10	Made Ground	Brick and rare fine to medium coal with plastic
RS-TP08	0.00 – 1.90	Made Ground	Brick
RS-TP08	1.90 – 3.30	Made Ground	Brick with timber

6. Ground Conditions and Material Properties

Based on the information gathered as part of the desk study and the recent ground investigation, the following geotechnical parameters and material properties have been determined.

6.1. Made ground

Made ground was encountered in all boreholes, trial pits and hand pits, ranging from 0.06m to 2.50m thickness, and has been described as yellow, brown and black slightly silty sandy gravel with cobble content of siltstone, sandstone, brick, slate and fine to medium coal. The base of the made ground varies from 52.17m AOD to 60.67m AOD.

Made Ground is shown to be variable across the site and shows evidence of contamination as a result of the housing development in the area. The Made Ground reaches a maximum depth of approximately 10 m at the disused A465 embankment (at the location of borehole RS-BH03). The thickness of made ground in test locations across the rest of the site is approximately 2 m. The proposed box culvert will be excavated to approximately 1.00m bgl. The made ground is unsuitable as an engineering material or fill, and therefore an assessment of its material parameters has been excluded from this report.

6.2. Glacial Till (Till)

The Glacial Till deposits material properties have been taken from the Quantum Factual report where possible, and where not derived and interpreted from laboratory data, in-situ testing and published information has been used.

6.2.1. Classification Testing

6.2.1.1. Moisture Content and Atterberg Limits

Five moisture content tests and five Atterberg Limit tests were undertaken the Glacial Till, from hand pit RS-HP06 at 0.6m, and from the trial pits RS-TP01 at 2.5m, RS-TP03 at 1.5m, RS-TP04 at 0.5m and RS-TP05 at 0.50m. Results of the laboratory testing can be seen in Appendix G, and a summary of these parameters can be seen in Table 6-2 below.

The results of the Atterberg Limit tests indicate:

- a Plasticity Index of 15% to 27%, with an average value of 24%;
- a Liquid Limit of 35% to 56%, with an average value of 46%; and
- a Plastic Limit of 17% to 29%, with an average value of 22%.

Moisture content ranged from 22% to 44%, with an average value of 29%.

The Till shows a moisture content being below the Liquid Limit, which may indicate that the samples have a limited cohesion.

The Plasticity Index is plotted against Liquid Limit, with an A line to identify the nature and plasticity exhibited by the samples. All samples were found to be of low plasticity and to plot above the A Line indicating inorganic clay with low to medium plasticity. Details of this plot can be seen in the Factual report in Appendix G.

Ten SPTs were undertaken in the Glacial Till. Of these, all but one test resulted in sufficiently high blow counts/low penetration that extrapolation was required to provide a SPT N value. This is likely a result of the tests being undertaken on a cobble or boulder, and the extrapolated N values are therefore unlikely to be representative of the soil mass. The SPT N value that has not been extrapolated was recorded as 11, and has been considered in the following analysis.

6.2.1.2. Particle Size Distribution (PSD)

Seven PSD tests were undertaken on samples taken from the Till. Details of the tests including fraction curves can be seen in Appendix G.

Five of the samples tested, from RS-TP01 to RS-TP05, and RS-HP06 exhibit fines percentage values greater than 35% (RS-TP01 83%, RS-TP03 at 1.5m 95%, RS-TP04 at 0.5m 36%, RS-TP05 55%, and TS-HP06 51%) indicating that the material should be classified as cohesive. While samples from RS-TP03 at 2.5m and RS-TP04 at 1.5m, has a fines percentage lower than 35% (RS-TP03 14% and RS-TP04 12%) indicating that the material should be classified as non-cohesive.

6.2.2. Compressibility

No testing has been carried out to determine the modulus of volume compressibility (m_v). m_v has therefore been derived using Stroud's correlation with Plasticity Index and SPT N. A Plasticity Index of 24% indicates a f_2 of 0.5; using this and an SPT N of 11 indicates an m_v of 0.18 MN/m^2. This corresponds to medium compressible material [9].

6.2.3. Young's Modulus (E_u)

No testing has been carried out to determine Young's Modulus . Using the correlation between E_u and m_v provided in CIRIA R143, E_u is estimated to be 5.6 MPa.

6.2.4. Angle of Friction (Phi')

The Angle of Friction was not directly measured.

A representative plasticity index value of 24% has been adopted to model a worst-case high plasticity low friction angle situation. A derived value for internal friction of Till is shown below using the below equation taken from BS 8002 [10].

$$\varphi'_{cv,k} = 24.7°$$

This value correlates with the suggested parameters presented by Tomlinson [9], and the material should be treated as a cohesive, values between 24-27° are suitable for this material.

6.2.5. Poisson's ratio (v)

No laboratory tests were undertaken to determine Poisson's Ratio. A representative value of 0.2 is suggested for upper saturated Clay by Bowles [11] and corroborated in the CIRIA guide 104 [12].

6.2.6. Undrained Shear Strength

No laboratory tests were undertaken to determine the Undrained Shear Strength. A representative Undrained Shear Strength value between 75 to 100KPa is recommended, based on values presented in Tomlinson [9].

6.2.7. Unit Weight

Representative unit weights taken from BS8002 [10] and corroborated against those seen in Barnes [13] for stiff to very stiff glacial clay are presented in Table 6-1 below.

Table 6-1 – Unit weight of Glacial Till.

Soil type	Bulk Density (Mg/m^3)	Unit Weight (kN/m^3)
Barnes [13]	1.9 – 2.3	19 – 23
BS 8002 [10]	-	21

A representative unit weight of 21kN/m^3 is recommended for design.

6.2.8. Protection of Buried Concrete

Three suites of tests were carried out on samples taken from site to determine the chemical aggressivity of soil and groundwater on buried concrete in accordance with BRE Special Digest 1:2005 [14, 14].

The results indicate the following maximum (or minimum for pH) values:

- Water soluble sulphate (2:1 leachate equivalent) of 0.04g/l (SO_4);
- Total sulphur of <0.15% (S);
- Acid soluble sulphate of 0.35% (SO_4);
- pH of 7.19

Based on the test results, it is recommended that a Design Sulphate Class DS-2 and an Aggressive Chemical Environment for Concrete (ACEC) Class of AC-2 concrete is used for the construction of any buried concrete on site.

6.3. Design Parameter Summary

A summary of the geotechnical parameters is included in Table 6-2 below.

Table 6-2 – Summary of Geotechnical Parameters.

Stratum	Parameter	Recommended Value
Glacial Till	Moisture Content	29%
	Plasticity Index	24%
	Modulus of volume compressibility (M_v)	0.18 MN/m^2 (derived)
	Young's Modulus (E_u)	5.6 MPa (derived)
	Poisson's Ratio	0.2
	Unit Weight	21kN/m^3
	Undrained shear strength	75 - 100 kPa (Average value of 87.5 kPa)
	Effective angle of shearing	24.3°, but it's recommended a value between 24-27°

7. Engineering Assessment

7.1. Assumptions

The developed foundation design is based on the following assumptions.

- All Made Ground will be excavated to ensure that the foundations are founded on competent Glacial Till or suitable imported fill material.
- Ground water level is not expected to be close to surface; no evidence of water was seen within boreholes above 3mBGL. A perched water table is possible as seepage was encountered within slit trenches.
- Unit weight of reinforced concrete is 24kN/m^3. There will be reinforced concrete wing walls and a trash screen structure.
- The total length of the inlet structure is approximately 600m.
- The new pipe down Lancaster Close is 900mm diameter.
- Foundation for the culvert is not confirmed at the time of writing this report. However, it is assumed that the new box culvert will be 1.50m by 0.75m deep.
- Design has considered the material to be drained and for this purpose an internal friction angle of 27.3° and a cohesion of 0kPa have been recommended.
- Overburden relief has been considered to be lower or equal to the proposed applied load.

7.2. Bearing Capacity

No details on the inlet structure were available at the time of writing this report due to the need for a new survey of woodland. It is considered however that the planned inlet structure shall be constructed of reinforced concrete wing walls and a trash screen structure. The entire length of the proposed culvert is approximately 600m.

The inlet will be shallow as the new box culvert is at ground level and will be required to take all run off from the woodland. It is proposed that the box culvert will be 1.5m in length and 0.75m deep.

The new pipe proposed for Lancaster Close will 900mm in diameter, however, at the time of writing this report the depth of the alignment was not confirmed.

7.3. Settlement

Settlement of the culvert or pipe structures is likely to be negligible as the net loading will be negative. The settlement of the culvert through the A465 embankment, it is not considered a concern, as the earthwork is no longer in use and any movement will be dependent on the method of installation.

The removal of the underlying material can cause ground heave pressures, which must be considered when designing the culvert. At this stage, it can be assumed 50% of heave pressure will be released during construction prior to formation of the base slab.

7.4. Excavations and Temporary Works

Excavation risks associated with the variability of Made Ground and Superficial Deposits are expected. These relate to the heterogeneity of the materials comprising irregular gravel fractions, which may be encountered and effect the shape and size of the excavation and the excavatability of the material. An effective temporary support method such as trench sheeting or Larsen's piles will be required to prevent open excavations from collapsing at the walls and damaging the culvert.

Trench sheeting will need to be installed with enough embedment depth and frequency of cross bracing so as to resist any collapse from the retained walls. The most efficient method of excavation would be to install two rows of the sheet piles from surface and excavate the material between them, bracing the rows against each other as the excavation proceeds.

Due to the limited depth of exploratory holes available in the site area an accurate bedrock depth cannot be obtained.

A technique such as thrust boring or horizontal directional drilling could be suitable for installation of the pipe beneath the former A465 embankment. Once invert levels have been determined, further consideration should be given to the method of installing the pipe beneath the embankment. Costs associated with thrust boring or directional drilling may be high compared to those of a traditional cut and cover depending on the installation depth required.

The construction of the culvert through the former A465 embankment could alternatively be undertaken in open cut. The form of the temporary works will comprise a combination of battered and retained slopes in the Made Ground and underlying Glacial Till material. Where vertical support to the excavation is required, propped sheet piles or similar may be adopted. Where it is necessary to adopt temporary support, ground settlement may occur due to lateral displacement of the supports as the excavation is advanced, however, as it is not a sensitive site, as the former A465 embankment is not used, it can be assumed that the ground disturbance and the surface settlement are not constraints.

7.4.1. Water Management

De-watering solution such as over pumping maybe required for open excavations to preventing flooding on site. It is anticipated that the ground water level is significantly lower during the mid and late summer months. It would be prudent therefore to plan any deep excavations works to this period of the year in order to take advantage of the lower water levels and reduced flooding risk

7.4.2. Protection of Buried Concrete

Three suites of tests were carried out on samples taken from site to determine the chemical aggressivity of soil and groundwater on buried concrete in accordance with BRE Special Digest 1:2005 [14, 14].

The results indicate the following maximum (or minimum for pH) values:

- Water soluble sulphate (2:1 leachate equivalent) of 0.04g/l (SO_4);
- Total sulphur of <0.15% (S);
- Acid soluble sulphate of 0.35% (SO_4);
- pH of 7.19

Based on the test results, it is recommended that a Design Sulphate Class DS-2 and an Aggressive Chemical Environment for Concrete (ACEC) Class of AC-2 concrete is used for the construction of any buried concrete on site.

8. Land Contamination Assessment

Land contamination is assessed through the identification and assessment of Potential Contaminant Linkages (PCLs). The approach in the following section is in accordance with the Contaminated Land Exposure Assessment (CLEA) model produced by DEFRA and the Environment Agency and as outlined in the DEFRA/Environment Agency Land Contamination Risk Management Guidance (LCRM) [15].

The LCRM provides a technical framework for identifying and remediating contamination through the application of a risk management process. The assessment involves the development of a conceptual site model (CSM) which describes the source-pathway-receptor relationship between potential sources of contamination and associated contaminants from both on-site and off-site sources, receptors to such contamination and potential pathways between the two. If all three are present or considered likely to be present, they are described as PCLs, which can be subject to the risk assessment process.

The question of whether risk is unacceptable, in any particular case, involves scientific and technical assessments, together with appropriate criteria by which to judge the risk and conclude the level of risk that would be unacceptable. The assessment framework and guidance given within the LCRM has been applied to this Risk Assessment (RA).

The CSM describes the relationship between contaminants which may be present from past and current activities (including any off-site activities from which contaminants may migrate on-site), receptors to those contaminants, and any potential connecting pathways.

Sources of contamination and associated contaminants, receptors to that contamination and the pathways between the two are identified and assessed to determine whether all three are present or are likely to be present and if so, these are identified as PCLs.

A generic quantitative risk assessment (GQRA) has been undertaken with reference to the site-specific data obtained as part of the September 2020 ground investigation. An assessment of risk has been undertaken using precautionary Generic Assessment Criteria (GAC), that represent minimal or tolerable risk, relevant to the PCLs. In addition, the potential implications of the contaminant concentrations, suitability of material for reuse and the preliminary waste classification have been assessed.

8.1. Initial Conceptual Site Model

8.1.1. Potential Sources of Contamination

Based on the available information detailed in Section 2 and updated following the Quantum Geotechnical 2020 site investigation, the following sources of contamination have been identified:

8.1.1.1. On-site

- Made Ground associated with the construction and operation of the existing culvert of unknown origin. This may contain a range of inorganic and organic contaminants including organic hydrocarbons, metals, asbestos and a source of ground gas.

8.1.1.2. Off-site

- Made Ground associated with the infilled areas of former coal abstractions within 500m of the site. This may contain a range of inorganic and organic contaminants including organic hydrocarbons, PAHs, metals, asbestos and a source of ground gas;
- A laundrette (89m south) with a range of inorganic and organic contaminants including organic hydrocarbons, metals and solvents; and
- A vehicle repair garage (296m south east), petrol station 360m south west) and a fire station (421m south west). A range of inorganic and organic contaminants including organic hydrocarbons, fire retardants and metals.

8.1.2. Potential Receptors

The following receptors have been identified at the site.

8.1.2.1. Human Health

- On-site – site visitors and maintenance workers; and
- Off-site – residents and workers in surrounding residential and commercial properties.

8.1.2.2. Controlled Waters

- Surface water in a concrete culvert (on-site), Nant y Gwyddyl 440m north east and the River Neath 480m south east (off-site); and
- Groundwater within the Secondary A bedrock aquifer and Secondary A and Secondary undifferentiated superficial aquifers.

8.1.2.3. Property

- On and offsite services and structures; and
- Adjacent residential properties and Cwmnedd Primary School (50m east).

8.1.2.4. Ecological

- Adjacent ecological areas of unnamed woodlands.

8.1.3. Potential Pathways

8.1.3.1. Human Health

Potential exposure pathways to the identified on-site human receptors include:

- Dermal contact with and ingestion of contaminants in soils, soil-derived dusts and water;
- Inhalation of soil derived dust and fibres; and
- Inhalation of ground gas/vapours.

The potential exposure pathways to the identified off-site human receptors include:

- Dermal contact with and ingestion of contaminants in soil-derived dusts and water that may have migrated off site;
- Inhalation of soil derived dust and gas/vapours which may have migrated off site; and
- Migration of contaminated groundwater and ingestion / dermal contact from receiving water body / abstraction.

8.1.3.2. Controlled Waters

The potential exposure pathways to controlled water receptors include:

- Leaching of contaminants in soil to groundwater;
- Migration of contaminated water through preferential pathways such as underground services, pipes and granular material to groundwater; and,
- Discharge of contaminants entrained in surface water run-off followed by overland flow and discharge.

8.1.3.3. Property

The potential exposure pathways to property / infrastructure includes:

- Direct contact of contaminants in soil and/or groundwater with existing buried services; and
- Migration of ground gas along strata and preferential pathways such as service routes or differentially permeable strata leading to accumulation and explosion.

8.1.3.4. Ecological

The potential exposure pathways to ecological receptors include:

- Direct contact with and / or ingestion of contaminants in windblown soil-derived dusts and groundwater or surface which may have migrated off-site.

8.2. Human Health Generic Quantitative Risk Assessment

A Generic Quantitative Risk Assessment (GQRA) of potential PCLs has been carried out using information from the Quantum Geotechnical 2020 ground investigation as summarised in this report.

The soil, soil leachate ad surface water chemical data have been screened against their respective GACs to assess the risks to the previously identified receptors. The outcome of this assessment is presented in the following sections.

Data screening for human health is presented in Appendix H.

8.2.1. Selection of Human Health Generic Assessment Criteria

Detailed guidance on human health risk assessment is provided in Science Report SR2 [16], SR3 [17] and the CLEA Model. The GQRA for identified human receptors has compared soil concentration data with GAC.

Category 4 Screening Values (C4SLs), derived to be protective of chronic risks to human health have been published for six contaminants (benzo(a)pyrene, benzene, lead, arsenic, cadmium and chromium) by DEFRA [18]. C4SLs represent low risk levels, they are not representative of significant possibility of significant harm (SPoSH). If the C4SLs are not exceeded, land can be demonstrated as being in Category 4 and cannot be determined as contaminated land.

Atkins has produced soil screening values (SSVs) based on minimal toxicological risk for a variety of standard land uses at 1% soil organic matter (SOM) (sand soil type) and 6% SOM (sandy loam soil type) using CLEA v1.071 in accordance with Environment Agency guidance. Based on the ratio of genotoxic PAHs to benzo(a)pyrene, the surrogate marker approach for genotoxic PAHs as set out in the C4SL Project Methodology has been adopted.

The proposed project is a flood alleviation scheme in the vicinity of Rock Street, Glynneath, South Wales. Therefore, to undertake the assessment, soil samples have been screened against a public open space (residential) land use SSVs and C4SLs, where available (collectively referred to as GAC). This scenario is considerate of the exposure for current and future site users comprising maintenance workers and the general public.

The presence of SOM is important in determining the fate and behaviour of a number of organic contaminants such as PAHs and chlorinated solvents. The mobility of these contaminants decreases with increasing SOM. Generally, the greater the SOM content the greater the sorptive capacity of the soil. The SOM content across the thirty-seven analysed samples were reported to range between 0.50 % and 48 % with an average of 12.18 %. Given fourteen results are below 6% in SOM content, Atkins' derived SSVs for a 1% SOM have been used to inform the GAC as a conservative approach.

Potential acute risks resulting from short term exposure of by construction workers to contamination involved with the proposed development cannot be assessed using these GACs because they relate to the long-term (chronic) risk. Risks to construction workers should be managed by the contractor through their Construction Environmental Management Plans (CEMPs) and as a minimum should include the use of appropriate Personal Protective Equipment (PPE) and appropriate working methods.

It should be noted that the GAC may change as new policy and technical guidance, including toxicological data, are published by the Natural Resources Wales and other authoritative sources, but they are valid at the time of writing.

8.2.2. Comparison of Soil Concentration Data with Human Health Generic Assessment Criteria

A total of thirty-seven soil samples were analysed across the site comprising 37 samples obtained from the Made Ground. Samples were collected between the depths of 0.10m and 3.00m bgl.

The soil results were screened against GAC for a public open space (residential) end use. Concentrations of lead and benzo(a)pyrene were found to exceed the GAC as summarised in Table 8-1 below.

Table 8-1 – Recorded GAC Exceedances for 'public open space (residential) 1% SOM'.

Contaminant	Generic Assessment Criteria (mg/kg)	Number of Samples	Number of Exceedances	Maximum Concentration (mg/kg)	Location & Depth (m bgl)	Layer
Lead	625	37	1	660	RS-HP04C, 0.4 m	Made Ground
Benzo(a)pyrene	10.3	37	6	470	RS-TP02, 0.30m; RS-HP03A, 0.50m; RS-HP04, 0.40m; RS-HP04B, 0.30m; RS-HP04C, 0.40m; RS-HP05, 0.30m	Made Ground

8.2.3. Asbestos

Thirty-seven soil samples collected between the depths of 0.10m and 3.00m bgl were analysed for asbestos fibres. No asbestos fibres were detected.

8.2.4. Human Health Discussion

There were thirty-seven soil samples analysed for a range chemical analyses. There was one exceedances of lead and six exceedances benzo(a)pyrene for the public open space (residential) land use GAC. No asbestos was detected during this investigation.

The lead and benzo(a)pyrene exceedances are not considered to be an unacceptable risk to human health under a current land use as RS-TP02, RS-HP03A, RS-HP04, RS-HP04B, RS-HP04C and RS-HP05 are located in areas of hardstanding and tarmac which eliminates the inhalation/direct contact pathways to the identified human health receptors. It is assumed that the ground surface under a future site use as a concrete culverted channel will be covered in hardstanding. Furthermore, the exceedance for lead was within the same order of magnitude as the GAC along with five of the six benzo(a)pyrene exceedances. The identified exceedances are considered marginal. Evidence from the exploratory logs suggests that anthropogenic material containing coal is located within the Made Ground.

Based on the samples recovered, the nature of soil contaminants identified and the unlikelihood of public exposure, we consider that the potential contaminants in unsaturated shallow soils are unlikely to present an unacceptable risk to human receptors. The risk is evaluated as ‘low’ considering a medium consequence and unlikely probability.

However, during the construction works it is considered that there is the potential for an unacceptable risk to the construction workers and the general public walking adjacent to the site to exist, and the risks from lead and benzo(a)pyrene in the soil should be managed by the contactor.

8.3. Controlled Waters Generic Quantitative Risk Assessment

A GQRA for the identified PCLs has been carried out using information from the Quantum Geotechnical 2020 ground investigation as summarised in this report.

Data screening for controlled waters is presented in Appendix H.

8.3.1. Selection of Controlled Waters Generic Assessment Criteria

The controlled waters GQRA has been designed to assess the potential risks posed to the identified controlled waters receptors from the migration of contaminants from identified on-site sources. To assess potential risks to the identified receptors, a comparison of soil leachate and surface water against pertinent water quality standards (WQS) has been undertaken.

The screening criteria for controlled waters assessment are dependent on the nature of the key receptor(s).

Superficial deposits underlying the site comprises of Glacial Till classified as a Secondary undifferentiated aquifer. Bedrock underlying the site comprises of the Lower Coal Measures which is classified as a Secondary A aquifer.

The nearest surface watercourse is the River Neath located adjacent to the south of the site.

Considering the hydrological and hydrogeological regime as summarised above, both surface water and groundwater are primary receptors for potential contamination. Soil leachate and surface water data has been screened against Water Quality Standards (WQS) comprising Environmental Quality Standards for inland freshwater (EQS) [19], protective of aquatic life in surface. Soil leachate has also been screened against Drinking Water Standards (DWS) to assess the risks to groundwater receptors.

The hydrometric river quality data for the River Neath hydrometric area, have been input into the metals bioavailability assessment tool (M-BAT) created within the Water Framework Directive [20] to develop more appropriate freshwater EQS for copper, lead, manganese, nickel and zinc. Site specific predicted no-effect concentrations (PNEC) were calculated for the above-mentioned metals. River quality data and results from the M-BAT are presented in Appendix H.

Surface water samples were taken from upstream and downstream of the site to inform the conditions of the receiving water.

Comparison of the results with the WQS and DWS identified exceedances of the contaminants analysed as summarised in Table 8-2 and Table 8-3 below.

8.3.2. Comparison of Soil Leachate Data with Controlled Waters Generic Assessment Criteria

Data from twenty soil-leachate samples collected from the Made Ground between the depths of 0.3m and 2.0m bgl were screened against Freshwater EQS and Drinking Water Standards (DWS).

A summary of the EQS soil leachate exceedances are summarised in Table 8-2 below.

Table 8-2 – Soil Leachate EQS exceedances.

Constituent	Standard	Units	EQS (mg/l)	Number of samples	Minimum concentration	Maximum concentration	Number of exceedances	Location & Depth (m bgl)	Layer
Ammoniacal Nitrogen	EQS (freshwater)	mg/l	0.2	20	<0.05	0.3	1	RS-TP02, 0.30m	Made Ground
Nitrite	EQS (freshwater)	mg/l	0.01	20	<0.02	0.32	6	RS-TP08, 0.70m; RS-TP07A, 1.20m; RS-TP02, 0.30m; RS-HP02, 0.50m; RS-HP03, 1.10m; RS-HP04, 0.40m	Made Ground

A summary of the DWS soil leachate exceedances are summarised in Table 8-3 below.

Table 8-3 – Soil Leachate DWS exceedances.

Constituent	Standard	Units	DWS (mg/l)	Number of samples	Minimum concentration	Maximum concentration	Number of exceedances	Location & Depth (m bgl)	Layer
Nitrate	Drinking Water Standard	mg/l	50	20	<0.5	60	1	RS-HP06, 0.60m	Made Ground
Arsenic	Drinking Water Standard	mg/l	0.01	20	<0.001	0.012	1	RS-HP05, 0.30m	Made Ground
Iron	Drinking Water Standard	mg/l	0.2	20	<0.02	0.76	2	RS-TP04, 0.30m; RS-HP07, 0.60m	Made Ground

8.3.3. Comparison of Surface Water Data with Controlled Waters Generic Assessment Criteria

Data from two surface water samples collected by Quantum Geotechnical on the 7 October 2020 were screened against Freshwater EQS. No concentrations were identified to exceed the freshwater EQS values.

8.3.4. Controlled Waters Discussion

Concentrations of ammoniacal nitrogen and nitrite were identified to marginally exceed the soil leachate EQS values. The number of soil-leachate EQS exceedances across the site are minimal and soil leachate exceedances are generally within the same order of magnitude of the EQS screening values. One nitrite exceedance of 0.32mg/l exceeded the screening criteria (0.01mg/l) by over an order of magnitude.

A small number of concentrations of nitrate, arsenic and iron were identified to marginally exceed the soil leachate DWS values. The number of exceedances is minimal and are all within one order of magnitude of the DWS screening values.

Soil-leachate analysis is relatively aggressive and may not be representative of actual conditions, potentially overestimating leachable concentrations present in in-situ soils.

Surface water concentrations were found below the EQS GAC for all of the analytes in the upstream and downstream sampling locations.

Given the limited exceedances recorded and the conservative nature of the generic risk assessment, it is considered that the soil-leachate concentrations are unlikely to pose an unacceptable risk to the identified controlled waters receptors as long as appropriate mitigation are used to protect controlled waters during any construction. The risk is evaluated as ‘low’ considering a medium consequence and unlikely probability.

8.3.5. Updated Conceptual Site Model

Based on the human health and controlled waters GQRAs presented above, the initial CSM presented in Sections 8.2 to 8.3 has been revised based on the assessments completed.

The revised CSM resulting from the information discussed above is shown below in Table 8-4.

Table 8-4 – Updated Conceptual Site Model.

Source	Receptor		Contaminant Exposure / Migration Pathway	Potential Consequence	Probability	Risk Classification	Comments
On-site • Made Ground associated with the construction and operation of the existing culvert of unknown origin. Off-site • Made Ground associated with the infilled areas of former coal abstractions within 500m of the site. • A laundrette (89m south) with a range of inorganic and organic contaminants including organic hydrocarbons, metals and solvents; and • A vehicle repair garage (296m south east), petrol station 360m south west) and a fire station (421m south west). A range of inorganic and organic contaminants including organic hydrocarbons, fire retardants and metals.	Human Health: On-site	Current on-site users including maintenance workers and general public passing through the site	Dermal contact with and ingestion of contaminants in soil, soil-derived dust and water. Inhalation of contaminants in soil, soil-derived dust and fibres.	Medium	Unlikely	Low Risk	There were a small number of exceedances for lead and benzo(a)pyrene of the GAC for a public open space (residential) end use. No asbestos fibres were detected. Under a current land use and future proposed flood alleviation scheme, the site will be covered in hardstanding which will act as a barrier and limit dust generation / migration. Therefore, there is not considered to be an unacceptable risk to human health. It is also assumed that any potential risks to construction workers would be managed through robust risk assessments to identify appropriate PPE and working methods. The risk associated with inhalation of ground gas has been assessed as low risk On the basis that exploratory logs did not identify potential likely sources of ground gas generating materials. Furthermore, it is unlikely on-site users would routinely access the culverts which are presumed to also be vented via manholes or similar. Potential risk to maintenance workers would be managed through best practice robust risk assessments to identify appropriate PPE and working methods. Surrounding land use of the site will also not change as part of the proposed scheme
		Future on-site users including maintenance workers, general members of the public.	Inhalation of ground gas / vapours	Medium	Unlikely	Low Risk	
	Human Health: Off-site	Off-site workers within the adjacent residential properties, members of the public visiting the adjacent residential properties and Cwmnedd Primary School	Dermal contact with and ingestion of contaminants in soil-derived dusts and water that may have migrated off-site Inhalation of soil-derived dust and fibres which may have migrated off-site	Medium	Unlikely	Low Risk	
			Inhalation of ground gas / vapours which may have migrated off site	Medium	Unlikely	Low Risk	
	Controlled Waters: Surface water	Surface water in a concrete culvert (on-site). Off-site watercourses: Nant y Gwyddyl located 440m north-east and the	Lateral migration of contaminated groundwater with discharge to surface	Medium	Unlikely	Low Risk	A small number of marginal soil leachate EQS exceedances were identified for ammoniacal nitrogen and nitrite. A small number of marginal soil leachate exceedances were identified for nitrate, arsenic and iron. No concentrations of surface water sample

Source	Receptor		Contaminant Exposure / Migration Pathway	Potential Consequence	Probability	Risk Classification	Comments
		River Neath 480m south-east of the site.	watercourses as base flow Discharge of contaminants entrained in surface water run-off followed by overland flow and discharge				analytes exceed the freshwater EQS values. The majority of the soil leachate sample locations are covered by hardstanding, preventing infiltration of water coming into contact with the source of contamination. Potential contaminants in the soil leachate samples at the concentrations recorded are considered unlikely to present potentially unacceptable risks to identified surface water and groundwater receptors. Where excavation is required, consideration should be given to the potential for generation of preferential pathways during the works where contaminants may potentially leach from unsaturated soils into surface water. Controls should be implemented to mitigate this risk as far as is practicable.
	Controlled Waters Groundwater	Superficial Alluvium and Glacial Till (Secondary A aquifer and Secondary undifferentiated) Bedrock of the South Wales Lower Coal Measures (Secondary A aquifer). (on-site and off-site)	Leaching of contaminants in soil to groundwater in underlying aquifer Migration of contaminated water through preferential pathways such as underground services, pipes and granular material to groundwater in underlying aquifer	Medium	Unlikely	Low Risk	
	Property	On-site current and future below ground infrastructure	Direct contact of contaminated soils/water with infrastructure, services and structures and subsequent chemical attack Direct contact of migrating contaminated groundwater within infrastructure, services and structures	Minor	Unlikely	Very Low Risk	It is assumed that appropriate concrete classifications will be adopted for the scheme as part of the design of the works. The risk associated with the migration of ground gas along preferential pathways has been assessed as low considering the absence of identified potential sources of gas during the ground investigation. The culvert is likely to be vented via manholes or similar, promoting air flow through the system.

Source	Receptor		Contaminant Exposure / Migration Pathway	Potential Consequence	Probability	Risk Classification	Comments
			Migration of ground gas along strata and preferential pathways such as service routes or differentially permeable strata leading to accumulation and explosion.	Medium	Unlikely	Low Risk	
		Off-site adjacent residential properties and Cwmnedd Primary School	Direct contact of contaminants in soil and/or groundwater with existing / future buried service.	Mild	Unlikely	Very low risk	
			Migration of ground gas along strata and preferential pathways such as service routes or differentially permeable strata leading to accumulation and explosion.	Medium	Unlikely	Low Risk	
	Ecological	Off-site adjacent unnamed ancient Woodlands	Direct contact with and / or ingestion of contaminants in windblown soil-derived dusts and water which may have migrated off-site	Minor	Unlikely	Very low risk	The site comprises a mixture of buildings, hardstanding and grassed/vegetated playing fields. Therefore, soils would be covered/bound and it is unlikely that dust generation and off-site migration of contamination would occur. The ancient woodlands are upgradient from the north to the south culvert flow (down hill).

8.4. Suitability for re-use

Appropriate verification sampling of the actual material excavated will be required during construction works in accordance with a Material Management Plan (MMP) with concentrations compared to appropriate reuse criteria to confirm suitability for reuse or otherwise, specific to the required end use.

8.5. Preliminary waste classification

Material that is surplus to requirements and where there is no clear design requirement for re-use on-site is classified as waste and should be disposed of in accordance with the Duty of Care as specified in the Landfill Regulations [21]. If the scheme does not require all excavated material to be retained on-site, it is a waste.

Waste is classified into three categories comprising inert, non-hazardous and hazardous. A preliminary waste assessment has been undertaken based on analysed concentrations of contaminants in the soil samples obtained during the 2020 investigation and using the McArdle/Atkins' on-line waste classification tool (CAT WASTESOIL).

The results of the CAT-WASTESOIL assessment indicates that one of the soil samples would be classified as hazardous waste.

This classification is based on 37 discrete samples and the actual material to be removed off-site for disposal must be appropriately classified and agreed with the chosen landfill operator. It is the responsibility of the waste producer to classify, treat, manage and dispose of waste appropriately and to ensure the chosen landfill is licensed to accept such material.

8.6. Conclusions and Recommendations

Based on the investigation and assessment presented herein, the overall contamination risk associated with the site is considered to be low to human health, controlled waters, property and ecological receptors under the current and future end use.

The risks should be assessed by the contractor during the construction works as bare soils will be exposed during excavation and construction workers and members of the public passing through the site could be exposed.

In relation to the proposed project, the following is also likely to be required:

- adoption of appropriate health and safety measures, practices and procedures during construction to mitigate potential risks to construction workers and visitors;
- adoption of appropriate best practice environmental management during construction, e.g. minimisation of dust generation and migration, to mitigate potential risks to controlled waters, visitors and surrounding off-site users;
- vigilance to be maintained throughout the works for potential asbestos containing material at surface or other unexpected contamination during site clearance and earthworks in areas not previously investigated;
- There are noted sightings of Japanese Knotweed in the vicinity of the culvert. Disturbance of this should be avoided at all times, with actual locations added to any future hazard plan. If works near to the Japanese Knotweed are unavoidable then a competent professional should be consulted; and
- Where relevant, a piling risk assessment should be undertaken to determine appropriate control/mitigation measures to be implemented during site construction works.

8.7. Limitations

It should be noted that, as with any physical site investigation involving discrete sampling, test results will only be representative of the point sampled and further investigation and analysis may be required should ground conditions differ from those reported. If, during any excavation/construction works, visibly contaminated material is encountered in excavations, advice should be sought from an Environmental Scientist and the requirement for additional testing and assessment of the risks agreed.

9. Geotechnical Risk Register

A preliminary Geotechnical Risk Register has been prepared using the Geotechnical Risk Index detailed in Table 9-1 below. The geotechnical risks shown in Table 9-2 below present the key hazards identified.

Table 9-1 – Geotechnical risk matrix.

Risk Probability (P)		Risk Impact (I)		Risk Rating (R)	
1	Highly Unlikely	1	Very low	1	Trivial
2	Unlikely	2	Low	4	Tolerable
3	Low likelihood	3	Medium	9	Substantial
4	Likely	4	High	16	Intolerable
5	Highly Likely	5	Very high	25	Intolerable

Table 9-2 – Updated Geotechnical risk register (after Quantum GI, November 2020).

Hazard	Impact	Initial Risk Rating			Mitigation Measures	Risk after mitigation			Residual Risk
		P	I	R		P	I	R	
Presence of Made Ground of variable and potentially poor engineering properties across the site.	Re-design, increased cost and delay in works if more extensive and if identified late in the programme due to unpredictable and usually poor strength properties.	3	3	9	Undertake ground investigation to determine the presence, depth and nature of Made Ground. Use GI data in the design to provide details on the extent of the made ground.	2	1	2	Localised pockets of unforeseen ground conditions encountered during construction.
Design basis changes during design and construction period	Re-design, increased cost and delay in works.	3	2	6	Ensure appropriate site investigations carried out at design stage. Utilise local knowledge of NPTCBC staff. Agree the Scope at the start of the detailed design phase	1	2	2	None anticipated
Temporary increased flood risk due to potential obstructions during construction	Delays and additional cost	4	3	12	Commission contractor suitably experienced in this type of construction and provide measures for over pumping or diversions	2	2	4	None anticipated
Underground and overhead utilities and services	Re-design, delays and additional cost, endangering the work force.	4	4	16	Implement site scans using Cable Avoidance Tool (CAT). Client to provide latest set of available services drawings for consideration during design.	2	2	4	Use of permit to dig system during construction.
Unexpected groundwater conditions (elevated or seepage)	Redesign, construction delays, increased cost	4	3	12	Undertake appropriate intrusive ground investigation, install groundwater installations and monitor groundwater levels over extended periods.	4	2	8	Appropriate dewatering scheme shall be implemented to lower the ground water levels and facilitate construction activities.
Potential contamination in soils or groundwater	Localised contamination in Made Ground and / or groundwater associated with on-site historical construction or on-site migration from adjacent off-site commercial sources (e.g. colliery and garages). Potential mobilisation of contaminants in unsaturated Made Ground soils with migration to surface watercourses or groundwater.	2	3	6	Investigate potential contamination sources as part of the GI. Review GI data and provide initial assessment of the contamination risk to the contractor. Implement best practice site procedures to prevent migration of potential contaminants or silt into surface watercourses or groundwater.	2	2	4	Localised pockets of contamination during construction.
Presence of Asbestos containing material ACM	Risk to health of site workers if ACM is disturbed during temporary works. Resulting in the site classification being uplifted.	3	3	8	Ensure the risk is briefed to all site personal and that adequate mitigation measure are in place for removal if required	1	3	3	Positive identification does not remove the risk of exposure

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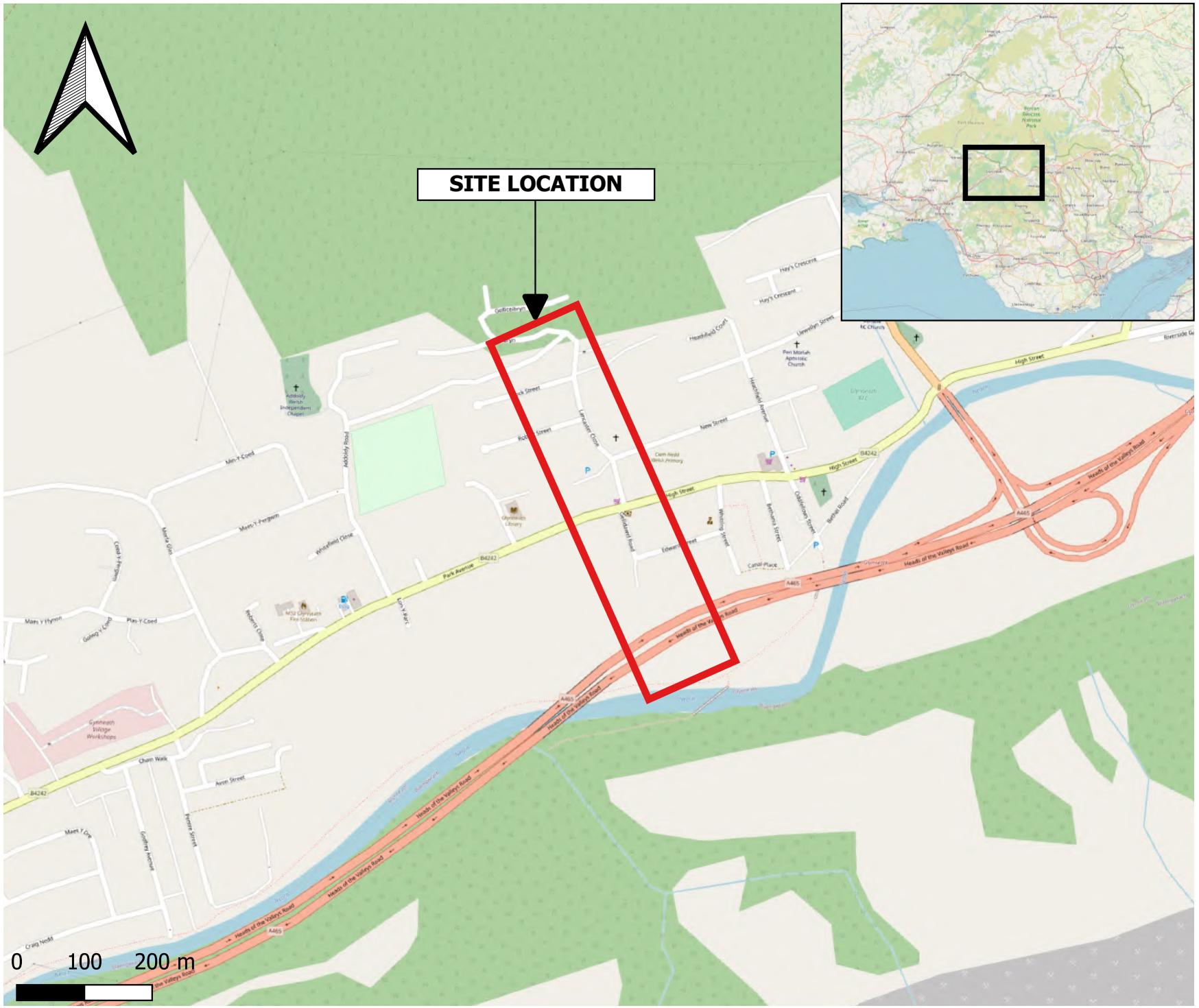
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Appendix A. Location Maps

A.1. Site Location Plan



Legend
See annotated plan

ATKINS
2 Capital Quarter
Tyndall Street
Cardiff
CF10 4BZ
Tel: 02920485159

CLIENT

Neath Port Talbot County Borough Council

PROJECT

Neath Port Talbot Flood Alleviation Scheme - Rock Street

TITLE

Figure 1: Site Location Plan

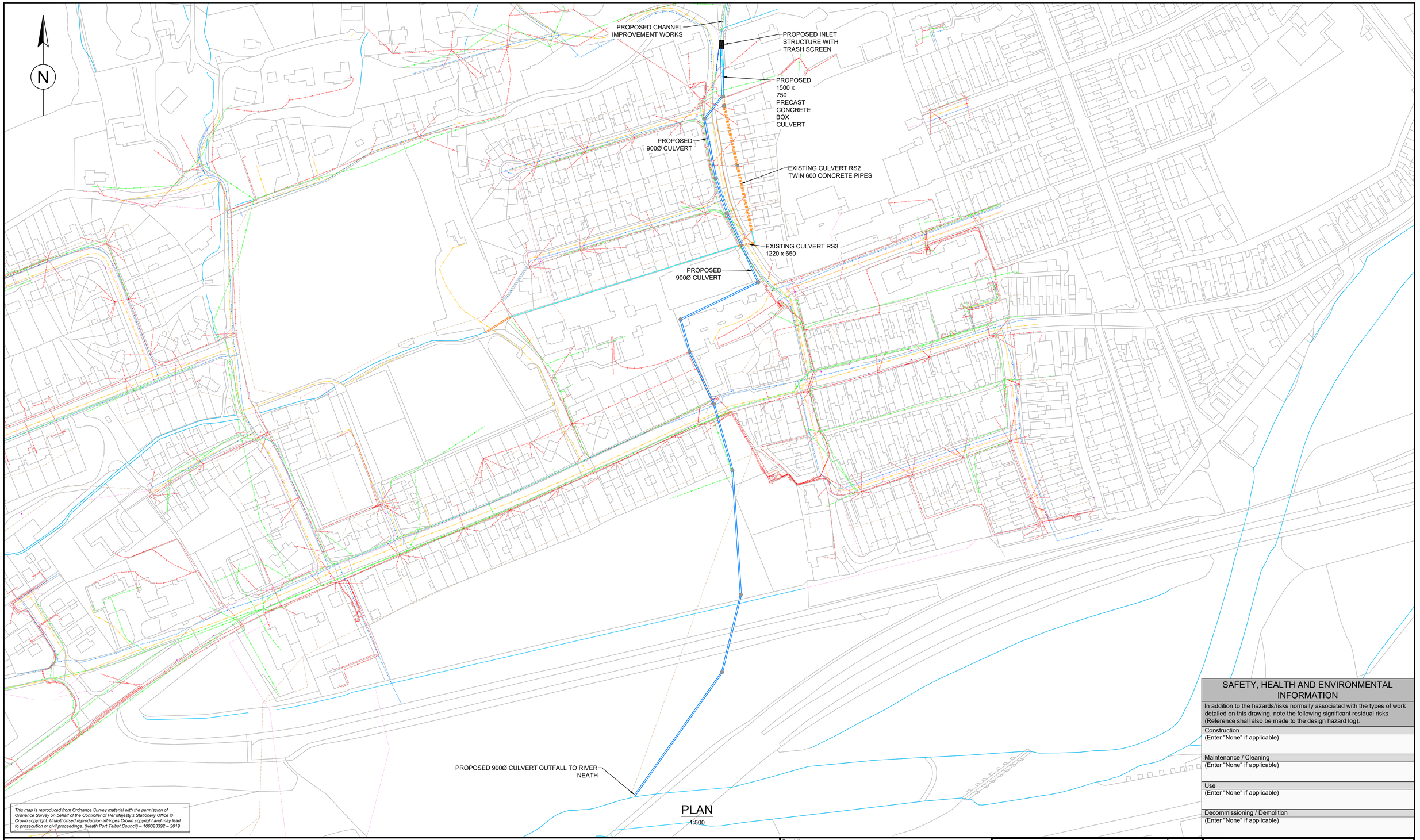
APPENDIX A.1

A.2. Utilities Map

Medium

DO NOT SCALE

Millimetres 100 0 10



PLAN
1:500

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NOTES

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE NOTED.
2. ALL LEVELS ARE IN METRES ABOVE ORDNANCE DATUM UNLESS OTHERWISE NOTED.

SERVICES LEGEND

- Dwr Cymru Welsh Water - Sewerage
- Dwr Cymru Welsh Water - Water
- Neath Port Talbot Borough Council - Drainage
- Neath Port Talbot Borough Council - Gully
- Openreach - British Telecommunications
- Openreach - British Telecommunications - Overhead
- Wales and West Utilities
- Western Power Distribution
- Western Power Distribution - Overhead
- Western Power Distribution - Substation
- Radar Trace
- Unidentified

Description	Status	Revision	Drawn	Checked	Reviewed	Authorised	Issue Date
first Issue	S0	P01.1	---	---	---	---	---

SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION

In addition to the hazards/risks normally associated with the types of work detailed on this drawing, note the following significant residual risks (Reference shall also be made to the design hazard log).

Construction
(Enter "None" if applicable)

Maintenance / Cleaning
(Enter "None" if applicable)

Use
(Enter "None" if applicable)

Decommissioning / Demolition
(Enter "None" if applicable)

Drawing Suitability: WORK IN PROGRESS
Status: S0

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www.atkinsglobal.com

Client: NEATH PORT TALBOT COUNTY BOROUGH COUNCIL

Project Title: ROCK STREET

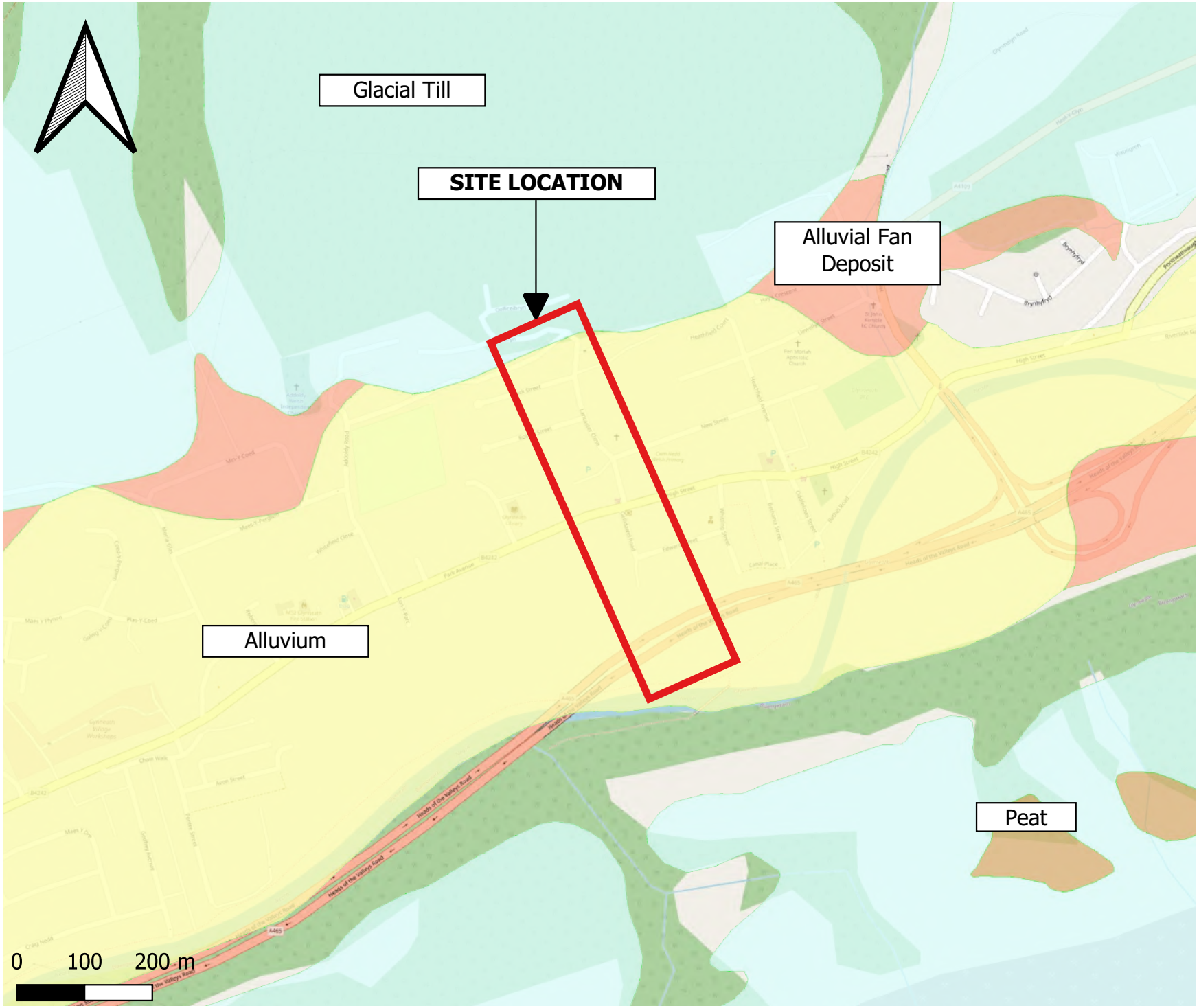
Drawing Title: PROPOSED SCHEME OVERVIEW

Drawing Number
Project | Originator | Volume
NE06_001 - ATK - GEN - SWMWREC - DR - CD - 000001
Location | Type | Role | Number

Original Size: A1 | Scale: AS SHOWN | Project Ref. No: 5192792 | Sheet: 1 of 1 | Rev: P01.1

Appendix B. Geological Maps

B.1. Superficial Geology



Legend
See annotated plan

ATKINS
2 Capital Quarter
Tyndall Street
Cardiff
CF10 4BZ
Tel: 02920485159

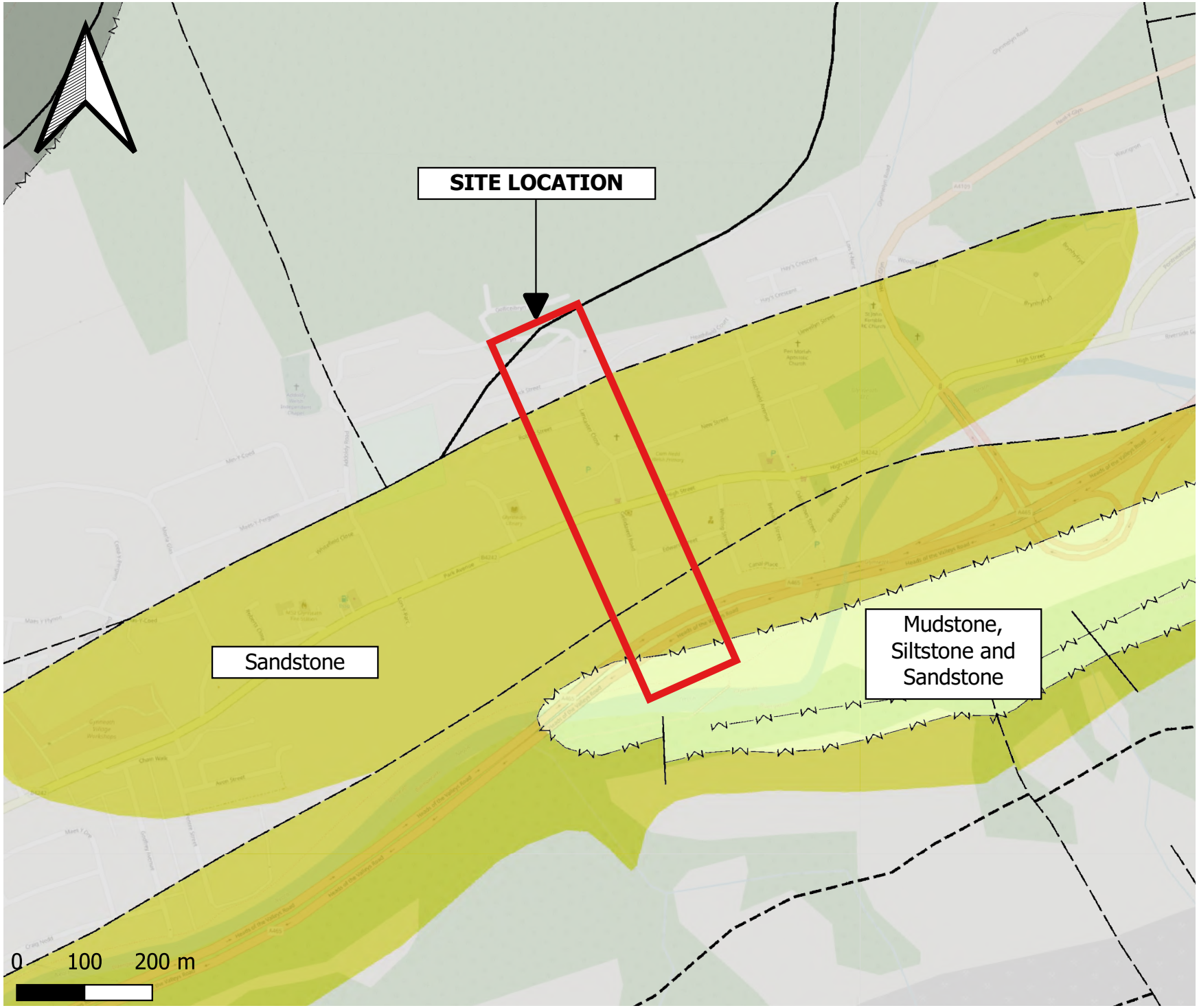
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Neath Port Talbot County Borough Council

PROJECT
Neath Port Talbot Flood Alleviation Scheme - Rock Street

TITLE
Figure 3: Superficial Geology

APPENDIX B.2

B.2. Bedrock Geology



Legend
See annotated plan

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Tyndall Street
Cardiff
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Tel: 02920485159

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Neath Port Talbot County Borough Council

PROJECT
Neath Port Talbot Flood Alleviation Scheme - Rock Street

TITLE
Figure 2: Bedrock and Structural Geology

APPENDIX A.1

Appendix C. Borehole Records

C.1. Borehole Data

Ref ID	Ground Water Level (m AOD)	Tarmac / Topsoil		Made Ground		Glacial Till	
		Top Depth (m)	Base Depth (m)	Top Depth (m)	Base Depth (m)	Top Depth (m)	Base Depth (m)
RS-BH01	-	-	-	0.00	2.10	-	-
RS-BH02	51.67	-	-	0.00	0.90	0.90	5.00
RS-BH03	-	0.00	0.50	0.50	10.00	-	-
RS-BH04	-	0.00	1.50	-	-	1.50	7.50
RS-BH04A	-	0.00	0.80	-	-	-	-
RS-BH04B	-	0.00	0.80	-	-	-	-
RS- HP01	-	0.00	0.10	-	-	-	-
RS- HP02	57.27	0.00	0.10	0.10	1.50	-	-
RS- HP03	-	0.00	0.08	0.08	1.20	-	-
RS- HP03A	-	0.00	0.08	0.08	0.50	-	-
RS- HP04	-	-	-	0.00	0.60	-	-
RS- HP04A	-	0.00	0.08	0.08	0.45	-	-
RS- HP04B	-	-	-	0.06	0.60	-	-
RS- HP04C	53.58	0.00	0.08	0.08	1.35	-	-
RS- HP05	-	0.00	0.08	0.08	0.75	-	-
RS- HP05A	-	0.00	0.10	0.10	1.05	-	-
RS- HP06	-	0.05	0.15	0.15	0.70	-	-
RS- HP07	-	0.00	0.10	0.10	2.50	-	-
RS-TP01	58.80	0.00	0.05	0.05	3.00	-	-

Ref ID	Ground Water Level (m AOD)	Tarmac / Topsoil		Made Ground		Glacial Till	
		Top Depth (m)	Base Depth (m)	Top Depth (m)	Base Depth (m)	Top Depth (m)	Base Depth (m)
RS-TP02	-	0.00	0.12	0.12	0.50	-	-
RS-TP03	-	0.00	0.08	0.08	3.00	-	-
RS-TP04	-	0.00	0.10	0.10	3.00	-	-
RS-TP05	-	0.00	0.10	0.10	3.00	-	-
RS-TP07	-	-	-	0.00	2.50	2.50	3.00
RS-TP07A	-	-	-	0.00	1.25	-	-
RS-TP08	-	-	-	0.00	3.00	-	-

Appendix D. Envirocheck Report

Envirocheck® Report:

Datasheet

Order Details:

Order Number:
221660568_1_1

Customer Reference:
20191393

National Grid Reference:
287940, 206690

Slice:
A

Site Area (Ha):
3.65

Search Buffer (m):
1000

Site Details:

Site at 287940, 206760

Client Details:

Mr J Dyke
Atkins Ltd
Longcross Court
47 Newport Road
Cardiff
CF24 0AD

Envirocheck®
LANDMARK INFORMATION GROUP®

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Introduction

The Environment Act 1995 has made site sensitivity a key issue, as the legislation pays as much attention to the pathways by which contamination could spread, and to the vulnerable targets of contamination, as it does the potential sources of contamination.
For this reason, Landmark's Site Sensitivity maps and Datasheet(s) place great emphasis on statutory data provided by the Environment Agency/Natural Resources Wales and the Scottish Environment Protection Agency; it also incorporates data from Natural England (and the Scottish and Welsh equivalents) and Local Authorities; and highlights hydrogeological features required by environmental and geotechnical consultants. It does not include any information concerning past uses of land. The datasheet is produced by querying the Landmark database to a distance defined by the client from a site boundary provided by the client.
In this datasheet the National Grid References (NGRs) are rounded to the nearest 10m in accordance with Landmark's agreements with a number of Data Suppliers.

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Envirocheck®
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Report Version v53.0

Contents

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Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Agency & Hydrological					
BGS Groundwater Flooding Susceptibility	pg 1	Yes	Yes	Yes	n/a
Contaminated Land Register Entries and Notices					
Discharge Consents	pg 4		1	10	14
Prosecutions Relating to Controlled Waters			n/a	n/a	n/a
Enforcement and Prohibition Notices					
Integrated Pollution Controls					
Integrated Pollution Prevention And Control					
Local Authority Integrated Pollution Prevention And Control					
Local Authority Pollution Prevention and Controls	pg 10			1	
Local Authority Pollution Prevention and Control Enforcements					
Nearest Surface Water Feature	pg 10	Yes			
Pollution Incidents to Controlled Waters	pg 10	1		28	22
Prosecutions Relating to Authorised Processes	pg 19		1		
Registered Radioactive Substances					
River Quality	pg 19			1	1
River Quality Biology Sampling Points					
River Quality Chemistry Sampling Points	pg 20				2
Substantiated Pollution Incident Register					
Water Abstractions	pg 21			1	(*6)
Water Industry Act Referrals					
Groundwater Vulnerability Map	pg 23	Yes	n/a	n/a	n/a
Bedrock Aquifer Designations	pg 24	Yes	n/a	n/a	n/a
Superficial Aquifer Designations	pg 24	Yes	n/a	n/a	n/a
Source Protection Zones					
Extreme Flooding from Rivers or Sea without Defences	pg 24	Yes	Yes	n/a	n/a
Flooding from Rivers or Sea without Defences	pg 24	Yes	Yes	n/a	n/a
Areas Benefiting from Flood Defences	pg 24		Yes	n/a	n/a
Flood Water Storage Areas				n/a	n/a
Flood Defences				n/a	n/a
OS Water Network Lines	pg 25	6	23	54	147

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Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Waste					
BGS Recorded Landfill Sites					
Historical Landfill Sites					
Integrated Pollution Control Registered Waste Sites					
Licensed Waste Management Facilities (Landfill Boundaries)					
Licensed Waste Management Facilities (Locations)	pg 51				2
Local Authority Landfill Coverage	pg 51	1	n/a	n/a	n/a
Local Authority Recorded Landfill Sites					
Potentially Infilled Land (Non-Water)	pg 51			1	12
Potentially Infilled Land (Water)	pg 52	1		9	3
Registered Landfill Sites					
Registered Waste Transfer Sites					
Registered Waste Treatment or Disposal Sites					
Hazardous Substances					
Control of Major Accident Hazards Sites (COMAH)					
Explosive Sites					
Notification of Installations Handling Hazardous Substances (NIHHS)					
Planning Hazardous Substance Consents					
Planning Hazardous Substance Enforcements					

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Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Geological					
BGS 1:625,000 Solid Geology	pg 53	Yes	n/a	n/a	n/a
BGS Estimated Soil Chemistry	pg 53	Yes	Yes	Yes	Yes
BGS Recorded Mineral Sites	pg 57		4	7	12
BGS Urban Soil Chemistry					
BGS Urban Soil Chemistry Averages					
CBSCB Compensation District			n/a	n/a	n/a
Coal Mining Affected Areas	pg 61	Yes	n/a	n/a	n/a
Mining Instability	pg 61	Yes	n/a	n/a	n/a
Man-Made Mining Cavities					
Natural Cavities					
Non Coal Mining Areas of Great Britain	pg 61	Yes		n/a	n/a
Potential for Collapsible Ground Stability Hazards	pg 61	Yes		n/a	n/a
Potential for Compressible Ground Stability Hazards	pg 61	Yes		n/a	n/a
Potential for Ground Dissolution Stability Hazards				n/a	n/a
Potential for Landslide Ground Stability Hazards	pg 61	Yes	Yes	n/a	n/a
Potential for Running Sand Ground Stability Hazards	pg 61	Yes		n/a	n/a
Potential for Shrinking or Swelling Clay Ground Stability Hazards	pg 61	Yes		n/a	n/a
Radon Potential - Radon Affected Areas	pg 62	Yes	n/a	n/a	n/a
Radon Potential - Radon Protection Measures			n/a	n/a	n/a
Industrial Land Use					
Contemporary Trade Directory Entries	pg 63	3	3	8	11
Fuel Station Entries	pg 65			1	
Points of Interest - Commercial Services	pg 65	2	1	3	5
Points of Interest - Education and Health					
Points of Interest - Manufacturing and Production	pg 66			1	5
Points of Interest - Public Infrastructure	pg 66		1	7	5
Points of Interest - Recreational and Environmental	pg 67		1		3
Gas Pipelines					
Underground Electrical Cables					

Summary

Data Type	Page Number	On Site	0 to 250m	251 to 500m	501 to 1000m (*up to 2000m)
Sensitive Land Use					
Ancient Woodland	pg 69	1	3	9	33
Areas of Adopted Green Belt					
Areas of Unadopted Green Belt					
Areas of Outstanding Natural Beauty					
Environmentally Sensitive Areas					
Forest Parks					
Local Nature Reserves					
Marine Nature Reserves					
National Nature Reserves					
National Parks					
Nitrate Sensitive Areas					
Nitrate Vulnerable Zones					
Ramsar Sites					
Sites of Special Scientific Interest					
Special Areas of Conservation					
Special Protection Areas					
World Heritage Sites					

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SE (S)	0	1	287950 206650
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NE (N)	0	1	287950 206800
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NE (E)	0	1	287950 206689
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A13NW (SE)	0	1	287943 206689
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SW (S)	0	1	287943 206650
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NW (N)	0	1	287943 206800
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NE (NE)	7	1	288000 206800
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NW (N)	22	1	287943 206850
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NW (N)	40	1	287900 206850
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SW (SW)	44	1	287850 206600
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NW (NW)	51	1	287850 206850
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NE (NE)	67	1	288050 206850
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NW (NW)	70	1	287800 206850
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NW (NW)	112	1	287800 206900
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13SE (SE)	115	1	288150 206550
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NE (NE)	115	1	288100 206850
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NW (NW)	146	1	287700 206800
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NE (NE)	178	1	288150 206900
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NE (E)	191	1	288200 206750
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NW (NW)	202	1	287650 206850
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NW (NW)	221	1	287650 206900
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A13NE (NE)	246	1	288200 206950

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12NE (W)	246	1	287600 206800
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12NE (W)	246	1	287600 206750
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NE (S)	259	1	288000 206300
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12NE (NW)	266	1	287600 206900
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A14SW (SE)	273	1	288300 206500
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NE (S)	275	1	288050 206300
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A8NW (S)	292	1	287900 206250
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A8NW (S)	292	1	287943 206250
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12NE (W)	296	1	287550 206800
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A12NE (W)	300	1	287550 206850
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12NE (NW)	313	1	287550 206900
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13NE (NE)	314	1	288250 207000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A13SE (SE)	316	1	288250 206350
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A8NW (S)	342	1	287900 206200
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A18SE (NE)	344	1	288250 207050
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NE (S)	345	1	287950 206200
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12NE (W)	350	1	287500 206850
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A14SW (SE)	351	1	288300 206350
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12NE (NW)	378	1	287500 206950
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A19SW (NE)	384	1	288300 207050
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A17SE (NW)	389	1	287550 207050
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A8NW (S)	392	1	287900 206150

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A8NW (S)	392	1	287943 206150
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A8NE (SE)	397	1	288250 206250
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12NE (W)	399	1	287450 206850
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12NE (NW)	401	1	287500 207000
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A14SW (E)	408	1	288450 206600
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A12NE (NW)	409	1	287450 206900
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A14NW (E)	409	1	288450 206689
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A19SW (NE)	415	1	288300 207100
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A14SW (E)	418	1	288450 206500
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A14NW (E)	423	1	288450 206700
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A12NE (NW)	424	1	287450 206950
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A19SW (NE)	426	1	288350 207050
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A14SW (SE)	431	1	288450 206450
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A14NW (NE)	431	1	288400 206950
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A8NE (S)	433	1	288100 206150
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A14NW (NE)	448	1	288400 207000
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding of Property Situated Below Ground Level	A19SW (NE)	449	1	288300 207150
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A14SW (E)	458	1	288500 206600
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A14SW (E)	459	1	288500 206650
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A17SE (NW)	459	1	287500 207100
	BGS Groundwater Flooding Susceptibility Flooding Type: Potential for Groundwater Flooding to Occur at Surface	A14SW (SE)	479	1	288500 206450
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A8NE (S)	480	1	288100 206100

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Groundwater Flooding Susceptibility Flooding Type: Limited Potential for Groundwater Flooding to Occur	A8NE (S)	494	1	287950 206050
1	**Discharge Consents** Operator: Mr William Slocombe Property Type: Domestic Property (Single) Location: 1a Gellicaebryn Road Glyneath Neat, Glyneath, Neath Port Talbot Cbc, Sa11 5ed Authority: Natural Resources Wales Catchment Area: Not Supplied Reference: Bb4026601 Permit Version: 1 Effective Date: 17th June 1978 Issued Date: 17th June 1978 Revocation Date: Not Supplied Discharge Type: Unspecified Discharge Environment: Land/Soakaway Receiving Water: Underground Strata **Status: New Consent, by Application (Water Resources Act 1991, Section 88)** Positional Accuracy: Located by supplier to within 10m	A13SW (W)	167	2	287702 206682
2	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Swo.Heathfield Avenue Glynneat Authority: Natural Resources Wales Catchment Area: NEATH - CONF WITH NEDD FECHAN AND MELLTE TO TL Reference: BP0038901 Permit Version: 1 Effective Date: 26th August 1987 Issued Date: 26th August 1987 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: River Neath **Status: Effective** Positional Accuracy: Located by supplier to within 100m	A14SW (SE)	324	2	288330 206440
2	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Swo.Heathfield Avenue Glynneat Authority: Natural Resources Wales Catchment Area: NEATH - CONF WITH NEDD FECHAN AND MELLTE TO TL Reference: Bp0038901 Permit Version: 1 Effective Date: 26th August 1987 Issued Date: 26th August 1987 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: River Neath **Status: Effective** Positional Accuracy: Located by supplier to within 10m	A14SW (SE)	324	2	288330 206440
3	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Swo Rear Whitting St Glyn Authority: Natural Resources Wales Catchment Area: River Neath Reference: BW2903901 Permit Version: 1 Effective Date: 1st February 1956 Issued Date: 1st February 1956 Revocation Date: 31st March 2004 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: River Neath **Status: Revoked (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 100m	A8NE (SE)	352	2	288270 206320

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
4	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Cso In Footpath Adj Bethel Rd, Bethel Road, Glynneath, Neath Port Talbot Authority: Natural Resources Wales Catchment Area: NEATH - CONF WITH NEDD FECHAN AND MELLTE TO TL Reference: Wqd001597 Permit Version: 1 Effective Date: 21st May 2008 Issued Date: 21st May 2008 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: River Neath **Status: Effective** Positional Accuracy: Located by supplier to within 10m	A14SW (E)	358	2	288400 206586
4	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Cso In Footpath Adj Bethel Rd, Bethel Road, Glynneath, Neath Port Talbot Authority: Natural Resources Wales Catchment Area: NEATH - CONF WITH NEDD FECHAN AND MELLTE TO TL Reference: Wqd001597 Permit Version: 1 Effective Date: 21st May 2008 Issued Date: 21st May 2008 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: River Neath **Status: Effective** Positional Accuracy: Located by supplier to within 10m	A14SW (E)	358	2	288400 206586
4	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Cso In Footpath Adj Bethel Rd, Bethel Road, Glynneath, Neath Port Talbot Authority: Natural Resources Wales Catchment Area: River Neath Reference: Npswqd001597 Permit Version: 1 Effective Date: 21st May 2008 Issued Date: 21st May 2008 Revocation Date: Not Supplied Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: River Neath **Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 10m	A14SW (E)	358	2	288400 206586
5	**Discharge Consents** Operator: Esso Petroleum Co Ltd Property Type: Not Supplied Location: Glynneath Express Service Station, Neath Road, Glynneath, West Glamorgan, Sa11 5ew Authority: Natural Resources Wales Catchment Area: NEATH - CONF WITH NEDD FECHAN AND MELLTE TO TL Reference: Bp0297501 Permit Version: 2 Effective Date: 26th November 2012 Issued Date: 26th November 2012 Revocation Date: Not Supplied Discharge Type: Trade Discharges - Site Drainage Discharge Environment: Into Land Receiving Water: To Land **Status: Effective** Positional Accuracy: Located by supplier to within 10m	A12SE (SW)	363	2	287580 206390

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
5	**Discharge Consents** Operator: Esso Petroleum Co Ltd Property Type: Production And Distribution Of Oil Location: Glynneath Express Service Station, Neath Road, Glynneath, West Glamorgan, Sa11 5ew Authority: Natural Resources Wales Catchment Area: Not Supplied Reference: Bp0297501 Permit Version: 1 Effective Date: 25th March 2002 Issued Date: 25th March 2002 Revocation Date: 25th November 2012 Discharge Type: Trade Discharges - Site Drainage Discharge Environment: Into Land Receiving Water: To Land **Status: New Consent (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 10m	A12SE (SW)	363	2	287580 206390
6	**Discharge Consents** Operator: Williams J Property Type: Undefined Or Other Location: Glyn Neath Lon-A-Nant Authority: Natural Resources Wales Catchment Area: River Neath Reference: Bp0010801 Permit Version: 1 Effective Date: 13th February 1986 Issued Date: 13th February 1986 Revocation Date: 29th July 1994 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: To Land **Status: Consent expired** Positional Accuracy: Located by supplier to within 100m	A19SW (NE)	415	2	288300 207100
7	**Discharge Consents** Operator: Mr Graham Morris Property Type: Domestic Property (Single) Location: Maes Y Berllan Abernant Hir Glynnea, Abernant, Glynneath, Sa11 5ru Authority: Natural Resources Wales Catchment Area: River Neath Reference: BM0045101 Permit Version: 1 Effective Date: 10th March 1986 Issued Date: 10th March 1986 Revocation Date: Not Supplied Discharge Type: Unspecified Discharge Environment: Into Land Receiving Water: To Land **Status: New Consent, by Application (Water Resources Act 1991, Section 88)** Positional Accuracy: Located by supplier to within 100m	A12SE (W)	480	2	287400 206600
8	**Discharge Consents** Operator: Cuddy P Sons Ltd Property Type: Undefined Or Other Location: Glynneath Office Building At 5a Mor, Office Building At 5a Morfa Gl Authority: Natural Resources Wales Catchment Area: River Neath Reference: Bp0106201 Permit Version: 1 Effective Date: 3rd November 1988 Issued Date: 3rd November 1988 Revocation Date: 2nd November 1992 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Tributary Of River Neath **Status: Consent expired** Positional Accuracy: Located by supplier to within 100m	A12SE (SW)	529	2	287400 206400

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
9	**Discharge Consents** Operator: Handley W J Property Type: Domestic Property (Single) Location: Hendrewyddil Farm Pontwalby Glynnea, Pontwalby Glynneath. Authority: Natural Resources Wales Catchment Area: River Neath Reference: Bp0109901 Permit Version: 1 Effective Date: 30th November 1988 Issued Date: 30th November 1988 Revocation Date: 1st June 1994 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: To Land **Status: Consent expired** Positional Accuracy: Located by supplier to within 100m	A9NW (SE)	669	2	288500 206100
10	**Discharge Consents** Operator: John Pearce Haulage Property Type: Undefined Or Other Location: Glyn Neath Willow Fields(Outlet Nor, Willow Fields(Outlet Northern Authority: Natural Resources Wales Catchment Area: River Neath Reference: Bp0106001 Permit Version: 1 Effective Date: 3rd November 1988 Issued Date: 3rd November 1988 Revocation Date: 23rd February 1994 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: Tributary Of River Neath **Status: Consent expired** Positional Accuracy: Located by supplier to within 100m	A7NE (SW)	699	2	287300 206200
11	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewage Disposal Works Location: Rear Godfrey Avenue Glynneath Npt, Glynneath, Neath Port Talbot Authority: Natural Resources Wales Catchment Area: NEATH - CONF WITH NEDD FECHAN AND MELLTE TO TL Reference: Bp0319301 Permit Version: 2 Effective Date: 7th January 2008 Issued Date: 7th January 2008 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: River Neath **Status: Effective** Positional Accuracy: Located by supplier to within 10m	A7SE (SW)	848	2	287385 205876
11	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewage Disposal Works Location: Rear Godfrey Avenue Glynneath Npt, Glynneath, Neath Port Talbot Authority: Natural Resources Wales Catchment Area: NEATH - CONF WITH NEDD FECHAN AND MELLTE TO TL Reference: Bp0319301 Permit Version: 2 Effective Date: 7th January 2008 Issued Date: 7th January 2008 Revocation Date: Not Supplied Discharge Type: Sewage Discharges - Stw Storm Overflow/Storm Tank - Water Company Discharge Environment: Freshwater Stream/River Receiving Water: River Neath **Status: Effective** Positional Accuracy: Located by supplier to within 10m	A7SE (SW)	848	2	287385 205876

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
12	**Discharge Consents** Operator: F Cox Property Type: Undefined Or Other Location: Woodlands Bungalow Banwen Rd. Glynn, Banwen Rd. Glynneath Authority: Natural Resources Wales Catchment Area: River Neath Reference: Bp0105001 Permit Version: 1 Effective Date: 8th November 1988 Issued Date: 8th November 1988 Revocation Date: 11th July 1994 Discharge Type: Unspecified Discharge Environment: Not Supplied Receiving Water: To Land **Status: Consent expired** Positional Accuracy: Located by supplier to within 100m	A19SE (NE)	858	2	288800 207100
13	**Discharge Consents** Operator: Dwr Cymru Cyfyngedig Property Type: Sewerage Network - Sewers - Water Company Location: Rear Of Godfrey Avenue Glynneath, Neath Port Talbot Authority: Natural Resources Wales Catchment Area: Not Supplied Reference: Bp0319301 Permit Version: 1 Effective Date: 31st March 2008 Issued Date: 7th March 2005 Revocation Date: 6th January 2008 Discharge Type: Public Sewage: Storm Sewage Overflow Discharge Environment: Freshwater Stream/River Receiving Water: Unknown Water **Status: Consent without application (Water Resources Act 1991, Schedule 10)** Positional Accuracy: Located by supplier to within 100m	A7SE (SW)	885	2	287300 205900
14	**Discharge Consents** Operator: Celtic Energy Ltd Property Type: Coal Extraction, Surface Location: Outlet B Derlwyn Occs Authority: Natural Resources Wales Catchment Area: River Neath Reference: Bp0048502 Permit Version: 2 Effective Date: 12th March 1997 Issued Date: 12th March 1997 Revocation Date: 24th August 1998 Discharge Type: Minewater Discharge Environment: Not Supplied Receiving Water: Nant Y Gwyddyl **Status: Revoked (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 10m	A23SE (N)	919	2	288210 207720
14	**Discharge Consents** Operator: Celtic Energy Ltd Property Type: Coal Extraction, Surface Location: Derlwyn Occs Point C Authority: Natural Resources Wales Catchment Area: River Neath Reference: Bp0048506 Permit Version: 2 Effective Date: 12th March 1997 Issued Date: 12th March 1997 Revocation Date: 24th August 1998 Discharge Type: Trade Effluent Discharge Environment: Not Supplied Receiving Water: Nant Y Gwyddyl **Status: Revoked (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 10m	A23SE (N)	933	2	288260 207720

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
14	**Discharge Consents** Operator: Celtic Energy Ltd Property Type: Coal Extraction, Surface Location: Derlwyn Occs Point C Authority: Natural Resources Wales Catchment Area: River Neath Reference: Bp0048506 Permit Version: 1 Effective Date: 4th September 1990 Issued Date: 4th September 1990 Revocation Date: 11th March 1997 Discharge Type: Trade Effluent Discharge Environment: Not Supplied Receiving Water: Nant Y Gwyddyl **Status: Authorisation revoked** Positional Accuracy: Located by supplier to within 100m	A23SE (N)	933	2	288260 207720
14	**Discharge Consents** Operator: Celtic Energy Ltd Property Type: Coal Extraction, Surface Location: Derlwyn Occs Point C Authority: Natural Resources Wales Catchment Area: River Neath Reference: BP0048507 Permit Version: 1 Effective Date: 4th September 1990 Issued Date: 4th September 1990 Revocation Date: 10th July 2001 Discharge Type: Trade Effluent Discharge Environment: Not Supplied Receiving Water: Nant Y Gwyddl, Trib Of River N **Status: Revoked (Water Resources Act 1991, Section 88 & Schedule 10 as amended by Environment Act 1995)** Positional Accuracy: Located by supplier to within 10m	A23SE (N)	933	2	288260 207720
15	**Discharge Consents** Operator: Celtic Energy Ltd Property Type: Coal Extraction, Surface Location: Outlet B Derlwyn Occs Authority: Natural Resources Wales Catchment Area: River Neath Reference: Bp0048502 Permit Version: 1 Effective Date: 4th September 1990 Issued Date: 4th September 1990 Revocation Date: 11th March 1997 Discharge Type: Minewater Discharge Environment: Not Supplied Receiving Water: Nant Y Gwyddyl **Status: Authorisation revoked** Positional Accuracy: Located by supplier to within 100m	A23SE (N)	924	2	288210 207725
16	**Discharge Consents** Operator: Celtic Energy Ltd Property Type: Coal Extraction, Surface Location: Derlwyn Occs Point A Authority: Natural Resources Wales Catchment Area: River Neath Reference: Bp0048505 Permit Version: 1 Effective Date: 4th September 1990 Issued Date: 4th September 1990 Revocation Date: 2nd February 1998 Discharge Type: Trade Effluent Discharge Environment: Not Supplied Receiving Water: Nant Hir, Trib Of River Neath **Status: Consent expired** Positional Accuracy: Located by supplier to within 100m	A22SE (N)	965	2	287600 207730

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
16	**Discharge Consents** Operator: Celtic Energy Ltd Property Type: Coal Extraction, Surface Location: Derlwyn Occs (Point A) Settling Lag, Settling Lagoon Authority: Natural Resources Wales Catchment Area: River Neath Reference: Bp0048501 Permit Version: 1 Effective Date: 4th September 1990 Issued Date: 4th September 1990 Revocation Date: 2nd February 1998 Discharge Type: Minewater Discharge Environment: Not Supplied Receiving Water: Nant Hir Tributary Of River Ne **Status: Consent expired** Positional Accuracy: Located by supplier to within 100m	A22SE (N)	977	2	287555 207730
17	**Local Authority Pollution Prevention and Controls** Name: Tesco Stores Ltd Location: Neath Road, Glynneath, NEATH, West Glamorgan, SA11 5EW Authority: Neath Port Talbot County Borough Council, Environmental Health Department Permit Reference: E3/1/101 Dated: 26th February 1999 Process Type: Local Authority Pollution Prevention and Control Description: PG1/14 Petrol filling station **Status: Permitted** Positional Accuracy: Automatically positioned to the address	A12SE (SW)	360	3	287597 206363
	Nearest Surface Water Feature	A13NE (N)	0	-	287945 206749
18	**Pollution Incidents to Controlled Waters** Property Type: Water Company Sewage: Surface Water Outfall Location: Location Description Not Available Authority: Environment Agency, Welsh Region Pollutant: Light Oil Note: Not Supplied Incident Date: 4th February 1995 Incident Reference: 22637 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A13NW (W)	0	4	287900 206700
19	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: 100 Metres Downstream Of, Glynneath Trading Estate Authority: Environment Agency, Welsh Region Pollutant: Oils - Petrol Note: Blocked Sewer Incident Date: 18th September 1996 Incident Reference: 29981 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Overflow Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A14SW (E)	259	4	288300 206600
20	**Pollution Incidents to Controlled Waters** Property Type: Council Premises Location: 200 M Down Stream Of, Langley Bridge Authority: Environment Agency, Welsh Region Pollutant: Light Oil Note: Not Supplied Incident Date: 25th April 1991 Incident Reference: 202 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Overflow Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A8NE (S)	259	4	288000 206300

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
20	**Pollution Incidents to Controlled Waters** Property Type: Water Company Sewage: Storm Overflow Location: 200 M Down Stream Of, Langley Bridge, Glynneath Authority: Environment Agency, Welsh Region Pollutant: Unknown Note: Blocked Sewer Incident Date: 17th March 1992 Incident Reference: 3906 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Overflow Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A8NE (S)	263	4	288000 206295
21	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Glynneath Rear, Of Hawarden Industrial Estate Authority: Environment Agency, Welsh Region Pollutant: Crude Sewage Note: Inadequate Design/Capacity Incident Date: 16th September 1996 Incident Reference: 30076 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Direct Discharge Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A12NE (W)	262	4	287600 206700
21	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Location Description Not Available Authority: Environment Agency, Welsh Region Pollutant: Light Oil Note: Inadequate Design/Capacity Incident Date: 23rd July 1996 Incident Reference: 29519 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Direct Discharge Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A12NE (W)	263	4	287600 206695
22	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: 50 Metres Below, Glynneath Traffic Lights Authority: Environment Agency, Welsh Region Pollutant: Crude Sewage Note: River Neath; Overflow Incident Date: 3rd July 1997 Incident Reference: 32912 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Blocked Sewer Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A14SW (SE)	273	4	288300 206500
22	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Crude Sewage Overflow 50M Downstream, Glyn Neath Traffic Lights Authority: Environment Agency, Welsh Region Pollutant: Crude Sewage Note: River Neath; Overflow Incident Date: 25th September 1997 Incident Reference: 33992 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Blocked Sewer Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A14SW (SE)	275	4	288300 206495
22	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Crude Sewage Overflow In Glynneath, 50M Downstream Traffic Lights Authority: Environment Agency, Welsh Region Pollutant: Crude Sewage Note: River Neath; Overflow Incident Date: 25th September 1997 Incident Reference: 33992 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Blocked Sewer Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A14SW (SE)	279	4	288305 206495

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
23	**Pollution Incidents to Controlled Waters** Property Type: Water Company Sewage: Storm Overflow Location: Glynneath Authority: Environment Agency, Welsh Region Pollutant: Unknown Note: Not Supplied Incident Date: 19th March 1992 Incident Reference: 3993 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Overflow Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A8NE (SE)	329	4	288200 206300
24	**Pollution Incidents to Controlled Waters** Property Type: Council Premises Location: Location Description Not Available Authority: Environment Agency, Welsh Region Pollutant: Washery Effluent Note: Blocked Sewer Incident Date: 8th April 1991 Incident Reference: 121 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Overflow Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A8NW (S)	342	4	287900 206200
24	**Pollution Incidents to Controlled Waters** Property Type: Water Company Sewage: Storm Overflow Location: Lamb And Flag, Glynneath Authority: Environment Agency, Welsh Region Pollutant: Sewage - Treated Effluent Note: Not Supplied Incident Date: 19th December 1991 Incident Reference: 1739 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Overflow Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A8NW (S)	347	4	287850 206200
25	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: In Garden Of 12 Lon Y Nant Authority: Environment Agency, Welsh Region Pollutant: Light Oil Note: Not Supplied Incident Date: 5th June 1996 Incident Reference: 28797 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Effluent Discharge Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A14NW (E)	358	4	288350 206845
25	**Pollution Incidents to Controlled Waters** Property Type: Coal Location: Lon Y Nant Authority: Environment Agency, Welsh Region Pollutant: Polyelectrolyte/Flocculent Note: Not Supplied Incident Date: 5th June 1996 Incident Reference: 28797 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Effluent Discharge Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A14NW (E)	359	4	288350 206850
25	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: In Garden Of 12 Lon Y Nant Authority: Environment Agency, Welsh Region Pollutant: Polyelectrolyte/Flocculent Note: Not Supplied Incident Date: 5th June 1996 Incident Reference: 28797 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Effluent Discharge Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A14NW (E)	363	4	288355 206845

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
26	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Glynneath Crude Sewage Overflow, 100M Downstream, Glynneath Traffic Lights Authority: Environment Agency, Welsh Region Pollutant: Crude Sewage Note: River Neath; Overflow Incident Date: 23rd February 1998 Incident Reference: 34833 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Blocked Sewer Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A14SW (E)	359	4	288400 206595
26	**Pollution Incidents to Controlled Waters** Property Type: Water Company Sewage: Storm Overflow Location: Cso Opposite, Halfway Public House And, Opposite Royal Authority: Environment Agency, Welsh Region Pollutant: Crude Sewage Note: Not Supplied Incident Date: 16th May 1995 Incident Reference: 23954 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Overflow Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A14SW (E)	359	4	288400 206600
27	**Pollution Incidents to Controlled Waters** Property Type: Water Company Sewage: Sewerage Location: 100 Meters Down Stream Of, Traffic Light, Rock Pool Authority: Environment Agency, Welsh Region Pollutant: Crude Sewage Note: Blocked Sewer Incident Date: 12th June 1992 Incident Reference: 4797 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Overflow Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A14SW (SE)	369	4	288400 206500
27	**Pollution Incidents to Controlled Waters** Property Type: Water Company Sewage: Storm Overflow Location: Glynneath Authority: Environment Agency, Welsh Region Pollutant: Crude Sewage Note: Not Supplied Incident Date: 5th September 1991 Incident Reference: 1468 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Overflow Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A14SW (SE)	370	4	288400 206495
27	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Crude Sewage Overflow At Glynneath Authority: Environment Agency, Welsh Region Pollutant: Crude Sewage Note: River Neath; Overflow Incident Date: 19th August 1997 Incident Reference: 33258 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Blocked Sewer Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A14SW (E)	373	4	288405 206505
27	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Glynneath Crude Sewage Overflow Authority: Environment Agency, Welsh Region Pollutant: Crude Sewage Note: River Neath; Overflow Incident Date: 30th April 1998 Incident Reference: 35558 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Blocked Sewer Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A14SW (E)	374	4	288405 206500

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
27	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Glynneath Crude Sewage Overflow Authority: Environment Agency, Welsh Region Pollutant: Crude Sewage Note: River Neath; Overflow Incident Date: 5th February 1998 Incident Reference: 34706 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Blocked Sewer Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A14SW (SE)	375	4	288405 206495
28	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: 100 Metres Downstream Of, Glynneath Traffic Lights Authority: Environment Agency, Welsh Region Pollutant: Unknown Note: Blocked Sewer Incident Date: 12th September 1996 Incident Reference: 29875 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Overflow Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A14NW (E)	374	4	288400 206700
29	**Pollution Incidents to Controlled Waters** Property Type: Council Premises Location: Langley Bridge Authority: Environment Agency, Welsh Region Pollutant: Sewage - Treated Effluent Note: Blocked Sewer Incident Date: 5th May 1991 Incident Reference: 698 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Overflow Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A9NW (SE)	387	4	288300 206300
30	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Behind Rugby Club At Glynneath, Brook Crosses, Glynneath Road Authority: Environment Agency, Welsh Region Pollutant: Mud/Clay/Soil Note: Poor Management Incident Date: 14th March 1997 Incident Reference: 31660 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Runoff Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A14NW (E)	396	4	288400 206795
30	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Lon Y Nant, Glynneath Authority: Environment Agency, Welsh Region Pollutant: Crude Sewage Note: Not Supplied Incident Date: 14th November 1996 Incident Reference: 30517 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A14NW (E)	397	4	288400 206800
31	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Glynneath, Langley Bridge Authority: Environment Agency, Welsh Region Pollutant: Mud/Clay/Soil Note: River Neath; Direct Introduction Incident Date: 14th August 1997 Incident Reference: 33222 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Deliberate Act Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A8NW (SW)	401	4	287700 206200

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
32	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Location Description Not Available Authority: Environment Agency, Welsh Region Pollutant: Miscellaneous - Tip Leachate Note: Not Supplied Incident Date: 15th October 1994 Incident Reference: 21574 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Unknown Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A12SE (SW)	433	4	287500 206400
33	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Glynneath Authority: Environment Agency, Welsh Region Pollutant: Crude Sewage Note: Not Supplied Incident Date: 13th December 1991 Incident Reference: 1727 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Unknown Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A14NW (E)	472	4	288500 206700
34	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Generally From, Opencast Sites In, Glynneath Authority: Environment Agency, Welsh Region Pollutant: Mud/Clay/Soil Note: Weather Incident Date: 12th May 1997 Incident Reference: 32282 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Effluent Discharge Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A8SE (S)	550	4	288000 206000
34	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: CWMGWRACH Authority: Environment Agency, Welsh Region Pollutant: Mud/Clay/Soil Note: Weather Incident Date: 12th May 1997 Incident Reference: 32282 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Effluent Discharge Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A8SE (S)	555	4	288000 205995
35	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Near, Pontwalby Bridge Authority: Environment Agency, Welsh Region Pollutant: Mud/Clay/Soil Note: Not Supplied Incident Date: 6th May 1995 Incident Reference: 24026 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Unknown Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A14SW (E)	559	4	288600 206600
36	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Nant Y Gwyddl, Reserve, Glamorgan Authority: Environment Agency, Welsh Region Pollutant: Oils - Diesel (Including Agricultural) Note: Not Supplied Incident Date: 17th May 1992 Incident Reference: 4620 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Unknown Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A19SW (NE)	627	4	288400 207300

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
37	**Pollution Incidents to Controlled Waters** Property Type: Water Company Sewage: Sewerage Location: Opposite Halfway House Authority: Environment Agency, Welsh Region Pollutant: Crude Sewage Note: Not Supplied Incident Date: 10th May 1995 Incident Reference: 24207 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Leakage Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A14NE (E)	667	4	288700 206695
37	**Pollution Incidents to Controlled Waters** Property Type: Water Company Sewage: Sewerage Location: Opposite Halfway, Pub In, Glynneath Authority: Environment Agency, Welsh Region Pollutant: Mud/Clay/Soil Note: Not Supplied Incident Date: 26th April 1995 Incident Reference: 23736 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Leakage Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A14NE (E)	668	4	288700 206700
38	**Pollution Incidents to Controlled Waters** Property Type: Building Sites Location: Village Of, Glynneath, Brook Authority: Environment Agency, Welsh Region Pollutant: Rubble/Litter Or Solids Note: Deliberate Act Incident Date: 27th September 1995 Incident Reference: 25977 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Direct Discharge Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A14NE (E)	727	4	288750 206750
39	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Opposite Community Centre Authority: Environment Agency, Welsh Region Pollutant: Mud/Clay/Soil Note: Poor Operational Practise Incident Date: 12th March 1995 Incident Reference: 23355 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Direct Discharge Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A7SE (SW)	847	4	287500 205800
39	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: CLYNE Authority: Environment Agency, Welsh Region Pollutant: Mud/Clay/Soil Note: Poor Operational Practise Incident Date: 13th March 1995 Incident Reference: 23356 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Direct Discharge Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A7SE (SW)	849	4	287505 205795
39	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Between, Resolven And, ABERDULAIS Authority: Environment Agency, Welsh Region Pollutant: Foam/Soap Suds Note: Poor Operational Practise Incident Date: 12th March 1995 Incident Reference: 23355 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Direct Discharge Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A7SE (SW)	852	4	287500 205795

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
40	**Pollution Incidents to Controlled Waters** Property Type: Abandoned mine Location: Langey Bridge, Glynneath Authority: Environment Agency, Welsh Region Pollutant: Crude Sewage Note: Neglect Incident Date: 2nd June 1992 Incident Reference: 4782 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Effluent Discharge Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A8SE (S)	891	4	288200 205700
40	**Pollution Incidents to Controlled Waters** Property Type: Abandoned mine Location: Bridge Over Dual Carriageway Authority: Environment Agency, Welsh Region Pollutant: Rubbish Note: Not Supplied Incident Date: 3rd January 1991 Incident Reference: 2562 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Effluent Discharge Incident Severity: Category 2 - Significant Incident Positional Accuracy: Located by supplier to within 100m	A8SE (S)	896	4	288200 205695
41	**Pollution Incidents to Controlled Waters** Property Type: Road Location: Lamb And Flag, Glynneath Authority: Environment Agency, Welsh Region Pollutant: Mud/Clay/Soil Note: Poor Operational Practise Incident Date: 31st May 1995 Incident Reference: 24161 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Effluent Discharge Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A7SE (SW)	893	4	287405 205805
41	**Pollution Incidents to Controlled Waters** Property Type: Road Location: Pentre Street, Glynneath Authority: Environment Agency, Welsh Region Pollutant: Mud/Clay/Soil Note: Poor Operational Practise Incident Date: 31st May 1995 Incident Reference: 24161 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Effluent Discharge Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A7SE (SW)	896	4	287400 205805
41	**Pollution Incidents to Controlled Waters** Property Type: Road Location: Cwmgwrach And, Rheola Down To, ABERDULAIS Authority: Environment Agency, Welsh Region Pollutant: Mud/Clay/Soil Note: Poor Operational Practise Incident Date: 31st May 1995 Incident Reference: 24161 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Effluent Discharge Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A7SE (SW)	897	4	287405 205800
41	**Pollution Incidents to Controlled Waters** Property Type: Road Location: Glynneath Authority: Environment Agency, Welsh Region Pollutant: Mud/Clay/Soil Note: Poor Operational Practise Incident Date: 31st May 1995 Incident Reference: 24161 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Effluent Discharge Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A7SE (SW)	899	4	287395 205805

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
41	**Pollution Incidents to Controlled Waters** Property Type: Road Location: Glynneath To, ABERDULAIS Authority: Environment Agency, Welsh Region Pollutant: Mud/Clay/Soil Note: Poor Operational Practise Incident Date: 31st May 1995 Incident Reference: 24161 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Effluent Discharge Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A7SE (SW)	900	4	287400 205800
41	**Pollution Incidents to Controlled Waters** Property Type: Road Location: Between, Glynneath And, RESOLVEN Authority: Environment Agency, Welsh Region Pollutant: Unknown Note: Poor Operational Practise Incident Date: 31st May 1995 Incident Reference: 24161 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Effluent Discharge Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A7SE (SW)	901	4	287405 205795
41	**Pollution Incidents to Controlled Waters** Property Type: Road Location: RESOLVEN Authority: Environment Agency, Welsh Region Pollutant: Mud/Clay/Soil Note: Poor Operational Practise Incident Date: 31st May 1995 Incident Reference: 24161 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Effluent Discharge Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A7SE (SW)	903	4	287395 205800
41	**Pollution Incidents to Controlled Waters** Property Type: Road Location: River, Cwmgwrach To, ABERDULAIS Authority: Environment Agency, Welsh Region Pollutant: Mud/Clay/Soil Note: Poor Operational Practise Incident Date: 31st May 1995 Incident Reference: 24161 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Effluent Discharge Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A7SE (SW)	904	4	287400 205795
41	**Pollution Incidents to Controlled Waters** Property Type: Road Location: Cwmgwrach Bridge Authority: Environment Agency, Welsh Region Pollutant: Mud/Clay/Soil Note: Poor Operational Practise Incident Date: 31st May 1995 Incident Reference: 24161 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Effluent Discharge Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A7SE (SW)	907	4	287395 205795
42	**Pollution Incidents to Controlled Waters** Property Type: Not Given Location: Pool At Glyneath Lights Authority: Environment Agency, Welsh Region Pollutant: Light Oil Note: Not Supplied Incident Date: 4th April 1996 Incident Reference: 28242 Catchment Area: Not Given Receiving Water: Not Given Cause of Incident: Unknown Incident Severity: Category 3 - Minor Incident Positional Accuracy: Located by supplier to within 100m	A15SW (E)	962	4	289000 206500

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
43	**Prosecutions Relating to Authorised Processes** Location: 8 High Street, GLYN-NEATH, . Prosecution Text: Three Charges Involving Knowingly Permitting Waste To Be Deposited And Disposed Of On Land Without A Waste Management Licence, And One Charge Of Causing Black Smoke To Be Emmited (Charged By Neath Port Talbot Council Under Caa84) Prosecution Act: Epa90 Hearing Date: 13th September 2000 Verdict: Guilty Fine: 650 Costs: 250 Positional Accuracy: Manually positioned to the address or location	A13SE (S)	79	4	287975 206481
	River Quality Name: Neath GQA Grade: River Quality B Reach: Cwmgwrach Stw Outlet-Conf.Nedd Fechan Estimated Distance (km): 4.9 Flow Rate: Flow less than 10 cumecs Flow Type: River Year: 2000	A8NE (S)	364	4	288003 206190
	River Quality Name: Neath Canal GQA Grade: River Quality B Reach: Abergarwed Weir - Glynneath Estimated Distance (km): 7.1 Flow Rate: Flow greater than 80 cumecs Flow Type: Canal Year: 2000	A7NW (SW)	931	4	287091 206099

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
44	**River Quality Chemistry Sampling Points** Name: Gwrelych Reach: Confluence River Neath To Confluence Tributary Cwm Ceffyl Estimated Distance: 2.00 Objective: Not Supplied Positional Accuracy: Located by supplier to within 10m Year: 1990 GQA Grade: River Quality Chemistry GQA Grade B - Good Compliance: Not Supplied Year: 1993 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 1994 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 1995 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 1996 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 1997 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 1998 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 1999 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2000 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2001 GQA Grade: River Quality Chemistry GQA Grade B - Good Compliance: Not Supplied Year: 2002 GQA Grade: River Quality Chemistry GQA Grade B - Good Compliance: Not Supplied Year: 2003 GQA Grade: River Quality Chemistry GQA Grade B - Good Compliance: Not Supplied Year: 2004 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2005 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2006 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2007 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2008 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2009 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied	A14SE (E)	858	4	288899 206602

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
44	**River Quality Chemistry Sampling Points** Name: Gwrelych Reach: Confluence Tributary Cwm Ceffyl To Llyn Fawr Estimated Distance: 1.80 Objective: Not Supplied Positional Accuracy: Located by supplier to within 10m Year: 1990 GQA Grade: River Quality Chemistry GQA Grade B - Good Compliance: Not Supplied Year: 1993 GQA Grade: River Quality Chemistry GQA Grade B - Good Compliance: Not Supplied Year: 1994 GQA Grade: River Quality Chemistry GQA Grade B - Good Compliance: Not Supplied Year: 1995 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 1996 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 1997 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 1998 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 1999 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2000 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2001 GQA Grade: River Quality Chemistry GQA Grade B - Good Compliance: Not Supplied Year: 2002 GQA Grade: River Quality Chemistry GQA Grade B - Good Compliance: Not Supplied Year: 2003 GQA Grade: River Quality Chemistry GQA Grade B - Good Compliance: Not Supplied Year: 2004 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2005 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2006 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2007 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2008 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied Year: 2009 GQA Grade: River Quality Chemistry GQA Grade A - Very Good Compliance: Not Supplied	A14SE (E)	858	4	288899 206602
45	**Water Abstractions** Operator: Alfred Mcalpine Construction Ltd Licence Number: 21/58/72/0032 Permit Version: Not Supplied Location: Location Description Not Available Authority: Environment Agency, Welsh Region Abstraction: General Industrial Abstraction Type: Not Supplied Source: River Daily Rate (m3): 32 Yearly Rate (m3): 5500 Details: Inland Water Afon Nedd; Neath; West Glam. Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A8NE (S)	325	4	288000 206230

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Celtic Energy Ltd Licence Number: 21/58/72/0024 Permit Version: Not Supplied Location: Location Description Not Available Authority: Environment Agency, Welsh Region Abstraction: Wash Unspecified Abstraction Type: Not Supplied Source: Surface Daily Rate (m3): 163 Yearly Rate (m3): 40914 Details: River Neath At Aberpergwm Washery; Glynneath Authorised Start: Not Supplied Authorised End: Not Supplied Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 100m	A1NW (SW)	1818	4	286320 205660
	Water Abstractions Operator: Energybuild Limited Licence Number: 21/58/72/0030 Permit Version: 104 Location: Tributary Of River Neath At Penstar Tip Authority: Natural Resources Wales Abstraction: Extractive: Make-Up Or Top Up Water Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 7th March 2005 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(W)	1992	2	285990 206010
	Water Abstractions Operator: Energybuild Limited Licence Number: 21/58/72/0030 Permit Version: 103 Location: Tributary Of River Neath At Penstar Tip Authority: Environment Agency, Welsh Region Abstraction: Extractive: Make-Up Or Top Up Water Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 1st October 2003 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(W)	1992	4	285990 206010
	Water Abstractions Operator: Anthracite Mining Limited Licence Number: 21/58/72/0030 Permit Version: 102 Location: Tributary Of River Neath At Penstar Tip Authority: Environment Agency, Welsh Region Abstraction: Extractive: Make-Up Or Top Up Water Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 14th December 2000 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(W)	1992	4	285990 206010

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Water Abstractions Operator: Dragon Coal Corporation Ltd Licence Number: 21/58/72/0030 Permit Version: 101 Location: Tributary Of River Neath At Penstar Tip Authority: Environment Agency, Welsh Region Abstraction: Extractive: Make-Up Or Top Up Water Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 January Authorised End: 31 December Permit Start Date: 19th June 2000 Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(W)	1992	4	285990 206010
	Water Abstractions Operator: Energybuild Limited Licence Number: 21/58/72/0030 Permit Version: Not Supplied Location: Aberpergwm Colliery, Engine Cottage Site Authority: Natural Resources Wales Abstraction: Extractive: Make-Up Or Top Up Water Abstraction Type: Water may be abstracted from a single point Source: Surface Daily Rate (m3): Not Supplied Yearly Rate (m3): Not Supplied Details: Not Supplied Authorised Start: 01 January Authorised End: 31 December Permit Start Date: Not Supplied Permit End Date: Not Supplied Positional Accuracy: Located by supplier to within 10m	(W)	1992	2	285990 206010
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - Medium Vulnerability Combined Vulnerability: Medium Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Intermediate Bedrock Flow: Well Connected Fractures Dilution: >550 mm/year Baseflow Index: <40% Superficial Patchiness: >90% Superficial Thickness: 3-10m Superficial Recharge: Low	A13NW (N)	0	2	287919 206748
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - Medium Vulnerability Combined Vulnerability: Medium Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Intermediate Bedrock Flow: Well Connected Fractures Dilution: >550 mm/year Baseflow Index: <40% Superficial Patchiness: >90% Superficial Thickness: 3-10m Superficial Recharge: Low	A13NW (SE)	0	2	287943 206689

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - Medium Vulnerability Combined Vulnerability: Medium Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Intermediate Bedrock Flow: Well Connected Fractures Dilution: >550 mm/year Baseflow Index: 40-70% Superficial Patchiness: <90% Superficial Thickness: 3-10m Superficial Recharge: Low	A13NE (NE)	0	2	288000 206756
	Groundwater Vulnerability Map Combined Classification: Secondary Superficial Aquifer - Medium Vulnerability Combined Vulnerability: Medium Combined Aquifer: Productive Bedrock Aquifer, Productive Superficial Aquifer Pollutant Speed: Intermediate Bedrock Flow: Well Connected Fractures Dilution: >550 mm/year Baseflow Index: 40-70% Superficial Patchiness: <90% Superficial Thickness: 3-10m Superficial Recharge: Low	A13NE (E)	0	2	288000 206689
	Bedrock Aquifer Designations Aquifer Designation: Secondary Aquifer - A	A13NW (SE)	0	2	287943 206689
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - A	A13NW (SE)	0	2	287943 206689
	Superficial Aquifer Designations Aquifer Designation: Secondary Aquifer - Undifferentiated	A13NW (N)	0	2	287919 206748
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13NW (NW)	0	2	287938 206693
	Extreme Flooding from Rivers or Sea without Defences Type: Extent of Extreme Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13NE (E)	115	2	288185 206737
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13NW (NW)	0	2	287938 206693
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13SE (S)	116	2	288022 206457
	Flooding from Rivers or Sea without Defences Type: Extent of Flooding from Rivers or Sea without Defences Flood Plain Type: Fluvial Models Boundary Accuracy: As Supplied	A13SW (SW)	142	2	287742 206535
	Areas Benefiting from Flood Defences Type: Area Benefiting from Flood Defences Boundary Accuracy: As Supplied	A13SE (S)	116	2	288022 206457
	Flood Water Storage Areas None				
	Flood Defences None				

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
46	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 124.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A13NE (N)	0	5	287976 206789
47	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 49.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A13NE (N)	0	5	287976 206789
48	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 261.5 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A13NW (NW)	0	5	287921 206708
49	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 17.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A13NW (N)	0	5	287942 206734
50	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 38.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A13NE (N)	0	5	287945 206749
51	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 55.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A13NE (N)	0	5	287945 206749
52	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 4.3 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A13NE (NE)	23	5	288012 206819
53	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 53.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A13NE (NE)	26	5	288015 206823
54	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 130.0 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A13NW (NW)	39	5	287797 206797

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
55	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 35.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A13NW (NW)	49	5	287797 206797
56	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 21.5 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A13NE (NE)	70	5	288046 206866
57	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 15.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A13NE (N)	74	5	287968 206900
58	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 29.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A13NE (N)	74	5	287968 206900
59	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 3.4 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A13NW (NW)	77	5	287771 206772
60	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 16.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A13NW (W)	79	5	287766 206756
61	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 14.1 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A13NW (W)	87	5	287762 206744
62	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 51.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A13NE (NE)	91	5	288060 206882
63	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 2.8 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A13NE (N)	93	5	287990 206921

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
64	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 12.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A13NW (W)	95	5	287760 206730
65	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 149.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A13NW (N)	95	5	287874 206901
66	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 120.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A13NE (N)	95	5	287991 206923
67	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 78.3 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A13NW (W)	100	5	287760 206730
68	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 110.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A13SW (SW)	133	5	287774 206533
69	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 40.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A13NW (W)	163	5	287686 206717
70	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 109.1 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A13NW (W)	178	5	287685 206706
71	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 384.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A13SE (S)	207	5	288001 206351
72	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 22.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A13NE (NE)	229	5	288194 206924

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
73	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 30.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A13NE (NE)	235	5	288176 206967
74	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 14.3 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A13SW (SW)	242	5	287671 206497
75	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 359.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A18SE (N)	255	5	288054 207074
76	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 47.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A13SW (SW)	255	5	287659 206489
77	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 262.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A12NE (W)	258	5	287579 206728
78	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 157.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 2	A18SW (N)	266	5	287864 207074
79	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 25.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A13SW (W)	270	5	287610 206627
80	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 5.9 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A12NE (W)	277	5	287578 206723
81	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 34.7 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A12NE (W)	277	5	287578 206723

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
82	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 75.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A12NE (W)	278	5	287582 206701
83	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 634.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A12NE (W)	285	5	287563 206754
84	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 514.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A13NW (NW)	294	5	287606 206969
85	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 303.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A13NW (NW)	294	5	287606 206969
86	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 100.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A12SE (W)	295	5	287586 206619
87	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 22.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A12SE (W)	295	5	287585 206624
88	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 6.7 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A12SE (W)	295	5	287580 206641
89	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 131.4 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A12SE (W)	295	5	287586 206619
90	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 280.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A8NE (SE)	297	5	288123 206299

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
91	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 15.8 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A13SW (SW)	303	5	287614 206476
92	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 10.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A12SE (SW)	318	5	287599 206473
93	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 22.4 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A12SE (SW)	319	5	287585 206527
94	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 34.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A12SE (SW)	320	5	287589 206505
95	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 253.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A12SE (SW)	328	5	287589 206471
96	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 311.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Nedd Catchment Name: Neath Primacy: 1	A14SW (SE)	329	5	288355 206483
97	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 26.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Nedd Catchment Name: Neath Primacy: 1	A8NW (S)	346	5	287879 206198
98	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 217.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Nedd Catchment Name: Neath Primacy: 1	A8NE (S)	346	5	288006 206208
99	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 58.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Nedd Catchment Name: Neath Primacy: 1	A8NW (S)	346	5	287934 206197

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
100	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 150.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Nedd Catchment Name: Neath Primacy: 1	A14SW (SE)	347	5	288322 206384
101	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 345.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A12NE (W)	352	5	287498 206717
102	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 15.1 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A14NW (NE)	352	5	288315 206956
103	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 236.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Nant y Gwyddyl Catchment Name: Neath Primacy: 1	A14NW (E)	357	5	288353 206830
104	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 164.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Nant y Gwyddyl Catchment Name: Neath Primacy: 1	A14NW (NE)	361	5	288327 206948
105	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 197.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Nedd Catchment Name: Neath Primacy: 1	A8NW (S)	361	5	287856 206186
106	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 79.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Nant Rhyd-y-gau Catchment Name: Neath Primacy: 1	A8NW (S)	361	5	287856 206186
107	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 141.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Nedd Catchment Name: Neath Primacy: 1	A8NE (S)	382	5	288139 206218
108	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 15.5 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A18SW (N)	388	5	287767 207177

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
109	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 13.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A18SW (N)	398	5	287776 207189
110	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 305.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A18SW (N)	408	5	287782 207201
111	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 134.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Nant Hir Catchment Name: Neath Primacy: 1	A8NE (SE)	410	5	288270 206247
112	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 75.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A7NE (SW)	413	5	287606 206263
113	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 61.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Nant Rhyd-y-gau Catchment Name: Neath Primacy: 1	A8NW (S)	425	5	287894 206117
114	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 56.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Nant y Gwyddyl Catchment Name: Neath Primacy: 1	A14NW (E)	426	5	288447 206726
115	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 30.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Nant y Gwyddyl Catchment Name: Neath Primacy: 1	A14NW (E)	427	5	288438 206768
116	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 135.3 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A14NW (E)	427	5	288438 206768
117	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 2.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A14NW (E)	431	5	288459 206695

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
118	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 5.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Nant y Gwyddyl Catchment Name: Neath Primacy: 1	A14NW (E)	433	5	288461 206697
119	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 59.5 Watercourse Level: Underground Permanent: True Watercourse Name: Nant y Gwyddyl Catchment Name: Neath Primacy: 1	A14NW (E)	435	5	288464 206692
120	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 2.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A14NW (E)	441	5	288457 206748
121	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 226.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Nedd Catchment Name: Neath Primacy: 1	A14SW (E)	445	5	288484 206636
122	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 234.9 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A19SW (NE)	455	5	288290 207171
123	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 443.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A18SE (NE)	459	5	288203 207233
124	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 171.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A9NW (SE)	463	5	288417 206317
125	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 130.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Nant Hir Catchment Name: Neath Primacy: 1	A9NW (SE)	470	5	288383 206265
126	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 176.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Nant Rhyd-y-gau Catchment Name: Neath Primacy: 1	A8NW (S)	470	5	287936 206072

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127	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 146.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Nant y Gwyddyl Catchment Name: Neath Primacy: 1	A19SW (NE)	488	5	288394 207097
128	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 283.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A12NE (W)	491	5	287360 206686
129	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 2.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A12NE (W)	501	5	287346 206761
130	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 728.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A12NE (W)	501	5	287346 206761
131	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 268.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A14NW (E)	511	5	288497 206889
132	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 80.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A8NW (S)	512	5	287691 206079
133	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 48.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Nedd Catchment Name: Neath Primacy: 1	A8NW (S)	512	5	287691 206079
134	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 258.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A8NW (S)	540	5	287765 206021
135	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 492.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A19SW (NE)	544	5	288337 207250

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
136	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 224.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Nedd Catchment Name: Neath Primacy: 1	A8NW (SW)	556	5	287655 206047
137	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 70.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A8NW (SW)	556	5	287655 206047
138	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 52.8 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A9NW (SE)	557	5	288510 206287
139	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 147.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Nant Hir Catchment Name: Neath Primacy: 1	A9NW (SE)	557	5	288510 206287
140	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 15.9 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A7NE (SW)	561	5	287392 206326
141	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 364.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A12NE (W)	572	5	287276 206749
142	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 91.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A7NE (SW)	577	5	287378 206318
143	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 300.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Nant y Gwyddyl Catchment Name: Neath Primacy: 1	A19SW (NE)	582	5	288404 207235
144	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 12.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A8SW (S)	589	5	287698 205993

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
145	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 8.7 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A8SW (S)	596	5	287705 205982
146	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 39.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A8SW (S)	600	5	287711 205976
147	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 319.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A9NW (SE)	605	5	288539 206243
148	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 493.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Nant yr Eithin Catchment Name: Neath Primacy: 1	A8SE (S)	614	5	288147 205975
149	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 9.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Nant yr Eithin Catchment Name: Neath Primacy: 1	A8SE (S)	615	5	288130 205967
150	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 71.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Nant yr Eithin Catchment Name: Neath Primacy: 1	A8SE (S)	616	5	288121 205963
151	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 72.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A8SE (S)	619	5	288043 205938
152	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 25.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Nant Rhyd-y-gau Catchment Name: Neath Primacy: 1	A8SE (S)	619	5	288043 205938
153	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 105.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A12SW (W)	620	5	287245 206643

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
154	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 535.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A12SW (W)	629	5	287229 206673
155	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 134.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Nant Rhyd-y-gau Catchment Name: Neath Primacy: 1	A8SE (S)	633	5	288065 205928
156	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 7.4 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A8SW (S)	634	5	287717 205938
157	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 65.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A8SW (S)	641	5	287717 205930
158	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 116.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A12SW (W)	642	5	287240 206574
159	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 62.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Nant Hir Catchment Name: Neath Primacy: 1	A9NE (SE)	646	5	288639 206342
160	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 21.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A9NE (SE)	646	5	288639 206342
161	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 94.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Nedd Catchment Name: Neath Primacy: 1	A14NE (E)	661	5	288691 206707
162	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 119.9 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A14NE (E)	661	5	288691 206707

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
163	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 8.8 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A7NE (SW)	667	5	287299 206272
164	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 21.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A7NE (SW)	676	5	287291 206269
165	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 238.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A9NE (SE)	685	5	288654 206282
166	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 17.8 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A7NE (SW)	696	5	287276 206253
167	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 12.1 Watercourse Level: Underground Permanent: True Watercourse Name: Nant Hir Catchment Name: Neath Primacy: 1	A9NE (SE)	707	5	288696 206320
168	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 145.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A7NW (SW)	714	5	287261 206244
169	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 162.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Nant Hir Catchment Name: Neath Primacy: 1	A9NE (SE)	716	5	288702 206309
170	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 300.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 2	A12SW (W)	729	5	287120 206682
171	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 107.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A12SW (W)	739	5	287129 206615

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172	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 9.2 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A8SW (S)	740	5	287823 205808
173	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 6.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A8SW (S)	747	5	287828 205800
174	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 49.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Nant Gwrelych Catchment Name: Neath Primacy: 1	A14NE (E)	749	5	288784 206692
175	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 79.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Nedd Catchment Name: Neath Primacy: 1	A14NE (E)	750	5	288784 206694
176	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 261.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A12SW (W)	753	5	287132 206546
177	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 208.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A8SE (S)	754	5	288085 205809
178	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 135.6 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A14NE (E)	755	5	288741 206916
179	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 139.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Nant Rhyd-y-gau Catchment Name: Neath Primacy: 1	A8SE (S)	755	5	288078 205806
180	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 9.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A14NE (E)	758	5	288772 206794

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181	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 93.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A19SE (NE)	760	5	288714 207049
182	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 42.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A9NE (SE)	765	5	288705 206208
183	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 50.4 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A14NE (E)	765	5	288778 206801
184	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 371.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Nedd Catchment Name: Neath Primacy: 1	A7SE (SW)	765	5	287481 205908
185	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 64.4 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A7SE (SW)	765	5	287481 205908
186	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 69.9 Watercourse Level: Underground Permanent: True Watercourse Name: Nant Gwrelych Catchment Name: Neath Primacy: 1	A14SE (E)	770	5	288809 206653
187	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 40.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A7SE (SW)	783	5	287524 205861
188	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 126.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A9SW (SE)	794	5	288524 205958
189	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 107.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A9SW (SE)	794	5	288524 205958

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
190	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 9.8 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A7SE (SW)	796	5	287551 205831
191	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 105.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A18NE (N)	800	5	288209 207597
192	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 216.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A7SE (SW)	800	5	287558 205824
193	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 159.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A18NE (N)	800	5	288209 207597
194	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 67.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A14NE (E)	803	5	288807 206842
195	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 302.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A17SW (NW)	816	5	287102 207134
196	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 98.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A17NE (NW)	822	5	287327 207435
197	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 118.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A17NE (NW)	822	5	287327 207435
198	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 43.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Nedd Catchment Name: Neath Primacy: 1	A14SE (E)	825	5	288861 206681

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
199	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 268.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A19NW (NE)	832	5	288470 207505
200	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 146.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Nant Gwrelych Catchment Name: Neath Primacy: 1	A14SE (E)	833	5	288873 206627
201	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 211.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A9NE (SE)	834	5	288762 206168
202	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 42.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Nant Hir Catchment Name: Neath Primacy: 1	A9NE (SE)	834	5	288762 206168
203	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 305.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Nant y Gwyddyl Catchment Name: Neath Primacy: 1	A19NW (NE)	834	5	288500 207485
204	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 161.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A17NE (NW)	845	5	287393 207511
205	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 132.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A17NE (NW)	849	5	287380 207507
206	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 96.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A8SE (S)	852	5	288057 205703
207	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 482.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Nant Rhyd-y-gau Catchment Name: Neath Primacy: 1	A8SE (S)	853	5	288054 205702

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
208	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 24.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A9SW (SE)	853	5	288489 205862
209	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 14.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 2	A9SW (SE)	853	5	288489 205862
210	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 362.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A12NW (W)	855	5	286996 206701
211	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 161.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A8SW (S)	856	5	287635 205731
212	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 14.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A14SE (E)	857	5	288869 206365
213	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 125.7 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A7NW (SW)	857	5	287142 206161
214	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 397.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A17SW (NW)	860	5	287074 207177
215	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 280.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A9NE (SE)	861	5	288769 206126
216	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 234.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Nant Hir Catchment Name: Neath Primacy: 1	A9NE (SE)	861	5	288769 206126

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
217	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 9.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A9SW (SE)	863	5	288479 205845
218	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 548.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A17SW (NW)	865	5	287101 207237
219	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 177.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Afon Nedd Catchment Name: Neath Primacy: 1	A14SE (E)	867	5	288904 206676
220	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 66.2 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A14NE (E)	869	5	288868 206870
221	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 72.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A14SE (E)	869	5	288889 206394
222	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 52.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A12NW (W)	876	5	286972 206866
223	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 55.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A17SW (NW)	886	5	287141 207335
224	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 44.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A17SW (NW)	886	5	287141 207335
225	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 4.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A8SE (S)	893	5	288132 205678

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
226	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 7.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A8SE (S)	897	5	288135 205674
227	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 38.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A3NE (S)	901	5	288142 205672
228	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 25.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Nant Pergwm Catchment Name: Neath Primacy: 1	A12NW (W)	902	5	286943 206807
229	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 18.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A12NW (W)	902	5	286943 206807
230	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 39.6 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A12NW (W)	903	5	286943 206825
231	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 19.7 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A17NW (NW)	904	5	287152 207377
232	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 513.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A17NW (NW)	911	5	287158 207395
233	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 197.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Nant Pergwm Catchment Name: Neath Primacy: 1	A11NE (W)	916	5	286929 206785
234	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 62.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A14SE (E)	918	5	288947 206437

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
235	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 18.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A7SE (SW)	920	5	287463 205738
236	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 20.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A11NE (W)	920	5	286928 206862
237	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 53.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A7SE (SW)	927	5	287475 205723
238	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 2.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A15SW (E)	927	5	288961 206473
239	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 47.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A7SE (SW)	928	5	287446 205739
240	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 53.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A15SW (E)	929	5	288967 206497
241	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 124.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A14NE (E)	930	5	288920 206919
242	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 13.7 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A7NW (W)	935	5	287001 206323
243	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 16.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A17NW (NW)	939	5	287097 207363

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
244	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 52.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A7NW (W)	941	5	286998 206310
245	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 20.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A15SW (E)	941	5	288974 206459
246	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 29.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A17NE (NW)	943	5	287453 207654
247	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 128.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A17NE (NW)	944	5	287464 207661
248	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 50.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A17NE (NW)	944	5	287437 207648
249	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 4.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A23SE (N)	946	5	288217 207746
250	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 36.8 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A23SW (N)	947	5	287749 207746
251	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 233.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A23SW (N)	947	5	287786 207753
252	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 38.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A23SW (N)	948	5	287749 207746

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
253	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 102.1 Watercourse Level: On ground surface Permanent: True Watercourse Name: Nant Gwrelych Catchment Name: Neath Primacy: 1	A15SW (E)	948	5	288988 206539
254	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 129.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A7NW (SW)	950	5	287003 206252
255	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 16.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A23SE (N)	950	5	288221 207749
256	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 3.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A23SE (N)	950	5	288221 207749
257	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 5.9 Watercourse Level: Not Supplied Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A7NW (SW)	952	5	287003 206252
258	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 83.2 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A23SE (N)	952	5	288224 207750
259	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 123.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A7SE (SW)	963	5	287395 205728
260	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 116.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A23SE (N)	965	5	288219 207765
261	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 141.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A7SE (SW)	966	5	287403 205720

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
262	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 217.0 Watercourse Level: On ground surface Permanent: True Watercourse Name: Nant yr Eithin Catchment Name: Neath Primacy: 1	A9SW (SE)	968	5	288451 205711
263	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 49.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A11NE (W)	973	5	286873 206777
264	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 48.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A22SE (N)	978	5	287567 207734
265	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 4.0 Watercourse Level: Underground Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A22SE (N)	979	5	287560 207734
266	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 129.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A2NE (S)	979	5	287524 205642
267	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 268.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A7NW (SW)	981	5	287022 206125
268	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 25.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A22SE (N)	984	5	287604 207751
269	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 78.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A11NE (W)	991	5	286855 206750
270	**OS Water Network Lines** Watercourse Form: Lake Watercourse Length: 33.9 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A11NE (W)	992	5	286854 206812

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
271	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 68.3 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A17NE (NW)	994	5	287414 207692
272	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 69.6 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A17NE (NW)	994	5	287414 207692
273	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 413.7 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A7SE (SW)	996	5	287366 205708
274	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 151.5 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A11NE (W)	996	5	286850 206818
275	**OS Water Network Lines** Watercourse Form: Inland river Watercourse Length: 222.4 Watercourse Level: On ground surface Permanent: True Watercourse Name: Not Supplied Catchment Name: Neath Primacy: 1	A23SW (N)	999	5	287620 207771

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
276	**Licensed Waste Management Facilities (Locations)** Licence Number: GB3493HZ Location: Land Off Heol Y Glyn, Glynneath, Glynneath, Neath, Neath Port Talbot, SA11 5BB Operator Name: Cuddy Demolition And Dismantling Limited Operator Location: Not Supplied Authority: Natural Resources Wales Site Category: Not Supplied **Licence Status: Effective** Issued: 9th August 2018 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A14NW (NE)	617	2	288587 206969
276	**Licensed Waste Management Facilities (Locations)** Licence Number: 900085 Location: Glynneath, Neath, SA11 5BB Operator Name: Cuddy Demolition And Dismantling Limited Operator Location: Not Supplied Authority: Natural Resources Wales Site Category: Use of waste in construction <50,000 tps **Licence Status: Issued** Issued: 15th August 2014 Last Modified: Not Supplied Expires: Not Supplied Suspended: Not Supplied Revoked: Not Supplied Surrendered: Not Supplied IPPC Reference: Not Supplied Positional Accuracy: Located by supplier to within 10m	A14NW (NE)	617	2	288587 206969
	Local Authority Landfill Coverage Name: Neath Port Talbot County Borough Council - Has supplied landfill data		0	3	287943 206689
277	**Potentially Infilled Land (Non-Water)** Bearing Ref: S Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1983	A8NE (S)	273	-	288086 206314
278	**Potentially Infilled Land (Non-Water)** Bearing Ref: NE Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1983	A19SW (NE)	568	-	288345 207269
279	**Potentially Infilled Land (Non-Water)** Bearing Ref: N Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1983	A18NE (N)	596	-	288181 207392
280	**Potentially Infilled Land (Non-Water)** Bearing Ref: N Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1983	A18NE (N)	658	-	288027 207485
281	**Potentially Infilled Land (Non-Water)** Bearing Ref: N Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1983	A18NE (N)	681	-	288224 207467
282	**Potentially Infilled Land (Non-Water)** Bearing Ref: S Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1983	A8SE (S)	704	-	288070 205857
283	**Potentially Infilled Land (Non-Water)** Bearing Ref: NW Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1983	A17NE (NW)	834	-	287558 207581
284	**Potentially Infilled Land (Non-Water)** Bearing Ref: N Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1983	A18NE (N)	867	-	288217 207664
285	**Potentially Infilled Land (Non-Water)** Bearing Ref: NE Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1983	A19NW (NE)	867	-	288395 207593

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
286	**Potentially Infilled Land (Non-Water)** Bearing Ref: E Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1983	A14NE (E)	899	-	288921 206773
287	**Potentially Infilled Land (Non-Water)** Bearing Ref: N Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1983	A23SE (N)	943	-	288129 207760
288	**Potentially Infilled Land (Non-Water)** Bearing Ref: NW Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1983	A17NE (NW)	972	-	287387 207655
289	**Potentially Infilled Land (Non-Water)** Bearing Ref: E Use: Unknown Filled Ground (Pit, quarry etc) Date of Mapping: 1983	A15NW (E)	993	-	288969 206987
290	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1921	A13SE (S)	0	-	287974 206584
291	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1964	A8NE (S)	251	-	288012 206309
292	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1938	A8NE (S)	254	-	288028 206313
293	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1938	A8NW (S)	282	-	287855 206266
294	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1938	A8NE (S)	300	-	287976 206244
295	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1938	A8NW (S)	375	-	287815 206179
296	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1964	A12SE (SW)	389	-	287535 206403
297	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1964	A7NE (SW)	391	-	287589 206316
298	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1938	A12SE (SW)	391	-	287534 206432
299	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1921	A14NW (E)	448	-	288455 206792
300	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1964	A14SW (SE)	509	-	288498 206362
301	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1964	A7NE (SW)	724	-	287300 206151
302	**Potentially Infilled Land (Water)** Use: Unknown Filled Ground (Pond, marsh, river, stream, dock etc) Date of Mapping: 1938	A12SW (W)	823	-	287074 206491

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS 1:625,000 Solid Geology Description: Pennine Lower Coal Measures Formation And South Wales Lower Coal Measures Formation (Undifferentiated)	A13NW (SE)	0	1	287943 206689
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 25 - 35 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A13NW (N)	0	1	287919 206748
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A13SE (SE)	0	1	287949 206678
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 45 - 60 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A13NW (SE)	0	1	287943 206689
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A13SW (W)	244	1	287623 206680
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 35 - 45 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A8NE (S)	284	1	288003 206272
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 25 - 35 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A8NE (S)	348	1	287965 206197

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 45 - 60 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A14SW (E)	365	1	288419 206568
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 25 - 35 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A14NW (NE)	397	1	288377 206900
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 45 - 60 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A14NW (E)	432	1	288439 206787
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A12NE (W)	442	1	287406 206851
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 25 - 35 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A8NE (S)	507	1	288105 206071
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 45 - 60 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A8NW (SW)	508	1	287642 206110

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A8NE (S)	537	1	288035 206020
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A8SE (S)	550	1	287979 205996
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A8SW (SW)	612	1	287625 206000
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A14NE (E)	689	1	288708 206764
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A9NW (SE)	745	1	288567 206059
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 25 - 35 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A17SE (NW)	756	1	287285 207305

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 25 - 35 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A17SE (NW)	786	1	287296 207359
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 25 - 35 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A17SW (NW)	812	1	287091 207102
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: <15 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A9NE (SE)	843	1	288729 206100
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 35 - 45 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A14SE (E)	883	1	288925 206568
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A9NE (SE)	888	1	288880 206296
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 25 - 35 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 30 - 45 mg/kg	A17NE (NW)	898	1	287507 207629

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Estimated Soil Chemistry Source: British Geological Survey, National Geoscience Information Service Soil Sample Type: Sediment Arsenic Concentration: 15 - 25 mg/kg Cadmium Concentration: <1.8 mg/kg Chromium Concentration: 60 - 90 mg/kg Lead Concentration: <100 mg/kg Nickel Concentration: 15 - 30 mg/kg	A15NW (E)	962	1	289000 206689
303	**BGS Recorded Mineral Sites** Site Name: Aber-Nant Fach Location: Glyn-Neath, Neath, West Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 153723 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: South Wales Lower Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A13NE (N)	73	1	287972 206900
304	**BGS Recorded Mineral Sites** Site Name: Aber-Nant Location: Glyn-Neath, Neath, West Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 125185 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: South Wales Lower Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A13NW (NW)	138	1	287722 206859
305	**BGS Recorded Mineral Sites** Site Name: Aber-Nant Location: Glyn-Neath, Neath, West Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 125192 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: South Wales Lower Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A13NW (N)	199	1	287936 207021
306	**BGS Recorded Mineral Sites** Site Name: Aber-Nant Fach Location: Glyn-Neath, Neath, West Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 153722 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: South Wales Lower Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A13NE (NE)	242	1	288165 206992
307	**BGS Recorded Mineral Sites** Site Name: Aber-Nant Fach Location: Glyn-Neath, Neath, West Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 153721 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: South Wales Lower Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A18SE (N)	257	1	288042 207079

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
308	**BGS Recorded Mineral Sites** Site Name: Aber-Nant Location: Glyn-Neath, Neath, West Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 125198 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: South Wales Lower Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A18SE (NE)	339	1	288152 207124
309	**BGS Recorded Mineral Sites** Site Name: Aber-Nant Location: Glyn-Neath, Neath, West Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 125202 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: South Wales Lower Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A14NW (NE)	362	1	288293 207022
310	**BGS Recorded Mineral Sites** Site Name: Aber-Nant Location: Glyn-Neath, Neath, West Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 125188 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: South Wales Lower Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A18SW (N)	407	1	287858 207216
311	**BGS Recorded Mineral Sites** Site Name: Aber-Nant Location: Glyn-Neath, Neath, West Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 125200 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: South Wales Lower Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A18SE (NE)	407	1	288215 207165
312	**BGS Recorded Mineral Sites** Site Name: Aber-Nant Location: Glyn-Neath, Neath, West Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 125204 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: South Wales Lower Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A19SW (NE)	485	1	288313 207187
313	**BGS Recorded Mineral Sites** Site Name: Glyn-Melyn Location: Glyn-Neath, Neath, West Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 153720 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: South Wales Lower Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A18SE (NE)	486	1	288245 207240

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
314	**BGS Recorded Mineral Sites** Site Name: Rock Colliery Location: Glyn-Neath, Neath, West Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 125201 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: South Wales Lower Coal Measures Formation Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A18NE (N)	586	1	288222 207365
315	**BGS Recorded Mineral Sites** Site Name: Rock Colliery Location: Glyn-Neath, Neath, West Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 125182 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: South Wales Lower Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A18NW (NW)	601	1	287653 207367
316	**BGS Recorded Mineral Sites** Site Name: Rock Colliery Location: Glyn-Neath, Neath, West Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 125186 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: South Wales Lower Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A18NW (N)	641	1	287726 207427
317	**BGS Recorded Mineral Sites** Site Name: Derlwyn Occs Location: Blaengwrach, Glynneath, West Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 3035 Type: Opencast **Status: Ceased** Operator: Celtic Energy Ltd. Operator Location: Not Supplied Periodic Type: Carboniferous Geology: South Wales Lower Coal Measures Formation Commodity: Coal - Opencast Positional Accuracy: Unknown	A18NE (N)	672	1	288000 207500
318	**BGS Recorded Mineral Sites** Site Name: Blaen-Llanbi Location: Glyn-Neath, Neath, West Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 153718 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: South Wales Lower Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A19SW (NE)	690	1	288445 207344
319	**BGS Recorded Mineral Sites** Site Name: Nant-Yr-Eithin Location: Glyn-Neath, Neath, West Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 125194 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: South Wales Lower Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A8SE (S)	706	1	288076 205856

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
320	**BGS Recorded Mineral Sites** Site Name: Blaen-Llanbi Location: Glyn-Neath, Neath, West Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 153717 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: South Wales Lower Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A19NW (NE)	708	1	288360 207430
321	**BGS Recorded Mineral Sites** Site Name: Rock Colliery Location: Glyn-Neath, Neath, West Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 125195 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: South Wales Lower Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A18NE (N)	847	1	288082 207670
322	**BGS Recorded Mineral Sites** Site Name: Blaen-Nant-Y-Gwyddyl Location: Glyn-Neath, Neath, West Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 125199 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: South Wales Lower Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A18NE (N)	855	1	288211 207653
323	**BGS Recorded Mineral Sites** Site Name: Blaen-Nant-Y-Gwyddyl Location: Glyn-Neath, Neath, West Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 125205 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: South Wales Lower Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A19NW (NE)	866	1	288381 207599
324	**BGS Recorded Mineral Sites** Site Name: Rock Colliery Location: Glyn-Neath, Neath, West Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 125197 Type: Underground **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: South Wales Lower Coal Measures Formation Commodity: Coal - Deep Positional Accuracy: Located by supplier to within 10m	A23SE (N)	963	1	288137 207779
325	**BGS Recorded Mineral Sites** Site Name: Ynys-Cymmer Location: Glyn-Neath, Neath, West Glamorgan Source: British Geological Survey, National Geoscience Information Service Reference: 153719 Type: Opencast **Status: Ceased** Operator: Unknown Operator Operator Location: Not Supplied Periodic Type: Carboniferous Geology: South Wales Lower Coal Measures Formation Commodity: Sandstone Positional Accuracy: Located by supplier to within 10m	A15NW (E)	983	1	288959 206984

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	BGS Measured Urban Soil Chemistry No data available				
	BGS Urban Soil Chemistry Averages No data available				
	Coal Mining Affected Areas Description: In an area which may be affected by coal mining activity. It is recommended that a coal mining report is obtained from the Coal Authority. Contact details are included in the Useful Contacts section of this report.	A13NW (SE)	0	6	287943 206689
	Mining Instability Mining Evidence: Inconclusive Coal Mining Source: Ove Arup & Partners Boundary Quality: As Supplied	A13NW (SE)	0	-	287943 206689
	Non Coal Mining Areas of Great Britain Risk: Highly Unlikely Source: British Geological Survey, National Geoscience Information Service	A13NW (SE)	0	1	287943 206689
	Potential for Collapsible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NW (SE)	0	1	287943 206689
	Potential for Collapsible Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (N)	0	1	287919 206748
	Potential for Compressible Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A13NW (SE)	0	1	287943 206689
	Potential for Compressible Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NW (N)	0	1	287919 206748
	Potential for Ground Dissolution Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NW (SE)	0	1	287943 206689
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	0	1	287856 206779
	Potential for Landslide Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13NW (N)	0	1	287942 206716
	Potential for Landslide Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A13NW (N)	0	1	287940 206730
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (SE)	0	1	287943 206689
	Potential for Landslide Ground Stability Hazards Hazard Potential: Moderate Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	185	1	288091 206981
	Potential for Landslide Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A18SE (N)	205	1	288052 207023
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (N)	0	1	287919 206748
	Potential for Running Sand Ground Stability Hazards Hazard Potential: Low Source: British Geological Survey, National Geoscience Information Service	A13NW (SE)	0	1	287943 206689
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: Very Low Source: British Geological Survey, National Geoscience Information Service	A13NW (SE)	0	1	287943 206689
	Potential for Shrinking or Swelling Clay Ground Stability Hazards Hazard Potential: No Hazard Source: British Geological Survey, National Geoscience Information Service	A13NE (NE)	231	1	288223 206828

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
	Radon Potential - Radon Affected Areas Affected Area: The property is in an Intermediate probability radon area (1 to 3% of homes are estimated to be at or above the Action Level). Source: British Geological Survey, National Geoscience Information Service	A13NW (SE)	0	1	287943 206689
	Radon Potential - Radon Affected Areas Affected Area: The property is in a Lower probability radon area (less than 1% of homes are estimated to be at or above the Action Level). Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	0	1	287874 206801
	Radon Potential - Radon Affected Areas Affected Area: The property is in a Lower probability radon area (less than 1% of homes are estimated to be at or above the Action Level). Source: British Geological Survey, National Geoscience Information Service	A13SE (SE)	0	1	287974 206626
	Radon Potential - Radon Protection Measures Protection Measure: No radon protective measures are necessary in the construction of new dwellings or extensions Source: British Geological Survey, National Geoscience Information Service	A13NW (SE)	0	1	287943 206689
	Radon Potential - Radon Protection Measures Protection Measure: No radon protective measures are necessary in the construction of new dwellings or extensions Source: British Geological Survey, National Geoscience Information Service	A13NW (NW)	0	1	287874 206801
	Radon Potential - Radon Protection Measures Protection Measure: No radon protective measures are necessary in the construction of new dwellings or extensions Source: British Geological Survey, National Geoscience Information Service	A13SE (SE)	0	1	287974 206626

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
326	**Contemporary Trade Directory Entries** Name: R A Lambert Coal Merchants Ltd Location: R A Lambert (Coal Merchants), Old Rock Sidings, Lancaster Close, Glynneath, SA11 5EF Classification: Coal & Smokeless Fuel Merchants & Distributors **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NE (NE)	0	-	287983 206726
326	**Contemporary Trade Directory Entries** Name: Scarr Resprays Location: Lancaster Close, Glynneath, Neath, West Glamorgan, SA11 5EF Classification: Car Body Repairs **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13NE (E)	0	-	287993 206707
326	**Contemporary Trade Directory Entries** Name: R A Lambert Coal Merchants Ltd Location: Glynneath, SA11 5EF Classification: Coal & Smokeless Fuel Merchants & Distributors **Status: Active** Positional Accuracy: Automatically positioned to the address	A13NE (NE)	0	-	287983 206726
327	**Contemporary Trade Directory Entries** Name: Windsor Motors Location: Lancaster Close, Glynneath, Neath, SA11 5EF Classification: Garage Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A13NE (E)	42	-	288051 206733
328	**Contemporary Trade Directory Entries** Name: Happy Launderette Glyneath Ltd Location: 16, High Street, Glynneath, Neath, West Glamorgan, SA11 5BU Classification: Laundries & Launderettes **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SE (S)	89	-	288016 206485
329	**Contemporary Trade Directory Entries** Name: Pryse Printers Location: 34, High Street, Glynneath, Neath, West Glamorgan, SA11 5BU Classification: Printers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A13SE (SE)	91	-	288070 206502
330	**Contemporary Trade Directory Entries** Name: Nelson & Son (Glynneath) Ltd Location: Oddfellows Street, Glynneath, NEATH, West Glamorgan, SA11 5DB Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SW (SE)	296	-	288313 206470
331	**Contemporary Trade Directory Entries** Name: Glynneath Industrial Laundry Location: Bethel Road, Glynneath, Neath, West Glamorgan, SA11 5DG Classification: Laundries & Launderettes **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A14SW (SE)	318	-	288351 206515
331	**Contemporary Trade Directory Entries** Name: Neath Vale Building Supplies Ltd Location: Bethel Road, Glynneath, Neath, West Glamorgan, SA11 5DG Classification: Builders' Merchants **Status: Active** Positional Accuracy: Automatically positioned to the address	A14SW (E)	320	-	288355 206521
332	**Contemporary Trade Directory Entries** Name: Evans Location: 2, Whitefield Close, Glynneath, Neath, West Glamorgan, SA11 5DY Classification: Meat - Wholesale **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12SE (SW)	351	-	287569 206459
333	**Contemporary Trade Directory Entries** Name: Esso Location: Tesco Neath Road, Glynneath, Neath, West Glamorgan, SA11 5EW Classification: Petrol Filling Stations **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A12SE (SW)	355	-	287605 206360

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
333	**Contemporary Trade Directory Entries** Name: Esso Location: Neath Road, Glynneath, Neath, West Glamorgan, SA11 5EW Classification: Petrol Filling Stations **Status: Active** Positional Accuracy: Manually positioned to the address or location	A12SE (SW)	357	-	287604 206357
333	**Contemporary Trade Directory Entries** Name: Glynneath Service Station Location: Glynneath, Neath, West Glamorgan, SA11 5EW Classification: Petrol Filling Stations **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12SE (SW)	360	-	287597 206363
333	**Contemporary Trade Directory Entries** Name: Tesco Express Location: Glynneath, Neath, West Glamorgan, SA11 5EW Classification: Petrol Filling Stations **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A12SE (SW)	360	-	287597 206363
334	**Contemporary Trade Directory Entries** Name: John Pearce Glynneath Ltd Location: 1, Wellfield Place, Glynneath, Neath, West Glamorgan, SA11 5ER Classification: Road Haulage Services **Status: Active** Positional Accuracy: Automatically positioned to the address	A7NE (SW)	618	-	287372 206237
334	**Contemporary Trade Directory Entries** Name: John Pearce Glynneath Ltd Location: 1, Wellfield Place, Glynneath, Neath, West Glamorgan, SA11 5ER Classification: Road Haulage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7NE (SW)	618	-	287372 206237
335	**Contemporary Trade Directory Entries** Name: R O Parks Hirwaun Ltd Location: 12, Plas-y-Coed, Glynneath, Neath, West Glamorgan, SA11 5SB Classification: Coal & Smokeless Fuel Merchants & Distributors **Status: Active** Positional Accuracy: Automatically positioned to the address	A7NE (SW)	686	-	287273 206284
335	**Contemporary Trade Directory Entries** Name: Glynneath Guinea Pig Rescue Location: Glynneath, Neath, West Glamorgan, SA11 5SQ Classification: Dry Cleaners **Status: Active** Positional Accuracy: Manually positioned within the geographical locality	A7NW (SW)	716	-	287237 206297
336	**Contemporary Trade Directory Entries** Name: Reliance Cleaning Solutions Location: 56, Morfa Glas, Glynneath, Neath, SA11 5RP Classification: Cleaning Services - Domestic **Status: Active** Positional Accuracy: Automatically positioned to the address	A12SW (W)	754	-	287142 206506
337	**Contemporary Trade Directory Entries** Name: The Vale Of Neath Auto Services Location: Chain Walk, Glynneath, Neath, West Glamorgan, SA11 5HE Classification: Garage Services **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7NE (SW)	761	-	287292 206097
338	**Contemporary Trade Directory Entries** Name: Paul Green Tyres Location: Unit 1-2, Glynneath Village Workshops, Glynneath, Neath, West Glamorgan, SA11 5RG Classification: Tyre Dealers **Status: Active** Positional Accuracy: Automatically positioned to the address	A7NW (SW)	882	-	287138 206114
339	**Contemporary Trade Directory Entries** Name: Paul Green Location: Unit 1-2, Glynneath Village Workshops, Glynneath, Neath, SA11 5RG Classification: Tyre Dealers **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7NW (SW)	894	-	287102 206159

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
339	**Contemporary Trade Directory Entries** Name: Mike Morgan Rallying Location: Unit 3-4, Glynneath Village Workshops, Glynneath, Neath, West Glamorgan, SA11 5RG Classification: Garage Services **Status: Active** Positional Accuracy: Manually positioned to the address or location	A7NW (SW)	904	-	287093 206154
339	**Contemporary Trade Directory Entries** Name: Elliott Building Supplies Location: Unit 13, Glynneath Village Workshops, Glynneath, Neath, SA11 5RG Classification: Builders' Merchants **Status: Inactive** Positional Accuracy: Automatically positioned to the address	A7NW (SW)	905	-	287093 206152
340	**Contemporary Trade Directory Entries** Name: Corn Stores Location: Aberdare Rd, Glynneath, Neath, West Glamorgan, SA11 5HY Classification: Agricultural Merchants **Status: Inactive** Positional Accuracy: Manually positioned to the address or location	A14NE (E)	903	-	288916 206815
341	**Fuel Station Entries** Name: Glyn Neath Express Location: Neath Road , Glynneath , Neath, Neath Port Talbot, SA11 5EW Brand: Esso Premises Type: Petrol Station **Status: Open** Positional Accuracy: Manually positioned to the address or location	A12SE (SW)	354	-	287605 206361
342	**Points of Interest - Commercial Services** Name: Scarr Resprays Location: Lancaster House, Lancaster Close, Glynneath, Neath, SA11 5EF Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A13NW (NW)	0	7	287917 206735
342	**Points of Interest - Commercial Services** Name: S'Car Resprays Location: Lancaster House, Lancaster Close, Glynneath, Neath, SA11 5EF Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A13NW (NW)	0	7	287917 206735
343	**Points of Interest - Commercial Services** Name: Windsor Motors Location: Lancaster Close, Glynneath, Neath, SA11 5EF Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A13NE (NE)	25	7	288035 206728
344	**Points of Interest - Commercial Services** Name: White Hart Garage Location: Oddfellows Street, Glynneath, Neath, SA11 5DB Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A14SW (SE)	296	7	288313 206470
344	**Points of Interest - Commercial Services** Name: Nelson & Son (Glynneath) Ltd Location: Oddfellows Street, Glynneath, Neath, SA11 5DB Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A14SW (SE)	296	7	288313 206470
344	**Points of Interest - Commercial Services** Name: Nelson & Son Glynneath Ltd Location: Oddfellows Street, Glynneath, Neath, SA11 5DB Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A14SW (SE)	296	7	288313 206470
345	**Points of Interest - Commercial Services** Name: John Pearce Glynneath Ltd Location: 1 Wellfield Place, Glynneath, Neath, SA11 5ER Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A7NE (SW)	618	7	287372 206237

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
345	**Points of Interest - Commercial Services** Name: John Pearce Glynneath Ltd Location: 1 Wellfield Place, Glynneath, Neath, SA11 5ER Category: Transport, Storage and Delivery Class Code: Distribution and Haulage Positional Accuracy: Positioned to address or location	A7NE (SW)	618	7	287372 206237
346	**Points of Interest - Commercial Services** Name: Vale of Neath Auto Services Location: 1-2 Chain Walk, Glynneath, Neath, SA11 5HE Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A7NE (SW)	749	7	287303 206103
346	**Points of Interest - Commercial Services** Name: The Vale of Neath Auto Services Location: Chain Walk, Glynneath, Neath, SA11 5HE Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A7NE (SW)	761	7	287292 206097
347	**Points of Interest - Commercial Services** Name: Mike Morgan Rallying Location: Unit 3-4 Glynneath Village Workshops, Glynneath, Neath, SA11 5RG Category: Repair and Servicing Class Code: Vehicle Repair, Testing and Servicing Positional Accuracy: Positioned to address or location	A7NW (SW)	903	7	287121 206102
348	**Points of Interest - Manufacturing and Production** Name: Identilase Ltd Location: 16a Bethania Street, Glynneath, Neath, SA11 5DE Category: Extractive Industries Class Code: Stone Quarrying and Preparation Positional Accuracy: Positioned to address or location	A13SE (SE)	266	7	288252 206425
349	**Points of Interest - Manufacturing and Production** Name: Glyn-Neath Business Parc Location: SA11 Category: Industrial Features Class Code: Business Parks and Industrial Estates Positional Accuracy: Positioned to an adjacent address or location	A7NW (SW)	837	7	287150 206191
349	**Points of Interest - Manufacturing and Production** Name: Glynneath Village Workshops Location: SA11 Category: Industrial Features Class Code: Unspecified Works Or Factories Positional Accuracy: Positioned to an adjacent address or location	A7NW (SW)	867	7	287111 206203
350	**Points of Interest - Manufacturing and Production** Name: Shaft (Disused) Location: SA10 Category: Extractive Industries Class Code: Unspecified Quarries Or Mines Positional Accuracy: Positioned to address or location	A12NW (W)	911	7	286938 206872
351	**Points of Interest - Manufacturing and Production** Name: A Davies Location: Ynys Cymmer Farm, Pontneathvaughan Road, Glynneath, Neath, SA11 5NT Category: Farming Class Code: Livestock Farming Positional Accuracy: Positioned to address or location	A15NW (E)	971	7	288968 206893
351	**Points of Interest - Manufacturing and Production** Name: A Davies Location: Ynys Cymmer Farm, Pontneathvaughan Road, Glynneath, Neath, SA11 5NT Category: Farming Class Code: Livestock Farming Positional Accuracy: Positioned to address or location	A15NW (E)	971	7	288968 206893
352	**Points of Interest - Public Infrastructure** Name: Glynneath Police Station Location: Whitting Street, Glynneath, Neath, SA11 5DH Category: Central and Local Government Class Code: Police Stations Positional Accuracy: Positioned to address or location	A13SE (SE)	143	7	288137 206481
353	**Points of Interest - Public Infrastructure** Name: Weir Location: SA11 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A8NE (S)	346	7	288090 206239

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
354	**Points of Interest - Public Infrastructure** Name: Esso Location: Neath Road, Glynneath, Neath, SA11 5EW Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A12SE (SW)	354	7	287605 206361
354	**Points of Interest - Public Infrastructure** Name: Glyn Neath Express Location: Neath Road, Glynneath, Neath, SA11 5EW Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A12SE (SW)	354	7	287605 206361
354	**Points of Interest - Public Infrastructure** Name: Esso Location: Neath Road, Glynneath, Neath, SA11 5EW Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A12SE (SW)	356	7	287606 206356
354	**Points of Interest - Public Infrastructure** Name: Tesco Express Location: Glynneath, Neath, West Glamorgan, SA11 5EW Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A12SE (SW)	360	7	287597 206363
354	**Points of Interest - Public Infrastructure** Name: Glyn Neath Express Location: Glynneath, Neath, West Glamorgan, SA11 5EW Category: Road And Rail Class Code: Petrol and Fuel Stations Positional Accuracy: Positioned to address or location	A12SE (SW)	361	7	287596 206362
354	**Points of Interest - Public Infrastructure** Name: Glynneath Fire Station Location: Wellfield Place, Neath, SA11 5ER Category: Central and Local Government Class Code: Fire Brigade Stations Positional Accuracy: Positioned to address or location	A12SE (SW)	421	7	287536 206348
355	**Points of Interest - Public Infrastructure** Name: Heap (Disused) Location: SA11 Category: Infrastructure and Facilities Class Code: Refuse Disposal Facilities Positional Accuracy: Positioned to an adjacent address or location	A8SE (S)	642	7	288090 205926
356	**Points of Interest - Public Infrastructure** Name: Weir Location: SA11 Category: Water Class Code: Weirs, Sluices and Dams Positional Accuracy: Positioned to an adjacent address or location	A8SE (S)	839	7	288055 205716
357	**Points of Interest - Public Infrastructure** Name: Spoil Heap Location: SA11 Category: Infrastructure and Facilities Class Code: Waste Storage, Processing and Disposal Positional Accuracy: Positioned to an adjacent address or location	A9NE (SE)	953	7	288874 206123
358	**Points of Interest - Public Infrastructure** Name: Cemetery Location: Not Supplied Category: Infrastructure and Facilities Class Code: Cemeteries and Crematoria Positional Accuracy: Positioned to an adjacent address or location	A19SE (NE)	961	7	288907 207104
358	**Points of Interest - Public Infrastructure** Name: Glyn-Neath Cemetery Location: SA11 Category: Infrastructure and Facilities Class Code: Cemeteries and Crematoria Positional Accuracy: Positioned to an adjacent address or location	A19SE (NE)	961	7	288907 207105
359	**Points of Interest - Recreational and Environmental** Name: Playground Location: Nr Earlsfield Close, SA11 Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to address or location	A13SW (SW)	168	7	287751 206487

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
360	**Points of Interest - Recreational and Environmental** Name: Play Area Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A7NW (SW)	818	7	287131 206292
360	**Points of Interest - Recreational and Environmental** Name: Play Area Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A7NW (SW)	882	7	287081 206238
360	**Points of Interest - Recreational and Environmental** Name: Play Area Location: Not Supplied Category: Recreational Class Code: Playgrounds Positional Accuracy: Positioned to an adjacent address or location	A7NW (SW)	882	7	287063 206294

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
361	**Ancient Woodland** Name: Not Supplied Reference: 18547 Area(m²): 19607.86 Type: Ancient and Semi-Natural Woodland	A13NW (N)	0	2	287943 206746
362	**Ancient Woodland** Name: Not Supplied Reference: 18548 Area(m²): 2709.04 Type: Ancient and Semi-Natural Woodland	A13NE (NE)	94	2	288062 206884
363	**Ancient Woodland** Name: Not Supplied Reference: 18549 Area(m²): 21787.64 Type: Ancient and Semi-Natural Woodland	A13NE (NE)	205	2	288172 206915
364	**Ancient Woodland** Name: Not Supplied Reference: 14075 Area(m²): 6884.92 Type: Ancient and Semi-Natural Woodland	A18SW (N)	241	2	287882 207051
365	**Ancient Woodland** Name: Not Supplied Reference: 16893 Area(m²): 32690.47 Type: Ancient and Semi-Natural Woodland	A12NE (W)	313	2	287524 206804
366	**Ancient Woodland** Name: Not Supplied Reference: 14058 Area(m²): 131578.01 Type: Ancient and Semi-Natural Woodland	A8NE (S)	388	2	288113 206202
367	**Ancient Woodland** Name: Not Supplied Reference: 14076 Area(m²): 1972.65 Type: Ancient and Semi-Natural Woodland	A18SW (N)	405	2	287781 207198
368	**Ancient Woodland** Name: Not Supplied Reference: 14077 Area(m²): 12628.94 Type: Ancient and Semi-Natural Woodland	A18SE (N)	427	2	288030 207253
369	**Ancient Woodland** Name: Not Supplied Reference: 22440 Area(m²): 7166.73 Type: Restored Ancient Woodland Site	A12SE (W)	431	2	287432 206675
370	**Ancient Woodland** Name: Not Supplied Reference: 8883 Area(m²): 81156.42 Type: Ancient and Semi-Natural Woodland	A8NE (S)	448	2	287962 206097
371	**Ancient Woodland** Name: Not Supplied Reference: 10512 Area(m²): 23761.85 Type: Restored Ancient Woodland Site	A12NE (W)	451	2	287395 206794
372	**Ancient Woodland** Name: Not Supplied Reference: 9496 Area(m²): 2405.29 Type: Ancient and Semi-Natural Woodland	A12NE (W)	465	2	287393 206901
373	**Ancient Woodland** Name: Not Supplied Reference: 7364 Area(m²): 10380.77 Type: Ancient and Semi-Natural Woodland	A12NE (NW)	475	2	287399 206959
374	**Ancient Woodland** Name: Not Supplied Reference: 40275 Area(m²): 187510.55 Type: Plantation on Ancient Woodland	A12NE (W)	507	2	287346 206889

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
375	**Ancient Woodland** Name: Not Supplied Reference: 14055 Area(m²): 38930.69 Type: Ancient and Semi-Natural Woodland	A8NE (S)	510	2	288011 206043
376	**Ancient Woodland** Name: Not Supplied Reference: 10170 Area(m²): 146327.1 Type: Ancient and Semi-Natural Woodland	A19SW (NE)	516	2	288398 207140
377	**Ancient Woodland** Name: Not Supplied Reference: 39780 Area(m²): 1853.21 Type: Plantation on Ancient Woodland	A8SW (S)	535	2	287889 206008
378	**Ancient Woodland** Name: Not Supplied Reference: 18557 Area(m²): 28581.1 Type: Ancient and Semi-Natural Woodland	A19SW (NE)	544	2	288284 207284
379	**Ancient Woodland** Name: Not Supplied Reference: 10512 Area(m²): 8.43 Type: Restored Ancient Woodland Site	A17SE (NW)	557	2	287478 207216
380	**Ancient Woodland** Name: Not Supplied Reference: 22441 Area(m²): 23855.03 Type: Restored Ancient Woodland Site	A12NW (W)	595	2	287251 206807
381	**Ancient Woodland** Name: Not Supplied Reference: 14078 Area(m²): 60810.53 Type: Ancient and Semi-Natural Woodland	A18NE (N)	614	2	288199 207404
382	**Ancient Woodland** Name: Not Supplied Reference: 42582 Area(m²): 3128.25 Type: Plantation on Ancient Woodland	A17NE (NW)	626	2	287598 207374
383	**Ancient Woodland** Name: Not Supplied Reference: 39406 Area(m²): 28691.84 Type: Plantation on Ancient Woodland	A18NW (N)	662	2	287643 207428
384	**Ancient Woodland** Name: Not Supplied Reference: 10168 Area(m²): 16179.06 Type: Ancient and Semi-Natural Woodland	A19SE (NE)	703	2	288620 207135
385	**Ancient Woodland** Name: Not Supplied Reference: 39780 Area(m²): 282.29 Type: Plantation on Ancient Woodland	A8SE (S)	706	2	288012 205844
386	**Ancient Woodland** Name: Not Supplied Reference: 42833 Area(m²): 2499.48 Type: Plantation on Ancient Woodland	A12NW (W)	708	2	287168 207006
387	**Ancient Woodland** Name: Not Supplied Reference: 16892 Area(m²): 4275.92 Type: Ancient and Semi-Natural Woodland	A12SW (W)	710	2	287148 206668
388	**Ancient Woodland** Name: Not Supplied Reference: 41122 Area(m²): 1124.69 Type: Plantation on Ancient Woodland	A8SE (S)	720	2	287996 205827

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
389	**Ancient Woodland** Name: Not Supplied Reference: 14052 Area(m²): 13361.24 Type: Ancient and Semi-Natural Woodland	A8SE (S)	725	2	288022 205826
390	**Ancient Woodland** Name: Not Supplied Reference: 18550 Area(m²): 1553.24 Type: Ancient and Semi-Natural Woodland	A19SE (NE)	729	2	288663 207099
391	**Ancient Woodland** Name: Not Supplied Reference: 18551 Area(m²): 7715.99 Type: Ancient and Semi-Natural Woodland	A19SE (NE)	739	2	288693 207059
392	**Ancient Woodland** Name: Not Supplied Reference: 14054 Area(m²): 10404.34 Type: Ancient and Semi-Natural Woodland	A7SE (SW)	752	2	287593 205859
393	**Ancient Woodland** Name: Not Supplied Reference: 18553 Area(m²): 1974.42 Type: Ancient and Semi-Natural Woodland	A19NW (NE)	799	2	288554 207391
394	**Ancient Woodland** Name: Not Supplied Reference: 43107 Area(m²): 7371.61 Type: Plantation on Ancient Woodland	A17SW (NW)	814	2	287106 207137
395	**Ancient Woodland** Name: Not Supplied Reference: 9077 Area(m²): 23370.77 Type: Ancient and Semi-Natural Woodland	A17NE (NW)	822	2	287410 207494
396	**Ancient Woodland** Name: Not Supplied Reference: 42832 Area(m²): 2331.38 Type: Plantation on Ancient Woodland	A17SW (NW)	841	2	287050 207069
397	**Ancient Woodland** Name: Not Supplied Reference: 41664 Area(m²): 4998.26 Type: Plantation on Ancient Woodland	A17SW (W)	844	2	287041 207051
398	**Ancient Woodland** Name: Not Supplied Reference: 39780 Area(m²): 3976.97 Type: Plantation on Ancient Woodland	A8SE (S)	890	2	288222 205708
399	**Ancient Woodland** Name: Not Supplied Reference: 7383 Area(m²): 1466.04 Type: Ancient and Semi-Natural Woodland	A19SE (NE)	892	2	288772 207251
400	**Ancient Woodland** Name: Not Supplied Reference: 39867 Area(m²): 2081.42 Type: Plantation on Ancient Woodland	A17NE (NW)	915	2	287463 207629
401	**Ancient Woodland** Name: Not Supplied Reference: 14056 Area(m²): 10142.02 Type: Ancient and Semi-Natural Woodland	A7NW (SW)	926	2	287105 206083
402	**Ancient Woodland** Name: Not Supplied Reference: 18552 Area(m²): 4978.23 Type: Ancient and Semi-Natural Woodland	A19SE (NE)	929	2	288856 207156

Sensitive Land Use

Map ID	Details	Quadrant Reference (Compass Direction)	Estimated Distance From Site	Contact	NGR
403	**Ancient Woodland** Name: Not Supplied Reference: 10167 Area(m²): 1625.89 Type: Ancient and Semi-Natural Woodland	A19SE (NE)	943	2	288887 207117
404	**Ancient Woodland** Name: Not Supplied Reference: 42836 Area(m²): 73100.04 Type: Plantation on Ancient Woodland	A17NW (NW)	951	2	287202 207497
405	**Ancient Woodland** Name: Not Supplied Reference: 22439 Area(m²): 31812.8 Type: Restored Ancient Woodland Site	A11SE (W)	979	2	286874 206684
406	**Ancient Woodland** Name: Not Supplied Reference: 14057 Area(m²): 42519.74 Type: Ancient and Semi-Natural Woodland	A10NW (E)	999	2	289002 206313

Agency & Hydrological	Version	Update Cycle
Contaminated Land Register Entries and Notices		
Powys County Council - Public Protection Department	February 2015	Annual Rolling Update
Neath Port Talbot County Borough Council - Environmental Health Department	March 2015	Annual Rolling Update
Rhondda Cynon Taff County Borough Council - Environmental Services	October 2017	Annual Rolling Update
Discharge Consents		
Environment Agency - Welsh Region	August 2014	Quarterly
Natural Resources Wales	July 2019	Quarterly
Enforcement and Prohibition Notices		
Environment Agency - Welsh Region	March 2013	Annual Rolling Update
Integrated Pollution Controls		
Environment Agency - Welsh Region	October 2008	Variable
Integrated Pollution Prevention And Control		
Natural Resources Wales	April 2019	Quarterly
Environment Agency - Welsh Region	July 2019	Quarterly
Local Authority Integrated Pollution Prevention And Control		
Neath Port Talbot County Borough Council - Environmental Health Department	August 2012	Variable
Powys County Council - Public Protection Department	May 2014	Variable
Rhondda Cynon Taff County Borough Council - Public Health and Protection Division	September 2014	Variable
Local Authority Pollution Prevention and Controls		
Neath Port Talbot County Borough Council - Environmental Health Department	March 2014	Annual Rolling Update
Powys County Council - Public Protection Department	May 2014	Annual Rolling Update
Rhondda Cynon Taff County Borough Council - Public Health and Protection Division	September 2014	Annual Rolling Update
Local Authority Pollution Prevention and Control Enforcements		
Neath Port Talbot County Borough Council - Environmental Health Department	March 2014	Variable
Powys County Council - Public Protection Department	May 2014	Variable
Rhondda Cynon Taff County Borough Council - Public Health and Protection Division	September 2014	Variable
Nearest Surface Water Feature		
Ordnance Survey	January 2019	
Pollution Incidents to Controlled Waters		
Environment Agency - Welsh Region	December 1998	Not Applicable
Prosecutions Relating to Authorised Processes		
Environment Agency - Welsh Region	March 2013	Annual Rolling Update
Natural Resources Wales	March 2013	Annual Rolling Update
Prosecutions Relating to Controlled Waters		
Environment Agency - Welsh Region	March 2013	Annual Rolling Update
Natural Resources Wales	March 2013	Annual Rolling Update
Registered Radioactive Substances		
Natural Resources Wales	January 2015	Annually
Environment Agency - Welsh Region	June 2016	
River Quality		
Environment Agency - Head Office	November 2001	Not Applicable
River Quality Chemistry Sampling Points		
Environment Agency - Head Office	July 2012	Annually
Substantiated Pollution Incident Register		
Environment Agency Wales - South East Area	July 2019	Quarterly
Environment Agency Wales - South West Area	July 2019	Quarterly
Natural Resources Wales	July 2019	Quarterly
Water Abstractions		
Environment Agency - Welsh Region	July 2019	Quarterly
Natural Resources Wales	July 2019	Quarterly

Data Currency

Agency & Hydrological	Version	Update Cycle
Water Industry Act Referrals		
Natural Resources Wales	July 2019	Quarterly
Environment Agency - Welsh Region	October 2017	Quarterly
Groundwater Vulnerability Map		
Natural Resources Wales	June 2018	As notified
Bedrock Aquifer Designations		
Natural Resources Wales	January 2018	Annually
Superficial Aquifer Designations		
Natural Resources Wales	January 2018	Annually
Source Protection Zones		
Natural Resources Wales	November 2016	Annual Rolling Update
Extreme Flooding from Rivers or Sea without Defences		
Natural Resources Wales	August 2019	Quarterly
Flooding from Rivers or Sea without Defences		
Natural Resources Wales	August 2019	Quarterly
Areas Benefiting from Flood Defences		
Natural Resources Wales	August 2019	Quarterly
Flood Water Storage Areas		
Natural Resources Wales	August 2019	Quarterly
Flood Defences		
Natural Resources Wales	August 2019	Quarterly
OS Water Network Lines		
Ordnance Survey	July 2019	Quarterly
Surface Water 1 in 30 year Flood Extent		
Natural Resources Wales	October 2013	Annually
Surface Water 1 in 100 year Flood Extent		
Natural Resources Wales	October 2013	Annually
Surface Water 1 in 1000 year Flood Extent		
Natural Resources Wales	October 2013	Annually
Surface Water Suitability		
Natural Resources Wales	October 2013	Annually
BGS Groundwater Flooding Susceptibility		
British Geological Survey - National Geoscience Information Service	May 2013	Annually

Data Currency

Waste	Version	Update Cycle
BGS Recorded Landfill Sites		
British Geological Survey - National Geoscience Information Service	June 1996	Not Applicable
Historical Landfill Sites		
Natural Resources Wales	July 2017	Quarterly
Integrated Pollution Control Registered Waste Sites		
Environment Agency - Welsh Region	October 2008	Not Applicable
Licensed Waste Management Facilities (Landfill Boundaries)		
Environment Agency Wales - South East Area	July 2018	Quarterly
Environment Agency Wales - South West Area	July 2018	Quarterly
Natural Resources Wales	July 2018	Quarterly
Licensed Waste Management Facilities (Locations)		
Environment Agency Wales - South East Area	July 2019	Quarterly
Environment Agency Wales - South West Area	July 2019	Quarterly
Natural Resources Wales	July 2019	Quarterly
Local Authority Landfill Coverage		
Neath Port Talbot County Borough Council - Environmental Health Department	May 2000	Not Applicable
Powys County Council	May 2000	Not Applicable
Rhondda Cynon Taff County Borough Council	May 2000	Not Applicable
Local Authority Recorded Landfill Sites		
Powys County Council	May 2000	Not Applicable
Rhondda Cynon Taff County Borough Council	May 2000	Not Applicable
Neath Port Talbot County Borough Council - Environmental Health Department	September 2003	Not Applicable
Potentially Infilled Land (Non-Water)		
Landmark Information Group Limited	December 1999	Not Applicable
Potentially Infilled Land (Water)		
Landmark Information Group Limited	December 1999	Not Applicable
Registered Landfill Sites		
Environment Agency Wales - South East Area	March 2003	Not Applicable
Environment Agency Wales - South West Area	March 2003	Not Applicable
Registered Waste Transfer Sites		
Environment Agency Wales - South East Area	March 2003	Not Applicable
Environment Agency Wales - South West Area	March 2003	Not Applicable
Registered Waste Treatment or Disposal Sites		
Environment Agency Wales - South East Area	March 2003	Not Applicable
Environment Agency Wales - South West Area	March 2003	Not Applicable

Hazardous Substances	Version	Update Cycle
Control of Major Accident Hazards Sites (COMAH)		
Health and Safety Executive	April 2018	Bi-Annually
Explosive Sites		
Health and Safety Executive	March 2017	Annually
Notification of Installations Handling Hazardous Substances (NIHHS)		
Health and Safety Executive	November 2000	Not Applicable
Planning Hazardous Substance Enforcements		
Brecon Beacons National Park	August 2008	Annual Rolling Update
Powys County Council - Planning Department	February 2016	Variable
Rhondda Cynon Taff County Borough Council - Planning Department	February 2016	Variable
Neath Port Talbot County Borough Council - Planning Department	October 2015	Variable
Planning Hazardous Substance Consents		
Brecon Beacons National Park	August 2008	Annual Rolling Update
Powys County Council - Planning Department	February 2016	Variable
Rhondda Cynon Taff County Borough Council - Planning Department	February 2016	Variable
Neath Port Talbot County Borough Council - Planning Department	October 2015	Variable

Geological	Version	Update Cycle
BGS 1:625,000 Solid Geology		
British Geological Survey - National Geoscience Information Service	January 2009	Not Applicable
BGS Estimated Soil Chemistry		
British Geological Survey - National Geoscience Information Service	October 2015	Annually
BGS Recorded Mineral Sites		
British Geological Survey - National Geoscience Information Service	April 2019	Bi-Annually
CBSCB Compensation District		
Cheshire Brine Subsidence Compensation Board (CBSCB)	August 2011	Not Applicable
Coal Mining Affected Areas		
The Coal Authority - Property Searches	March 2014	Annual Rolling Update
Mining Instability		
Ove Arup & Partners	October 2000	Not Applicable
Non Coal Mining Areas of Great Britain		
British Geological Survey - National Geoscience Information Service	May 2015	Not Applicable
Potential for Collapsible Ground Stability Hazards		
British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Compressible Ground Stability Hazards		
British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Ground Dissolution Stability Hazards		
British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Landslide Ground Stability Hazards		
British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Running Sand Ground Stability Hazards		
British Geological Survey - National Geoscience Information Service	January 2019	Annually
Potential for Shrinking or Swelling Clay Ground Stability Hazards		
British Geological Survey - National Geoscience Information Service	January 2019	Annually
Radon Potential - Radon Affected Areas		
British Geological Survey - National Geoscience Information Service	July 2011	Annually
Radon Potential - Radon Protection Measures		
British Geological Survey - National Geoscience Information Service	July 2011	Annually

Industrial Land Use	Version	Update Cycle
Contemporary Trade Directory Entries Thomson Directories	July 2019	Quarterly
Fuel Station Entries Catalist Ltd - Experian	September 2019	Quarterly
Gas Pipelines National Grid	July 2014	
Points of Interest - Commercial Services PointX	September 2019	Quarterly
Points of Interest - Education and Health PointX	September 2019	Quarterly
Points of Interest - Manufacturing and Production PointX	September 2019	Quarterly
Points of Interest - Public Infrastructure PointX	September 2019	Quarterly
Points of Interest - Recreational and Environmental PointX	September 2019	Quarterly
Underground Electrical Cables National Grid	December 2015	
Sensitive Land Use	**Version**	**Update Cycle**
Ancient Woodland Natural Resources Wales	August 2018	Bi-Annually
Areas of Outstanding Natural Beauty Natural Resources Wales	June 2019	Bi-Annually
Environmentally Sensitive Areas The National Assembly for Wales - GI Services (Department of Planning & Countryside)	January 2017	
Forest Parks Forestry Commission	April 1997	Not Applicable
Local Nature Reserves Neath Port Talbot County Borough Council Powys County Council Rhondda Cynon Taff County Borough Council	 August 2018 August 2018 August 2018	 Bi-Annually Bi-Annually Bi-Annually
Marine Nature Reserves Natural Resources Wales	August 2018	Bi-Annually
National Nature Reserves Natural Resources Wales	June 2019	Bi-Annually
National Parks Natural Resources Wales	August 2018	Annually
Nitrate Vulnerable Zones Natural Resources Wales The National Assembly for Wales - GI Services (Department of Planning & Countryside)	 July 2019 October 2005	 Bi-Annually
Ramsar Sites Natural Resources Wales	July 2019	Bi-Annually
Sites of Special Scientific Interest Natural Resources Wales	March 2019	Bi-Annually
Special Areas of Conservation Natural Resources Wales	August 2018	Bi-Annually
Special Protection Areas Natural Resources Wales	August 2018	Bi-Annually

Data Suppliers

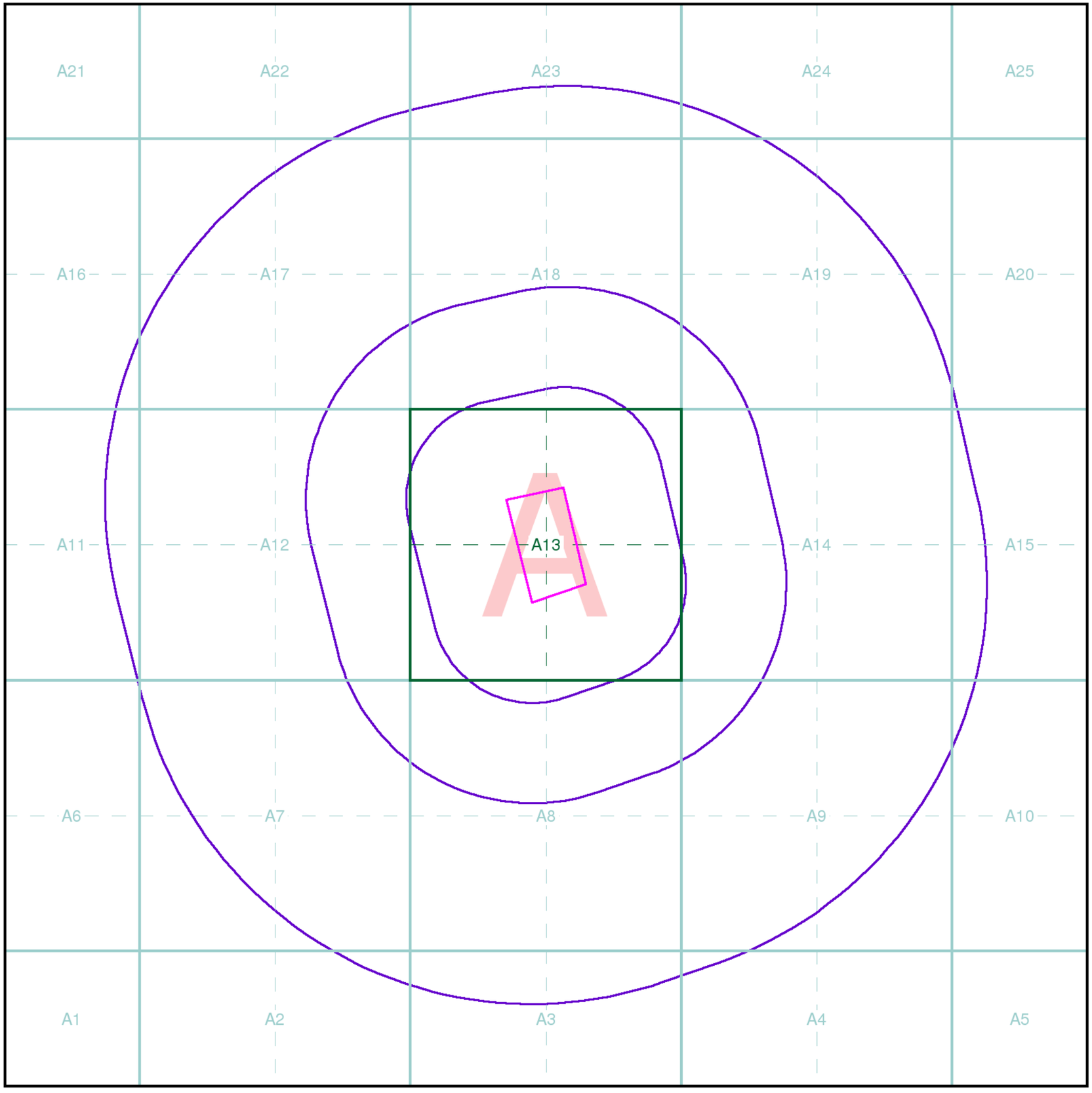
A selection of organisations who provide data within this report

Data Supplier	Data Supplier Logo
Ordnance Survey	
Environment Agency	
Scottish Environment Protection Agency	
The Coal Authority	
British Geological Survey	
Centre for Ecology and Hydrology	
Natural Resources Wales	
Scottish Natural Heritage	
Natural England	
Public Health England	
Ove Arup	
Peter Brett Associates	

Useful Contacts

Contact	Name and Address	Contact Details
1	**British Geological Survey - Enquiry Service** British Geological Survey, Environmental Science Centre, Keyworth, Nottingham, Nottinghamshire, NG12 5GG	Telephone: 0115 936 3143 Fax: 0115 936 3276 Email: enquiries@bgs.ac.uk Website: www.bgs.ac.uk
2	**Natural Resources Wales** Ty Cambria, 29 Newport Road, Cardiff, CF24 0TP	Telephone: 0300 065 3000 Email: enquiries@naturalresourceswales.gov.uk
3	**Neath Port Talbot County Borough Council - Environmental Health Department** Room 322, Neath Civic Centre, Neath, West Glamorgan, SA11 3QZ	Telephone: 01639 763333 Fax: 01693 763444 Website: www.neath-porttalbot.gov.uk
4	**Environment Agency - National Customer Contact Centre (NCCC)** PO Box 544, Templeborough, Rotherham, S60 1BY	Telephone: 03708 506 506 Email: enquiries@environment-agency.gov.uk
5	**Ordnance Survey** Adanac Drive, Southampton, Hampshire, SO16 0AS	Telephone: 03456 05 05 05 Email: customerservices@ordnancesurvey.co.uk Website: www.ordnancesurvey.gov.uk
6	**The Coal Authority - Property Searches** 200 Lichfield Lane, Mansfield, Nottinghamshire, NG18 4RG	Telephone: 0345 762 6848 Fax: 01623 637 338 Email: groundstability@coal.gov.uk Website: www2.groundstability.com
7	**PointX** 7 Abbey Court, Eagle Way, Sowton, Exeter, Devon, EX2 7HY	Website: www.pointx.co.uk
-	**Public Health England - Radon Survey, Centre for Radiation, Chemical and Environmental Hazards** Chilton, Didcot, Oxfordshire, OX11 0RQ	Telephone: 01235 822622 Fax: 01235 833891 Email: radon@phe.gov.uk Website: www.ukradon.org
-	**Landmark Information Group Limited** Imperium, Imperial Way, Reading, Berkshire, RG2 0TD	Telephone: 0844 844 9952 Fax: 0844 844 9951 Email: customerservices@landmarkinfo.co.uk Website: www.landmarkinfo.co.uk

Please note that the Environment Agency / Natural Resources Wales / SEPA have a charging policy in place for enquiries.



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Index Map

For ease of identification, your site and buffer have been split into Slices, Segments and Quadrants. These are illustrated on the Index Map opposite and explained further below.

Slice
Each slice represents a 1:10,000 plot area (2.7km x 2.7km) for your site and buffer. A large site and buffer may be made up of several slices (represented by a red outline), that are referenced by letters of the alphabet, starting from the bottom left corner of the slice "grid". This grid does not relate to National Grid lines but is designed to give best fit over the site and buffer.

Segment
A segment represents a 1:2,500 plot area. Segments that have plot files associated with them are shown in dark green, others in light blue. These are numbered from the bottom left hand corner within each slice.

Quadrant
A quadrant is a quarter of a segment. These are labelled as NW, NE, SW, SE and are referenced in the datasheet to allow features to be quickly located on plots. Therefore a feature that has a quadrant reference of A7NW will be in Slice A, Segment 7 and the NW Quadrant.

A selection of organisations who provide data within this report:

Map data

British Geological Survey
NATURAL ENVIRONMENT RESEARCH COUNCIL

Cyfoeth Naturiol Cymru
Natural Resources Wales

Envirocheck reports are compiled from 136 different sources of data.

Client Details

Mr J Dyke, Atkins Ltd, Longcross Court, 47 Newport Road, Cardiff, CF24 0AD

Order Details

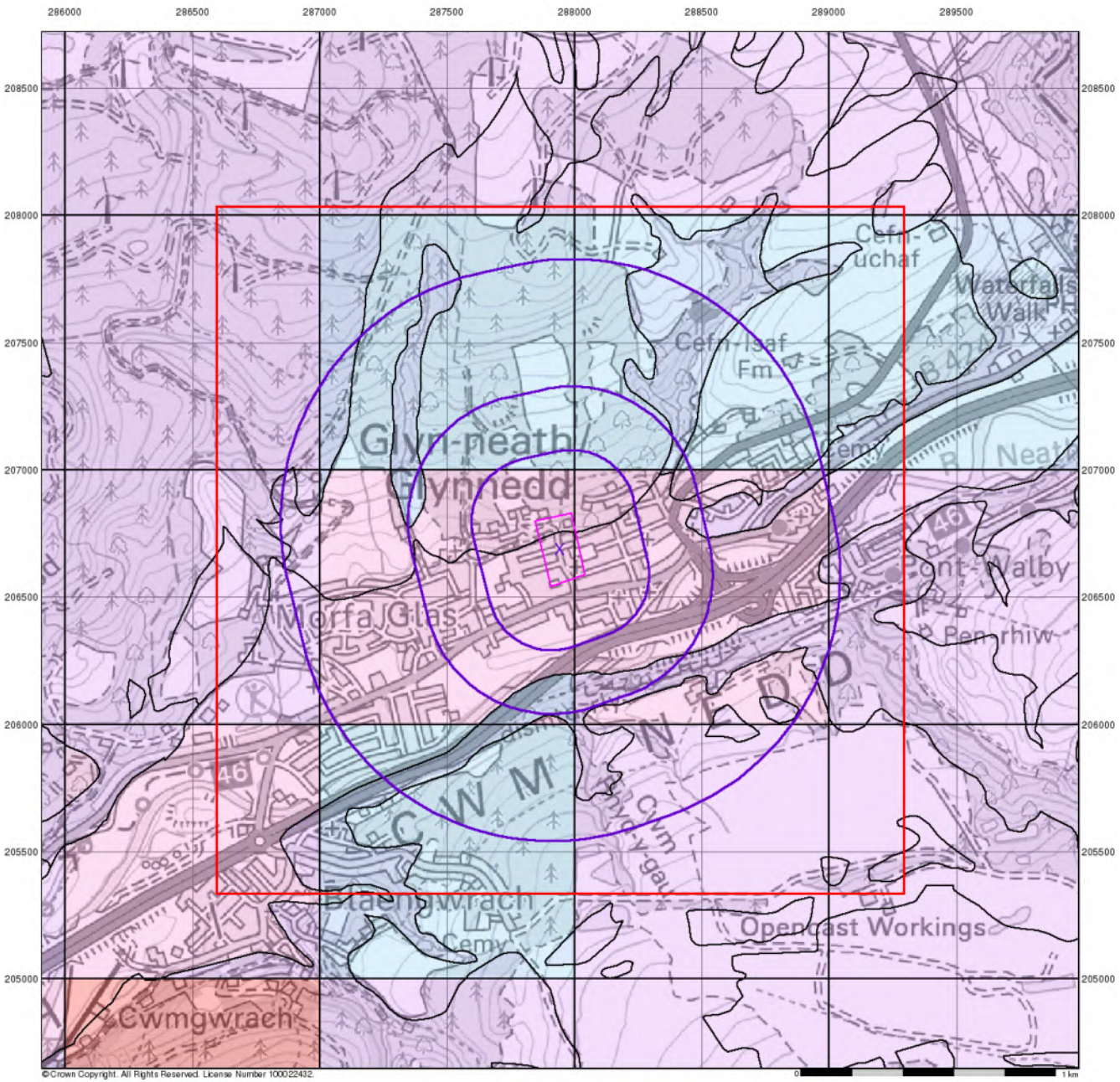
Order Number:	221660568_1_1
Customer Ref:	20191393
National Grid Reference:	287940, 206690
Site Area (Ha):	3.65
Search Buffer (m):	1000

Site Details

Site at 287940, 206760

Full Terms and Conditions can be found on the following link:
http://www.landmarkinfo.co.uk/Terms/Show/515

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Groundwater Vulnerability

General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice | Map ID

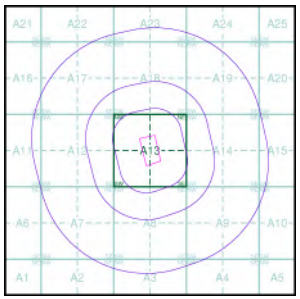
Agency and Hydrological

Bedrock Aquifers	Superficial Aquifers
High Vulnerability, Principal Aquifer	High Vulnerability, Principal Aquifer
High Vulnerability, Secondary Aquifer	High Vulnerability, Secondary Aquifer
Medium Vulnerability, Principal Aquifer	Medium Vulnerability, Principal Aquifer
Medium Vulnerability, Secondary Aquifer	Medium Vulnerability, Secondary Aquifer
Low Vulnerability, Principal Aquifer	Low Vulnerability, Principal Aquifer
Low Vulnerability, Secondary Aquifer	Low Vulnerability, Secondary Aquifer

Unproductive Aquifer

Soluble Rock

Site Sensitivity Context Map - Slice A



Order Details

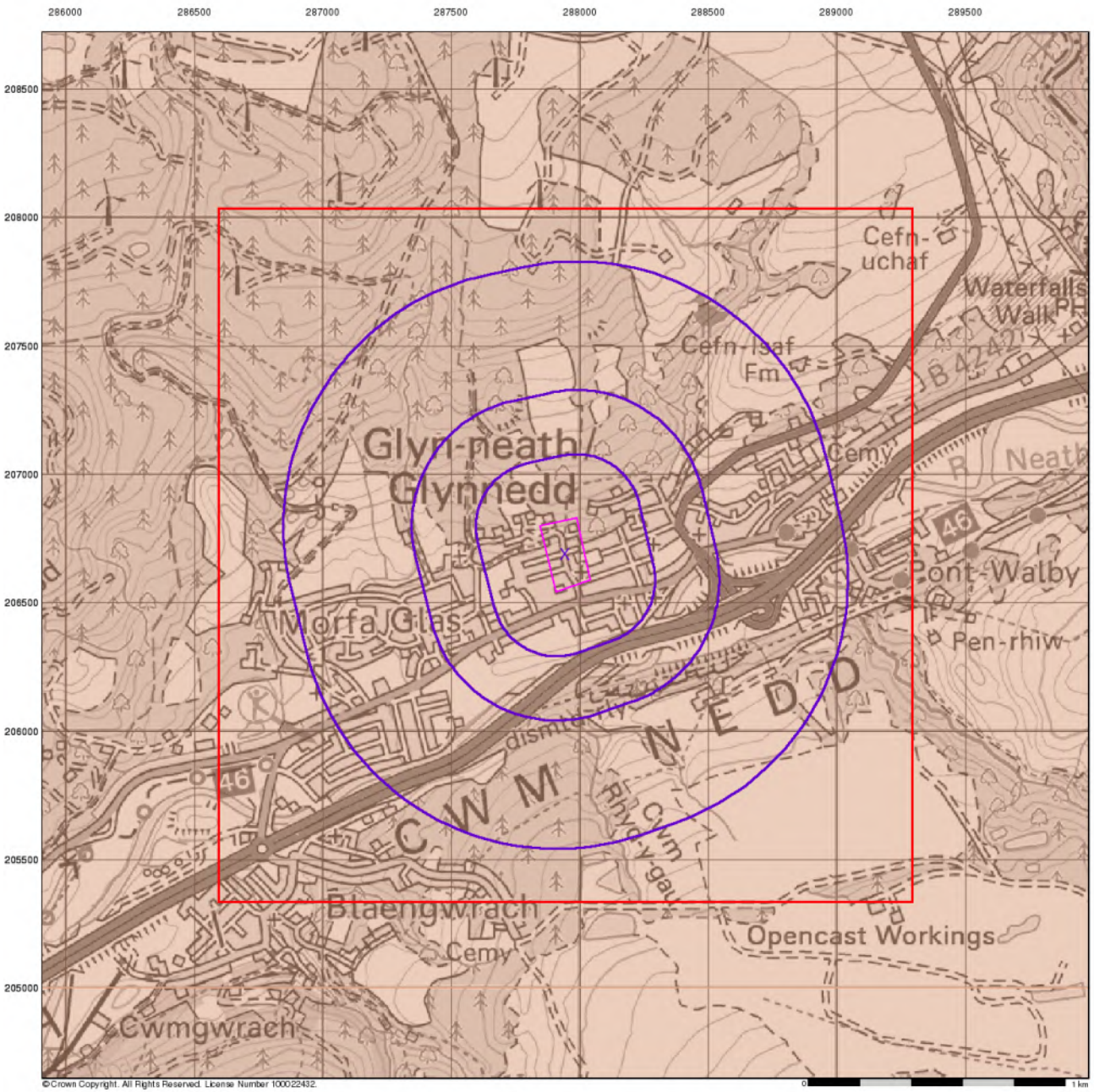
Order Number:	221660568_1_1
Customer Ref:	20191393
National Grid Reference:	287940, 206690
Slice:	A
Site Area (Ha):	3.65
Search Buffer (m):	1000

Site Details

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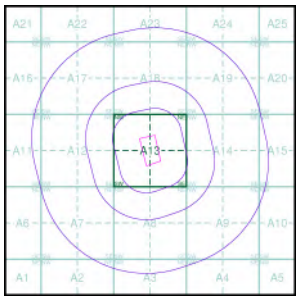
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Bedrock Aquifer Designation

General

Agency and Hydrological

Site Sensitivity Context Map - Slice A



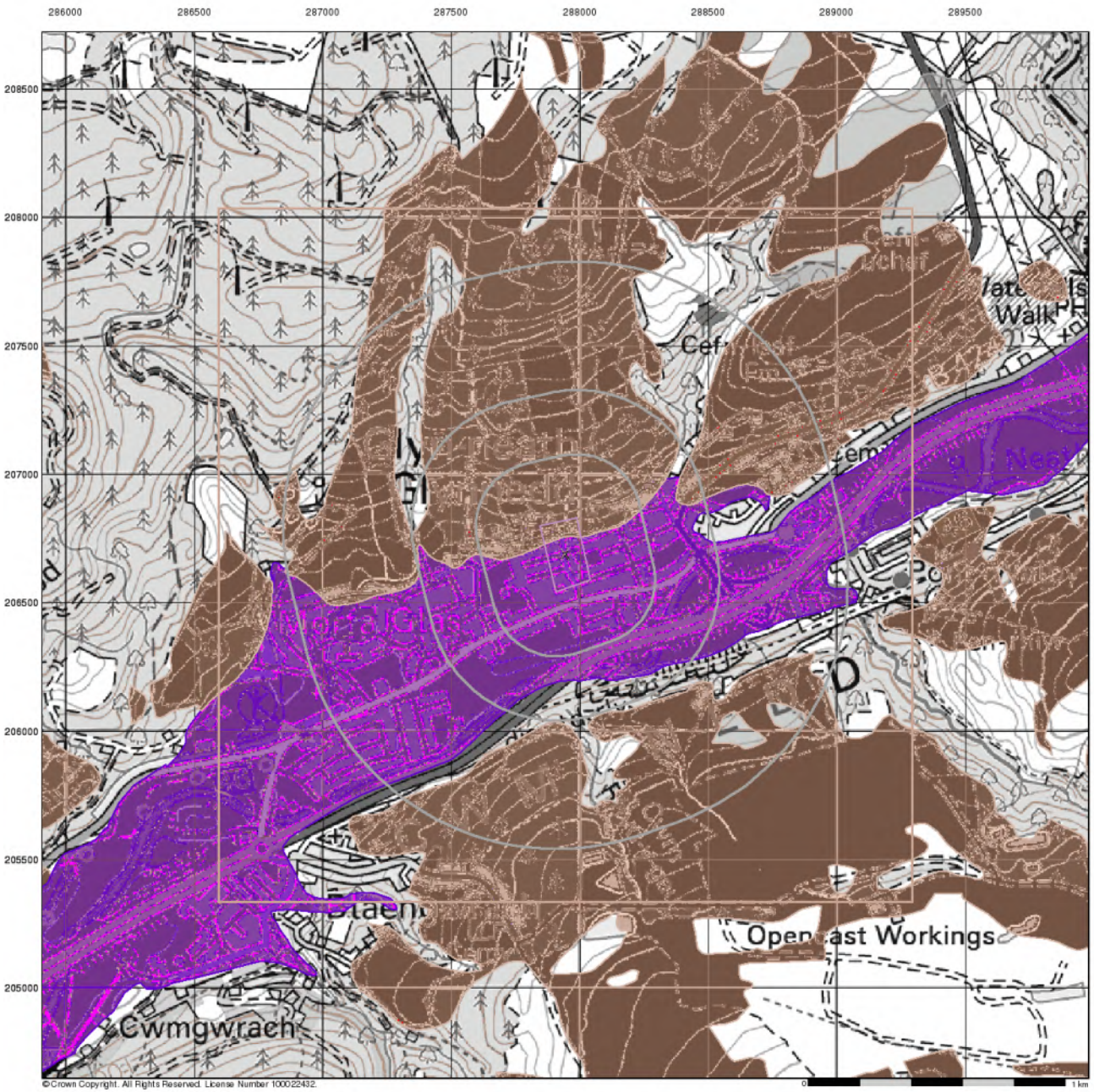
Order Details

Order Number:	221660568_1_1
Customer Ref:	20191393
National Grid Reference:	287940, 206690
Slice:	A
Site Area (Ha):	3.65
Search Buffer (m):	1000

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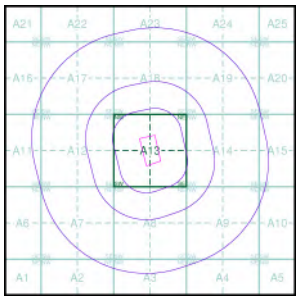
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Superficial Aquifer Designation

General

Agency and Hydrological

Site Sensitivity Context Map - Slice A



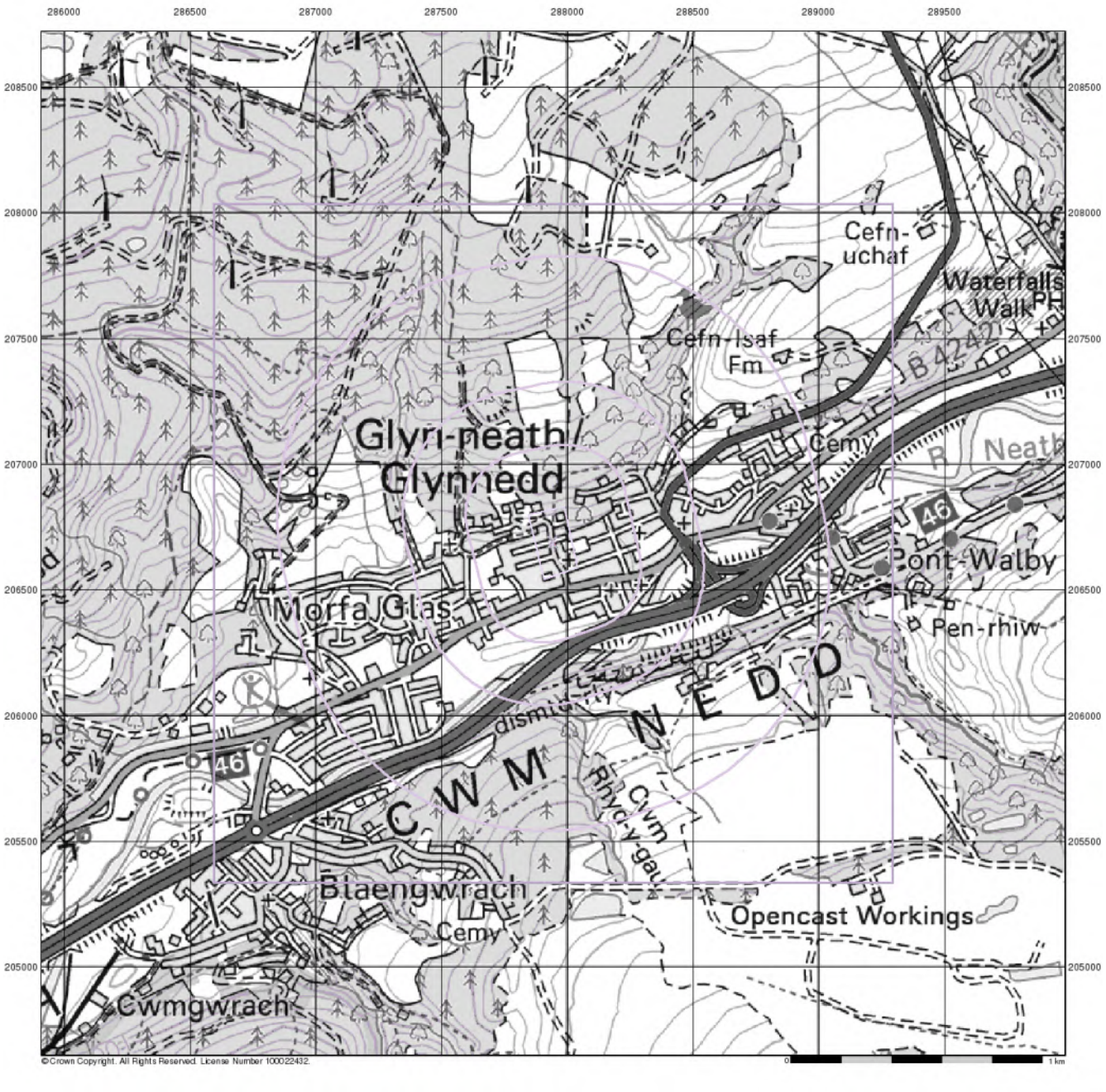
Order Details

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Customer Ref:	20191393
National Grid Reference:	287940, 206690
Slice:	A
Site Area (Ha):	3.65
Search Buffer (m):	1000

Site Details

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Source Protection Zones

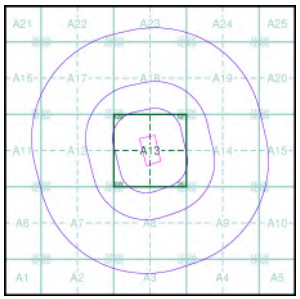
General

Specified Site | Specified Buffer(s) | Bearing Reference Point
Slice | Map ID

Agency and Hydrological

- Inner zone (Zone 1)
- Inner zone - subsurface activity only (Zone 1c)
- Outer zone (Zone 2)
- Outer zone - subsurface activity only (Zone 2c)
- Total catchment (Zone 3)
- Total catchment - subsurface activity only (Zone 3c)
- Special interest (Zone 4)

Site Sensitivity Context Map - Slice A



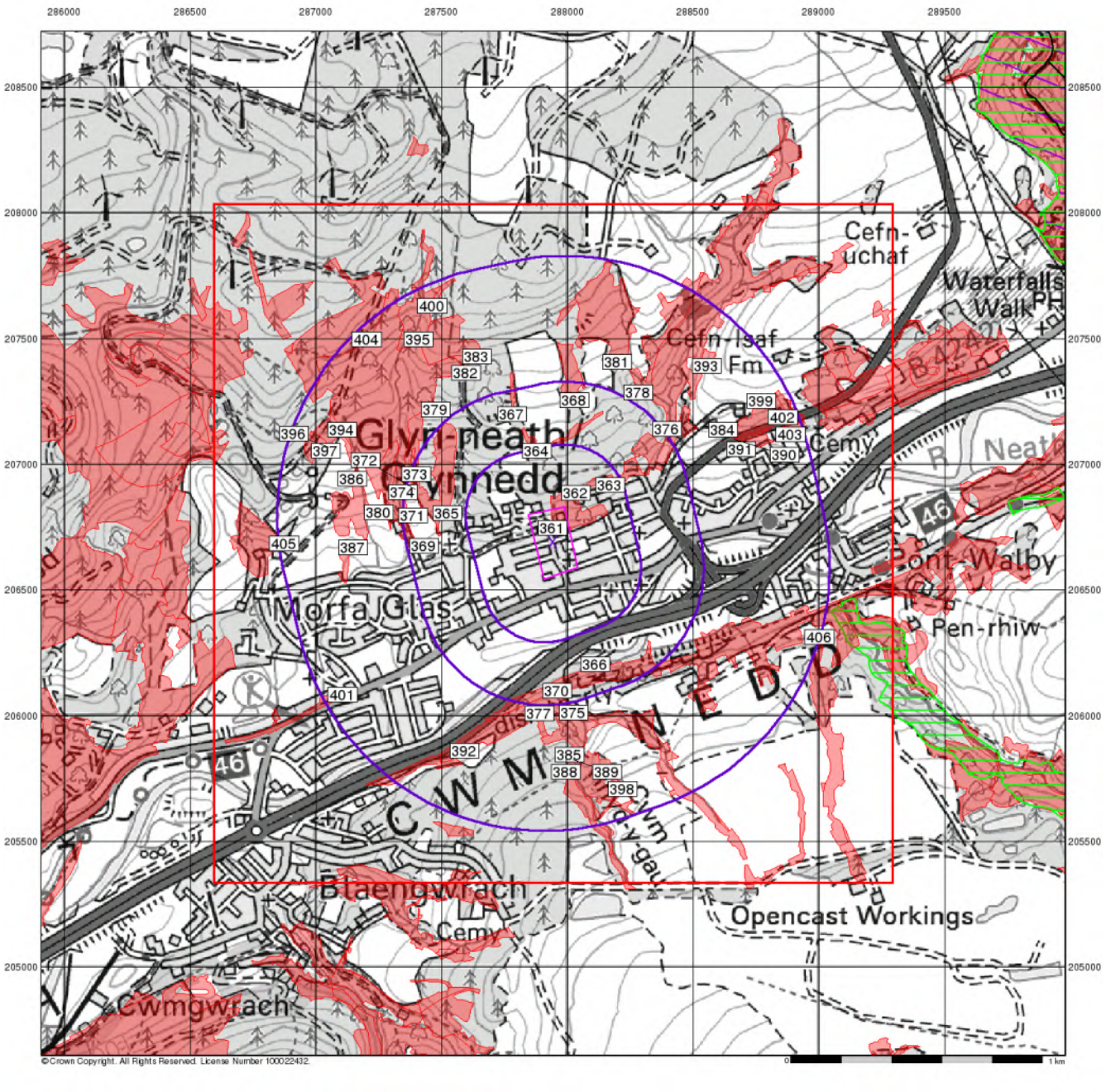
Order Details

Order Number:	221660568_1_1
Customer Ref:	20191393
National Grid Reference:	287940, 206690
Slice:	A
Site Area (Ha):	3.65
Search Buffer (m):	1000

Site Details

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Sensitive Land Uses

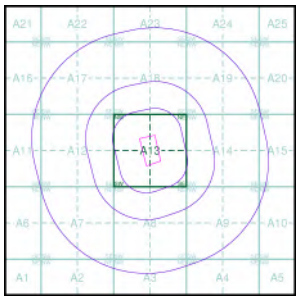
General

Specified Site | Specified Buffer(s) | Bearing Reference Point
Slice | Map ID

Sensitive Land Uses

- Ancient Woodland
- Area of Adopted Green Belt
- Area of Unadopted Green Belt
- Area of Outstanding Natural Beauty
- Environmentally Sensitive Area
- Forest Park
- Local Nature Reserve
- Marine Nature Reserve
- National Nature Reserve
- National Park
- Nitrate Sensitive Area
- Nitrate Vulnerable Zone
- Ramsar Site
- Site of Special Scientific Interest
- Special Area of Conservation
- Special Protection Area
- World Heritage Sites

Site Sensitivity Context Map - Slice A



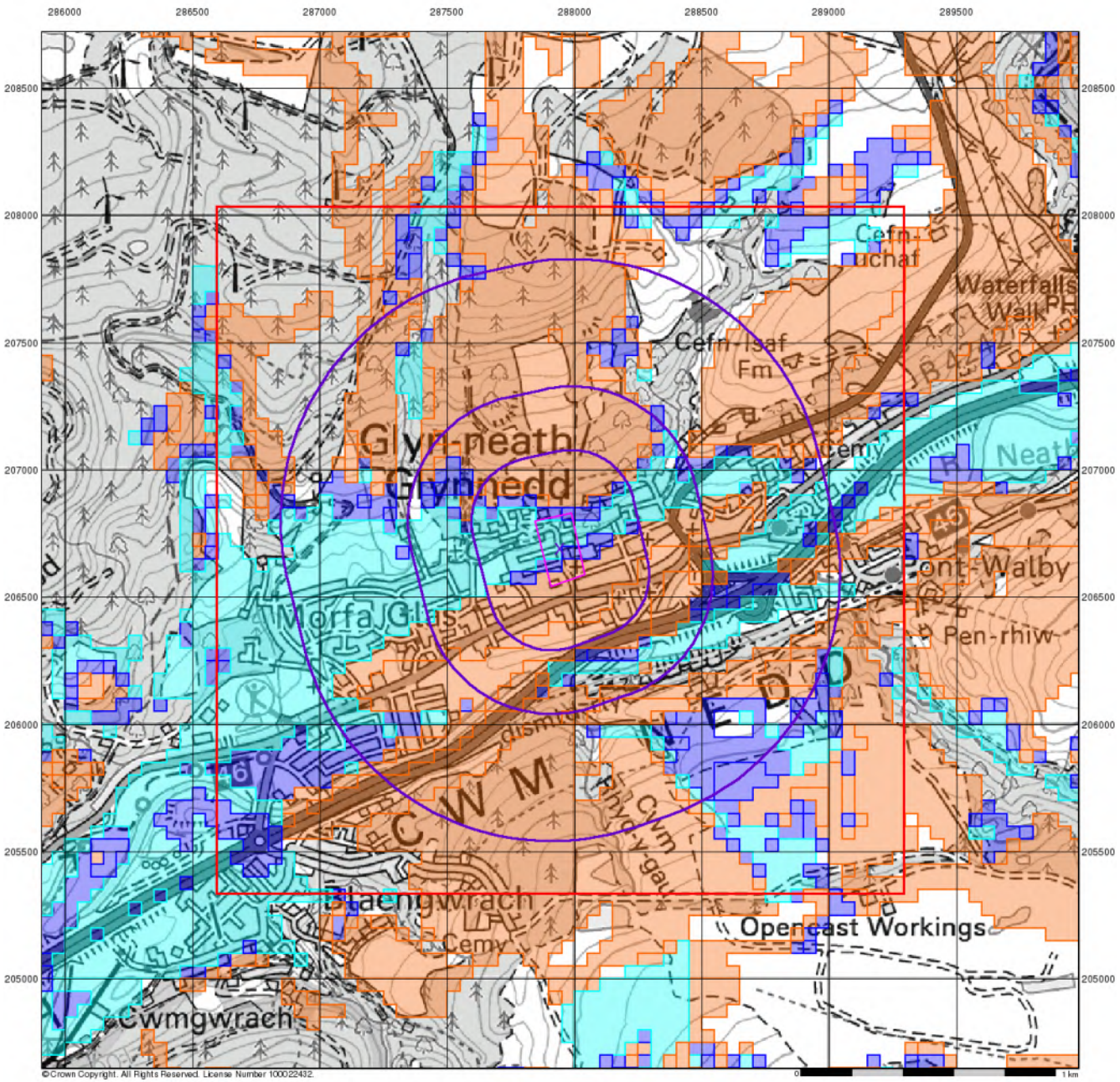
Order Details

Order Number:	221660568_1_1
Customer Ref:	20191393
National Grid Reference:	287940, 206690
Slice:	A
Site Area (Ha):	3.65
Search Buffer (m):	1000

Site Details

Site at 287940, 206760

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BGS Flood GFS Data

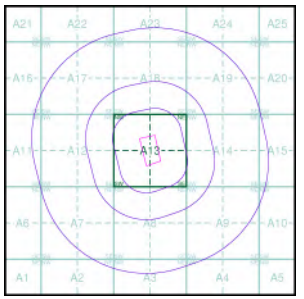
General

Specified Site | Specified Buffer(s) | Bearing Reference Point | Slice

Agency and Hydrological (Flood)

- Limited Potential for Groundwater Flooding to Occur
- Potential for Groundwater Flooding of Property Situated Below Ground Level
- Potential for Groundwater Flooding to Occur at Surface

Site Sensitivity Context Map - Slice A



Order Details

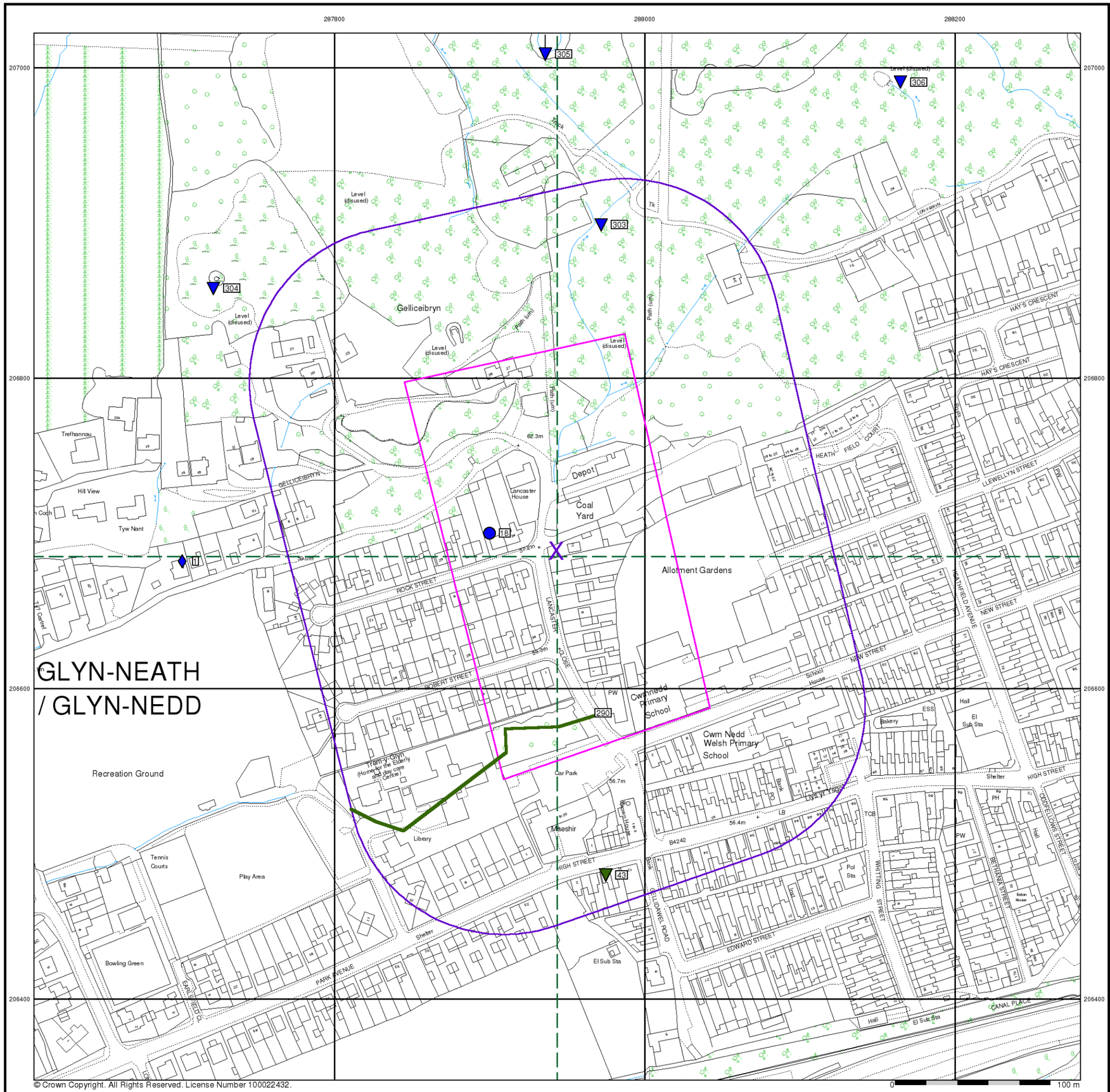
Order Number:	221660568_1_1
Customer Ref:	20191393
National Grid Reference:	287940, 206690
Slice:	A
Site Area (Ha):	3.65
Search Buffer (m):	1000

Site Details

Site at 287940, 206760

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General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Map ID
- Several of Type at Location
- Pylon
- Overhead Transmission Line

Agency and Hydrological

- Contaminated Land Register Entry or Notice (Location)
- Contaminated Land Register Entry or Notice
- Discharge Consent
- Enforcement or Prohibition Notice
- Integrated Pollution Control
- Integrated Pollution Prevention Control
- Local Authority Integrated Pollution Prevention and Control
- Local Authority Pollution Prevention and Control
- Local Authority Pollution Prevention and Control Enforcement
- Pollution Incident to Controlled Waters
- Prosecution Relating to Authorised Processes
- Prosecution Relating to Controlled Waters
- Registered Radioactive Substance
- River Network or Water Feature
- River Quality Sampling Point
- Substantiated Pollution Incident Register
- Water Abstraction
- Water Industry Act Referral

Hazardous Substances

- COMAH Site
- Explosive Site
- NIHHS Site
- Planning Hazardous Substance Consent
- Planning Hazardous Substance Enforcement

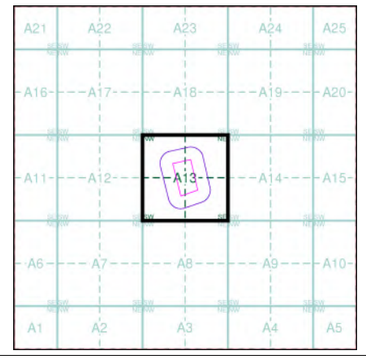
Geological

- BGS Recorded Mineral Site

Waste

- BGS Recorded Landfill Site (Location)
- BGS Recorded Landfill Site
- EA Historic Landfill (Buffered Point)
- EA Historic Landfill (Polygon)
- Integrated Pollution Control Registered Waste Site
- Licensed Waste Management Facility (Landfill Boundary)
- Licensed Waste Management Facility (Location)
- Local Authority Recorded Landfill Site (Location)
- Local Authority Recorded Landfill Site
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Water)
- Potentially Infilled Land (Water)
- Potentially Infilled Land (Water)
- Registered Landfill Site
- Registered Landfill Site (Location)
- Registered Landfill Site (Point Buffered to 100m)
- Registered Landfill Site (Point Buffered to 250m)
- Registered Waste Transfer Site (Location)
- Registered Waste Transfer Site
- Registered Waste Treatment or Disposal Site (Location)
- Registered Waste Treatment or Disposal Site

Site Sensitivity Map - Segment A13



Order Details

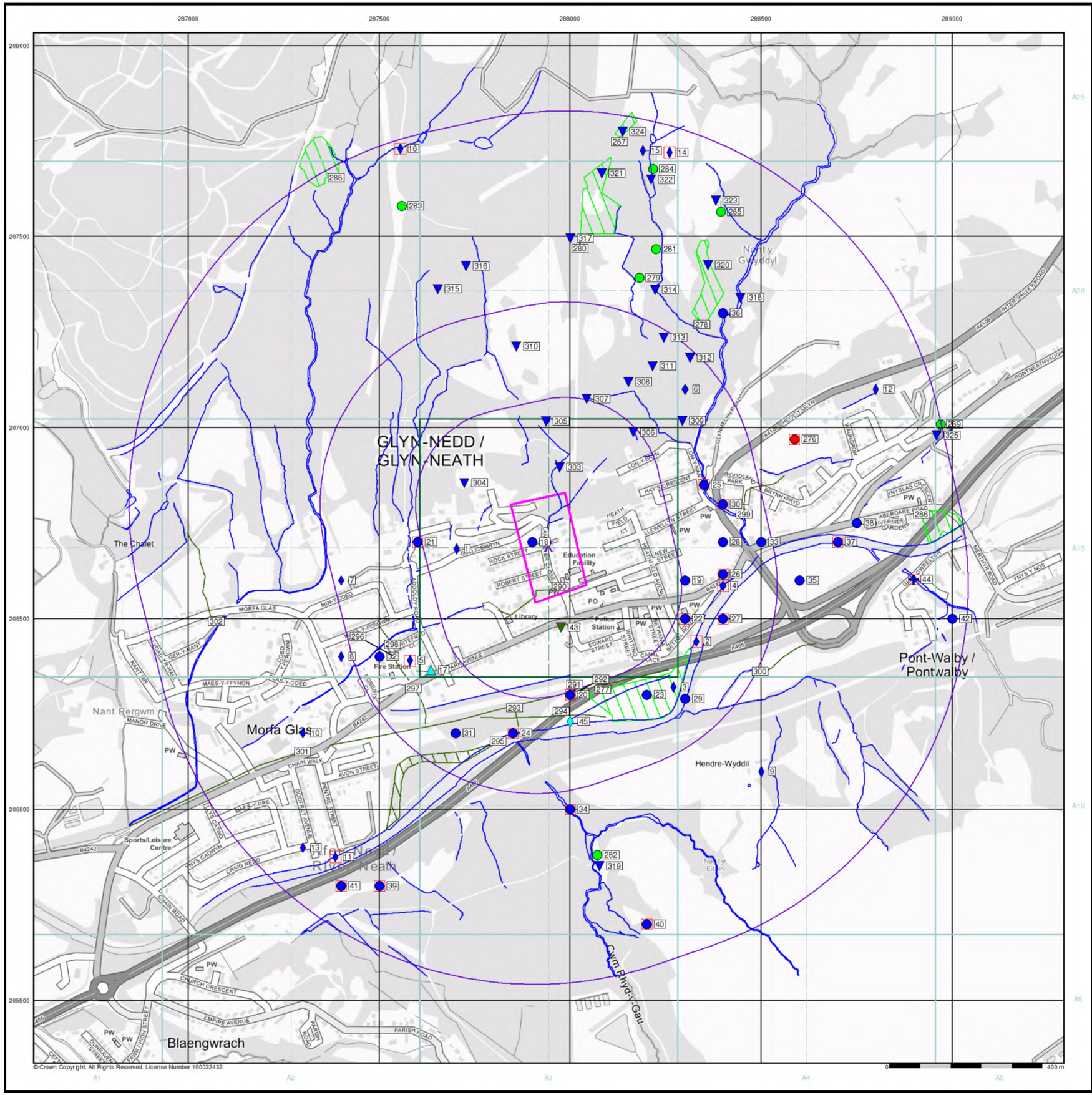
Order Number:	221660568_1_1
Customer Ref:	20191393
National Grid Reference:	287940, 206690
Slice:	A
Site Area (Ha):	3.65
Plot Buffer (m):	100

Site Details

Site at 287940, 206760

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General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Map ID
- Several of Type at Location

Agency and Hydrological

- Contaminated Land Register Entry or Notice (Location)
- Contaminated Land Register Entry or Notice
- Discharge Consent
- Enforcement or Prohibition Notice
- Integrated Pollution Control
- Integrated Pollution Prevention Control
- Local Authority Integrated Pollution Prevention and Control
- Local Authority Pollution Prevention and Control
- Local Authority Pollution Prevention and Control Enforcement
- Pollution Incident to Controlled Waters
- Prosecution Relating to Authorised Processes
- Prosecution Relating to Controlled Waters
- Registered Radioactive Substance
- River Network or Water Feature
- River Quality Sampling Point
- Substantiated Pollution Incident Register
- Water Abstraction
- Water Industry Act Referral

Hazardous Substances

- COMAH Site
- Explosive Site
- NIHHS Site
- Planning Hazardous Substance Consent
- Planning Hazardous Substance Enforcement

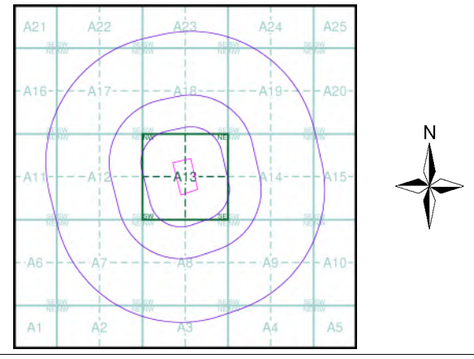
Geological

- BGS Recorded Mineral Site

Waste

- BGS Recorded Landfill Site (Location)
- BGS Recorded Landfill Site
- EA Historic Landfill (Buffered Point)
- EA Historic Landfill (Polygon)
- Integrated Pollution Control Registered Waste Site
- Licensed Waste Management Facility (Landfill Boundary)
- Licensed Waste Management Facility (Location)
- Local Authority Recorded Landfill Site (Location)
- Local Authority Recorded Landfill Site
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Non-water)
- Potentially Infilled Land (Water)
- Potentially Infilled Land (Water)
- Potentially Infilled Land (Water)
- Registered Landfill Site
- Registered Landfill Site (Location)
- Registered Landfill Site (Point Buffered to 100m)
- Registered Landfill Site (Point Buffered to 250m)
- Registered Waste Transfer Site (Location)
- Registered Waste Transfer Site
- Registered Waste Treatment or Disposal Site (Location)
- Registered Waste Treatment or Disposal Site

Site Sensitivity Map - Slice A



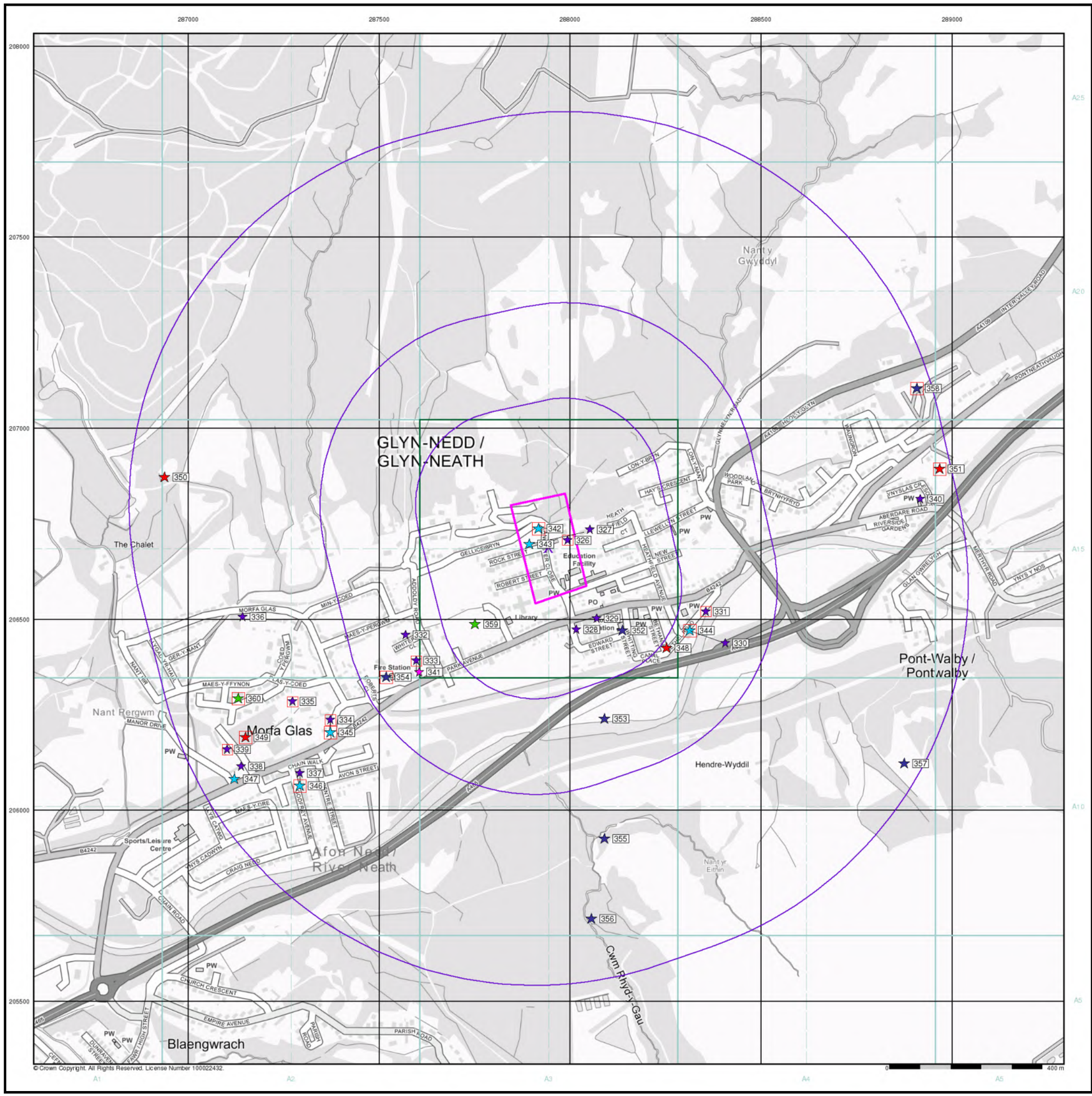
Order Details

Order Number:	221660568_1_1
Customer Ref:	20191393
National Grid Reference:	287940, 206690
Slice:	A
Site Area (Ha):	3.65
Search Buffer (m):	1000

Site Details

Site at 287940, 206760

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Industrial Land Use Map

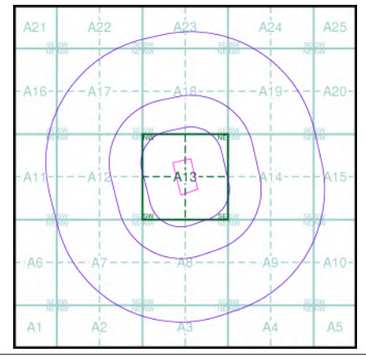
General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Slice
- Map ID

Industrial Land Use

- Contemporary Trade Directory Entry
- Fuel Station Entry
- Gas Pipeline
- Points of Interest - Commercial Services
- Points of Interest - Education and Health
- Points of Interest - Manufacturing and Production
- Points of Interest - Public Infrastructure
- Points of Interest - Recreational and Environmental
- Underground Electrical Cables

Industrial Land Use Map - Slice A



Order Details

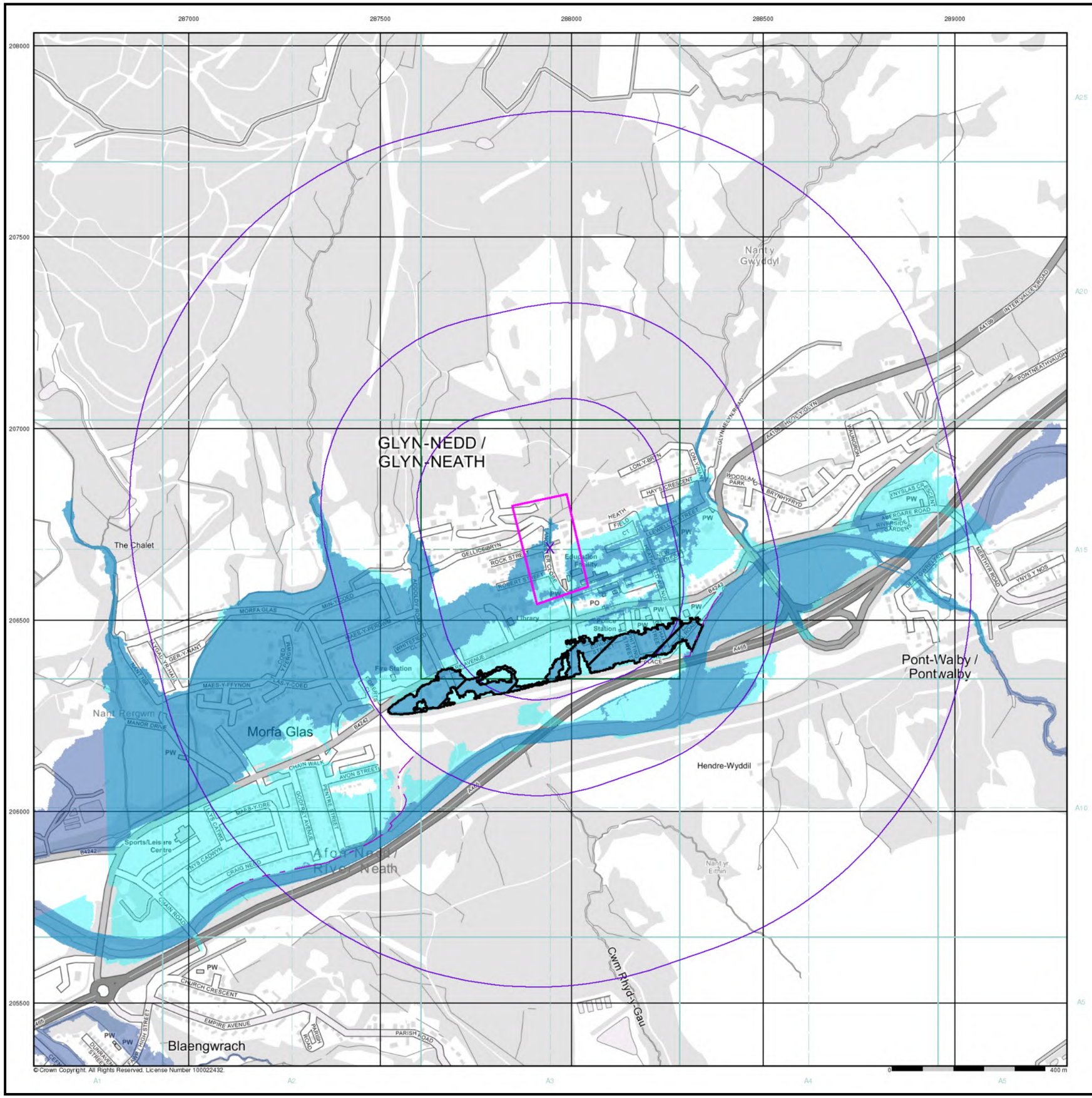
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Customer Ref:	20191393
National Grid Reference:	287940, 206690
Slice:	A
Site Area (Ha):	3.65
Search Buffer (m):	1000

Site Details

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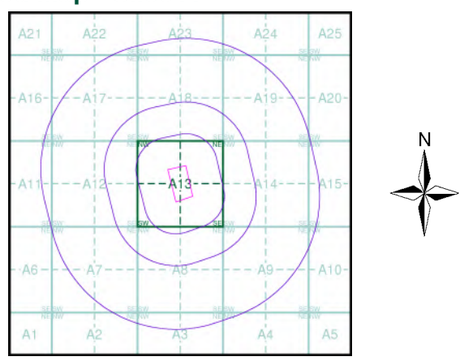
General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point

Agency and Hydrological (Flood)

- Extreme Flooding from Rivers or Sea without Defences (Zone 2)
- Flooding from Rivers or Sea without Defences (Zone 3)
- Area Benefiting from Flood Defence
- Flood Water Storage Areas
- Flood Defence

Flood Map - Slice A



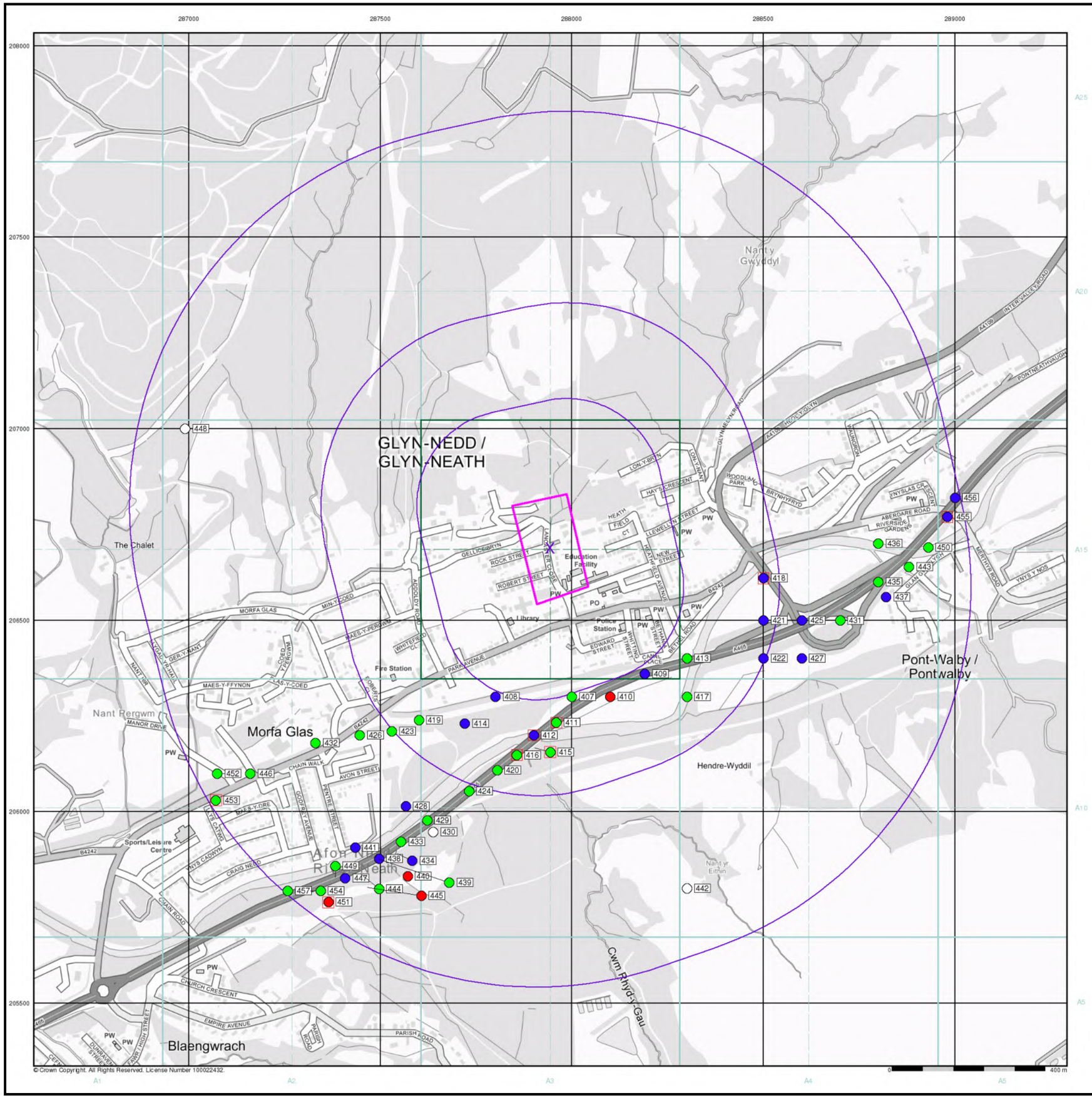
Order Details

Order Number:	221660568_1_1
Customer Ref:	20191393
National Grid Reference:	287940, 206690
Slice:	A
Site Area (Ha):	3.65
Search Buffer (m):	1000

Site Details

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General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point
- Map ID
- Several of Type at Location

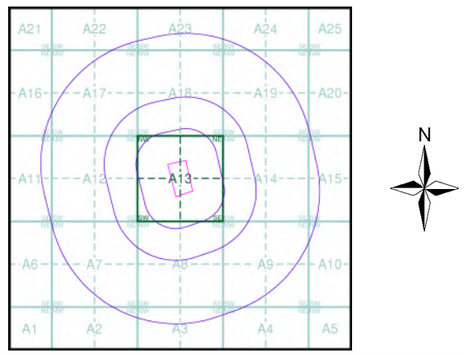
Agency and Hydrological (Boreholes)

- BGS Borehole Depth 0 - 10m
- BGS Borehole Depth 10 - 30m
- BGS Borehole Depth 30m +
- Confidential
- Other

For Borehole information please refer to the Borehole .csv file which accompanied this slice.

A copy of the BGS Borehole Ordering Form is available to download from the Support section of www.envirocheck.co.uk.

Borehole Map - Slice A



Order Details

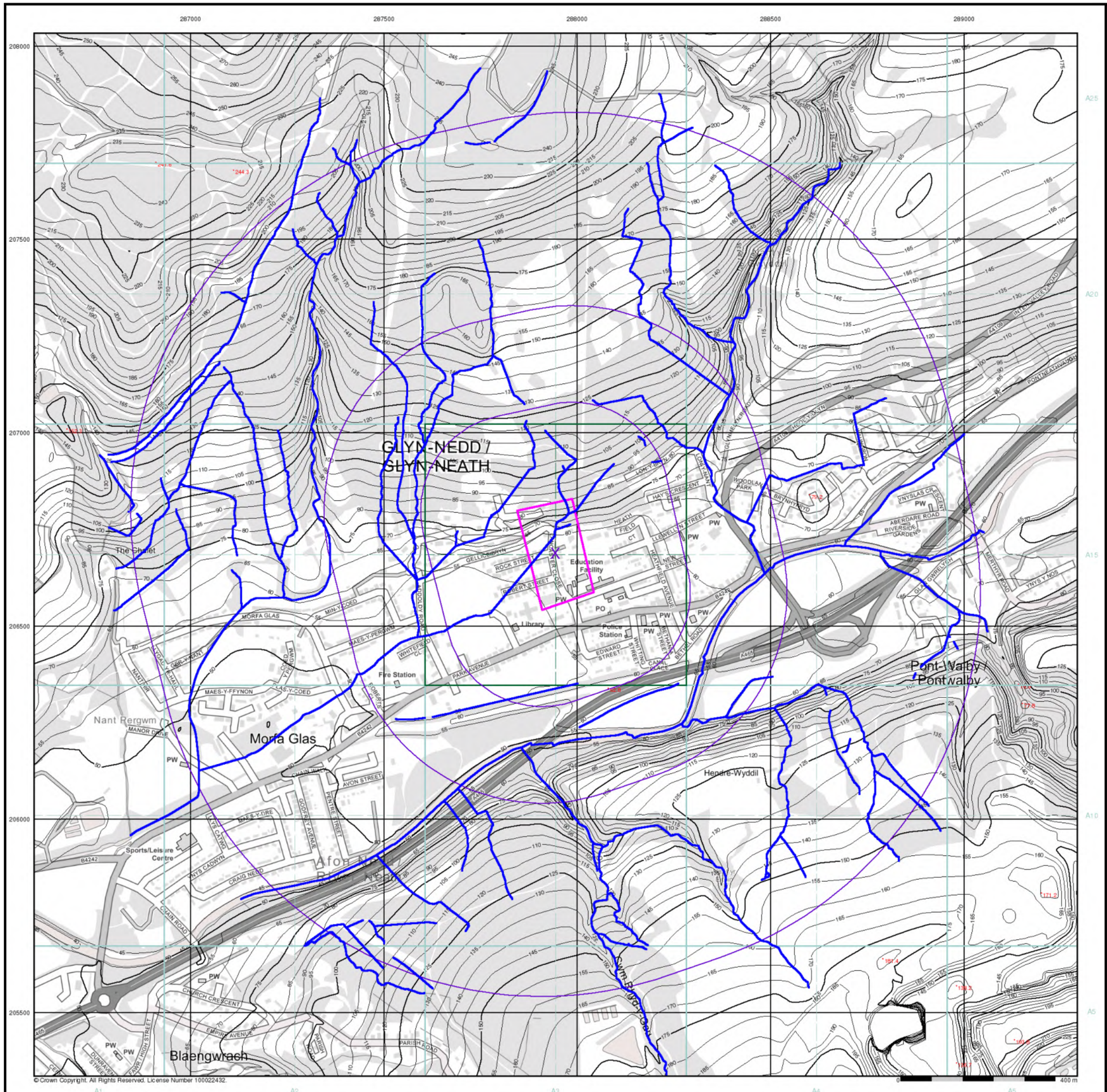
Order Number:	221660568_1_1
Customer Ref:	20191393
National Grid Reference:	287940, 206690
Slice:	A
Site Area (Ha):	3.65
Search Buffer (m):	1000

Site Details

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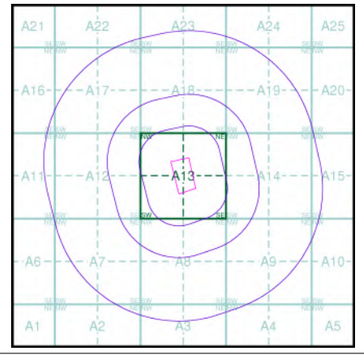
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General
- Specified Site
- Specified Buffer(s)
- Grid Reference: 4dp

OS Water Network Data
- Canal
- Inland River
- Pipeline
- Tidal River
- Weir

Contours (height in meters)
- Master Contour
- Master Contours
- Spot Height
- MHW = Mean High Water
- MLW = Mean Low Water

OS Water Network Map - Slice A



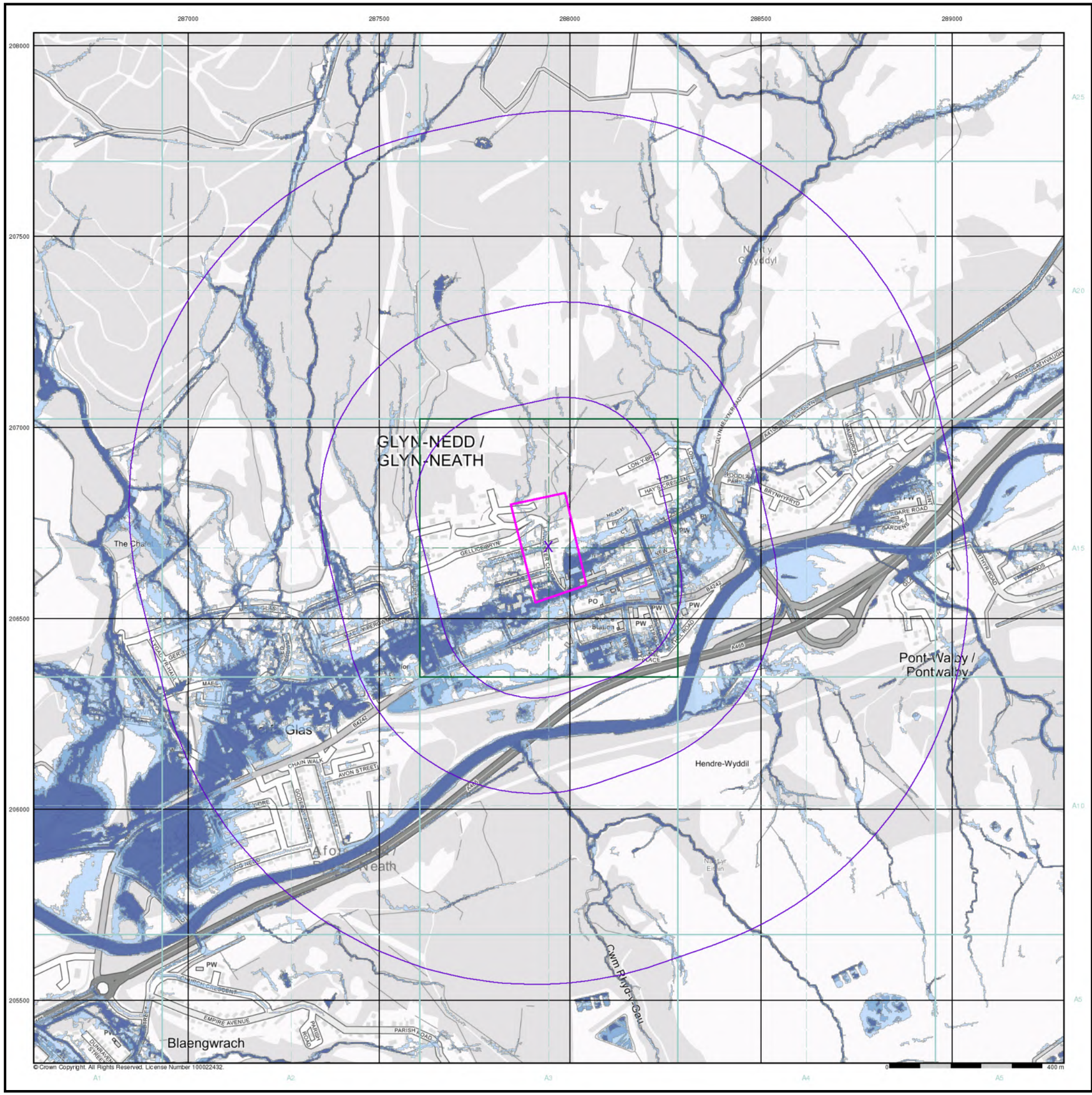
Order Details

Order Number:	221660568_1_1
Customer Ref:	20191393
National Grid Reference:	287940, 206690
Slice:	A
Site Area (Ha):	3.65
Search Buffer (m):	1000

Site Details

Site at 287940, 206760

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General

- Specified Site
- Specified Buffer(s)
- Bearing Reference Point

Risk of Flooding from Surface Water

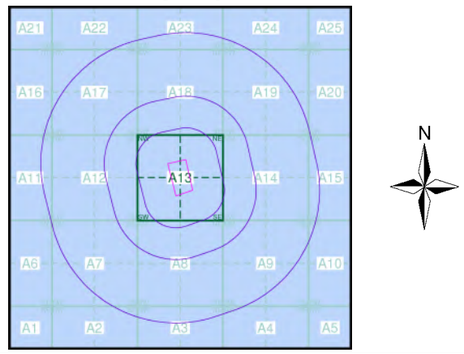
- High - 30 Year Return
- Medium - 100 Year Return
- Low - 1000 Year Return

Suitability

See the suitability map below

- National to county
- County to town
- Town to street
- Street to parcels of land
- Property

EA/NRW Suitability Map - Slice A



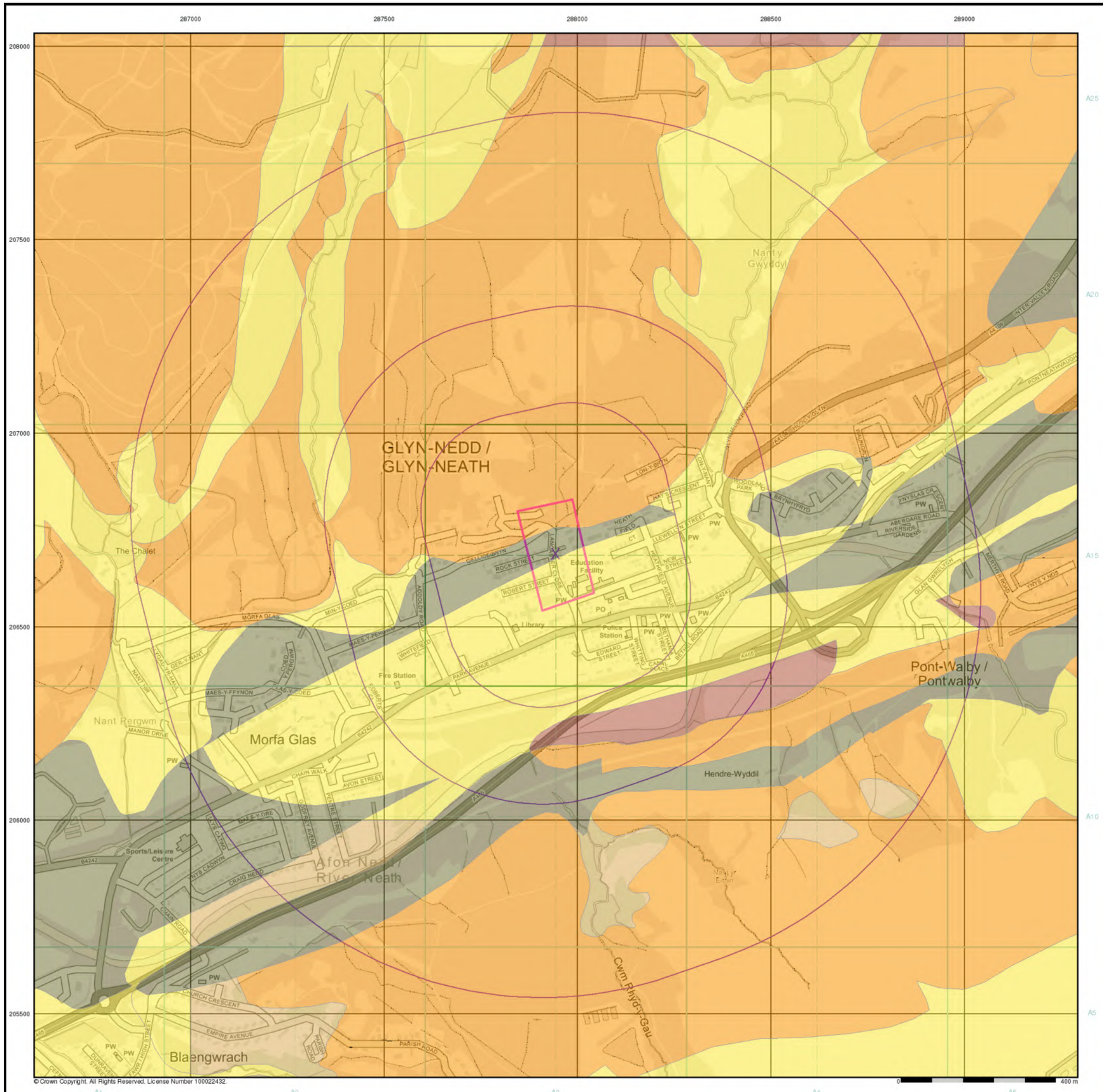
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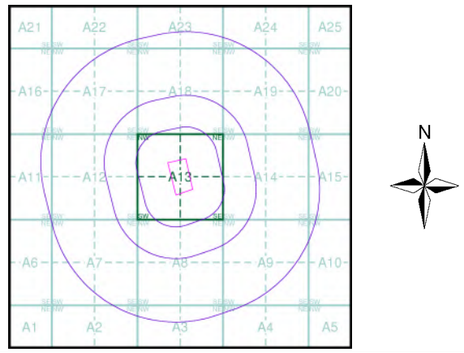
Specified Site | Specified Buffer(s) | X Bearing Reference Point

Estimated Soil Chemistry Arsenic

Arsenic Concentrations mg/kg

- < 15
- 15 - 25
- 25 - 35
- 35 - 45
- 45 - 60
- 60 - 120
- > 120

Estimated Soil Chemistry Arsenic - Slice A



Order Details

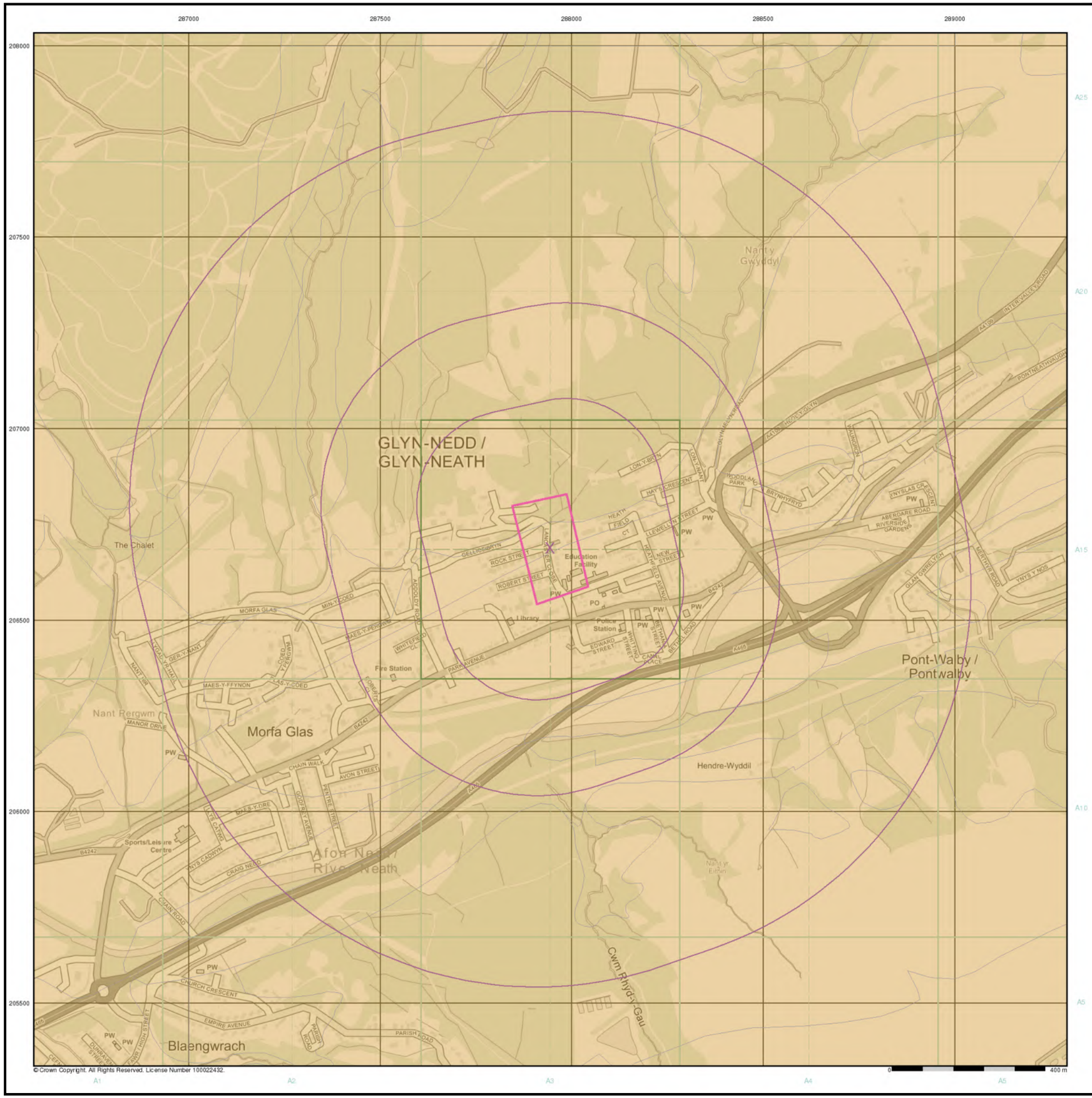
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Customer Ref:	20191393
National Grid Reference:	287940, 206690
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Site Area (Ha):	3.65
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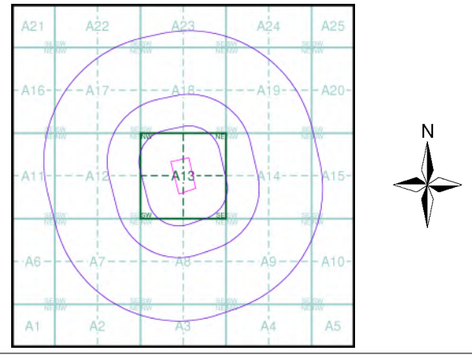
Specified Site | Specified Buffer(s) | X Bearing Reference Point

Estimated Soil Chemistry Cadmium

Cadmium Concentrations mg/kg

- < 1.8
- 1.8 - 2.2
- 2.2 - 3.0
- > 3.0

Estimated Soil Chemistry Cadmium - Slice A



Order Details

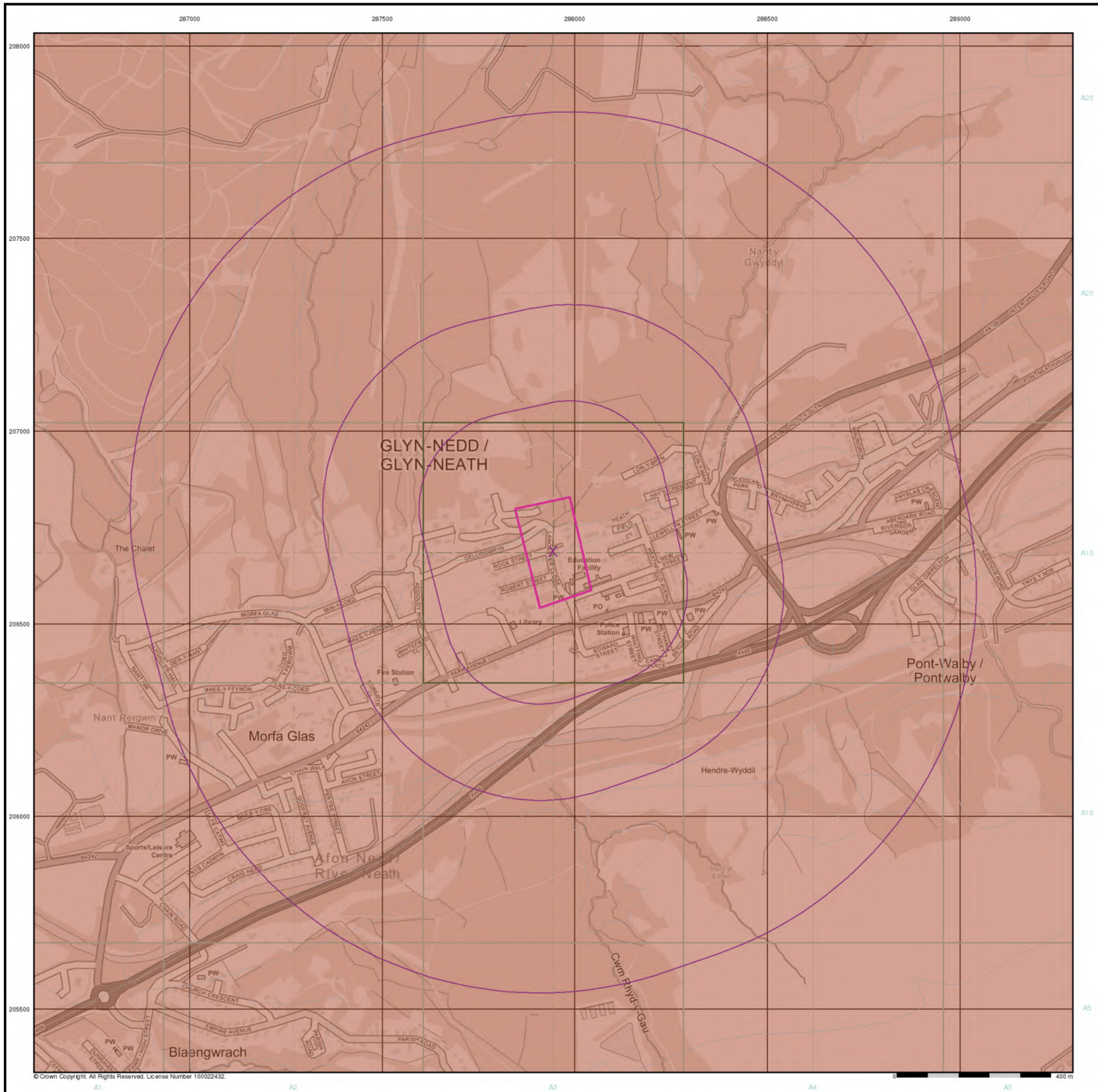
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Customer Ref:	20191393
National Grid Reference:	287940, 206690
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Site Area (Ha):	3.65
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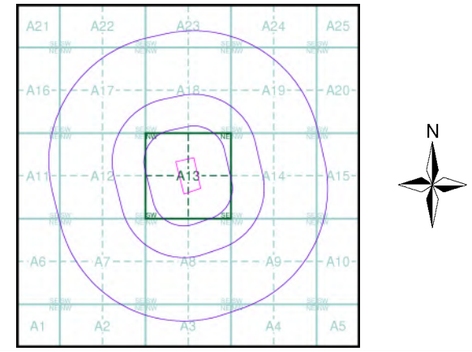
Specified Site | Specified Buffer(s) | X Bearing Reference Point

Estimated Soil Chemistry Chromium

Chromium Concentrations mg/kg

- < 20
- 20 - 40
- 40 - 60
- 60 - 90
- 90 - 120
- 120 - 180
- > 180

Estimated Soil Chemistry Chromium - Slice A



Order Details

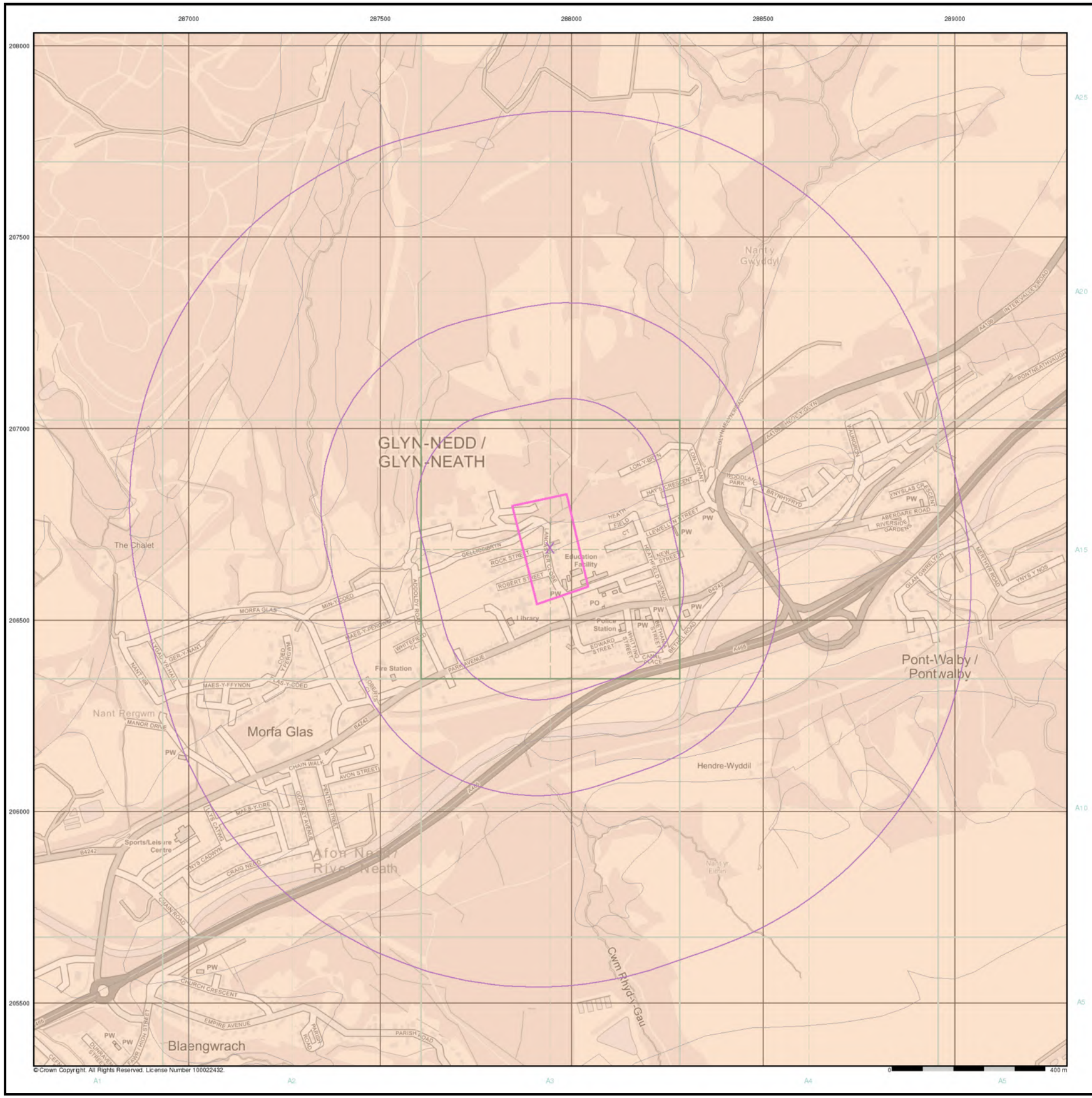
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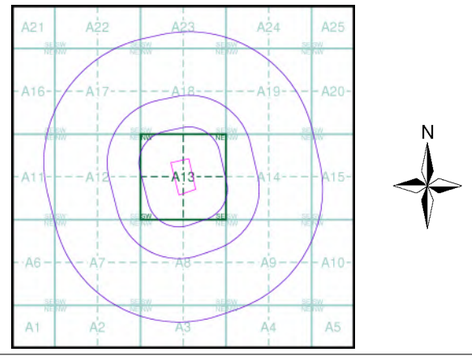
Specified Site Specified Buffer(s) X Bearing Reference Point

Estimated Soil Chemistry Lead

Lead Concentrations mg/kg

- <100 mg/kg
- 100 - 200
- 200 - 300
- 300 - 600
- 600 - 1200
- >1200

Estimated Soil Chemistry Lead - Slice A



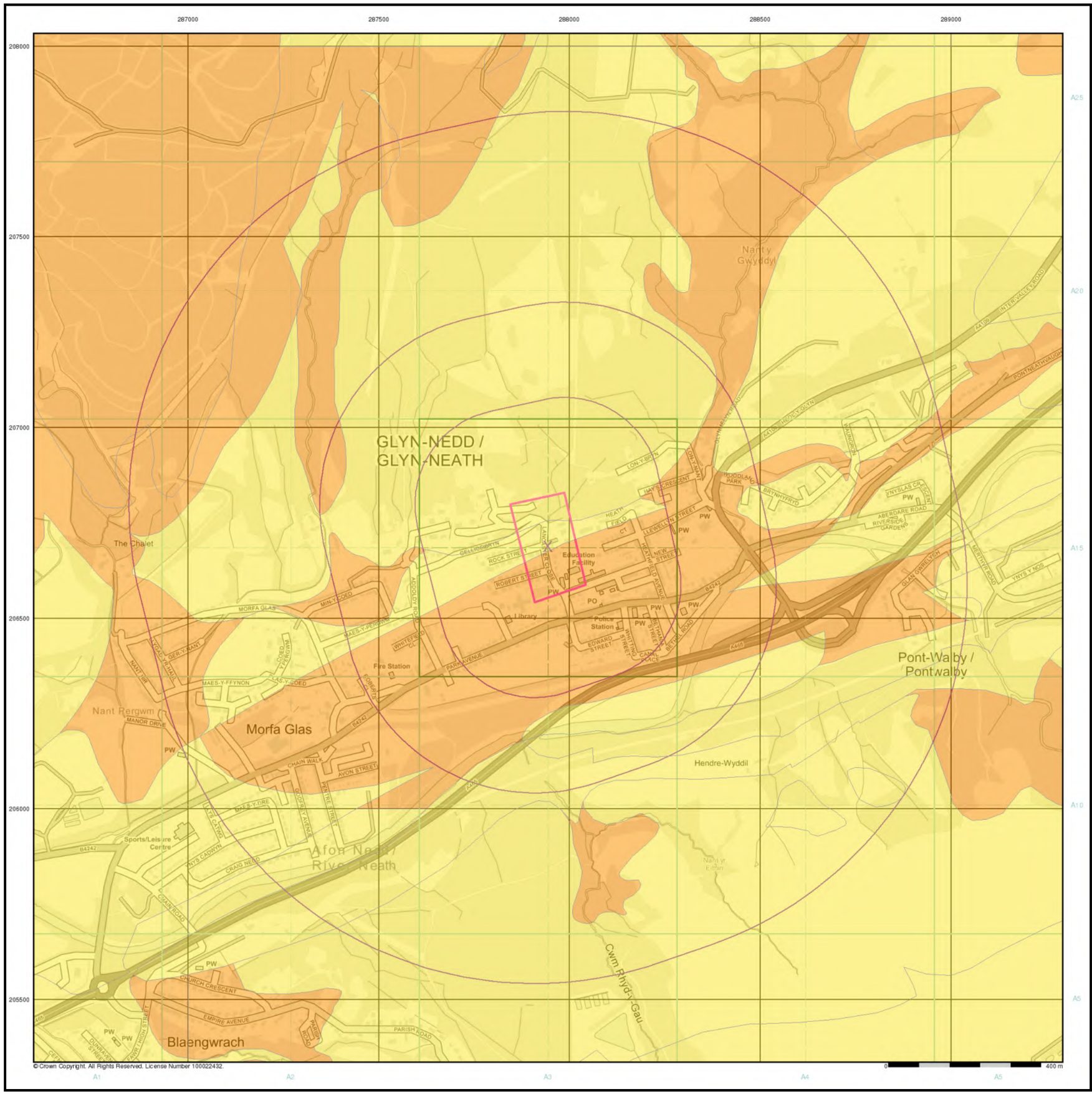
Order Details

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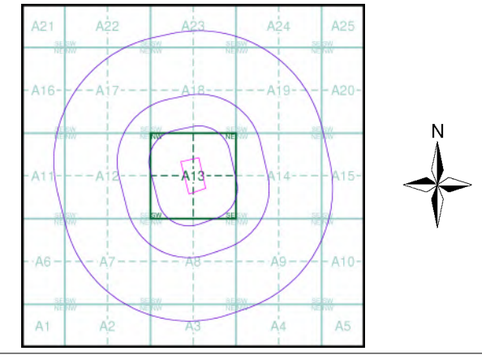
X

Estimated Soil Chemistry Nickel

Nickel Concentrations mg/kg

- < 15
- 15 - 30
- 30 - 45
- 45 - 60
- 60 - 80
- 80 - 100
- > 100

Estimated Soil Chemistry Nickel - Slice A



Order Details

Order Details:	221660568_1_1
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National Grid Reference:	287940, 206690
Slice:	A
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Search Buffer (m):	1000

Site Details

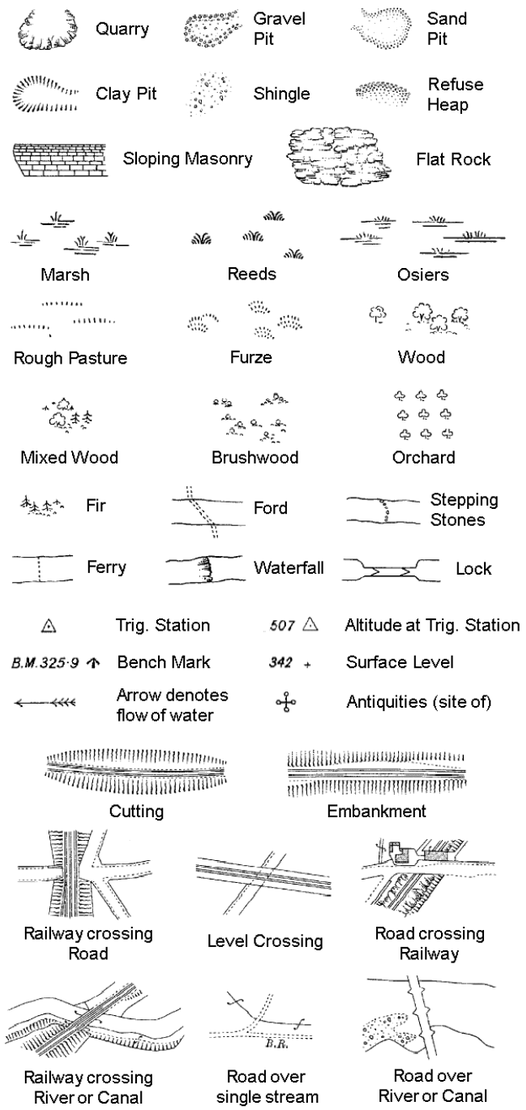
Site at 287940, 206760

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Historical Mapping Legends

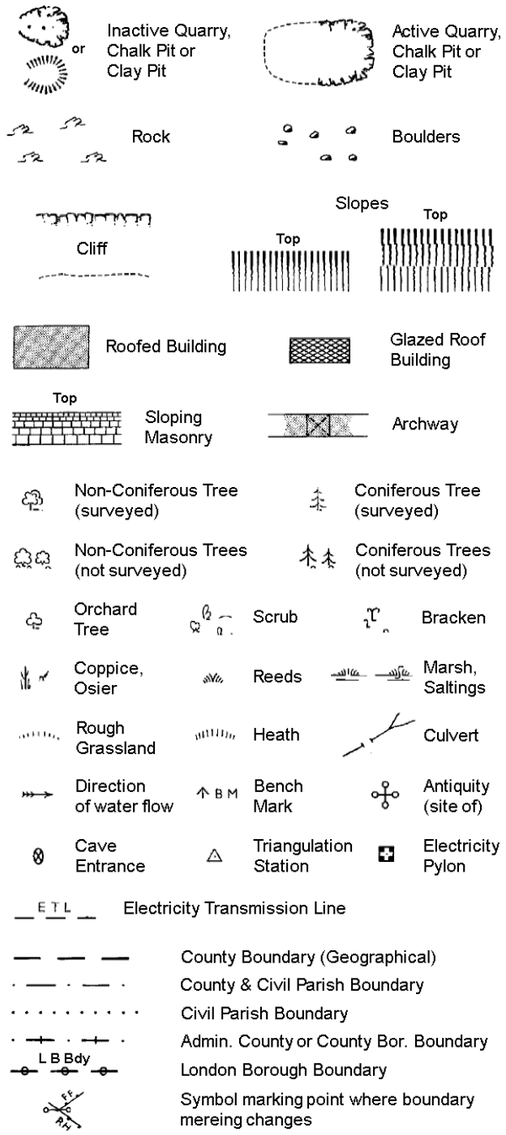
Ordnance Survey County Series and Ordnance Survey Plan 1:2,500



County Boundary (Geographical)
County & Civil Parish Boundary
Administrative County & Civil Parish Boundary
Co. Boro. Bdy.
County Borough Boundary (England)
Co. Burgh Bdy.
County Burgh Boundary (Scotland)

B P B S	Boundary Post or Stone	P.C.B	Police Call Box
B.R.	Bridle Road	P	Pump
E.P	Electricity Pylon	S.P	Signal Post
F.B.	Foot Bridge	St.	Sluice
F.P.	Foot Path	Sp.	Spring
G.P	Guide Post or Board	T.C.B	Telephone Call Box
M.S	Mile Stone	Tr.	Trough
M.P M.R	Mooring Post or Ring	W	Well

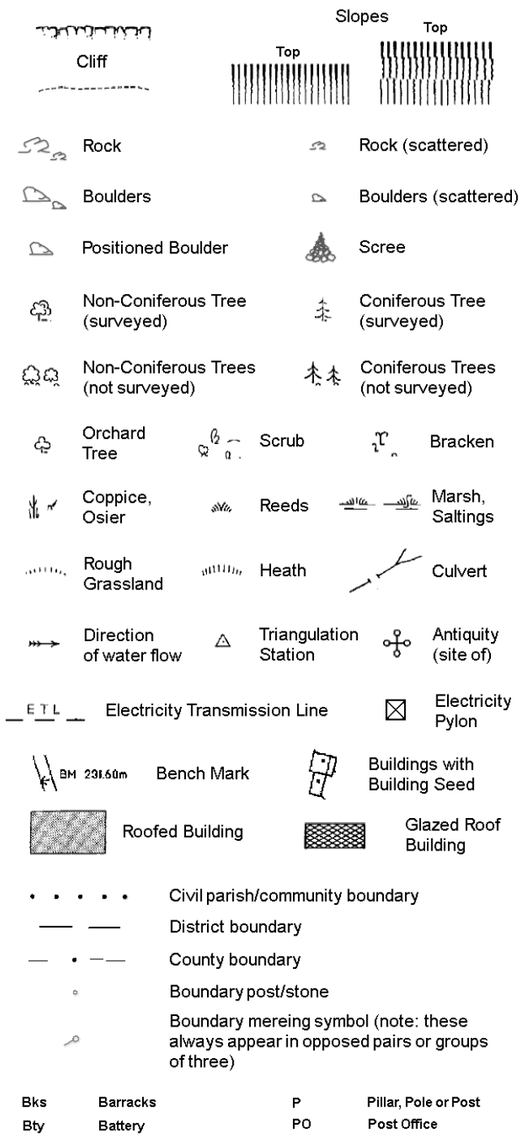
Ordnance Survey Plan, Additional SIMs and Supply of Unpublished Survey Information 1:2,500 and 1:1,250



County Boundary (Geographical)
County & Civil Parish Boundary
Civil Parish Boundary
Admin. County or County Bor. Boundary
L B Bdy
London Borough Boundary
Symbol marking point where boundary mereing changes

BH	Beer House	P	Pillar, Pole or Post
BP, BS	Boundary Post or Stone	PO	Post Office
Cn, C	Capstan, Crane	PC	Public Convenience
Chy	Chimney	PH	Public House
D Fn	Drinking Fountain	Pp	Pump
El P	Electricity Pillar or Post	SB, S Br	Signal Box or Bridge
FAP	Fire Alarm Pillar	SP, SL	Signal Post or Light
FB	Foot Bridge	Spr	Spring
GP	Guide Post	Tk	Tank or Track
H	Hydrant or Hydraulic	TCB	Telephone Call Box
LC	Level Crossing	TCP	Telephone Call Post
MH	Manhole	Tr	Trough
MP	Mile Post or Mooring Post	Wr Pt, Wr T	Water Point, Water Tap
MS	Mile Stone	W	Well
NTL	Normal Tidal Limit	Wd Pp	Wind Pump

Large-Scale National Grid Data 1:2,500 and 1:1,250



Civil parish/community boundary
District boundary
County boundary
Boundary post/stone
Boundary mereing symbol (note: these always appear in opposed pairs or groups of three)

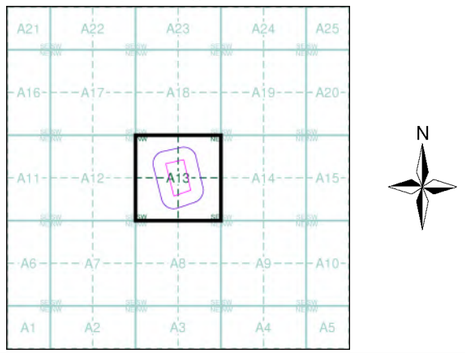
Bks	Barracks	P	Pillar, Pole or Post
Bty	Battery	PO	Post Office
Cemy	Cemetery	PC	Public Convenience
Chy	Chimney	Pp	Pump
Cis	Cistern	Ppg Sta	Pumping Station
Dismtd Rly	Dismantled Railway	PW	Place of Worship
El Gen Sta	Electricity Generating Station	Sewage Ppg Sta	Sewage Pumping Station
El P	Electricity Pole, Pillar	SB, S Br	Signal Box or Bridge
El Sub Sta	Electricity Sub Station	SP, SL	Signal Post or Light
FB	Filter Bed	Spr	Spring
Fn / D Fn	Fountain / Drinking Ftn.	Tk	Tank or Track
Gas Gov	Gas Valve Compound	Tr	Trough
GVC	Gas Governer	Wd Pp	Wind Pump
GP	Guide Post	Wr Pt, Wr T	Water Point, Water Tap
MH	Manhole	Wks	Works (building or area)
MP, MS	Mile Post or Mile Stone	W	Well

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Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Glamorganshire	1:2,500	1876 - 1877	2
Glamorganshire	1:2,500	1899	3
Glamorganshire	1:2,500	1918 - 1919	4
Ordnance Survey Plan	1:2,500	1962 - 1964	5
Ordnance Survey Plan	1:2,500	1972 - 1981	6
Additional SIMs	1:2,500	1977 - 1981	7
Additional SIMs	1:2,500	1981	8
Ordnance Survey Plan	1:2,500	1984	9
Additional SIMs	1:2,500	1991	10
Large-Scale National Grid Data	1:2,500	1993	11
Large-Scale National Grid Data	1:2,500	1995	12
Large-Scale National Grid Data	1:2,500	1996	13
Large-Scale National Grid Data	1:2,500	1996	14
Historical Aerial Photography	1:2,500	2000	15

Historical Map - Segment A13



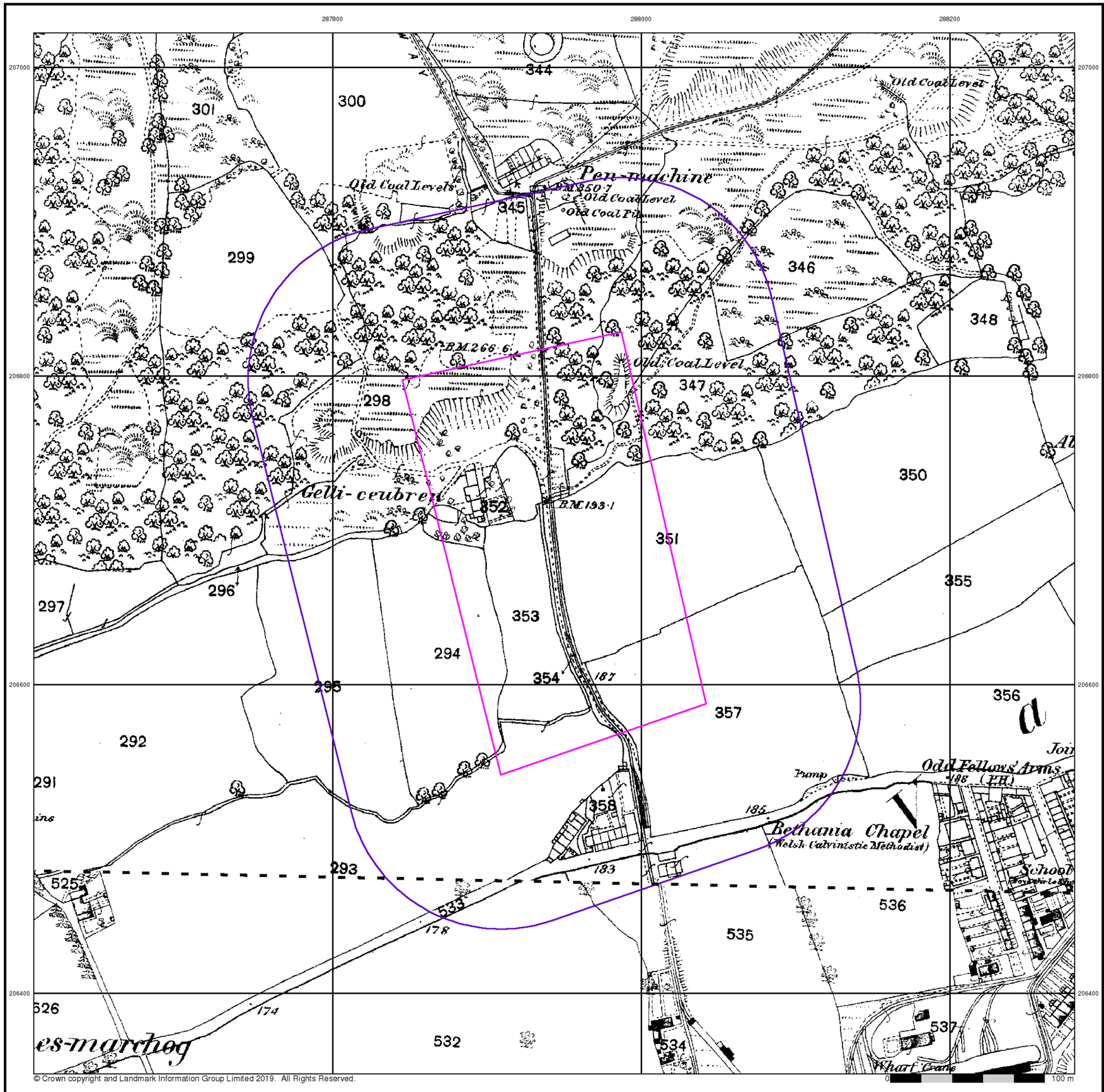
Order Details

Order Number:	221660568_1_1
Customer Ref:	20191393
National Grid Reference:	287940, 206690
Slice:	A
Site Area (Ha):	3.65
Search Buffer (m):	100

Site Details

Site at 287940, 206760

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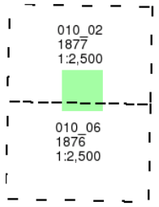
Glamorganshire

Published 1876 - 1877

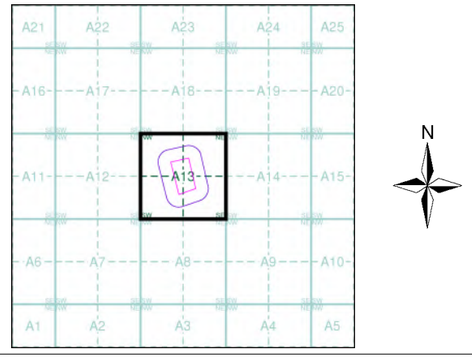
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

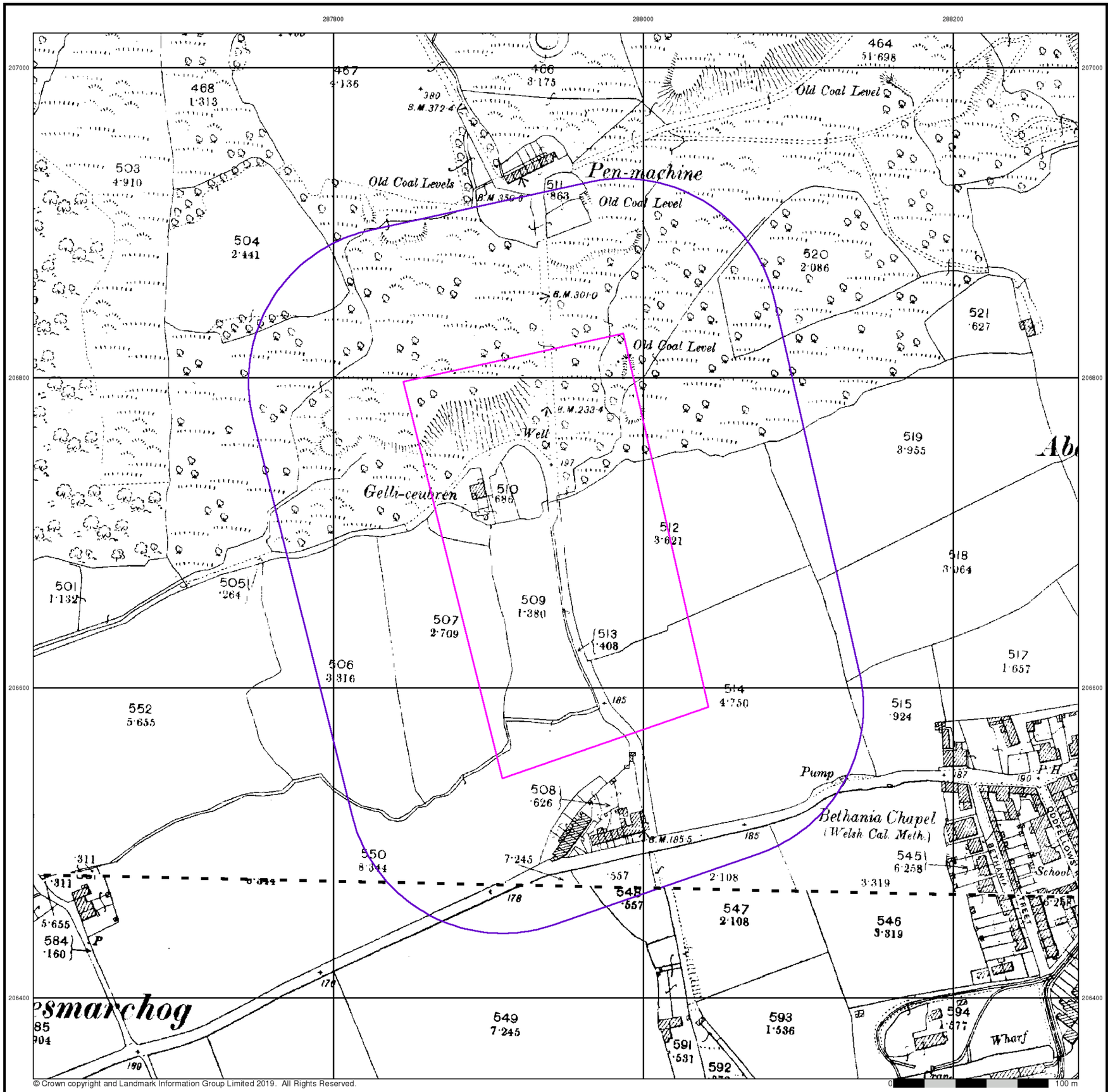
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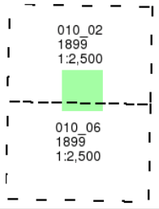
Glamorganshire

Published 1899

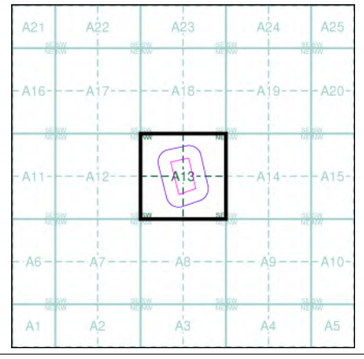
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The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

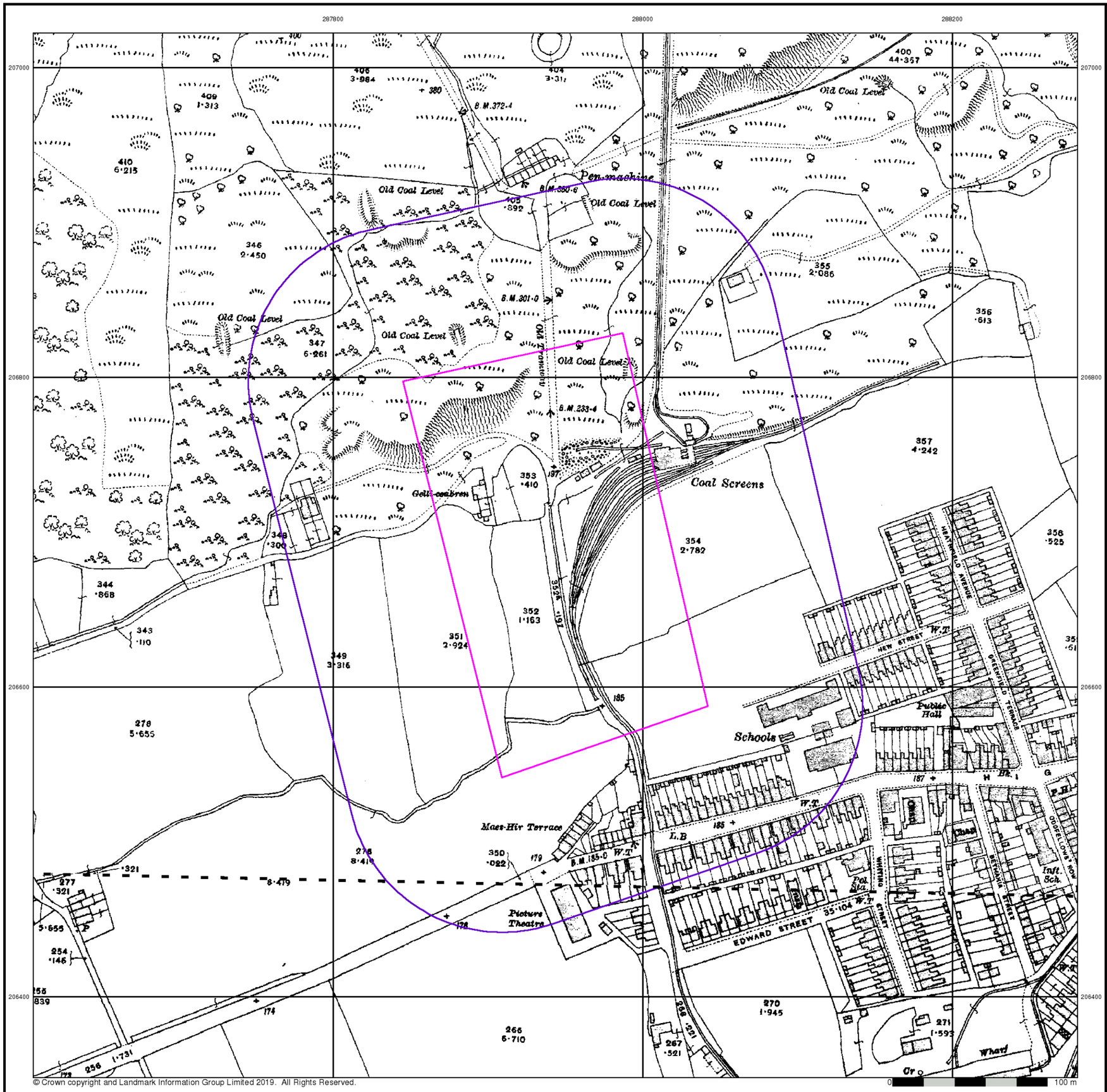
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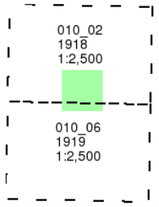
Glamorganshire

Published 1918 - 1919

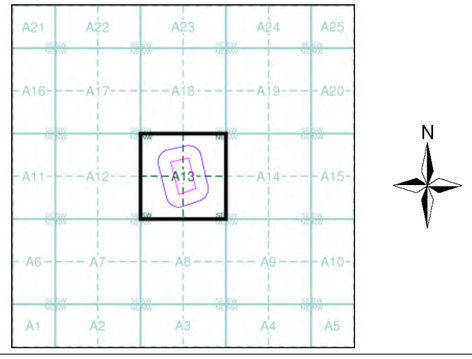
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

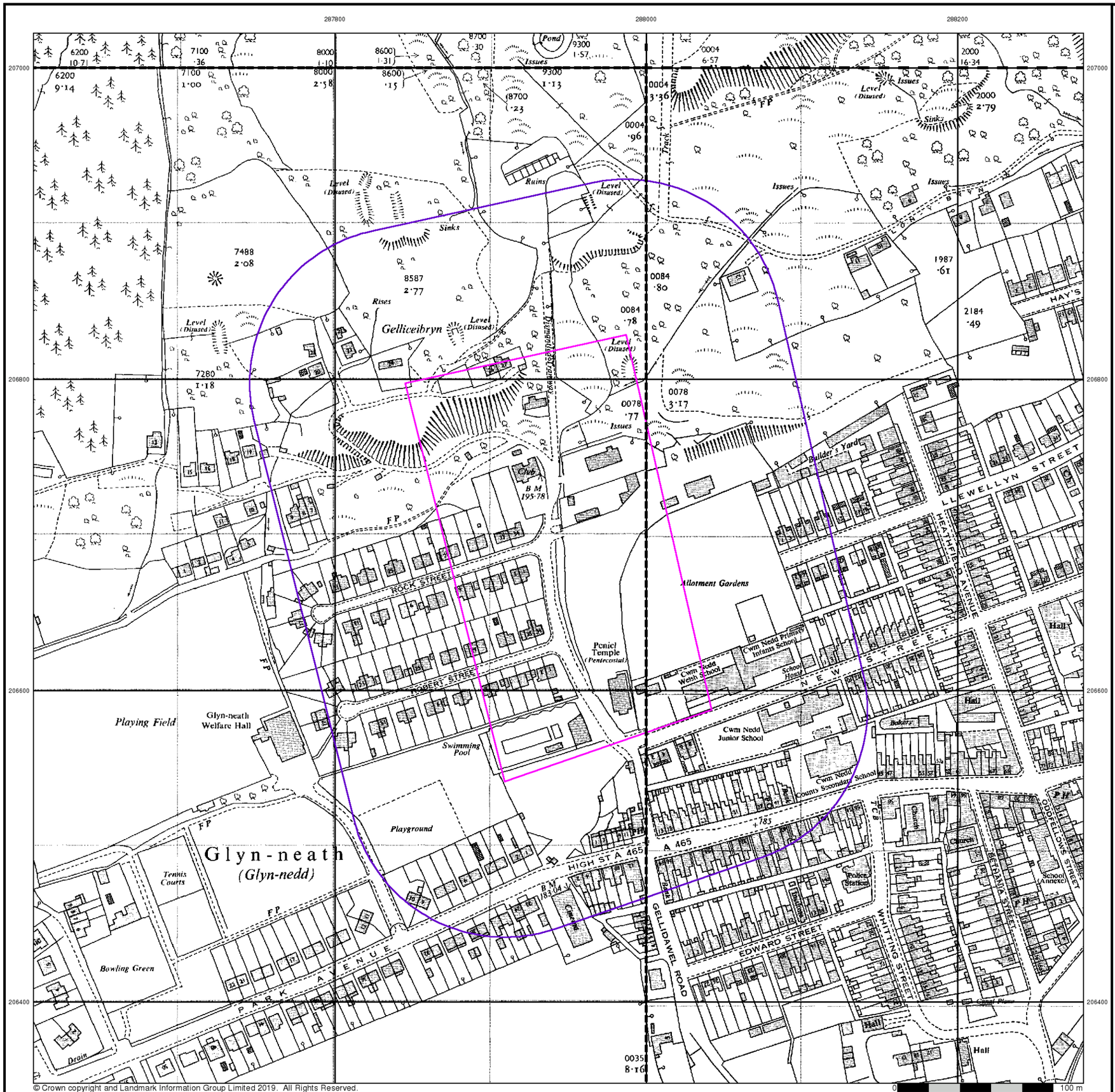
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Ordnance Survey Plan

Published 1962 - 1964

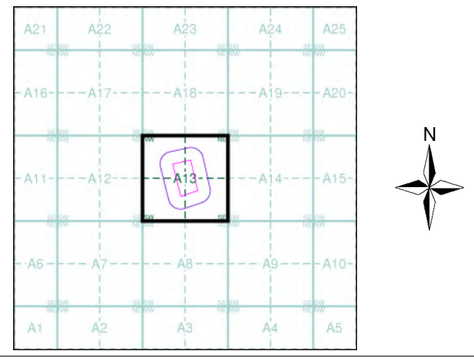
Source map scale - 1:2,500

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Map Name(s) and Date(s)

SN8707 1963 1:2,500	SN8807 1964 1:2,500
SN8706 1962 1:2,500	SN8806 1962 1:2,500

Historical Map - Segment A13



Order Details

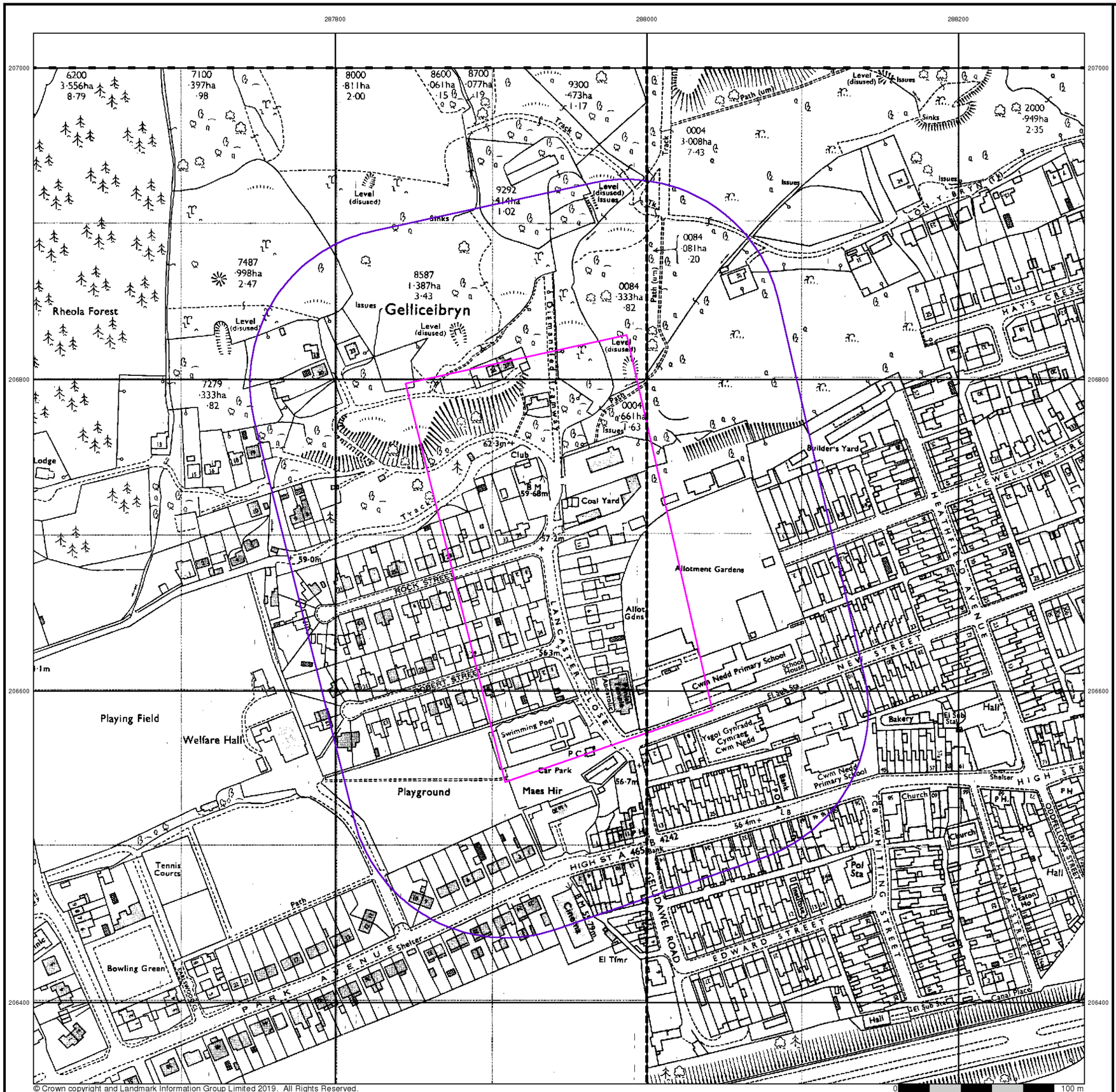
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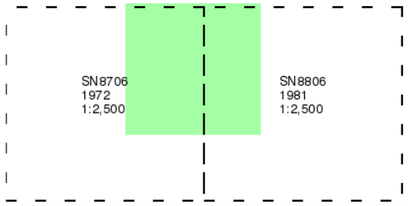
Ordnance Survey Plan

Published 1972 - 1981

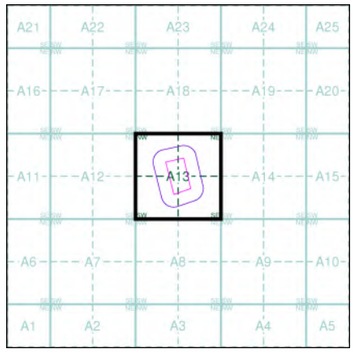
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

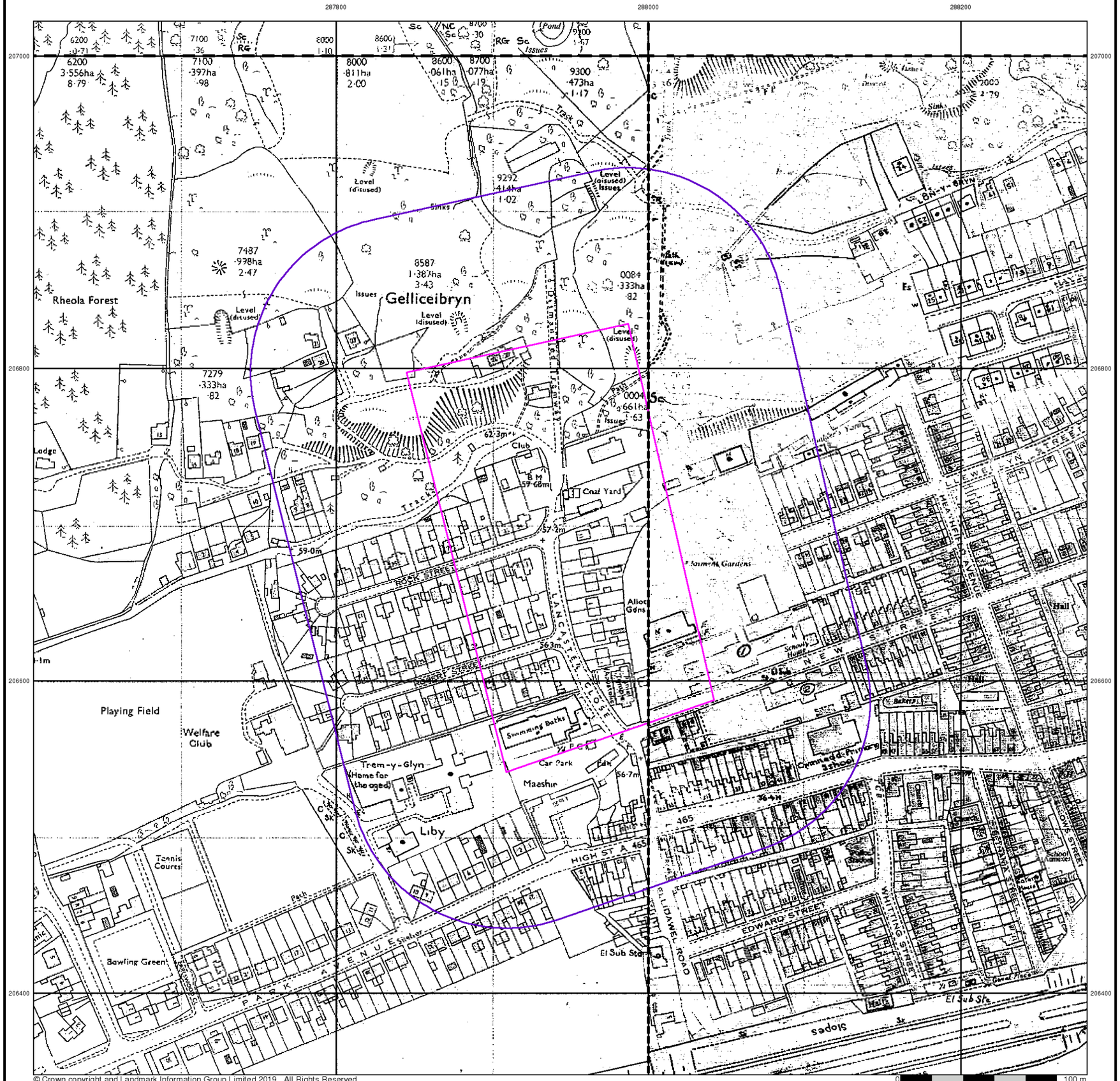
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Customer Ref:	20191393
National Grid Reference:	287940, 206690
Slice:	A
Site Area (Ha):	3.65
Search Buffer (m):	100

Site Details

Site at 287940, 206760

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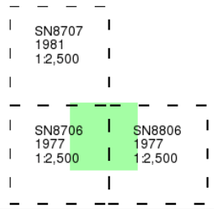
Additional SIMs

Published 1977 - 1981

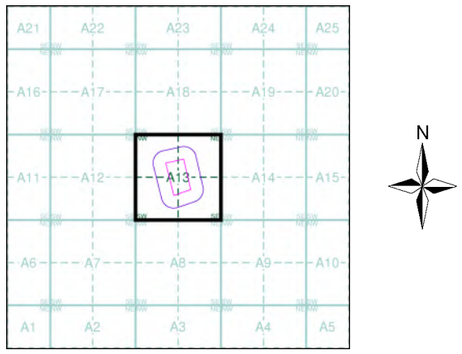
Source map scale - 1:2,500

The SIM cards (Ordnance Survey's `Survey of Information on Microfilm') are further, minor editions of mapping which were produced and published in between the main editions as an area was updated. They date from 1947 to 1994, and contain detailed information on buildings, roads and land-use. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

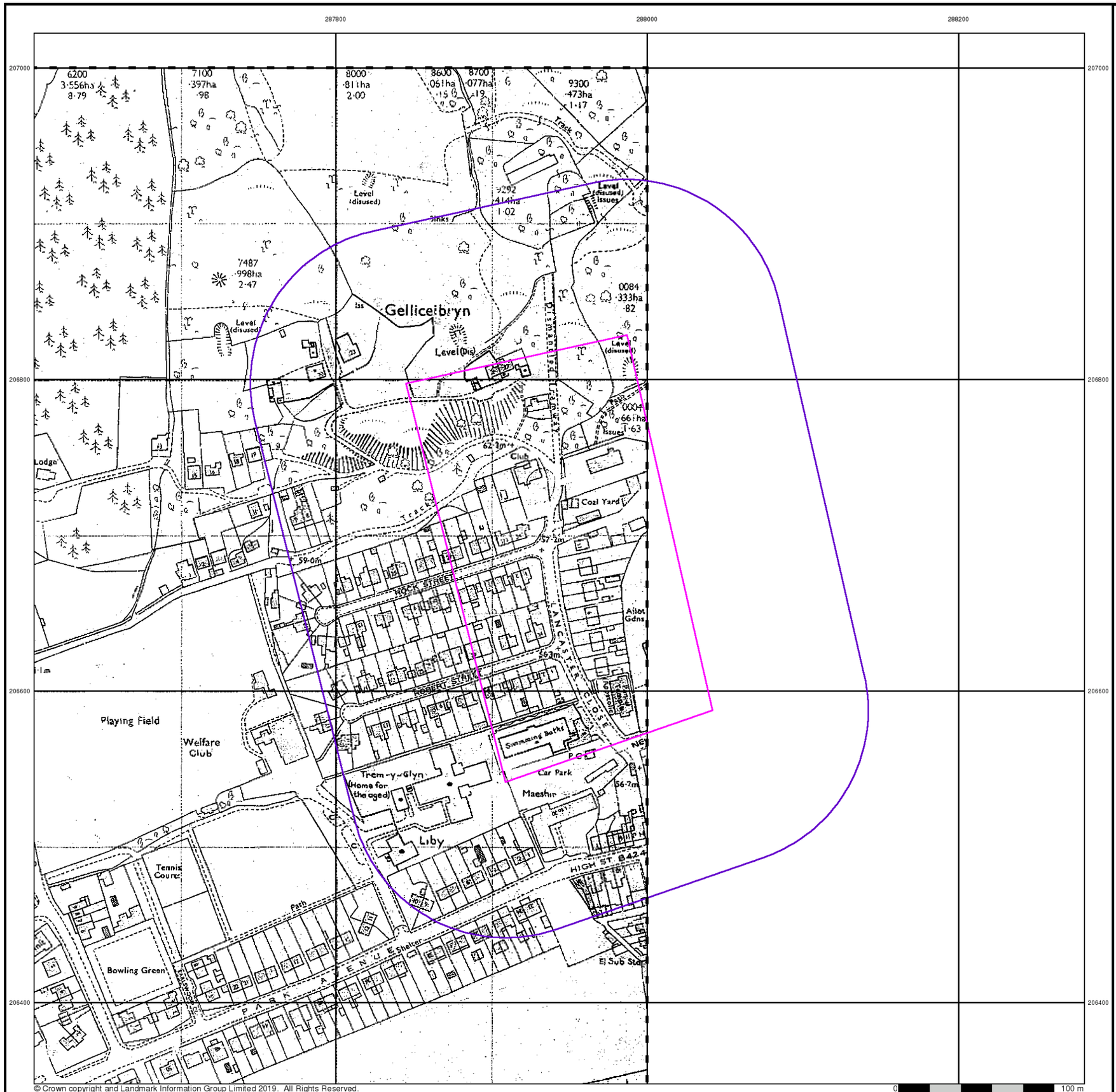
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Customer Ref:	20191393
National Grid Reference:	287940, 206690
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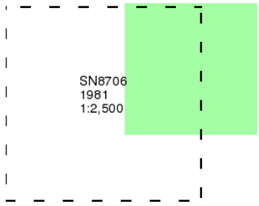
Additional SIMs

Published 1981

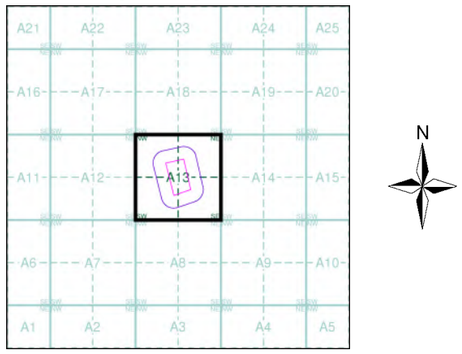
Source map scale - 1:2,500

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Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

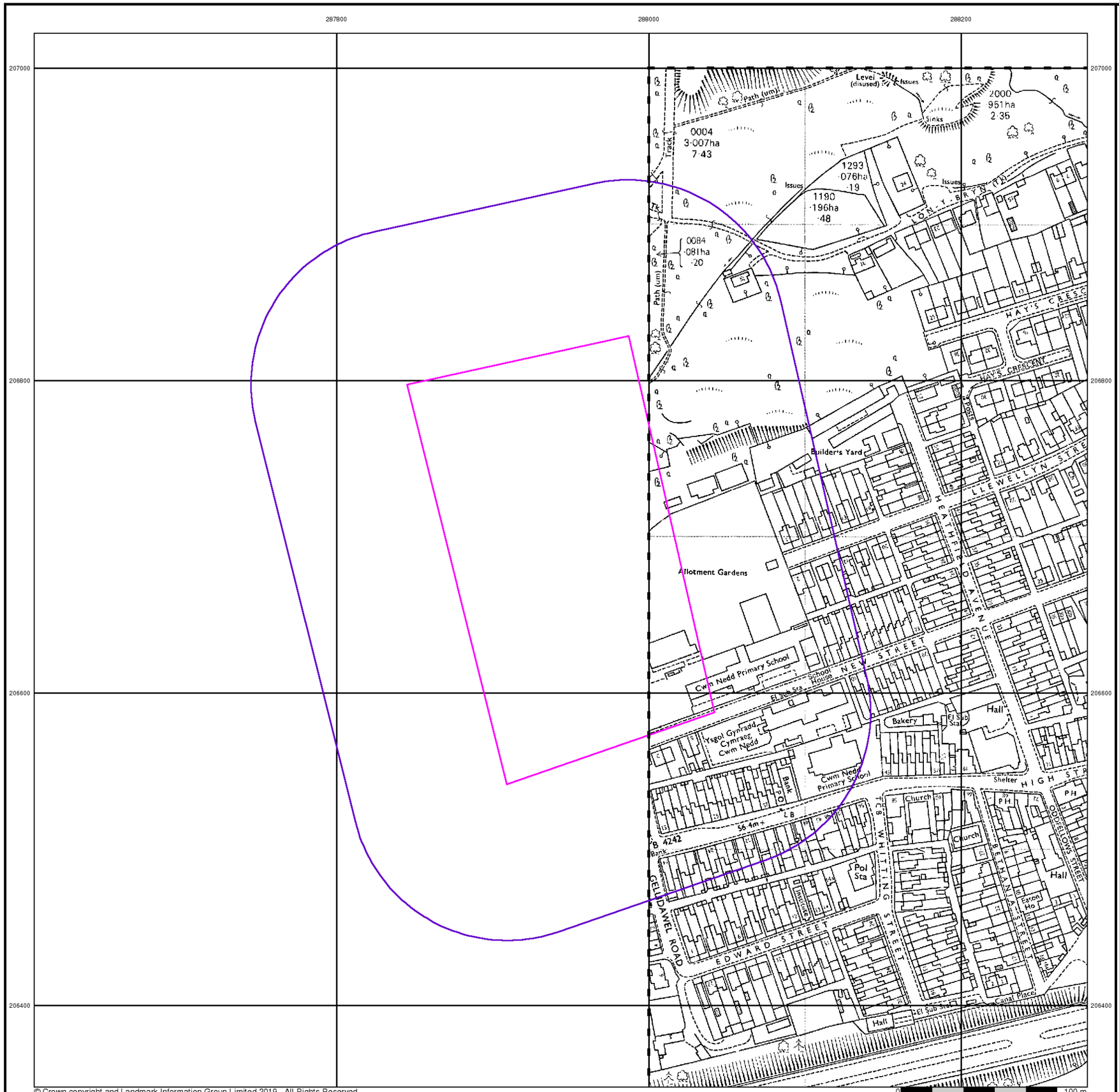
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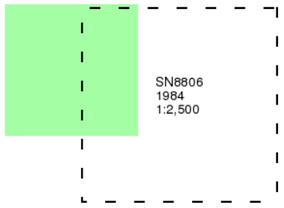
Ordnance Survey Plan

Published 1984

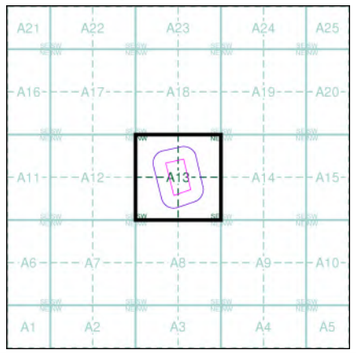
Source map scale - 1:2,500

The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas and by 1896 it covered the whole of what were considered to be the cultivated parts of Great Britain. The published date given below is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas.

Map Name(s) and Date(s)



Historical Map - Segment A13



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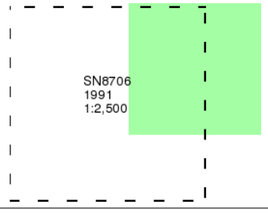
Additional SIMs

Published 1991

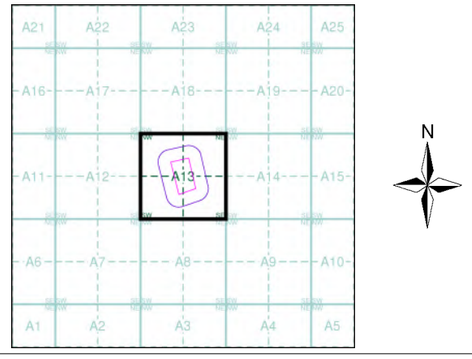
Source map scale - 1:2,500

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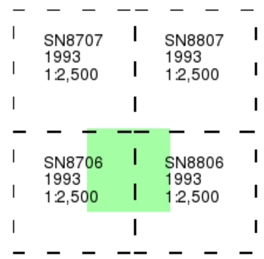
Large-Scale National Grid Data

Published 1993

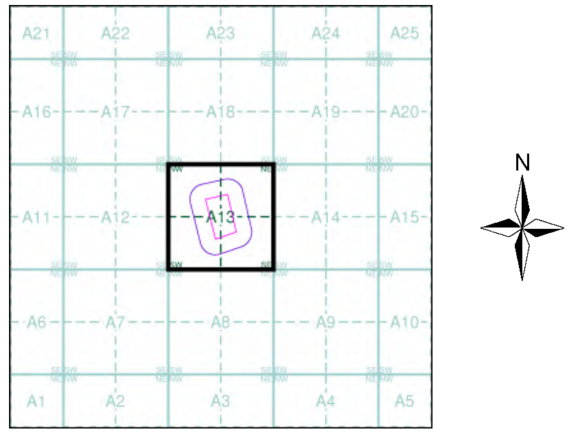
Source map scale - 1:2,500

'Large Scale National Grid Data' superseded SIM cards (Ordnance Survey's 'Survey of Information on Microfilm') in 1992, and continued to be produced until 1999. These maps were the fore-runners of digital mapping and so provide detailed information on houses and roads, but tend to show less topographic features such as vegetation. These maps were produced at both 1:2,500 and 1:1,250 scales.

Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

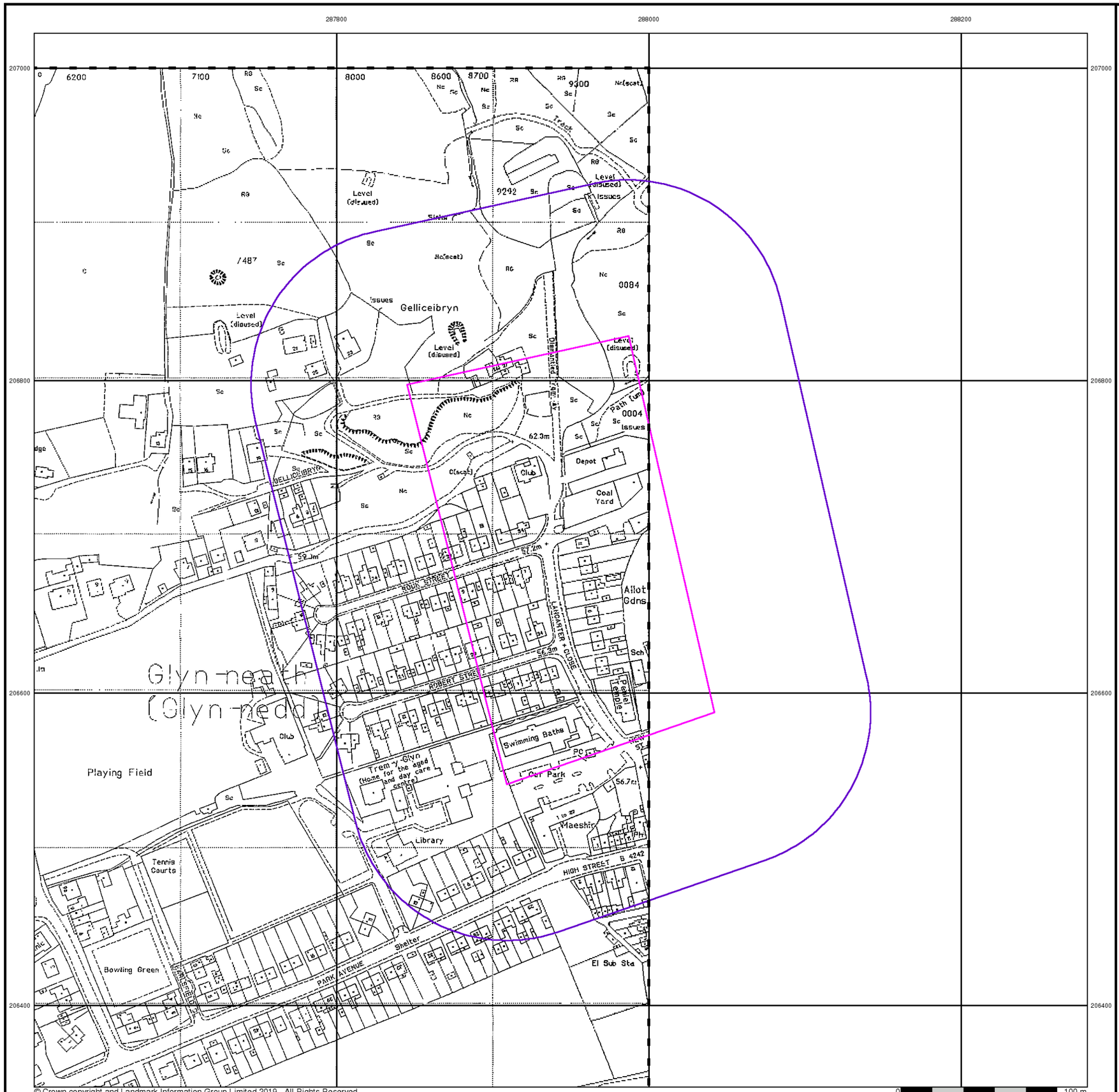
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Customer Ref: 20191393
National Grid Reference: 287940, 206690
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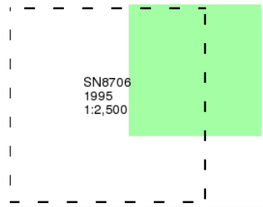
Large-Scale National Grid Data

Published 1995

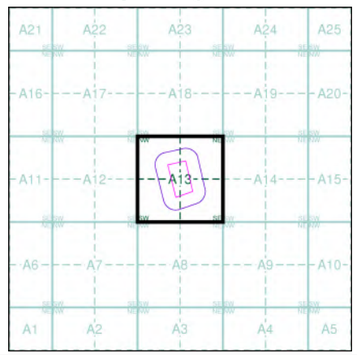
Source map scale - 1:2,500

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Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

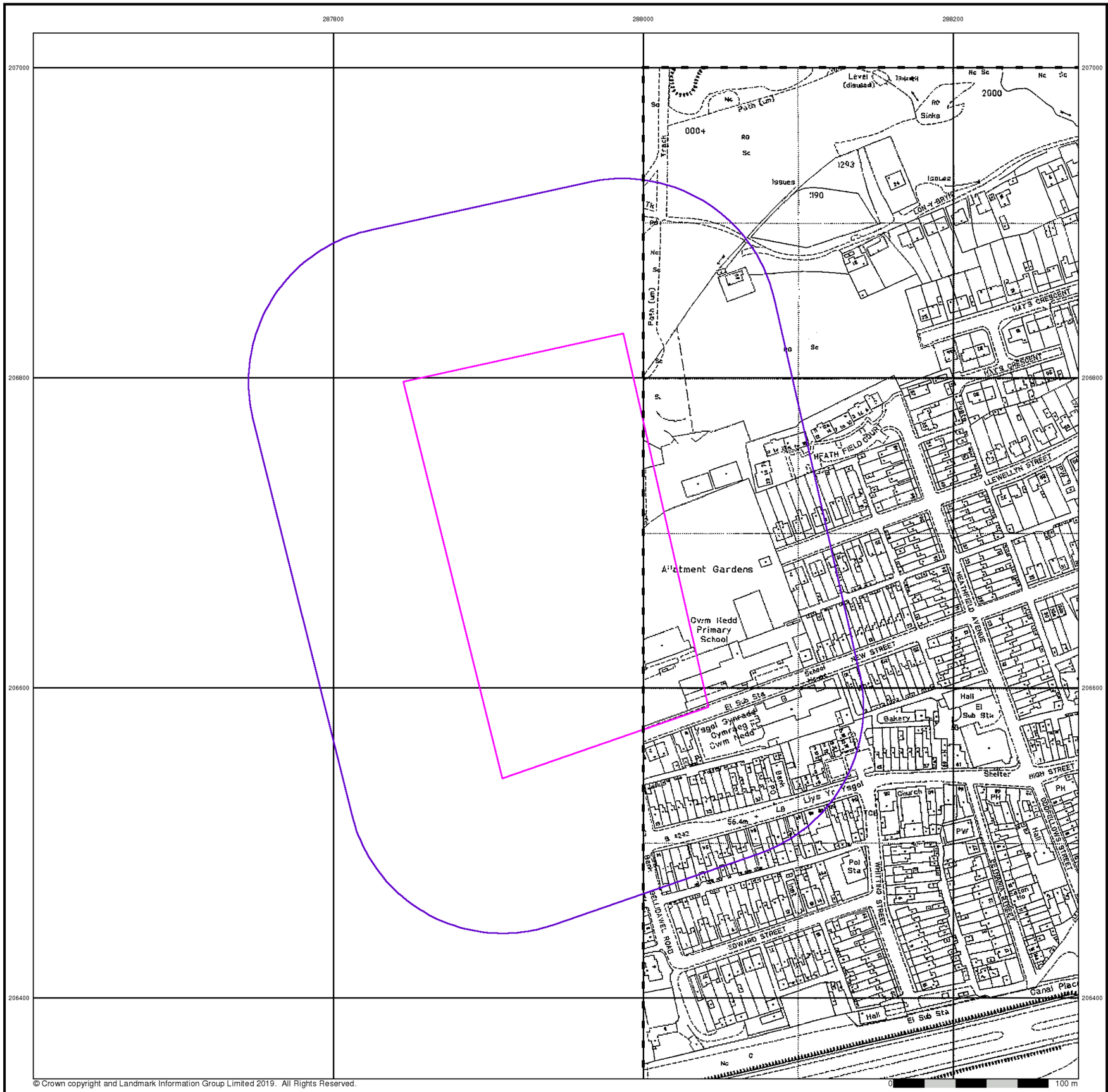
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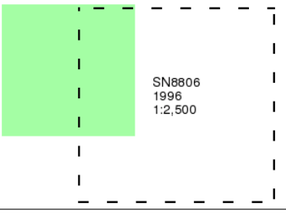
Large-Scale National Grid Data

Published 1996

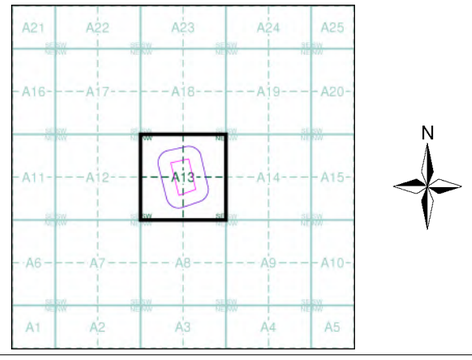
Source map scale - 1:2,500

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Map Name(s) and Date(s)



Historical Map - Segment A13



Order Details

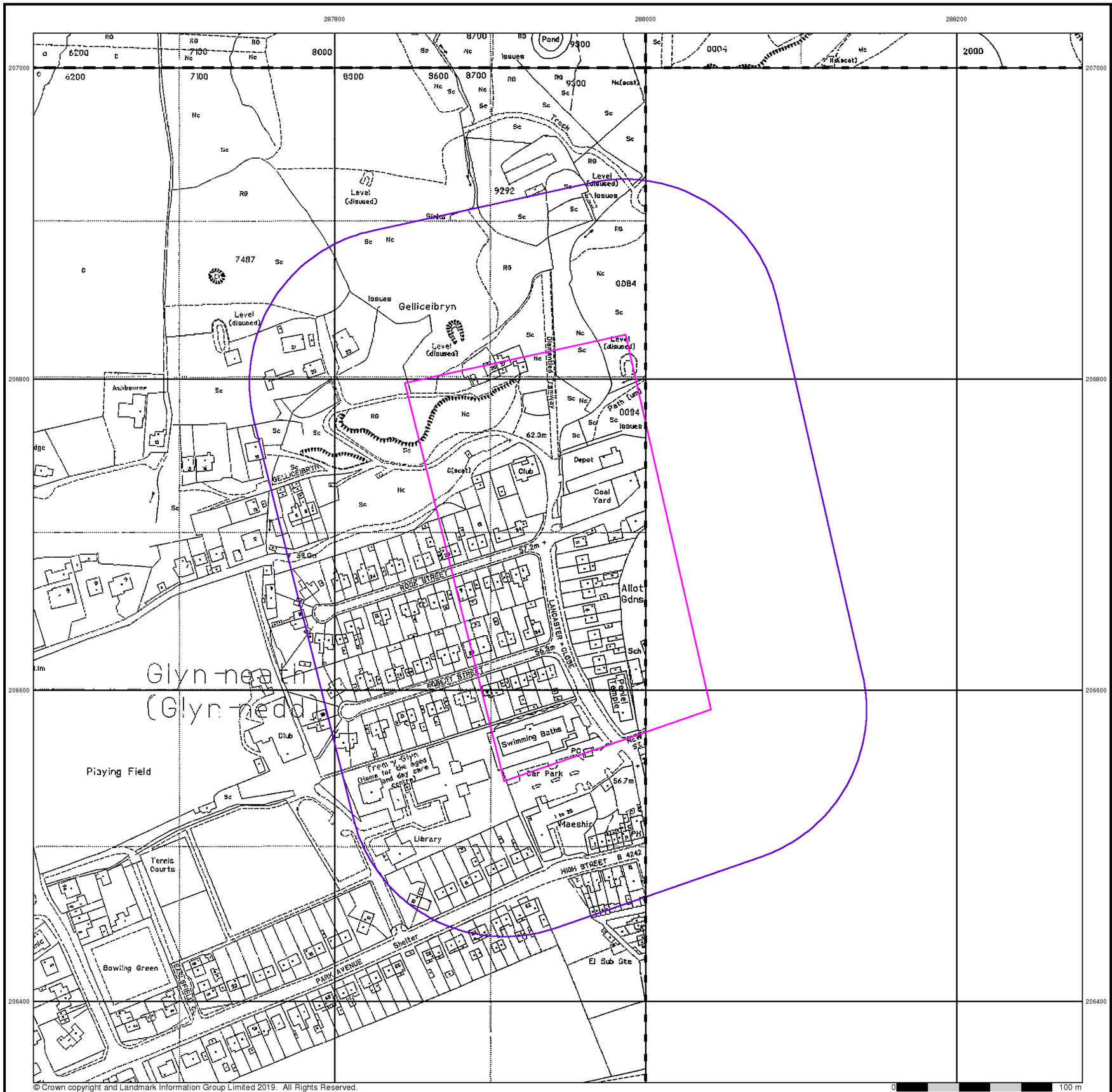
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Customer Ref:	20191393
National Grid Reference:	287940, 206690
Slice:	A
Site Area (Ha):	3.65
Search Buffer (m):	100

Site Details

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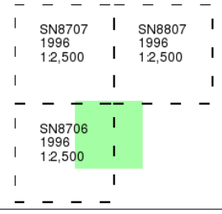
Large-Scale National Grid Data

Published 1996

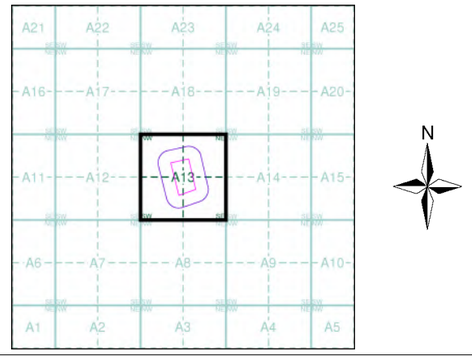
Source map scale - 1:2,500

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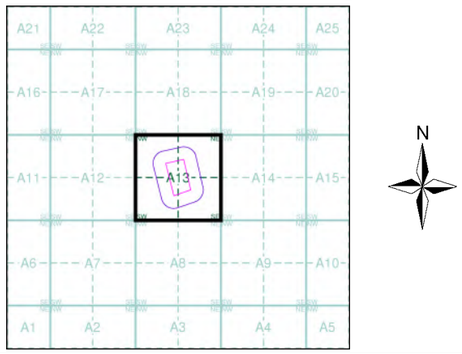
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Historical Aerial Photography

Published 2000

This aerial photography was produced by Getmapping, these vertical aerial photographs provide a seamless, full colour survey of the whole of Great Britain

Historical Aerial Photography - Segment A13



Order Details

Order Number:	221660568_1_1
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Historical Mapping Legends

Ordnance Survey County Series 1:10,560

Gravel Pit
Sand Pit
Other Pits
Quarry
Shingle
Orchard
Osiers
Reeds
Marsh
Mixed Wood
Deciduous
Brushwood
Fir
Furze
Rough Pasture
Arrow denotes flow of water
Trigonometrical Station
Site of Antiquities
Bench Mark
Pump, Guide Post, Signal Post
Well, Spring, Boundary Post
·285 Surface Level
Sketched Contour
Instrumental Contour
Main Roads
Fenced
Un-Fenced
Minor Roads
Fenced
Un-Fenced
Sunken Road
Raised Road
Road over Railway
Railway over River
Railway over Road
Level Crossing
Road over River or Canal
Road over Stream
Road over Stream
County Boundary (Geographical)
County & Civil Parish Boundary
Administrative County & Civil Parish Boundary
Co. Boro. Bdy. County Borough Boundary (England)
Co. Burgh Bdy. County Burgh Boundary (Scotland)
R.D. Bdy. Rural District Boundary
Civil Parish Boundary

Ordnance Survey Plan 1:10,000

Chalk Pit, Clay Pit or Quarry
Gravel Pit
Sand Pit
Disused Pit or Quarry
Refuse or Slag Heap
Lake, Loch or Pond
Dunes
Boulders
Coniferous Trees
Non-Coniferous Trees
Orchard
Scrub
Coppice
Bracken
Heath
Rough Grassland
Marsh
Reeds
Saltings
Building
Direction of Flow of Water
Shingle
Sand
Glasshouse
Pylon
Electricity Transmission Line
Pole
Sloping Masonry
Cutting
Embankment
Standard Gauge Multiple Track
Road Under
Road Over
Level Crossing
Foot Bridge
Standard Gauge Single Track
Siding, Tramway or Mineral Line
Narrow Gauge
Geographical County
Administrative County, County Borough or County of City
Municipal Borough, Urban or Rural District, Burgh or District Council
Borough, Burgh or County Constituency
Shown only when not coincident with other boundaries
Civil Parish
Shown alternately when coincidence of boundaries occurs

BP, BS	Boundary Post or Stone	Pol Sta	Police Station
Ch	Church	PO	Post Office
CH	Club House	PC	Public Convenience
F E Sta	Fire Engine Station	PH	Public House
FB	Foot Bridge	SB	Signal Box
Fn	Fountain	Spr	Spring
GP	Guide Post	TCB	Telephone Call Box
MP	Mile Post	TCP	Telephone Call Post
MS	Mile Stone	W	Well

1:10,000 Raster Mapping

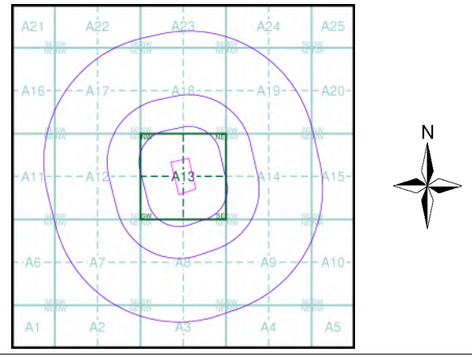
Gravel Pit
Refuse tip or slag heap
Rock
Rock (scattered)
Boulders
Boulders (scattered)
Shingle
Mud
Sand
Sand Pit
Slopes
Top of cliff
General detail
Underground detail
Overhead detail
Narrow gauge railway
Multi-track railway
Single track railway
County boundary (England only)
Civil, parish or community boundary
District, Unitary, Metropolitan, London Borough boundary
Constituency boundary
Area of wooded vegetation
Non-coniferous trees
Non-coniferous trees (scattered)
Coniferous trees
Coniferous trees (scattered)
Positioned tree
Orchard
Coppice or Osiers
Rough Grassland
Heath
Scrub
Marsh, Salt Marsh or Reeds
Water feature
Flow arrows
MHW(S) Mean high water (springs)
MLW(S) Mean low water (springs)
Telephone line (where shown)
Electricity transmission line (with poles)
BM 123.45 m Bench mark (where shown)
Triangulation station
Point feature (e.g. Guide Post or Mile Stone)
Pylon, flare stack or lighting tower
Site of (antiquity)
Glasshouse
General Building
Important Building

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Historical Mapping & Photography included:

Mapping Type	Scale	Date	Pg
Glamorganshire	1:10,560	1884	2
Brecknockshire	1:10,560	1888	3
Glamorganshire	1:10,560	1900	4
Brecknockshire	1:10,560	1905	5
Glamorganshire	1:10,560	1921	6
Brecknockshire	1:10,560	1921	7
Brecknockshire	1:10,560	1921	8
Glamorganshire	1:10,560	1938	9
Brecknockshire	1:10,560	1953	10
Glamorganshire	1:10,560	1953	11
Ordnance Survey Plan	1:10,000	1964	12
Ordnance Survey Plan	1:10,000	1980	13
Ordnance Survey Plan	1:10,000	1983	14
10K Raster Mapping	1:10,000	2000	15
10K Raster Mapping	1:10,000	2006	16
VectorMap Local	1:10,000	2019	17

Historical Map - Slice A



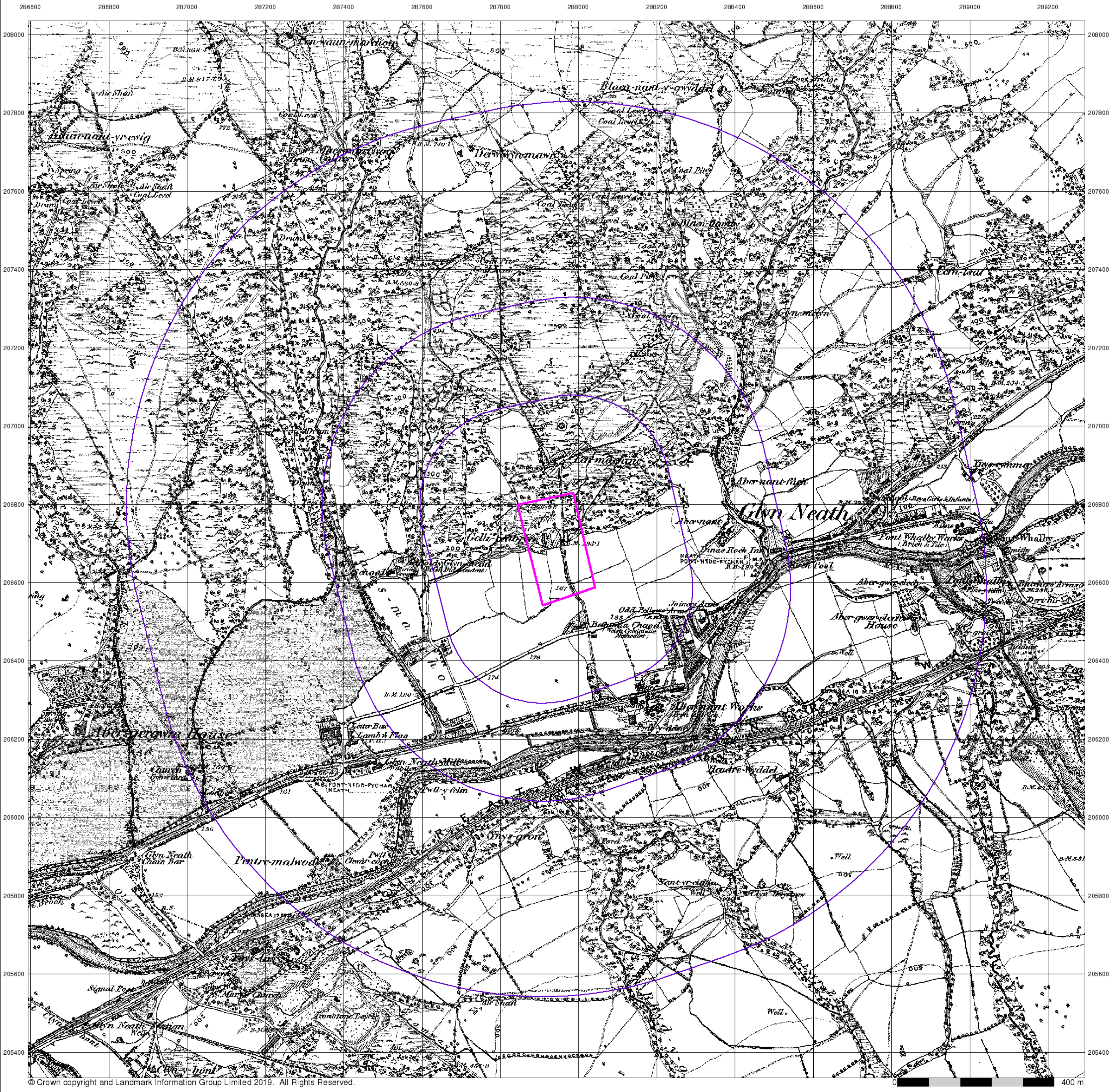
Order Details

Order Number:	221660568_1_1
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National Grid Reference:	287940, 206690
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Site Area (Ha):	3.65
Search Buffer (m):	1000

Site Details

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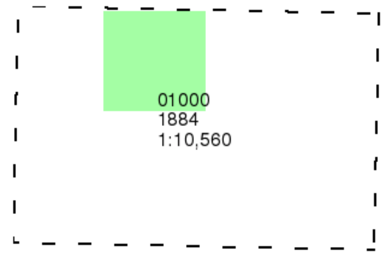
Glamorganshire

Published 1884

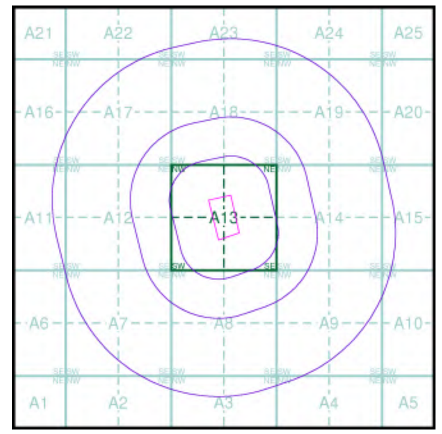
Source map scale - 1:10,560

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Map Name(s) and Date(s)



Historical Map - Slice A



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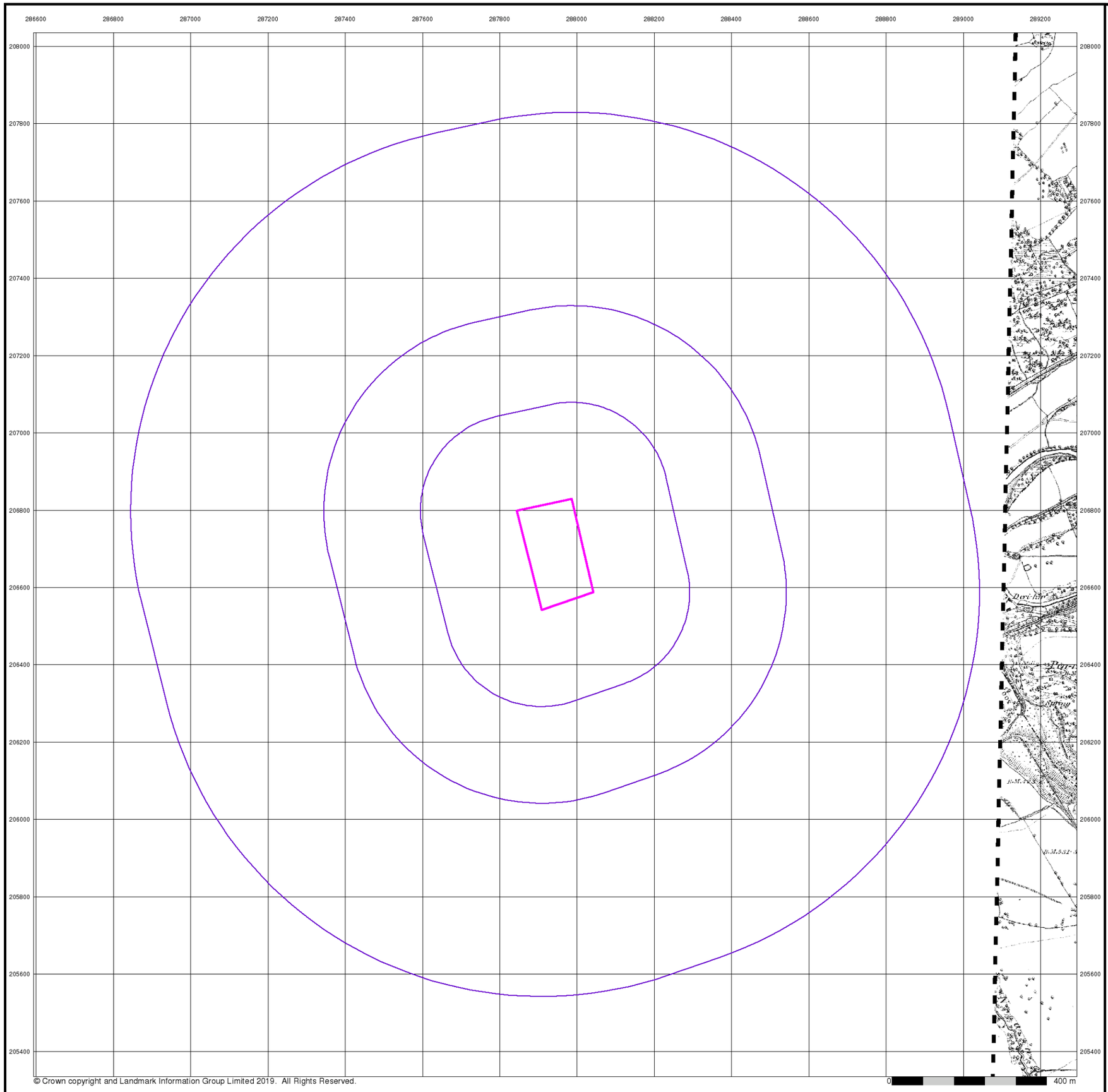
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Search Buffer (m): 1000

Site Details

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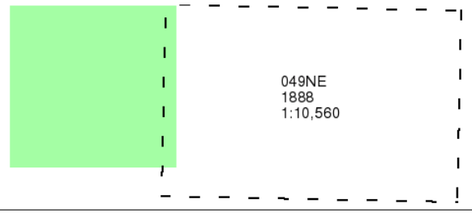
Brecknockshire

Published 1888

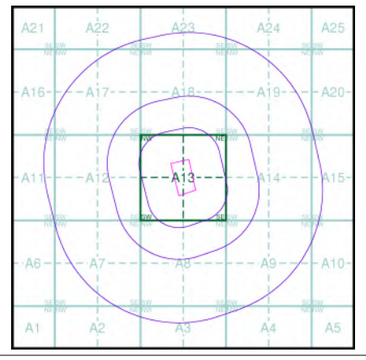
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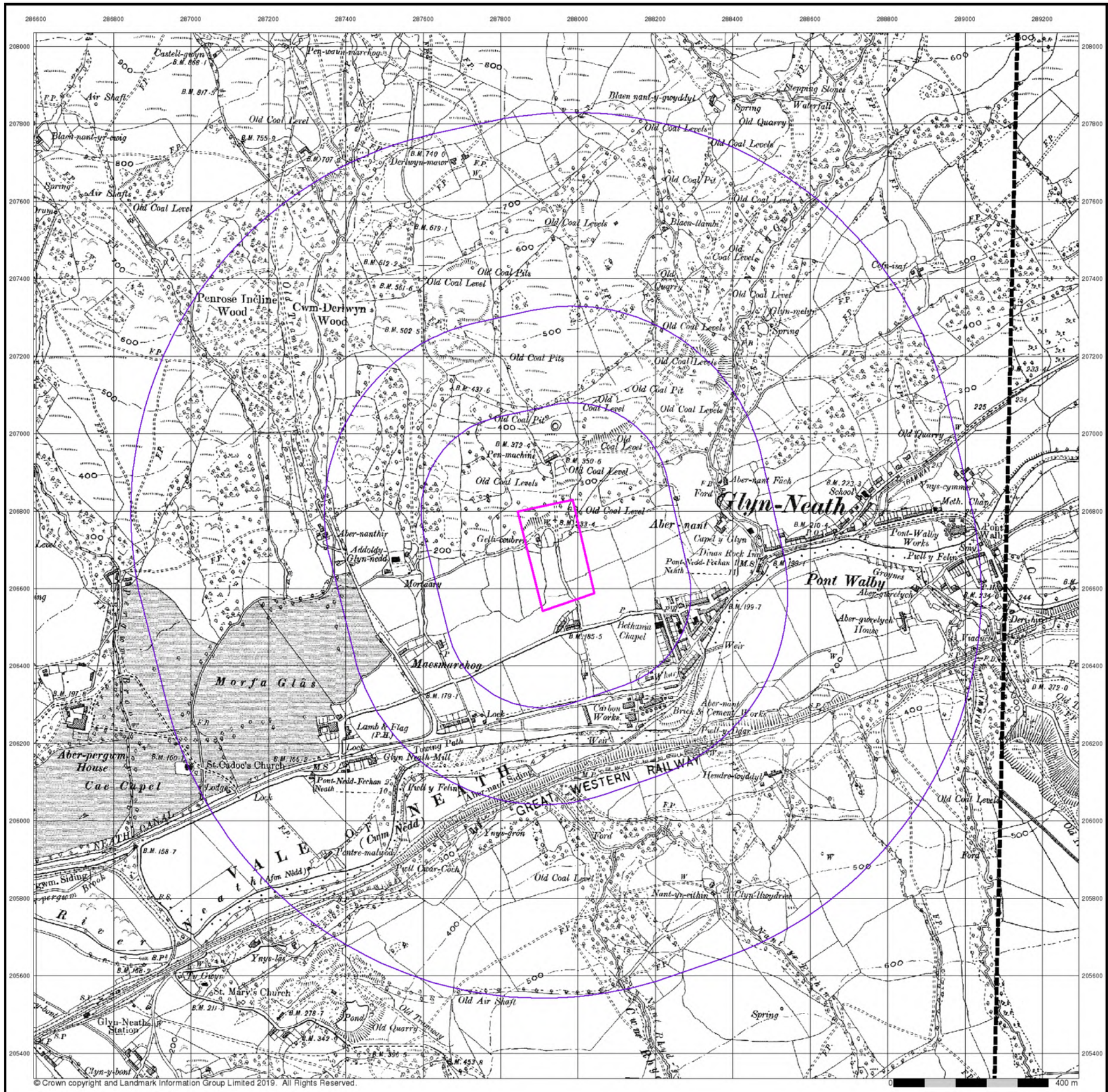
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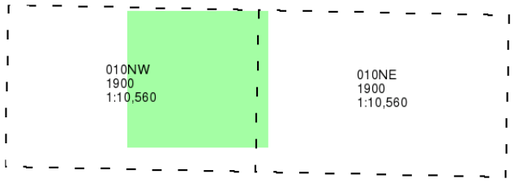
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Published 1900

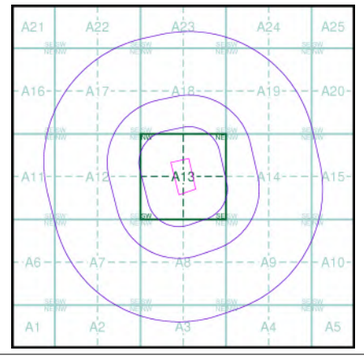
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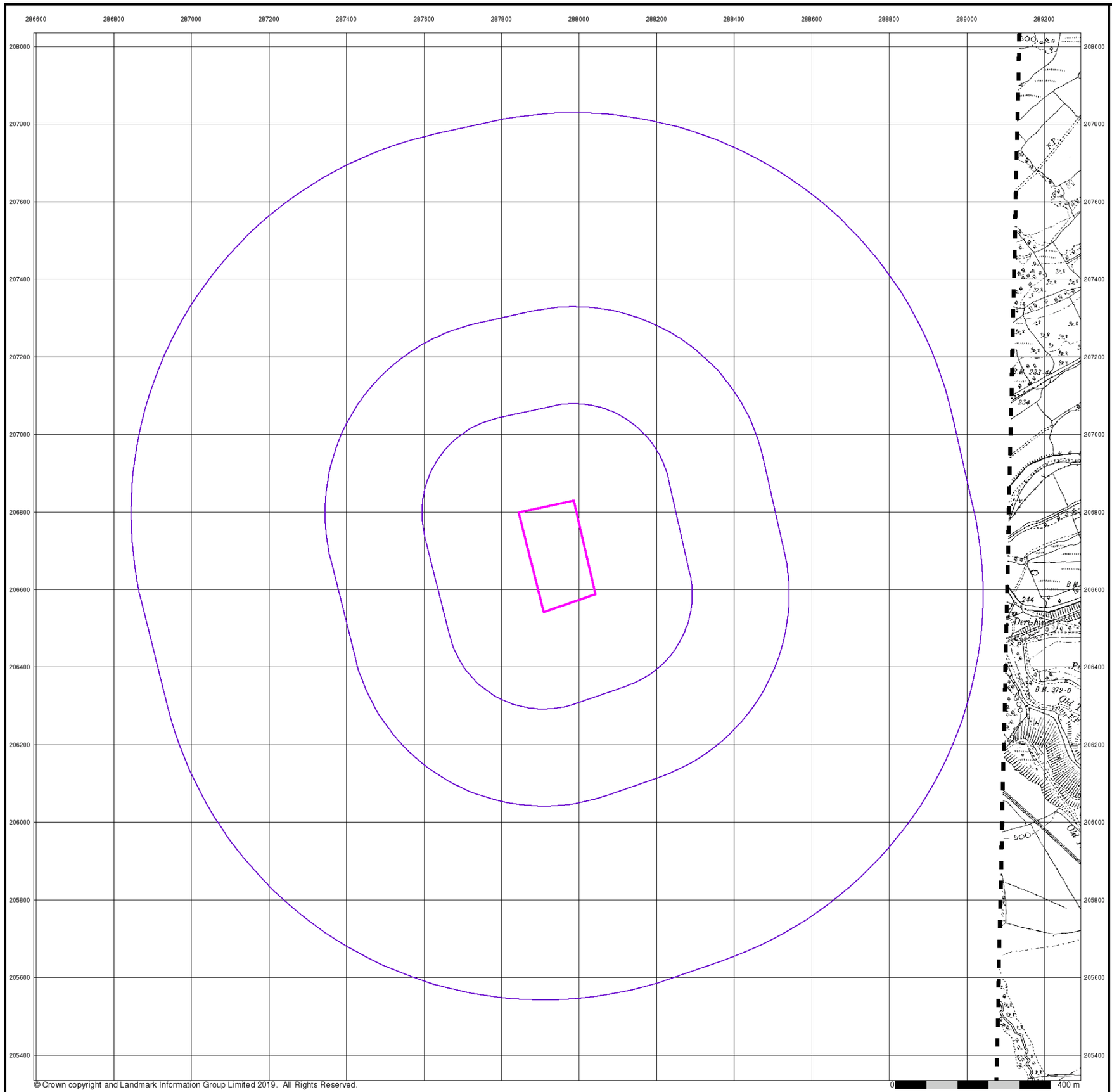
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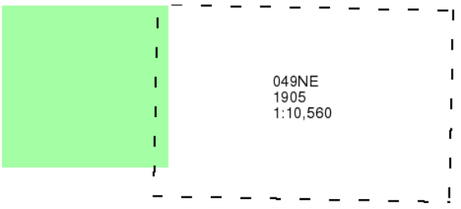
Brecknockshire

Published 1905

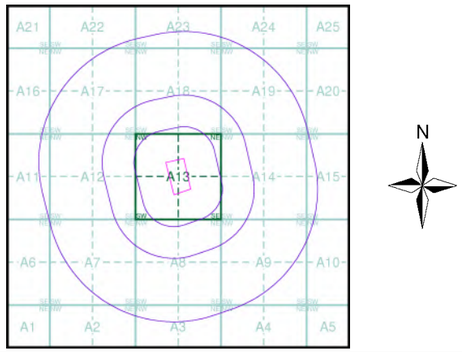
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Map Name(s) and Date(s)



Historical Map - Slice A



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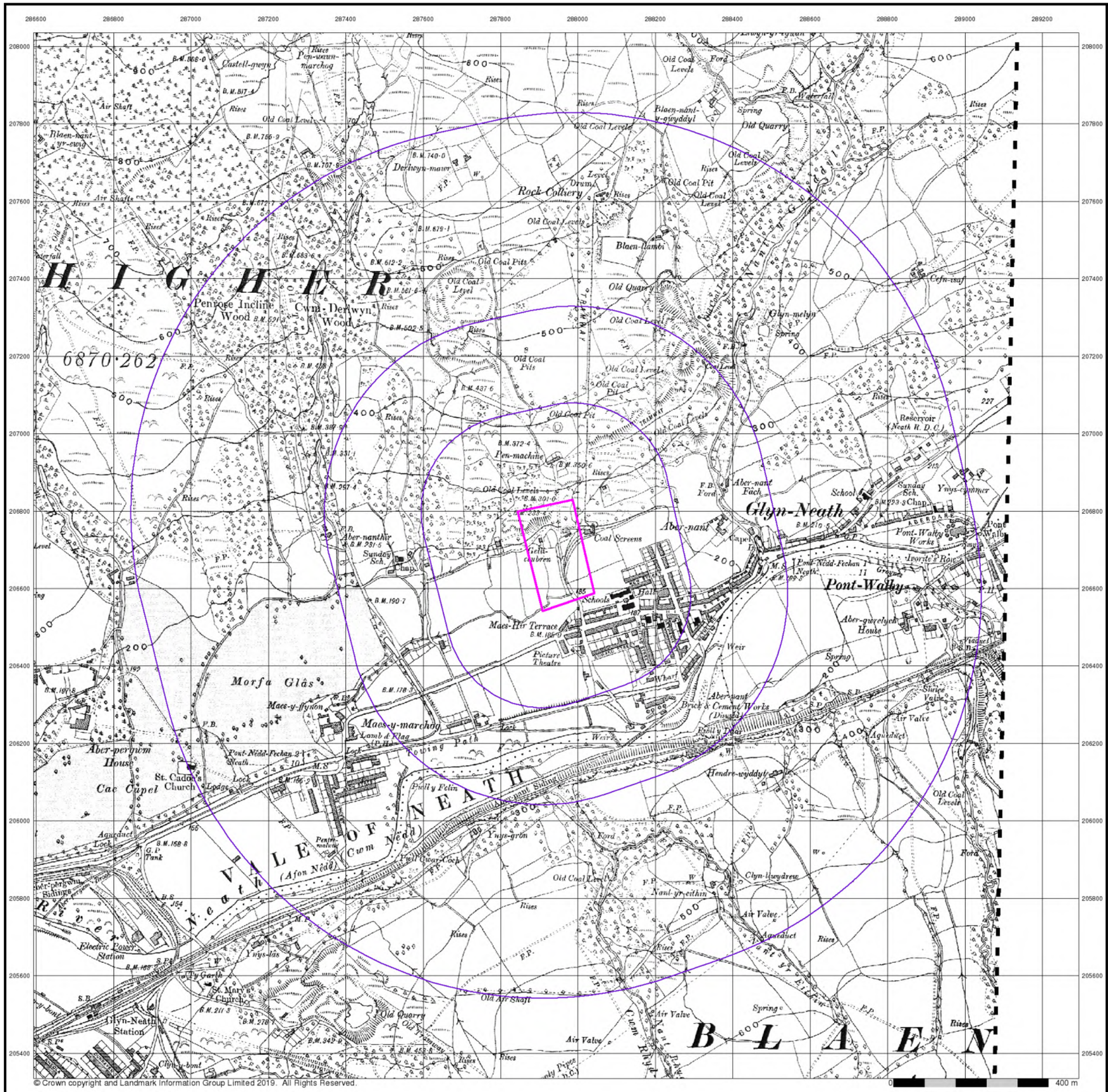
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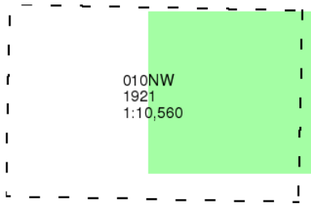
Glamorganshire

Published 1921

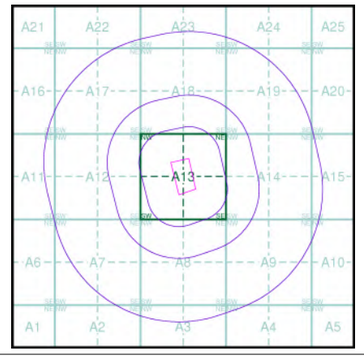
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Map Name(s) and Date(s)



Historical Map - Slice A



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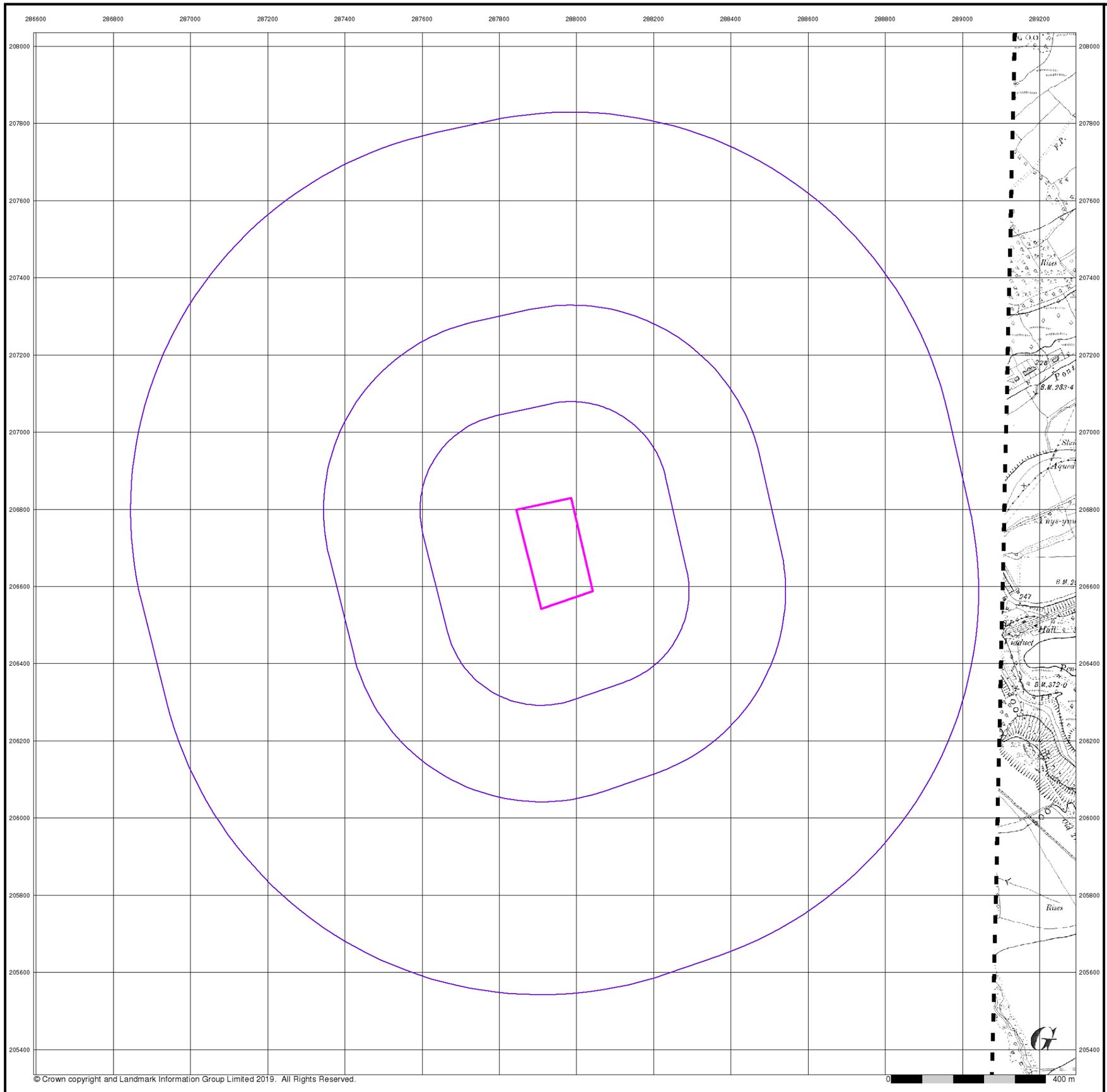
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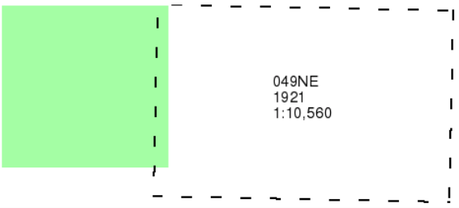
Brecknockshire

Published 1921

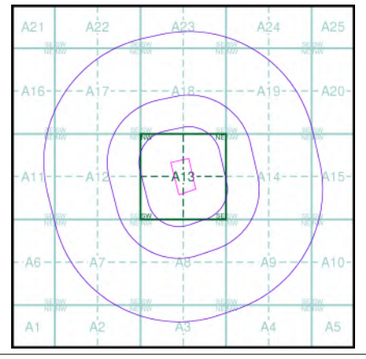
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Historical Map - Slice A



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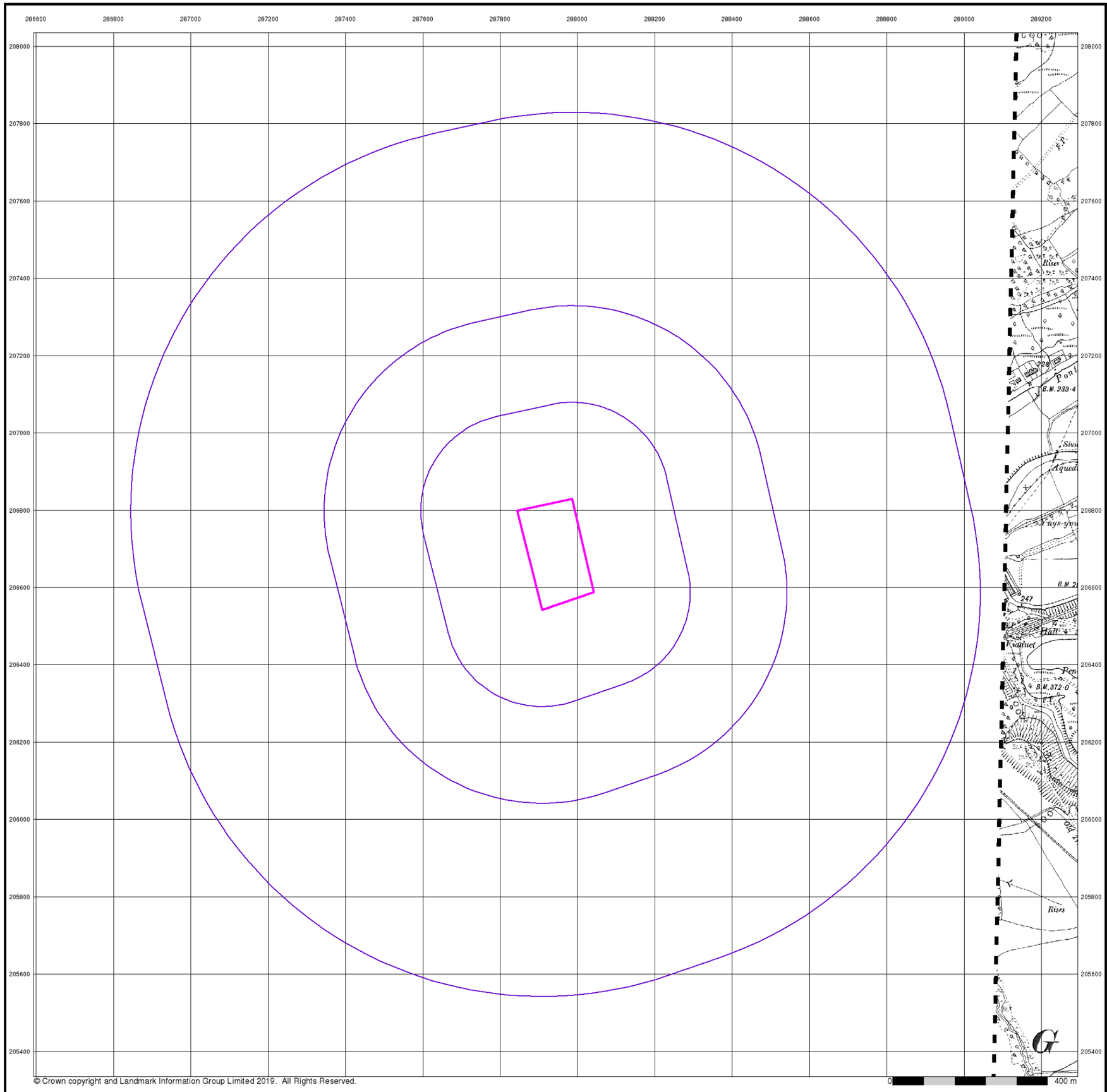
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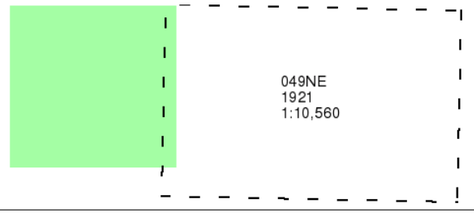
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Published 1921

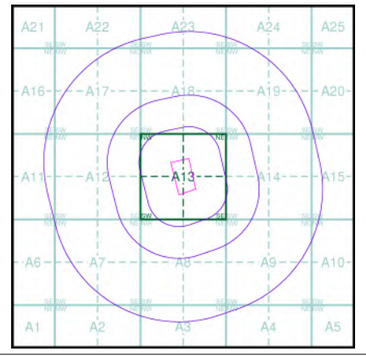
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Map Name(s) and Date(s)



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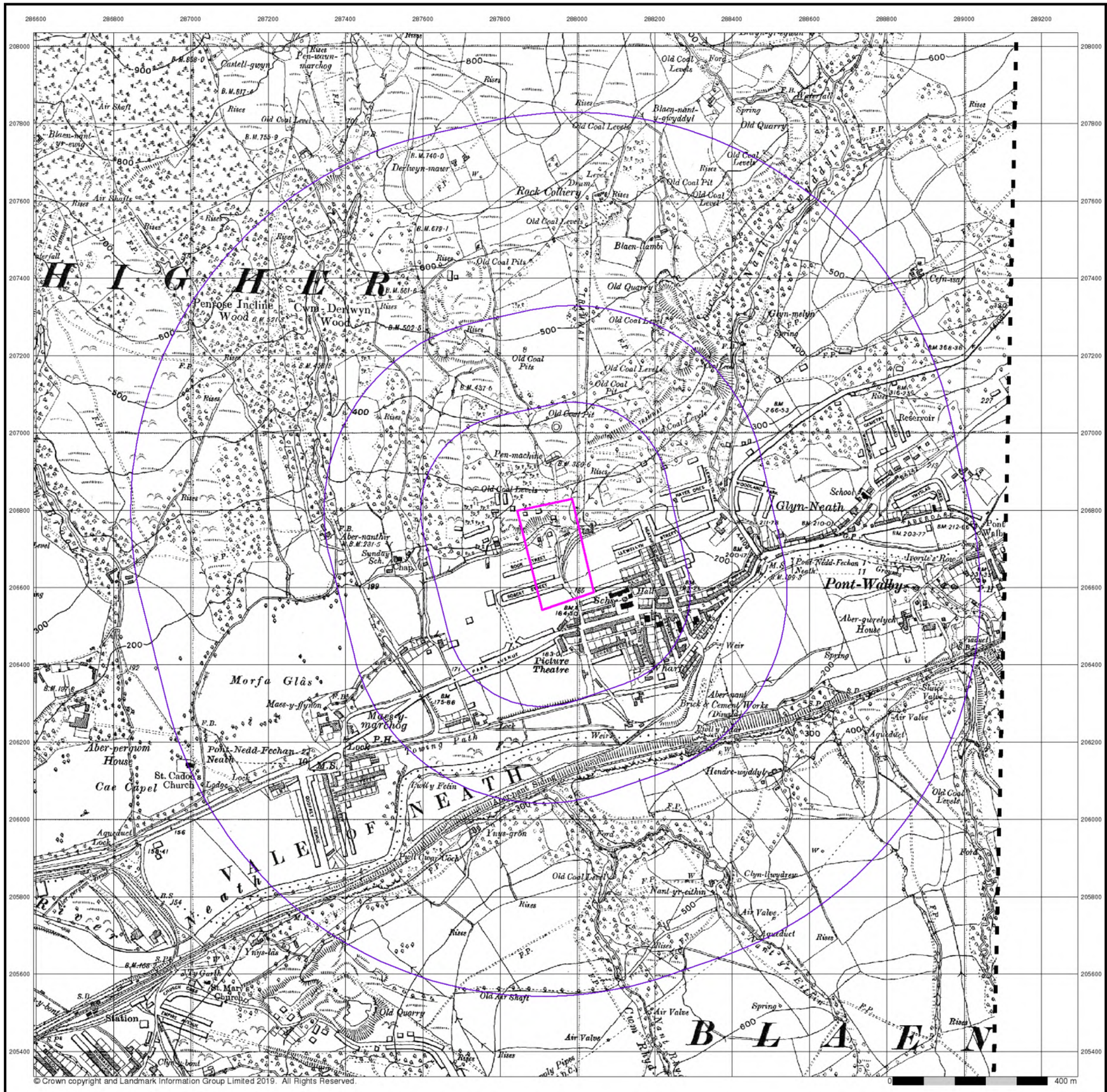
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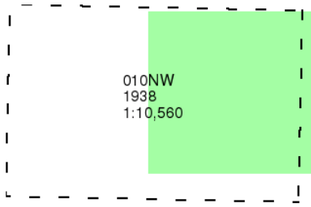
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Published 1938

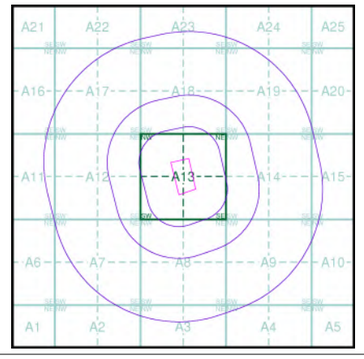
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Historical Map - Slice A



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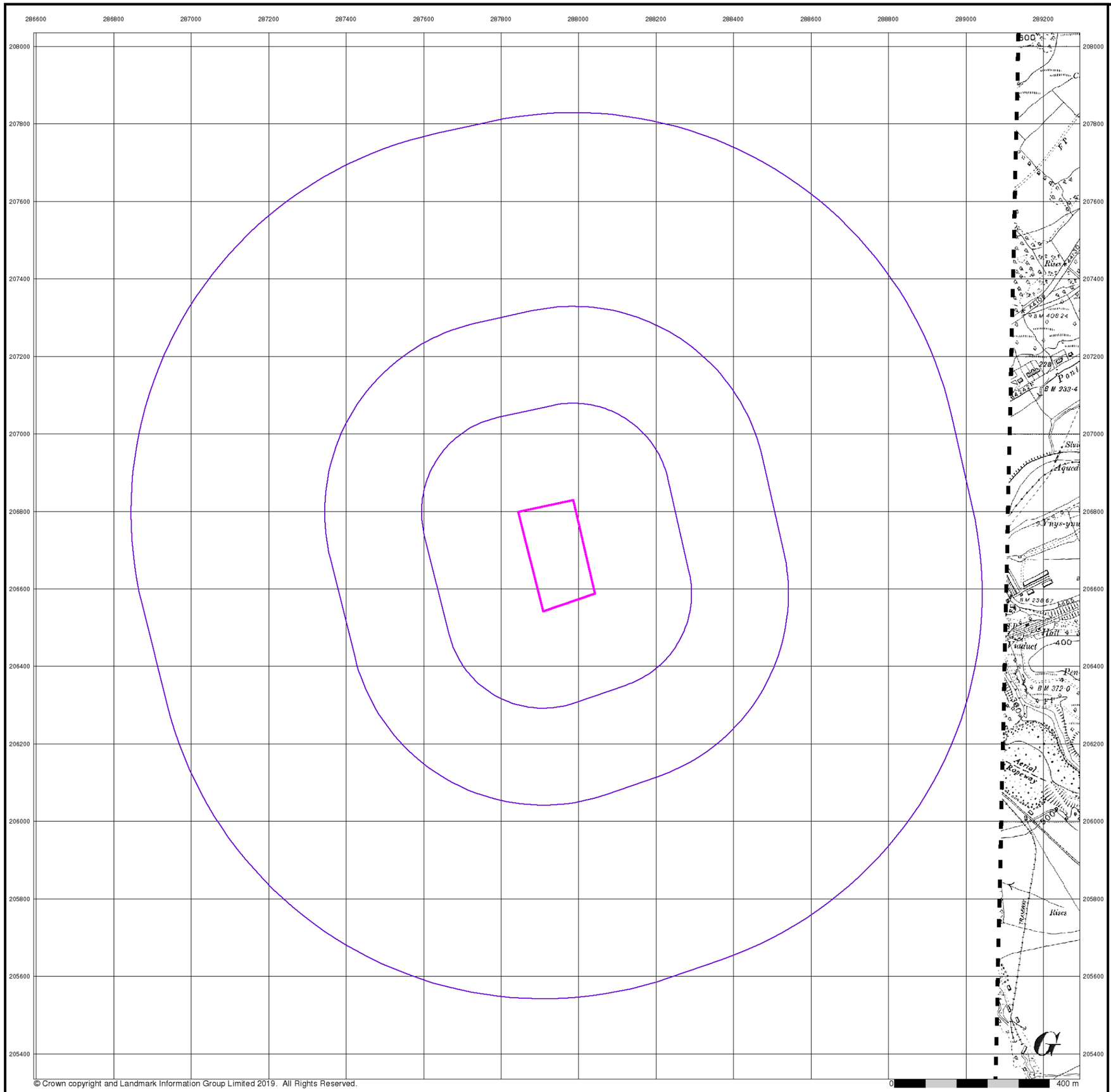
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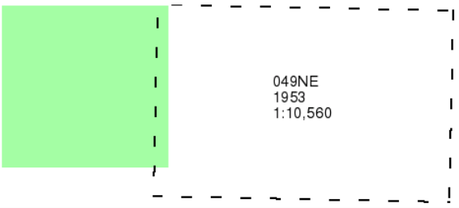
Brecknockshire

Published 1953

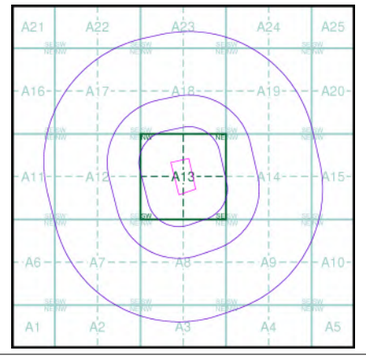
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Historical Map - Slice A



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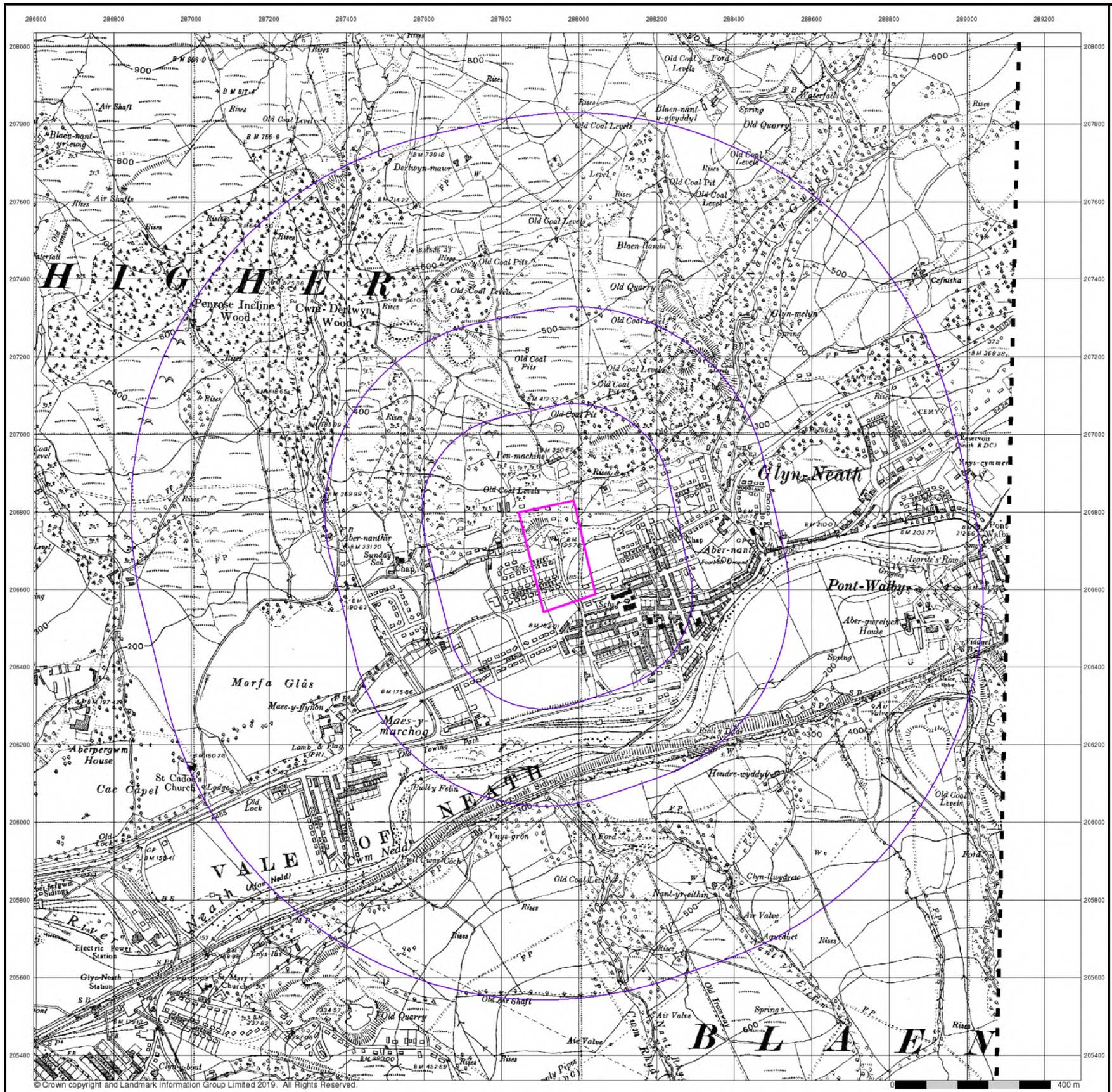
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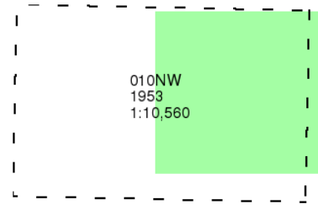
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Published 1953

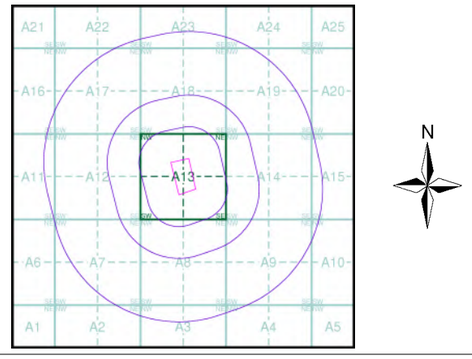
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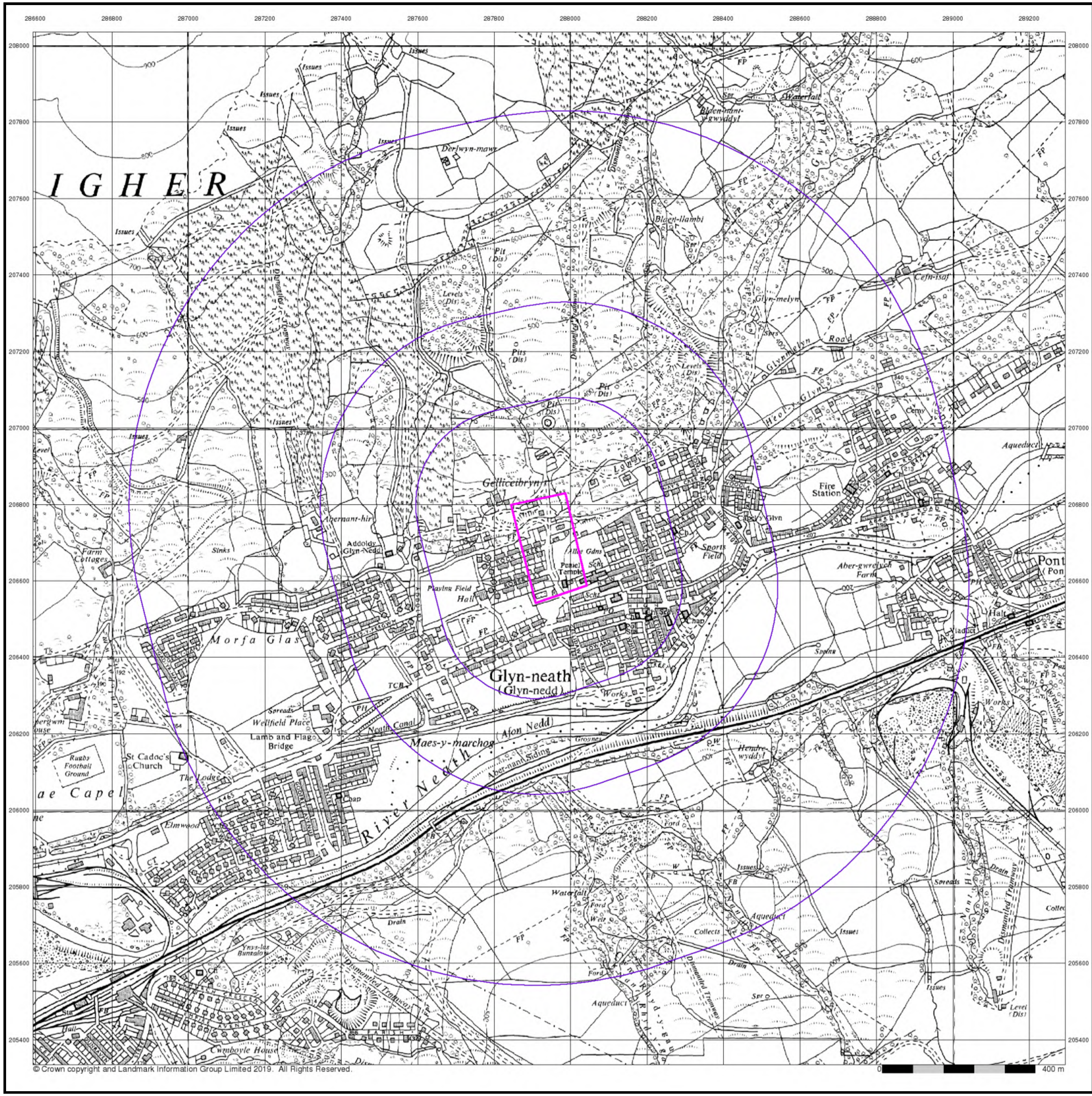
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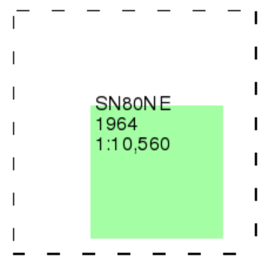
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Published 1964

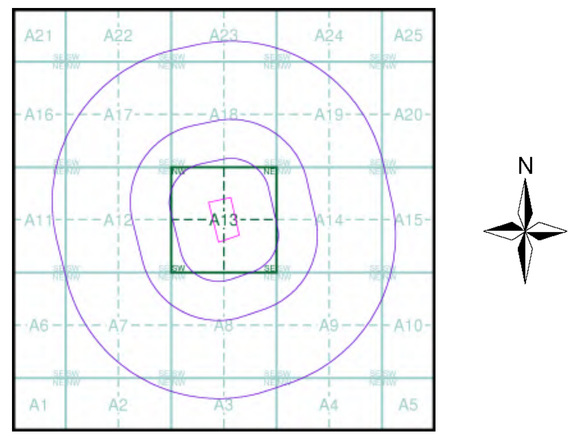
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The historical maps shown were reproduced from maps predominantly held at the scale adopted for England, Wales and Scotland in the 1840`s. In 1854 the 1:2,500 scale was adopted for mapping urban areas; these maps were used to update the 1:10,560 maps. The published date given therefore is often some years later than the surveyed date. Before 1938, all OS maps were based on the Cassini Projection, with independent surveys of a single county or group of counties, giving rise to significant inaccuracies in outlying areas. In the late 1940`s, a Provisional Edition was produced, which updated the 1:10,560 mapping from a number of sources. The maps appear unfinished - with all military camps and other strategic sites removed. These maps were initially overprinted with the National Grid. In 1970, the first 1:10,000 maps were produced using the Transverse Mercator Projection. The revision process continued until recently, with new editions appearing every 10 years or so for urban areas.

Map Name(s) and Date(s)



Historical Map - Slice A



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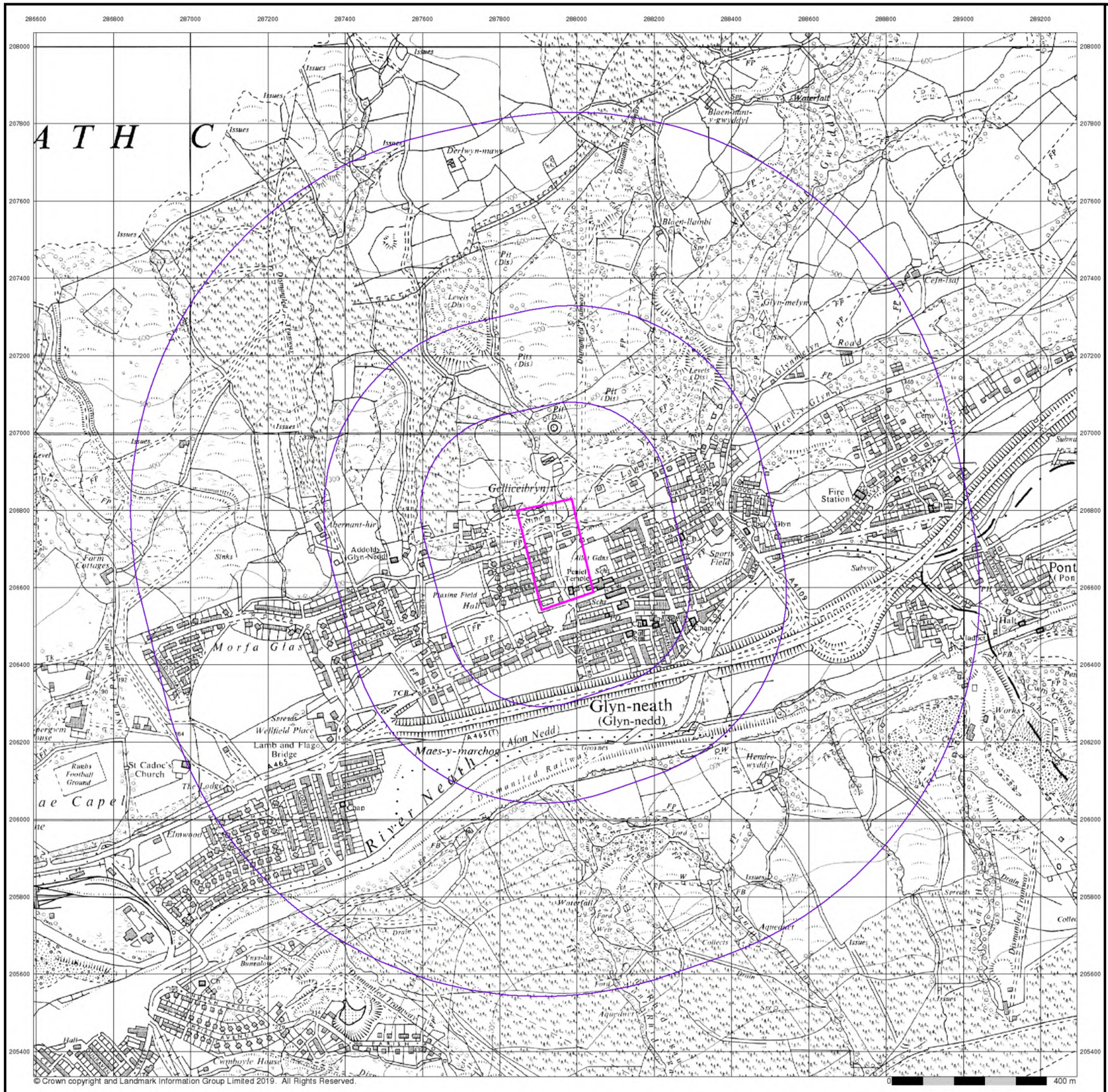
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Slice: A
Site Area (Ha): 3.65
Search Buffer (m): 1000

Site Details

Site at 287940, 206760

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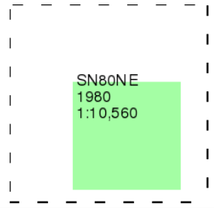
Ordnance Survey Plan

Published 1980

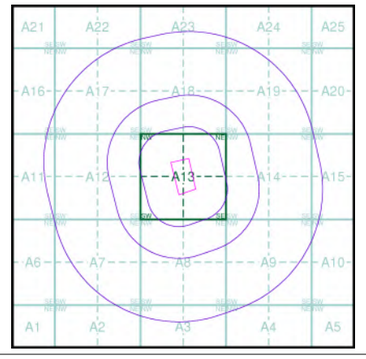
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Map Name(s) and Date(s)



Historical Map - Slice A



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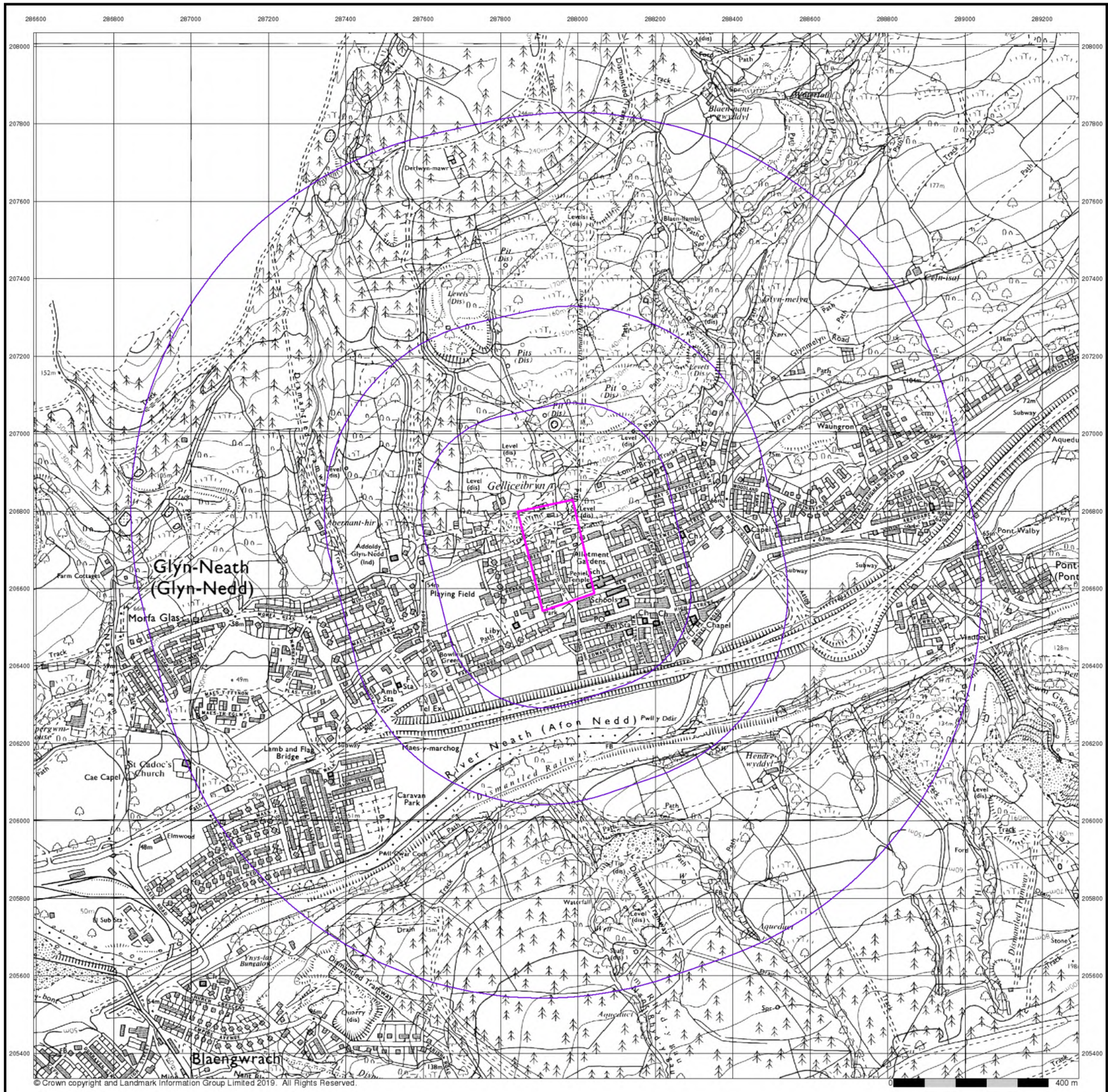
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Site Details

Site at 287940, 206760

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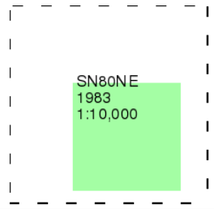
Ordnance Survey Plan

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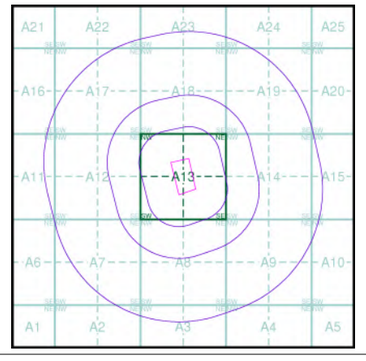
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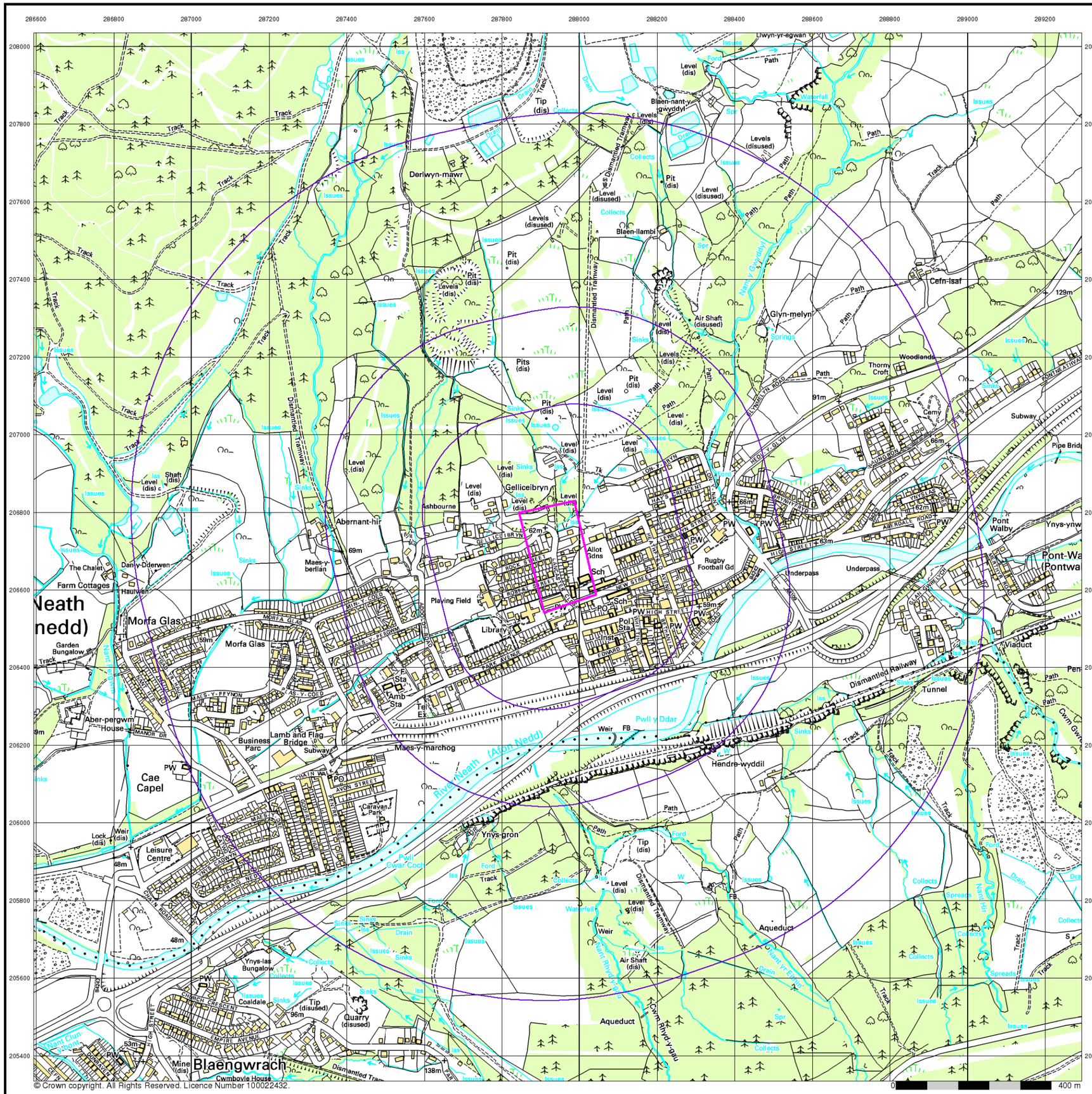
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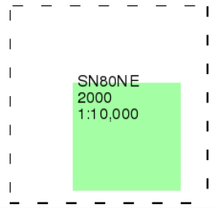
10k Raster Mapping

Published 2000

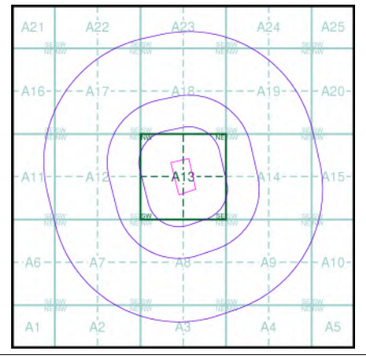
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The historical maps shown were produced from the Ordnance Survey`s 1:10,000 colour raster mapping. These maps are derived from Landplan which replaced the old 1:10,000 maps originally published in 1970. The data is highly detailed showing buildings, fences and field boundaries as well as all roads, tracks and paths. Road names are also included together with the relevant road number and classification. Boundary information depiction includes county, unitary authority, district, civil parish and constituency.

Map Name(s) and Date(s)



Historical Map - Slice A



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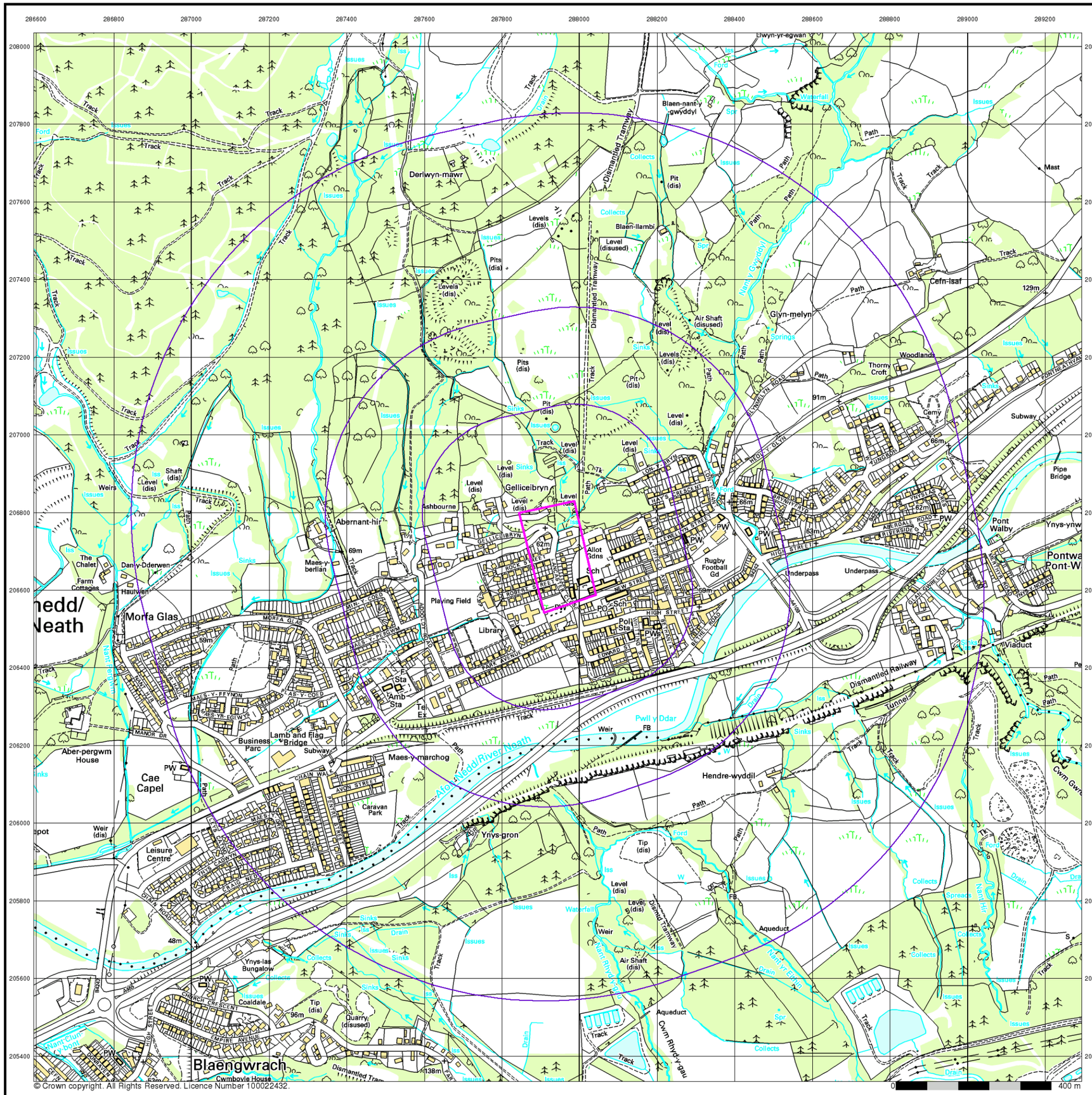
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Search Buffer (m):	1000

Site Details

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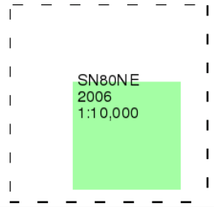
10k Raster Mapping

Published 2006

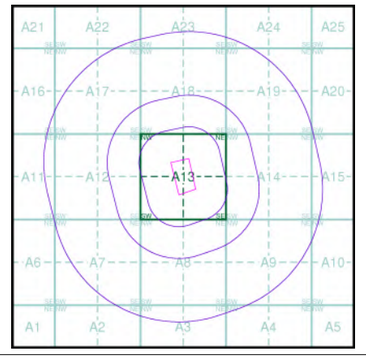
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Map Name(s) and Date(s)



Historical Map - Slice A



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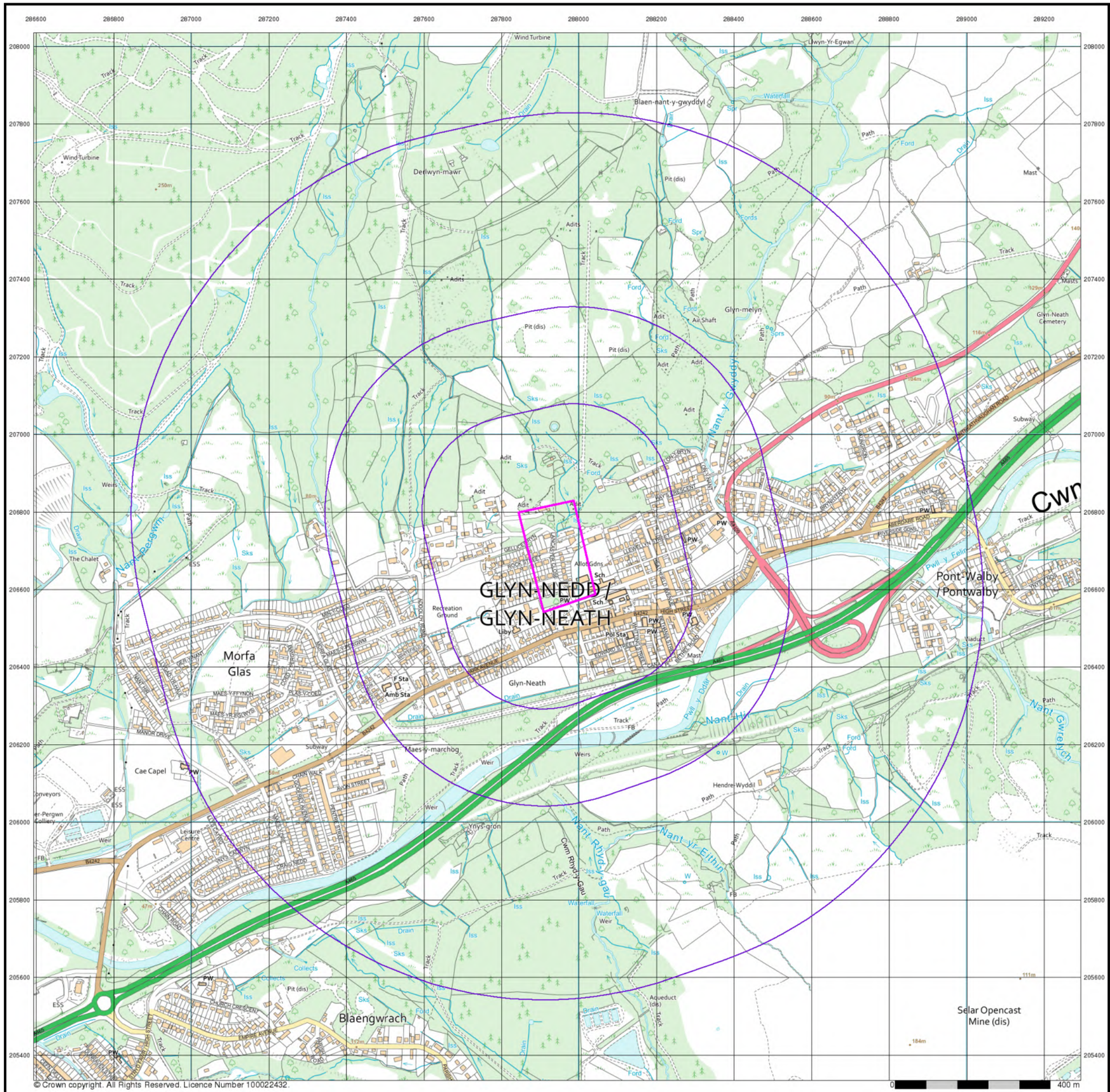
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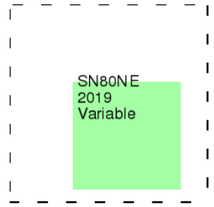
VectorMap Local

Published 2019

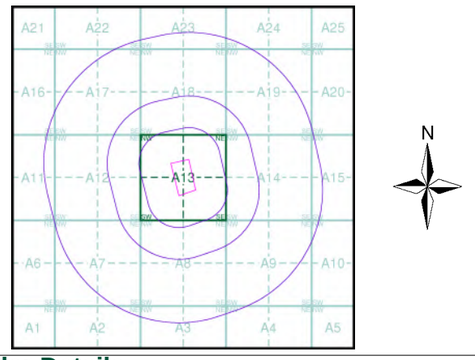
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VectorMap Local (Raster) is Ordnance Survey's highest detailed 'backdrop' mapping product. These maps are produced from OS's VectorMap Local, a simple vector dataset at a nominal scale of 1:10,000, covering the whole of Great Britain, that has been designed for creating graphical mapping. OS VectorMap Local is derived from large-scale information surveyed at 1:1250 scale (covering major towns and cities),1:2500 scale (smaller towns, villages and developed rural areas), and 1:10 000 scale (mountain, moorland and river estuary areas).

Map Name(s) and Date(s)



Historical Map - Slice A



Order Details

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Appendix E. CON29M Coal Mining Report

The Coal Authority

CON29M
coal mining report

SITE AT 287940, 206760, NEATH PORT TALBOT

Known or potential coal mining risks

Past underground coal mining	Page 4
Future underground coal mining	Page 4
Mine entries	Page 5

Further action

These additional reports can give further detail on the risks identified:

- Mine entry interpretive report
- Mine entry plan and data sheets

For more information please see our Further action reports on page 10

Professional opinion

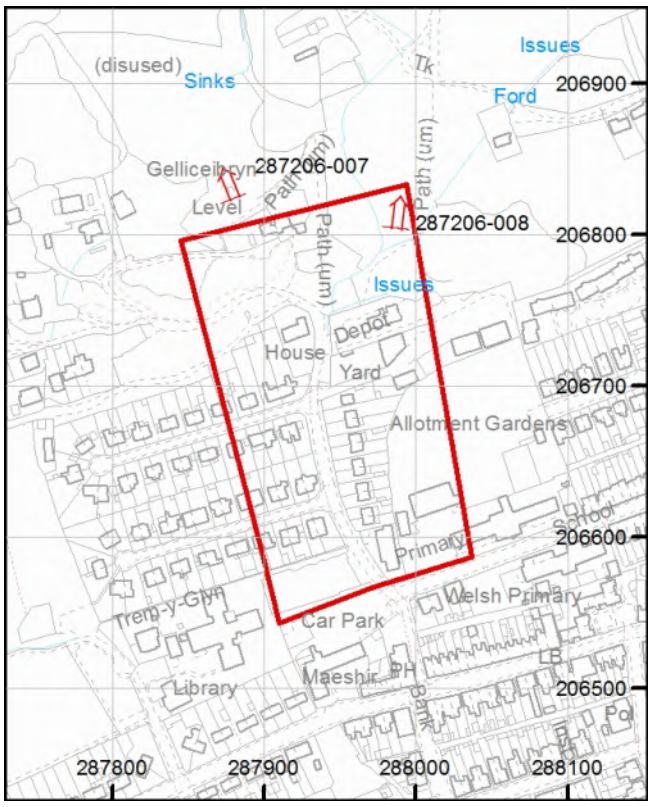
According to the official mining information records held by the Coal Authority at the time of this search, evidence of, or the potential for, coal mining related features have been identified. In view of the coal mining circumstances we would recommend that any planned or future development should follow detailed technical advice before beginning work on site. Please see page 3 for further details on Future development.

Enquiry boundary

Key

Approximate position of enquiry boundary shown

Disused adit



We can confirm that the location is **on the coalfield**

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This report is prepared in accordance with the latest Law Society's Guidance Notes 2018, the User Guide 2018 and the Coal Authority's Terms and Conditions applicable at the time the report was produced.

Accessibility

If you would like this information in an alternative format, please contact our communications team on 0345 762 6848 or email communications@coal.gov.uk.

Professional opinion

Mine entries

The enquiry boundary shows the approximate location of the disused mine entry/entries referred to in this report. Property owners have the benefit of statutory protection (under the Coal Mining Subsidence Act 1991). This contains provision for the making good, to the reasonable satisfaction of the owner, of physical damage caused by disused coal mine workings including disused coal mine entries. A leaflet setting out the rights and obligations of either the Coal Authority or other responsible persons under the 1991 Act can be obtained by visiting www.coal.gov.uk. Please note this Act is not valid where coal was worked or extracted by virtue of the grant of a gale in the Forest of Dean, or any other part of the Hundred of St. Briavels in the county of Gloucester.

If you wish to discuss the relevance of any of the information contained in this report, you should seek the advice of a qualified mining engineer or surveyor. If you or your advisor wishes to examine the source plans from which the information has been taken, these are available to view, at our Coal Authority head office in Mansfield. To book an appointment please call 01623 637 225. Should you or your advisor wish to carry out a physical investigation that may enter, disturb or interfere with any disused mine entry, prior permission must be sought from the owner. For coal mine entries, the owner will normally be the Coal Authority.

The Coal Authority, regardless of responsibility and in conjunction with other public bodies, provide an emergency, 24 hour call out facility in coalfield areas to assess the public safety implications of mining features (including disused mine entries). To report an emergency you can call 01623 646 333.

Future development

If development proposals are being considered, technical advice relating to both the investigation of coal and former coal mines and their treatment should be obtained before beginning work on site. All proposals should apply specialist engineering practice required for former mining areas. No development should be undertaken that intersects, disturbs or interferes with any coal or coal mines without first obtaining the permission of the Coal Authority. Developers should be aware that the investigation of coal seams, mine workings or mine entries may have the potential to generate and/or displace underground gases. Associated risks both to the development site and any neighbouring land or properties should be fully considered when undertaking any ground works. The need for effective measures to prevent gases migrating onto any land or into any properties, either during investigation or remediation work, or after development must also be assessed and properly addressed.

If you are looking to develop, or undertake works, within a coal mining development high risk area your Local Authority planning department may require a Coal Mining Risk Assessment to be undertaken by a qualified mining geologist or engineer. Should you require any additional information then please contact the Coal Authority on 0345 762 6848 or email cmra@coal.gov.uk.

Detailed findings

Information provided by the Coal Authority in this report is compiled in response to the Law Society's CON29M Coal Mining enquiries. The said enquiries are protected by copyright owned by the Law Society of 113 Chancery Lane, London WC2A 1PL.

The Coal Authority owns the copyright in this report and the information used to produce this report is protected by our database rights. All rights are reserved and unauthorised use is prohibited. If we provide a report for you, this does not mean that copyright and any other rights will pass to you. However, you can use the report for your own purposes.

1 Past underground coal mining

The property is in a surface area that could be affected by underground mining in 1 seam of coal at shallow depth, and last worked in 1912.

2 Present underground coal mining

The property is not within a surface area that could be affected by present underground mining.

3 Future underground coal mining

The property is not in an area where the Coal Authority has received an application for, and is currently considering whether to grant a licence to remove or work coal by underground methods.

The property is not in an area where a licence has been granted to remove or otherwise work coal using underground methods.

The property is not in an area likely to be affected from any planned future underground coal mining.

However, reserves of coal exist in the local area which could be worked at some time in the future.

No notices have been given, under section 46 of the Coal Mining Subsidence Act 1991, stating that the land is at risk of subsidence.

4 Mine entries

Within, or within 20 metres of, the boundary of the property there are 2 mine entries, the approximate positions of which are shown on the enquiry boundary plot. For reasons of clarity, mine entry symbols may not be drawn to the same scale as the plan.

There is no record of what steps, if any, have been taken to treat the mine entries.

This information is based on the information that the Coal Authority has at the time of this enquiry.

Based on the Coal Authority's knowledge of the mining circumstances at the time of this enquiry, there may be unrecorded mine entries in the local area that do not appear on Coal Authority records.

For an additional fee, the Coal Authority can provide a Mine Entry Interpretive Report. The report will provide a separate assessment for the mine entry/entries referred to in this report. It gives an opinion on the likelihood of mining subsidence damage caused from ground movement as a consequence of the mine entry/entries. It also gives details of the remedies available for subsidence damage where the mine entry was sunk in connection with coal mining.

Please note that it may not be possible to produce a report if the main building to the property cannot be identified from Coal Authority plans (ie for development sites and new build).

For further advice on how to order this additional information please visit www.groundstability.com.

5 Coal mining geology

The Coal Authority is not aware of any damage due to geological faults or other lines of weakness that have been affected by coal mining.

6 Past opencast coal mining

The property is not within the boundary of an opencast site from which coal has been removed by opencast methods.

7 Present opencast coal mining

The property does not lie within 200 metres of the boundary of an opencast site from which coal is being removed by opencast methods.

8 Future opencast coal mining

There are no licence requests outstanding to remove coal by opencast methods within 800 metres of the boundary.

The property is not within 800 metres of the boundary of an opencast site for which a licence to remove coal by opencast methods has been granted.

9 Coal mining subsidence

The Coal Authority has not received a damage notice or claim for the subject property, or any property within 50 metres of the enquiry boundary, since 31 October 1994.

There is no current Stop Notice delaying the start of remedial works or repairs to the property.

The Coal Authority is not aware of any request having been made to carry out preventive works before coal is worked under section 33 of the Coal Mining Subsidence Act 1991.

10 Mine gas

The Coal Authority has no record of a mine gas emission requiring action.

11 Hazards related to coal mining

The property has not been subject to remedial works, by or on behalf of the Coal Authority, under its Emergency Surface Hazard Call Out procedures.

12 Withdrawal of support

The property is not in an area where a notice to withdraw support has been given.

The property is not in an area where a notice has been given under section 41 of the Coal Industry Act 1994, cancelling the entitlement to withdraw support.

13 Working facilities order

The property is not in an area where an order has been made, under the provisions of the Mines (Working Facilities and Support) Acts 1923 and 1966 or any statutory modification or amendment thereof.

14 Payments to owners of former copyhold land

The property is not in an area where a relevant notice has been published under the Coal Industry Act 1975/Coal Industry Act 1994.

Statutory cover



Coal mining subsidence

In the unlikely event of any coal mining related subsidence damage, the Coal Authority or the mine operator has a duty to take remedial action in respect of subsidence caused by the withdrawal of support from land or property in connection with lawful coal mining operations.

When the works are the responsibility of the Coal Authority, our dedicated public safety and subsidence team will manage the claim. The house or land owner ("the owner") is covered for these works under the terms of the Coal Mining Subsidence Act 1991 (as amended by the Coal Industry Act 1994). Please note, this Act does not apply where coal was worked or gotten by virtue of the grant of a gale in the Forest of Dean, or any other part of the Hundred of St. Briavels in the county of Gloucester.

If you believe your land or property is suffering from coal mining subsidence damage and you need more information on what to do next, please use the following link to our website which sets out what your rights are and what you need to consider before making a claim.
www.gov.uk/government/publications/coal-mining-subsidence-damage-notice-form



Coal mining hazards

Our public safety and subsidence team provide a 24 hour a day, 7 days a week hazard reporting service, to help protect the public from hazards caused by past coal workings, such as a mine shaft or shallow working collapse. To report any hazards please call 01623 646 333. Further information can be found on our website: www.gov.uk/coalauthority.

Glossary

Key terms

adit - horizontal or sloped entrance to a mine

coal mining subsidence - ground movement caused by the removal of coal by underground mining

Coal Mining Subsidence Act 1991 - the Act setting out the duties of the Coal Authority to repair damage caused by coal mining subsidence

coal mining subsidence damage - damage to land, buildings or structures caused by the removal of coal by underground mining

coal seams - bed of coal of varying thickness

future opencast coal mining - a licence granted, or licence application received, by the Coal Authority to excavate coal from the surface

future underground coal mining - a licence granted, or licence application received, by the Coal Authority to excavate coal underground. Although it is unlikely, remaining coal reserves could create a possibility for future mining, which would be licensed by the Coal Authority

mine entries - collective name for shafts and adits

payments to owners of former copyhold land - historically, copyhold land gave rights to coal to the copyholder. Legislation was set up to allow others to work this coal, but they had to issue a notice and pay compensation if a copyholder came forward

shaft - vertical entry into a mine

site investigation - investigations of coal mining risks carried out with the Coal Authority's permission

stop notice - a delay to repairs because further coal mining subsidence damage may occur and it would be unwise to carry out permanent repairs

subsidence claim - a formal notice of subsidence damage to the Coal Authority since it was established on 31 October 1994

withdrawal of support - a historic notice informing landowners that the coal beneath their property was going to be worked

working facilities orders - a court order which gave permission, restricted or prevented coal mine workings

Further action reports

Mine entry interpretive report - assesses the risk of ground movement from mine entries in, or within 20 metres of, the property boundary. To order this report, use the same boundary as the CON29M report, then draw the building on the additional map screen.

For more information and to order this report please visit:
https://www2.groundstability.com/interpretive-report

Mine entry plan and data sheets - give additional information on mine entries recorded on a piece of land. To order this report use the same boundary as the CON29M report and a member of our team will contact you to confirm the mine entries to include in this bespoke report.

For more information and to order this report please visit:
https://www2.groundstability.com/plan-and-data-sheets

Appendix F. Unexploded Ordnance

SITE LOCATION

Map Centre: 287937,206669



LEGEND

- **High:** Areas indicated as having a bombing density of 50 bombs per 1000acre or higher.
- **Moderate:** Areas indicated as having a bombing density of 15 to 49 bombs per 1000acre.
- **Low:** Areas indicated as having 15 bombs per 1000acre or less.

miltary **industry** **UXO find**
transport **dock** **Luftwaffe targets**
utilities **other**

Appendix G. Factual Report

ROCK STREET FLOOD ALLEVIATION SCHEME
GROUND INVESTIGATION
FACTUAL REPORT

Report No. Q0341/Q0432/FR.v01



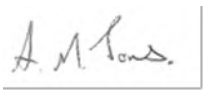
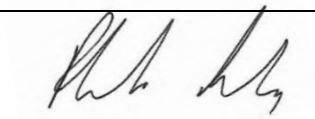
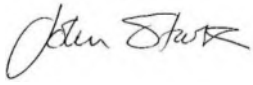
ROCK STREET FLOOD ALEVIATION SCHEME

GROUND INVESTIGATION FACTUAL REPORT

Report No. Q0341/Q0432/FR.v01 February 2021

DOCUMENT CONTROL

Contract Name:	**Rock Street Flood Alleviation Scheme**
Contract Reference:	**Q0341 & Q0432**
Report Type:	**Ground Investigation Factual Report**
Report Reference:	**Q0341/Q0432/FR.v01**
Date of Report Production:	**February 2021**
Client:	**Atkins**

Version:	Date:	Prepared by:	Checked by:	Approved by:
Final	01/02/21	A Jones	P. Darby	J. Stark
				
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0.0 FOREWORD

The following Conditions and Notes on Site Investigation Procedures should be read in conjunction with this report.

0.1 General

Recommendations made and opinions expressed in the report are based on the strata observed in the excavations, together with the results of site and laboratory tests. No responsibility can be held for conditions which have not been revealed by the Exploratory Holes or which occur between Exploratory Holes. Whilst the report may suggest the likely configuration of strata, both between Exploratory Holes and below the maximum depth of investigation, this is only indicative and liability cannot be accepted for its accuracy.

Unless specifically stated, no account has been taken of possible subsidence due to mineral extraction below or close to the site.

0.2 Investigation Procedures

Rotary Percussive (dynamic sampled) Boreholes, Hand and Machine excavated pitting techniques for ground investigation have been employed within the project. All Exploratory Hole operations, sampling and logging of soils, rocks and in-situ testing complies with the recommendations of the British Code of Practice BS 5930: 2015 'Site Investigations', British Code of Practice BS 10175: A2:2017 'Investigation of Potentially Contaminated Sites' and BS 1377: 1990, 'Methods of Test for Soils for Engineering Purposes'.

0.3 Routine Sampling

Representative bulk disturbed and environmental samples of the different strata are taken following completion of logging. These samples are sealed and labelled in clear plastic bags and 2kg plastic tubs. Soil samples obtained for environmental testing are sampled and sealed in borosilicate amber jars or in specialist vessels where required. Ground Water samples were sampled and sealed in borosilicate amber bottles or in specialist vessels where required All samples are returned from site to QGL's laboratory for controlled storage within 24 hours of sampling to await test scheduling/requirements.

0.4 In-Situ Testing, Surveying & Instrumentation

In-situ testing comprised:

- Standard Penetration Testing within Boreholes (SPT)
- All exploratory hole locations to be surveyed for location and elevation.
- PAS B Surveys
- PID testing

0.5 Groundwater

Where possible, the depth of entry of any influx of groundwater is recorded during the course of excavation or boring operations. The rate of inflow into the excavation or borehole is monitored during the course of the excavation or during boring procedures. Upon encountering any water strikes, work is temporarily halted and the water levels monitored for a standard twenty-minute period recording the change in water level at the end of the twenty minutes.

Groundwater conditions observed in the excavations are those appertaining to the period of investigation. It should be noted, however, that groundwater levels are subject to diurnal, seasonal and climatic variations and can also be affected by drainage conditions or other causes.

0.6 Retention of Samples

After satisfactory completion of all the scheduled laboratory tests on any sample, the remaining material is discarded. Further to notifying the Engineer/ Client with one week's notice all soil and/or rock samples not tested will be discarded 28 days after submission of the approved final report.

1.0 INTRODUCTION

1.1 General

Upon the instructions of Atkins, the scheme Engineer / Investigation Supervisor / Client, Quantum Geotechnic Limited (QGL) was commissioned to undertake a ground investigation for the proposed flood alleviation scheme for Rock Street, Glyn Neath.

The site extends from the entrance to the existing culvert at the northern end of the site extends below Lancaster Close located within a housing estate in a southwest direction. The site extends across the B4242 and rough grassland and a disused road to the south. The site terminates at the southern extent of the culvert, on the bank of the River Neath to the A465.

The site is located at National Grid reference SN879065.

The siteworks were carried out in two phases:

- Phase I between 9th – 23rd September 2020 (Project ref; Q0341) and,
- Phase II between 19th – 22nd January 2021 (Project ref; Q0432).

Where necessary trial pits, hand pits and boreholes were carried out under traffic management supplied by Amberon as QGLs approved traffic management supplier. These areas were re-instated to NRSWA standard.

QGL were the appointed Contractor for the works, under order number 5192792-001 issued on 11th August 2020. The works were commissioned in order to establish general ground conditions and locate live services across the proposed route of a new culvert.

This report presents a factual account of the fieldwork carried out, includes descriptions of the strata encountered, available groundwater observations, details of in-situ testing undertaken, location of services encountered and provides results of subsequent laboratory testing of samples obtained from the investigation.

General notes on the techniques employed by QGL are described in the Foreword together with the limitations inherent in carrying out site investigation work.

1.2 Purpose of Ground Investigation

The purpose of the ground investigation is to determine the existing ground conditions on the site, together with details and location of services along the proposed culvert route to allow the design of the proposed culvert improvement works. The purpose of the proposed works is to improve the hydraulic conveyance capacity of the existing water course whilst maintaining the current alignment.

The scheme is expected to involve the reprofiling of the Gelliceibryn Brook and construction of a new inlet structure and trash screen within the woodland at the top of Lancaster Close, construction of a 60m length of box-culvert immediately downstream of the new inlet, unblocking two existing 600mm diameter culvert and construction of a 25m length of block/brick work wall.

1.3 Initial Scope of Work

The initial scope of works entailed the following:

- 4 no. Percussive Rotary Boreholes
- 12 no. Hand Excavated Pits / Trenches
- 8 no. Machine Excavated Trial Pits
- In-Situ Testing
- PAS-B and GPR Survey to identify underground services.

General

- Geotechnical and Geo-environmental Laboratory Testing.
- Provide a factual report detailing the investigation.

The actual scope of works completed is detailed in Section 3.0.

General notes on the techniques employed by Quantum are described in the Foreword together with the limitations inherent in carrying out ground investigation work.

2.0 SITE DETAIL

2.1 Site Description

The site is located on Lancaster Close, Glynneath, approximately 25km northeast of Swansea and 40km northwest of Cardiff in South Wales.

The study area extends in a southwest direction across the town, and is located within a housing estate, leading down over open rough ground to the river Neath and A465. The site is approximately 500m west of the A4109. Directly north of the site is a heavily wooded area which is designated as an ancient woodland and which extends onto the north side of the valley that Glynneath is situated in.

The nearest postcode to the site is SA11 5EE.

Access to the northern section of the site is from Lancaster Close, running north off Park Avenue. Access to the southern area of the site is via a disused road off Park Avenue.

Selected Boreholes and Trial Pits were carried out on the footpath or highway across the site. Where required traffic management was utilised to provide an adequate and safe working area.

The site has been categorised as "yellow" based on the nature of the site and its historical uses, the category of the site has been defined in accordance with the Guidelines for the Safe Investigation by Drilling of Landfills and Contaminated Land (SISG, 1993).

The general extent of the site is shown in Figure 1 in Appendix I.

2.2 Statutory Service Information

All service information was held by the client with the relevant plans and information made available to QGL prior to commencement of the intrusive works.

A permit to excavate was issued by QGL for all exploratory holes. Standard QGL procedures for breaking ground were followed and all areas were scanned using a cable avoidance tool. A hand dug trial pit was excavated to 1.2m prior to commencement of drilling where services may be at risk. All hand excavation was undertaken using insulated digging tools.

A Utility survey to comply with PAS 128:2014 type B was undertaken at selected exploratory hole locations to help locate services for exposure. In addition, a GPR was undertaken along the central section of Lancaster Close. The Survey was undertaken by Intersect Surveys to locate and permit marking up of existing buried services across an area selected by the client.

2.3 Published Geology

Details of the published and inferred geology of the site are summarised as followed:

Superficial Deposits

The British Geological Survey (BGS) sheet 1:50,000 231 (Merthyr Tydfil) indicates the site is predominantly underlain by Alluvial deposits. Alluvial Fan deposits are shown to encroach the north eastern extent of the site. Glacial Till is shown along the northern extent. No Made Ground is recorded however it is expected to be present in localised areas across the site.

Bedrock Geology

The site is mapped to be underlain by interbedded sandstone, siltstone and mudstone with coal seams of the Lower Coal Measures which are mapped to underlie the superficial deposits.

3.0 FIELDWORK

3.1 General

A summary of the works completed and covered by this report are given below:

- 4 No. Rotary Percussive (dynamic sampled) boreholes. (RS-BH01-RS-BH03, RS-BH04, RS-BH04A & RS-BH04B)
- 18 No. Hand Excavated Trial Pits (RS-HP01, RS-HP02, RS-HP03, RS-HP03A, RS-HP04A-D, RS-HP05, RS-HP05A, RS-HP06 & RS-HP08 – RS-HP12).
- 9 No. Machine Excavated Trial Pits (RS-TP01-RS-TP05, RS-TP07, RS-TP07A, RS-TP08 & RS-HP07)
- In-situ testing and sampling.
- Post fieldwork groundwater and ground gas monitoring.
- PAS B survey at exploratory hole locations
- GPR survey along central section of Lancaster Close

Full time site supervision and attendance from QGL was undertaken on all aspects of the site works and subsequent reinstatement works of all exploratory hole locations. Reinstatement of the exploratory holes within the highway was undertaken in accordance with NRSWA requirements. All service plans were held onsite, with all site personnel inducted by QGL and briefed of the pertinent Risk Assessments and Method Statements relating to the tasks to be undertaken.

The borehole locations were subject to a 1.2m deep service / utility inspection pit prior to any drilling. Also, each area of investigation was fully eCAT4+ ('Cable Avoidance Tool') scanned prior to breaking ground.

3.2 Exploratory Hole Locations

The exploratory hole locations were specified by Atkins and set out on site by QGL using the co-ordinates provided.

Exploratory Hole Location Plans are presented as Figure 2 in Appendix I and the Exploratory Hole co-ordinates and levels are detailed within Table 1.

Table 1: *Exploratory Hole Co-Ordinates & Levels*

Exploratory Hole	Easting	Northing	Height (mAOD)
RS-BH01	287966.77	206566.55	56.38
RS-BH02	287917.18	206541.17	55.40
RS-BH03	287973.52	206319.92	62.17
RS-BH04	287952.99	206294.22	54.50
RS-BH04A	287951.52	206294.33	54.41
RS-BH04B	287951.55	206293.60	54.40
RS-HP01	287942.58	206720.89	59.05
RS-HP02	287941.34	206699.28	58.77
RS-HP03	287919.95	206519.63	55.52
RS-HP03A	287920.24	206516.95	55.35
RS-HP04	287934.92	206485.07	55.00
RS-HP04A	287933.91	206486.95	55.02
RS-HP04B	287935.92	206482.85	54.97
RS-HP04C	287935.51	206487.51	55.08
RS-HP04Di	287936.69	206480.82	54.96
RS-HP04Dii	287937.75	206481.58	54.97
RS-HP04Diii	287934.12	206479.60	54.91
RS-HP05	287940.65	206473.89	55.01
RS-HP05A	287939.68	206476.80	54.97
RS-HP06	287943.42	206450.33	55.52
RS-HP07	287953.86	206400.52	55.46
RS-HP08	287936.685	206697.313	58.09
RS-HP09	287931.739	206686.28	57.227
RS-HP10	287936.312	206689.574	57.516
RS-HP11	287943.236	206628.239	56.473
RS-HP12	287977.85	206572.756	56.244
RS-TP01	287937.95	206737.81	59.65
RS-TP02	287934.13	206701.85	57.74
RS-TP03	287956.02	206585.48	56.51
RS-TP04	287949.53	206434.87	56.92
RS-TP05	287953.27	206382.90	56.75
RS-TP06		Cancelled by client	
RS-TP07	287939.34	206272.90	53.78
RS-TP07A	287910.62	206269.81	53.12
RS-TP08	287888.07	206213.28	53.40

3.3 Boreholes

Percussive Rotary (Dynamic Sampling) Boreholes

A Commachio MC205 rubber track-mounted rotary drilling rig was used to progress two boreholes RS-BH01 and RS-BH02 to depths of between 5.0mbgl (below ground level) within the car park area. Due to difficult drilling conditions in the southern area of the site, a Commachio MC600 steel track-mounted drilling rig was used to progress the remaining two boreholes RS-BH03 and RS-BH04 to depths of 10.0m and 7.0mbgl respectively.

Each Borehole was drilled using dynamic sampling methods through the superficial deposits with an ODEX casing system. Dynamic Sampling is a technique whereby a hydraulically driven percussive hammer attached to the head of the drill rig mast is used to drive a 1.00m length, 101mm diameter, steel sampling tube through the soils to obtain undisturbed samples within 87mm core liner.

On encountering an obstruction or refusal of the Dynamic sample barrel, all boreholes were continued and kept open using an ODEX casing system of 115mm diameter. A combined air/mist flush was used to clear the hole of returns and debris.

In-situ testing was carried out in all boreholes (see section 3.4.1.).

Borehole RS-BH01 was located within the pavement and reinstated to NRSWA requirements on completion of the borehole.

Details of the exploratory holes, including final depths in metres below ground level (mbgl) and SPT Hammer used are provided below in Table 2.

Table 2: *Borehole details*

Exploratory Hole ID	Drilling method	SPT Hammer Reference	Termination Depth (mbgl)	Terminating Strata	Notes/Reason for Termination
RS-BH01	DS	Q2	5.0	Alluvium	Scheduled Depth
RS-BH02	DS	Q2	5.0	Alluvium	Scheduled Depth
RS-BH03	DS	Q2	10.0	Made Ground	Scheduled Depth
RS-BH04A	DS	N/A	1.0	Made Ground	Obstruction – Timber
RS-BH04B	DS	N/A	1.0	Made Ground	Obstruction - Timber
RS-BH04	DS	Q2	7.5	Alluvium	Scheduled Depth

The Engineering Geologist's borehole logs are presented within Appendix II.

3.4 Hand Excavated Service Trial Pits

19 No. Hand Excavated Trial Pits were formed using insulated Hand Digging Tools were excavated to determine the locations of the underground services present together with shallow ground conditions. 1no Hand Excavated Trial Pit (RS-HP07) was extended using a JCB 3CX due to the extended depth of services to be located. The positions are shown on the exploratory hole location plan in Appendix I.

This method of investigation allows a safe method of excavation around services together with direct sampling of the near surface deposits for identification purposes, as well as assessment of any salient features and Made Ground or disturbed ground. The trial pits were logged in accordance with BS5930:2015; BS EN ISO 14688-1:2002 and BS EN ISO 14688-2:2004 and supervised at all times by an Engineering Geologist from QGL. All of the trial pits were backfilled with compacted layers of arisings upon completion with suitable surface reinstatement where required.

Details of the Hand Pits including final depths in metres below ground level (mbgl) are provided below in Table 3.

Table 3: *Hand Pit details*

Exploratory Hole ID	Exploratory Hole Type	Termination Depth (mbgl)	Terminating Strata	Notes/Reason for Termination
RS-HP01	Hand Excavated Trial Pit	Turf Removed	N/A	Services at Surface
RS-HP02	Hand Excavated Trial Pit	1.5	Made Ground	Service Located
RS-HP03	Hand Excavated Trial Pit	1.2	Made Ground	Scheduled Depth
RS-HP03A	Hand Excavated Trial Pit	0.5	Made Ground	Sandstone boulder Obstruction
RS-HP04	Hand Excavated Trial Pit	0.6	Made Ground	Services Located
RS-HP04A	Hand Excavated Trial Pit	0.45	Made Ground	Services Located
RS-HP04B	Hand Excavated Trial Pit	0.6	Made Ground	Services Located
RS-HP04C	Hand Excavated Trial Pit	1.35	Made Ground	Services Located
RS-HP04Di	Hand Excavated Trial Pit	0.15	Concrete	Obstruction - Concrete
RS-HP04Dii	Hand Excavated Trial Pit	0.25	Concrete	Obstruction - Concrete
RS-HP04Diii	Hand Excavated Trial Pit	0.15	Concrete	Obstruction - Concrete
RS-HP05	Hand Excavated Trial Pit	0.75	Made Ground	Services Located
RS-HP05A	Hand Excavated Trial Pit	1.05	Made Ground	Services Located
RS-HP06	Hand Excavated Trial Pit	0.7	Alluvium	Engineers Instruction
RS-HP07	Converted to Machine Excavated Trial Pit	2.5	Made Ground - Re-worked Alluvium	Service Located

Exploratory Hole ID	Exploratory Hole Type	Termination Depth (mbgl)	Terminating Strata	Notes/Reason for Termination
RS-HP08	Hand Excavated Trial Pit	0.50	Made Ground	Services Located
RS-HP09	Hand Excavated Trial Pit	0.90	Made Ground	Services Located
RS-HP10	Hand Excavated Trial Pit	1.10	Made Ground	Services Located
RS-HP11	Hand Excavated Trial Pit	1.40	Made Ground/ Alluvium	Partial Services Located (Unable to locate Gas Mains)
RS-HP12	Hand Excavated Trial Pit	1.20	Made Ground/ Alluvium	Partial Services Located (Unable to locate Gas Mains)

A complete set of Engineering Geologist Trial Pit logs are presented within Appendix III whilst the results.

Details of the services encountered are provided in Table 4 below.

Table 4: *Service details*

Exploratory Hole ID		Service	Duct	Diameter	Easting	Northing	Height mAOD	Remarks
RS-	TP01	Unknown	Steel Pipe		287937.93	206737.51	58.74	
RS-	TP02	LV	Black plastic		287933.85	206701.17	57.13	
RS-	HP01	Water	Steel	100mm	287942.83	206721.99	59.00	Visible at Surface
RS-	HP01	Water	Steel	100mm	287942.53	206720.26	59.07	Visible at Surface
RS-	HP02	LV	Black plastic	100mm	287941.28	287941.28	57.39	
RS-	HP03	LV	No Service found in pit - CAT detected LV service in adjacent rear Garden					
RS-	HP03A							
RS-	HP04	LV	N/A	30mm	287934.91	206485.04	54.46	
RS-	HP04	Copper Pipe	N/A	3/4inch	287934.80	206485.10	54.77	
RS-	HP04	Copper Pipe	N/A	3/4inch	287935.90	206482.89	54.59	
RS-	HP04A	HV	Electric Tile		287933.92	206486.93	54.62	
RS-	HP04B	Sewer/Drain	Concrete encased	120mm	287935.91	206482.88	54.60	
RS-	HP04C	Sewer	Concrete encased	300mm	287934.75	206487.14	54.09	
RS-	HP04D	Water	Service not located due to concrete encountered					
RS-	HP05	Copper Pipe	N/A		287940.56	206473.97	54.48	
RS-	HP05	BT	Plastic Grey	100mm	287940.53	206474.36	54.61	
RS-	HP05	BT	Plastic Grey	100mm	287940.54	206474.24	54.59	
RS-	HP05	HV	Electric Tile		287940.66	206473.72	54.50	
RS-	HP05	LV	Black Plastic	100mm	287940.80	206473.27	54.48	
RS-	HP05A	Gas	N/A	100mm	287939.68	206476.75	53.96	
RS-	HP06	BT	No Service Detected					
RS-	HP07	CSO	Concrete		287955.20	206401.06	52.96	
RS-	HP08	Water	Metal (Grey)	30mm	287935.063	206697.480	57.249	
RS-	HP09	Water	Metal (Grey)	80mm	287931.183	206686.379	56.323	Connecting collar observed in pit

Exploratory Hole ID	Service	Duct	Diameter	Easting	Northing	Height mAOD	Remarks
RS- HP10	LV	Plastic (Black Polypropylene)	100mm	287935.247	206689.444	56.909	
RS- HP10	Gas (domestic feed)	Plastic (Yellow MDPE)	25mm	287935.669	206689.445	57.068	
RS- HP10	Gas (main line)	Plastic (Yellow MDPE)	45mm	287933.483	206689.574	56.252	
RS- HP10	Water	Metal (Black/Grey)	30mm	287935.762	206689.328	56.988	
RS- HP11	Water	Metal (Black/Grey)	30mm	287943.477	206627.264	55.625	
RS- HP11	Water	Plastic (Blue MDPE)	28mm	287943.523	206627.273	55.637	
RS- HP11	Water	Plastic (Blue HDPE)	90mm	287943.503	206627.299	55.554	
RS- HP12	BT	Plastic (Orange Duct)	110mm	287973.300	206568.846	55.892	
RS- HP12	Water	Cast Iron (Black/ Grey with part concrete surround)	90mm	287973.825	206569.488	55.735	
General surveyed locations							
Lancaster Close Public Car Park Manhole Invert	Manhole Invert			287942.261	206548.987	54.573	
Lancaster Close Public Car Park Street Light Duct	Streetlight duct			287916.111	206546.875	55.386	
No.11. Lancaster Close - Rear Garden Manhole (A) - Blocked Invert	Manhole Invert (completely blocked-silted up)			287962.945	206690.267	57.588	
No.11. Lancaster Close - Rear Garden Manhole (B) - Active Invert	Manhole Invert (functioning)			287963.142	206689.563	57.446	
No.2. Lancaster Close Front Drive Manhole Cover	Manhole Cover			287961.621	206620.932	57.160	
No.3. Lancaster Close Rear Drive Manhole Cover	Manhole Cover			287971.861	206625.140	57.253	
No1. Robert St, Rear Courtyard Manhole Cover	Manhole Cover			287940.364	206600.561	56.055	
No1. Robert St, Rear Driveway-Pavement Manhole Cover	Manhole Cover			287953.481	206596.225	56.492	
No1. Robert St, Rear Driveway-Pavement Manhole Invert	Manhole Invert			287953.422	206596.137	55.546	
No1. Robert St, Side Garden Manhole Cover	Manhole cover (buried under turf, unable to lift cover, seized)			287943.475	206603.042	56.057	
Robert St-Lancaster Close Junction Drainage Gully Invert	Gully Invert			587938.750	206632.545	55.515	

3.5 Machine Excavated Trial Pits

8 No. trial pits were excavated using a JCB 3CX 100º excavator owned and operated by M&J Plant as an approved plant supplier to QGL. The exploratory hole positions are shown on the exploratory hole location plan in Figure 2 in Appendix I.

This method of investigation allows direct sampling of the near surface deposits for identification purposes,

locating of buried services, as well as assessment of any salient features and Made Ground or disturbed ground. The trial pits were logged in accordance with BS5930:2015; BS EN ISO 14688-1:2002 and BS EN ISO 14688-2:2004,and supervised at all times by an Engineering Geologist from QGL.

All trial trenches were backfilled with compacted layers of arisings upon completion. Surface reinstatement was undertaken in accordance with NRSWA where required.

Geotechnical and Environmental samples were taken within the superficial deposits for laboratory testing purposes.

Details of the Trial pits including final depths in metres below ground level (mbgl) are provided in Table 5.

Table 5: *Trial Pit Detail*

Exploratory Hole ID	Exploratory Hole Type	Final Length (mbgl)	Terminating Strata	Reason for termination
RS-TP01	Machine Excavated Trial Pit	3.0	Glacial Till	Scheduled Depth
RS-TP02	Machine Excavated Trial Pit	0.5.0	Made Ground	Unable to Safely complete excavation
RS-TP03	Machine Excavated Trial Pit	3.0	Alluvium	Scheduled Depth
RS-TP04	Machine Excavated Trial Pit	3.0	Alluvium	Scheduled Depth
RS-TP05	Machine Excavated Trial Pit	3.0	Alluvium	Scheduled Depth
RS-TP07	Machine Excavated Trial Pit	3.0	Alluvium	Scheduled Depth
RS-TP07A	Machine Excavated Trial Pit	1.25	Made Ground	Re-positioned to avoid potential risk to services
RS-TP08	Machine Excavated Trial Pit	3.0	Made Ground	Scheduled Depth

A complete set of Engineering Geologist's Test Hole logs are presented within Appendix III.

3.6 In-Situ Testing

3.6.1 Standard Penetration Testing

Standard penetration tests (SPTs) were undertaken within all boreholes, at intervals specified by Redstart.

This is a dynamic test as described in BS EN ISO 22476-3:2005 + A1:2011. Within fine grained or cohesive soils, the test incorporates a small diameter tube (650mm length, 50mm external diameter and 35mm internal diameter) with a cutting shoe known as the 'split barrel sampler'. The sampler is forced into the soil dynamically using blows from a 63.5kg hammer dropped through 760mm. The sampler is initially advanced 150mm into the soil with seating blows, then the number of blows required to advance the sampler each 75mm increment up to a depth of 300mm is recorded. This cumulative total number of blows over the 300mm test is referred to as the "N" value. For coarse gravels and bedrock the split barrel is replaced by a 60° cone (SPT(C) - Standard Penetration Test (Cone)). SPT/SPT(C) results are detailed within the relevant

borehole Logs. The SPT calibration certificate for the SPT hammer used during this investigation is presented in Appendix II.

3.6.2 PAS128:2014 Type B Survey and Ground Penetrating Radar Survey

A PAS 128:2014 non-intrusive Type B survey was undertaken by Intersect to identify the underground services in areas as requested by the client.

During the survey utilities were detected by Ground Penetrating Radar (GPR) to get a horizontal and vertical (depth) position. In addition a RD8000 CAT and Genny survey was also included.

The survey was completed to Level M3 by a suitably trained operative with Level 3 NVQ.

A GPR survey was undertaken across the central area of Lancaster Close to provide an indication of the location of buried services across the survey area.

Figure 1 presented in Appendix V was produced by Intersect showing the services identified during the survey.

3.6.3 Headspace Testing

All environmental soil samples collected were screened using a calibrated Photoionisation Detector onsite to measure isobutylene, prior to being sent to the laboratory.

Soil is placed in a sealed plastic bag, half-filled to allow airspace above the soil and left a period of no less than one hour prior to screening.

Measurements are detailed within the exploratory hole logs included within Appendix II and Appendix III.

3.7 Soil Sampling

Disturbed samples of soil were taken in clear sealed plastic bags and white plastic tubs. Environmental samples were taken at various depths as noted on the relevant logs.

The environmental samples were dispatched to Chemtest, Coventry using a daily courier service for storage awaiting testing instructions from the Engineer. Environmental soil samples were taken in amber glass jars, vials and plastic tubs provided by the laboratory to suit the anticipated testing.

Geotechnical samples were returned from site to QGL's laboratory for controlled storage to await test scheduling/requirements. For specific details of laboratory testing see Section 4.0.

4.0 LABORATORY TESTING

4.1 General

The laboratory testing was scheduled by Atkins and comprised a number of geotechnical classification and performance tests as well as chemical testing on selected soil samples and ground water samples recovered from the investigation.

4.2 Geotechnical Testing

Geotechnical classification and performance testing was undertaken at QGL's approved UKAS accredited laboratory at GSTL, Llanelli.

Geotechnical tests undertaken on selected soil samples are listed below. All the geotechnical soil testing work was carried out in accordance with the procedures stipulated in the various sections of BS 1377:1990 "Methods of test for soils for civil engineering purposes" and to UKAS accreditation where applicable and chemical testing carried out in accordance with BRE Special Digest 1:2005 "Concrete in aggressive ground".

Geotechnical soil testing undertaken:

- 13 No. Moisture content
- 6 No. Liquid limit, plastic limit and plasticity index
- 13 No. Particle size distribution by wet sieving
- 6 No. PSD – Sedimentation by Pipette
- 5 No. Suite D (Brownfield site pyrite present)

Geotechnical Laboratory Test results are presented in Appendix VI.

4.3 Geo-Environmental Testing

Geo-Environmental chemical testing was undertaken at Eurofins Chemtest ltd, Coventry. All testing was scheduled by Atkins. The following suites of testing were scheduled:

- 37 No Suite E (Soil)
- 20 No. Suite F (Leachate)
- 2 No Suite F (Water samples)

Chemical Laboratory Test results are presented in Appendix VII.

5.0 REFERENCES

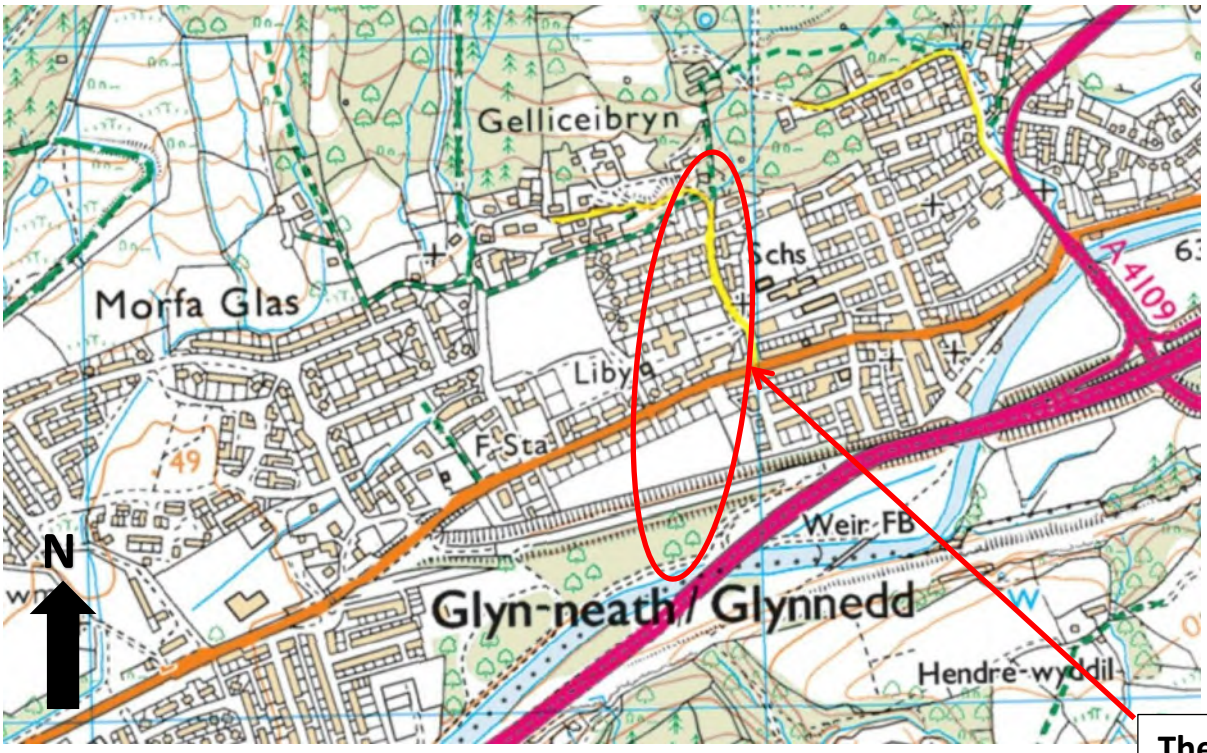
British Geological Survey:

- The British Geological Survey (BGS) sheet 1:50,000 231 (Merthyr Tydfil)
- BGS Geology of Britain Viewer (www.bgs.ac.uk)

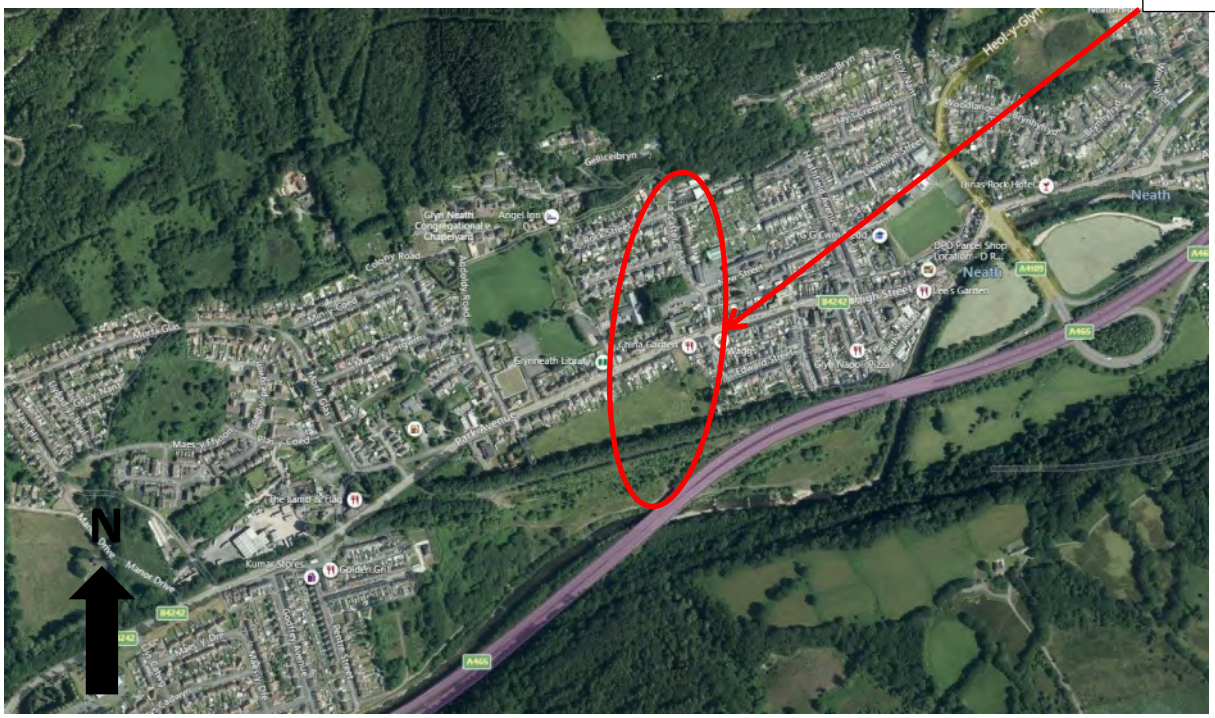
Specialist Publications:-

- British Code of Practice BS 5930:2015 *'Code of Practice for Site Investigations'*
- British Code of Practice BS 1377:1990 *'Methods of test for soils for civil engineering purposes'.*
- British Code of Practice BS EN ISO 14688-1:2002+A2:2013 investigation and testing. Identification and classification of soil. Identification and description
- British Code of Practice BS EN ISO 14688-2:2004+A2:2013 Geotechnical investigation and testing. Identification and classification of soil. Principles for a classification.
- British Code of Practice BS EN ISO 14689-1:2003 Ground Investigation and Testing – Identification and classification of rock
- Health and Safety Executive Guidance Note EH40/90
- *CIRIA Report 143* 'The Standard Penetration Test (SPT): Methods and Use', 1995.
- BRE (2005) Special Digest 1:2005, 3rd Edition, Concrete in aggressive ground. BRE, Garston.
- BS 6031: 2009 Code of Practice for Earthworks.
- Workmanship for excavation shall comply with BS 8000: 1989 Part 1, Sections 3.1, 3.2 and 3.3.
- Specification for Highway Works (MCHW 1), Volume 1, Series 600 & Series 800, 2006 with Amendment 2016
- ICE UK Specification for Ground Investigation Second Edition.
- Design Manual for Roads and Bridges: Volume 7 Pavement Design and Maintenance
- Specification for Highways Works Series 600 Earthworks
- Highways Agency Interim Advice Note 73/06, Rev 1 2009, Clause 7.7

APPENDIX I – **SITE PLANS AND FIGURES**



The Site



Mapping sourced from www.bing.com

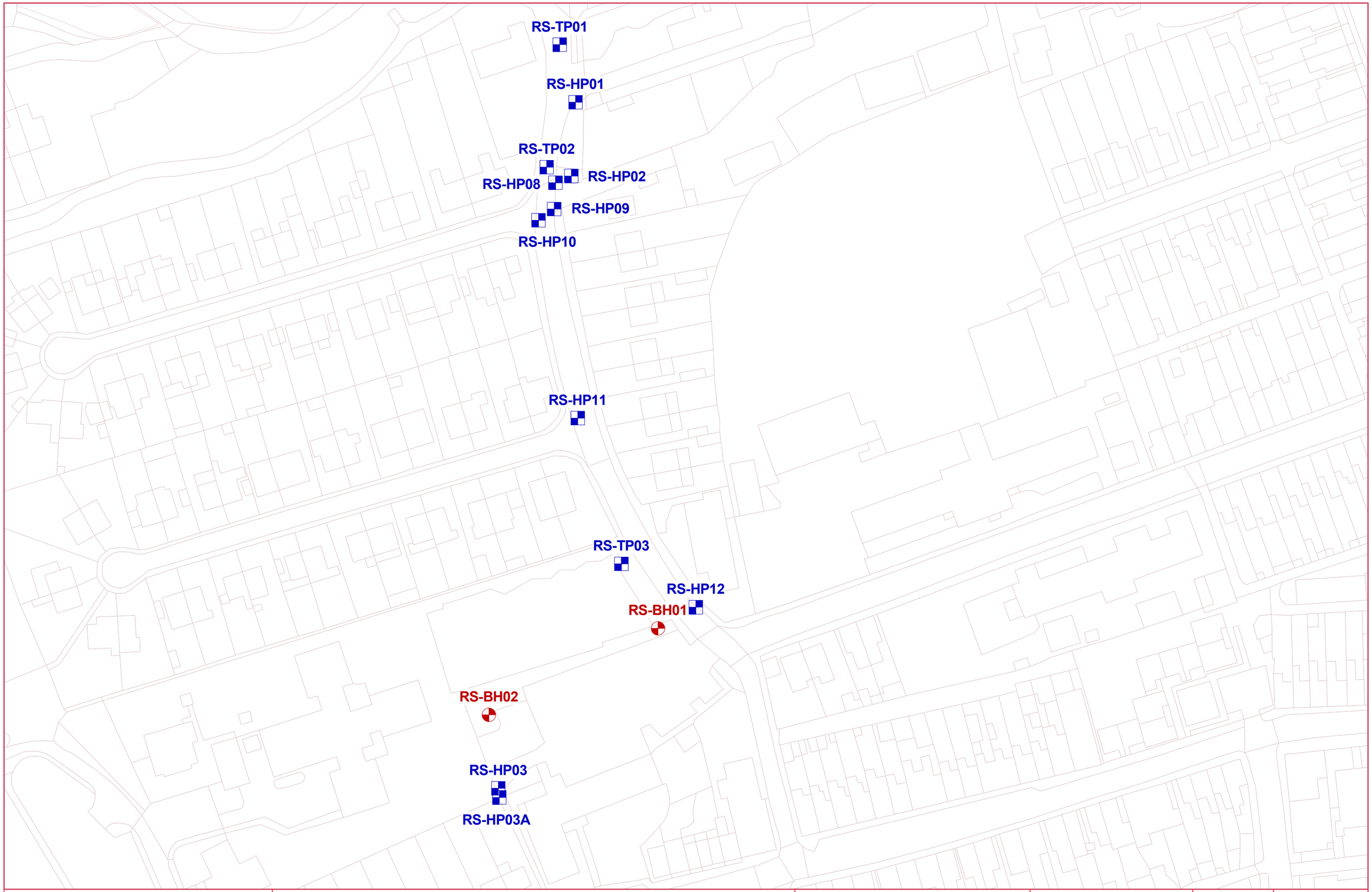
Quantum Geotech

FIGURE 1

Project: **Rock Street Flood Alleviation**

Job No: **Q0341**

Drawing Title: **Site Location Plan**



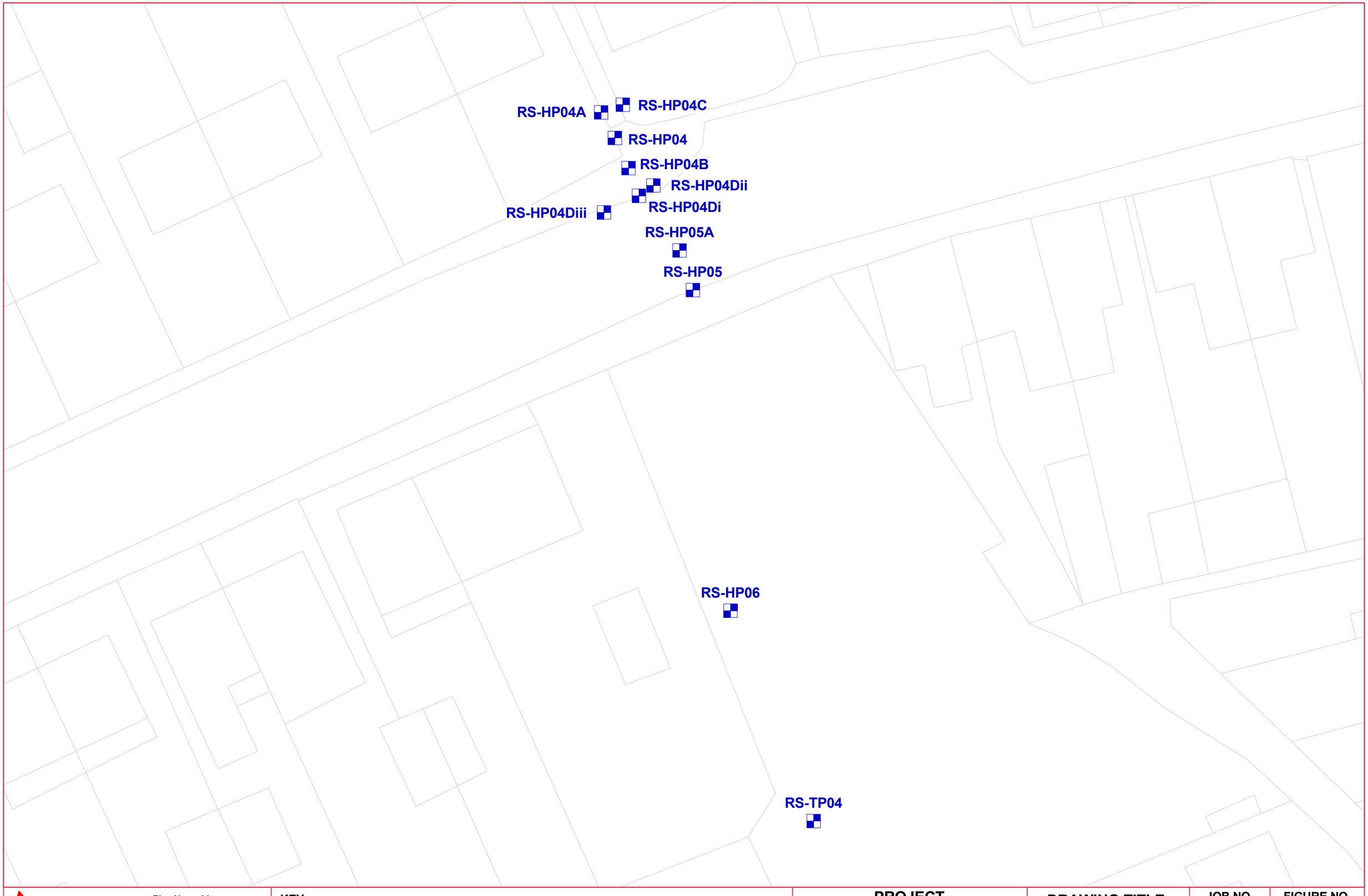
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KEY
Borehole
Trial Pit
Dynamic Probe
In-situ Test
Window Sample
Sampling Point
Historical Borehole

PROJECT
ROCKSTREET, GLYNEATH

DRAWING TITLE:
EXPLORATORY HOLE LOCATION PLAN

JOB NO.	FIGURE NO.
Q0341	2
DATE	SCALE
02/02/21	1:1000



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Window Sample
Sampling Point
Historical Borehole

PROJECT
ROCKSTREET, GLYNEATH

DRAWING TITLE:
EXPLORATORY HOLE LOCATION PLAN

JOB NO.	FIGURE NO.
Q0341	3
DATE	SCALE
02/11/20	1:250

RS-HP06

RS-TP04

RS-HP07

RS-TP05

RS-BH03

RS-BH04
RS-BH04A
RS-BH04B

RS-TP07

RS-TP07A

RS-TP08

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KEY
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Trial Pit
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Window Sample
Sampling Point
Historical Borehole

PROJECT
ROCKSTREET, GLYNEATH

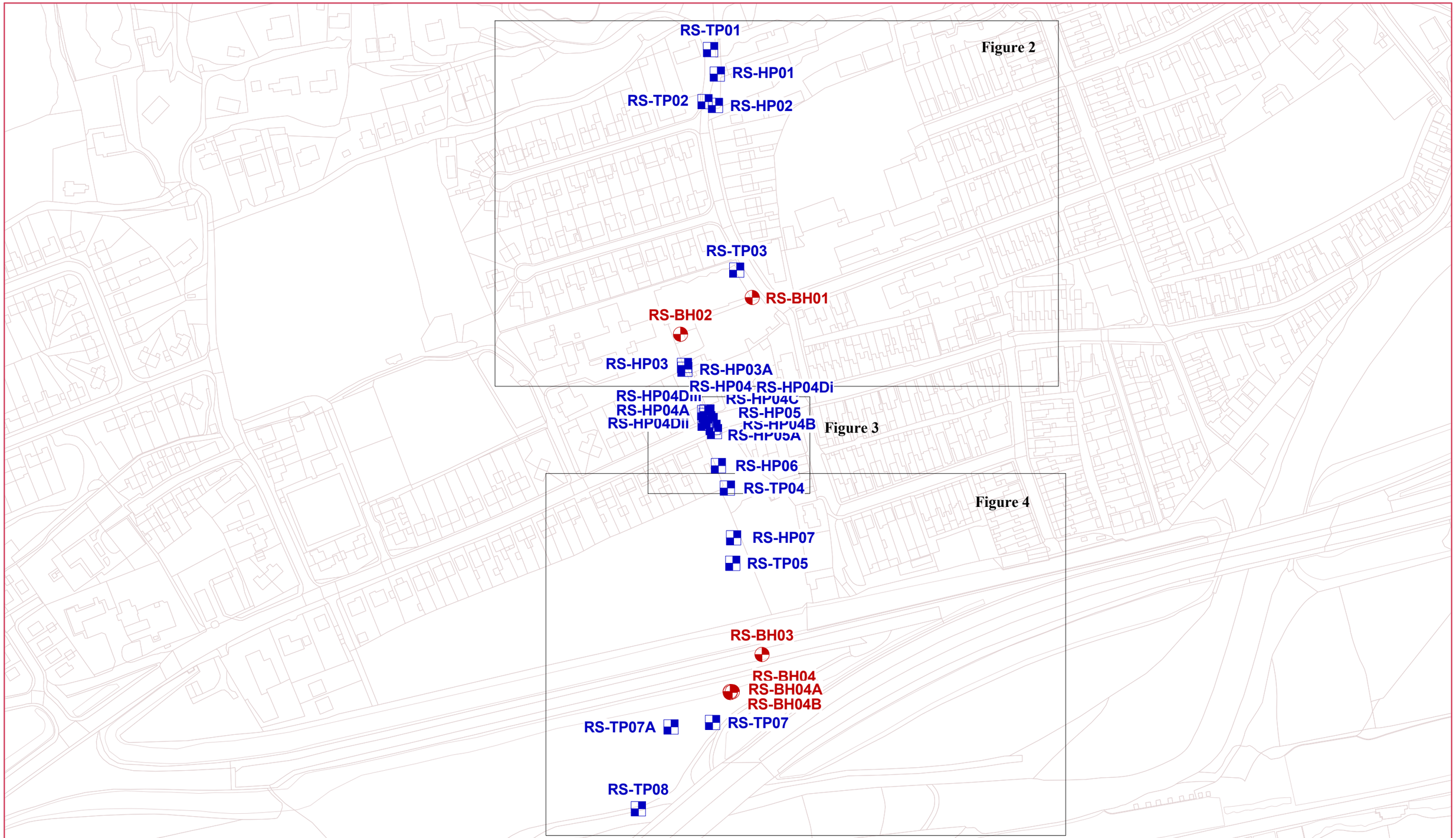
DRAWING TITLE:
EXPLORATORY HOLE
LOCATION PLAN

JOB NO.
Q0341

FIGURE NO.
4

DATE
02/11/20

SCALE
1:1000



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KEY
Borehole
Trial Pit
Dynamic Probe
In-situ Test
Window Sample
Sampling Point
Historical Borehole

PROJECT ROCKSTREET, GLYNEATH	DRAWING TITLE: EXPLORATORY HOLE LOCATION PLAN	JOB NO. Q0341	FIGURE NO. 5
		DATE 02/11/20	SCALE 1:2500

APPENDIX II – **BOREHOLE LOGS**

Contract : Rockstreet, Glyneath

Client : Atkins

Borehole No.
RS-BH01

Dates : 14/9/20 - 15/9/20

Location :

Job Number : Q0341

Engineer : Atkins

Ground Level : 56.38 m A.O.D.
Level to Ordnance Datum

Coordinates: 287966.77 E
206566.55 N
Co-ordinates to National Grid

m B.G.L.	Run Details: Core Run	TCR %	SCR %	RQD %	Fractures: Min Avg Max	FI	Insitu Tests: Depth	Test Results	Samples: Depth	Type No. Blows	Strata: Depth (Thick-ness)	Description	Legend	Red. Level A.O.D.	Water
0									0.06 - 0.12	B1	(0.06)	Made Ground: Red Engineering Brick. [PAVING]		56.32	
									0.10	ES1	0.06			56.26	
									0.20 - 0.40	B2	(0.06)	Made Ground: Yellow-brown slightly gravelly fine to coarse SAND. Gravel is fine to coarse angular to sub-rounded sandstone quartz. [SUB-BASE]			
									0.30	ES2	0.12			55.98	
									0.50 - 0.70	B3	(0.28)				
									0.50	ES3	0.40			55.68	
											(0.30)	Made Ground: Grey sandy fine to coarse angular to sub-angular siltstone sandstone GRAVEL with minor organic content. Sand is fine to coarse. Organics are rootlets. [SUB-BASE]			
1									1.00 - 1.20	B4	0.70				
									1.00	ES4	(0.50)				
											1.20	Made Ground: Brown locally black slightly clayey slightly silty sandy fine to coarse angular siltstone sandstone slag GRAVEL with abundant angular limestone cobble/ boulder content. Sand is fine to coarse. Organics are rootlets. [FILL]		55.18	
	1.50						1.5	SPT (S) 15 (1-1-**3-3-3-6**)	1.50	SPT					
		100							1.50 - 2.10	B5	(0.90)				
2									2.00	ES5					
	2.1										2.10	Made Ground: Soft brown slightly clayey slightly sandy gravelly SILT with frequent concrete cobble content. Sand is fine to medium. Gravel is sandstone limestone brick concrete. [FILL]		54.28	
												Made Ground: Soft to locally firm brown slightly silty slightly sandy gravelly CLAY with occasional siltstone sub-angular cobble content. Sand is fine to medium. Gravel is fine to coarse angular siltstone sandstone coal. [RE-WORKED ALLUVIUM]			
3							3	SPT (C) 50/85mm (25/40mm-**38-12/10mm**--)	3.00 - 4.50	D	(2.40)	**Drillers Description** Limestone Boulders.			
												Arisings are grey slightly sandy fine to coarse angular to sub-rounded siltstone sandstone GRAVEL.			
4															
							4.5	SPT (C) 50/10mm (25/20mm-**50/10mm**---)	4.50 - 5.00	D	4.50	**Drillers Description** Limestone Boulders.		51.88	
											(0.50)	Grey brown slightly silty slightly sandy gravelly CLAY. Sand is fine to coarse. Gravel is fine to coarse angular to sub-angular mudstone siltstone sandstone.			
5							5	SPT (C) 50/155mm (20-5/35mm-**10-25-15/5mm**-)			5.00	Borehole Terminated At 5.00mbgl Upon Specification Depth.		51.38	

Hole Progress / Water Obs

Date / Time	H. Depth	C. Depth	Water
14/09/2020 16:30	3.00	3.00	DRY
15/09/2020 08:00	3.00	3.00	DRY

Casing

Depth	Diam.
5.00	115.00

Groundwater

Struck	Rose To	Behaviour	Sealed
		No groundwater encountered	

Flush

Depth	Type	Returns
1.20 - 5.00	Air Mist	

Plant: Commachio 205

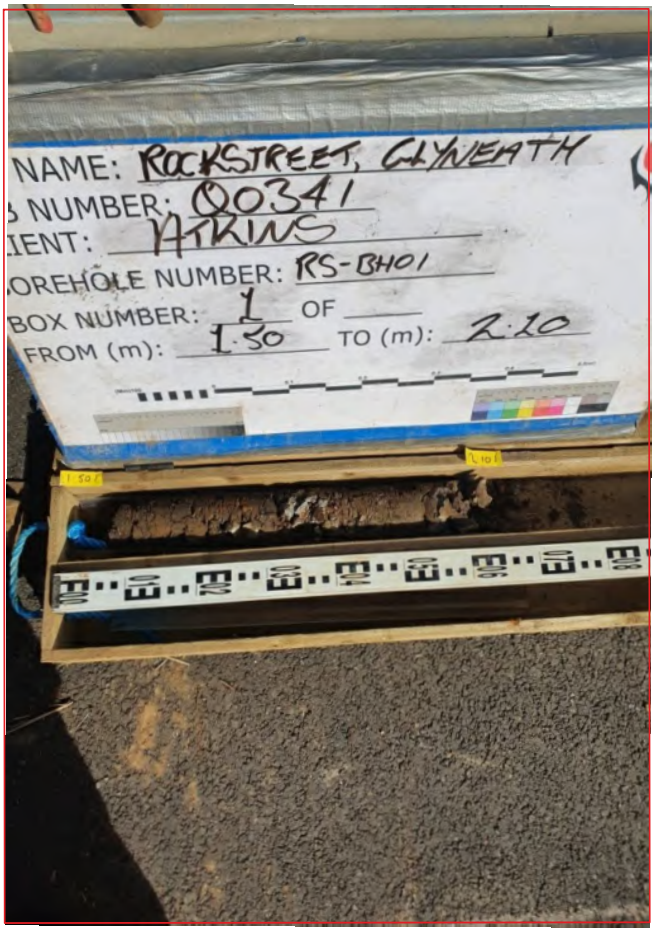
Remarks: Position marked out in liaison with Atkins engineer. Area CAT and genny scanned with Permit to excavate issued prior to breaking ground. Hand excavated inspection pit carried out to 1.2mbgl.
Drillers Description - CPT / Sampling refused, pot samples of drilling returns taken for engineers description.
On completion BH backfilled with bentonite pellets, with paving bricks replaced at surface.

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Operator:	Logged By:	Sheet No.	m Per Page	All measurements in metres unless otherwise stated
GBj & RM	L Weaver	1 Of 1	6	

AGS

Contract : Rockstreet, Glyneath **Client : Atkins**		**Borehole No.** **RS-BH01**
Dates : 14/9/20 - 15/9/20 Location :	Job Number : Q0341 Engineer : Atkins	Ground Level : 56.38 m A.O.D. *Level to Ordnance Datum* Coordinates: 287966.77 E 206566.55 N *Co-ordinates to National Grid*



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Operator:	Logged By.	Sheet No.	m Per Page	
GBj & RM	L Weaver	1 Of 1	2	All measurements in metres unless otherwise stated

AGS

Contract : Rockstreet, Glyneath

Client : Atkins

Borehole No.
RS-BH02

Dates : 11/9/20 - 14/9/20

Location :

Job Number : Q0341

Engineer : Atkins

Ground Level : 55.40 m A.O.D.
Level to Ordnance Datum

Coordinates: 287917.18 E
206541.17 N
Co-ordinates to National Grid

m B.G.L.	Run Details: Core Run	TCR %	SCR %	RQD %	Fractures: Min Avg Max	FI	Insitu Tests: Depth	Test Results	Samples: Depth	Type No. Blows	Strata: Depth (Thick-ness)	Description	Legend	Red. Level A.O.D.	Water
0											(0.35)	MADE GROUND: Brown slightly clayey sandy slightly gravelly Silt with many rootlets, plastic and brick. (Topsoil)			
									0.30	D1 ES2	0.35	PID @0.3mbgl = 0.2ppm		55.05	
									0.50 0.50 - 0.90	ES3 B4	(0.55)	MADE GROUND: Brown slightly silty sandy Gravel with medium cobble content of sandstone and concrete. Gravel is angular to sub rounded fine to coarse sandstone, siltstone, brick, concrete, clay pipe, pottery, tile slate and fine coal.			
1											0.90 (0.30)			54.50	
	1.20	67					1.2	SPT (S) 11 (2-1-**2-3-1-5**)	1.20 1.20 - 1.80	SPTLS5 B6	1.20 (0.60)	PID @0.5mbgl = 0.3ppm ...with high cobble content from 0.6mbgl with low boulder content of sandstone from 0.9mbgl		54.20	
	1.8										1.80	**Drillers Description** Boulders, Cobbles and Gravels. Arisings logged as: Brown slightly silty slightly sandy Gravel of sandstone, siltstone, brick and coal.		53.60	
2									2.00 - 2.50	D7		Brown slightly clayey sandy GRAVEL with low cobble content. Gravel is sub angular to sub rounded fine to coarse sandstone and siltstone.			
3							3	SPT (C) 50/28mm (2-23/20mm-**50/28mm**---)	3.00 - 3.50	D8	(2.70)	**Drillers Description** Boulders, Cobbles and Gravels. Arisings logged as: Brown slightly silty slightly sandy Gravel of sandstone, siltstone, brick and coal.			
4									4.00 - 4.50	D9					
							4.5	SPT (C) 50/80mm (5-9-**41-9/5mm**--)	4.50 - 5.00	D10	4.50 (0.50)	**Drillers Description** Boulders and Cobbles Arisings logged as: Brown slightly silty slightly sandy Gravel of sandstone, siltstone, brick and coal.		50.90	
5							5	SPT (C) 50 (25/50mm-**50**---)			5.00	Borehole terminated at scheduled depth of 5.0mbgl		50.40	

Hole Progress / Water Obs

Date / Time	H. Depth	C. Depth	Water
11/09/2020 16:00	4.50	4.50	DRY
14/09/2020 08:00	4.50	4.50	DRY

Casing

Depth	Diam.
5.00	115.00

Groundwater

Struck	Rose To	Behaviour	Sealed
		No groundwater encountered	

Flush

Depth	Type	Returns
1.20 - 5.00	Air Mist	

Plant: Commachio 205

Remarks: Position marked out in liaison with Atkins engineer. Area CAT and genny scanned with Permit to excavate issued prior to breaking ground. Hand excavated inspection pit carried out to 0.9mbgl.
Drillers Description - CPT / Sampling refused, pot samples of drilling returns taken for engineers description.
On completion BH backfilled with bentonite pellets, with turf replaced at surface.

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Operator:	Logged By.	Sheet No.	m Per Page	All measurements in metres unless otherwise stated
GBs & GBj	A Jones	1 Of 1	6	

AGS

Contract : Rockstreet, Glyneath

Client : Atkins

Borehole No.
RS-BH03

Dates : 15/9/20 - 16/9/20

Location :

Job Number : Q0341

Engineer : Atkins

Ground Level : 62.17 m A.O.D.
Level to Ordnance Datum

Coordinates: 287973.52 E
206319.92 N
Co-ordinates to National Grid

m B.G.L.	Run Details: Core Run	TCR %	SCR %	RQD %	Fractures: Min Avg Max	FI	Insitu Tests: Depth	Test Results	Samples: Depth	Type No. Blows	Strata: Depth (Thick-ness)	Description	Legend	Red. Level A.O.D.	Water
0												TARMAC			
											(0.50)				
									0.50 - 1.00	D1	0.50	...boulder at 1.5mbgl **Drillers Description** MADE GROUND: Gravel with cobbles (Colliery Spoil)		61.67	
1									1.00 - 1.50	D2	(1.00)	Arisings logged as: MADE GROUND: Dark grey slightly silty slightly sandy Gravel. Gravel is angular to sub angular fine to coarse siltstone, sandstone and fine coal.			
							1.5	SPT (C) 50/30mm (10-15/45mm-**50/30mm**---)			1.50	**Drillers Description** MADE GROUND: Sandstone boulders.		60.67	
2									2.00 - 2.50	D3	(1.50)	Arisings logged as: MADE GROUND: Dark grey slightly silty slightly sandy Gravel. Gravel is angular to sub angular fine to coarse siltstone, sandstone and fine coal.			
3							3	SPT (C) 50/25mm (14-11/10mm-**50/25mm**---)	3.00 - 3.50	D4	3.00	**Drillers Description** MADE GROUND: Gravel with cobbles and boulders(Colliery Spoil)		59.17	
											(1.50)	Arisings logged as: MADE GROUND: Dark grey slightly silty slightly sandy Gravel. Gravel is angular to sub angular fine to coarse siltstone, sandstone and fine coal.			
4									4.00 - 4.50	D5					
							4.5	SPT (C) 34 (8-8-**12**-**22**--)			4.50	**Drillers Description** MADE GROUND: Gravel with cobbles (Colliery Spoil)		57.67	
5									5.00 - 5.50	D6	(1.50)	Arisings logged as: MADE GROUND: Dark grey slightly silty slightly sandy Gravel. Gravel is angular to sub angular fine to coarse siltstone, sandstone and fine coal.			

Hole Progress / Water Obs

Date / Time	H. Depth	C. Depth	Water

Casing

Depth	Diam.

Groundwater

Struck	Rose To	Behaviour	Sealed
6.00	5.50	Medium Water ingress	

Flush

Depth	Type	Returns
1.20 - 10.00	Air Mist	

Plant: Commachio 205

Remarks: Position marked out in liaison with Atkins engineer. Area CAT and genny scanned with Permit to excavate issued prior to breaking ground. Hand excavated inspection pit carried out to 0.5mbgl (large boulder)
Drillers Description - CPT / Sampling refused, pot samples of drilling returns taken for engineers description.
On completion BH backfilled with bentonite pellets, with tarmac replaced at surface.

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Operator:	Logged By.	Sheet No.	m Per Page	All measurements in metres unless otherwise stated
GBj & RM	A Jones	1 Of 2	6	

AGS

Contract : Rockstreet, Glyneath

Client : Atkins

Borehole No.
RS-BH03

Dates : 15/9/20 - 16/9/20

Location :

Job Number : Q0341

Engineer : Atkins

Ground Level : 62.17 m A.O.D.
Level to Ordnance Datum

Coordinates: 287973.52 E
206319.92 N
Co-ordinates to National Grid

m B.G.L.	Run Details: Core Run	TCR %	SCR %	RQD %	Fractures: Min Avg Max	FI	Insitu Tests: Depth	Test Results	Samples: Depth	Type No. Blows	Strata: Depth (Thick-ness)	Description	Legend	Red. Level A.O.D.	Water
6							6	SPT (C) 50/135mm (25-**25-25/60mm**--)	6.00 - 6.50	D7	6.00	**Drillers Description** MADE GROUND: Gravel with cobbles and boulders(Colliery Spoil) Arisings logged as: MADE GROUND: Dark grey slightly silty slightly sandy Gravel. Gravel is angular to sub angular fine to coarse siltstone, sandstone and fine coal.		56.17	
											(1.50)				
7									7.00 - 7.50	D8					
							7.5	SPT (C) 50/153mm (16-9/5mm-**23-17-10/3mm**-)			7.50	**Drillers Description** MADE GROUND: Gravel with cobbles (Colliery Spoil) Arisings logged as: MADE GROUND: Dark grey slightly silty slightly sandy Gravel. Gravel is angular to sub angular fine to coarse siltstone, sandstone and fine coal.		54.67	
8									8.00 - 8.50	D9					
											(2.50)				
9							9	SPT (C) 50/215mm (9-8-**7-13-30/65mm**-)	9.00 - 9.50	D10					
10							10	SPT (C) 50/80mm (9-16/35mm-**35-15/5mm**--)			10.00	Borehole terminated at scheduled depth of 10.0mbgl		52.17	
11															

Hole Progress / Water Obs

Date / Time	H. Depth	C. Depth	Water
15/09/2020 16:30	7.50	7.50	
16/09/2020 08:00	7.50	7.50	

Casing

Depth	Diam.
10.00	115.00

Groundwater

Struck	Rose To	Behaviour	Sealed

Flush

Depth	Type	Returns

Plant: Commachio 205

Remarks: Position marked out in liaison with Atkins engineer. Area CAT and genny scanned with Permit to excavate issued prior to breaking ground. Hand excavated inspection pit carried out to 0.5mbgl (large boulder)
Drillers Description - CPT / Sampling refused, pot samples of drilling returns taken for engineers description.
On completion BH backfilled with bentonite pellets, with tarmac replaced at surface.

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Operator:	Logged By.	Sheet No.	m Per Page	All measurements in metres unless otherwise stated
GBj & RM	A Jones	2 Of 2	6	

AGS

Contract : Rockstreet, Glyneath

Client : Atkins

Borehole No.
RS-BH04

Dates : 16/9/20 - 17/9/20

Location :

Job Number : Q0341

Engineer : Atkins

Ground Level : 54.50 m A.O.D.
Level to Ordnance Datum

Coordinates: 287952.99 E
206294.22 N
Co-ordinates to National Grid

m B.G.L.	Run Details: Core Run	TCR %	SCR %	RQD %	Fractures: Min Avg Max	FI	Insitu Tests: Depth	Test Results	Samples: Depth	Type No. Blows	Strata: Depth (Thick-ness)	Description	Legend	Red. Level A.O.D.	Water
0									0.50 - 1.00	D1	(1.50)	**Drillers Description** MADE GROUND: Sand and Cobbles Arisings logged as: MADE GROUND: Brown slightly silty slightly sandy Gravel of sandstone, siltstone, brick and coal.			
1							1.5	SPT (C) 50/15mm (25/5mm-**50/15mm**---)	1.50 - 2.00	D2	1.50	**Drillers Description** Clayey sandy Gravel with Cobbles Arisings logged as: Brown clayey sandy GRAVEL of sandstone and siltstone.		53.00	
2									2.50 - 3.00	D3					
3							3	SPT (C) 50/160mm (10-10-**6-4-40/10mm**-)	3.50 - 4.00	D4					
4							4.5	SPT (C) 50/10mm (25/5mm-**50/10mm**---)	4.50 - 5.00	D5	(6.00)				
5									5.50 - 6.00	D6					

Hole Progress / Water Obs

Date / Time	H. Depth	C. Depth	Water
16/09/2020 16:00	3.00	3.00	DRY
17/09/2020 08:00	3.00	3.00	DRY

Casing

Depth	Diam.

Groundwater

Struck	Rose To	Behaviour	Sealed

Flush

Depth	Type	Returns
1.20 - 7.50	Air Mist	

Plant: Commachio 205

Remarks: Position marked out in liaison with Atkins engineer. Area CAT and genny scanned with Permit to excavate issued prior to breaking ground.

Drillers Description - CPT / Sampling refused, pot samples of drilling returns taken for engineers description.

On completion BH backfilled with bentonite pellets, with turf replaced at surface.

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Operator:	Logged By.	Sheet No.	m Per Page	All measurements in metres unless otherwise stated
GBj & RM	A Jones	1 Of 2	6	

AGS

Contract : Rockstreet, Glyneath

Client : Atkins

Borehole No.
RS-BH04

Dates : 16/9/20 - 17/9/20

Location :

Job Number : Q0341

Engineer : Atkins

Ground Level : 54.50 m A.O.D.
Level to Ordnance Datum

Coordinates: 287952.99 E
206294.22 N
Co-ordinates to National Grid

m B.G.L.	Run Details: Core Run	TCR %	SCR %	RQD %	Fractures: Min Avg Max	FI	Insitu Tests: Depth	Test Results	Samples: Depth	Type No. Blows	Strata: Depth (Thick-ness)	Description	Legend	Red. Level A.O.D.	Water
6							6	SPT (C) 50/200mm (8-13-**15-15-20/50mm**-)				**Drillers Description** Clayey sandy Gravel with Cobbles Arisings logged as: Brown clayey sandy GRAVEL of sandstone and siltstone.			
									6.50 - 7.00	D7					
7									7.00 - 7.50	D8					
							7.5	SPT (C) 50/20mm (25/15mm-**50/20mm**---)			7.50	Borehole terminated below scheduled depth of 7.5mbgl		47.00	
8															
9															
10															
11															

Hole Progress / Water Obs				Casing		Groundwater				Flush		
Date / Time	H. Depth	C. Depth	Water	Depth	Diam.	Struck	Rose To	Behaviour	Sealed	Depth	Type	Returns

Plant: Commachio 205
Remarks: Position marked out in liaison with Atkins engineer. Area CAT and genny scanned with Permit to excavate issued prior to breaking ground.
Drillers Description - CPT / Sampling refused, pot samples of drilling returns taken for engineers description.
On completion BH backfilled with bentonite pellets, with turf replaced at surface.

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AGS

Contract : Rockstreet, Glyneath

Client : Atkins

Borehole No.
RS-BH04A

Dates : 16/8/20 - 16/8/20

Location :

Job Number : Q0341

Engineer : Atkins

Ground Level : 54.41 m A.O.D.
Level to Ordnance Datum

Coordinates: 287951.52 E
206294.33 N
Co-ordinates to National Grid

m B.G.L.	Run Details: Core Run	TCR %	SCR %	RQD %	Fractures: Min Avg Max	FI	Samples: Depth	Type No. Blows	Depth (Thick-ness)	Strata: Description	Legend	Red. Level A.O.D.	Water
0							0.30 0.30 - 0.60 0.60	ES1 B2 ES3	(0.70)	MADE GROUND: Brown slightly silty sandy Gravel with medium cobble content of sandstone and brick. Gravel is angular to sub PID @0.3mbgl = 0.4ppm PID @0.6mbgl = 0.2ppm			
									0.70 (0.10)	**Drillers Description** MADE GROUND: Sand and Cobbles		53.71	
1									0.80 (0.20)	Arisings logged as: MADE GROUND: Brown slightly silty slightly sandy Gravel of sandstone, siltstone, brick and coal.		53.61	
									1.00	**Drillers Description** Timber Refused at 1.0mbgl on timber, BH re-positioned 0.5m away.		53.41	
2													
3													
4													
5													

Hole Progress / Water Obs

Date / Time	H. Depth	C. Depth	Water

Casing

Depth	Diam.

Groundwater

Struck	Rose To	Behaviour	Sealed

Flush

Depth	Type	Returns
0.70 - 1.00	Air Mist	

Plant:
Remarks:

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AGS

Contract : Rockstreet, Glyneath

Client : Atkins

Borehole No.
RS-BH04B

Dates : 16/8/20 - 16/8/20

Location :

Job Number : Q0341

Engineer : Atkins

Ground Level : 54.40 m A.O.D.
Level to Ordnance Datum

Coordinates: 287951.55 E
206293.60 N
Co-ordinates to National Grid

m B.G.L.	Run Details: Core Run	TCR %	SCR %	RQD %	Fractures: Min Avg Max	FI	Samples: Depth	Type No. Blows	Strata: Depth (Thick-ness)	Description	Legend	Red. Level A.O.D.	Water
0							0.00 - 0.50	D1	(0.80)	**Drillers Description** MADE GROUND: Sand and Cobbles Arisings logged as: MADE GROUND: Brown slightly silty slightly sandy Gravel of sandstone, siltstone, brick and coal.			
									0.80 (0.20)	**Drillers Description** Timber		53.60	
1									1.00	Refused at 1.0mbgl on timber, BH re-positioned 0.5m away.		53.40	
2													
3													
4													
5													

Hole Progress / Water Obs: Date / Time	H. Depth	C. Depth	Water	Casing: Depth	Diam.	Groundwater: Struck	Rose To	Behaviour	Sealed	Flush: Depth	Type	Returns
										0.00 - 1.00	Air Mist	

Plant:
Remarks:

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AGS

KEY TO BOREHOLE AND TRIAL PIT LOGS

MATERIAL LEGENDS

 Made Ground	 Topsoil	 Clay
 Gravel	 Sand	 Silt
 Peat	 Boulders	 Cobbles
 Chalk	 Conglomerate	 Volcaniclastic
 Asphalt	 Void	 Mudstone
 Siltstone	 Sandstone	 Limestone
 Ironstone	 Mudstone / Siltstone	 Breccia
 Coal	 Coral	 Bedrock
 Shale	 Gypsum	 Igneous (Coarse Grained)
 Igneous (Fine Grained)	 Igneous (Medium Grained)	 Metamorphic (Coarse Grained)
 Metamorphic (Fine Grained)	 Metamorphic (Medium Grained)	

INSTALLATION / BACKFILL DETAILS

 Arisings	 Concrete	 Bentonite cement grout
 Bentonite seal	 Filter	 Pea Gravel
 Plain pipe	 Slotted pipe	 Piezometer / Standpipe tip

NOTE:
Legend symbols in accordance with BS 5930 (2015)

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KEY TO BOREHOLE AND TRIAL PIT LOGS

m.A.O.D. metres Above Ordnance Datum.

SAMPLE AND TEST TYPES

U	Undisturbed driven tube sample - 102mm diameter, 450mm long.
P	Undisturbed pushed piston sample - 102mm diameter, 1000mm long.
TW	Undisturbed thin walled push in sample - 100mm diameter, 750mm long.
B	Bulk disturbed sample.
BLK	Block Sample
CBR	Heavy duty undisturbed sample - 154 mm diameter (CBR mould).
D	Small disturbed sample.
LB	Large Bulk disturbed sample (for earthworks testing)
C	Core sample
W	Water sample
G	Gas sample
ES	Environmental sample (soil)
j	Jar sample
t	Tub sample
p	Pot sample
s	Small sample
v	Vial sample
S	Standard Penetration Test using split spoon sampler. (See Note).
C	Standard Penetration Test using a solid 60 degree cone. (See Note).

NOTE: Where a single value is quoted this is the N value for 300 mm penetration following a seating drive of 150 mm. Where this full penetration is not achieved the number of blows is quoted for the penetration below the seating drive eg. 63/160 mm.
Where total penetration is less than the seating drive this is indicated by a + and the number of blows for total penetration is quoted eg. +50/75 mm.

HV	Hand Vane Test. Vane undrained shear strength, c_u, quoted in kPa.
V	Borehole Vane Test. Vane undrained shear strength, c_u, quoted in kPa.
FHT/RHT	Falling / Rising Head Permeability Test.

CORE RUN DETAILS

TCR	Total Core Recovery, %
SCR	Solid Core Recovery, %
RQD	Rock Quality Designation, %
FI	Fracture Index. NI - Non intact where > 25 No. per metre length.

WATER COLUMN SYMBOLS

	First water strike, second water strike etc.
	Standing water level after first strike, second strike etc.
	Seepage.

NOTE:
Legend symbols in accordance with BS 5930 (2015)

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APPENDIX III – **HAND EXCAVATED SERVICE TRIAL PIT LOGS**

Contract : Rockstreet, Glyneath

Client : Atkins

Trial Pit No.
RS-HP01

Dates : 22/9/20 - 22/9/20

Location :

Job Number : Q0341

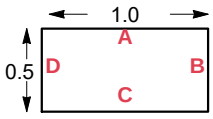
Engineer : Atkins

Ground Level : 59.05 m A.O.D.
Level to Ordnance Datum

Coordinates: 287942.58 E
206720.89 N
Co-ordinates to National Grid

m B.G.L.	Samples		Tests		Strata				WATER
	Depth	Type No.	Depth	Test Results	Depth (Thick-ness)	Description	Legend	Red. Level A.O.D.	
					0.10	2no Water pipes found at surface, within 50mm cast duct and 100mm cast duct			
					0.10	No hand pit excavated as instructed by Engineer		58.95	

PLAN



Groundwater:

Stability:

Shoring:

Remarks : Position marked out in liaison with Atkins engineer. Area CAT and genny scanned, PAS 128 survey with Permit to excavate issued prior to breaking ground. Any services encountered were surveyed in to National Grid.
All Services in area were located at surface.

Equipment Used:

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Contract : Rockstreet, Glyneath

Client : Atkins

Trial Pit No. RS-HP02

Dates : 22/9/20 - 22/9/20

Location :

Job Number : Q0341

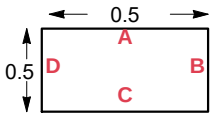
Engineer : Atkins

Ground Level : 58.77 m A.O.D. *Level to Ordnance Datum*

Coordinates: 287941.34 E 206699.28 N *Co-ordinates to National Grid*

m B.G.L.	Samples Depth	Samples Type No.	Tests Depth	Tests Test Results	Strata Depth (Thick-ness)	Strata Description	Legend	Red. Level A.O.D.	WATER
					0.10	TOPSOIL - Brown sandy slightly gravelly Silt.			
					0.10	MADE GROUND: Brown silty clayey slightly sandy Gravel with low cobble content of sandstone. Gravel is angular to sub-angular fine to coarse sandstone, siltstone, tile, slate and rare fine coal.		58.67	
	0.30 -	ES1				PID @0.3mbgl = 0.2ppm			
	0.50 -	ES2				PID @0.5mbgl = 0.4ppm			
	0.50 - 1.00	B3			0.90				
1					1.00	MADE GROUND: Dark grey slightly sandy gravelly Clay. (becoming wet from 1.0mbgl		57.77	
	1.30 -	ES4			0.50	PID @1.3mbgl = 0.4ppm			
	1.50 -	D5			1.50	Hand pit terminated on 100mm duct at 1.5mbgl		57.27	

PLAN



Groundwater: Seepage around duct at 1.5mbgl

Stability: Stable

Shoring: None

Remarks : Position marked out in liaison with Atkins engineer. Area CAT and genny scanned, PAS 128 survey with Permit to excavate issued prior to breaking ground. Any services encountered were surveyed in to National Grid.
On completion hole back filled with arisings with surface reinstated level with Turf.
HV Cable @ E:287941.28 N:206699.38 Depth:57.39m

Equipment Used: Insulated hand tools

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AGS

Contract : Rockstreet, Glyneath Client : Atkins		Trial Pit No. RS-HP02
Dates : 22/9/20 - 22/9/20 Location :	Job Number : Q0341 Engineer : Atkins	Ground Level : 58.77 m A.O.D. *Level to Ordnance Datum* Coordinates: 287941.34 E 206699.28 N *Co-ordinates to National Grid*





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Contract : Rockstreet, Glyneath

Client : Atkins

Trial Pit No.
RS-HP03

Dates : 10/9/20 - 10/9/20

Location :

Job Number : Q0341

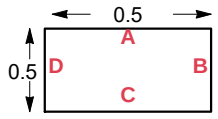
Engineer : Atkins

Ground Level : 55.52 m A.O.D.
Level to Ordnance Datum

Coordinates: 287919.95 E
206519.63 N
Co-ordinates to National Grid

m B.G.L.	Samples Depth	Samples Type No.	Tests Depth	Tests Test Results	Strata Depth (Thick-ness)	Strata Description	Legend	Red. Level A.O.D.	WATER
					0.08	TARMAC			
					0.08 0.07	MADE GROUND: Pale brown slightly silty slightly sandy Gravel. Gravel is angular to sub angular fine to coarse Sandstone. (Sub-Base)		55.44	
					0.15	MADE GROUND: Dark grey slightly silty sandy Gravel with low cobble content of sandstone. Gravel is angular to sub rounded fine to coarse sandstone, siltstone, tile pottery and slate.		55.37	
	0.30 -	ES1				...with medium cobble content from 0.3mbgl PID @0.3mbgl = 0.6ppm			
	0.50 - 0.80	B2			0.65				
	0.70 -	ES3				PID @0.7mbgl = 0.2ppm			
					0.80	MADE GROUND: Brown slightly silty sandy Gravel. Sand is fine to coarse. Gravel is angular to sub angular fine to coarse sandstone, siltstone, brick, clay pipe and concrete with fine coal.		54.72	
	0.90 -	D4							
1					0.40	with low cobble content sandstone from 1.0mbgl			
	1.10 -	ES5				PID @1.1mbgl = 0.1ppm			
					1.20	Hand pit terminated at 1.2mbgl. Strong signal from CAT detector at base of pit - No service located.		54.32	

PLAN



Groundwater: No groundwater encountered

Stability: Stable

Shoring: None

Remarks : Position marked out in liaison with Atkins engineer. Area CAT and genny scanned with Permit to excavate issued prior to breaking ground. Any services encountered were surveyed in to National Grid.
On completion hole back filled with arisings with surface reinstated level with tarmac.

Equipment Used: Insulated hand tools

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AGS

Contract : Rockstreet, Glyneath Client : Atkins		Trial Pit No. RS-HP03
Dates : 10/9/20 - 10/9/20 Location :	Job Number : Q0341 Engineer : Atkins	Ground Level : 55.52 m A.O.D. *Level to Ordnance Datum* Coordinates: 287919.95 E 206519.63 N *Co-ordinates to National Grid*





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Contract : Rockstreet, Glyneath

Client : Atkins

Trial Pit No.
RS-HP03A

Dates : 10/9/20 - 10/9/20
Location :

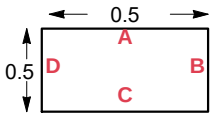
Job Number : Q0341
Engineer : Atkins

Ground Level : 55.35 m A.O.D.
Level to Ordnance Datum

Coordinates: 287920.24 E
206516.95 N
Co-ordinates to National Grid

m B.G.L.	Samples		Tests		Strata				WATER
	Depth	Type No.	Depth	Test Results	Depth (Thick-ness)	Description	Legend	Red. Level A.O.D.	
					0.08	TARMAC			
					0.08	MADE GROUND: Pale brown slightly silty slightly sandy Gravel. Gravel is angular to sub angular fine to coarse Sandstone. (Sub-Base)		55.27	
					0.42	PID @0.5mbgl = 0.1ppm			
	0.50 -	ES1			0.50	Hand Pit terminated on sandstone boulder at 0.5mbgl Strong CAT signal over wall in private rear garden.		54.85	

PLAN



Groundwater: No groundwater encountered

Stability: Stable

Shoring: None

Remarks : Position marked out in liaison with Atkins engineer. Area CAT and genny scanned with Permit to excavate issued prior to breaking ground. Any services encountered were surveyed in to National Grid.
On completion hole back filled with arisings with surface reinstated level with Turf.

Equipment Used: Insulated hand tools

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Contract : Rockstreet, Glyneath

Client : Atkins

Trial Pit No.
RS-HP04

Dates : 17/9/20 - 17/9/20
Location :

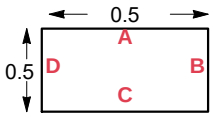
Job Number : Q0341
Engineer : Atkins

Ground Level : 55.00 m A.O.D.
Level to Ordnance Datum

Coordinates: 287934.92 E
206485.07 N
Co-ordinates to National Grid

m B.G.L.	Samples		Tests		Strata				WATER
	Depth	Type No.	Depth	Test Results	Depth (Thick-ness)	Description	Legend	Red. Level A.O.D.	
					0.06	MADE GROUND: Red Engineering Brick. [PAVING]			
					0.06 0.09	MADE GROUND: Yellow-brown slightly gravelly fine to coarse Sand. Gravel is fine to coarse angular to sub-rounded sandstone quartz.		54.94	
					0.15	MADE GROUND: Brown grey slightly silty sandy Gravel with high cobble content of sandstone. Gravel is angular o sub angular fine to coarse sandstone, siltstone, tile, slate and fine to medium coal. @0.25mbgl 1inch copper pipe @0.3mbgl yellow electricity warning tape		54.85	
	0.40 -	ES1			0.45	PID @0.4mbgl = 0.1ppm @0.55mbgl 1 inch copper pipe			
					0.60	@0.6mbgl 30mm LV cable Hand Pit terminated at 0.6mbgl on location of services.		54.40	

PLAN



Groundwater: No groundwater encountered

Stability: Stable

Shoring: None

Remarks : Position marked out in liaison with Atkins engineer. Area CAT and genny scanned, PAS128 Survey with Permit to excavate issued prior to breaking ground. Any services encountered were surveyed in to National Grid.
On completion hole back filled with arisings with surface reinstated level with paving bricks.

Equipment Used: Insulated hand tools

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Contract : Rockstreet, Glyneath Client : Atkins		Trial Pit No. RS-HP04
Dates : 17/9/20 - 17/9/20 Location :	Job Number : Q0341 Engineer : Atkins	Ground Level : 55.00 m A.O.D. *Level to Ordnance Datum* Coordinates: 287934.92 E 206485.07 N *Co-ordinates to National Grid*





Contract : Rockstreet, Glyneath

Client : Atkins

Trial Pit No.
RS-HP04A

Dates : 16/9/20 - 16/9/20
Location :

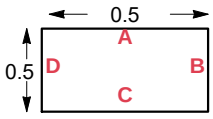
Job Number : Q0341
Engineer : Atkins

Ground Level : 55.02 m A.O.D.
Level to Ordnance Datum

Coordinates: 287933.91 E
206486.95 N
Co-ordinates to National Grid

m B.G.L.	Samples		Tests		Strata				WATER
	Depth	Type No.	Depth	Test Results	Depth (Thick-ness)	Description	Legend	Red. Level A.O.D.	
					0.08	TARMAC			
					0.08 0.17	MADE GROUND: Pale brown slightly silty slightly sandy Gravel. Gravel is angular to sub angular fine to coarse Sandstone. (Sub-Base)		54.94	
					0.25 0.20	MADE GROUND: Black silty slightly sandy GRAVEL with low cobble content of sandstone. Gravel is angular to sub angular fine to coarse siltstone, sandstone, brick, slate and fine to medium coal. @0.4mbgl electric tile over HV cables		54.77	
					0.45	Hand Pit terminated at 0.45mbgl		54.57	

PLAN



Groundwater: No groundwater encountered

Stability: Stable

Shoring: None

Remarks : Position marked out in liaison with Atkins engineer. Area CAT and genny scanned, PAS128 Survey with Permit to excavate issued prior to breaking ground. Any services encountered were surveyed in to National Grid.
On completion hole back filled with arisings with surface reinstated level with tarmac.

Equipment Used: Insulated hand tools

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Contract : Rockstreet, Glyneath Client : Atkins		Trial Pit No. RS-HP04A
Dates : 16/9/20 - 16/9/20 Location :	Job Number : Q0341 Engineer : Atkins	Ground Level : 55.02 m A.O.D. *Level to Ordnance Datum* Coordinates: 287933.91 E 206486.95 N *Co-ordinates to National Grid*





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Contract : Rockstreet, Glyneath

Client : Atkins

Trial Pit No.
RS-HP04B

Dates : 17/9/20 - 17/9/20
Location :

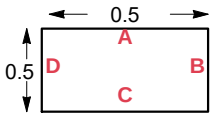
Job Number : Q0341
Engineer : Atkins

Ground Level : 54.97 m A.O.D.
Level to Ordnance Datum

Coordinates: 287935.92 E
206482.85 N
Co-ordinates to National Grid

m B.G.L.	Samples Depth	Samples Type No.	Tests Depth	Tests Test Results	Strata Depth (Thick-ness)	Strata Description	Strata Legend	Strata Red. Level A.O.D.	WATER
					0.06	MADE GROUND: Red Engineering Brick. [PAVING]			
					0.06 0.09	MADE GROUND: Yellow-brown slightly gravelly fine to coarse Sand. Gravel is fine to coarse angular to sub-rounded sandstone quartz.		54.91	
					0.15	MADE GROUND: Brown grey slightly silty sandy Gravel with high cobble content of sandstone. Gravel is angular o sub angular fine to coarse sandstone, siltstone, limestone, tarmac and fine to medium coal. PID @0.3mbgl = 0.2ppm		54.82	
	0.30 - 0.30 - 0.50	ES1 B2			0.45	@0.4mbgl concrete encased 120mm sewer / drain pipe PID @ 0.6mbgl = 0.5ppm			
	0.60 -	ES3			0.60	Hand Pit terminated at 0.6mbgl on location of services.		54.37	

PLAN



Groundwater: No groundwater encountered

Stability: Stable

Shoring: None

Remarks : Position marked out in liaison with Atkins engineer. Area CAT and genny scanned, PAS128 Survey with Permit to excavate issued prior to breaking ground. Any services encountered were surveyed in to National Grid.
On completion hole back filled with arisings with surface reinstated level with paving bricks.

Equipment Used: Insulated hand tools

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W & A	A Jones	1 Of 2	2		

Contract : Rockstreet, Glyneath Client : Atkins		Trial Pit No. RS-HP04B
Dates : 17/9/20 - 17/9/20 Location :	Job Number : Q0341 Engineer : Atkins	Ground Level : 54.97 m A.O.D. *Level to Ordnance Datum* Coordinates: 287935.92 E 206482.85 N *Co-ordinates to National Grid*





Contract : Rockstreet, Glyneath

Client : Atkins

Trial Pit No. RS-HP04C

Dates : 21/9/20 - 21/9/20

Location :

Job Number : Q0341

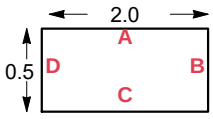
Engineer : Atkins

Ground Level : 55.08 m A.O.D. *Level to Ordnance Datum*

Coordinates: 287935.51 E 206487.51 N *Co-ordinates to National Grid*

m B.G.L.	Samples Depth	Samples Type No.	Tests Depth	Tests Test Results	Strata Depth (Thickness)	Strata Description	Strata Legend	Strata Red. Level A.O.D.	WATER
					0.08	TARMAC			
					0.08 0.22	MADE GROUND: Pale brown slightly silty slightly sandy Gravel. Gravel is angular to sub angular fine to coarse Sandstone. (Sub-Base)		55.00	
	0.40 - 0.40 - 0.50	ES1 B2			0.30 0.20	MADE GROUND: Black silty slightly sandy GRAVEL with low cobble content of sandstone. Gravel is angular to sub angular fine to coarse siltstone, sandstone, brick, slate and fine to medium coal. PID @0.4mbgl = 0.1ppm		54.78	
	0.60 - 0.60 - 1.00	ES5 B6			0.50	MADE GROUND: Brown slightly sandy gravelly CLAY with low cobble content. Gravel is angular to sub rounded fine to coarse sandstone, clay pipe and concrete with fine coal. PID @0.6mbgl = 0.2ppm		54.58	
1					0.85	@1.05 slag concrete encased 12inch sewer.			
	1.20 -	ES7				PID @1.2mbgl = 0.8ppm			
					1.35	Hand Pit terminated at 1.35mbgl on location of services.		53.73	

PLAN



Groundwater: becoming wetter from 1.0mbgl

Stability: Stable

Shoring: None

Remarks : Position marked out in liaison with Atkins engineer. Area CAT and genny scanned, PAS128 Survey with Permit to excavate issued prior to breaking ground. Any services encountered were surveyed in to National Grid.
On completion hole back filled with arisings with surface reinstated level with tarmac.

Equipment Used: Insulated hand tools

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Operator:	Logged By.	Sheet No.	m Per Page	All measurements in metres unless otherwise stated	AGS
RM & GB	A Jones	1 Of 2	2		

Contract : Rockstreet, Glyneath Client : Atkins			Trial Pit No. RS-HP04C
Dates : 21/9/20 - 21/9/20 Location :	Job Number : Q0341 Engineer : Atkins	Ground Level : 55.08 m A.O.D. *Level to Ordnance Datum* Coordinates: 287935.51 E 206487.51 N *Co-ordinates to National Grid*	





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Operator:	Logged By.	Sheet No.	m Per Page	
RM & GB	A Jones	2 Of 2		All measurements in metres unless otherwise stated

AGS

Contract : Rockstreet, Glyneath

Client : Atkins

Trial Pit No.
RS-HP04Di

Dates : 21/9/20 - 21/9/20
Location :

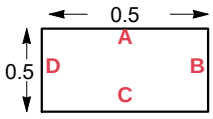
Job Number : Q0341
Engineer : Atkins

Ground Level : 54.96 m A.O.D.
Level to Ordnance Datum

Coordinates: 287936.69 E
206480.82 N
Co-ordinates to National Grid

m B.G.L.	Samples		Tests		Strata				WATER
	Depth	Type No.	Depth	Test Results	Depth (Thick-ness)	Description	Legend	Red. Level A.O.D.	
					0.15	TARMAC			
					0.15	Hand Pit terminated on Concrete over water main @0.15mbgl		54.81	

PLAN



Groundwater: No groundwater encountered

Stability: Stable

Shoring: None

Remarks : Position marked out in liaison with Atkins engineer. Area CAT and genny scanned, PAS128 Survey with Permit to excavate issued prior to breaking ground. Any services encountered were surveyed in to National Grid.
On completion hole back filled with arisings with surface reinstated level with tarmac.

Equipment Used: Insulated hand tools

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Operator:	Logged By.	Sheet No.	m Per Page	
RM & GB	A Jones	1 Of 2	2	All measurements in metres unless otherwise stated

AGS

Contract : Rockstreet, Glyneath **Client : Atkins**		**Trial Pit No.** **RS-HP04Di**
Dates : 21/9/20 - 21/9/20 Location :	Job Number : Q0341 Engineer : Atkins	Ground Level : 54.96 m A.O.D. *Level to Ordnance Datum* Coordinates: 287936.69 E 206480.82 N *Co-ordinates to National Grid*



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Operator:	Logged By.	Sheet No.	m Per Page	
RM & GB	A Jones	2 Of 2		All measurements in metres unless otherwise stated

AGS

Contract : Rockstreet, Glyneath

Client : Atkins

Trial Pit No.
RS-HP04Dii

Dates : 21/9/20 - 21/9/20
Location :

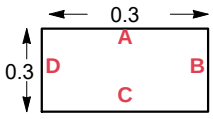
Job Number : Q0341
Engineer : Atkins

Ground Level : 54.97 m A.O.D.
Level to Ordnance Datum

Coordinates: 287937.75 E
206481.58 N
Co-ordinates to National Grid

m B.G.L.	Samples		Tests		Strata				WATER
	Depth	Type No.	Depth	Test Results	Depth (Thick-ness)	Description	Legend	Red. Level A.O.D.	
					0.25	TARMAC			
					0.25	Hand Pit terminated on Concrete over water main @0.15mbgl		54.72	

PLAN



Groundwater: No groundwater encountered

Stability: Stable

Shoring: None

Remarks : Position marked out in liaison with Atkins engineer. Area CAT and genny scanned, PAS128 Survey with Permit to excavate issued prior to breaking ground. Any services encountered were surveyed in to National Grid.
On completion hole back filled with arisings with surface reinstated level with tarmac.

Equipment Used: Insulated hand tools

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Operator:	Logged By.	Sheet No.	m Per Page	
RM & GB	A Jones	1 Of 2	2	All measurements in metres unless otherwise stated

AGS

Contract : Rockstreet, Glyneath Client : Atkins		Trial Pit No. RS-HP04Dii
Dates : 21/9/20 - 21/9/20 Location :	Job Number : Q0341 Engineer : Atkins	Ground Level : 54.97 m A.O.D. *Level to Ordnance Datum* Coordinates: 287937.75 E 206481.58 N *Co-ordinates to National Grid*



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Operator:	Logged By.	Sheet No.	m Per Page	
RM & GB	A Jones	2 Of 2		All measurements in metres unless otherwise stated

AGS

Contract : Rockstreet, Glyneath

Client : Atkins

Trial Pit No.
RS-HP04Diii

Dates : 21/9/20 - 21/9/20
Location :

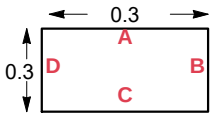
Job Number : Q0341
Engineer : Atkins

Ground Level : 54.91 m A.O.D.
Level to Ordnance Datum

Coordinates: 287934.12 E
206479.60 N
Co-ordinates to National Grid

m B.G.L.	Samples		Tests		Strata				WATER
	Depth	Type No.	Depth	Test Results	Depth (Thick-ness)	Description	Legend	Red. Level A.O.D.	
					0.15	TARMAC			
					0.15	Hand Pit terminated on Concrete over water main @0.15mbgl		54.76	

PLAN



Groundwater: No groundwater encountered

Stability: Stable

Shoring: None

Remarks : Position marked out in liaison with Atkins engineer. Area CAT and genny scanned, PAS128 Survey with Permit to excavate issued prior to breaking ground. Any services encountered were surveyed in to National Grid.
On completion hole back filled with arisings with surface reinstated level with tarmac.

Equipment Used: Insulated hand tools

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RM & GB	A Jones	1 Of 2	2	All measurements in metres unless otherwise stated

AGS

Contract : Rockstreet, Glyneath Client : Atkins		Trial Pit No. RS-HP04Diii
Dates : 21/9/20 - 21/9/20 Location :	Job Number : Q0341 Engineer : Atkins	Ground Level : 54.91 m A.O.D. *Level to Ordnance Datum* Coordinates: 287934.12 E 206479.60 N *Co-ordinates to National Grid*



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Operator:	Logged By.	Sheet No.	m Per Page	All measurements in metres unless otherwise stated	AGS
RM & GB	A Jones	2 Of 2			

Contract : Rockstreet, Glyneath

Client : Atkins

Trial Pit No. RS-HP05

Dates : 16/9/20 - 16/9/20

Location :

Job Number : Q0341

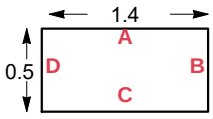
Engineer : Atkins

Ground Level : 55.01 m A.O.D. *Level to Ordnance Datum*

Coordinates: 287940.65 E 206473.89 N *Co-ordinates to National Grid*

m B.G.L.	Samples Depth	Samples Type No.	Tests Depth	Tests Test Results	Strata Depth (Thick-ness)	Strata Description	Strata Legend	Strata Red. Level A.O.D.	WATER
					0.08	TARMAC			
					0.08	MADE GROUND: Dark brown silty slightly sandy Gravel with low cobble content of sandstone. Gravel is angular to sub angular fine to coarse sandstone, siltstone, brick, concrete, tile and clay pipe.		54.93	
	0.30 - 0.30 - 0.50	ES1 B2			0.52	PID @0.3mbgl = 0.4ppm @0.4mbgl 2no grey 100mm BT ducts @0.55mbgl 3inch duct - HV cable 1inch copper pipe			
	0.60 -	ES3			0.60	@0.60mbgl Electricity warning tile - LV cable		54.41	
					0.15	Brown slightly sandy gravelly CLAY with low cobble content. Gravel is sub angular to sub rounded fine to coarse sandstone and fine coal.			
					0.75	PID @0.6mbgl = 0.3ppm Hand Pit terminated at 0.75mbgl on location of all services		54.26	

PLAN



Groundwater: No groundwater encountered

Stability: Stable

Shoring: None

Remarks : Position marked out in liaison with Atkins engineer. Area CAT and genny scanned, PAS128 Survey with Permit to excavate issued prior to breaking ground. Any services encountered were surveyed in to National Grid.
On completion hole back filled with arisings with surface reinstated level with tarmac.

Equipment Used: Insulated hand tools

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Operator:	Logged By.	Sheet No.	m Per Page	All measurements in metres unless otherwise stated	AGS
PD & LS	A Jones	1 Of 2	2		

Contract : Rockstreet, Glyneath **Client : Atkins**		**Trial Pit No.** **RS-HP05**
Dates : 16/9/20 - 16/9/20 Location :	Job Number : Q0341 Engineer : Atkins	Ground Level : 55.01 m A.O.D. *Level to Ordnance Datum* Coordinates: 287940.65 E 206473.89 N *Co-ordinates to National Grid*





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Operator:	Logged By.	Sheet No.	m Per Page	
PD & LS	A Jones	2 Of 2		All measurements in metres unless otherwise stated

AGS

Contract : Rockstreet, Glyneath

Client : Atkins

Trial Pit No.
RS-HP05A

Dates : 16/9/20 - 16/9/20
Location :

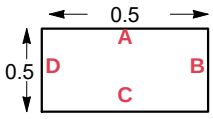
Job Number : Q0341
Engineer : Atkins

Ground Level : 54.97 m A.O.D.
Level to Ordnance Datum

Coordinates: 287939.68 E
206476.80 N
Co-ordinates to National Grid

m B.G.L.	Samples Depth	Samples Type No.	Tests Depth	Tests Test Results	Strata Depth (Thick-ness)	Strata Description	Strata Legend	Strata Red. Level A.O.D.	WATER
					0.10	TARMAC			
					0.10 0.70	MADE GROUND: Pale brown slightly silty slightly sandy Gravel. Gravel is angular to sub angular fine to coarse Sandstone. (Sub-Base)		54.87	
1					0.80 0.25	MADE GROUND: Brown slightly sandy gravelly CLAY with low cobble content. Gravel is angular to sub rounded fine to coarse sandstone, clay pipe and concrete with fine coal. @0.9mbgl yellow warning tape. @1.05mbgl Yellow 100mm gas main.		54.17	
					1.05	Hand Pit terminated at 1.05mbgl on location of service.		53.92	

PLAN



Groundwater: No groundwater encountered

Stability: Stable

Shoring: None

Remarks : Position marked out in liaison with Atkins engineer. Area CAT and genny scanned, PAS128 Survey with Permit to excavate issued prior to breaking ground. Any services encountered were surveyed in to National Grid.
On completion hole back filled with arisings with surface reinstated level with tarmac.

Equipment Used: Insulated hand tools

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PD & LS	A Jones	1 Of 3	2	All measurements in metres unless otherwise stated

AGS

Contract : Rockstreet, Glyneath Client : Atkins		Trial Pit No. RS-HP05A
Dates : 16/9/20 - 16/9/20 Location :	Job Number : Q0341 Engineer : Atkins	Ground Level : 54.97 m A.O.D. *Level to Ordnance Datum* Coordinates: 287939.68 E 206476.80 N *Co-ordinates to National Grid*





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Operator:	Logged By.	Sheet No.	m Per Page	
PD & LS	A Jones	2 Of 3		All measurements in metres unless otherwise stated

AGS

Contract : Rockstreet, Glyneath Client : Atkins		Trial Pit No. RS-HP05A
Dates : 16/9/20 - 16/9/20 Location :	Job Number : Q0341 Engineer : Atkins	Ground Level : 54.97 m A.O.D. *Level to Ordnance Datum* Coordinates: 287939.68 E 206476.80 N *Co-ordinates to National Grid*



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Operator:	Logged By.	Sheet No.	m Per Page	
PD & LS	A Jones	3 Of 3		All measurements in metres unless otherwise stated

AGS

Contract : Rockstreet, Glyneath

Client : Atkins

Trial Pit No. RS-HP06

Dates : 10/9/20 - 11/9/20

Location :

Job Number : Q0341

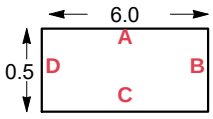
Engineer : Atkins

Ground Level : 55.52 m A.O.D. *Level to Ordnance Datum*

Coordinates: 287943.42 E 206450.33 N *Co-ordinates to National Grid*

m B.G.L.	Samples		Tests		Strata				WATER
	Depth	Type No.	Depth	Test Results	Depth (Thick-ness)	Description	Legend	Red. Level A.O.D.	
					0.05	MADE GROUND: Brown sandy slightly gravelly Silt. (Topsoil)			
					0.05	TARMAC		55.47	
					0.05	CONCRETE		55.42	
					0.10 0.05	MADE GROUND: Dark Brown grey slightly silty sandy Gravel with low cobble content of sandstone and concrete. Gravel is angular to sub angular fine to coarse sandstone, siltstone, brick, concrete, slate, tile, clay pipe, pottery, ash and coal.		55.37	
	0.30 -	ES1			0.15 0.30	PID @ 0.3mbgl = 0.2ppm			
					0.45	Brown slightly sandy gravelly CLAY with low cobble content. Gravel is sub angular to sub rounded fine to coarse sandstone and fine coal.		55.07	
	0.60 -	D2 ES3			0.25	PID @0.6mbgl = 0.0ppm			
					0.70	Hand Pit terminated at 0.7mbgl on natural strata. (No services located)		54.82	

PLAN



Groundwater: No groundwater encountered

Stability: Stable

Shoring: None

Remarks : Position marked out in liaison with Atkins engineer. Area CAT and genny scanned with Permit to excavate issued prior to breaking ground. Any services encountered were surveyed in to National Grid.
On completion hole back filled with arisings with surface reinstated level with turf.

Equipment Used: Insulated hand tools

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Operator:	Logged By.	Sheet No.	m Per Page	All measurements in metres unless otherwise stated	AGS
RM & GB	A Jones	1 Of 3	2		

Contract : Rockstreet, Glyneath **Client : Atkins**		**Trial Pit No.** **RS-HP06**
Dates : 10/9/20 - 11/9/20 Location :	Job Number : Q0341 Engineer : Atkins	Ground Level : 55.52 m A.O.D. *Level to Ordnance Datum* Coordinates: 287943.42 E 206450.33 N *Co-ordinates to National Grid*





Contract : Rockstreet, Glyneath Client : Atkins		Trial Pit No. RS-HP06
Dates : 10/9/20 - 11/9/20 Location :	Job Number : Q0341 Engineer : Atkins	Ground Level : 55.52 m A.O.D. *Level to Ordnance Datum* Coordinates: 287943.42 E 206450.33 N *Co-ordinates to National Grid*





Contract : Rockstreet, Glyneath

Client : Atkins

Trial Pit No. RS-HP07

Dates : 18/9/20 - 18/9/20

Location :

Job Number : Q0341

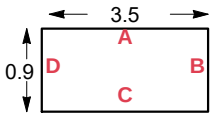
Engineer : Atkins

Ground Level : 55.46 m A.O.D. *Level to Ordnance Datum*

Coordinates: 287953.86 E 206400.52 N *Co-ordinates to National Grid*

m B.G.L.	Samples Depth	Samples Type No.	Tests Depth	Tests Test Results	Strata Depth (Thick-ness)	Strata Description	Strata Legend	Strata Red. Level A.O.D.	WATER
					0.10	TOPSOIL: Dark brown slightly sandy slightly gravelly Clay.			
					0.10	MADE GROUND: (Re-worked natural) Brown slightly silty sandy Gravel with medium to high content and low boulder content of sandstone. Gravel is sub angular to rounded fine to coarse sandstone and quartz.		55.36	
	0.50 - 1.00	B2							
	0.60 -	ES1				PID @ 0.6mbgl = 0.0ppm			
1									
	1.20 -	ES3				PID @ 1.2mbgl = 0.0ppm			
					2.40				
	1.50 - 2.00	B4							
2									
						@2.5mbgl concrete over possible culvert.			
					2.50	Trial pit terminated on concrete at 2.5mbgl		52.96	

PLAN



Groundwater: No groundwater encountered

Stability: Sides collapsing from surface.

Shoring: None

Remarks : Position marked out in liaison with Atkins engineer. Area CAT and genny scanned with Permit to excavate issued prior to breaking ground. Any services encountered were surveyed in to National Grid.
On completion hole back filled with arisings with surface reinstated level with turf.

Equipment Used: JCB 3CX

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AD	A Jones	1 Of 2	4		

Contract : Rockstreet, Glyneath **Client : Atkins**		**Trial Pit No.** **RS-HP07**
Dates : 18/9/20 - 18/9/20 Location :	Job Number : Q0341 Engineer : Atkins	Ground Level : 55.46 m A.O.D. *Level to Ordnance Datum* Coordinates: 287953.86 E 206400.52 N *Co-ordinates to National Grid*





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Operator:	Logged By.	Sheet No.	m Per Page	
AD	A Jones	2 Of 2		All measurements in metres unless otherwise stated

AGS

Contract : Rock St & Lancaster Close, Glynneath - Phase II

Client : Neath Port Talbot County Borough Council

Trial Pit No. RS-HP08

Dates : 19/1/21 - 19/1/21

Job Number : Q0432

Location : Northern end of Lancaster Close

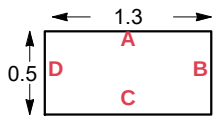
Engineer : Atkins

Ground Level : 58.09 m A.O.D. *Level to Ordnance Datum*

Coordinates: 287936.69 E 206697.31 N *Co-ordinates to National Grid*

m B.G.L.	Samples		Tests		Strata				WATER
	Depth	Type No.	Depth	Test Results	Depth (Thick-ness)	Description	Legend	Red. Level A.O.D.	
					0.50	MADE GROUND - Dark brown and black, sandy Gravel of fine to coarse, angular to subangular sandstone, siltstone, ash and clinker with fragments of brick and glass. Medium to high rounded cobble of sandstone content. 30mmØ black/ grey metal water pipe 0.40m depth			
					0.50	End of Hand Dug Trench - target utility/ buried service located and recorded.		57.59	

PLAN



Groundwater: None Encountered

Stability: Stable

Shoring: N/A

Remarks: Hand excavated trench using only insulated hand tools. Area and excavation CAT and Genny scanned continuously. Trench reinstated using compacted Type 1 MOT sub-base and hot lay tarmacadum in accordance with Highways Specification and Engineer satisfaction. Any services located were surveyed to National Grid and Ordnance Datum. Full time traffic management employed.

Equipment Used: Hand Tools Only.

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Operator:	Logged By.	Sheet No.	m Per Page	
QGL	R McDermott	1 Of 3	3	All measurements in metres unless otherwise stated

AGS

Contract : Rock St & Lancaster Close, Glynneath - Phase II Client : Neath Port Talbot County Borough Council			Trial Pit No. RS-HP08
Dates : 19/1/21 - 19/1/21 Location : Northern end of Lancaster Close	Job Number : Q0432 Engineer : Atkins	Ground Level : 58.09 m A.O.D. *Level to Ordnance Datum* Coordinates: 287936.69 E 206697.31 N *Co-ordinates to National Grid*	





Contract : Rock St & Lancaster Close, Glynneath - Phase II **Client : Neath Port Talbot County Borough Council**		**Trial Pit No.** **RS-HP08**
Dates : 19/1/21 - 19/1/21 Location : Northern end of Lancaster Close	Job Number : Q0432 Engineer : Atkins	Ground Level : 58.09 m A.O.D. *Level to Ordnance Datum* Coordinates: 287936.69 E 206697.31 N *Co-ordinates to National Grid*





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Operator:	Logged By.	Sheet No.	m Per Page	
QGL	R McDermott	3 Of 3		All measurements in metres unless otherwise stated

AGS

Contract : Rock St & Lancaster Close, Glynneath - Phase II

Client : Neath Port Talbot County Borough Council

Trial Pit No. RS-HP09

Dates : 19/1/21 - 19/1/21

Job Number : Q0432

Ground Level : 57.23 m A.O.D. *Level to Ordnance Datum*

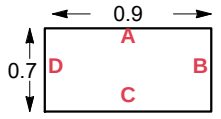
Location : Northern end of Lancaster Close

Engineer : Atkins

Coordinates: 287931.74 E 206686.28 N *Co-ordinates to National Grid*

m B.G.L.	Samples Depth	Samples Type No.	Tests Depth	Tests Test Results	Strata Depth (Thick-ness)	Strata Description	Strata Legend	Strata Red. Level A.O.D.	WATER
					0.11	MADE GROUND - ASPHALT			
					0.11 0.14	MADE GROUND - ASPHALT		57.12	
					0.25 0.10	MADE GROUND - Black, sandy Gravel of fine to coarse, angular ash, brick, sandstone and siltstone. Medium to high cobble content of rounded sandstone.		56.98	
					0.35	MADE GROUND - Grey brown, slightly sandy Gravel (sub-base) of medium to coarse, angular limestone.		56.88	
					0.50				
					0.85 0.05 0.90	MADE GROUND - Brown and grey slightly sandy Gravel of fine, angular sandstone ('bedding dust') 80mmØ black/ grey metal water pipe 0.90m depth with connecting collar End of Hand Dug Trench - target utility/ buried service located and recorded.		56.38 56.33	

PLAN



Groundwater: None Encountered

Stability: Stable

Shoring: N/A

Remarks: Hand excavated trench using only insulated hand tools. Area and excavation CAT and Genny scanned continuously. Trench reinstated using compacted Type 1 MOT sub-base and hot lay tarmacadum in accordance with Highways Specification and Engineer satisfaction. Any services located were surveyed to National Grid and Ordnance Datum. Full time traffic management employed.

Equipment Used: Hand Tools Only.

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Operator:	Logged By.	Sheet No.	m Per Page	All measurements in metres unless otherwise stated
QGL	R McDermott	1 Of 3	3	

AGS

Contract : Rock St & Lancaster Close, Glynneath - Phase II Client : Neath Port Talbot County Borough Council		Trial Pit No. RS-HP09
Dates : 19/1/21 - 19/1/21 Location : Northern end of Lancaster Close	Job Number : Q0432 Engineer : Atkins	Ground Level : 57.23 m A.O.D. *Level to Ordnance Datum* Coordinates: 287931.74 E 206686.28 N *Co-ordinates to National Grid*





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QGL	R McDermott	2 Of 3		All measurements in metres unless otherwise stated

AGS

Contract : Rock St & Lancaster Close, Glynneath - Phase II Client : Neath Port Talbot County Borough Council			Trial Pit No. RS-HP09
Dates : 19/1/21 - 19/1/21 Location : Northern end of Lancaster Close	Job Number : Q0432 Engineer : Atkins	Ground Level : 57.23 m A.O.D. *Level to Ordnance Datum* Coordinates: 287931.74 E 206686.28 N *Co-ordinates to National Grid*	





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QGL	R McDermott	3 Of 3			

Contract : Rock St & Lancaster Close, Glynneath - Phase II

Client : Neath Port Talbot County Borough Council

Trial Pit No.
RS-HP10

Dates : 19/1/21 - 19/1/21

Job Number : Q0432

Location : Northern end of Lancaster Close

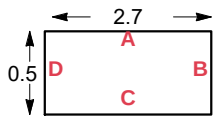
Engineer : Atkins

Ground Level : 57.52 m A.O.D.
Level to Ordnance Datum

Coordinates: 287936.31 E
206689.57 N
Co-ordinates to National Grid

m B.G.L.	Samples Depth	Samples Type No.	Tests Depth	Tests Test Results	Strata Depth (Thick-ness)	Strata Description	Strata Legend	Strata Red. Level A.O.D.	WATER
					0.20	TURF/ ASPHALT			
					0.20 0.10	MADE GROUND - Black sandy Gravel of fine to coarse, angular of sandstone, siltstone, ash and occasional mortar.		57.32	
					0.30	MADE GROUND - Grey brown, slightly sandy Gravel (sub-base) of medium to coarse, angular limestone. 25mmØ yellow MDPE gas pipe at 0.30m depth traced westwards into Lancaster Close road (domestic line feed) 30mmØ black/ grey metal water pipe 0.40m depth 0.80 100mmØ black corrugated Polypropylene ducting - possible electric at 0.60m running north-south 45mmØ yellow MDPE gas pipe at 1.10m depth, mains & domestic feed connector valve at 1.00m depth, running north-south		57.22	
1					1.10	End of Hand Dug Trench - target utility/ buried service located and recorded.		56.42	

PLAN



Groundwater: None Encountered

Stability: Stable

Shoring: N/A

Remarks: Hand excavated trench using only insulated hand tools. Area and excavation CAT and Genny scanned continuously. Trench reinstated using compacted Type 1 MOT sub-base and hot lay tarmacadum in accordance with Highways Specification and Engineer satisfaction. Any services located were surveyed to National Grid and Ordnance Datum. Full time traffic management employed.

Equipment Used: Hand Tools Only.

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QGL	R McDermott	1 Of 3	3		

Contract : Rock St & Lancaster Close, Glynneath - Phase II Client : Neath Port Talbot County Borough Council			Trial Pit No. RS-HP10
Dates : 19/1/21 - 19/1/21 Location : Northern end of Lancaster Close	Job Number : Q0432 Engineer : Atkins	Ground Level : 57.52 m A.O.D. *Level to Ordnance Datum* Coordinates: 287936.31 E 206689.57 N *Co-ordinates to National Grid*	





Contract : Rock St & Lancaster Close, Glynneath - Phase II Client : Neath Port Talbot County Borough Council			Trial Pit No. RS-HP10
Dates : 19/1/21 - 19/1/21 Location : Northern end of Lancaster Close	Job Number : Q0432 Engineer : Atkins	Ground Level : 57.52 m A.O.D. *Level to Ordnance Datum* Coordinates: 287936.31 E 206689.57 N *Co-ordinates to National Grid*	





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QGL	R McDermott	3 Of 3		All measurements in metres unless otherwise stated

AGS

Contract : Rock St & Lancaster Close, Glynneath - Phase II

Client : Neath Port Talbot County Borough Council

Trial Pit No.
RS-HP11

Dates : 20/1/21 - 21/1/21

Location : Central along Lancaster Close

Job Number : Q0432

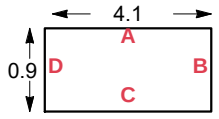
Engineer : Atkins

Ground Level : 56.47 m A.O.D.
Level to Ordnance Datum

Coordinates: 287943.24 E
206628.24 N
Co-ordinates to National Grid

m B.G.L.	Samples Depth	Samples Type No.	Tests Depth	Tests Test Results	Strata Depth (Thick-ness)	Strata Description	Strata Legend	Strata Red. Level A.O.D.	WATER
					0.12	MADE GROUND - ASPHALT			
					0.12	MADE GROUND - ASPHALT		56.35	
					0.09				
					0.21	MADE GROUND - Grey brown, slightly sandy Gravel (sub-base) of medium to coarse, angular limestone. 30mmØ black/ grey metal water pipe 0.90m depth Pit extended northwards to reveal: 28mmØ blue MDPE (Alkathene) water pipe 0.90m depth 90mmØ blue HDPE (Alkathene) water pipe 1.00m depth Pit extended southwards to reveal:		56.26	
1					0.79				
					1.00	0.21m to 0.65m depth: MADE GROUND - Black and dark brown, sandy Gravel of medium to coarse, subangular to rounded sandstone, brick, clinker and ash. High rounded cobble and boulder content of quartzitic sandstone.		55.47	
					0.40	0.65m to 0.80m depth: MADE GROUND - Reworked brown and grey, very gravelly Silt/ Clay. Gravel of fine to coarse, subrounded sandstone.			
					1.40	0.80m to 1.00m depth: Brown and grey, very gravelly SILT/ CLAY. Gravel of fine to medium subrounded sandstone. Medium rounded cobble content of quartzitic sandstone.		55.07	
						Brown and grey, very gravelly SILT/ CLAY. Gravel of fine to medium subrounded sandstone. Medium rounded cobble content of quartzitic sandstone.			
						End of Hand Dug Trench - target utility/ buried service located and recorded. No gas pipe revealed.			

PLAN



Groundwater: None Encountered

Stability: Stable

Shoring: N/A

Remarks: Hand excavated trench using only insulated hand tools. Area and excavation CAT and Genny scanned continuously. Trench reinstated using compacted Type 1 MOT sub-base and hot lay tarmacadum in accordance with Highways Specification and Engineer satisfaction. Any services located were surveyed to National Grid and Ordnance Datum. Full time traffic management employed.

Equipment Used: Hand Tools Only.

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QGL	R McDermott	1 Of 3	3	All measurements in metres unless otherwise stated

AGS

Contract : Rock St & Lancaster Close, Glynneath - Phase II Client : Neath Port Talbot County Borough Council			Trial Pit No. RS-HP11
Dates : 20/1/21 - 21/1/21 Location : Central along Lancaster Close	Job Number : Q0432 Engineer : Atkins	Ground Level : 56.47 m A.O.D. *Level to Ordnance Datum* Coordinates: 287943.24 E 206628.24 N *Co-ordinates to National Grid*	





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QGL	R McDermott	2 Of 3		All measurements in metres unless otherwise stated

Contract : Rock St & Lancaster Close, Glynneath - Phase II Client : Neath Port Talbot County Borough Council		Trial Pit No. RS-HP11
Dates : 20/1/21 - 21/1/21 Location : Central along Lancaster Close	Job Number : Q0432 Engineer : Atkins	Ground Level : 56.47 m A.O.D. *Level to Ordnance Datum* Coordinates: 287943.24 E 206628.24 N *Co-ordinates to National Grid*





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QGL	R McDermott	3 Of 3			

Contract : Rock St & Lancaster Close, Glynneath - Phase II

Client : Neath Port Talbot County Borough Council

Trial Pit No.
RS-HP12

Dates : 20/1/21 - 21/1/21

Location : Southern end of Lancaster Close

Job Number : Q0432

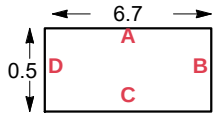
Engineer : Atkins

Ground Level : 56.24 m A.O.D.
Level to Ordnance Datum

Coordinates: 287977.85 E
206572.76 N
Co-ordinates to National Grid

m B.G.L.	Samples Depth	Samples Type No.	Tests Depth	Tests Test Results	Strata Depth (Thick-ness)	Strata Description	Strata Legend	Strata Red. Level A.O.D.	WATER
					0.13	MADE GROUND - ASPHALT (or Block Paving within pavement area)			
					0.13	MADE GROUND - ASPHALT (or Bedding Sand in pavement area)		56.11	
					0.08			56.03	
					0.21	MADE GROUND - Black, slightly sandy Gravel of fine to coarse, angular ash, clinker, slag, sandstone. High rounded cobble content of quartzitic sandstone.			
					0.08			55.95	
					0.29	MADE GROUND - Rounded COBBLES & BOULDERS of quartzitic sandstone with minor ash and sand matrix.			
					0.31	90mmØ black/ grey cast metal water pipe 0.55m depth under road (partial concrete surround and severe corrosion observed)			
					0.60	110mmØ orange smooth duct BT at 0.60m depth below pavement area		55.64	
1					0.50	MADE GROUND - Reworked brown and grey, very gravelly Silt/ Clay. Gravel of fine to coarse, subrounded sandstone with glass, metal, bone and wire fragments. High rounded cobbles and boulders of sandstone throughout.			
					1.10	Brown and grey, very gravelly SILT/ CLAY. Gravel of fine to medium subrounded sandstone. Medium rounded cobble content of quartzitic sandstone.		55.14	
					0.10				
					1.20	End of Hand Dug Trench - target utility/ buried service located and recorded.		55.04	
						No gas pipe revealed.			

PLAN



Groundwater: None Encountered - surface water entering pit only

Stability: Stable

Shoring: N/A

Remarks: Hand excavated trench using only insulated hand tools. Area and excavation CAT and Genny scanned continuously. Trench reinstated using compacted Type 1 MOT sub-base and hot lay tarmacadum in accordance with Highways Specification and Engineer satisfaction. Any services located were surveyed to National Grid and Ordnance Datum. Full time traffic management employed.

Equipment Used: Hand Tools Only.

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QGL	R McDermott	1 Of 3	3	All measurements in metres unless otherwise stated

AGS

Contract : Rock St & Lancaster Close, Glynneath - Phase II Client : Neath Port Talbot County Borough Council			Trial Pit No. RS-HP12
Dates : 20/1/21 - 21/1/21 Location : Southern end of Lancaster Close	Job Number : Q0432 Engineer : Atkins	Ground Level : 56.24 m A.O.D. *Level to Ordnance Datum* Coordinates: 287977.85 E 206572.76 N *Co-ordinates to National Grid*	





Contract : Rock St & Lancaster Close, Glynneath - Phase II Client : Neath Port Talbot County Borough Council			Trial Pit No. RS-HP12
Dates : 20/1/21 - 21/1/21 Location : Southern end of Lancaster Close	Job Number : Q0432 Engineer : Atkins	Ground Level : 56.24 m A.O.D. *Level to Ordnance Datum* Coordinates: 287977.85 E 206572.76 N *Co-ordinates to National Grid*	





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QGL	R McDermott	3 Of 3			

KEY TO BOREHOLE AND TRIAL PIT LOGS

MATERIAL LEGENDS

 Made Ground	 Topsoil	 Clay
 Gravel	 Sand	 Silt
 Peat	 Boulders	 Cobbles
 Chalk	 Conglomerate	 Volcaniclastic
 Asphalt	 Void	 Mudstone
 Siltstone	 Sandstone	 Limestone
 Ironstone	 Mudstone / Siltstone	 Breccia
 Coal	 Coral	 Bedrock
 Shale	 Gypsum	 Igneous (Coarse Grained)
 Igneous (Fine Grained)	 Igneous (Medium Grained)	 Metamorphic (Coarse Grained)
 Metamorphic (Fine Grained)	 Metamorphic (Medium Grained)	

INSTALLATION / BACKFILL DETAILS

 Arisings	 Concrete	 Bentonite cement grout
 Bentonite seal	 Filter	 Pea Gravel
 Plain pipe	 Slotted pipe	 Piezometer / Standpipe tip

NOTE:
Legend symbols in accordance with BS 5930 (2015)

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KEY TO BOREHOLE AND TRIAL PIT LOGS

m.A.O.D. metres Above Ordnance Datum.

SAMPLE AND TEST TYPES

U	Undisturbed driven tube sample - 102mm diameter, 450mm long.
P	Undisturbed pushed piston sample - 102mm diameter, 1000mm long.
TW	Undisturbed thin walled push in sample - 100mm diameter, 750mm long.
B	Bulk disturbed sample.
BLK	Block Sample
CBR	Heavy duty undisturbed sample - 154 mm diameter (CBR mould).
D	Small disturbed sample.
LB	Large Bulk disturbed sample (for earthworks testing)
C	Core sample
W	Water sample
G	Gas sample
ES	Environmental sample (soil)
j	Jar sample
t	Tub sample
p	Pot sample
s	Small sample
v	Vial sample
S	Standard Penetration Test using split spoon sampler. (See Note).
C	Standard Penetration Test using a solid 60 degree cone. (See Note).

NOTE: Where a single value is quoted this is the N value for 300 mm penetration following a seating drive of 150 mm. Where this full penetration is not achieved the number of blows is quoted for the penetration below the seating drive eg. 63/160 mm.
Where total penetration is less than the seating drive this is indicated by a + and the number of blows for total penetration is quoted eg. +50/75 mm.

HV	Hand Vane Test. Vane undrained shear strength, c_u, quoted in kPa.
V	Borehole Vane Test. Vane undrained shear strength, c_u, quoted in kPa.
FHT/RHT	Falling / Rising Head Permeability Test.

CORE RUN DETAILS

TCR	Total Core Recovery, %
SCR	Solid Core Recovery, %
RQD	Rock Quality Designation, %
FI	Fracture Index. NI - Non intact where > 25 No. per metre length.

WATER COLUMN SYMBOLS

	First water strike, second water strike etc.
	Standing water level after first strike, second strike etc.
	Seepage.

NOTE:
Legend symbols in accordance with BS 5930 (2015)

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APPENDIX IV – **MACHINE EXCAVATED TRIAL PIT LOGS**

Contract : Rockstreet, Glyneath

Client : Atkins

Trial Pit No.
RS-TP01

Dates : 17/9/20 - 17/9/20
Location :

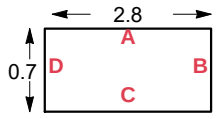
Job Number : Q0341
Engineer : Atkins

Ground Level : 59.65 m A.O.D.
Level to Ordnance Datum

Coordinates: 287937.95 E
206737.81 N
Co-ordinates to National Grid

m B.G.L.	Samples Depth	Samples Type No.	Tests Depth	Tests Test Results	Strata Depth (Thickness)	Strata Description	Legend	Red. Level A.O.D.	WATER
					0.05	Broken TARMAC			
					0.05	MADE GROUND: Dark grey silty slightly sandy Gravel with low to medium cobble content siltstone and sandstone. Gravel is angular to sub angular fine to coarse siltstone, mudstone, sandstone, brick and rare fine to medium coal with plastic. PID @0.3mbgl = 5.6ppm		59.60	
	0.30 -	ES1							
	0.50 -	ES2				PID @0.5mbgl = 1.9ppm			
	0.50 - 1.00	B3			1.05	@0.7mbgl 50mm plastic pipe along edge of pipe			
1									
					1.10	Grey brown slightly silty slightly sandy GRAVEL with low cobble content of sandstone. Gravel is angular to sub rounded fine to coarse sandstone, siltstone, mudstone and rare fine coal. PID @1.2mbgl = 0.5ppm		58.55	
	1.20 -	ES4							
	1.50 - 1.80	B5			0.70				
					1.80	Brown slightly silty slightly sandy gravelly CLAY. Gravel is angular fine to coarse mudstone. PID @2.0mbgl = 0.0ppm		57.85	
	1.90 -	D6							
2	2.00 -	ES7							
	2.50 - 3.00	B8			1.20				
3					3.00	Trial Pit terminated at scheduled depth of 3.0mbgl		56.65	

PLAN



Groundwater: Slow water ingress at 0.8mbgl

Stability: Sides collapsing from 0.8mbgl

Shoring: None

Remarks : Position marked out in liaison with Atkins engineer. Area CAT and genny scanned, PAS128 Survey with Permit to excavate issued prior to breaking ground. Any services encountered were surveyed in to National Grid.
On completion hole back filled with arisings with surface reinstated level.

Equipment Used: JCB 3CX

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Operator:	Logged By.	Sheet No.	m Per Page	
AD	A Jones	1 Of 2	4	All measurements in metres unless otherwise stated

AGS

Contract : Rockstreet, Glyneath Client : Atkins		Trial Pit No. RS-TP01
Dates : 17/9/20 - 17/9/20 Location :	Job Number : Q0341 Engineer : Atkins	Ground Level : 59.65 m A.O.D. *Level to Ordnance Datum* Coordinates: 287937.95 E 206737.81 N *Co-ordinates to National Grid*





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Operator:	Logged By.	Sheet No.	m Per Page	All measurements in metres unless otherwise stated	AGS
AD	A Jones	2 Of 2			

Contract : Rockstreet, Glyneath

Client : Atkins

Trial Pit No. RS-TP02

Dates : 18/9/20 - 18/9/20

Location :

Job Number : Q0341

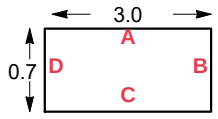
Engineer : Atkins

Ground Level : 57.74 m A.O.D. *Level to Ordnance Datum*

Coordinates: 287934.13 E 206701.85 N *Co-ordinates to National Grid*

m B.G.L.	Samples		Tests		Strata				WATER
	Depth	Type No.	Depth	Test Results	Depth (Thick-ness)	Description	Legend	Red. Level A.O.D.	
					0.12	TARMAC			
	0.20 - 0.50	B1			0.12	MADE GROUND: Black slightly clayey slightly sandy Gravel with high cobble content of sandstone.		57.62	
	0.30 -	ES2			0.38	@0.3mbgl yellow electricity warning tape. PID @0.3mbgl = 23.4ppm @0.5mbgl Black duct with LV cable.			
					0.50	Trial Pit terminated at 0.5mbgl to prevent damage to highway.		57.24	

PLAN



Groundwater: No groundwater encountered

Stability: Stable

Shoring: None

Remarks : Position marked out in liaison with Atkins engineer. Area CAT and genny scanned, PAS128 Survey with Permit to excavate issued prior to breaking ground. Any services encountered were surveyed in to National Grid.
On completion hole back filled with arisings with surface reinstated level with tarmac.

Equipment Used: JCB 3CX and Insulated hand tools

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Operator:	Logged By.	Sheet No.	m Per Page	All measurements in metres unless otherwise stated
AD	A Jones	1 Of 2	4	

AGS

Contract : Rockstreet, Glyneath **Client : Atkins**		**Trial Pit No.** **RS-TP02**
Dates : 18/9/20 - 18/9/20 Location :	Job Number : Q0341 Engineer : Atkins	Ground Level : 57.74 m A.O.D. *Level to Ordnance Datum* Coordinates: 287934.13 E 206701.85 N *Co-ordinates to National Grid*





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Operator:	Logged By.	Sheet No.	m Per Page	
AD	A Jones	2 Of 2		All measurements in metres unless otherwise stated

AGS

Contract : Rockstreet, Glyneath

Client : Atkins

Trial Pit No. RS-TP03

Dates : 17/9/20 - 17/9/20

Location :

Job Number : Q0341

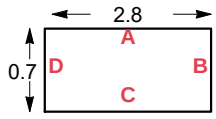
Engineer : Atkins

Ground Level : 56.51 m A.O.D. *Level to Ordnance Datum*

Coordinates: 287956.02 E 206585.48 N *Co-ordinates to National Grid*

m B.G.L.	Samples Depth	Samples Type No.	Tests Depth	Tests Test Results	Strata Depth (Thickness)	Description	Legend	Red. Level A.O.D.	WATER
					0.08	TARMAC			
	0.10 -	ES1 B2			0.08	MADE GROUND: Pale brown slightly silty slightly gravelly SAND. Sand is medium to coarse. Gravel is angular fine sandstone.		56.43	
					0.07	PID @0.1mbgl = 0.4ppm		56.36	
					0.15	MADE GROUND: Black slightly silty sandy gravelly Clay with low cobble content sandstone. Gravel is angular to sub angular fine to coarse sandstone, siltstone, slate, glass, brick concrete and fine to medium coal.			
	0.50 - 0.50 - 1.00	ES3 B4			0.95	PID @0.5mbgl = 0.2ppm			
1									
					1.10	Brown slightly silty slightly sandy slightly gravelly CLAY. Gravel is angular fine coal.		55.41	
	1.40 - 1.50 - 2.00	ES5 B6				PID @1.4mbgl = 0.0ppm			
					1.00				
2									
					2.10	Brown slightly clayey sandy GRAVEL with low cobble content of sandstone.Gravel is sub angular to sub rounded fine to coarse sandstone and siltstone.		54.41	
	2.50 - 3.00	B7			0.90				
3									
					3.00	Terminated at 3.0mbgl on scheduled depth		53.51	

PLAN



Groundwater: No groundwater encountered

Stability: Sides colapsing from 1.2mbgl

Shoring: None

Remarks : Position marked out in liaison with Atkins engineer. Area CAT and genny scanned, PAS128 Survey with Permit to excavate issued prior to breaking ground. Any services encountered were surveyed in to National Grid.
On completion hole back filled with arisings with surface reinstated level with tarmac.

Equipment Used: JCB 3CX

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Operator:	Logged By.	Sheet No.	m Per Page	All measurements in metres unless otherwise stated	AGS
AD	A Jones	1 Of 2	4		

Contract : Rockstreet, Glyneath Client : Atkins		Trial Pit No. RS-TP03
Dates : 17/9/20 - 17/9/20 Location :	Job Number : Q0341 Engineer : Atkins	Ground Level : 56.51 m A.O.D. *Level to Ordnance Datum* Coordinates: 287956.02 E 206585.48 N *Co-ordinates to National Grid*





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AGS

Contract : Rockstreet, Glyneath

Client : Atkins

Trial Pit No. RS-TP04

Dates : 18/9/20 - 18/9/20

Location :

Job Number : Q0341

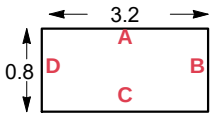
Engineer : Atkins

Ground Level : 56.92 m A.O.D. *Level to Ordnance Datum*

Coordinates: 287949.53 E 206434.87 N *Co-ordinates to National Grid*

m B.G.L.	Samples Depth	Samples Type No.	Tests Depth	Tests Test Results	Strata Depth (Thickness)	Strata Description	Strata Legend	Strata Red. Level A.O.D.	WATER
					0.10	TOPSOIL: Dark brown slightly sandy slightly gravelly Clay.			
	0.10 - 0.30	B1			0.10	MADE GROUND: Dark brown slightly silty slightly sandy gravelly Clay with timber steel and plastic. Gravel is angular to sub angular fine to coarse brick, concrete and tile. PID @0.3mbgl = 0.8ppm		56.82	
	0.30 -	ES2			0.30				
	0.50 - 1.00	B3			0.40	Brown slightly silty sandy slightly gravelly CLAY.		56.52	
	0.70 -	ES4			0.70	PID @0.7mbgl = 0.0ppm			
1					1.10	Brown slightly silty sandy Gravel with medium to high cobble content and low boulder content of sandstone. Gravel is sub angular to rounded fine to coarse sandstone and fine to medium siltstone and quartz.		55.82	
	1.50 - 2.00	B5							
2					1.90				
	2.50 - 3.00	B6							
3					3.00	Trial Pit terminated at scheduled depth of 3.0mbgl		53.92	

PLAN



Groundwater: No groundwater encountered

Stability: Sides collapsing from 1.0mbgl

Shoring: None

Remarks : Position marked out in liaison with Atkins engineer. Area CAT and genny scanned with Permit to excavate issued prior to breaking ground. Any services encountered were surveyed in to National Grid.
On completion hole back filled with arisings with surface reinstated level with turf.

Equipment Used: JCB 3CX

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AGS

Contract : Rockstreet, Glyneath **Client : Atkins**		**Trial Pit No.** **RS-TP04**
Dates : 18/9/20 - 18/9/20 Location :	Job Number : Q0341 Engineer : Atkins	Ground Level : 56.92 m A.O.D. *Level to Ordnance Datum* Coordinates: 287949.53 E 206434.87 N *Co-ordinates to National Grid*





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AGS

Contract : Rockstreet, Glyneath

Client : Atkins

Trial Pit No. RS-TP05

Dates : 18/9/20 - 18/9/20

Location :

Job Number : Q0341

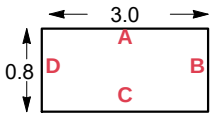
Engineer : Atkins

Ground Level : 56.75 m A.O.D. *Level to Ordnance Datum*

Coordinates: 287953.27 E 206382.90 N *Co-ordinates to National Grid*

m B.G.L.	Samples Depth	Samples Type No.	Tests Depth	Tests Test Results	Strata Depth (Thickness)	Strata Description	Strata Legend	Strata Red. Level A.O.D.	WATER
					0.10	TOPSOIL: Dark brown slightly sandy slightly gravelly Clay.			
					0.10	Brown slightly silty sandy slightly gravelly CLAY.		56.65	
	0.50 - 0.50 - 0.90	ES1 B2				PID @0.5mbgl = 0.0ppm			
					1.00				
1					1.10	Brown slightly silty sandy Gravel with medium to high cobble content and low boulder content of sandstone. Gravel is sub angular to rounded fine to coarse sandstone and fine to medium siltstone and quartz.		55.65	
	1.50 - 2.00	B3							
2					1.90				
	2.50 - 3.00	B4							
3					3.00	Trial Pit terminated at scheduled depth 3.0mbgl		53.75	

PLAN



Groundwater: No groundwater encountered

Stability: Sides collapsing from 1.0mbgl

Shoring: None

Remarks : Position marked out in liaison with Atkins engineer. Area CAT and genny scanned with Permit to excavate issued prior to breaking ground. Any services encountered were surveyed in to National Grid.
On completion hole back filled with arisings with surface reinstated level with turf.

Equipment Used: JCB 3CX

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AGS

Contract : Rockstreet, Glyneath **Client : Atkins**		**Trial Pit No.** **RS-TP05**
Dates : 18/9/20 - 18/9/20 Location :	Job Number : Q0341 Engineer : Atkins	Ground Level : 56.75 m A.O.D. *Level to Ordnance Datum* Coordinates: 287953.27 E 206382.90 N *Co-ordinates to National Grid*





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AD	A Jones	2 Of 2		All measurements in metres unless otherwise stated

AGS

Contract : Rockstreet, Glyneath

Client : Atkins

Trial Pit No.
RS-TP07

Dates : 9/9/20 - 9/9/20

Location :

Job Number : Q0341

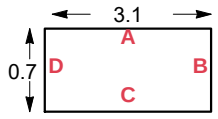
Engineer : Atkins

Ground Level : 53.78 m A.O.D.
Level to Ordnance Datum

Coordinates: 287939.34 E
206272.90 N
Co-ordinates to National Grid

m B.G.L.	Samples Depth	Samples Type No.	Tests Depth	Tests Test Results	Strata Depth (Thick-ness)	Strata Description	Strata Legend	Strata Red. Level A.O.D.	WATER
	0.30 -	ES1				MADE GROUND: Brown slightly clayey slightly silty sandy Gravel with medium cobble content of sandstone. Gravel is sub angular to sub rounded fine to coarse sandstone, siltstone, quartz, brick, concrete and fine to medium coal. PID @0.3mbgl = 0.0ppm			
	0.50 - 1.00	B2							
	0.70 -	ES3				PID @0.7mbgl = 0.0ppm			
1									
	1.20 -	ES4			2.50	PID @0.3mbgl = 0.3ppm			
	1.50 - 2.00	B5							
2	2.00 -	ES6				PID @2.0mbgl = 0.0ppm			
	2.50 - 3.00	B7			2.50	Brown slightly silty sandy GRAVEL with medium cobble content of sandstone. Gravel is sub angular to sub rounded fine to coarse sandstone and quartz.		51.28	
					0.50	(Natural strata layer in west side of wall of pit from 1.0mbgl) PID @3.0mbgl = 0.0ppm			
3	3.00 -	ES8			3.00	Trial Pit terminated at scheduled depth of 3.0mbgl		50.78	

PLAN



Groundwater: No groundwater encountered

Stability: Sides collapsing from 1.0mbgl

Shoring: None

Remarks : Position marked out in liaison with Atkins engineer. Area CAT and genny scanned with Permit to excavate issued prior to breaking ground. Any services encountered were surveyed in to National Grid.
On completion hole back filled with arisings with surface reinstated level with turf.

Equipment Used: JCB 3CX

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RL	A Jones	1 Of 2	4	All measurements in metres unless otherwise stated

AGS

Contract : Rockstreet, Glyneath Client : Atkins		Trial Pit No. RS-TP07
Dates : 9/9/20 - 9/9/20 Location :	Job Number : Q0341 Engineer : Atkins	Ground Level : 53.78 m A.O.D. *Level to Ordnance Datum* Coordinates: 287939.34 E 206272.90 N *Co-ordinates to National Grid*





Contract : Rockstreet, Glyneath

Client : Atkins

Trial Pit No. RS-TP07A

Dates : 9/9/20 - 9/9/20

Location :

Job Number : Q0341

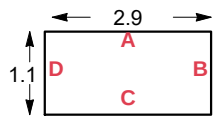
Engineer : Atkins

Ground Level : 53.12 m A.O.D. *Level to Ordnance Datum*

Coordinates: 287910.62 E 206269.81 N *Co-ordinates to National Grid*

m B.G.L.	Samples Depth	Samples Type No.	Tests Depth	Tests Test Results	Strata Depth (Thick-ness)	Strata Description	Strata Legend	Strata Red. Level A.O.D.	WATER
						MADE GROUND: Brown slightly clayey slightly silty sandy Gravel with medium cobble content of sandstone and concrete. Gravel is sub angular to sub rounded fine to coarse sandstone, siltstone, quartz, brick, concrete and fine to medium coal.			
	0.50 - 0.50 - 1.00	ES1 B2			1.25	PID @0.5mbgl = 0.0ppm			
1						with concrete boulder at 0.8mbgl (Casing from old large diameter pipe)			
						with steel at 0.9mbgl			
	1.20 -	ES3				PID @1.2mbgl = 0.3ppm			
					1.25	@1.25mbgl electricity tiles		51.87	
						Trial Pit terminated at 1.25mbgl to avoid risk to underground services.			

PLAN



Groundwater: No groundwater encountered

Stability: Sides collapsing from 0.8mbgl

Shoring: None

Remarks : Position marked out in liaison with Atkins engineer. Area CAT and genny scanned with Permit to excavate issued prior to breaking ground. Any services encountered were surveyed in to National Grid.
On completion hole back filled with arisings with surface reinstated level with turf.

Equipment Used: JCB 3CX

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RL	A Jones	1 Of 2	4	

AGS

Contract : Rockstreet, Glyneath **Client : Atkins**		**Trial Pit No.** **RS-TP07A**
Dates : 9/9/20 - 9/9/20 Location :	Job Number : Q0341 Engineer : Atkins	Ground Level : 53.12 m A.O.D. *Level to Ordnance Datum* Coordinates: 287910.62 E 206269.81 N *Co-ordinates to National Grid*





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AGS

Contract : Rockstreet, Glyneath

Client : Atkins

Trial Pit No. RS-TP08

Dates : 9/9/20 - 9/9/20

Location :

Job Number : Q0341

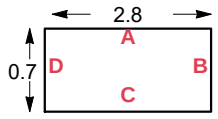
Engineer : Atkins

Ground Level : 53.40 m A.O.D. *Level to Ordnance Datum*

Coordinates: 287888.07 E 206213.28 N *Co-ordinates to National Grid*

m B.G.L.	Samples Depth	Samples Type No.	Tests Depth	Tests Test Results	Strata Depth (Thick-ness)	Strata Description	Strata Legend	Strata Red. Level A.O.D.	WATER
	0.30 -	ES1				MADE GROUND: Brown slightly clayey slightly silty sandy Gravel with medium cobble content of sandstone. Gravel is sub angular to sub rounded fine to coarse sandstone, siltstone, quartz, brick, concrete and fine to medium coal. PID @0.3mbgl = 0.0ppm			
	0.50 - 0.80	B2							
	0.70 -	ES3				PID @ 0.7mbgl = 0.0ppm			
1	1.00 -	ES4			1.90	...very clayey from 0.9mbgl. PID @1.0mbgl = 0.0ppm			
	1.20 - 1.50	B5				...with plastic timber and high brick content from 1.2mbgl			
					1.90	MADE GROUND: Brownish black slightly silty Sand and Gravel with low cobble content. Sand is fine to coarse. Gravel is sub angular to sub rounded fine to coarse sandstone, siltstone, brick with timber. PID @2.0mbgl = 0.2ppm		51.50	
2	2.00 -	ES6							
	2.00 - 2.50	B7			1.10				
3	3.00 -	ES8				PID @3.0mbgl = 0.0ppm			
					3.00	Trial Pit terminated at scheduled depth of 3.0mbgl		50.40	

PLAN



Groundwater: No groundwater encountered

Stability: Stable

Shoring: None

Remarks : Position marked out in liaison with Atkins engineer. Area CAT and genny scanned with Permit to excavate issued prior to breaking ground. Any services encountered were surveyed in to National Grid.
On completion hole back filled with arisings with surface reinstated level with turf.

Equipment Used: JCB 3CX

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RL	A Jones	1 Of 2	4	All measurements in metres unless otherwise stated

AGS

Contract : Rockstreet, Glyneath Client : Atkins		Trial Pit No. RS-TP08
Dates : 9/9/20 - 9/9/20 Location :	Job Number : Q0341 Engineer : Atkins	Ground Level : 53.40 m A.O.D. *Level to Ordnance Datum* Coordinates: 287888.07 E 206213.28 N *Co-ordinates to National Grid*





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Operator:	Logged By.	Sheet No.	m Per Page	
RL	A Jones	2 Of 2		All measurements in metres unless otherwise stated

AGS

KEY TO BOREHOLE AND TRIAL PIT LOGS

MATERIAL LEGENDS

 Made Ground	 Topsoil	 Clay
 Gravel	 Sand	 Silt
 Peat	 Boulders	 Cobbles
 Chalk	 Conglomerate	 Volcaniclastic
 Asphalt	 Void	 Mudstone
 Siltstone	 Sandstone	 Limestone
 Ironstone	 Mudstone / Siltstone	 Breccia
 Coal	 Coral	 Bedrock
 Shale	 Gypsum	 Igneous (Coarse Grained)
 Igneous (Fine Grained)	 Igneous (Medium Grained)	 Metamorphic (Coarse Grained)
 Metamorphic (Fine Grained)	 Metamorphic (Medium Grained)	

INSTALLATION / BACKFILL DETAILS

 Arisings	 Concrete	 Bentonite cement grout
 Bentonite seal	 Filter	 Pea Gravel
 Plain pipe	 Slotted pipe	 Piezometer / Standpipe tip

NOTE:
Legend symbols in accordance with BS 5930 (2015)

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KEY TO BOREHOLE AND TRIAL PIT LOGS

m.A.O.D. metres Above Ordnance Datum.

SAMPLE AND TEST TYPES

U	Undisturbed driven tube sample - 102mm diameter, 450mm long.
P	Undisturbed pushed piston sample - 102mm diameter, 1000mm long.
TW	Undisturbed thin walled push in sample - 100mm diameter, 750mm long.
B	Bulk disturbed sample.
BLK	Block Sample
CBR	Heavy duty undisturbed sample - 154 mm diameter (CBR mould).
D	Small disturbed sample.
LB	Large Bulk disturbed sample (for earthworks testing)
C	Core sample
W	Water sample
G	Gas sample
ES	Environmental sample (soil)
j	Jar sample
t	Tub sample
p	Pot sample
s	Small sample
v	Vial sample
S	Standard Penetration Test using split spoon sampler. (See Note).
C	Standard Penetration Test using a solid 60 degree cone. (See Note).

NOTE: Where a single value is quoted this is the N value for 300 mm penetration following a seating drive of 150 mm. Where this full penetration is not achieved the number of blows is quoted for the penetration below the seating drive eg. 63/160 mm.
Where total penetration is less than the seating drive this is indicated by a + and the number of blows for total penetration is quoted eg. +50/75 mm.

HV	Hand Vane Test. Vane undrained shear strength, c_u, quoted in kPa.
V	Borehole Vane Test. Vane undrained shear strength, c_u, quoted in kPa.
FHT/RHT	Falling / Rising Head Permeability Test.

CORE RUN DETAILS

TCR	Total Core Recovery, %
SCR	Solid Core Recovery, %
RQD	Rock Quality Designation, %
FI	Fracture Index. NI - Non intact where > 25 No. per metre length.

WATER COLUMN SYMBOLS

	First water strike, second water strike etc.
	Standing water level after first strike, second strike etc.
	Seepage.

NOTE:
Legend symbols in accordance with BS 5930 (2015)

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APPENDIX V – **GPR SURVEY DRAWINGS**

Electromagnetic and/or Ground Penetrating Radar techniques have been used to locate/map underground utilities and features on this drawing. Intersect Surveys Ltd has made every endeavour to make sure that the information contained within this drawing is accurate and of the highest quality. Intersect Surveys Ltd has used any record drawings provided by the client or by the Statutory Utility Providers, at the client's request, at the time of the survey. Any information taken from these drawings (e.g. pipe sizes and position) is not guaranteed. Historic record information is often incomplete and inaccurate and cannot be relied upon. Intersect Surveys Ltd is not liable for any topographical survey that has not been undertaken by us. Any inaccuracies relating to topographical plans/development plans/Ordnance Survey data that we have no control over is the liability of the customer. Where quoted, depth information of underground services/features is stated. Depths are generally within +/10% accurate, but cannot be guaranteed. Any depths shown on drains are usually to invert (base of drainage channel) unless otherwise stated. At Intersect Surveys Ltd we use skilled staff and modern, calibrated equipment to perform our surveys. However, the completeness of any underground survey cannot be 100% guaranteed and the results from these types of surveys are not infallible. If the location or depth of services/features is of particular importance to a project then it is strongly recommended that discussions are held with Intersect Surveys Ltd regarding any possible limitations or anomalies. It is also strongly advised that trial excavations should be undertaken to confirm survey results. We cannot be held responsible for any inaccuracies beyond those that could be reasonably expected by a competent company.

ABBREVIATIONS (Land & Utilities)

AR	ASSUMED ROUTE	KO	KERB OUTLET	SL	SIGNAL LOST
AV	AIR VALVE	Lby	LIFEBOUY	SP	SIGN POST
BB	BACKDROP BEACON	Lck	LOCK GATE	SPil	SHEET PILING
BD	BACKDROP	Ldr	LADDER	Spr	SPRING
Bdy	BOUNDARY	Lp	LAMP POLE	SR	STARTING POINT
BH	BOREHOLE	LP	LAMP POST	ST	STOP TAP
BHch	BASEMENT HATCH COVER	LV	LOW VOLTAGE	Sti	STILE
Bn	LITTER / GRIT SALT BIN	MgP	MOORING POST	Stl	STRUCTURE TOP LEVEL
BL	BASEMENT LIGHT	mH	METERS HIGH	Stp	STUMP (TREE)
BP	BOLLARD	MH	MANHOLE	StP	STAY PIPE
BP	BOUNDARY POST	Mkr	MARKER	StPn	STAY POST
BS	BUS STOP	Mkr	MARKER POST	SV	STOP VALVE
BTIC	BRITISH TELECOM CHAMBER	MkrE	MARKER POST (ELECTRIC)	SV	STOP VALVE
CatL	CATENARY LEVEL	MkrG	MARKER POST (GAS)	SVP	SOIL VENT PIPE
CATV	CABLE TV COVER	MkrR	MARKER POST (RAILWAY)	TBM	TEMPORARY BENCH MARK
CB	CONTROL BOX	MkrT	MARKER POST (TELECOM)	TCB	TELEPHONE CALL BOX
CC	CABLE CHAMBER T	MkrW	MARKER POST (WATER)	TCH	TELEPHONE MANHOLE COVER
CD	COAL CHUTE	MP	MILE POST	TfL	TAKEN FROM MEDDRIS
CGrd	CATTLE GRID	MS	MILE STONE	TH	THRESHOLD LEVEL
ChL	CHANNEL LEVEL	NL	NOT LOCATED	TL	TRAFFIC LIGHT
Chy	CHIMNEY	NP	NAME PLATE	TP	TELEGRAPH POLE
CI	CAST IRON	OSA	OUTSIDE SURVEY AREA	Tpt	TRIAL PIT
CL	COVER LEVEL	OSBM	O.S BENCH MARK	Tr	TROUGH
CO	CLEANING OUT	OHP	OVERHEAD PIPE	TTF	UNABLE TO FIND
CP	CABLE PIT	OHCa	OH CABLE (UNIDENTIFIED)	UTGA	UNABLE TO GAIN ACCESS
CpL	COPING LEVEL	OHE	OVERHEAD CABLE (ELECTRIC)	UTL	UNABLE TO LIFT
Cpstn	CAPSTAN	OHG	OVERHEAD GANTRY	UTR	UNABLE TO ROD
Cpst	CAMERA POST	OHP	OVERHEAD PIPE	UTS	UNABLE TO SURVEY
CR	CABLE RISER	OHT	OVERHEAD CABLE (TELECOM)	UTT	UNABLE TO TRACE
CrL	CROWN LEVEL	OP	OUTLET PIPE	VC	VITREOUS CLAY
CTV	CCTV CAMERA	P	PIPE	VC	VENT CONE
CWM	CABLE WINDING MACHINERY	Pb	PARK BENCH	VR	VAPOUR RECOVERY
d	DEPTH	PB	POST BOX	VS	VENTILATION SHAFT
Dia	DIAMETER	PCrg	PEDESTRIAN CROSSING	VW	VALVE / SLUICE WHEEL
DS	DIRECTION SIGN	PE	POLYETHALINE	WB	WEIGHBRIDGE
EIC	ELECTRIC INSPECTION COVER	PF	PITCH FIBER	WL	WATER LEVEL
EoC	EDGE OF CANOPY	Pl	PILE	WM	WATER METER
EoR	EDGE OF ROADWAY	PlD	PLATE EMBEDMENT DETECTOR	WO	WASTE WATER VALVE
EOT	END OF TRACE	Pmd	PLANT MOTOR DRIVE	Wr	WEIR
EP	ELECTRICITY POLE	PP	PETROL / DIESEL PUMP	WrL	WEIR LEVEL
ER	EARTH ROD	PR	PIPE RISER	WrP	WEIR PLATE (TOP)
ESher	EMERGENCY SHOWER	Psk	PENSTOCK	WWP	WASTE WATER PIPE
ESP	ELECTRICITY SUPPLY POINT	PU	PUMP		
Esw	ELECTRICAL SWITCH	PVC	PIPE (VERTICAL)	FENCE TYPES:	
Ex	EXISTING	PVC	POLY VINYL CHLORIDE	AMP	ARMCO
FH	FIRE HYDRANT	Py	PYLON	BWF	BARBED WIRE
FL	FLOOR LEVEL	Pz	PIEZOMETER	CBF	CLOSE BOARDED
FS	FLAG STAFF / POLE	RE	RODDING EYE	CIF	CORRUGATED IRON
G	GULLY	RG	RAIN GAUGE	CLF	CHAIN LINK
GI	GRATED	RM	RESISTOR MONITORING PNT	CPF	CHESTNUT PALING
GP	GAS INLET PIPE	RP	REFLECTOR POST	IRF	IRON RAILING
GP	GATE POST	RS	RAIN SENSOR	MF	MESH FENCING
GPR	TRACED BY G.P.R	RSP	RAILWAY SIGNAL POST	PCF	POST & CHAIN
Gri	GRILLE	RWP	RAIN WATER PIPE	PIF	POST & IRON RAIL
GV	GAS VALVE	S	SPREAD	PRF	POST & RAIL
Hgt	HEIGHT	SA	SURVEY ABANDONED	PWF	POST & WIRE
HP	HYDRANT	Sch	SCHEDULE	SPF	STEEL PALISADE
HV	HIGH VOLTAGE	Shlt	SHELTER (BUS / TRAM)	WMF	WIRE MESH
IC	INSPECTION CHAMBER	SI	SPUN IRON		
IL	INVERT LEVEL	SL	SOFFIT LEVEL		
IP	INLET PIPE	SIL	SILT LEVEL (TOP)		
JN	JUNCTION	SMP	SETTLEMENT MONITORING PNT		

KEY

- TV / TV — CCTV / CABLE TELEVISION
- 450 — COMBINED DRAINAGE
- COM — COMMUNICATIONS CABLE
- A / A — COMPRESSED AIR
- DUCTING
- E / E — EARTH CABLE
- ELECTRIC CABLE
- EOT — END OF TRACE
- 150 — FOUL DRAINAGE
- F / F — FUEL PIPE
- GAS PIPE
- G — GAUGE LINE
- H — HEATING
- O / O — OFFSET FILL PIPE
- PUMPING MAIN
- R — RADAR AREA ANOMALY
- R / R — RADAR UTILITY TRACE
- 300 — SURFACE DRAINAGE
- SURVEY BOUNDARY
- TELECOM CABLE
- TL / TL — TRAFFIC LIGHTS
- U / U — UNIDENTIFIED
- VR / VR — VAPOUR RECOVERY
- V / V — VENT PIPE
- WATER PIPE
- O.S BENCH MARK
- SURVEY CONTROL STATION

SURVEY AREA 1

SURVEY AREA 2

Revision	Description	Date

Drawing Status: INFORMATION

INTERSECT SURVEYS
T: 0208 399 3851 M: 07535 236 812
www.intersectsurveys.co.uk

Client: QUANTUM GEOTECH

Project: ROCK STREET, GLYNNEATH
NEATH

Title: UNDERGROUND UTILITY SERVICES LAYOUT

Drawn	Surveyed:	Date
A.J.O.	A.S.	SEPT'20
Cad File: 45112–001		Scale 1:200@A0
Drawing Number 45112-001		Revision

APPENDIX VI – **GEOTECHNICAL LABORATORY TEST RESULTS**

Laboratory Report

2788

GEO Site & Testing Services Ltd

Contract Number: 50632

Client Ref: **Q0341**
Client PO:

Report Date: **04-11-2020**

Client **Quantum Geotechnic Ltd**
Ty Berwig
Bynea
Llanelli.
Carmarthenshire.
SA14 9ST

Contract Title: **Rockstreet, Glyneath**
For the attention of: **Arwel Jones**

Date Received: **07-10-2020**
Date Completed: **04-11-2020**

Test Description	Qty
Moisture Content BS 1377:1990 - Part 2 : 3.2 - * UKAS	13
4 Point Liquid & Plastic Limit BS 1377:1990 - Part 2 : 4.3 & 5.3 - * UKAS	6
PSD Wet Sieve method BS 1377:1990 - Part 2 : 9.2 - * UKAS	13
PSD: Sedimentation by pipette carried out with Wet Sieve (Wet Sieve must also be selected) BS 1377:1990 - Part 2 : 9.4 - * UKAS	6
BRE Suite D Brownfield Site (pyrite present) **includes pH, water & acid soluble sulphate, total sulphur, magnesium, chloride and nitrate** BRE - BR279 - @ Non Accredited Test	5
Disposal of samples for job	1

Notes: **Observations and Interpretations are outside the UKAS Accreditation**
*** - denotes test included in laboratory scope of accreditation**
- denotes test carried out by approved contractor
@ - denotes non accredited tests

This certificate is issued in accordance with the accreditation requirements of the United Kingdom Accreditation Service. The results reported herein relate only to the material supplied to the laboratory. This certificate shall not be reproduced except in full, without the prior written approval of the laboratory.

Approved Signatories:
Emma Sharp (Office Manager/Director) - Paul Evans (Quality/Technical Manager) - Richard John (Advanced Testing Manager)
Sean Penn (Administrative/Accounts Assistant) - Shaun Jones (Laboratory manager) - Wayne Honey (Administrative/Quality Assistant)

GEO Site & Testing Services Ltd
Unit 3-4, Heol Aur, Dafen Ind Estate, Dafen, Llanelli, Carmarthenshire SA14 8QN
Tel: 01554 784040 Fax: 01554 784041 info@gstl.co.uk gstl.co.uk

GSTL	NATURAL MOISTURE, LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX (BS 1377 : Part 2 : 1990 Method 5)	
Contract Number	**50632**	
Site Name	**Rockstreet, Glyneath**	
Date Tested	**02/11/2020**	
	DESCRIPTIONS	

Sample/Hole Reference	Sample Number	Sample Type	Depth (m)			Descriptions
RS-HP06	2	D	0.60	-		Brown silty clayey fine to coarse sandy fine to coarse GRAVEL
RS-TP01	8	B	2.50	-	3.00	Brown fine to medium gravelly fine to coarse sandy silty CLAY
RS-TP03	6	B	1.50	-	2.00	Brown slightly fine to medium gravelly fine to coarse sandy silty CLAY
RS-TP04	3	B	0.50	-	1.00	Brown silty clayey fine to coarse sandy fine to coarse GRAVEL
RS-TP05	2	B	0.50	-	0.90	Brown slightly fine to medium gravelly silty clayey fine to coarse SAND
RS-BH01	5	B	1.50	-	2.10	Brown silty clayey fine to coarse sandy fine to coarse GRAVEL
				-		
				-		
				-		
				-		
				-		
				-		
				-		
				-		
				-		
				-		
				-		
				-		
				-		
				-		
				-		
				-		
				-		
				-		

Operators	Checked	04/11/2020	Wayne Honey (Administrative/Quality Assistant)
Daniel Bassett	Approved	04/11/2020	Paul Evans (Quality/Technical Manager)

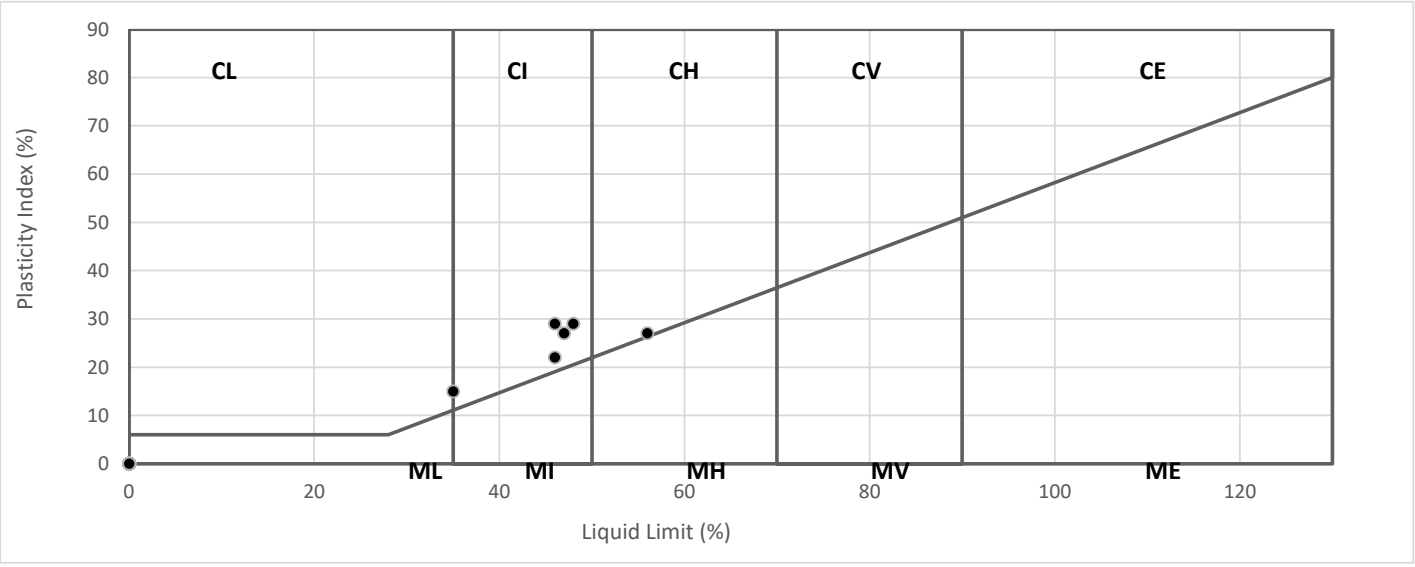
UKAS TESTING
2788

GSTL	NATURAL MOISTURE, LIQUID LIMIT, PLASTIC LIMIT AND PLASTICITY INDEX (BS 1377 : Part 2 : 1990 Method 5)	
Contract Number	**50632**	
Project Location	**Rockstreet, Glyneath**	
Date Tested	**02/11/2020**	

Sample/Hole Reference	Sample Number	Sample Type	Depth (m)			Moisture Content %	Liquid Limit %	Plastic Limit %	Plasticity index %	Passing 0.425mm %	Remarks
RS-HP06	2	D	0.60	-		23	46	24	22	51	CI Intermediate Plasticity
RS-TP01	8	B	2.50	-	3.00	31	47	20	27	83	CI Intermediate Plasticity
RS-TP03	6	B	1.50	-	2.00	44	56	29	27	95	CH High Plasticity
RS-TP04	3	B	0.50	-	1.00	29	48	19	29	51	CI Intermediate Plasticity
RS-TP05	2	B	0.50	-	0.90	26	35	20	15	96	CL/I Low/Inter. Plasticity
RS-BH01	5	B	1.50	-	2.10	22	46	17	29	37	CI Intermediate Plasticity
				-							
				-							
				-							
				-							
				-							
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				-							
				-							
				-							
				-							

Symbols: NP : Non Plastic # : Liquid Limit and Plastic Limit Wet Sieved

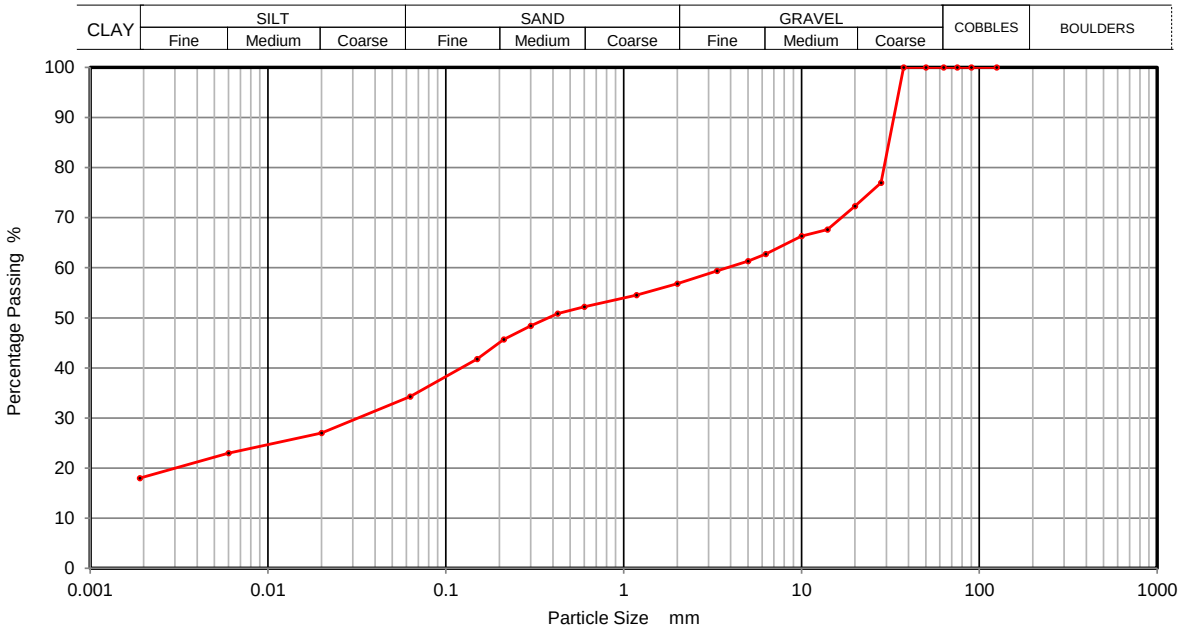
PLASTICITY CHART FOR CASAGRANDE CLASSIFICATION
BS 5930:1999+A2:2010



Operators	Checked	04/11/2020	Wayne Honey (Administrative/Quality Assistant)
Daniel Bassett	Approved	04/11/2020	Paul Evans (Quality/Technical Manager)

UKAS TESTING
2788

GSTL	PARTICLE SIZE DISTRIBUTION BS 1377 Part 2:1990 Wet Sieve & Pipette Analysis, Clause 9.2 & 9.4	Contract Number	50632
		Borehole/Pit No.	RS-HP06
Site Name	Rockstreet, Glyneath	Sample No.	2
Soil Description	Brown silty clayey fine to coarse sandy fine to coarse GRAVEL	Depth Top	0.60
		Depth Base	
Date Tested	31/10/2020	Sample Type	D



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100	0.0200	27
90	100	0.0060	23
75	100	0.0020	18
63	100		
50	100		
37.5	100		
28	77		
20	72		
14	68		
10	66		
6.3	63		
5	61		
3.35	59		
2	57		
1.18	55		
0.6	52		
0.425	51		
0.3	48		
0.212	46		
0.15	42		
0.063	34		

Sample Proportions	% dry mass
Cobbles	0
Gravel	43
Sand	23
Silt	16
Clay	18

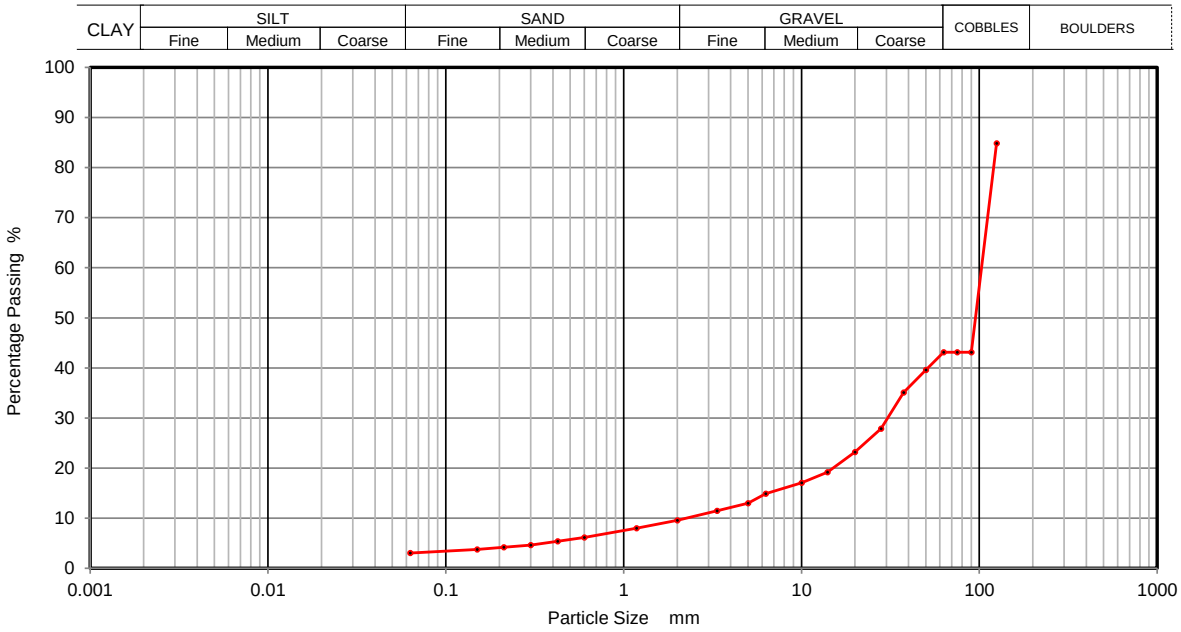
Remarks

Preparation and testing in accordance with BS1377 unless noted below

Operators	Checked	03/11/2020	Wayne Honey	W. Honey
RO/MH	Approved	04/11/2020	Paul Evans	P Evans

UKAS TESTING
2788

GSTL	PARTICLE SIZE DISTRIBUTION BS 1377 Part 2:1990 Wet Sieve, Clause 9.2	Contract Number	50632
		Borehole/Pit No.	RS-HP07
Site Name	Rockstreet, Glyneath	Sample No.	2
Soil Description	Brown slightly clayey/silty slightly fine to coarse sandy fine to coarse GRAVEL (with cobbles)	Depth Top	0.50
		Depth Base	1.00
Date Tested	31/10/2020	Sample Type	B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	85		
90	43		
75	43		
63	43		
50	40		
37.5	35		
28	28		
20	23		
14	19		
10	17		
6.3	15		
5	13		
3.35	11		
2	10		
1.18	8		
0.6	6		
0.425	5		
0.3	5		
0.212	4		
0.15	4		
0.063	3		

MC in accordance with BS1377 Part 2 1990 Clause 3.2	
Moisture Content %	5.7

Sample Proportions	% dry mass
Cobbles	57
Gravel	33
Sand	7
Silt and Clay	3

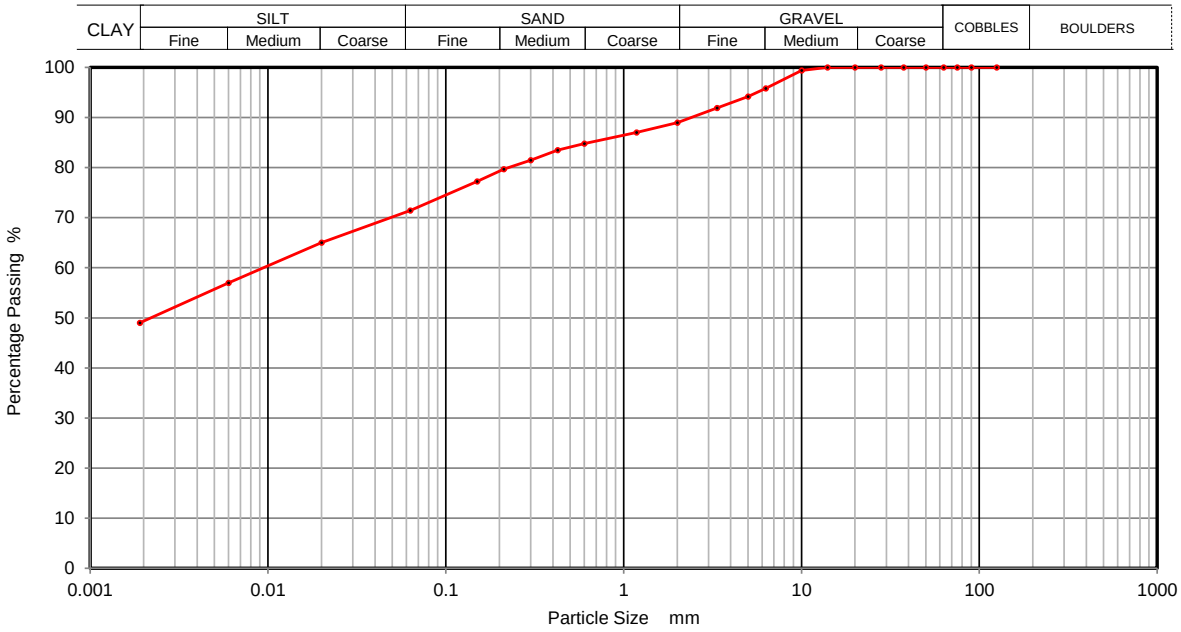
Remarks

Preparation and testing in accordance with BS1377 unless noted below

Operators	Checked	03/11/2020	Wayne Honey	W. Honey
RO/MH	Approved	04/11/2020	Paul Evans	P Evans

UKAS TESTING 2788

GSTL	PARTICLE SIZE DISTRIBUTION BS 1377 Part 2:1990 Wet Sieve & Pipette Analysis, Clause 9.2 & 9.4	Contract Number	50632
		Borehole/Pit No.	RS-TP01
Site Name	Rockstreet, Glyneath	Sample No.	8
Soil Description	Brown fine to medium gravelly fine to coarse sandy silty CLAY	Depth Top	2.50
		Depth Base	3.00
Date Tested	31/10/2020	Sample Type	B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100	0.0200	65
90	100	0.0060	57
75	100	0.0020	49
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	99		
6.3	96		
5	94		
3.35	92		
2	89		
1.18	87		
0.6	85		
0.425	83		
0.3	81		
0.212	80		
0.15	77		
0.063	71		

Sample Proportions	% dry mass
Cobbles	0
Gravel	11
Sand	18
Silt	22
Clay	49

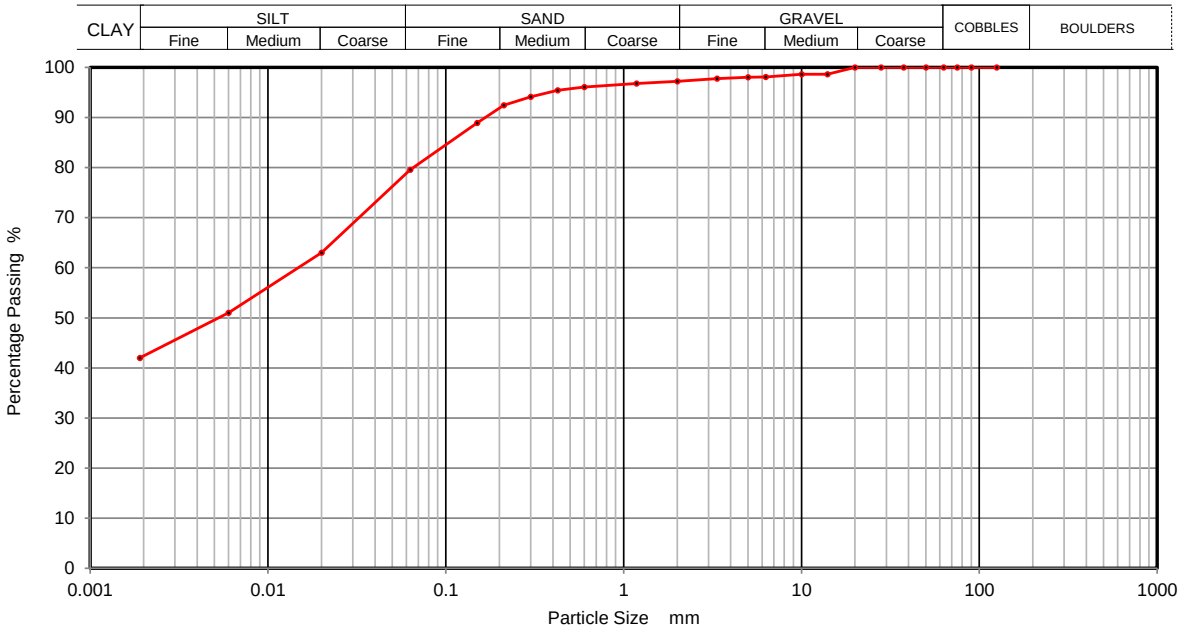
Remarks

Preparation and testing in accordance with BS1377 unless noted below

Operators	Checked	03/11/2020	Wayne Honey	W. Honey
RO/MH	Approved	04/11/2020	Paul Evans	D P Evans

UKAS TESTING 2788

GSTL	**PARTICLE SIZE DISTRIBUTION** **BS 1377 Part 2:1990** **Wet Sieve & Pipette Analysis, Clause 9.2 & 9.4**	Contract Number	**50632**
		Borehole/Pit No.	**RS-TP03**
Site Name	**Rockstreet, Glyneath**	Sample No.	**6**
Soil Description	Brown slightly fine to medium gravelly fine to coarse sandy silty CLAY	Depth Top	**1.50**
		Depth Base	**2.00**
Date Tested	31/10/2020	Sample Type	**B**



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100	0.0200	63
90	100	0.0060	51
75	100	0.0020	42
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	99		
10	99		
6.3	98		
5	98		
3.35	98		
2	97		
1.18	97		
0.6	96		
0.425	95		
0.3	94		
0.212	92		
0.15	89		
0.063	80		

Sample Proportions	% dry mass
Cobbles	0
Gravel	3
Sand	17
Silt	38
Clay	42

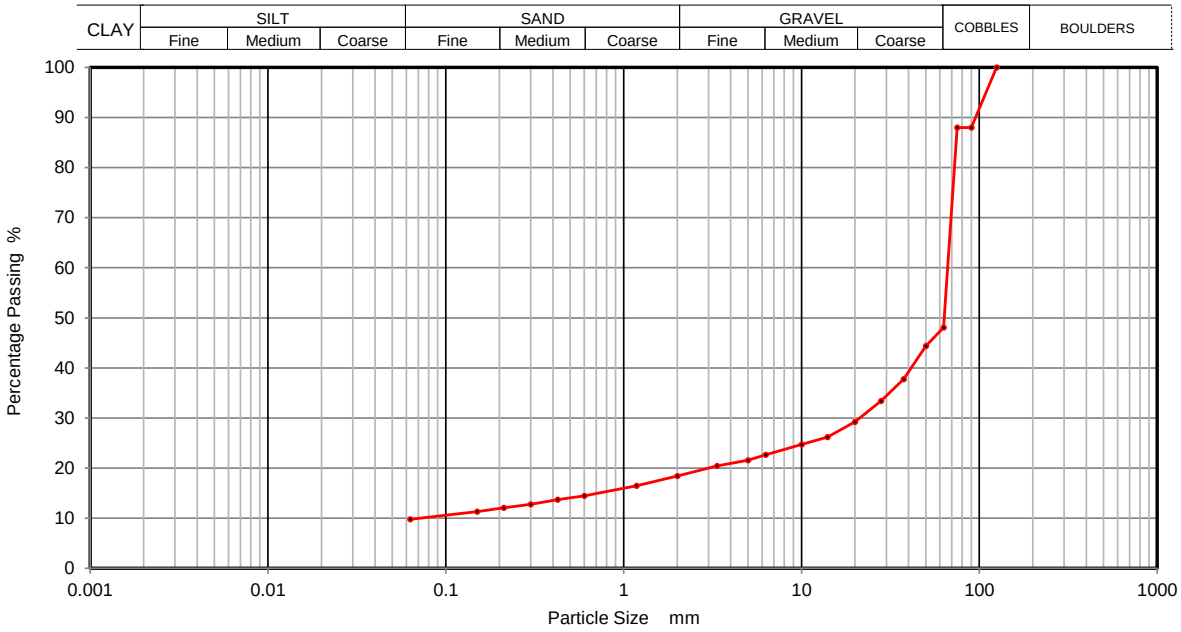
Remarks

Preparation and testing in accordance with BS1377 unless noted below

Operators	Checked	03/11/2020	Wayne Honey	W. Honey
RO/MH	Approved	04/11/2020	Paul Evans	P Evans

UKAS TESTING 2788

GSTL	PARTICLE SIZE DISTRIBUTION BS 1377 Part 2:1990 Wet Sieve, Clause 9.2	Contract Number	50632
		Borehole/Pit No.	RS-TP03
Site Name	Rockstreet, Glyneath	Sample No.	7
Soil Description	Light brown slightly fine to coarse sandy clayey/silty fine to coarse GRAVEL (with cobbles)	Depth Top	2.50
		Depth Base	3.00
Date Tested	31/10/2020	Sample Type	B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	88		
75	88		
63	48		
50	44		
37.5	38		
28	33		
20	29		
14	26		
10	25		
6.3	23		
5	22		
3.35	20		
2	18		
1.18	16		
0.6	14		
0.425	14		
0.3	13		
0.212	12		
0.15	11		
0.063	10		

MC in accordance with BS1377 Part 2 1990 Clause 3.2	
Moisture Content %	8.2

Sample Proportions	% dry mass
Cobbles	52
Gravel	30
Sand	8
Silt and Clay	10

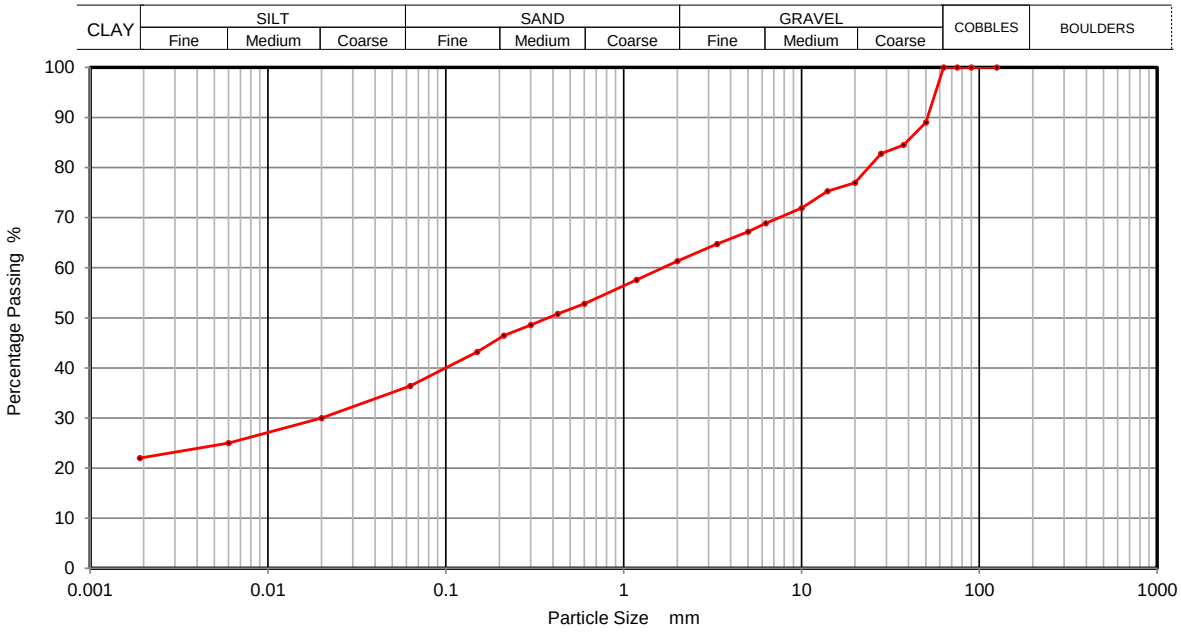
Remarks

Preparation and testing in accordance with BS1377 unless noted below

Operators	Checked	03/11/2020	Wayne Honey	W. Honey
RO/MH	Approved	04/11/2020	Paul Evans	D P Evans

UKAS TESTING 2788

GSTL	PARTICLE SIZE DISTRIBUTION BS 1377 Part 2:1990 Wet Sieve & Pipette Analysis, Clause 9.2 & 9.4	Contract Number	50632
		Borehole/Pit No.	RS-TP04
Site Name	Rockstreet, Glyneath	Sample No.	3
Soil Description	Brown silty clayey fine to coarse sandy fine to coarse GRAVEL	Depth Top	0.50
		Depth Base	1.00
Date Tested	31/10/2020	Sample Type	B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100	0.0200	30
90	100	0.0060	25
75	100	0.0020	22
63	100		
50	89		
37.5	85		
28	83		
20	77		
14	75		
10	72		
6.3	69		
5	67		
3.35	65		
2	61		
1.18	58		
0.6	53		
0.425	51		
0.3	49		
0.212	46		
0.15	43		
0.063	36		

Sample Proportions	% dry mass
Cobbles	0
Gravel	39
Sand	25
Silt	14
Clay	22

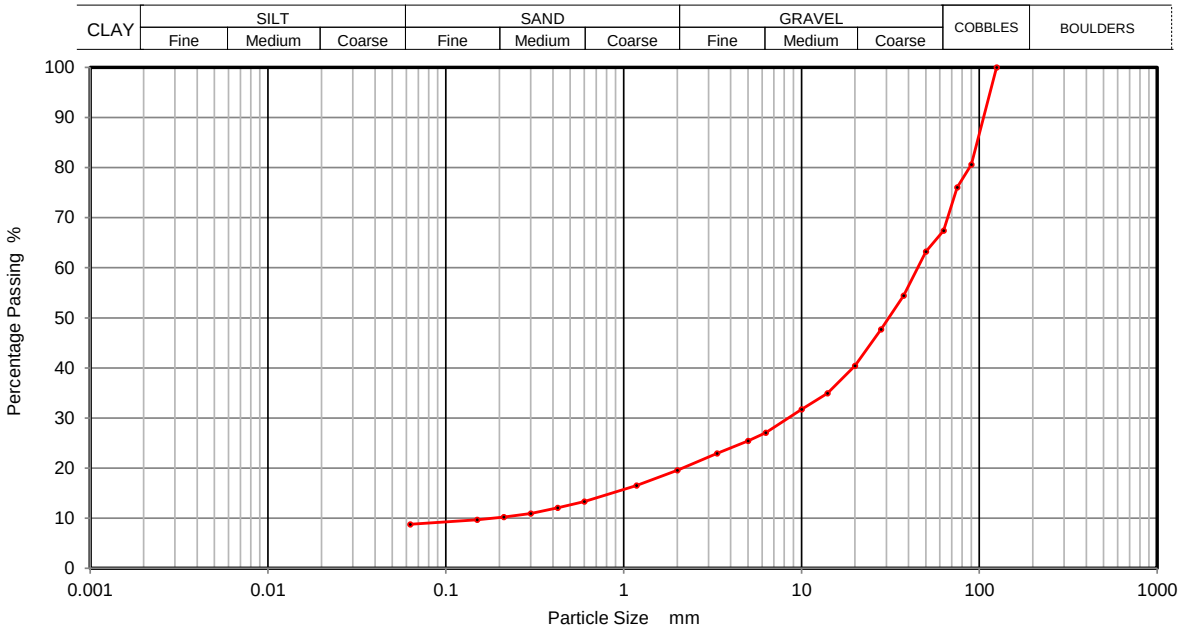
Remarks

Preparation and testing in accordance with BS1377 unless noted below

Operators	Checked	03/11/2020	Wayne Honey	W. Honey
RO/MH	Approved	04/11/2020	Paul Evans	P Evans

UKAS TESTING
2788

GSTL	PARTICLE SIZE DISTRIBUTION BS 1377 Part 2:1990 Wet Sieve, Clause 9.2	Contract Number	50632
		Borehole/Pit No.	RS-TP04
Site Name	Rockstreet, Glyneath	Sample No.	5
Soil Description	Brown slightly clayey/silty fine to coarse sandy fine to coarse GRAVEL (with cobbles)	Depth Top	1.50
		Depth Base	2.00
Date Tested	31/10/2020	Sample Type	B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	81		
75	76		
63	67		
50	63		
37.5	54		
28	48		
20	40		
14	35		
10	32		
6.3	27		
5	25		
3.35	23		
2	20		
1.18	17		
0.6	13		
0.425	12		
0.3	11		
0.212	10		
0.15	10		
0.063	9		

MC in accordance with BS1377 Part 2 1990 Clause 3.2	
Moisture Content %	11

Sample Proportions	% dry mass
Cobbles	33
Gravel	47
Sand	11
Silt and Clay	9

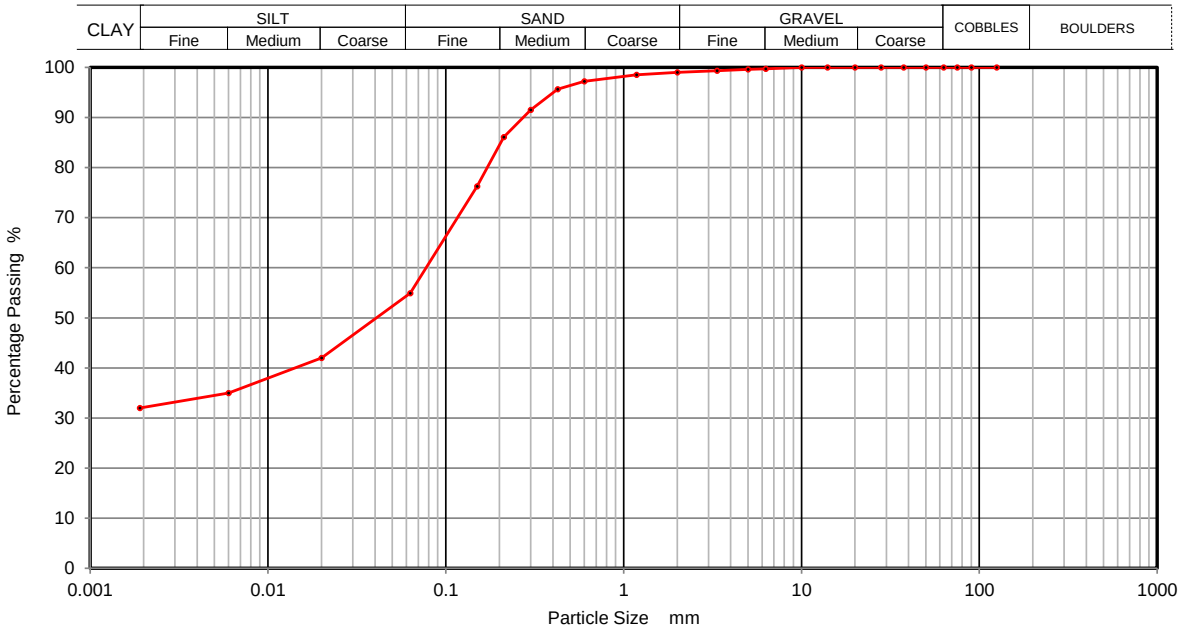
Remarks

Preparation and testing in accordance with BS1377 unless noted below

Operators	Checked	03/11/2020	Wayne Honey	W. Honey
RO/MH	Approved	04/11/2020	Paul Evans	P Evans

UKAS TESTING 2788

GSTL	**PARTICLE SIZE DISTRIBUTION** **BS 1377 Part 2:1990** **Wet Sieve & Pipette Analysis, Clause 9.2 & 9.4**	Contract Number	**50632**
		Borehole/Pit No.	**RS-TP05**
Site Name	**Rockstreet, Glyneath**	Sample No.	**2**
Soil Description	Brown slightly fine to medium gravelly silty clayey fine to coarse SAND	Depth Top	**0.50**
		Depth Base	**0.90**
Date Tested	31/10/2020	Sample Type	**B**



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100	0.0200	42
90	100	0.0060	35
75	100	0.0020	32
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	100		
5	100		
3.35	99		
2	99		
1.18	99		
0.6	97		
0.425	96		
0.3	92		
0.212	86		
0.15	76		
0.063	55		

Sample Proportions	% dry mass
Cobbles	0
Gravel	1
Sand	44
Silt	23
Clay	32

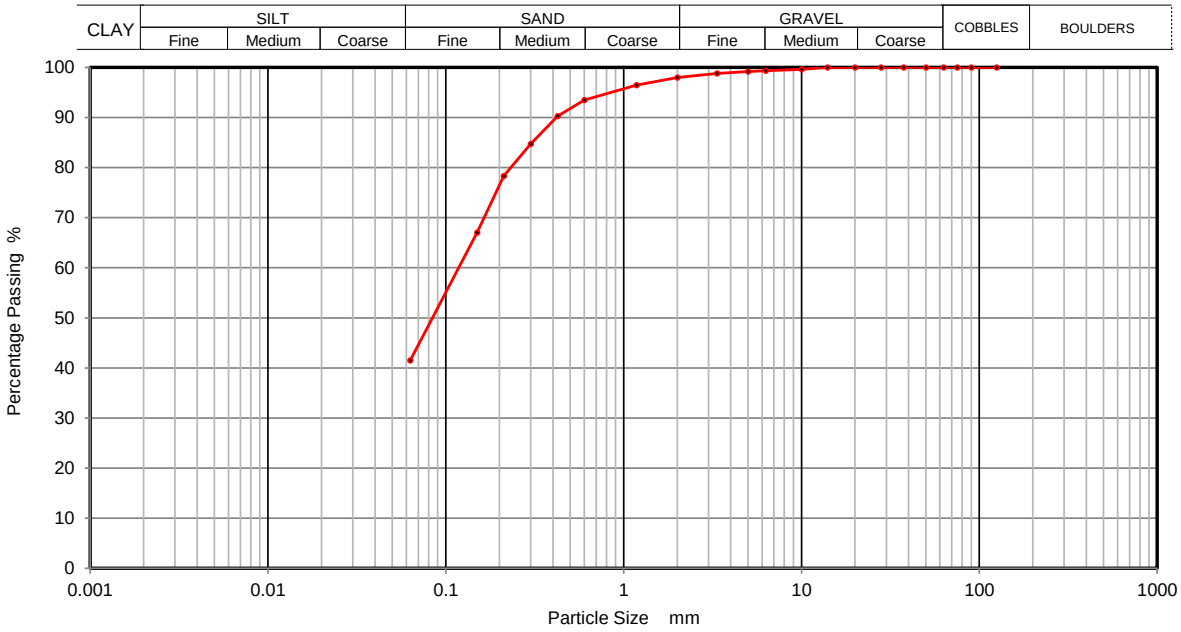
Remarks

Preparation and testing in accordance with BS1377 unless noted below

Operators	Checked	03/11/2020	Wayne Honey	W. Honey
RO/MH	Approved	04/11/2020	Paul Evans	P Evans

UKAS TESTING 2788

GSTL	PARTICLE SIZE DISTRIBUTION BS 1377 Part 2:1990 Wet Sieve, Clause 9.2	Contract Number	50632
		Borehole/Pit No.	RS-TP05
Site Name	Rockstreet, Glyneath	Sample No.	3
Soil Description	Brown slightly fine to medium gravelly silty/clayey fine to coarse SAND	Depth Top	1.50
		Depth Base	2.00
Date Tested	31/10/2020	Sample Type	B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	100		
75	100		
63	100		
50	100		
37.5	100		
28	100		
20	100		
14	100		
10	100		
6.3	99		
5	99		
3.35	99		
2	98		
1.18	96		
0.6	93		
0.425	90		
0.3	85		
0.212	78		
0.15	67		
0.063	41		

MC in accordance with BS1377 Part 2 1990 Clause 3.2	
Moisture Content %	9.9

Sample Proportions	% dry mass
Cobbles	0
Gravel	2
Sand	57
Silt and Clay	41

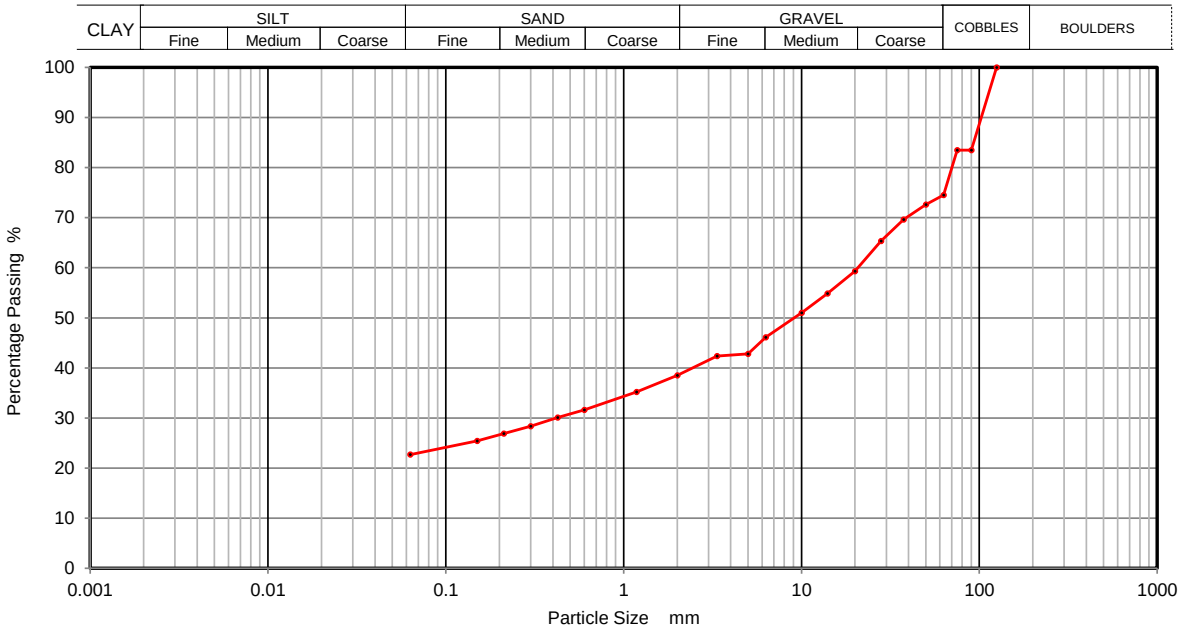
Remarks

Preparation and testing in accordance with BS1377 unless noted below

Operators	Checked	03/11/2020	Wayne Honey	W. Honey
RO/MH	Approved	04/11/2020	Paul Evans	P Evans

UKAS TESTING
2788

GSTL	PARTICLE SIZE DISTRIBUTION BS 1377 Part 2:1990 Wet Sieve, Clause 9.2	Contract Number	50632
		Borehole/Pit No.	RS-TP07
Site Name	Rockstreet, Glyneath	Sample No.	2
Soil Description	Grey fine to coarse sandy silty/clayey fine to coarse GRAVEL (with cobbles)	Depth Top	0.50
		Depth Base	1.00
Date Tested	31/10/2020	Sample Type	B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	83		
75	83		
63	75		
50	73		
37.5	70		
28	65		
20	59		
14	55		
10	51		
6.3	46		
5	43		
3.35	42		
2	39		
1.18	35		
0.6	32		
0.425	30		
0.3	28		
0.212	27		
0.15	25		
0.063	23		

MC in accordance with BS1377 Part 2 1990 Clause 3.2	
Moisture Content %	10

Sample Proportions	% dry mass
Cobbles	25
Gravel	36
Sand	16
Silt and Clay	23

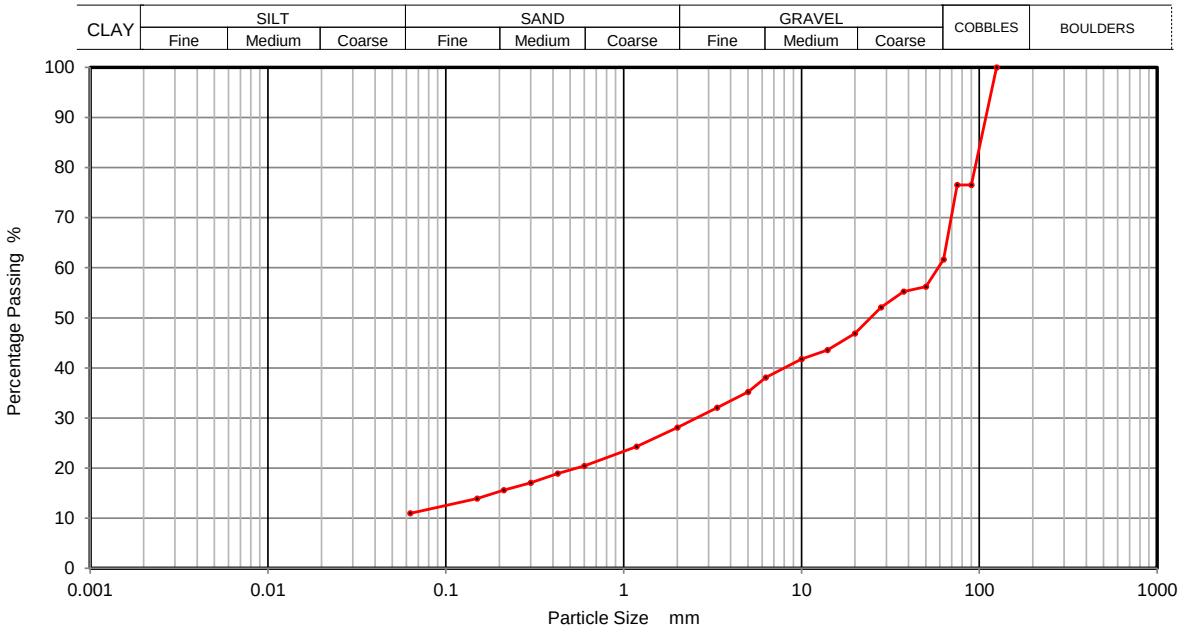
Remarks

Preparation and testing in accordance with BS1377 unless noted below

Operators	Checked	03/11/2020	Wayne Honey	W. Honey
RO/MH	Approved	04/11/2020	Paul Evans	P Evans

UKAS TESTING 2788

GSTL	PARTICLE SIZE DISTRIBUTION BS 1377 Part 2:1990 Wet Sieve, Clause 9.2	Contract Number	50632
		Borehole/Pit No.	RS-TP08
Site Name	Rockstreet, Glyneath	Sample No.	5
Soil Description	Dark brown clayey/silty fine to coarse sandy fine to coarse GRAVEL (with cobbles)	Depth Top	1.20
		Depth Base	1.50
Date Tested	31/10/2020	Sample Type	B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	77		
75	77		
63	62		
50	56		
37.5	55		
28	52		
20	47		
14	44		
10	42		
6.3	38		
5	35		
3.35	32		
2	28		
1.18	24		
0.6	20		
0.425	19		
0.3	17		
0.212	16		
0.15	14		
0.063	11		

MC in accordance with BS1377 Part 2 1990 Clause 3.2	
Moisture Content %	16

Sample Proportions	% dry mass
Cobbles	38
Gravel	34
Sand	17
Silt and Clay	11

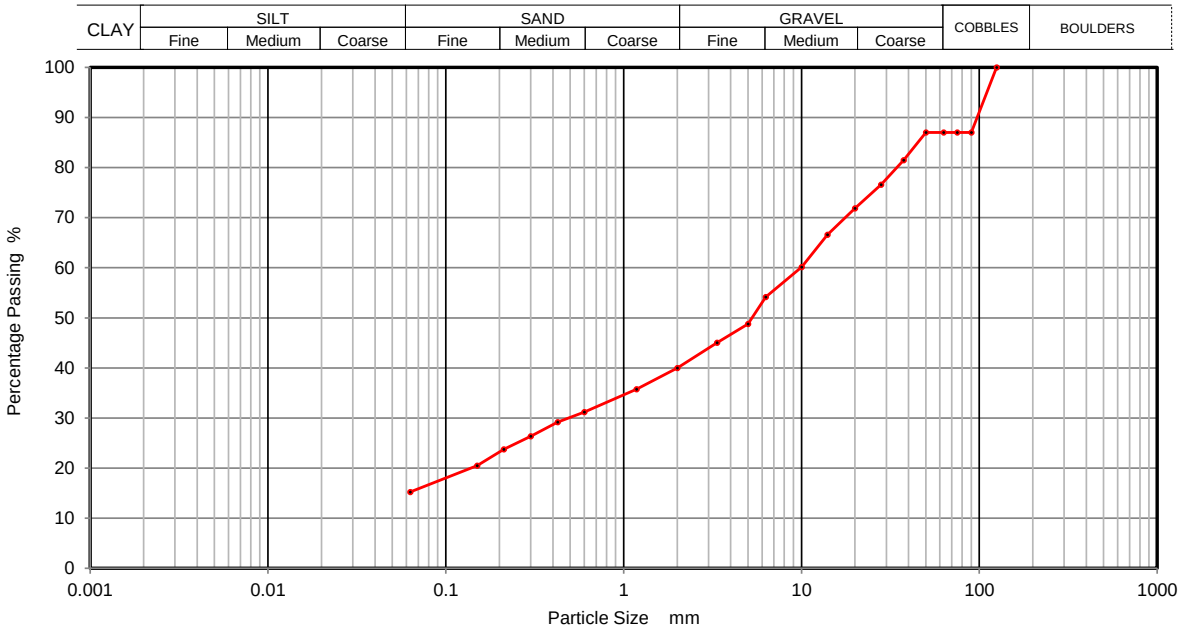
Remarks

Preparation and testing in accordance with BS1377 unless noted below

Operators	Checked	03/11/2020	Wayne Honey	W. Honey
RO/MH	Approved	04/11/2020	Paul Evans	P Evans

UKAS TESTING 2788

GSTL	PARTICLE SIZE DISTRIBUTION BS 1377 Part 2:1990 Wet Sieve, Clause 9.2	Contract Number	50632
		Borehole/Pit No.	RS-TP08
Site Name	Rockstreet, Glyneath	Sample No.	7
Soil Description	Brown clayey/silty fine to coarse sandy fine to coarse GRAVEL (with cobbles)	Depth Top	2.00
		Depth Base	2.50
Date Tested	31/10/2020	Sample Type	B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100		
90	87		
75	87		
63	87		
50	87		
37.5	81		
28	77		
20	72		
14	67		
10	60		
6.3	54		
5	49		
3.35	45		
2	40		
1.18	36		
0.6	31		
0.425	29		
0.3	26		
0.212	24		
0.15	20		
0.063	15		

MC in accordance with BS1377 Part 2 1990 Clause 3.2	
Moisture Content %	15

Sample Proportions	% dry mass
Cobbles	13
Gravel	47
Sand	25
Silt and Clay	15

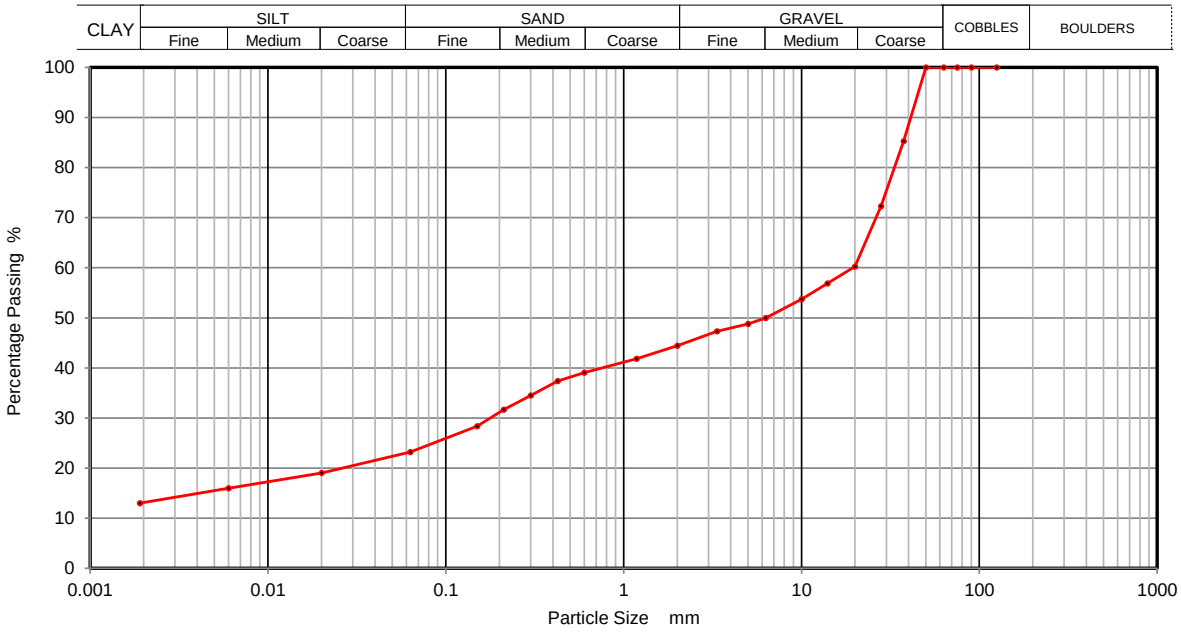
Remarks

Preparation and testing in accordance with BS1377 unless noted below

Operators	Checked	03/11/2020	Wayne Honey	W. Honey
RO/MH	Approved	04/11/2020	Paul Evans	P Evans

UKAS TESTING 2788

GSTL	PARTICLE SIZE DISTRIBUTION BS 1377 Part 2:1990 Wet Sieve & Pipette Analysis, Clause 9.2 & 9.4	Contract Number	50632
		Borehole/Pit No.	RS-BH01
Site Name	Rockstreet, Glyneath	Sample No.	5
Soil Description	Brown silty clayey fine to coarse sandy fine to coarse GRAVEL	Depth Top	1.50
		Depth Base	2.10
Date Tested	31/10/2020	Sample Type	B



Sieving		Sedimentation	
Particle Size mm	% Passing	Particle Size mm	% Passing
125	100	0.0200	19
90	100	0.0060	16
75	100	0.0020	13
63	100		
50	100		
37.5	85		
28	72		
20	60		
14	57		
10	54		
6.3	50		
5	49		
3.35	47		
2	44		
1.18	42		
0.6	39		
0.425	37		
0.3	34		
0.212	32		
0.15	28		
0.063	23		

Sample Proportions	% dry mass
Cobbles	0
Gravel	56
Sand	21
Silt	10
Clay	13

Remarks

Preparation and testing in accordance with BS1377 unless noted below

Operators	Checked	03/11/2020	Wayne Honey	W. Honey
RO/MH	Approved	04/11/2020	Paul Evans	P Evans

UKAS TESTING
2788

GSTL	Certificate of Chemical Analysis (BRE BR 279)	Contract Number	50632
		Client Reference	Q0341
Client	Quantum	Date Received	
Site Name	Rockstreet, Glynheath	Date Started	30/10/2020
		Date Completed	04/11/2020
		No. of Samples	5

Hole Number	Sample Number	Sample Type	Depth (m)			Acid Soluble Sulphate	Aqueous Extract Sulphate	Chloride Content	Ph Value	Total Sulphur	Magnesium	Nitrate
RS-BH01	5	B	1.50	-	2.10	0.29	0.04	NCP	7.52	0.13	<1	10-25
RS-TP01	8	B	2.50	-	3.00	0.33	0.04	NCP	7.36	0.14	<1	10-25
RS-TP03	6	B	1.50	-	2.00	0.23	0.04	NCP	7.48	0.10	<1	25-50
RS-TP04	3	B	0.50	-	1.00	0.29	0.04	NCP	7.28	0.13	<1	10-25
RS-TP05	2	B	0.50	-	0.90	0.35	0.04	NCP	7.19	0.15	<1	25-50
				-								
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				-								
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Key	Reported As
Acid Soluble Sulphate	% SO_4
Aqueous Extract Sulphate	g/l SO_4
Chloride Content (Semi)	mg Cl/l
PH Value	@ 25°
Total Sulphur	% S
Magnesium	g/l SO_4
Nitrate	NO_3 mg/l

Remarks

NCP = No Chloride Present

Test Operator	Checked and Authorised by		Paul Evans	D P Evans
Darren Bourne	Date	04/11/2020		

APPENDIX VII – **CHEMICAL LABORATORY TEST RESULTS**

eurofins | Chemtest
Eurofins Chemtest Ltd
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

Final Report

Report No.:	20-26944-1
Initial Date of Issue:	13-Oct-2020
Client	Quantum Geotechnic Ltd
Client Address:	Plas Newydd Llanedi Pontarddulais Swansea SA4 0FQ
Contact(s):	Arwel Jones
Project	Q0341 Rock Street
Quotation No.:	Q20-19535
Date Received:	07-Oct-2020
Order No.:	
Date Instructed:	07-Oct-2020
No. of Samples:	29
Turnaround (Wkdays):	5
Results Due:	13-Oct-2020
Date Approved:	13-Oct-2020
Approved By:	
Details:	Glynn Harvey, Technical Manager

Results - Leachate

Project: Q0341 Rock Street

Client: Quantum Geotechnic Ltd				**Chemtest Job No.:**		20-26944	20-26944	20-26944	20-26944	20-26944	20-26944	20-26944	20-26944	20-26944	20-26944
Quotation No.: Q20-19535				**Chemtest Sample ID.:**		1076126	1076127	1076131	1076132	1076133	1076138	1076142	1076143	1076144	1076147
				Client Sample ID.:		1	2	5	2	1	2	5	1	1	1
				Sample Location:		RS-TP05	RS-TP04	RS-TP03	RS-TP02	RS-TP01	RS-HP02	RS-HP03	RS-HP03A	RS-HP04	RS-HP04C
				Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Top Depth (m):		0.5	0.3	1.4	0.3	0.3	0.5	1.1	0.5	0.4	0.4
Determinand	**Accred.**	**SOP**	**Type**	**Units**	**LOD**										
pH	U	1010	2:1		N/A	7.6	7.6	8.0	8.5	8.4	8.4	8.2	8.2	8.2	8.2
Chemical Oxygen Demand	U	1100	2:1	mg O2/l	10	13	44	23	30	12	16	20	13	22	12
Ammoniacal Nitrogen	U	1220	2:1	mg/l	0.050	0.078	0.064	0.060	0.30	0.058	0.11	0.093	< 0.050	0.16	0.062
Nitrite	U	1220	2:1	mg/l	0.020	< 0.020	< 0.020	< 0.020	0.32	< 0.020	0.052	0.028	< 0.020	0.15	< 0.020
Nitrate	U	1220	2:1	mg/l	0.50	1.9	28	1.7	3.0	0.70	4.4	5.8	8.5	12	36
Sulphate	U	1220	2:1	mg/l	1.0	11	7.1	3.4	85	8.2	25	15	17	9.9	24
Cyanide (Total)	U	1300	2:1	mg/l	0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Cyanide (Free)	U	1300	2:1	mg/l	0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Cyanide (Complex)	U	1300	2:1	mg/l	0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Sulphide	U	1325	2:1	mg/l	0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Magnesium	U	1415	2:1	mg/l	0.50	0.62	1.6	0.87	1.2	2.6	4.3	3.6	5.2	5.2	2.6
Aluminium (Dissolved)	N	1450	2:1	µg/l	10	< 10	150	< 10	< 10	< 10	< 10	11	20	< 10	32
Arsenic (Dissolved)	U	1450	2:1	µg/l	1.0	< 1.0	6.2	< 1.0	6.9	< 1.0	< 1.0	< 1.0	1.1	2.2	8.3
Boron (Dissolved)	U	1450	2:1	µg/l	20	< 20	< 20	< 20	110	23	27	< 20	< 20	< 20	< 20
Barium (Dissolved)	U	1450	2:1	µg/l	5.0	< 5.0	18	7.6	40	8.9	13	34	170	45	92
Beryllium (Dissolved)	U	1450	2:1	µg/l	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cadmium (Dissolved)	U	1450	2:1	µg/l	0.080	< 0.080	< 0.080	< 0.080	< 0.080	< 0.080	< 0.080	< 0.080	< 0.080	< 0.080	< 0.080
Chromium (Dissolved)	U	1450	2:1	µg/l	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	2.0	1.5
Copper (Dissolved)	U	1450	2:1	µg/l	1.0	< 1.0	7.7	< 1.0	2.5	< 1.0	1.0	1.8	< 1.0	2.8	< 1.0
Manganese (Dissolved)	U	1450	2:1	µg/l	1.0	1.7	32	< 1.0	19	1.1	6.5	3.7	< 1.0	< 1.0	< 1.0
Molybdenum (Dissolved)	U	1450	2:1	µg/l	1.0	< 1.0	< 1.0	< 1.0	22	< 1.0	4.7	< 1.0	5.4	4.6	15
Nickel (Dissolved)	U	1450	2:1	µg/l	1.0	< 1.0	1.3	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Lead (Dissolved)	U	1450	2:1	µg/l	1.0	< 1.0	4.7	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Antimony (Dissolved)	U	1450	2:1	µg/l	1.0	< 1.0	< 1.0	< 1.0	1.8	< 1.0	< 1.0	< 1.0	1.1	1.1	2.5
Selenium (Dissolved)	U	1450	2:1	µg/l	1.0	< 1.0	< 1.0	< 1.0	4.8	< 1.0	< 1.0	< 1.0	< 1.0	1.0	2.4
Vanadium (Dissolved)	U	1450	2:1	µg/l	1.0	< 1.0	< 1.0	< 1.0	3.6	< 1.0	< 1.0	< 1.0	< 1.0	1.3	3.6
Zinc (Dissolved)	U	1450	2:1	µg/l	1.0	2.6	6.5	1.1	1.8	< 1.0	< 1.0	7.0	< 1.0	< 1.0	1.8
Mercury Low Level	U	1460	2:1	µg/l	0.010	< 0.010	0.048	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Iron (Dissolved)	N	1450	2:1	µg/l	20	< 20	760	70	73	32	41	85	68	91	120
Chromium (Hexavalent)	U	1490	2:1	µg/l	20	[A] < 20	[A] < 20	[A] < 20	[A] < 20	[A] < 20	[A] < 20	[A] < 20	[A] < 20	[A] < 20	[A] < 20
C2 Aliphatic TPH >C5-C6	N	1675	2:1	µg/l	0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10
C2 Aliphatic TPH >C6-C8	N	1675	2:1	µg/l	0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10
C2 Aliphatic TPH >C8-C10	N	1675	2:1	µg/l	0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10
C2 Aliphatic TPH >C10-C12	N	1675	2:1	µg/l	0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10
C2 Aliphatic TPH >C12-C16	N	1675	2:1	µg/l	0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10
C2 Aliphatic TPH >C16-C21	N	1675	2:1	µg/l	0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10
C2 Aliphatic TPH >C21-C35	N	1675	2:1	µg/l	0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10
C2 Aliphatic TPH >C35-C44	N	1675	2:1	µg/l	0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10
Total Aliphatic Hydrocarbons	N	1675	2:1	µg/l	5.0	[A] < 5.0	[A] < 5.0	[A] < 5.0	[A] < 5.0	[A] < 5.0	[A] < 5.0	[A] < 5.0	[A] < 5.0	[A] < 5.0	[A] < 5.0
C2 Aromatic TPH >C5-C7	N	1675	2:1	µg/l	0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10

Results - Leachate

Project: Q0341 Rock Street

Client: Quantum Geotechnic Ltd				**Chemtest Job No.:**		20-26944	20-26944	20-26944	20-26944	20-26944	20-26944	20-26944	20-26944	20-26944	20-26944
Quotation No.: Q20-19535				**Chemtest Sample ID.:**		1076126	1076127	1076131	1076132	1076133	1076138	1076142	1076143	1076144	1076147
				Client Sample ID.:		1	2	5	2	1	2	5	1	1	1
				Sample Location:		RS-TP05	RS-TP04	RS-TP03	RS-TP02	RS-TP01	RS-HP02	RS-HP03	RS-HP03A	RS-HP04	RS-HP04C
				Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Top Depth (m):		0.5	0.3	1.4	0.3	0.3	0.5	1.1	0.5	0.4	0.4
Determinand	**Accred.**	**SOP**	**Type**	**Units**	**LOD**										
C2 Aromatic TPH >C7-C8	N	1675	2:1	µg/l	0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10
C2 Aromatic TPH >C8-C10	N	1675	2:1	µg/l	0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10
C2 Aromatic TPH >C10-C12	N	1675	2:1	µg/l	0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10
C2 Aromatic TPH >C12-C16	N	1675	2:1	µg/l	0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10
C2 Aromatic TPH >C16-C21	N	1675	2:1	µg/l	0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10
C2 Aromatic TPH >C21-C35	N	1675	2:1	µg/l	0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10
C2 Aromatic TPH >C35-C44	N	1675	2:1	µg/l	0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10
C2 Total Aromatic Hydrocarbons	N	1675	2:1	µg/l	5.0	[A] < 5.0	[A] < 5.0	[A] < 5.0	[A] < 5.0	[A] < 5.0	[A] < 5.0	[A] < 5.0	[A] < 5.0	[A] < 5.0	[A] < 5.0
Total Petroleum Hydrocarbons	N	1675	2:1	µg/l	10	[A] < 10	[A] < 10	[A] < 10	[A] < 10	[A] < 10	[A] < 10	[A] < 10	[A] < 10	[A] < 10	[A] < 10
Naphthalene	N	1700	2:1	µg/l	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Acenaphthylene	N	1700	2:1	µg/l	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Acenaphthene	N	1700	2:1	µg/l	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Fluorene	N	1700	2:1	µg/l	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Phenanthrene	N	1700	2:1	µg/l	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Anthracene	N	1700	2:1	µg/l	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Fluoranthene	N	1700	2:1	µg/l	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Pyrene	N	1700	2:1	µg/l	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Benzo[a]anthracene	N	1700	2:1	µg/l	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Chrysene	N	1700	2:1	µg/l	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Benzo[b]fluoranthene	N	1700	2:1	µg/l	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Benzo[k]fluoranthene	N	1700	2:1	µg/l	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Benzo[a]pyrene	N	1700	2:1	µg/l	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Indeno(1,2,3-c,d)Pyrene	N	1700	2:1	µg/l	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Dibenz(a,h)Anthracene	N	1700	2:1	µg/l	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Benzo[g,h,i]perylene	N	1700	2:1	µg/l	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Coronene	N	1700	2:1	µg/l	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Total Of 16 PAH's	N	1700	2:1	µg/l	0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Benzene	U	1760	2:1	µg/l	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
Toluene	U	1760	2:1	µg/l	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
Ethylbenzene	U	1760	2:1	µg/l	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
m & p-Xylene	U	1760	2:1	µg/l	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
o-Xylene	U	1760	2:1	µg/l	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
Methyl Tert-Butyl Ether	N	1760	2:1	µg/l	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
Total Phenols	U	1920	2:1	mg/l	0.030	< 0.030	< 0.030	< 0.030	< 0.030	< 0.030	< 0.030	< 0.030	< 0.030	< 0.030	< 0.030

Results - Leachate

Project: Q0341 Rock Street

Client: Quantum Geotechnic Ltd				**Chemtest Job No.:**		20-26944	20-26944	20-26944	20-26944	20-26944	20-26944
Quotation No.: Q20-19535				**Chemtest Sample ID.:**		1076149	1076150	1076153	1076154	1076156	1076158
				Client Sample ID.:		7	1	3	1	3	3
				Sample Location:		RS-HP04C	RS-HP05	RS-HP06	RS-HP07	RS-BH02	RS-BH04A
				Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Top Depth (m):		1.2	0.3	0.6	0.6	0.5	0.6
Determinand	**Accred.**	**SOP**	**Type**	**Units**	**LOD**						
pH	U	1010	2:1		N/A	8.3	8.5	8.4	8.0	8.2	8.2
Chemical Oxygen Demand	U	1100	2:1	mg O2/l	10	19	18	18	14	16	21
Ammoniacal Nitrogen	U	1220	2:1	mg/l	0.050	0.076	0.072	0.078	0.086	0.074	0.063
Nitrite	U	1220	2:1	mg/l	0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020
Nitrate	U	1220	2:1	mg/l	0.50	3.5	18	60	4.5	7.3	24
Sulphate	U	1220	2:1	mg/l	1.0	11	50	3.5	2.8	6.6	4.2
Cyanide (Total)	U	1300	2:1	mg/l	0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Cyanide (Free)	U	1300	2:1	mg/l	0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Cyanide (Complex)	U	1300	2:1	mg/l	0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Sulphide	U	1325	2:1	mg/l	0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Magnesium	U	1415	2:1	mg/l	0.50	2.7	5.1	0.92	< 0.50	2.3	2.8
Aluminium (Dissolved)	N	1450	2:1	µg/l	10	11	13	< 10	62	15	< 10
Arsenic (Dissolved)	U	1450	2:1	µg/l	1.0	4.5	12	< 1.0	< 1.0	1.4	< 1.0
Boron (Dissolved)	U	1450	2:1	µg/l	20	21	42	< 20	< 20	< 20	< 20
Barium (Dissolved)	U	1450	2:1	µg/l	5.0	20	29	7.4	< 5.0	54	25
Beryllium (Dissolved)	U	1450	2:1	µg/l	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cadmium (Dissolved)	U	1450	2:1	µg/l	0.080	< 0.080	< 0.080	< 0.080	< 0.080	< 0.080	< 0.080
Chromium (Dissolved)	U	1450	2:1	µg/l	1.0	1.5	5.1	< 1.0	< 1.0	1.1	< 1.0
Copper (Dissolved)	U	1450	2:1	µg/l	1.0	1.6	1.7	< 1.0	1.6	1.9	1.8
Manganese (Dissolved)	U	1450	2:1	µg/l	1.0	< 1.0	< 1.0	1.4	20	< 1.0	< 1.0
Molybdenum (Dissolved)	U	1450	2:1	µg/l	1.0	6.0	18	< 1.0	< 1.0	3.3	< 1.0
Nickel (Dissolved)	U	1450	2:1	µg/l	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Lead (Dissolved)	U	1450	2:1	µg/l	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Antimony (Dissolved)	U	1450	2:1	µg/l	1.0	< 1.0	1.9	< 1.0	< 1.0	< 1.0	< 1.0
Selenium (Dissolved)	U	1450	2:1	µg/l	1.0	< 1.0	4.2	< 1.0	< 1.0	1.5	< 1.0
Vanadium (Dissolved)	U	1450	2:1	µg/l	1.0	< 1.0	7.3	< 1.0	< 1.0	< 1.0	< 1.0
Zinc (Dissolved)	U	1450	2:1	µg/l	1.0	< 1.0	< 1.0	< 1.0	1.8	2.9	< 1.0
Mercury Low Level	U	1460	2:1	µg/l	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Iron (Dissolved)	N	1450	2:1	µg/l	20	65	57	62	310	100	81
Chromium (Hexavalent)	U	1490	2:1	µg/l	20	[A] < 20	[A] < 20	[A] < 20	[A] < 20	[A] < 20	[A] < 20
C2 Aliphatic TPH >C5-C6	N	1675	2:1	µg/l	0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10
C2 Aliphatic TPH >C6-C8	N	1675	2:1	µg/l	0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10
C2 Aliphatic TPH >C8-C10	N	1675	2:1	µg/l	0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10
C2 Aliphatic TPH >C10-C12	N	1675	2:1	µg/l	0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10
C2 Aliphatic TPH >C12-C16	N	1675	2:1	µg/l	0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10
C2 Aliphatic TPH >C16-C21	N	1675	2:1	µg/l	0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10
C2 Aliphatic TPH >C21-C35	N	1675	2:1	µg/l	0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10
C2 Aliphatic TPH >C35-C44	N	1675	2:1	µg/l	0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10
Total Aliphatic Hydrocarbons	N	1675	2:1	µg/l	5.0	[A] < 5.0	[A] < 5.0	[A] < 5.0	[A] < 5.0	[A] < 5.0	[A] < 5.0
C2 Aromatic TPH >C5-C7	N	1675	2:1	µg/l	0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10

Results - Leachate

Project: Q0341 Rock Street

Client: Quantum Geotechnic Ltd				**Chemtest Job No.:**		20-26944	20-26944	20-26944	20-26944	20-26944	20-26944
Quotation No.: Q20-19535				**Chemtest Sample ID.:**		1076149	1076150	1076153	1076154	1076156	1076158
				Client Sample ID.:		7	1	3	1	3	3
				Sample Location:		RS-HP04C	RS-HP05	RS-HP06	RS-HP07	RS-BH02	RS-BH04A
				Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Top Depth (m):		1.2	0.3	0.6	0.6	0.5	0.6
Determinand	**Accred.**	**SOP**	**Type**	**Units**	**LOD**						
C2 Aromatic TPH >C7-C8	N	1675	2:1	µg/l	0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10
C2 Aromatic TPH >C8-C10	N	1675	2:1	µg/l	0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10
C2 Aromatic TPH >C10-C12	N	1675	2:1	µg/l	0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10
C2 Aromatic TPH >C12-C16	N	1675	2:1	µg/l	0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10
C2 Aromatic TPH >C16-C21	N	1675	2:1	µg/l	0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10
C2 Aromatic TPH >C21-C35	N	1675	2:1	µg/l	0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10
C2 Aromatic TPH >C35-C44	N	1675	2:1	µg/l	0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10
C2 Total Aromatic Hydrocarbons	N	1675	2:1	µg/l	5.0	[A] < 5.0	[A] < 5.0	[A] < 5.0	[A] < 5.0	[A] < 5.0	[A] < 5.0
Total Petroleum Hydrocarbons	N	1675	2:1	µg/l	10	[A] < 10	[A] < 10	[A] < 10	[A] < 10	[A] < 10	[A] < 10
Naphthalene	N	1700	2:1	µg/l	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Acenaphthylene	N	1700	2:1	µg/l	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Acenaphthene	N	1700	2:1	µg/l	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Fluorene	N	1700	2:1	µg/l	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Phenanthrene	N	1700	2:1	µg/l	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Anthracene	N	1700	2:1	µg/l	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Fluoranthene	N	1700	2:1	µg/l	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Pyrene	N	1700	2:1	µg/l	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Benzo[a]anthracene	N	1700	2:1	µg/l	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Chrysene	N	1700	2:1	µg/l	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Benzo[b]fluoranthene	N	1700	2:1	µg/l	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Benzo[k]fluoranthene	N	1700	2:1	µg/l	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Benzo[a]pyrene	N	1700	2:1	µg/l	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Indeno(1,2,3-c,d)Pyrene	N	1700	2:1	µg/l	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Dibenz(a,h)Anthracene	N	1700	2:1	µg/l	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Benzo[g,h,i]perylene	N	1700	2:1	µg/l	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Coronene	N	1700	2:1	µg/l	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Total Of 16 PAH's	N	1700	2:1	µg/l	0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Benzene	U	1760	2:1	µg/l	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
Toluene	U	1760	2:1	µg/l	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
Ethylbenzene	U	1760	2:1	µg/l	1.0	[A] 1.8	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
m & p-Xylene	U	1760	2:1	µg/l	1.0	[A] 7.6	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
o-Xylene	U	1760	2:1	µg/l	1.0	[A] 15	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
Methyl Tert-Butyl Ether	N	1760	2:1	µg/l	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
Total Phenols	U	1920	2:1	mg/l	0.030	< 0.030	< 0.030	< 0.030	< 0.030	< 0.030	< 0.030

Results - Soil

Project: Q0341 Rock Street

Client: Quantum Geotechnic Ltd				**Chemtest Job No.:**	20-26944	20-26944	20-26944	20-26944	20-26944	20-26944	20-26944	20-26944	20-26944
Quotation No.: Q20-19535				**Chemtest Sample ID.:**	1076126	1076127	1076128	1076129	1076130	1076131	1076132	1076133	1076135
				Client Sample ID.:	1	2	4	1	3	5	2	1	4
				Sample Location:	RS-TP05	RS-TP04	RS-TP04	RS-TP03	RS-TP03	RS-TP03	RS-TP02	RS-TP01	RS-TP01
				Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Top Depth (m):	0.5	0.3	0.7	0.1	0.5	1.4	0.3	0.3	1.2
				Asbestos Lab:	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
ACM Type	U	2192		N/A	-	-	-	-	-	-	-	-	-
Asbestos Identification	U	2192		N/A	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
ACM Detection Stage	U	2192		N/A	-	-	-	-	-	-	-	-	-
Moisture	N	2030	%	0.020	18	12	16	4.2	14	9.7	20	6.9	5.4
Soil Colour	N	2040		N/A	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown
Other Material	N	2040		N/A	None	Stones	Stones	Stones	Stones	None	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand
pH	M	2010		4.0	[A] 6.8	[A] 6.9	[A] 7.6	[A] 8.8	[A] 8.5	[A] 8.2	[A] 8.9	[A] 9.3	[A] 8.7
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40	[A] < 0.40	[A] 0.74	[A] < 0.40	[A] < 0.40	[A] < 0.40	[A] < 0.40	[A] 0.77	[A] 0.50	[A] < 0.40
Magnesium (Water Soluble)	M	2120	mg/kg	20	[A] < 20	[A] < 20	[A] < 20	[A] < 20	[A] < 20	[A] < 20	[A] < 20	[A] < 20	[A] < 20
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.010	[A] 0.017	[A] 0.014	[A] 0.012	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] 0.070	[A] 0.054	[A] < 0.010
Nitrite (Extractable)	N	2220	mg/kg	0.10	< 0.10	0.24	< 0.10	< 0.10	0.11	< 0.10	< 0.10	< 0.10	< 0.10
Nitrate (Water Soluble)	N	2220	g/l	0.010	< 0.010	0.017	0.022	< 0.010	< 0.010	< 0.010	0.017	< 0.010	0.016
Cyanide (Complex)	M	2300	mg/kg	0.50	[A] < 0.50	[A] < 0.50	[A] < 0.50	[A] < 0.50	[A] < 0.50	[A] < 0.50	[A] < 0.50	[A] < 0.50	[A] < 0.50
Cyanide (Free)	M	2300	mg/kg	0.50	[A] < 0.50	[A] < 0.50	[A] < 0.50	[A] < 0.50	[A] < 0.50	[A] < 0.50	[A] < 0.50	[A] < 0.50	[A] < 0.50
Cyanide (Total)	M	2300	mg/kg	0.50	[A] < 0.50	[A] < 0.50	[A] < 0.50	[A] < 0.50	[A] < 0.50	[A] < 0.50	[A] < 0.50	[A] < 0.50	[A] < 0.50
Sulphide (Easily Liberatable)	N	2325	mg/kg	0.50	[A] 5.0	[A] 3.9	[A] 1.8	[A] 2.0	[A] 5.0	[A] 2.4	[A] 400	[A] 110	[A] 56
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	[A] 0.73	[A] 4.4	[A] 2.5	[A] < 0.50	[A] 1.7	[A] 1.2	[A] 2.6	[A] 0.73	[A] 1.0
Aluminium (Total)	N	2430	mg/kg	100	[A] 6200	[A] 8000	[A] 11000	[A] 2100	[A] 7600	[A] 10000	[A] 13000	[A] 14000	[A] 11000
Iron (Total)	N	2430	mg/kg	100	[A] 17000	[A] 21000	[A] 26000	[A] 13000	[A] 19000	[A] 20000	[A] 19000	[A] 26000	[A] 25000
Sulphate (Total)	M	2430	mg/kg	100	[A] 190	[A] 1200	[A] 310	[A] 390	[A] 820	[A] 510	[A] 4700	[A] 3700	[A] 410
Arsenic	M	2450	mg/kg	1.0	5.5	57	11	26	31	8.0	11	17	14
Barium	M	2450	mg/kg	10	40	210	99	23	380	120	430	240	88
Beryllium	U	2450	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.5	2.0	1.0
Cadmium	M	2450	mg/kg	0.10	0.10	2.2	0.24	0.15	0.85	< 0.10	0.20	0.55	0.23
Chromium	M	2450	mg/kg	1.0	8.9	15	15	5.4	15	14	21	21	18
Manganese	M	2450	mg/kg	5.0	950	1500	2000	610	1100	1400	1300	2300	840
Molybdenum	M	2450	mg/kg	2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Antimony	N	2450	mg/kg	2.0	< 2.0	2.1	< 2.0	< 2.0	3.7	< 2.0	< 2.0	< 2.0	< 2.0
Copper	M	2450	mg/kg	0.50	11	130	17	7.4	51	15	27	47	31
Mercury	M	2450	mg/kg	0.10	< 0.10	0.25	< 0.10	< 0.10	0.28	< 0.10	0.10	< 0.10	< 0.10
Nickel	M	2450	mg/kg	0.50	11	26	20	9.9	27	16	22	36	30
Lead	M	2450	mg/kg	0.50	14	110	27	12	130	24	26	48	24
Selenium	M	2450	mg/kg	0.20	0.29	0.93	< 0.20	< 0.20	0.60	0.29	0.38	0.74	0.44
Vanadium	U	2450	mg/kg	5.0	8.4	19	16	21	18	15	26	31	14
Zinc	M	2450	mg/kg	0.50	36	230	67	32	180	55	67	140	88
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Organic Matter	M	2625	%	0.40	[A] 0.83	[A] 11	[A] 1.7	[A] 0.60	[A] 17	[A] 2.1	[A] 16	[A] 11	[A] 3.3

Results - Soil

Project: Q0341 Rock Street

Client: Quantum Geotechnic Ltd			**Chemtest Job No.:**		20-26944	20-26944	20-26944	20-26944	20-26944	20-26944	20-26944	20-26944	20-26944
Quotation No.: Q20-19535			**Chemtest Sample ID.:**		1076126	1076127	1076128	1076129	1076130	1076131	1076132	1076133	1076135
			Client Sample ID.:		1	2	4	1	3	5	2	1	4
			Sample Location:		RS-TP05	RS-TP04	RS-TP04	RS-TP03	RS-TP03	RS-TP03	RS-TP02	RS-TP01	RS-TP01
			Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Top Depth (m):		0.5	0.3	0.7	0.1	0.5	1.4	0.3	0.3	1.2
			Asbestos Lab:		DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
Aliphatic TPH >C5-C6	N	2680	mg/kg	0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010
Aliphatic TPH >C6-C8	N	2680	mg/kg	0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010
Aliphatic TPH >C8-C10	N	2680	mg/kg	0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] 4.1	[A] < 0.10	[A] < 0.10
Aliphatic TPH >C10-C12	N	2680	mg/kg	0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] 2.2	[A] < 0.10	[A] < 0.10
Aliphatic TPH >C12-C16	N	2680	mg/kg	0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] 6.8	[A] < 0.10	[A] < 0.10
Aliphatic TPH >C16-C21	N	2680	mg/kg	0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] 6.9	[A] < 0.10	[A] < 0.10
Aliphatic TPH >C21-C35	N	2680	mg/kg	0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] 42	[A] < 0.10	[A] < 0.10
Aliphatic TPH >C35-C44	N	2680	mg/kg	0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] 16	[A] < 0.10	[A] < 0.10
Total Aliphatic Hydrocarbons	N	2680	mg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] 77	[A] < 1.0	[A] < 1.0
Aromatic TPH >C5-C7	N	2680	mg/kg	0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010
Aromatic TPH >C7-C8	N	2680	mg/kg	0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010
Aromatic TPH >C8-C10	N	2680	mg/kg	0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] 3.4	[A] < 0.10	[A] < 0.10
Aromatic TPH >C10-C12	N	2680	mg/kg	0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] 6.7	[A] < 0.10	[A] < 0.10
Aromatic TPH >C12-C16	N	2680	mg/kg	0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] 61	[A] < 0.10	[A] < 0.10
Aromatic TPH >C16-C21	N	2680	mg/kg	0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] 65	[A] < 0.10	[A] < 0.10
Aromatic TPH >C21-C35	N	2680	mg/kg	0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] 320	[A] < 0.10	[A] < 0.10
Aromatic TPH >C35-C44	N	2680	mg/kg	0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] 36	[A] < 0.10	[A] < 0.10
Total Aromatic Hydrocarbons	N	2680	mg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] 490	[A] < 1.0	[A] < 1.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	2.0	[A] < 2.0	[A] < 2.0	[A] < 2.0	[A] < 2.0	[A] < 2.0	[A] < 2.0	[A] 570	[A] < 2.0	[A] < 2.0
Naphthalene	N	2700	mg/kg	0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] 6.6	[A] < 0.010	[A] < 0.010
Acenaphthylene	N	2700	mg/kg	0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] 1.0	[A] < 0.010	[A] < 0.010
Acenaphthene	N	2700	mg/kg	0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] 26	[A] < 0.010	[A] < 0.010
Fluorene	N	2700	mg/kg	0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] 18	[A] < 0.010	[A] < 0.010
Phenanthrene	N	2700	mg/kg	0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] 1.3	[A] 1.3	[A] 31	[A] < 0.010	[A] < 0.010
Anthracene	N	2700	mg/kg	0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] 0.49	[A] 0.39	[A] 8.5	[A] < 0.010	[A] < 0.010
Fluoranthene	N	2700	mg/kg	0.010	[A] < 0.010	[A] 1.4	[A] < 0.010	[A] < 0.010	[A] 4.0	[A] 1.1	[A] 26	[A] < 0.010	[A] 0.42
Pyrene	N	2700	mg/kg	0.010	[A] < 0.010	[A] 1.5	[A] < 0.010	[A] < 0.010	[A] 3.6	[A] 0.97	[A] 21	[A] < 0.010	[A] 0.45
Benzo[a]anthracene	N	2700	mg/kg	0.010	[A] < 0.010	[A] 1.2	[A] < 0.010	[A] < 0.010	[A] 2.7	[A] 1.0	[A] 15	[A] < 0.010	[A] < 0.010
Chrysene	N	2700	mg/kg	0.010	[A] < 0.010	[A] 1.7	[A] < 0.010	[A] < 0.010	[A] 5.0	[A] 1.3	[A] 16	[A] < 0.010	[A] < 0.010
Benzo[b]fluoranthene	N	2700	mg/kg	0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] 6.5	[A] 0.60	[A] 20	[A] < 0.010	[A] < 0.010
Benzo[k]fluoranthene	N	2700	mg/kg	0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] 2.4	[A] 0.23	[A] 7.2	[A] < 0.010	[A] < 0.010
Benzo[a]pyrene	N	2700	mg/kg	0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] 3.8	[A] 0.58	[A] 13	[A] < 0.010	[A] < 0.010
Indeno(1,2,3-c,d)Pyrene	N	2700	mg/kg	0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] 2.2	[A] 0.21	[A] 8.7	[A] < 0.010	[A] < 0.010
Dibenz(a,h)Anthracene	N	2700	mg/kg	0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] 1.1	[A] 0.12	[A] 4.4	[A] < 0.010	[A] < 0.010
Benzo[g,h,i]perylene	N	2700	mg/kg	0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] 2.6	[A] 0.35	[A] 7.7	[A] < 0.010	[A] < 0.010
Coronene	N	2700	mg/kg	0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010
Total Of 17 PAH's	N	2700	mg/kg	0.20	[A] < 0.20	[A] 5.8	[A] < 0.20	[A] < 0.20	[A] 36	[A] 8.2	[A] 230	[A] < 0.20	[A] 0.87
Benzene	M	2760	µg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
Toluene	M	2760	µg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0

Results - Soil

Project: Q0341 Rock Street

Client: Quantum Geotechnic Ltd			**Chemtest Job No.:**		20-26944	20-26944	20-26944	20-26944	20-26944	20-26944	20-26944	20-26944	20-26944
Quotation No.: Q20-19535			**Chemtest Sample ID.:**		1076126	1076127	1076128	1076129	1076130	1076131	1076132	1076133	1076135
			Client Sample ID.:		1	2	4	1	3	5	2	1	4
			Sample Location:		RS-TP05	RS-TP04	RS-TP04	RS-TP03	RS-TP03	RS-TP03	RS-TP02	RS-TP01	RS-TP01
			Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Top Depth (m):		0.5	0.3	0.7	0.1	0.5	1.4	0.3	0.3	1.2
			Asbestos Lab:		DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
Ethylbenzene	M	2760	µg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
m & p-Xylene	M	2760	µg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
o-Xylene	M	2760	µg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
Total Phenols	M	2920	mg/kg	0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	0.67	< 0.30	< 0.30

Results - Soil

Project: Q0341 Rock Street

Client: Quantum Geotechnic Ltd				**Chemtest Job No.:**	20-26944	20-26944	20-26944	20-26944	20-26944	20-26944	20-26944	20-26944	20-26944
Quotation No.: Q20-19535				**Chemtest Sample ID.:**	1076136	1076138	1076139	1076140	1076142	1076143	1076144	1076145	1076147
				Client Sample ID.:	7	2	4	1	5	1	1	1	1
				Sample Location:	RS-TP01	RS-HP02	RS-HP02	RS-HP03	RS-HP03	RS-HP03A	RS-HP04	RS-HP04B	RS-HP04C
				Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Top Depth (m):	2.0	0.5	1.3	0.3	1.1	0.5	0.4	0.3	0.4
				Asbestos Lab:	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
ACM Type	U	2192		N/A	-	-	-	-	-	-	-	-	-
Asbestos Identification	U	2192		N/A	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
ACM Detection Stage	U	2192		N/A	-	-	-	-	-	-	-	-	-
Moisture	N	2030	%	0.020	21	8.6	16	7.9	11	5.1	6.4	3.6	10
Soil Colour	N	2040		N/A	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Clay	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand
pH	M	2010		4.0	[A] 7.6	[A] 7.8	[A] 8.1	[A] 8.9	[A] 8.3	[A] 8.9	[A] 8.7	[A] 9.4	[A] 8.5
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40	[A] 0.44	[A] < 0.40	[A] < 0.40	[A] < 0.40	[A] 0.44	[A] < 0.40	[A] < 0.40	[A] 0.41	[A] < 0.40
Magnesium (Water Soluble)	M	2120	mg/kg	20	[A] < 20	[A] < 20	[A] < 20	[A] < 20	[A] < 20	[A] < 20	[A] < 20	[A] < 20	[A] < 20
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.010	[A] < 0.010	[A] 0.010	[A] 0.020	[A] 0.029	[A] 0.013	[A] < 0.010	[A] 0.016	[A] 0.021	[A] < 0.010
Nitrite (Extractable)	N	2220	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nitrate (Water Soluble)	N	2220	g/l	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Cyanide (Complex)	M	2300	mg/kg	0.50	[A] < 0.50	[A] < 0.50	[A] < 0.50	[A] < 0.50	[A] < 0.50	[A] < 0.50	[A] < 0.50	[A] < 0.50	[A] < 0.50
Cyanide (Free)	M	2300	mg/kg	0.50	[A] < 0.50	[A] < 0.50	[A] < 0.50	[A] < 0.50	[A] < 0.50	[A] < 0.50	[A] < 0.50	[A] < 0.50	[A] < 0.50
Cyanide (Total)	M	2300	mg/kg	0.50	[A] < 0.50	[A] < 0.50	[A] < 0.50	[A] < 0.50	[A] < 0.50	[A] < 0.50	[A] < 0.50	[A] < 0.50	[A] < 0.50
Sulphide (Easily Liberatable)	N	2325	mg/kg	0.50	[A] 8.3	[A] 17	[A] 11	[A] 15	[A] 6.9	[A] 5.1	[A] 71	[A] 28	[A] 19
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	[A] 23	[A] 5.1	[A] 2.7	[A] 0.59	[A] 1.7	[A] 0.72	[A] 1.9	[A] 0.72	[A] 0.74
Aluminium (Total)	N	2430	mg/kg	100	[A] 11000	[A] 7800	[A] 10000	[A] 6700	[A] 7500	[A] 1900	[A] 6000	[A] 3000	[A] 4900
Iron (Total)	N	2430	mg/kg	100	[A] 21000	[A] 21000	[A] 23000	[A] 18000	[A] 18000	[A] 7200	[A] 25000	[A] 12000	[A] 12000
Sulphate (Total)	M	2430	mg/kg	100	[A] 360	[A] 1100	[A] 1600	[A] 960	[A] 860	[A] 1000	[A] 2900	[A] 1300	[A] 1100
Arsenic	M	2450	mg/kg	1.0	9.0	18	18	17	53	16	32	16	51
Barium	M	2450	mg/kg	10	110	140	270	480	320	810	260	240	680
Beryllium	U	2450	mg/kg	1.0	< 1.0	< 1.0	1.4	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cadmium	M	2450	mg/kg	0.10	< 0.10	0.61	0.66	0.58	1.6	0.29	0.59	0.34	2.1
Chromium	M	2450	mg/kg	1.0	19	14	17	20	16	7.9	86	93	14
Manganese	M	2450	mg/kg	5.0	1100	780	810	850	1100	290	3700	1800	600
Molybdenum	M	2450	mg/kg	2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Antimony	N	2450	mg/kg	2.0	< 2.0	< 2.0	2.4	< 2.0	4.5	< 2.0	2.5	< 2.0	5.0
Copper	M	2450	mg/kg	0.50	19	46	55	23	49	8.9	45	27	82
Mercury	M	2450	mg/kg	0.10	< 0.10	0.15	0.12	0.11	0.32	< 0.10	0.22	0.31	0.29
Nickel	M	2450	mg/kg	0.50	20	29	37	32	27	8.2	20	8.3	19
Lead	M	2450	mg/kg	0.50	24	80	86	45	130	30	260	64	660
Selenium	M	2450	mg/kg	0.20	0.31	0.67	0.98	< 0.20	0.68	< 0.20	0.36	< 0.20	0.26
Vanadium	U	2450	mg/kg	5.0	19	13	14	15	18	5.4	89	62	17
Zinc	M	2450	mg/kg	0.50	65	150	170	340	180	51	440	72	2100
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Organic Matter	M	2625	%	0.40	[A] 1.3	[A] 14	[A] 16	[A] 3.6	[A] 22	[A] 5.9	[A] 11	[A] 12	[A] 48

Results - Soil

Project: Q0341 Rock Street

Client: Quantum Geotechnic Ltd			**Chemtest Job No.:**		20-26944	20-26944	20-26944	20-26944	20-26944	20-26944	20-26944	20-26944	20-26944
Quotation No.: Q20-19535			**Chemtest Sample ID.:**		1076136	1076138	1076139	1076140	1076142	1076143	1076144	1076145	1076147
			Client Sample ID.:		7	2	4	1	5	1	1	1	1
			Sample Location:		RS-TP01	RS-HP02	RS-HP02	RS-HP03	RS-HP03	RS-HP03A	RS-HP04	RS-HP04B	RS-HP04C
			Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Top Depth (m):		2.0	0.5	1.3	0.3	1.1	0.5	0.4	0.3	0.4
			Asbestos Lab:		DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
Aliphatic TPH >C5-C6	N	2680	mg/kg	0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010
Aliphatic TPH >C6-C8	N	2680	mg/kg	0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010
Aliphatic TPH >C8-C10	N	2680	mg/kg	0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] 30	[A] < 0.10
Aliphatic TPH >C10-C12	N	2680	mg/kg	0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] 10	[A] < 0.10
Aliphatic TPH >C12-C16	N	2680	mg/kg	0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] 32	[A] < 0.10
Aliphatic TPH >C16-C21	N	2680	mg/kg	0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] 72	[A] < 0.10
Aliphatic TPH >C21-C35	N	2680	mg/kg	0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] 46	[A] 310	[A] < 0.10
Aliphatic TPH >C35-C44	N	2680	mg/kg	0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] 160	[A] 300	[A] < 0.10
Total Aliphatic Hydrocarbons	N	2680	mg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] 200	[A] 750	[A] < 1.0
Aromatic TPH >C5-C7	N	2680	mg/kg	0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010
Aromatic TPH >C7-C8	N	2680	mg/kg	0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010
Aromatic TPH >C8-C10	N	2680	mg/kg	0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] 24	[A] < 0.10
Aromatic TPH >C10-C12	N	2680	mg/kg	0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] 32	[A] < 0.10
Aromatic TPH >C12-C16	N	2680	mg/kg	0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] 460	[A] < 0.10
Aromatic TPH >C16-C21	N	2680	mg/kg	0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] 200	[A] 2200	[A] 5.0
Aromatic TPH >C21-C35	N	2680	mg/kg	0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] 1900	[A] 760	[A] 62
Aromatic TPH >C35-C44	N	2680	mg/kg	0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] 38	[A] < 0.10	[A] < 0.10
Total Aromatic Hydrocarbons	N	2680	mg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] 2100	[A] 3500	[A] 67
Total Petroleum Hydrocarbons	N	2680	mg/kg	2.0	[A] < 2.0	[A] < 2.0	[A] < 2.0	[A] < 2.0	[A] < 2.0	[A] < 2.0	[A] 2300	[A] 4200	[A] 67
Naphthalene	N	2700	mg/kg	0.010	[A] < 0.010	[A] 0.23	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] 0.28	[A] 1.1	[A] 1.6	[A] 0.80
Acenaphthylene	N	2700	mg/kg	0.010	[A] < 0.010	[A] 0.12	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] 0.41	[A] 2.8	[A] 9.1	[A] 2.8
Acenaphthene	N	2700	mg/kg	0.010	[A] < 0.010	[A] 0.45	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] 4.3	[A] 3.3	[A] 57	[A] 2.8
Fluorene	N	2700	mg/kg	0.010	[A] < 0.010	[A] 0.12	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] 3.4	[A] 3.6	[A] 69	[A] 3.0
Phenanthrene	N	2700	mg/kg	0.010	[A] < 0.010	[A] 0.93	[A] 0.98	[A] < 0.010	[A] 1.2	[A] 17	[A] 24	[A] 830	[A] 22
Anthracene	N	2700	mg/kg	0.010	[A] < 0.010	[A] 0.21	[A] 0.23	[A] < 0.010	[A] 0.43	[A] 4.4	[A] 9.4	[A] 25	[A] 8.6
Fluoranthene	N	2700	mg/kg	0.010	[A] < 0.010	[A] 1.5	[A] 1.1	[A] 0.47	[A] 2.5	[A] 24	[A] 62	[A] 1100	[A] 58
Pyrene	N	2700	mg/kg	0.010	[A] < 0.010	[A] 1.4	[A] 1.0	[A] 0.54	[A] 2.2	[A] 21	[A] 57	[A] 920	[A] 52
Benzo[a]anthracene	N	2700	mg/kg	0.010	[A] < 0.010	[A] 1.1	[A] 0.58	[A] 0.32	[A] 1.5	[A] 16	[A] 44	[A] 620	[A] 37
Chrysene	N	2700	mg/kg	0.010	[A] < 0.010	[A] 1.1	[A] 0.68	[A] 0.52	[A] 1.6	[A] 17	[A] 42	[A] 590	[A] 42
Benzo[b]fluoranthene	N	2700	mg/kg	0.010	[A] < 0.010	[A] 1.8	[A] 0.87	[A] < 0.010	[A] 1.9	[A] 21	[A] 60	[A] 770	[A] 47
Benzo[k]fluoranthene	N	2700	mg/kg	0.010	[A] < 0.010	[A] 0.51	[A] 0.25	[A] < 0.010	[A] 0.55	[A] 7.2	[A] 22	[A] 270	[A] 21
Benzo[a]pyrene	N	2700	mg/kg	0.010	[A] < 0.010	[A] 1.1	[A] 0.57	[A] < 0.010	[A] 1.1	[A] 13	[A] 40	[A] 470	[A] 38
Indeno(1,2,3-c,d)Pyrene	N	2700	mg/kg	0.010	[A] < 0.010	[A] 0.72	[A] 0.43	[A] < 0.010	[A] 0.84	[A] 8.9	[A] 28	[A] 320	[A] 33
Dibenz(a,h)Anthracene	N	2700	mg/kg	0.010	[A] < 0.010	[A] 0.25	[A] 0.12	[A] < 0.010	[A] 0.22	[A] 3.5	[A] 10	[A] 64	[A] 9.4
Benzo[g,h,i]perylene	N	2700	mg/kg	0.010	[A] < 0.010	[A] 0.81	[A] 0.66	[A] < 0.010	[A] 0.99	[A] 7.3	[A] 22	[A] 280	[A] 37
Coronene	N	2700	mg/kg	0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010
Total Of 17 PAH's	N	2700	mg/kg	0.20	[A] < 0.20	[A] 12	[A] 7.5	[A] 1.9	[A] 15	[A] 170	[A] 430	[A] 6400	[A] 410
Benzene	M	2760	µg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
Toluene	M	2760	µg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0

Results - Soil

Project: Q0341 Rock Street

Client: Quantum Geotechnic Ltd			**Chemtest Job No.:**		20-26944	20-26944	20-26944	20-26944	20-26944	20-26944	20-26944	20-26944	20-26944
Quotation No.: Q20-19535			**Chemtest Sample ID.:**		1076136	1076138	1076139	1076140	1076142	1076143	1076144	1076145	1076147
			Client Sample ID.:		7	2	4	1	5	1	1	1	1
			Sample Location:		RS-TP01	RS-HP02	RS-HP02	RS-HP03	RS-HP03	RS-HP03A	RS-HP04	RS-HP04B	RS-HP04C
			Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Top Depth (m):		2.0	0.5	1.3	0.3	1.1	0.5	0.4	0.3	0.4
			Asbestos Lab:		DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
Ethylbenzene	M	2760	µg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
m & p-Xylene	M	2760	µg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
o-Xylene	M	2760	µg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
Total Phenols	M	2920	mg/kg	0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30

Results - Soil

Project: Q0341 Rock Street

Client: Quantum Geotechnic Ltd				**Chemtest Job No.:**	20-26944	20-26944	20-26944	20-26944	20-26944	20-26944	20-26944	20-26944	20-26944
Quotation No.: Q20-19535				**Chemtest Sample ID.:**	1076149	1076150	1076151	1076152	1076153	1076154	1076156	1076157	1076158
				Client Sample ID.:	7	1	3	1	3	1	3	1	3
				Sample Location:	RS-HP04C	RS-HP05	RS-HP05	RS-HP06	RS-HP06	RS-HP07	RS-BH02	RS-BH04A	RS-BH04A
				Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
				Top Depth (m):	1.2	0.3	0.6	0.3	0.6	0.6	0.5	0.3	0.6
				Asbestos Lab:	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
ACM Type	U	2192		N/A	-	-	-	-	-	-	-	-	-
Asbestos Identification	U	2192		N/A	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
ACM Detection Stage	U	2192		N/A	-	-	-	-	-	-	-	-	-
Moisture	N	2030	%	0.020	7.6	9.8	16	26	15	5.8	11	19	19
Soil Colour	N	2040		N/A	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Sand	Sand	Clay	Sand	Sand	Sand	Sand	Sand	Sand
pH	M	2010		4.0	[A] 9.6	[A] 9.0	[A] 8.5	[A] 8.3	[A] 7.7	[A] 7.1	[A] 8.6	[A] 8.3	[A] 8.2
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40	[A] < 0.40	[A] 0.47	[A] < 0.40	[A] < 0.40	[A] < 0.40	[A] < 0.40	[A] < 0.40	[A] < 0.40	[A] < 0.40
Magnesium (Water Soluble)	M	2120	mg/kg	20	[A] < 20	[A] < 20	[A] < 20	[A] < 20	[A] < 20	[A] < 20	[A] < 20	[A] < 20	[A] < 20
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.010	[A] 0.039	[A] 0.048	[A] < 0.010	[A] 0.028	[A] 0.011	[A] 0.040	[A] < 0.010	[A] 0.010	[A] 0.011
Nitrite (Extractable)	N	2220	mg/kg	0.10	< 0.10	< 0.10	< 0.10	0.14	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nitrate (Water Soluble)	N	2220	g/l	0.010	< 0.010	0.012	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Cyanide (Complex)	M	2300	mg/kg	0.50	[A] < 0.50	[A] < 0.50	[A] < 0.50	[A] < 0.50	[A] < 0.50	[A] < 0.50	[A] < 0.50	[A] 1.4	[A] < 0.50
Cyanide (Free)	M	2300	mg/kg	0.50	[A] < 0.50	[A] < 0.50	[A] < 0.50	[A] < 0.50	[A] < 0.50	[A] < 0.50	[A] < 0.50	[A] < 0.50	[A] < 0.50
Cyanide (Total)	M	2300	mg/kg	0.50	[A] < 0.50	[A] < 0.50	[A] < 0.50	[A] < 0.50	[A] < 0.50	[A] < 0.50	[A] < 0.50	[A] 1.4	[A] < 0.50
Sulphide (Easily Liberatable)	N	2325	mg/kg	0.50	[A] 220	[A] 50	[A] 7.8	[A] 0.83	[A] 0.97	[A] 1.9	[A] 0.91	[A] 9.0	[A] 7.3
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	[A] 0.76	[A] 0.72	[A] 0.65	[A] 2.2	[A] 1.7	[A] 3.0	[A] 0.86	[A] 3.0	[A] 3.7
Aluminium (Total)	N	2430	mg/kg	100	[A] 9200	[A] 8900	[A] 6700	[A] 7500	[A] 7800	[A] 9200	[A] 7100	[A] 11000	[A] 8400
Iron (Total)	N	2430	mg/kg	100	[A] 18000	[A] 20000	[A] 18000	[A] 22000	[A] 24000	[A] 22000	[A] 19000	[A] 23000	[A] 23000
Sulphate (Total)	M	2430	mg/kg	100	[A] 2200	[A] 1900	[A] 360	[A] 1500	[A] 200	[A] 1900	[A] 1500	[A] 1100	[A] 780
Arsenic	M	2450	mg/kg	1.0	23	39	20	29	7.4	22	26	37	29
Barium	M	2450	mg/kg	10	380	420	110	410	81	110	330	340	140
Beryllium	U	2450	mg/kg	1.0	1.1	1.1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.1	< 1.0
Cadmium	M	2450	mg/kg	0.10	0.23	0.99	0.16	0.71	0.22	0.44	0.59	1.1	1.4
Chromium	M	2450	mg/kg	1.0	13	61	12	14	12	17	15	19	14
Manganese	M	2450	mg/kg	5.0	1000	2400	1200	960	1400	1100	910	1200	1100
Molybdenum	M	2450	mg/kg	2.0	< 2.0	2.4	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Antimony	N	2450	mg/kg	2.0	< 2.0	3.7	< 2.0	2.7	< 2.0	< 2.0	2.3	3.5	< 2.0
Copper	M	2450	mg/kg	0.50	19	130	17	48	14	28	48	61	56
Mercury	M	2450	mg/kg	0.10	0.11	0.28	< 0.10	0.56	< 0.10	< 0.10	0.62	0.23	0.11
Nickel	M	2450	mg/kg	0.50	16	26	11	29	17	27	30	38	51
Lead	M	2450	mg/kg	0.50	70	330	28	120	20	36	90	130	63
Selenium	M	2450	mg/kg	0.20	< 0.20	0.32	0.21	0.25	< 0.20	0.52	0.42	0.70	0.47
Vanadium	U	2450	mg/kg	5.0	12	57	14	16	13	16	21	22	16
Zinc	M	2450	mg/kg	0.50	150	890	56	120	54	87	140	190	150
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Organic Matter	M	2625	%	0.40	[A] 1.9	[A] 17	[A] 3.6	[A] 36	[A] 1.4	[A] 2.8	[A] 26	[A] 24	[A] 9.1

Results - Soil

Project: Q0341 Rock Street

Client: Quantum Geotechnic Ltd			**Chemtest Job No.:**		20-26944	20-26944	20-26944	20-26944	20-26944	20-26944	20-26944	20-26944	20-26944
Quotation No.: Q20-19535			**Chemtest Sample ID.:**		1076149	1076150	1076151	1076152	1076153	1076154	1076156	1076157	1076158
			Client Sample ID.:		7	1	3	1	3	1	3	1	3
			Sample Location:		RS-HP04C	RS-HP05	RS-HP05	RS-HP06	RS-HP06	RS-HP07	RS-BH02	RS-BH04A	RS-BH04A
			Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Top Depth (m):		1.2	0.3	0.6	0.3	0.6	0.6	0.5	0.3	0.6
			Asbestos Lab:		DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
Aliphatic TPH >C5-C6	N	2680	mg/kg	0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010
Aliphatic TPH >C6-C8	N	2680	mg/kg	0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010
Aliphatic TPH >C8-C10	N	2680	mg/kg	0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10
Aliphatic TPH >C10-C12	N	2680	mg/kg	0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10
Aliphatic TPH >C12-C16	N	2680	mg/kg	0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10
Aliphatic TPH >C16-C21	N	2680	mg/kg	0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10
Aliphatic TPH >C21-C35	N	2680	mg/kg	0.10	[A] < 0.10	[A] 50	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10
Aliphatic TPH >C35-C44	N	2680	mg/kg	0.10	[A] < 0.10	[A] 160	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10
Total Aliphatic Hydrocarbons	N	2680	mg/kg	1.0	[A] < 1.0	[A] 210	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
Aromatic TPH >C5-C7	N	2680	mg/kg	0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010
Aromatic TPH >C7-C8	N	2680	mg/kg	0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010
Aromatic TPH >C8-C10	N	2680	mg/kg	0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10
Aromatic TPH >C10-C12	N	2680	mg/kg	0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10
Aromatic TPH >C12-C16	N	2680	mg/kg	0.10	[A] 16	[A] 6.3	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10
Aromatic TPH >C16-C21	N	2680	mg/kg	0.10	[A] 84	[A] 110	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10
Aromatic TPH >C21-C35	N	2680	mg/kg	0.10	[A] 870	[A] 2100	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] 110	[A] < 0.10
Aromatic TPH >C35-C44	N	2680	mg/kg	0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10	[A] < 0.10
Total Aromatic Hydrocarbons	N	2680	mg/kg	1.0	[A] 970	[A] 2200	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] 110	[A] < 1.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	2.0	[A] 970	[A] 2400	[A] < 2.0	[A] < 2.0	[A] < 2.0	[A] < 2.0	[A] < 2.0	[A] 110	[A] < 2.0
Naphthalene	N	2700	mg/kg	0.010	[A] 0.13	[A] 2.0	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010
Acenaphthylene	N	2700	mg/kg	0.010	[A] 0.57	[A] 11	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010
Acenaphthene	N	2700	mg/kg	0.010	[A] 0.95	[A] 1.2	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010
Fluorene	N	2700	mg/kg	0.010	[A] 0.81	[A] 2.1	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010
Phenanthrene	N	2700	mg/kg	0.010	[A] 5.9	[A] 14	[A] 1.0	[A] 0.65	[A] < 0.010	[A] < 0.010	[A] 0.71	[A] 1.2	[A] < 0.010
Anthracene	N	2700	mg/kg	0.010	[A] 2.1	[A] 10	[A] 0.53	[A] 0.12	[A] < 0.010	[A] < 0.010	[A] 0.11	[A] 0.38	[A] < 0.010
Fluoranthene	N	2700	mg/kg	0.010	[A] 14	[A] 58	[A] 3.0	[A] 0.98	[A] < 0.010	[A] 0.73	[A] 1.4	[A] 2.9	[A] < 0.010
Pyrene	N	2700	mg/kg	0.010	[A] 12	[A] 57	[A] 3.0	[A] 0.96	[A] < 0.010	[A] 0.74	[A] 1.3	[A] 2.8	[A] 0.14
Benzo[a]anthracene	N	2700	mg/kg	0.010	[A] 9.3	[A] 47	[A] 2.4	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] 0.85	[A] 0.61	[A] < 0.010
Chrysene	N	2700	mg/kg	0.010	[A] 11	[A] 40	[A] 2.5	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] 0.55	[A] 0.24	[A] < 0.010
Benzo[b]fluoranthene	N	2700	mg/kg	0.010	[A] 10	[A] 76	[A] 3.5	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] 1.1	[A] 3.6	[A] < 0.010
Benzo[k]fluoranthene	N	2700	mg/kg	0.010	[A] 4.3	[A] 27	[A] 1.3	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] 0.43	[A] 1.5	[A] < 0.010
Benzo[a]pyrene	N	2700	mg/kg	0.010	[A] 7.5	[A] 53	[A] 3.4	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] 0.68	[A] 2.5	[A] < 0.010
Indeno(1,2,3-c,d)Pyrene	N	2700	mg/kg	0.010	[A] 5.7	[A] 37	[A] 1.9	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] 0.82	[A] 1.9	[A] < 0.010
Dibenz(a,h)Anthracene	N	2700	mg/kg	0.010	[A] 3.1	[A] 12	[A] 0.58	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] 0.64	[A] 0.64	[A] < 0.010
Benzo[g,h,i]perylene	N	2700	mg/kg	0.010	[A] 4.5	[A] 35	[A] 2.6	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] 0.71	[A] 1.8	[A] < 0.010
Coronene	N	2700	mg/kg	0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010	[A] < 0.010
Total Of 17 PAH's	N	2700	mg/kg	0.20	[A] 92	[A] 480	[A] 26	[A] 2.7	[A] < 0.20	[A] 1.5	[A] 9.3	[A] 20	[A] < 0.20
Benzene	M	2760	µg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
Toluene	M	2760	µg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0

Results - Soil

Project: Q0341 Rock Street

Client: Quantum Geotechnic Ltd			**Chemtest Job No.:**		20-26944	20-26944	20-26944	20-26944	20-26944	20-26944	20-26944	20-26944	20-26944
Quotation No.: Q20-19535			**Chemtest Sample ID.:**		1076149	1076150	1076151	1076152	1076153	1076154	1076156	1076157	1076158
			Client Sample ID.:		7	1	3	1	3	1	3	1	3
			Sample Location:		RS-HP04C	RS-HP05	RS-HP05	RS-HP06	RS-HP06	RS-HP07	RS-BH02	RS-BH04A	RS-BH04A
			Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Top Depth (m):		1.2	0.3	0.6	0.3	0.6	0.6	0.5	0.3	0.6
			Asbestos Lab:		DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	**Accred.**	**SOP**	**Units**	**LOD**									
Ethylbenzene	M	2760	µg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
m & p-Xylene	M	2760	µg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
o-Xylene	M	2760	µg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0	[A] < 1.0
Total Phenols	M	2920	mg/kg	0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30

Results - Water

Project: Q0341 Rock Street

Client: Quantum Geotechnic Ltd			**Chemtest Job No.:**		20-26944	20-26944
Quotation No.: Q20-19535			**Chemtest Sample ID.:**		1076159	1076160
			Client Sample ID.:		1	2
			Sample Location:		Up Stream	Down Stream
			Sample Type:		WATER	WATER
Determinand	**Accred.**	**SOP**	**Units**	**LOD**		
pH	U	1010		N/A	[A] 8.3	[A] 8.5
Biochemical Oxygen Demand Low Level	N	1090	mg O2/l	1.0	[A] < 1.0	[A] < 1.0
Alkalinity (Total)	U	1220	mg/l	10	[A] 200	[A] 190
Chloride	U	1220	mg/l	1.0	[A] 10	[A] 20
Ammonia (Free)	U	1220	mg/l	0.050	[A] < 0.050	[A] < 0.050
Ammonium	U	1220	mg/l	0.050	[A] 0.055	[A] < 0.050
Ammoniacal Nitrogen	U	1220	mg/l	0.050	[A] < 0.050	[A] < 0.050
Nitrate	U	1220	mg/l	0.50	[A] 2.9	[A] 1.8
Phosphorus (Dissolved)	U	1220	mg/l	0.020	[A] 0.028	[A] 0.036
Sulphate	U	1220	mg/l	1.0	[A] 28	[A] 32
Cyanide (Total)	U	1300	mg/l	0.050	[A] < 0.050	[A] < 0.050
Cyanide (Free)	U	1300	mg/l	0.050	[A] < 0.050	[A] < 0.050
Sulphide	U	1325	mg/l	0.050	[A] < 0.050	[A] < 0.050
Calcium	U	1415	mg/l	5.0	[A] 58	[A] 48
Total Hardness as CaCO3	U	1270	mg/l	15	[A] 190	[A] 180
Aluminium (Dissolved)	N	1450	µg/l	10	[A] 13	[A] < 10
Arsenic (Dissolved)	U	1450	µg/l	1.0	[A] < 1.0	[A] < 1.0
Boron (Dissolved)	U	1450	µg/l	20	[A] 450	[A] 290
Barium (Dissolved)	U	1450	µg/l	5.0	[A] 52	[A] 46
Beryllium (Dissolved)	U	1450	µg/l	1.0	[A] < 1.0	[A] < 1.0
Cadmium (Dissolved)	U	1450	µg/l	0.080	[A] < 0.080	[A] < 0.080
Chromium (Dissolved)	U	1450	µg/l	1.0	[A] < 1.0	[A] < 1.0
Copper (Dissolved)	U	1450	µg/l	1.0	[A] 1.1	[A] 1.1
Iron (Dissolved)	N	1450	µg/l	20	55	70
Mercury (Dissolved)	U	1450	µg/l	0.50	[A] < 0.50	[A] < 0.50
Molybdenum (Dissolved)	U	1450	µg/l	1.0	[A] < 1.0	[A] < 1.0
Nickel (Dissolved)	U	1450	µg/l	1.0	[A] < 1.0	[A] < 1.0
Lead (Dissolved)	U	1450	µg/l	1.0	[A] < 1.0	[A] < 1.0
Antimony (Dissolved)	U	1450	µg/l	1.0	[A] < 1.0	[A] < 1.0
Selenium (Dissolved)	U	1450	µg/l	1.0	[A] < 1.0	[A] < 1.0
Vanadium (Dissolved)	U	1450	µg/l	1.0	[A] < 1.0	[A] < 1.0
Zinc (Dissolved)	U	1450	µg/l	1.0	[A] 4.6	[A] 3.3
Low-Level Chromium (Hexavalent)	U	1495	µg/l	0.10	[A] < 0.10	[A] 0.10
Dissolved Organic Carbon	U	1610	mg/l	2.0	4.8	5.5
Total Organic Carbon	U	1610	mg/l	2.0	3.9	5.4
Aliphatic TPH >C5-C6	N	1675	µg/l	0.10	[A] < 0.10	[A] < 0.10
Aliphatic TPH >C6-C8	N	1675	µg/l	0.10	[A] < 0.10	[A] < 0.10
Aliphatic TPH >C8-C10	N	1675	µg/l	0.10	[A] < 0.10	[A] < 0.10
Aliphatic TPH >C10-C12	N	1675	µg/l	0.10	[A] < 0.10	[A] < 0.10
Aliphatic TPH >C12-C16	N	1675	µg/l	0.10	[A] < 0.10	[A] < 0.10
Aliphatic TPH >C16-C21	N	1675	µg/l	0.10	[A] < 0.10	[A] < 0.10

Results - Water

Project: Q0341 Rock Street

Client: Quantum Geotechnic Ltd			**Chemtest Job No.:**		20-26944	20-26944
Quotation No.: Q20-19535			**Chemtest Sample ID.:**		1076159	1076160
			Client Sample ID.:		1	2
			Sample Location:		Up Stream	Down Stream
			Sample Type:		WATER	WATER
Determinand	**Accred.**	**SOP**	**Units**	**LOD**		
Aliphatic TPH >C21-C35	N	1675	µg/l	0.10	[A] < 0.10	[A] < 0.10
Aliphatic TPH >C35-C44	N	1675	µg/l	0.10	[A] < 0.10	[A] < 0.10
Total Aliphatic Hydrocarbons	N	1675	µg/l	5.0	[A] < 5.0	[A] < 5.0
Aromatic TPH >C5-C7	N	1675	µg/l	0.10	[A] < 0.10	[A] < 0.10
Aromatic TPH >C7-C8	N	1675	µg/l	0.10	[A] < 0.10	[A] < 0.10
Aromatic TPH >C8-C10	N	1675	µg/l	0.10	[A] < 0.10	[A] < 0.10
Aromatic TPH >C10-C12	N	1675	µg/l	0.10	[A] < 0.10	[A] < 0.10
Aromatic TPH >C12-C16	N	1675	µg/l	0.10	[A] < 0.10	[A] < 0.10
Aromatic TPH >C16-C21	N	1675	µg/l	0.10	[A] < 0.10	[A] < 0.10
Aromatic TPH >C21-C35	N	1675	µg/l	0.10	[A] < 0.10	[A] < 0.10
Aromatic TPH >C35-C44	N	1675	µg/l	0.10	[A] < 0.10	[A] < 0.10
Total Aromatic Hydrocarbons	N	1675	µg/l	5.0	[A] < 5.0	[A] < 5.0
Total Petroleum Hydrocarbons	N	1675	µg/l	10	[A] < 10	[A] < 10
Naphthalene	N	1700	µg/l	0.010	[A] < 0.010	[A] < 0.010
Acenaphthylene	N	1700	µg/l	0.010	[A] < 0.010	[A] < 0.010
Acenaphthene	N	1700	µg/l	0.010	[A] < 0.010	[A] < 0.010
Fluorene	N	1700	µg/l	0.010	[A] < 0.010	[A] < 0.010
Phenanthrene	N	1700	µg/l	0.010	[A] < 0.010	[A] < 0.010
Anthracene	N	1700	µg/l	0.010	[A] < 0.010	[A] < 0.010
Fluoranthene	N	1700	µg/l	0.010	[A] < 0.010	[A] < 0.010
Pyrene	N	1700	µg/l	0.010	[A] < 0.010	[A] < 0.010
Benzo[a]anthracene	N	1700	µg/l	0.010	[A] < 0.010	[A] < 0.010
Chrysene	N	1700	µg/l	0.010	[A] < 0.010	[A] < 0.010
Benzo[b]fluoranthene	N	1700	µg/l	0.010	[A] < 0.010	[A] < 0.010
Benzo[k]fluoranthene	N	1700	µg/l	0.010	[A] < 0.010	[A] < 0.010
Benzo[a]pyrene	N	1700	µg/l	0.010	[A] < 0.010	[A] < 0.010
Indeno(1,2,3-c,d)Pyrene	N	1700	µg/l	0.010	[A] < 0.010	[A] < 0.010
Dibenz(a,h)Anthracene	N	1700	µg/l	0.010	[A] < 0.010	[A] < 0.010
Benzo[g,h,i]perylene	N	1700	µg/l	0.010	[A] < 0.010	[A] < 0.010
Total Of 16 PAH's	N	1700	µg/l	0.20	[A] < 0.20	[A] < 0.20
Benzene	U	1760	µg/l	1.0	[A] < 1.0	[A] < 1.0
Toluene	U	1760	µg/l	1.0	[A] < 1.0	[A] < 1.0
Ethylbenzene	U	1760	µg/l	1.0	[A] < 1.0	[A] < 1.0
m & p-Xylene	U	1760	µg/l	1.0	[A] < 1.0	[A] < 1.0
o-Xylene	U	1760	µg/l	1.0	[A] < 1.0	[A] < 1.0
Total Phenols	U	1920	mg/l	0.030	[A] < 0.030	[A] < 0.030

Deviations

In accordance with UKAS Policy on Deviating Samples TPS 63. Chemtest have a procedure to ensure 'upon receipt of each sample a competent laboratory shall assess whether the sample is suitable with regard to the requested test(s)'. This policy and the respective holding times applied, can be supplied upon request.The reason a sample is declared as deviating is detailed below. Where applicable the analysis remains UKAS/MCERTs accredited but the results may be compromised.

Sample:	Sample Ref:	Sample ID:	Sample Location:	Sampled Date:	Deviation Code(s):	Containers Received:
1076126		1	RS-TP05		A	Amber Glass 250ml
1076126		1	RS-TP05		A	Amber Glass 60ml
1076126		1	RS-TP05		A	Plastic Tub 500g
1076127		2	RS-TP04		A	Amber Glass 250ml
1076127		2	RS-TP04		A	Amber Glass 60ml
1076127		2	RS-TP04		A	Plastic Tub 500g
1076128		4	RS-TP04		A	Amber Glass 250ml
1076128		4	RS-TP04		A	Amber Glass 60ml
1076128		4	RS-TP04		A	Plastic Tub 500g
1076129		1	RS-TP03		A	Amber Glass 250ml
1076129		1	RS-TP03		A	Amber Glass 60ml
1076129		1	RS-TP03		A	Plastic Tub 500g
1076130		3	RS-TP03		A	Amber Glass 250ml
1076130		3	RS-TP03		A	Amber Glass 60ml
1076130		3	RS-TP03		A	Plastic Tub 500g
1076131		5	RS-TP03		A	Amber Glass 250ml
1076131		5	RS-TP03		A	Amber Glass 60ml
1076131		5	RS-TP03		A	Plastic Tub 500g
1076132		2	RS-TP02		A	Amber Glass 250ml
1076132		2	RS-TP02		A	Amber Glass 60ml
1076132		2	RS-TP02		A	Plastic Tub 500g
1076133		1	RS-TP01		A	Amber Glass 250ml
1076133		1	RS-TP01		A	Amber Glass 60ml
1076133		1	RS-TP01		A	Plastic Tub 500g

Deviations

In accordance with UKAS Policy on Deviating Samples TPS 63. Chemtest have a procedure to ensure 'upon receipt of each sample a competent laboratory shall assess whether the sample is suitable with regard to the requested test(s)'. This policy and the respective holding times applied, can be supplied upon request.The reason a sample is declared as deviating is detailed below. Where applicable the analysis remains UKAS/MCERTs accredited but the results may be compromised.

Sample:	Sample Ref:	Sample ID:	Sample Location:	Sampled Date:	Deviation Code(s):	Containers Received:
1076135		4	RS-TP01		A	Amber Glass 250ml
1076135		4	RS-TP01		A	Amber Glass 60ml
1076135		4	RS-TP01		A	Plastic Tub 500g
1076136		7	RS-TP01		A	Amber Glass 250ml
1076136		7	RS-TP01		A	Amber Glass 60ml
1076136		7	RS-TP01		A	Plastic Tub 500g
1076138		2	RS-HP02		A	Amber Glass 250ml
1076138		2	RS-HP02		A	Amber Glass 60ml
1076138		2	RS-HP02		A	Plastic Tub 500g
1076139		4	RS-HP02		A	Amber Glass 250ml
1076139		4	RS-HP02		A	Amber Glass 60ml
1076139		4	RS-HP02		A	Plastic Tub 500g
1076140		1	RS-HP03		A	Amber Glass 250ml
1076140		1	RS-HP03		A	Amber Glass 60ml
1076140		1	RS-HP03		A	Plastic Tub 500g
1076142		5	RS-HP03		A	Amber Glass 250ml
1076142		5	RS-HP03		A	Amber Glass 60ml
1076142		5	RS-HP03		A	Plastic Tub 500g
1076143		1	RS-HP03A		A	Amber Glass 250ml
1076143		1	RS-HP03A		A	Amber Glass 60ml
1076143		1	RS-HP03A		A	Plastic Tub 500g
1076144		1	RS-HP04		A	Amber Glass 250ml
1076144		1	RS-HP04		A	Amber Glass 60ml
1076144		1	RS-HP04		A	Plastic Tub 500g

Deviations

In accordance with UKAS Policy on Deviating Samples TPS 63. Chemtest have a procedure to ensure 'upon receipt of each sample a competent laboratory shall assess whether the sample is suitable with regard to the requested test(s)'. This policy and the respective holding times applied, can be supplied upon request.The reason a sample is declared as deviating is detailed below. Where applicable the analysis remains UKAS/MCERTs accredited but the results may be compromised.

Sample:	Sample Ref:	Sample ID:	Sample Location:	Sampled Date:	Deviation Code(s):	Containers Received:
1076145		1	RS-HP04B		A	Amber Glass 250ml
1076145		1	RS-HP04B		A	Amber Glass 60ml
1076145		1	RS-HP04B		A	Plastic Tub 500g
1076147		1	RS-HP04C		A	Amber Glass 250ml
1076147		1	RS-HP04C		A	Amber Glass 60ml
1076147		1	RS-HP04C		A	Plastic Tub 500g
1076149		7	RS-HP04C		A	Amber Glass 250ml
1076149		7	RS-HP04C		A	Amber Glass 60ml
1076149		7	RS-HP04C		A	Plastic Tub 500g
1076150		1	RS-HP05		A	Amber Glass 250ml
1076150		1	RS-HP05		A	Amber Glass 60ml
1076150		1	RS-HP05		A	Plastic Tub 500g
1076151		3	RS-HP05		A	Amber Glass 250ml
1076151		3	RS-HP05		A	Amber Glass 60ml
1076151		3	RS-HP05		A	Plastic Tub 500g
1076152		1	RS-HP06		A	Amber Glass 250ml
1076152		1	RS-HP06		A	Amber Glass 60ml
1076152		1	RS-HP06		A	Plastic Tub 500g
1076153		3	RS-HP06		A	Amber Glass 250ml
1076153		3	RS-HP06		A	Amber Glass 60ml
1076153		3	RS-HP06		A	Plastic Tub 500g
1076154		1	RS-HP07		A	Amber Glass 250ml
1076154		1	RS-HP07		A	Amber Glass 60ml
1076154		1	RS-HP07		A	Plastic Tub 500g

Deviations

In accordance with UKAS Policy on Deviating Samples TPS 63. Chemtest have a procedure to ensure 'upon receipt of each sample a competent laboratory shall assess whether the sample is suitable with regard to the requested test(s)'. This policy and the respective holding times applied, can be supplied upon request.The reason a sample is declared as deviating is detailed below. Where applicable the analysis remains UKAS/MCERTs accredited but the results may be compromised.

Sample:	Sample Ref:	Sample ID:	Sample Location:	Sampled Date:	Deviation Code(s):	Containers Received:
1076156		3	RS-BH02		A	Amber Glass 250ml
1076156		3	RS-BH02		A	Amber Glass 60ml
1076156		3	RS-BH02		A	Plastic Tub 500g
1076157		1	RS-BH04A		A	Amber Glass 250ml
1076157		1	RS-BH04A		A	Amber Glass 60ml
1076157		1	RS-BH04A		A	Plastic Tub 500g
1076158		3	RS-BH04A		A	Amber Glass 250ml
1076158		3	RS-BH04A		A	Amber Glass 60ml
1076158		3	RS-BH04A		A	Plastic Tub 500g
1076159		1	Up Stream		A	Coloured Winchester 1000ml
1076159		1	Up Stream		A	EPA Vial 40ml
1076159		1	Up Stream		A	Plastic Bottle 1000ml
1076160		2	Down Stream		A	Coloured Winchester 1000ml
1076160		2	Down Stream		A	EPA Vial 40ml
1076160		2	Down Stream		A	Plastic Bottle 1000ml

Test Methods

SOP	Title	Parameters included	Method summary
1010	pH Value of Waters	pH	pH Meter
1090	Biochemical Oxygen Demand	Biochemical Oxygen demand (BOD)	Colorimetric determination of dissolved oxygen in seeded sample after 5 days incubation at 20°C.
1100	Chemical Oxygen Demand	Chemical Oxygen demand (COD)	Dichromate oxidation of organic matter in sample followed by colorimetric determination of residual Cr[VI].
1220	Anions, Alkalinity & Ammonium in Waters	Fluoride; Chloride; Nitrite; Nitrate; Total; Oxidisable Nitrogen (TON); Sulfate; Phosphate; Alkalinity; Ammonium	Automated colorimetric analysis using 'Aquakem 600' Discrete Analyser.
1270	Total Hardness of Waters	Total hardness	Calculation applied to calcium and magnesium results, expressed as mg l-1 CaCO3 equivalent.
1300	Cyanides & Thiocyanate in Waters	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Continuous Flow Analysis.
1325	Sulphide in Waters	Sulphides	Automated colorimetric analysis by 'Aquakem 600' Discrete Analyser using N,N–dimethyl-pphenylenediamine.
1415	Cations in Waters by ICP-MS	Sodium; Potassium; Calcium; Magnesium	Direct determination by inductively coupled plasma - mass spectrometry (ICP-MS).
1450	Metals in Waters by ICP-MS	Metals, including: Antimony; Arsenic; Barium; Beryllium; Boron; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Tin; Vanadium; Zinc	Filtration of samples followed by direct determination by inductively coupled plasma mass spectrometry (ICP-MS).
1460	Mercury low-level in Waters by AFS	Mercury	Atomic Fluorescence Spectrometry, with collimated UV source, wavelength 253.7 nm.
1490	Hexavalent Chromium in Waters	Chromium [VI]	Automated colorimetric analysis by 'Aquakem 600' Discrete Analyser using 1,5-diphenylcarbazide.
1495	Low Level Hexavalent Chromium in Waters	Chromium [VI]	Colorimetric determination of hexavalent chromium expressed as Cr (VI) µg/l in water, using Ion Chromatography and UV-visible spectrophotometry.
1610	Total/Dissolved Organic Carbon in Waters	Organic Carbon	TOC Analyser using Catalytic Oxidation
1675	TPH Aliphatic/Aromatic split in Waters by GC-FID(cf. Texas Method 1006 / TPH CWG)	Aliphatics: >C5–C6, >C6–C8, >C8– C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Pentane extraction / GCxGC FID detection
1700	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Waters by GC-FID	Acenaphthene; Acenaphthylene; Anthracene; Benzo[a]Anthracene; Benzo[a]Pyrene; Benzo[b]Fluoranthene; Benzo[ghi]Perylene; Benzo[k]Fluoranthene; Chrysene; Dibenz[ah]Anthracene; Fluoranthene; Fluorene; Indeno[123cd]Pyrene; Naphthalene; Phenanthrene; Pyrene	Dichloromethane extraction / GC-FID (GC-FID detection is non-selective and can be subject to interference from co-eluting compounds)
1760	Volatile Organic Compounds (VOCs) in Waters by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics. (cf. USEPA Method 8260)	Automated headspace gas chromatographic (GC) analysis of water samples with mass spectrometric (MS) detection of volatile organic compounds.
1920	Phenols in Waters by HPLC	Phenolic compounds including: Phenol, Cresols, Xylenols, Trimethylphenols Note: Chlorophenols are excluded.	Determination by High Performance Liquid Chromatography (HPLC) using electrochemical detection.
2010	pH Value of Soils	pH	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.

Test Methods

SOP	Title	Parameters included	Method summary
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2120	Water Soluble Boron, Sulphate, Magnesium & Chromium	Boron; Sulphate; Magnesium; Chromium	Aqueous extraction / ICP-OES
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2220	Water soluble Chloride in Soils	Chloride	Aqueous extraction and measurememnt by 'Aquakem 600' Discrete Analyser using ferric nitrate / mercuric thiocyanate.
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Allkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.
2325	Sulphide in Soils	Sulphide	Steam distillation with sulphuric acid / analysis by 'Aquakem 600' Discrete Analyser, using N,N–dimethyl-p-phenylenediamine.
2425	Extractable Ammonium in soils	Ammonium	Extraction with potassium chloride solution / analysis by 'Aquakem 600' Discrete Analyser using sodium salicylate and sodium dichloroisocyanurate.
2430	Total Sulphate in soils	Total Sulphate	Acid digestion followed by determination of sulphate in extract by ICP-OES.
2450	Acid Soluble Metals in Soils	Metals, including: Arsenic; Barium; Beryllium; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Vanadium; Zinc	Acid digestion followed by determination of metals in extract by ICP-MS.
2490	Hexavalent Chromium in Soils	Chromium [VI]	Soil extracts are prepared by extracting dried and ground soil samples into boiling water. Chromium [VI] is determined by 'Aquakem 600' Discrete Analyser using 1,5-diphenylcarbazide.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2700	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-FID	Acenaphthene; Acenaphthylene; Anthracene; Benzo[a]Anthracene; Benzo[a]Pyrene; Benzo[b]Fluoranthene; Benzo[ghi]Perylene; Benzo[k]Fluoranthene; Chrysene; Dibenz[ah]Anthracene; Fluoranthene; Fluorene; Indeno[123cd]Pyrene; Naphthalene; Phenanthrene; Pyrene	Dichloromethane extraction / GC-FID (GC-FID detection is non-selective and can be subject to interference from co-eluting compounds)
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.
640	Characterisation of Waste (Leaching C10)	Waste material including soil, sludges and granular waste	ComplianceTest for Leaching of Granular Waste Material and Sludge
650	Characterisation of Waste (Leaching WAC)	Waste material including soil, sludges and granular waste	ComplianceTest for Leaching of Granular Waste Material and Sludge

Report Information

Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"

Comments or interpretations are beyond the scope of UKAS accreditation
The results relate only to the items tested
Uncertainty of measurement for the determinands tested are available upon request
None of the results in this report have been recovery corrected
All results are expressed on a dry weight basis

The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°C prior to analysis
All Asbestos testing is performed at the indicated laboratory
Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

A - Date of sampling not supplied
B - Sample age exceeds stability time (sampling to extraction)
C - Sample not received in appropriate containers
D - Broken Container
E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

All soil samples will be retained for a period of 45 days from the date of receipt
All water samples will be retained for 14 days from the date of receipt
Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:
customerservices@chemtest.com

eurofins | Chemtest
Eurofins Chemtest Ltd
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

Final Report

Report No.:	20-24344-1
Initial Date of Issue:	12-Oct-2020
Client	Quantum Geotechnic Ltd
Client Address:	Plas Newydd Llanedi Pontarddulais Swansea SA4 0FQ
Contact(s):	Arwel Jones
Project	Q0341 Rock Street
Quotation No.:	Q20-19535
Date Received:	11-Sep-2020
Order No.:	
Date Instructed:	05-Oct-2020
No. of Samples:	6
Turnaround (Wkdays):	5
Results Due:	09-Oct-2020
Date Approved:	12-Oct-2020
Approved By:	
Details:	Glynn Harvey, Technical Manager

Results - Leachate

Project: Q0341 Rock Street

Client: Quantum Geotechnic Ltd				**Chemtest Job No.:**		20-24344	20-24344	20-24344
Quotation No.: Q20-19535				**Chemtest Sample ID.:**		1062765	1062770	1062773
				Client Sample ID.:		3	2	4
				Sample Location:		RS-TP08	RS-TP07A	RS-TP07
				Sample Type:		SOIL	SOIL	SOIL
				Top Depth (m):		0.70	1.20	1.20
				Date Sampled:		09-Sep-2020	09-Sep-2020	09-Sep-2020
Determinand	**Accred.**	**SOP**	**Type**	**Units**	**LOD**			
pH	U	1010	2:1		N/A	8.4	9.0	8.3
Chemical Oxygen Demand	U	1100	2:1	mg O2/l	10	11	18	12
Ammoniacal Nitrogen	U	1220	2:1	mg/l	0.050	0.16	0.11	0.16
Nitrite	U	1220	2:1	mg/l	0.020	0.021	0.029	< 0.020
Nitrate	U	1220	2:1	mg/l	0.50	< 0.50	1.1	< 0.50
Sulphate	U	1220	2:1	mg/l	1.0	20	89	29
Cyanide (Total)	U	1300	2:1	mg/l	0.050	< 0.050	< 0.050	< 0.050
Cyanide (Free)	U	1300	2:1	mg/l	0.050	< 0.050	< 0.050	< 0.050
Cyanide (Complex)	U	1300	2:1	mg/l	0.050	< 0.050	< 0.050	< 0.050
Sulphide	U	1325	2:1	mg/l	0.050	< 0.050	< 0.050	< 0.050
Magnesium	U	1415	2:1	mg/l	0.50	11	2.3	4.6
Aluminium (Dissolved)	N	1450	2:1	µg/l	10	< 10	110	< 10
Arsenic (Dissolved)	U	1450	2:1	µg/l	1.0	< 1.0	1.7	< 1.0
Boron (Dissolved)	U	1450	2:1	µg/l	20	36	85	30
Barium (Dissolved)	U	1450	2:1	µg/l	5.0	84	25	100
Beryllium (Dissolved)	U	1450	2:1	µg/l	1.0	< 1.0	< 1.0	< 1.0
Cadmium (Dissolved)	U	1450	2:1	µg/l	0.080	< 0.080	< 0.080	< 0.080
Chromium (Dissolved)	U	1450	2:1	µg/l	1.0	< 1.0	1.6	1.1
Copper (Dissolved)	U	1450	2:1	µg/l	1.0	1.7	2.1	2.7
Manganese (Dissolved)	U	1450	2:1	µg/l	1.0	3.2	1.9	7.4
Molybdenum (Dissolved)	U	1450	2:1	µg/l	1.0	2.2	24	2.7
Nickel (Dissolved)	U	1450	2:1	µg/l	1.0	< 1.0	< 1.0	< 1.0
Lead (Dissolved)	U	1450	2:1	µg/l	1.0	< 1.0	< 1.0	< 1.0
Antimony (Dissolved)	U	1450	2:1	µg/l	1.0	< 1.0	< 1.0	< 1.0
Selenium (Dissolved)	U	1450	2:1	µg/l	1.0	1.1	3.5	1.7
Vanadium (Dissolved)	U	1450	2:1	µg/l	1.0	< 1.0	3.4	< 1.0
Zinc (Dissolved)	U	1450	2:1	µg/l	1.0	2.9	1.2	10
Mercury Low Level	U	1460	2:1	µg/l	0.010	< 0.010	< 0.010	< 0.010
Iron (Dissolved)	N	1450	2:1	µg/l	20	120	79	140
Chromium (Hexavalent)	U	1490	2:1	µg/l	20	< 20	< 20	< 20
C2 Aliphatic TPH >C5-C6	N	1675	2:1	µg/l	0.10	[B] < 0.10	[B] < 0.10	[B] < 0.10
C2 Aliphatic TPH >C6-C8	N	1675	2:1	µg/l	0.10	[B] < 0.10	[B] < 0.10	[B] < 0.10
C2 Aliphatic TPH >C8-C10	N	1675	2:1	µg/l	0.10	[B] < 0.10	[B] < 0.10	[B] < 0.10
C2 Aliphatic TPH >C10-C12	N	1675	2:1	µg/l	0.10	[B] < 0.10	[B] < 0.10	[B] < 0.10
C2 Aliphatic TPH >C12-C16	N	1675	2:1	µg/l	0.10	[B] < 0.10	[B] < 0.10	[B] < 0.10
C2 Aliphatic TPH >C16-C21	N	1675	2:1	µg/l	0.10	[B] < 0.10	[B] < 0.10	[B] < 0.10
C2 Aliphatic TPH >C21-C35	N	1675	2:1	µg/l	0.10	[B] < 0.10	[B] < 0.10	[B] < 0.10
C2 Aliphatic TPH >C35-C44	N	1675	2:1	µg/l	0.10	[B] < 0.10	[B] < 0.10	[B] < 0.10
Total Aliphatic Hydrocarbons	N	1675	2:1	µg/l	5.0	[B] < 5.0	[B] < 5.0	[B] < 5.0

Results - Leachate

Project: Q0341 Rock Street

Client: Quantum Geotechnic Ltd				**Chemtest Job No.:**		20-24344	20-24344	20-24344
Quotation No.: Q20-19535				**Chemtest Sample ID.:**		1062765	1062770	1062773
				Client Sample ID.:		3	2	4
				Sample Location:		RS-TP08	RS-TP07A	RS-TP07
				Sample Type:		SOIL	SOIL	SOIL
				Top Depth (m):		0.70	1.20	1.20
				Date Sampled:		09-Sep-2020	09-Sep-2020	09-Sep-2020
Determinand	**Accred.**	**SOP**	**Type**	**Units**	**LOD**			
C2 Aromatic TPH >C5-C7	N	1675	2:1	µg/l	0.10	[B] < 0.10	[B] < 0.10	[B] < 0.10
C2 Aromatic TPH >C7-C8	N	1675	2:1	µg/l	0.10	[B] < 0.10	[B] < 0.10	[B] < 0.10
C2 Aromatic TPH >C8-C10	N	1675	2:1	µg/l	0.10	[B] < 0.10	[B] < 0.10	[B] < 0.10
C2 Aromatic TPH >C10-C12	N	1675	2:1	µg/l	0.10	[B] < 0.10	[B] < 0.10	[B] < 0.10
C2 Aromatic TPH >C12-C16	N	1675	2:1	µg/l	0.10	[B] < 0.10	[B] < 0.10	[B] < 0.10
C2 Aromatic TPH >C16-C21	N	1675	2:1	µg/l	0.10	[B] < 0.10	[B] < 0.10	[B] < 0.10
C2 Aromatic TPH >C21-C35	N	1675	2:1	µg/l	0.10	[B] < 0.10	[B] < 0.10	[B] < 0.10
C2 Aromatic TPH >C35-C44	N	1675	2:1	µg/l	0.10	[B] < 0.10	[B] < 0.10	[B] < 0.10
C2 Total Aromatic Hydrocarbons	N	1675	2:1	µg/l	5.0	[B] < 5.0	[B] < 5.0	[B] < 5.0
Total Petroleum Hydrocarbons	N	1675	2:1	µg/l	10	[B] < 10	[B] < 10	[B] < 10
Naphthalene	N	1700	2:1	µg/l	0.010	< 0.010	< 0.010	< 0.010
Acenaphthylene	N	1700	2:1	µg/l	0.010	< 0.010	< 0.010	< 0.010
Acenaphthene	N	1700	2:1	µg/l	0.010	< 0.010	< 0.010	< 0.010
Fluorene	N	1700	2:1	µg/l	0.010	< 0.010	< 0.010	< 0.010
Phenanthrene	N	1700	2:1	µg/l	0.010	< 0.010	< 0.010	< 0.010
Anthracene	N	1700	2:1	µg/l	0.010	< 0.010	< 0.010	< 0.010
Fluoranthene	N	1700	2:1	µg/l	0.010	< 0.010	< 0.010	< 0.010
Pyrene	N	1700	2:1	µg/l	0.010	< 0.010	< 0.010	< 0.010
Benzo[a]anthracene	N	1700	2:1	µg/l	0.010	< 0.010	< 0.010	< 0.010
Chrysene	N	1700	2:1	µg/l	0.010	< 0.010	< 0.010	< 0.010
Benzo[b]fluoranthene	N	1700	2:1	µg/l	0.010	< 0.010	< 0.010	< 0.010
Benzo[k]fluoranthene	N	1700	2:1	µg/l	0.010	< 0.010	< 0.010	< 0.010
Benzo[a]pyrene	N	1700	2:1	µg/l	0.010	< 0.010	< 0.010	< 0.010
Indeno(1,2,3-c,d)Pyrene	N	1700	2:1	µg/l	0.010	< 0.010	< 0.010	< 0.010
Dibenz(a,h)Anthracene	N	1700	2:1	µg/l	0.010	< 0.010	< 0.010	< 0.010
Benzo[g,h,i]perylene	N	1700	2:1	µg/l	0.010	< 0.010	< 0.010	< 0.010
Coronene	N	1700	2:1	µg/l	0.010	< 0.010	< 0.010	< 0.010
Total Of 16 PAH's	N	1700	2:1	µg/l	0.20	< 0.20	< 0.20	< 0.20
Benzene	U	1760	2:1	µg/l	1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0
Toluene	U	1760	2:1	µg/l	1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0
Ethylbenzene	U	1760	2:1	µg/l	1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0
m & p-Xylene	U	1760	2:1	µg/l	1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0
o-Xylene	U	1760	2:1	µg/l	1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0
Methyl Tert-Butyl Ether	N	1760	2:1	µg/l	1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0
Total Phenols	U	1920	2:1	mg/l	0.030	< 0.030	< 0.030	< 0.030

Results - Soil

Project: Q0341 Rock Street

Client: Quantum Geotechnic Ltd			**Chemtest Job No.:**		20-24344	20-24344	20-24344	20-24344	20-24344	20-24344
Quotation No.: Q20-19535			**Chemtest Sample ID.:**		1062765	1062767	1062770	1062771	1062773	1062775
			Client Sample ID.:		3	6	2	1	4	8
			Sample Location:		RS-TP08	RS-TP08	RS-TP07A	RS-TP07	RS-TP07	RS-TP07
			Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Top Depth (m):		0.70	2.00	1.20	0.30	1.20	3.00
			Date Sampled:		09-Sep-2020	09-Sep-2020	09-Sep-2020	09-Sep-2020	09-Sep-2020	09-Sep-2020
			Asbestos Lab:		COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY
Determinand	**Accred.**	**SOP**	**Units**	**LOD**						
ACM Type	U	2192		N/A	-	-	-	-	-	-
Asbestos Identification	U	2192		N/A	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
ACM Detection Stage	U	2192		N/A	-	-	-	-	-	-
Moisture	N	2030	%	0.020	9.7	11	9.5	11	11	7.2
Soil Colour	N	2040		N/A	Brown	Brown	Brown	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Sand	Sand	Sand	Sand	Clay	Sand
pH	M	2010		4.0	6.9	8.1	7.9	8.0	8.2	8.3
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40	< 0.40	< 0.40	0.41	< 0.40	< 0.40	< 0.40
Magnesium (Water Soluble)	M	2120	mg/kg	20	< 20	34	< 20	< 20	< 20	< 20
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.010	0.028	0.22	< 0.010	< 0.010	< 0.010	< 0.010
Nitrite (Extractable)	N	2220	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nitrate (Water Soluble)	N	2220	g/l	0.010	0.018	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Cyanide (Complex)	M	2300	mg/kg	0.50	[B] < 0.50	[B] < 0.50	[B] < 0.50	[B] < 0.50	[B] < 0.50	[B] < 0.50
Cyanide (Free)	M	2300	mg/kg	0.50	[B] < 0.50	[B] < 0.50	[B] < 0.50	[B] < 0.50	[B] < 0.50	[B] < 0.50
Cyanide (Total)	M	2300	mg/kg	0.50	[B] < 0.50	[B] < 0.50	[B] < 0.50	[B] < 0.50	[B] < 0.50	[B] < 0.50
Sulphide (Easily Liberatable)	N	2325	mg/kg	0.50	5.9	2.0	47	12	44	16
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	1.2	< 0.50	1.1	1.8	0.57	< 0.50
Aluminium (Total)	N	2430	mg/kg	100	7900	5900	9700	8100	9700	7100
Iron (Total)	N	2430	mg/kg	100	22000	23000	25000	25000	20000	26000
Sulphate (Total)	M	2430	mg/kg	100	1800	1600	1700	800	2200	1300
Arsenic	M	2450	mg/kg	1.0	27	29	24	20	15	23
Barium	M	2450	mg/kg	10	190	170	220	170	360	170
Beryllium	U	2450	mg/kg	1.0	< 1.0	< 1.0	1.1	< 1.0	1.2	< 1.0
Cadmium	M	2450	mg/kg	0.10	0.39	0.85	0.44	0.44	0.21	0.18
Chromium	M	2450	mg/kg	1.0	29	41	20	16	16	16
Manganese	M	2450	mg/kg	5.0	1300	1100	1600	1200	1000	1100
Molybdenum	M	2450	mg/kg	2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Antimony	N	2450	mg/kg	2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Copper	M	2450	mg/kg	0.50	47	41	40	31	37	30
Mercury	M	2450	mg/kg	0.10	0.19	0.18	0.10	< 0.10	< 0.10	< 0.10
Nickel	M	2450	mg/kg	0.50	33	37	46	32	26	28
Lead	M	2450	mg/kg	0.50	48	43	58	30	31	26
Selenium	M	2450	mg/kg	0.20	1.0	1.1	0.62	0.63	0.66	0.83
Vanadium	U	2450	mg/kg	5.0	34	13	31	20	21	21
Zinc	M	2450	mg/kg	0.50	94	130	150	100	76	68
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50

Results - Soil

Project: Q0341 Rock Street

Client: Quantum Geotechnic Ltd			**Chemtest Job No.:**		20-24344	20-24344	20-24344	20-24344	20-24344	20-24344
Quotation No.: Q20-19535			**Chemtest Sample ID.:**		1062765	1062767	1062770	1062771	1062773	1062775
			Client Sample ID.:		3	6	2	1	4	8
			Sample Location:		RS-TP08	RS-TP08	RS-TP07A	RS-TP07	RS-TP07	RS-TP07
			Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Top Depth (m):		0.70	2.00	1.20	0.30	1.20	3.00
			Date Sampled:		09-Sep-2020	09-Sep-2020	09-Sep-2020	09-Sep-2020	09-Sep-2020	09-Sep-2020
			Asbestos Lab:		COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY
Determinand	**Accred.**	**SOP**	**Units**	**LOD**						
Organic Matter	M	2625	%	0.40	19	22	9.0	6.2	36	9.5
Aliphatic TPH >C5-C6	N	2680	mg/kg	0.010	[B] < 0.010	[B] < 0.010	[B] < 0.010	[B] < 0.010	[B] < 0.010	[B] < 0.010
Aliphatic TPH >C6-C8	N	2680	mg/kg	0.010	[B] < 0.010	[B] < 0.010	[B] < 0.010	[B] < 0.010	[B] < 0.010	[B] < 0.010
Aliphatic TPH >C8-C10	N	2680	mg/kg	0.10	[B] < 0.10	[B] < 0.10	[B] < 0.10	[B] < 0.10	[B] < 0.10	[B] < 0.10
Aliphatic TPH >C10-C12	N	2680	mg/kg	0.10	[B] < 0.10	[B] < 0.10	[B] 3.7	[B] < 0.10	[B] < 0.10	[B] < 0.10
Aliphatic TPH >C12-C16	N	2680	mg/kg	0.10	[B] < 0.10	[B] 6.4	[B] 7.6	[B] < 0.10	[B] < 0.10	[B] < 0.10
Aliphatic TPH >C16-C21	N	2680	mg/kg	0.10	[B] < 0.10	[B] < 0.10	[B] 1.9	[B] < 0.10	[B] < 0.10	[B] < 0.10
Aliphatic TPH >C21-C35	N	2680	mg/kg	0.10	[B] < 0.10	[B] 16	[B] 39	[B] < 0.10	[B] < 0.10	[B] < 0.10
Aliphatic TPH >C35-C44	N	2680	mg/kg	0.10	[B] < 0.10	[B] < 0.10	[B] < 0.10	[B] < 0.10	[B] < 0.10	[B] < 0.10
Total Aliphatic Hydrocarbons	N	2680	mg/kg	1.0	[B] < 1.0	[B] 23	[B] 53	[B] < 1.0	[B] < 1.0	[B] < 1.0
Aromatic TPH >C5-C7	N	2680	mg/kg	0.010	[B] < 0.010	[B] < 0.010	[B] < 0.010	[B] < 0.010	[B] < 0.010	[B] < 0.010
Aromatic TPH >C7-C8	N	2680	mg/kg	0.010	[B] < 0.010	[B] < 0.010	[B] < 0.010	[B] < 0.010	[B] < 0.010	[B] < 0.010
Aromatic TPH >C8-C10	N	2680	mg/kg	0.10	[B] < 0.10	[B] < 0.10	[B] < 0.10	[B] < 0.10	[B] < 0.10	[B] < 0.10
Aromatic TPH >C10-C12	N	2680	mg/kg	0.10	[B] < 0.10	[B] < 0.10	[B] < 0.10	[B] < 0.10	[B] < 0.10	[B] < 0.10
Aromatic TPH >C12-C16	N	2680	mg/kg	0.10	[B] < 0.10	[B] 4.0	[B] 2.1	[B] < 0.10	[B] < 0.10	[B] < 0.10
Aromatic TPH >C16-C21	N	2680	mg/kg	0.10	[B] < 0.10	[B] < 0.10	[B] 7.8	[B] < 0.10	[B] < 0.10	[B] < 0.10
Aromatic TPH >C21-C35	N	2680	mg/kg	0.10	[B] < 0.10	[B] 50	[B] 180	[B] < 0.10	[B] < 0.10	[B] < 0.10
Aromatic TPH >C35-C44	N	2680	mg/kg	0.10	[B] < 0.10	[B] < 0.10	[B] < 0.10	[B] < 0.10	[B] < 0.10	[B] < 0.10
Total Aromatic Hydrocarbons	N	2680	mg/kg	1.0	[B] < 1.0	[B] 54	[B] 190	[B] < 1.0	[B] < 1.0	[B] < 1.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	2.0	[B] < 2.0	[B] 77	[B] 250	[B] < 2.0	[B] < 2.0	[B] < 2.0
Naphthalene	N	2700	mg/kg	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Acenaphthylene	N	2700	mg/kg	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Acenaphthene	N	2700	mg/kg	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Fluorene	N	2700	mg/kg	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Phenanthrene	N	2700	mg/kg	0.010	< 0.010	< 0.010	1.1	< 0.010	< 0.010	< 0.010
Anthracene	N	2700	mg/kg	0.010	< 0.010	< 0.010	0.29	< 0.010	< 0.010	< 0.010
Fluoranthene	N	2700	mg/kg	0.010	< 0.010	< 0.010	1.4	< 0.010	< 0.010	< 0.010
Pyrene	N	2700	mg/kg	0.010	< 0.010	< 0.010	1.4	< 0.010	< 0.010	< 0.010
Benzo[a]anthracene	N	2700	mg/kg	0.010	< 0.010	< 0.010	0.90	< 0.010	< 0.010	< 0.010
Chrysene	N	2700	mg/kg	0.010	< 0.010	< 0.010	1.4	< 0.010	< 0.010	< 0.010
Benzo[b]fluoranthene	N	2700	mg/kg	0.010	< 0.010	< 0.010	1.3	< 0.010	< 0.010	< 0.010
Benzo[k]fluoranthene	N	2700	mg/kg	0.010	< 0.010	< 0.010	0.38	< 0.010	< 0.010	< 0.010
Benzo[a]pyrene	N	2700	mg/kg	0.010	< 0.010	< 0.010	1.0	< 0.010	< 0.010	< 0.010
Indeno(1,2,3-c,d)Pyrene	N	2700	mg/kg	0.010	< 0.010	< 0.010	0.79	< 0.010	< 0.010	< 0.010
Dibenz(a,h)Anthracene	N	2700	mg/kg	0.010	< 0.010	< 0.010	0.21	< 0.010	< 0.010	< 0.010
Benzo[g,h,i]perylene	N	2700	mg/kg	0.010	< 0.010	< 0.010	0.86	< 0.010	< 0.010	< 0.010
Coronene	N	2700	mg/kg	0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010
Total Of 17 PAH's	N	2700	mg/kg	0.20	< 0.20	< 0.20	11	< 0.20	< 0.20	< 0.20

Results - Soil

Project: Q0341 Rock Street

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			Sample Location:		RS-TP08	RS-TP08	RS-TP07A	RS-TP07	RS-TP07	RS-TP07
			Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
			Top Depth (m):		0.70	2.00	1.20	0.30	1.20	3.00
			Date Sampled:		09-Sep-2020	09-Sep-2020	09-Sep-2020	09-Sep-2020	09-Sep-2020	09-Sep-2020
			Asbestos Lab:		COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY	COVENTRY
Determinand	**Accred.**	**SOP**	**Units**	**LOD**						
Benzene	M	2760	µg/kg	1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0
Toluene	M	2760	µg/kg	1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0
Ethylbenzene	M	2760	µg/kg	1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0
m & p-Xylene	M	2760	µg/kg	1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0
o-Xylene	M	2760	µg/kg	1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0
Total Phenols	M	2920	mg/kg	0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30	< 0.30

Deviations

In accordance with UKAS Policy on Deviating Samples TPS 63. Chemtest have a procedure to ensure 'upon receipt of each sample a competent laboratory shall assess whether the sample is suitable with regard to the requested test(s)'. This policy and the respective holding times applied, can be supplied upon request.The reason a sample is declared as deviating is detailed below. Where applicable the analysis remains UKAS/MCERTs accredited but the results may be compromised.

Sample:	Sample Ref:	Sample ID:	Sample Location:	Sampled Date:	Deviation Code(s):	Containers Received:
1062765		3	RS-TP08	09-Sep-2020	B	Amber Glass 250ml
1062765		3	RS-TP08	09-Sep-2020	B	Amber Glass 60ml
1062765		3	RS-TP08	09-Sep-2020	B	Plastic Tub 500g
1062767		6	RS-TP08	09-Sep-2020	B	Amber Glass 250ml
1062767		6	RS-TP08	09-Sep-2020	B	Amber Glass 60ml
1062767		6	RS-TP08	09-Sep-2020	B	Plastic Tub 500g
1062770		2	RS-TP07A	09-Sep-2020	B	Amber Glass 250ml
1062770		2	RS-TP07A	09-Sep-2020	B	Amber Glass 60ml
1062770		2	RS-TP07A	09-Sep-2020	B	Plastic Tub 500g
1062771		1	RS-TP07	09-Sep-2020	B	Amber Glass 250ml
1062771		1	RS-TP07	09-Sep-2020	B	Amber Glass 60ml
1062771		1	RS-TP07	09-Sep-2020	B	Plastic Tub 500g
1062773		4	RS-TP07	09-Sep-2020	B	Amber Glass 250ml
1062773		4	RS-TP07	09-Sep-2020	B	Amber Glass 60ml
1062773		4	RS-TP07	09-Sep-2020	B	Plastic Tub 500g
1062775		8	RS-TP07	09-Sep-2020	B	Amber Glass 250ml
1062775		8	RS-TP07	09-Sep-2020	B	Amber Glass 60ml
1062775		8	RS-TP07	09-Sep-2020	B	Plastic Tub 500g

Test Methods

SOP	Title	Parameters included	Method summary
1010	pH Value of Waters	pH	pH Meter
1100	Chemical Oxygen Demand	Chemical Oxygen demand (COD)	Dichromate oxidation of organic matter in sample followed by colorimetric determination of residual Cr[VI].
1220	Anions, Alkalinity & Ammonium in Waters	Fluoride; Chloride; Nitrite; Nitrate; Total; Oxidisable Nitrogen (TON); Sulfate; Phosphate; Alkalinity; Ammonium	Automated colorimetric analysis using 'Aquakem 600' Discrete Analyser.
1300	Cyanides & Thiocyanate in Waters	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Continuous Flow Analysis.
1325	Sulphide in Waters	Sulphides	Automated colorimetric analysis by 'Aquakem 600' Discrete Analyser using N,N–dimethyl-pphenylenediamine.
1415	Cations in Waters by ICP-MS	Sodium; Potassium; Calcium; Magnesium	Direct determination by inductively coupled plasma - mass spectrometry (ICP-MS).
1450	Metals in Waters by ICP-MS	Metals, including: Antimony; Arsenic; Barium; Beryllium; Boron; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Tin; Vanadium; Zinc	Filtration of samples followed by direct determination by inductively coupled plasma mass spectrometry (ICP-MS).
1460	Mercury low-level in Waters by AFS	Mercury	Atomic Fluorescence Spectrometry, with collimated UV source, wavelength 253.7 nm.
1490	Hexavalent Chromium in Waters	Chromium [VI]	Automated colorimetric analysis by 'Aquakem 600' Discrete Analyser using 1,5-diphenylcarbazide.
1675	TPH Aliphatic/Aromatic split in Waters by GC-FID(cf. Texas Method 1006 / TPH CWG)	Aliphatics: >C5–C6, >C6–C8, >C8– C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Pentane extraction / GCxGC FID detection
1700	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Waters by GC-FID	Acenaphthene; Acenaphthylene; Anthracene; Benzo[a]Anthracene; Benzo[a]Pyrene; Benzo[b]Fluoranthene; Benzo[ghi]Perylene; Benzo[k]Fluoranthene; Chrysene; Dibenz[ah]Anthracene; Fluoranthene; Fluorene; Indeno[123cd]Pyrene; Naphthalene; Phenanthrene; Pyrene	Dichloromethane extraction / GC-FID (GC-FID detection is non-selective and can be subject to interference from co-eluting compounds)
1760	Volatile Organic Compounds (VOCs) in Waters by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics. (cf. USEPA Method 8260)	Automated headspace gas chromatographic (GC) analysis of water samples with mass spectrometric (MS) detection of volatile organic compounds.
1920	Phenols in Waters by HPLC	Phenolic compounds including: Phenol, Cresols, Xylenols, Trimethylphenols Note: Chlorophenols are excluded.	Determination by High Performance Liquid Chromatography (HPLC) using electrochemical detection.
2010	pH Value of Soils	pH	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2120	Water Soluble Boron, Sulphate, Magnesium & Chromium	Boron; Sulphate; Magnesium; Chromium	Aqueous extraction / ICP-OES
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2220	Water soluble Chloride in Soils	Chloride	Aqueous extraction and measuremernt by 'Aquakem 600' Discrete Analyser using ferric nitrate / mercuric thiocyanate.
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Allkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.

Test Methods

SOP	Title	Parameters included	Method summary
2325	Sulphide in Soils	Sulphide	Steam distillation with sulphuric acid / analysis by 'Aquakem 600' Discrete Analyser, using N,N–dimethyl-p-phenylenediamine.
2425	Extractable Ammonium in soils	Ammonium	Extraction with potassium chloride solution / analysis by 'Aquakem 600' Discrete Analyser using sodium salicylate and sodium dichloroisocyanurate.
2430	Total Sulphate in soils	Total Sulphate	Acid digestion followed by determination of sulphate in extract by ICP-OES.
2450	Acid Soluble Metals in Soils	Metals, including: Arsenic; Barium; Beryllium; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Vanadium; Zinc	Acid digestion followed by determination of metals in extract by ICP-MS.
2490	Hexavalent Chromium in Soils	Chromium [VI]	Soil extracts are prepared by extracting dried and ground soil samples into boiling water. Chromium [VI] is determined by 'Aquakem 600' Discrete Analyser using 1,5-diphenylcarbazide.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2700	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-FID	Acenaphthene; Acenaphthylene; Anthracene; Benzo[a]Anthracene; Benzo[a]Pyrene; Benzo[b]Fluoranthene; Benzo[ghi]Perylene; Benzo[k]Fluoranthene; Chrysene; Dibenz[ah]Anthracene; Fluoranthene; Fluorene; Indeno[123cd]Pyrene; Naphthalene; Phenanthrene; Pyrene	Dichloromethane extraction / GC-FID (GC-FID detection is non-selective and can be subject to interference from co-eluting compounds)
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.
640	Characterisation of Waste (Leaching C10)	Waste material including soil, sludges and granular waste	ComplianceTest for Leaching of Granular Waste Material and Sludge
650	Characterisation of Waste (Leaching WAC)	Waste material including soil, sludges and granular waste	ComplianceTest for Leaching of Granular Waste Material and Sludge

Report Information

Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"

Comments or interpretations are beyond the scope of UKAS accreditation
The results relate only to the items tested
Uncertainty of measurement for the determinands tested are available upon request
None of the results in this report have been recovery corrected
All results are expressed on a dry weight basis

The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°C prior to analysis
All Asbestos testing is performed at the indicated laboratory
Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

A - Date of sampling not supplied
B - Sample age exceeds stability time (sampling to extraction)
C - Sample not received in appropriate containers
D - Broken Container
E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

All soil samples will be retained for a period of 45 days from the date of receipt
All water samples will be retained for 14 days from the date of receipt
Charges may apply to extended sample storage

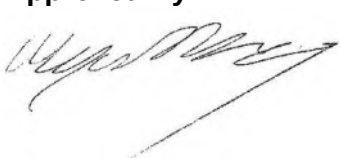
If you require extended retention of samples, please email your requirements to:
customerservices@chemtest.com

Eurofins Chemtest Ltd
Depot Road
Newmarket
CB8 0AL
Tel: 01638 606070
Email: info@chemtest.com

Final Report

Report No.:	20-24892-1		
Initial Date of Issue:	09-Oct-2020		
Client	Quantum Geotechnic Ltd		
Client Address:	Plas Newydd Llanedi Pontarddulais Swansea SA4 0FQ		
Contact(s):	Arwel Jones		
Project	Q0341 Rockstreet, Glyneath		
Quotation No.:	Q20-19535	**Date Received:**	17-Sep-2020
Order No.:		**Date Instructed:**	05-Oct-2020
No. of Samples:	4		
Turnaround (Wkdays):	5	**Results Due:**	09-Oct-2020
Date Approved:	09-Oct-2020		

Approved By:



Details: Glynn Harvey, Technical Manager

Results - Leachate

Project: Q0341 Rockstreet, Glyneath

Client: Quantum Geotechnic Ltd				**Chemtest Job No.:**		20-24892
Quotation No.: Q20-19535				**Chemtest Sample ID.:**		1065748
Order No.:				Client Sample Ref.:		ES5
				Client Sample ID.:		5
				Sample Location:		RS-BH01
				Sample Type:		SOIL
				Top Depth (m):		2.00
				Date Sampled:		14-Sep-2020
Determinand	**Accred.**	**SOP**	**Type**	**Units**	**LOD**	
pH	U	1010	2:1		N/A	8.6
Chemical Oxygen Demand	U	1100	2:1	mg O2/l	10	17
Ammoniacal Nitrogen	U	1220	2:1	mg/l	0.050	0.16
Nitrite	U	1220	2:1	mg/l	0.020	< 0.020
Nitrate	U	1220	2:1	mg/l	0.50	4.8
Sulphate	U	1220	2:1	mg/l	1.0	13
Cyanide (Total)	U	1300	2:1	mg/l	0.050	< 0.050
Cyanide (Free)	U	1300	2:1	mg/l	0.050	< 0.050
Cyanide (Complex)	U	1300	2:1	mg/l	0.050	< 0.050
Sulphide	U	1325	2:1	mg/l	0.050	< 0.050
Magnesium	U	1415	2:1	mg/l	0.50	2.2
Aluminium (Dissolved)	N	1450	2:1	µg/l	10	< 10
Arsenic (Dissolved)	U	1450	2:1	µg/l	1.0	< 1.0
Boron (Dissolved)	U	1450	2:1	µg/l	20	< 20
Barium (Dissolved)	U	1450	2:1	µg/l	5.0	66
Beryllium (Dissolved)	U	1450	2:1	µg/l	1.0	< 1.0
Cadmium (Dissolved)	U	1450	2:1	µg/l	0.080	< 0.080
Chromium (Dissolved)	U	1450	2:1	µg/l	1.0	< 1.0
Copper (Dissolved)	U	1450	2:1	µg/l	1.0	2.5
Manganese (Dissolved)	U	1450	2:1	µg/l	1.0	1.9
Molybdenum (Dissolved)	U	1450	2:1	µg/l	1.0	4.3
Nickel (Dissolved)	U	1450	2:1	µg/l	1.0	< 1.0
Lead (Dissolved)	U	1450	2:1	µg/l	1.0	< 1.0
Antimony (Dissolved)	U	1450	2:1	µg/l	1.0	< 1.0
Selenium (Dissolved)	U	1450	2:1	µg/l	1.0	1.4
Vanadium (Dissolved)	U	1450	2:1	µg/l	1.0	< 1.0
Zinc (Dissolved)	U	1450	2:1	µg/l	1.0	2.5
Mercury Low Level	U	1460	2:1	µg/l	0.010	< 0.010
Iron (Dissolved)	N	1450	2:1	µg/l	20	99
Chromium (Hexavalent)	U	1490	2:1	µg/l	20	< 20
C2 Aliphatic TPH >C5-C6	N	1675	2:1	µg/l	0.10	[B] < 0.10
C2 Aliphatic TPH >C6-C8	N	1675	2:1	µg/l	0.10	[B] < 0.10
C2 Aliphatic TPH >C8-C10	N	1675	2:1	µg/l	0.10	[B] < 0.10
C2 Aliphatic TPH >C10-C12	N	1675	2:1	µg/l	0.10	[B] < 0.10
C2 Aliphatic TPH >C12-C16	N	1675	2:1	µg/l	0.10	[B] < 0.10
C2 Aliphatic TPH >C16-C21	N	1675	2:1	µg/l	0.10	[B] < 0.10
C2 Aliphatic TPH >C21-C35	N	1675	2:1	µg/l	0.10	[B] < 0.10
C2 Aliphatic TPH >C35-C44	N	1675	2:1	µg/l	0.10	[B] < 0.10

Results - Leachate

Project: Q0341 Rockstreet, Glyneath

Client: Quantum Geotechnic Ltd				**Chemtest Job No.:**		20-24892
Quotation No.: Q20-19535				**Chemtest Sample ID.:**		1065748
Order No.:				Client Sample Ref.:		ES5
				Client Sample ID.:		5
				Sample Location:		RS-BH01
				Sample Type:		SOIL
				Top Depth (m):		2.00
				Date Sampled:		14-Sep-2020
Determinand	**Accred.**	**SOP**	**Type**	**Units**	**LOD**	
Total Aliphatic Hydrocarbons	N	1675	2:1	µg/l	5.0	[B] < 5.0
C2 Aromatic TPH >C5-C7	N	1675	2:1	µg/l	0.10	[B] < 0.10
C2 Aromatic TPH >C7-C8	N	1675	2:1	µg/l	0.10	[B] < 0.10
C2 Aromatic TPH >C8-C10	N	1675	2:1	µg/l	0.10	[B] < 0.10
C2 Aromatic TPH >C10-C12	N	1675	2:1	µg/l	0.10	[B] < 0.10
C2 Aromatic TPH >C12-C16	N	1675	2:1	µg/l	0.10	[B] < 0.10
C2 Aromatic TPH >C16-C21	N	1675	2:1	µg/l	0.10	[B] < 0.10
C2 Aromatic TPH >C21-C35	N	1675	2:1	µg/l	0.10	[B] < 0.10
C2 Aromatic TPH >C35-C44	N	1675	2:1	µg/l	0.10	[B] < 0.10
C2 Total Aromatic Hydrocarbons	N	1675	2:1	µg/l	5.0	[B] < 5.0
Total Petroleum Hydrocarbons	N	1675	2:1	µg/l	10	[B] < 10
Naphthalene	N	1700	2:1	µg/l	0.010	< 0.010
Acenaphthylene	N	1700	2:1	µg/l	0.010	< 0.010
Acenaphthene	N	1700	2:1	µg/l	0.010	< 0.010
Fluorene	N	1700	2:1	µg/l	0.010	< 0.010
Phenanthrene	N	1700	2:1	µg/l	0.010	< 0.010
Anthracene	N	1700	2:1	µg/l	0.010	< 0.010
Fluoranthene	N	1700	2:1	µg/l	0.010	< 0.010
Pyrene	N	1700	2:1	µg/l	0.010	< 0.010
Benzo[a]anthracene	N	1700	2:1	µg/l	0.010	< 0.010
Chrysene	N	1700	2:1	µg/l	0.010	< 0.010
Benzo[b]fluoranthene	N	1700	2:1	µg/l	0.010	< 0.010
Benzo[k]fluoranthene	N	1700	2:1	µg/l	0.010	< 0.010
Benzo[a]pyrene	N	1700	2:1	µg/l	0.010	< 0.010
Indeno(1,2,3-c,d)Pyrene	N	1700	2:1	µg/l	0.010	< 0.010
Dibenz(a,h)Anthracene	N	1700	2:1	µg/l	0.010	< 0.010
Benzo[g,h,i]perylene	N	1700	2:1	µg/l	0.010	< 0.010
Coronene	N	1700	2:1	µg/l	0.010	< 0.010
Total Of 16 PAH's	N	1700	2:1	µg/l	0.20	< 0.20
Benzene	U	1760	2:1	µg/l	1.0	[B] < 1.0
Toluene	U	1760	2:1	µg/l	1.0	[B] < 1.0
Ethylbenzene	U	1760	2:1	µg/l	1.0	[B] < 1.0
m & p-Xylene	U	1760	2:1	µg/l	1.0	[B] < 1.0
o-Xylene	U	1760	2:1	µg/l	1.0	[B] < 1.0
Methyl Tert-Butyl Ether	N	1760	2:1	µg/l	1.0	[B] < 1.0
Total Phenols	U	1920	2:1	mg/l	0.030	< 0.030

Results - Soil

Project: Q0341 Rockstreet, Glyneath

Client: Quantum Geotechnic Ltd			**Chemtest Job No.:**		20-24892	20-24892	20-24892	20-24892
Quotation No.: Q20-19535			**Chemtest Sample ID.:**		1065745	1065746	1065747	1065748
Order No.:			Client Sample Ref.:		ES2	ES3	ES4	ES5
			Client Sample ID.:		2	3	4	5
			Sample Location:		RS-BH01	RS-BH01	RS-BH01	RS-BH01
			Sample Type:		SOIL	SOIL	SOIL	SOIL
			Top Depth (m):		0.30	0.50	1.00	2.00
			Date Sampled:		14-Sep-2020	14-Sep-2020	14-Sep-2020	14-Sep-2020
			Asbestos Lab:		COVENTRY	COVENTRY	COVENTRY	COVENTRY
Determinand	**Accred.**	**SOP**	**Units**	**LOD**				
ACM Type	U	2192		N/A	-	-	-	-
Asbestos Identification	U	2192		N/A	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
ACM Detection Stage	U	2192		N/A	-	-	-	-
Moisture	N	2030	%	0.020	3.1	11	17	12
Soil Colour	N	2040		N/A	Brown	Brown	Brown	Brown
Other Material	N	2040		N/A	Stones	Stones	Stones	Stones
Soil Texture	N	2040		N/A	Sand	Sand	Sand	Sand
pH	M	2010		4.0	8.7	8.3	8.0	8.2
Boron (Hot Water Soluble)	M	2120	mg/kg	0.40	< 0.40	< 0.40	< 0.40	< 0.40
Magnesium (Water Soluble)	M	2120	mg/kg	20	< 20	< 20	< 20	< 20
Sulphate (2:1 Water Soluble) as SO4	M	2120	g/l	0.010	< 0.010	< 0.010	< 0.010	< 0.010
Nitrite (Extractable)	N	2220	mg/kg	0.10	< 0.10	< 0.10	< 0.10	< 0.10
Nitrate (Water Soluble)	N	2220	g/l	0.010	< 0.010	< 0.010	< 0.010	< 0.010
Cyanide (Complex)	M	2300	mg/kg	0.50	[B] < 0.50	[B] < 0.50	[B] < 0.50	[B] < 0.50
Cyanide (Free)	M	2300	mg/kg	0.50	[B] < 0.50	[B] < 0.50	[B] < 0.50	[B] < 0.50
Cyanide (Total)	M	2300	mg/kg	0.50	[B] < 0.50	[B] < 0.50	[B] < 0.50	[B] < 0.50
Sulphide (Easily Liberatable)	N	2325	mg/kg	0.50	4.8	4.3	1.8	3.0
Ammoniacal Nitrogen	M	2425	mg/kg	0.50	0.59	1.2	1.7	2.4
Aluminium (Total)	N	2430	mg/kg	100	440	7000	9400	8400
Iron (Total)	N	2430	mg/kg	100	1500	17000	20000	22000
Sulphate (Total)	M	2430	mg/kg	100	790	660	780	980
Arsenic	M	2450	mg/kg	1.0	13	21	55	28
Barium	M	2450	mg/kg	10	610	430	270	190
Beryllium	U	2450	mg/kg	1.0	< 1.0	< 1.0	< 1.0	< 1.0
Cadmium	M	2450	mg/kg	0.10	0.28	0.32	0.98	0.45
Chromium	M	2450	mg/kg	1.0	5.6	14	16	17
Manganese	M	2450	mg/kg	5.0	130	920	1200	1200
Molybdenum	M	2450	mg/kg	2.0	< 2.0	< 2.0	< 2.0	< 2.0
Antimony	N	2450	mg/kg	2.0	< 2.0	< 2.0	< 2.0	< 2.0
Copper	M	2450	mg/kg	0.50	3.1	19	42	26
Mercury	M	2450	mg/kg	0.10	< 0.10	< 0.10	0.10	< 0.10
Nickel	M	2450	mg/kg	0.50	2.5	20	23	22
Lead	M	2450	mg/kg	0.50	12	29	64	37
Selenium	M	2450	mg/kg	0.20	< 0.20	0.22	0.70	0.43
Vanadium	U	2450	mg/kg	5.0	< 5.0	18	23	22
Zinc	M	2450	mg/kg	0.50	6.3	60	130	86

Results - Soil

Project: Q0341 Rockstreet, Glyneath

Client: Quantum Geotechnic Ltd			**Chemtest Job No.:**		20-24892	20-24892	20-24892	20-24892
Quotation No.: Q20-19535			**Chemtest Sample ID.:**		1065745	1065746	1065747	1065748
Order No.:			Client Sample Ref.:		ES2	ES3	ES4	ES5
			Client Sample ID.:		2	3	4	5
			Sample Location:		RS-BH01	RS-BH01	RS-BH01	RS-BH01
			Sample Type:		SOIL	SOIL	SOIL	SOIL
			Top Depth (m):		0.30	0.50	1.00	2.00
			Date Sampled:		14-Sep-2020	14-Sep-2020	14-Sep-2020	14-Sep-2020
			Asbestos Lab:		COVENTRY	COVENTRY	COVENTRY	COVENTRY
Determinand	**Accred.**	**SOP**	**Units**	**LOD**				
Chromium (Hexavalent)	N	2490	mg/kg	0.50	< 0.50	< 0.50	< 0.50	< 0.50
Organic Matter	M	2625	%	0.40	0.50	6.4	17	5.9
Aliphatic TPH >C5-C6	N	2680	mg/kg	0.010	[B] < 0.010	[B] < 0.010	[B] < 0.010	[B] < 0.010
Aliphatic TPH >C6-C8	N	2680	mg/kg	0.010	[B] < 0.010	[B] < 0.010	[B] < 0.010	[B] < 0.010
Aliphatic TPH >C8-C10	N	2680	mg/kg	0.10	[B] < 0.10	[B] < 0.10	[B] < 0.10	[B] < 0.10
Aliphatic TPH >C10-C12	N	2680	mg/kg	0.10	[B] < 0.10	[B] < 0.10	[B] 3.1	[B] < 0.10
Aliphatic TPH >C12-C16	N	2680	mg/kg	0.10	[B] < 0.10	[B] 4.3	[B] 6.5	[B] < 0.10
Aliphatic TPH >C16-C21	N	2680	mg/kg	0.10	[B] < 0.10	[B] < 0.10	[B] < 0.10	[B] < 0.10
Aliphatic TPH >C21-C35	N	2680	mg/kg	0.10	[B] < 0.10	[B] 15	[B] 38	[B] < 0.10
Aliphatic TPH >C35-C44	N	2680	mg/kg	0.10	[B] < 0.10	[B] < 0.10	[B] < 0.10	[B] < 0.10
Total Aliphatic Hydrocarbons	N	2680	mg/kg	1.0	[B] < 1.0	[B] 19	[B] 48	[B] < 1.0
Aromatic TPH >C5-C7	N	2680	mg/kg	0.010	[B] < 0.010	[B] < 0.010	[B] < 0.010	[B] < 0.010
Aromatic TPH >C7-C8	N	2680	mg/kg	0.010	[B] < 0.010	[B] < 0.010	[B] < 0.010	[B] < 0.010
Aromatic TPH >C8-C10	N	2680	mg/kg	0.10	[B] < 0.10	[B] < 0.10	[B] < 0.10	[B] < 0.10
Aromatic TPH >C10-C12	N	2680	mg/kg	0.10	[B] < 0.10	[B] < 0.10	[B] < 0.10	[B] < 0.10
Aromatic TPH >C12-C16	N	2680	mg/kg	0.10	[B] < 0.10	[B] 2.0	[B] 2.0	[B] < 0.10
Aromatic TPH >C16-C21	N	2680	mg/kg	0.10	[B] < 0.10	[B] 3.2	[B] 8.2	[B] < 0.10
Aromatic TPH >C21-C35	N	2680	mg/kg	0.10	[B] < 0.10	[B] 36	[B] 110	[B] < 0.10
Aromatic TPH >C35-C44	N	2680	mg/kg	0.10	[B] < 0.10	[B] < 0.10	[B] < 0.10	[B] < 0.10
Total Aromatic Hydrocarbons	N	2680	mg/kg	1.0	[B] < 1.0	[B] 41	[B] 130	[B] < 1.0
Total Petroleum Hydrocarbons	N	2680	mg/kg	2.0	[B] < 2.0	[B] 60	[B] 170	[B] < 2.0
Naphthalene	N	2700	mg/kg	0.010	< 0.010	< 0.010	< 0.010	< 0.010
Acenaphthylene	N	2700	mg/kg	0.010	< 0.010	< 0.010	< 0.010	< 0.010
Acenaphthene	N	2700	mg/kg	0.010	< 0.010	< 0.010	< 0.010	< 0.010
Fluorene	N	2700	mg/kg	0.010	< 0.010	< 0.010	< 0.010	< 0.010
Phenanthrene	N	2700	mg/kg	0.010	< 0.010	7.3	1.4	1.5
Anthracene	N	2700	mg/kg	0.010	< 0.010	1.5	0.32	0.50
Fluoranthene	N	2700	mg/kg	0.010	0.27	7.9	2.4	2.1
Pyrene	N	2700	mg/kg	0.010	0.26	6.7	2.1	1.9
Benzo[a]anthracene	N	2700	mg/kg	0.010	< 0.010	3.0	1.0	0.77
Chrysene	N	2700	mg/kg	0.010	< 0.010	2.8	1.0	0.83
Benzo[b]fluoranthene	N	2700	mg/kg	0.010	< 0.010	2.8	1.2	0.97
Benzo[k]fluoranthene	N	2700	mg/kg	0.010	< 0.010	1.2	0.29	0.31
Benzo[a]pyrene	N	2700	mg/kg	0.010	< 0.010	2.3	0.92	0.95
Indeno(1,2,3-c,d)Pyrene	N	2700	mg/kg	0.010	< 0.010	1.6	0.63	0.64
Dibenz(a,h)Anthracene	N	2700	mg/kg	0.010	< 0.010	0.33	0.25	0.20
Benzo[g,h,i]perylene	N	2700	mg/kg	0.010	< 0.010	1.5	0.69	0.80

Results - Soil

Project: Q0341 Rockstreet, Glyneath

Client: Quantum Geotechnic Ltd			**Chemtest Job No.:**		20-24892	20-24892	20-24892	20-24892
Quotation No.: Q20-19535			**Chemtest Sample ID.:**		1065745	1065746	1065747	1065748
Order No.:			Client Sample Ref.:		ES2	ES3	ES4	ES5
			Client Sample ID.:		2	3	4	5
			Sample Location:		RS-BH01	RS-BH01	RS-BH01	RS-BH01
			Sample Type:		SOIL	SOIL	SOIL	SOIL
			Top Depth (m):		0.30	0.50	1.00	2.00
			Date Sampled:		14-Sep-2020	14-Sep-2020	14-Sep-2020	14-Sep-2020
			Asbestos Lab:		COVENTRY	COVENTRY	COVENTRY	COVENTRY
Determinand	**Accred.**	**SOP**	**Units**	**LOD**				
Coronene	N	2700	mg/kg	0.010	< 0.010	< 0.010	< 0.010	< 0.010
Total Of 17 PAH's	N	2700	mg/kg	0.20	0.53	39	12	11
Benzene	M	2760	µg/kg	1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0
Toluene	M	2760	µg/kg	1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0
Ethylbenzene	M	2760	µg/kg	1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0
m & p-Xylene	M	2760	µg/kg	1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0
o-Xylene	M	2760	µg/kg	1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0
Methyl Tert-Butyl Ether	M	2760	µg/kg	1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0	[B] < 1.0
Total Phenols	M	2920	mg/kg	0.30	< 0.30	< 0.30	< 0.30	< 0.30

Deviations

In accordance with UKAS Policy on Deviating Samples TPS 63. Chemtest have a procedure to ensure 'upon receipt of each sample a competent laboratory shall assess whether the sample is suitable with regard to the requested test(s)'. This policy and the respective holding times applied, can be supplied upon request.The reason a sample is declared as deviating is detailed below. Where applicable the analysis remains UKAS/MCERTs accredited but the results may be compromised.

Sample:	Sample Ref:	Sample ID:	Sample Location:	Sampled Date:	Deviation Code(s):	Containers Received:
1065745	ES2	2	RS-BH01	14-Sep-2020	B	Amber Glass 250ml
1065745	ES2	2	RS-BH01	14-Sep-2020	B	Amber Glass 60ml
1065745	ES2	2	RS-BH01	14-Sep-2020	B	Plastic Tub 500g
1065746	ES3	3	RS-BH01	14-Sep-2020	B	Amber Glass 250ml
1065746	ES3	3	RS-BH01	14-Sep-2020	B	Amber Glass 60ml
1065746	ES3	3	RS-BH01	14-Sep-2020	B	Plastic Tub 500g
1065747	ES4	4	RS-BH01	14-Sep-2020	B	Amber Glass 250ml
1065747	ES4	4	RS-BH01	14-Sep-2020	B	Amber Glass 60ml
1065747	ES4	4	RS-BH01	14-Sep-2020	B	Plastic Tub 500g
1065748	ES5	5	RS-BH01	14-Sep-2020	B	Amber Glass 250ml
1065748	ES5	5	RS-BH01	14-Sep-2020	B	Amber Glass 60ml
1065748	ES5	5	RS-BH01	14-Sep-2020	B	Plastic Tub 500g

Test Methods

SOP	Title	Parameters included	Method summary
1010	pH Value of Waters	pH	pH Meter
1100	Chemical Oxygen Demand	Chemical Oxygen demand (COD)	Dichromate oxidation of organic matter in sample followed by colorimetric determination of residual Cr[VI].
1220	Anions, Alkalinity & Ammonium in Waters	Fluoride; Chloride; Nitrite; Nitrate; Total; Oxidisable Nitrogen (TON); Sulfate; Phosphate; Alkalinity; Ammonium	Automated colorimetric analysis using 'Aquakem 600' Discrete Analyser.
1300	Cyanides & Thiocyanate in Waters	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Continuous Flow Analysis.
1325	Sulphide in Waters	Sulphides	Automated colorimetric analysis by 'Aquakem 600' Discrete Analyser using N,N–dimethyl-pphenylenediamine.
1415	Cations in Waters by ICP-MS	Sodium; Potassium; Calcium; Magnesium	Direct determination by inductively coupled plasma - mass spectrometry (ICP-MS).
1450	Metals in Waters by ICP-MS	Metals, including: Antimony; Arsenic; Barium; Beryllium; Boron; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Tin; Vanadium; Zinc	Filtration of samples followed by direct determination by inductively coupled plasma mass spectrometry (ICP-MS).
1460	Mercury low-level in Waters by AFS	Mercury	Atomic Fluorescence Spectrometry, with collimated UV source, wavelength 253.7 nm.
1490	Hexavalent Chromium in Waters	Chromium [VI]	Automated colorimetric analysis by 'Aquakem 600' Discrete Analyser using 1,5-diphenylcarbazide.
1675	TPH Aliphatic/Aromatic split in Waters by GC-FID(cf. Texas Method 1006 / TPH CWG)	Aliphatics: >C5–C6, >C6–C8, >C8– C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Pentane extraction / GCxGC FID detection
1700	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Waters by GC-FID	Acenaphthene; Acenaphthylene; Anthracene; Benzo[a]Anthracene; Benzo[a]Pyrene; Benzo[b]Fluoranthene; Benzo[ghi]Perylene; Benzo[k]Fluoranthene; Chrysene; Dibenz[ah]Anthracene; Fluoranthene; Fluorene; Indeno[123cd]Pyrene; Naphthalene; Phenanthrene; Pyrene	Dichloromethane extraction / GC-FID (GC-FID detection is non-selective and can be subject to interference from co-eluting compounds)
1760	Volatile Organic Compounds (VOCs) in Waters by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics. (cf. USEPA Method 8260)	Automated headspace gas chromatographic (GC) analysis of water samples with mass spectrometric (MS) detection of volatile organic compounds.
1920	Phenols in Waters by HPLC	Phenolic compounds including: Phenol, Cresols, Xylenols, Trimethylphenols Note: Chlorophenols are excluded.	Determination by High Performance Liquid Chromatography (HPLC) using electrochemical detection.
2010	pH Value of Soils	pH	pH Meter
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <37°C.
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930
2120	Water Soluble Boron, Sulphate, Magnesium & Chromium	Boron; Sulphate; Magnesium; Chromium	Aqueous extraction / ICP-OES
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry
2220	Water soluble Chloride in Soils	Chloride	Aqueous extraction and measuremernt by 'Aquakem 600' Discrete Analyser using ferric nitrate / mercuric thiocyanate.
2300	Cyanides & Thiocyanate in Soils	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Allkaline extraction followed by colorimetric determination using Automated Flow Injection Analyser.

Test Methods

SOP	Title	Parameters included	Method summary
2325	Sulphide in Soils	Sulphide	Steam distillation with sulphuric acid / analysis by 'Aquakem 600' Discrete Analyser, using N,N–dimethyl-p-phenylenediamine.
2425	Extractable Ammonium in soils	Ammonium	Extraction with potassium chloride solution / analysis by 'Aquakem 600' Discrete Analyser using sodium salicylate and sodium dichloroisocyanurate.
2430	Total Sulphate in soils	Total Sulphate	Acid digestion followed by determination of sulphate in extract by ICP-OES.
2450	Acid Soluble Metals in Soils	Metals, including: Arsenic; Barium; Beryllium; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Vanadium; Zinc	Acid digestion followed by determination of metals in extract by ICP-MS.
2490	Hexavalent Chromium in Soils	Chromium [VI]	Soil extracts are prepared by extracting dried and ground soil samples into boiling water. Chromium [VI] is determined by 'Aquakem 600' Discrete Analyser using 1,5-diphenylcarbazide.
2625	Total Organic Carbon in Soils	Total organic Carbon (TOC)	Determined by high temperature combustion under oxygen, using an Eltra elemental analyser.
2680	TPH A/A Split	Aliphatics: >C5–C6, >C6–C8,>C8–C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Dichloromethane extraction / GCxGC FID detection
2700	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-FID	Acenaphthene; Acenaphthylene; Anthracene; Benzo[a]Anthracene; Benzo[a]Pyrene; Benzo[b]Fluoranthene; Benzo[ghi]Perylene; Benzo[k]Fluoranthene; Chrysene; Dibenz[ah]Anthracene; Fluoranthene; Fluorene; Indeno[123cd]Pyrene; Naphthalene; Phenanthrene; Pyrene	Dichloromethane extraction / GC-FID (GC-FID detection is non-selective and can be subject to interference from co-eluting compounds)
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.
640	Characterisation of Waste (Leaching C10)	Waste material including soil, sludges and granular waste	ComplianceTest for Leaching of Granular Waste Material and Sludge
650	Characterisation of Waste (Leaching WAC)	Waste material including soil, sludges and granular waste	ComplianceTest for Leaching of Granular Waste Material and Sludge

Report Information

Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"

Comments or interpretations are beyond the scope of UKAS accreditation
The results relate only to the items tested
Uncertainty of measurement for the determinands tested are available upon request
None of the results in this report have been recovery corrected
All results are expressed on a dry weight basis

The following tests were analysed on samples as received and the results subsequently corrected to a dry weight basis TPH, BTEX, VOCs, SVOCs, PCBs, Phenols

For all other tests the samples were dried at < 37°C prior to analysis
All Asbestos testing is performed at the indicated laboratory
Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1

Sample Deviation Codes

A - Date of sampling not supplied
B - Sample age exceeds stability time (sampling to extraction)
C - Sample not received in appropriate containers
D - Broken Container
E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

All soil samples will be retained for a period of 45 days from the date of receipt
All water samples will be retained for 14 days from the date of receipt
Charges may apply to extended sample storage

If you require extended retention of samples, please email your requirements to:
customerservices@chemtest.com

Quantum Geotechnic Ltd
Plas Newydd
Pontardulais
Swansea
SA4 0FQ

T: 01554 744880
E: enquiries@quantumgeotech.co.uk
W: http://www.quantumgeotech.co.uk

Appendix H. Chemical Screening

ATKINS CatWasteSoil

Classification Assessment Tool of Soil Wastes - Hazard Summary Sheet

Site Name	Rock Street
Location	Skewen
Site ID	
Job Number	
Date	11/25/2020
User Name	Dan.Peters@atkinsglobal.com
Company Name	Atkins

Hole ID	Sample Depth	Hazardous Waste Y/N	HP1	HP2	HP3	HP4	HP5	HP6	HP7	HP8	HP9
RS-TP08	0.7	N	No	No	No	No	No	No	No	No	No
RS-TP08	2	N	No	No	No	No	No	No	No	No	No
RS-TP07A	1.2	N	No	No	No	No	No	No	No	No	No
RS-TP07	0.3	N	No	No	No	No	No	No	No	No	No
RS-TP07	1.2	N	No	No	No	No	No	No	No	No	No
RS-TP07	3	N	No	No	No	No	No	No	No	No	No
RS-BH01	0.3	N	No	No	No	No	No	No	No	No	No
RS-BH01	0.5	N	No	No	No	No	No	No	No	No	No
RS-BH01	1	N	No	No	No	No	No	No	No	No	No
RS-BH01	2	N	No	No	No	No	No	No	No	No	No
RS-TP05	0.5	N	No	No	No	No	No	No	No	No	No
RS-TP04	0.3	N	No	No	No	No	No	No	No	No	No
RS-TP04	0.7	N	No	No	No	No	No	No	No	No	No
RS-TP03	0.1	N	No	No	No	No	No	No	No	No	No
RS-TP03	0.5	N	No	No	No	No	No	No	No	No	No
RS-TP03	1.4	N	No	No	No	No	No	No	No	No	No
RS-TP02	0.3	N	No	No	No	No	No	No	No	No	No
RS-TP01	0.3	N	No	No	No	No	No	No	No	No	No
RS-TP01	1.2	N	No	No	No	No	No	No	No	No	No
RS-TP01	2	N	No	No	No	No	No	No	No	No	No
RS-HP02	0.5	N	No	No	No	No	No	No	No	No	No
RS-HP02	1.3	N	No	No	No	No	No	No	No	No	No
RS-HP03	0.3	N	No	No	No	No	No	No	No	No	No
RS-HP03	1.1	N	No	No	No	No	No	No	No	No	No
RS-HP03A	0.5	N	No	No	No	No	No	No	No	No	No
RS-HP04	0.4	N	No	No	No	No	No	No	No	No	No
RS-HP04B	0.3	N	No	No	No	No	No	No	No	No	No
RS-HP04C	0.4	Y	No	No	No	No	No	No	No	No	No

ATKINS CatWasteSoil

Classification Assessment Tool of Soil Wastes - Hazard Summary Sheet

Site Name	Rock Street
Location	Skewen
Site ID	
Job Number	
Date	11/25/2020
User Name	Dan.Peters@atkinsglobal.com
Company Name	Atkins

Hole ID	Sample Depth	Hazardous Waste Y/N	HP1	HP2	HP3	HP4	HP5	HP6	HP7	HP8	HP9
RS-HP04C	1.2	N	No	No	No	No	No	No	No	No	No
RS-HP05	0.3	N	No	No	No	No	No	No	No	No	No
RS-HP05	0.6	N	No	No	No	No	No	No	No	No	No
RS-HP06	0.3	N	No	No	No	No	No	No	No	No	No
RS-HP06	0.6	N	No	No	No	No	No	No	No	No	No
RS-HP07	0.6	N	No	No	No	No	No	No	No	No	No
RS-BH02	0.5	N	No	No	No	No	No	No	No	No	No
RS-BH04A	0.3	N	No	No	No	No	No	No	No	No	No
RS-BH04A	0.6	N	No	No	No	No	No	No	No	No	No

This output data has been generated by the CAT-Waste Soil waste classification tool provided by Atkins Consultants Ltd and J.McArdle Contracts and should be read in conjuntion with the standard Terms and Conditions

ATKINS CatWasteSoil

Classification Assessment Tool of Soil Wastes - Hazard Summary Sheet

Site Name	Rock Street
Location	Skewen
Site ID	
Job Number	
Date	11/25/2020
User Name	Dan.Peters@atkinsglobal.com
Company Name	Atkins

Hole ID	Sample Depth	Hazardous Waste Y/N	HP1	HP2	HP3	HP4	HP5	HP6	HP7	HP8	HP9

This output data has been generated by the CAT-Waste Soil waste classification tool provided by Atkins Consultants Ltd and J.McArdle Contracts and should be read in conjuntion with the standard Terms and Conditions

15:10 26/11/2020

ATKINS CatWasteSoil

Classification Assessment Tool of Soil Wastes - Hazard Summary Sheet

Site Name	Rock Street
Location	Skewen
Site ID	
Job Number	
Date	11/25/2020
User Name	Dan.Peters@atkinsglobal.com
Company Name	Atkins

Hole ID	Sample Depth	Hazardous Waste Y/N	HP1	HP2	HP3	HP4	HP5	HP6	HP7	HP8	HP9

ATKINS CatWasteSoil

Classification Assessment Tool of Soil Wastes - Hazard Summary Sheet

Site Name	Rock Street
Location	Skewen
Site ID	
Job Number	
Date	11/25/2020
User Name	Dan.Peters@atkinsglobal.com
Company Name	Atkins

Hole ID	Sample Depth	Hazardous Waste Y/N	HP1	HP2	HP3	HP4	HP5	HP6	HP7	HP8	HP9

ATKINS CatWasteSoil

Site Name	Rock Street
Location	Skewen
Site ID	
Job Number	
Date	11/25/2020
User Name	Dan.Peters@atkinsglobal.com
Company Name	Atkins

Hole ID	Sample Depth	Hazardous Waste Y/N	HP10	HP11	HP12	HP13	HP14	HP15	HP16
RS-TP08	0.7	N	No	No	No	No	No	No	No
RS-TP08	2	N	No	No	No	No	No	No	No
RS-TP07A	1.2	N	No	No	No	No	No	No	No
RS-TP07	0.3	N	No	No	No	No	No	No	No
RS-TP07	1.2	N	No	No	No	No	No	No	No
RS-TP07	3	N	No	No	No	No	No	No	No
RS-BH01	0.3	N	No	No	No	No	No	No	No
RS-BH01	0.5	N	No	No	No	No	No	No	No
RS-BH01	1	N	No	No	No	No	No	No	No
RS-BH01	2	N	No	No	No	No	No	No	No
RS-TP05	0.5	N	No	No	No	No	No	No	No
RS-TP04	0.3	N	No	No	No	No	No	No	No
RS-TP04	0.7	N	No	No	No	No	No	No	No
RS-TP03	0.1	N	No	No	No	No	No	No	No
RS-TP03	0.5	N	No	No	No	No	No	No	No
RS-TP03	1.4	N	No	No	No	No	No	No	No
RS-TP02	0.3	N	No	No	No	No	No	No	No
RS-TP01	0.3	N	No	No	No	No	No	No	No
RS-TP01	1.2	N	No	No	No	No	No	No	No
RS-TP01	2	N	No	No	No	No	No	No	No
RS-HP02	0.5	N	No	No	No	No	No	No	No
RS-HP02	1.3	N	No	No	No	No	No	No	No
RS-HP03	0.3	N	No	No	No	No	No	No	No
RS-HP03	1.1	N	No	No	No	No	No	No	No
RS-HP03A	0.5	N	No	No	No	No	No	No	No
RS-HP04	0.4	N	No	No	No	No	No	No	No
RS-HP04B	0.3	N	No	No	No	No	No	No	No
RS-HP04C	0.4	Y	No	No	No	No	Yes	No	No

ATKINS CatWasteSoil

Site Name	Rock Street
Location	Skewen
Site ID	
Job Number	
Date	11/25/2020
User Name	Dan.Peters@atkinsglobal.com
Company Name	Atkins

Hole ID	Sample Depth	Hazardous Waste Y/N	HP10	HP11	HP12	HP13	HP14	HP15	HP16
RS-HP04C	1.2	N	No	No	No	No	No	No	No
RS-HP05	0.3	N	No	No	No	No	No	No	No
RS-HP05	0.6	N	No	No	No	No	No	No	No
RS-HP06	0.3	N	No	No	No	No	No	No	No
RS-HP06	0.6	N	No	No	No	No	No	No	No
RS-HP07	0.6	N	No	No	No	No	No	No	No
RS-BH02	0.5	N	No	No	No	No	No	No	No
RS-BH04A	0.3	N	No	No	No	No	No	No	No
RS-BH04A	0.6	N	No	No	No	No	No	No	No

ATKINS CatWasteSoil

Site Name	Rock Street
Location	Skewen
Site ID	
Job Number	
Date	11/25/2020
User Name	Dan.Peters@atkinsglobal.com
Company Name	Atkins

Hole ID	Sample Depth	Hazardous Waste Y/N	HP10	HP11	HP12	HP13	HP14	HP15	HP16

ATKINS CatWasteSoil

Site Name	Rock Street
Location	Skewen
Site ID	
Job Number	
Date	11/25/2020
User Name	Dan.Peters@atkinsglobal.com
Company Name	Atkins

Hole ID	Sample Depth	Hazardous Waste Y/N	HP10	HP11	HP12	HP13	HP14	HP15	HP16

ATKINS CatWasteSoil

Site Name	Rock Street
Location	Skewen
Site ID	
Job Number	
Date	11/25/2020
User Name	Dan.Peters@atkinsglobal.com
Company Name	Atkins

Hole ID	Sample Depth	Hazardous Waste Y/N	HP10	HP11	HP12	HP13	HP14	HP15	HP16

ATKINS CatWasteSoil

Site Name	Rock Street
Location	Skewen
Site ID	
Job Number	
Date	11/25/2020
User Name	Dan.Peters@atkinsglobal.com
Company Name	Atkins

Hole ID	Sample Depth	Hazardous Waste Y/N
RS-TP08	0.7	N
RS-TP08	2	N
RS-TP07A	1.2	N
RS-TP07	0.3	N
RS-TP07	1.2	N
RS-TP07	3	N
RS-BH01	0.3	N
RS-BH01	0.5	N
RS-BH01	1	N
RS-BH01	2	N
RS-TP05	0.5	N
RS-TP04	0.3	N
RS-TP04	0.7	N
RS-TP03	0.1	N
RS-TP03	0.5	N
RS-TP03	1.4	N
RS-TP02	0.3	N
RS-TP01	0.3	N
RS-TP01	1.2	N
RS-TP01	2	N
RS-HP02	0.5	N
RS-HP02	1.3	N
RS-HP03	0.3	N
RS-HP03	1.1	N
RS-HP03A	0.5	N
RS-HP04	0.4	N
RS-HP04B	0.3	N
RS-HP04C	0.4	Y

This output data has been generated by the CAT-Waste Soil waste classification tool provided by Atkins Consultants Ltd and J.McArdle Contracts and should be read in conjuntion with the standard Terms and Conditions

ATKINS CatWasteSoil

Site Name	Rock Street
Location	Skewen
Site ID	
Job Number	
Date	11/25/2020
User Name	Dan.Peters@atkinsglobal.com
Company Name	Atkins

Hole ID	Sample Depth	Hazardous Waste Y/N
RS-HP04C	1.2	N
RS-HP05	0.3	N
RS-HP05	0.6	N
RS-HP06	0.3	N
RS-HP06	0.6	N
RS-HP07	0.6	N
RS-BH02	0.5	N
RS-BH04A	0.3	N
RS-BH04A	0.6	N

ATKINS CatWasteSoil

Site Name	Rock Street
Location	Skewen
Site ID	
Job Number	
Date	11/25/2020
User Name	Dan.Peters@atkinsglobal.com
Company Name	Atkins

Hole ID	Sample Depth	Hazardous Waste Y/N

ATKINS CatWasteSoil

Site Name	Rock Street
Location	Skewen
Site ID	
Job Number	
Date	11/25/2020
User Name	Dan.Peters@atkinsglobal.com
Company Name	Atkins

Hole ID	Sample Depth	Hazardous Waste Y/N

ATKINS CatWasteSoil

Site Name	Rock Street
Location	Skewen
Site ID	
Job Number	
Date	11/25/2020
User Name	Dan.Peters@atkinsglobal.com
Company Name	Atkins

Hole ID	Sample Depth	Hazardous Waste Y/N

INPUT DATA						RESULTS (Pb)			
ID	Location	Waterbody	Date	Measured Pb Concentration (dissolved) (µg l^{-1})	DOC	Site Specific PNEC Dissolved Pb (µg l^{-1})	BioF	Available Pb (µg l^{-1})	Risk Characterisation Ratio
1	River Cleddau		25/11/2020	1.00	5.15	6.18	0.19	0.19	0.16

ID	Location	Waterbody	Date	Measured Cu Concentration (dissolved) (µg l^{-1})	Measured Zn Concentration (dissolved) (µg l^{-1})	Measured Mn Concentration (dissolved) (µg l^{-1})	Measured Ni Concentration (dissolved) (µg l^{-1})	pH	DOC	Ca	Site-specific PNEC Dissolved Copper (µg l^{-1})	BioF	Bioavailable Copper Concentration (µg l^{-1})	Risk Characterisation Ratio	Site-specific PNEC Dissolved Zinc (µg l^{-1})	BioF	Bioavailable Zinc Concentration (µg l^{-1})	Risk Characterisation Ratio	Site-specific PNEC Dissolved Manganese (µg l^{-1})	BioF	Bioavailable Manganese Concentration (µg l^{-1})	Risk Characterisation Ratio
1	River Cleddau	River Cleddau	25/11/2020	1.1	4.6		1	8.4	5.15	53	9.60	0.10	0.11	0.11	29.37	0.37	1.71	0.16	123.00	1.00		

ATKINS

Assessment Criteria :	Drinking Water Standard England and Wales/WHO																																	
CaCO (mg/l):	185.00			pH	8.40																													
Calcium (mg/l):	53.00			DOC (mg/l)	5.15			Catchment area:	Drinking Water Standard																											
									Location		RS-TP08	RS-TP07A	RS-TP07	RS-BH01	RS-TP05	RS-TP04	RS-TP03	RS-TP02	RS-TP01	RS-HP02	RS-HP03	RS-HP03A	RS-HP04	RS-HP04C	RS-HP04C	RS-HP06	RS-HP07	RS-BH02	RS-BH04A
									Sample ID																									
									Depth		0.7m	1.2m	1.2m	2m	0.5m	0.3m	1.4m	0.3m	0.3m	0.5m	1.1m	0.5m	0.4m	0.4m	1.2m	0.3m	0.6m	0.6m	0.5m	0.6m
									Date		09-Sep-2020	09-Sep-2020	09-Sep-2020	14-Sep-2020																
									Strata																					
Constituents	Unit	Limit of Detection	Generic Assessment Criteria	Number of Samples	Minimum Value	Maximum Value	Number of Exceedences	Locations of Exceedences	Zone																					
pH		N/A	6.5-9.5	20	7.6	9	0				8.4	9	8.3	8.6	7.6	7.6	8	8.5	8.4	8.4	8.2	8.2	8.2	8.2	8.3	8.5	8.4	8	8.2	8.2
Chemical Oxygen Demand	mg O2/l	10	No WSV	20	11	44	0				11	18	12	17	13	44	23	30	12	16	20	13	22	12	19	18	18	14	16	21
Ammoniacal Nitrogen	mg/l	0.05	0.39	20	<0.05	0.3	0				0.16	0.11	0.16	0.16	0.078	0.064	0.06	0.3	0.058	0.11	0.093	<0.05	0.16	0.062	0.076	0.072	0.078	0.086	0.074	0.063
Nitrite	mg/l	0.02	0.5	20	<0.02	0.32	0				0.021	0.029	<0.02	<0.02	<0.02	<0.02	<0.02	0.32	<0.02	0.052	0.028	<0.02	0.15	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Nitrate	mg/l	0.5	50	20	<0.5	60	1	RS-HP06, 0.6m			<0.5	1.1	<0.5	4.8	1.9	28	1.7	3	0.7	4.4	5.8	8.5	12	36	3.5	18	60	4.5	7.3	24
Sulphate	mg/l	1	250	20	2.8	89	0				20	89	29	13	11	7.1	3.4	85	8.2	25	15	17	9.9	24	11	50	3.5	2.8	6.6	4.2
Cyanide (Total)	mg/l	0.05	0.05	20	<0.05	<0.05	0				<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Cyanide (Free)	mg/l	0.05	See Cyanide (total)	20	<0.05	<0.05	0				<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Cyanide (Complex)	mg/l	0.05	0.05	20	<0.05	<0.05	0				<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Sulphide	mg/l	0.05	No WSV	20	<0.05	<0.05	0				<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Magnesium	mg/l	0.5	N/A	20	<0.5	11	0				11	2.3	4.6	2.2	0.62	1.6	0.87	1.2	2.6	4.3	3.6	5.2	5.2	2.6	2.7	5.1	0.92	<0.5	2.3	2.8
Aluminium (Dissolved)	mg/l	0.01	No WSV	20	<0.01	0.15	0				<0.01	0.11	<0.01	<0.01	<0.01	0.15	<0.01	<0.01	<0.01	<0.01	0.011	0.02	<0.01	0.032	0.011	0.013	<0.01	0.062	0.015	<0.01
Arsenic (Dissolved)	mg/l	0.001	0.01	20	<0.001	0.012	1	RS-HP05, 0.3m			<0.001	0.0017	<0.001	<0.001	<0.001	0.0062	<0.001	0.0069	<0.001	<0.001	<0.001	0.0011	0.0022	0.0083	0.0045	0.012	<0.001	<0.001	0.0014	<0.001
Boron (Dissolved)	mg/l	0.02	No WSV	20	<0.02	0.11	0				0.036	0.085	0.03	<0.02	<0.02	<0.02	<0.02	0.11	0.023	0.027	<0.02	<0.02	<0.02	<0.02	0.021	0.042	<0.02	<0.02	<0.02	<0.02
Barium (Dissolved)	mg/l	0.005	No WSV	20	<0.005	0.17	0				0.084	0.025	0.1	0.066	<0.005	0.018	0.0076	0.04	0.0089	0.013	0.034	0.17	0.045	0.092	0.02	0.029	0.0074	<0.005	0.054	0.025
Beryllium (Dissolved)	mg/l	0.001	No WSV	20	<0.001	<0.001	0				<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cadmium (Dissolved)	mg/l	0.00008	0.005	20	<0.00008	<0.00008	0				<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008
Chromium (Dissolved)	mg/l	0.001	0.05	20	<0.001	0.0051	0				<0.001	0.0016	0.0011	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.002	0.0015	0.0015	0.0051	<0.001	<0.001	0.0011	<0.001
Copper (Dissolved)	mg/l	0.001	2	20	0.001	0.0077	0				0.0017	0.0021	0.0027	0.0025	<0.001	0.0077	<0.001	0.0025	<0.001	0.001	0.0018	<0.001	0.0028	<0.001	0.0016	0.0017	<0.001	0.0016	0.0019	0.0018
Manganese (Dissolved)	mg/l	0.001	0.05	20	<0.001	0.032	0				0.0032	0.0019	0.0074	0.0019	0.0017	0.032	<0.001	0.019	0.0011	0.0065	0.0037	<0.001	<0.001	<0.001	<0.001	0.0014	0.02	<0.001	<0.001	<0.001
Mohbdenum (Dissolved)	mg/l	0.001	No WSV	20	<0.001	0.024	0				0.0022	0.024	0.0027	0.0043	<0.001	<0.001	<0.001	0.022	<0.001	0.0047	<0.001	0.0054	0.0046	0.015	0.006	0.018	<0.001	<0.001	0.0033	<0.001
Nickel (Dissolved)	mg/l	0.001	0.02	20	<0.001	0.0013	0				<0.001	<0.001	<0.001	<0.001	<0.001	0.0013	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Lead (Dissolved)	mg/l	0.001	0.01	20	<0.001	0.0047	0				<0.001	<0.001	<0.001	<0.001	<0.001	0.0047	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Antimony (Dissolved)	mg/l	0.001	No WSV	20	<0.001	0.0025	0				<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0018	<0.001	<0.001	<0.001	0.0011	0.0011	0.0025	<0.001	0.0019	<0.001	<0.001	<0.001	<0.001
Selenium (Dissolved)	mg/l	0.001	0.01	20	0.001	0.0048	0				0.0011	0.0035	0.0017	0.0014	<0.001	<0.001	<0.001	0.0048	<0.001	<0.001	<0.001	<0.001	0.001	0.0024	<0.001	0.0042	<0.001	<0.001	0.0015	<0.001
Vanadium (Dissolved)	mg/l	0.001	No WSV	20	<0.001	0.0073	0				<0.001	0.0034	<0.001	<0.001	<0.001	<0.001	<0.001	0.0036	<0.001	<0.001	<0.001	<0.001	0.0013	0.0036	<0.001	0.0073	<0.001	<0.001	<0.001	<0.001
Zinc (Dissolved)	mg/l	0.001	3	20	<0.001	0.01	0				0.0029	0.0012	0.01	0.0025	0.0026	0.0065	0.0011	0.0018	<0.001	<0.001	0.007	<0.001	<0.001	0.0018	<0.001	<0.001	<0.001	<0.001	0.0018	0.0029	<0.001
Mercury Low Level	mg/l	0.00001	No WSV	20	<0.00001	0.000048	0				<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000048	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Iron (Dissolved)	mg/l	0.02	0.2	20	<0.02	0.76	2	RS-TP04, 0.3m; RS-HP07, 0.6m			0.12	0.079	0.14	0.099	<0.02	0.76	0.07	0.073	0.032	0.041	0.085	0.068	0.091	0.12	0.065	0.057	0.062	0.31	0.1	0.081
Chromium (Hexavalent)	mg/l	0.02	See Total Chromium	20	<0.02	<0.02	0				<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Aliphatic TPH >C5-C6	mg/l	0.0001	15	20	<0.0001	<0.0001	0				<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Aliphatic TPH >C6-C8	mg/l	0.0001	15	20	<0.0001	<0.0001	0				<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Aliphatic TPH >C8-C10	mg/l	0.0001	0.3	20	<0.0001	<0.0001	0				<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Aliphatic TPH >C10-C12	mg/l	0.0001	0.3	20	<0.0001	<0.0001	0				<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Aliphatic TPH >C12-C16	mg/l	0.0001	0.3	20	<0.0001	<0.0001	0				<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Aliphatic TPH >C16-C21	mg/l	0.0001	N/A	20	<0.0001	<0.0001	0				<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Aliphatic TPH >C21-C35	mg/l	0.0001	N/A	20	<0.0001	<0.0001	0				<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Aliphatic TPH >C35-C44	mg/l	0.0001	N/A	20	<0.0001	<0.0001	0				<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Total Aliphatic Hydrocarbons	mg/l	0.005	No WSV	20	<0.005	<0.005	0				<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Aromatic TPH >C5-C7	mg/l	0.0001	0.01	20	<0.0001	<0.0001	0				<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Aromatic TPH >C7-C8	mg/l	0.0001	0.7	20	<0.0001	<0.0001	0				<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Aromatic TPH >C8-C10	mg/l	0.0001	0.3	20	<0.0001	<0.0001	0				<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Aromatic TPH >C10-C12	mg/l	0.0001	0.09	20	<0.0001	<0.0001	0				<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Aromatic TPH >C12-C16	mg/l	0.0001	0.09	20	<0.0001	<0.0001	0				<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Aromatic TPH >C16-C21	mg/l	0.0001	0.09	20	<0.0001	<0.0001	0				<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Aromatic TPH >C21-C35	mg/l	0.0001	0.09	20	<0.0001	<0.0001	0				<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Aromatic TPH >C35-C44	mg/l	0.0001	N/A	20	<0.0001	<0.0001	0				<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Total Aromatic Hydrocarbons	mg/l	0.005	No WSV	20	<0.005	<0.005	0				<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Total Petroleum Hydrocarbons	mg/l	0.01	No WSV	20	<0.01	<0.01	0				<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Naphthalene	mg/l	0.00001	See BaP	20	<0.00001	<0.00001	0				<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Acenaphthylene	mg/l	0.00001	See BaP	20	<0.00001	<0.00001	0				<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Acenaphthene	mg/l	0.00001	See BaP	20	<0.00001	<0.00001	0				<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Fluorene	mg/l	0.00001	See BaP	20	<0.00001	<0.00001	0				<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Phenanthrene	mg/l	0.00001	See BaP	20	<0.00001	<0.00001	0				<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Anthracene	mg/l	0.00001	See BaP	20	<0.00001	<0.00001	0				<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Fluoranthene	mg/l	0.00001	See BaP	20	<0.00001	<0.00001	0				<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Pyrene	mg/l	0.00001	See BaP	20	<0.00001	<0.00001	0				<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Benzoanthracene	mg/l	0.00001	No WSV	20	<0.00001	<0.00001	0				<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Chrysene	mg/l	0.00001	See BaP	20	<0.00001	<0.00001	0				<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Benzofluoranthene	mg/l	0.00001	No WSV	20	<0.00001	<0.00001	0				<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Benzo[k]fluoranthene	mg/l	0.00001	See PAH Sum of 4	20	<0.00001	<0.00001	0				<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Benzopyrene	mg/l	0.00001	No WSV	20	<0.00001	<0.00001	0				<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Indeno(1,2,3-c,d)Pyrene	mg/l	0.00001	See PAH Sum of 4	20	<0.00001	<0.00001	0				<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Dibenz(a,h)Anthracene	mg/l	0.00001	See BaP	20	<0.00001	<0.00001	0				<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Benzo[g,h,i]perylene	mg/l	0.00001	See PAH Sum of 4	20	<0.00001	<0.00001	0				<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Coronene	mg/l	0.00001	No WSV	20	<0.00001	<0.00001	0				<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
Total Of 16 PAH's	mg/l	0.0002	No WSV	20	<0.0002	<0.0002	0				<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Benzene	mg/l	0.001	0.001	20	<0.001	<0.001	0				<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Toluene	mg/l	0.001	0.7	20	<0.001	<0.001	0				<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Ethylbenzene	mg/l	0.001	0.3	20	<0.001	0.0018	0				<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0018	<0.001	<0.001	<0.001	<0.001
m & p-Xylene	mg/l	0.001	See Xylenes (total)	20	<0.001	0.0076	0				<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0076	<0.001	<0.001	<0.001	<0.001	<0.001
o-Xylene	mg/l	0.001	See Xylenes (total)	20	<0.001	0.015	0				<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.015	<0.001	<0.001	<0.001	<0.001	<0.001
Methyl Tert-Butyl Ether	mg/l	0.001	No WSV	20	<0.001	<0.001	0				<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Total Phenols	mg/l	0.03	No WSV	20	<0.03	<0.03	0				<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03

ATKINS

Assessment Criteria :	Manual SSAC
CaCO (mg/l):	185.00
Calcium (mg/l):	53.00
pH	8.40
DOC (mg/l)	5.15
Catchment area:	Freshwater not listed

Constituents	Unit	Limit of Detection	Generic Assessment Criteria	Number of Samples	Minimum Value	Maximum Value	Number of Exceedences	Locations of Exceedences	Location	Sample ID	Depth	Date	Strata	Zone
pH		N/A	6-9	20	7.6	9	0			RS-TP08	0.7m	09-Sep-2020		
Chemical Oxygen Demand	mg O2/l	10	No WSV	20	11	44	0							
Ammoniacal Nitrogen	mg/l	0.05	0.2	20	<0.05	0.3	1	RS-TP02, 0.3m						
Nitrite	mg/l	0.02	0.01	20	<0.02	0.32	6	RS-TP08, 0.7m; RS-TP07A, 1.2m; RS-TP02, 0.3m; RS-HP02, 0.5m; RS-HP03, 1.1m; RS-HP04, 0.4m						
Nitrate	mg/l	0.5	N/A	20	<0.5	60	0							
Sulphate	mg/l	1	400	20	2.8	89	0							
Cyanide (Total)	mg/l	0.05	N/A	20	<0.05	<0.05	0							
Cyanide (Free)	mg/l	0.05	0.001	20	<0.05	<0.05	0							
Cyanide (Complex)	mg/l	0.05	N/A	20	<0.05	<0.05	0							
Sulphide	mg/l	0.05	No WSV	20	<0.05	<0.05	0							
Magnesium	mg/l	0.5	N/A	20	<0.5	11	0							
Aluminium (Dissolved)	mg/l	0.01	No WSV	20	<0.01	0.15	0							
Arsenic (Dissolved)	mg/l	0.001	0.05	20	<0.001	0.012	0							
Boron (Dissolved)	mg/l	0.02	No WSV	20	<0.02	0.11	0							
Barium (Dissolved)	mg/l	0.005	No WSV	20	<0.005	0.17	0							
Beryllium (Dissolved)	mg/l	0.001	No WSV	20	<0.001	<0.001	0							
Cadmium (Dissolved)	mg/l	0.00008	0.00015	20	<0.00008	<0.00008	0							
Chromium (Dissolved)	mg/l	0.001	See Cr VI as first pass	20	<0.001	0.0051	0							
Copper (Dissolved)	mg/l	0.001	0.0096	20	0.001	0.0077	0							
Manganese (Dissolved)	mg/l	0.001	0.123	20	<0.001	0.032	0							
Molybdenum (Dissolved)	mg/l	0.001	No WSV	20	<0.001	0.024	0							
Nickel (Dissolved)	mg/l	0.001	0.00596	20	<0.001	0.0013	0							
Lead (Dissolved)	mg/l	0.001	0.00618	20	<0.001	0.0047	0							
Antimony (Dissolved)	mg/l	0.001	No WSV	20	<0.001	0.0025	0							
Selenium (Dissolved)	mg/l	0.001	N/A	20	0.001	0.0048	0							
Vanadium (Dissolved)	mg/l	0.001	No WSV	20	<0.001	0.0073	0							
Zinc (Dissolved)	mg/l	0.001	0.03077	20	<0.001	0.01	0							
Mercury Low Level	mg/l	0.00001	No WSV	20	<0.00001	0.000048	0							
Iron (Dissolved)	mg/l	0.02	1	20	<0.02	0.76	0							
Chromium (Hexavalent)	mg/l	0.02	0.0034	20	<0.02	<0.02	0							
Aliphatic TPH >C5-C6	mg/l	0.0001	0.01	20	<0.0001	<0.0001	0							
Aliphatic TPH >C6-C8	mg/l	0.0001	0.01	20	<0.0001	<0.0001	0							
Aliphatic TPH >C8-C10	mg/l	0.0001	0.01	20	<0.0001	<0.0001	0							
Aliphatic TPH >C10-C12	mg/l	0.0001	0.01	20	<0.0001	<0.0001	0							
Aliphatic TPH >C12-C16	mg/l	0.0001	0.01	20	<0.0001	<0.0001	0							
Aliphatic TPH >C16-C21	mg/l	0.0001	0.01	20	<0.0001	<0.0001	0							
Aliphatic TPH >C21-C35	mg/l	0.0001	0.01	20	<0.0001	<0.0001	0							
Aliphatic TPH >C35-C44	mg/l	0.0001	0.01	20	<0.0001	<0.0001	0							
Total Aliphatic Hydrocarbons	mg/l	0.005	No WSV	20	<0.005	<0.005	0							
Aromatic TPH >C5-C7	mg/l	0.0001	0.01	20	<0.0001	<0.0001	0							
Aromatic TPH >C7-C8	mg/l	0.0001	0.01	20	<0.0001	<0.0001	0							
Aromatic TPH >C8-C10	mg/l	0.0001	0.01	20	<0.0001	<0.0001	0							
Aromatic TPH >C10-C12	mg/l	0.0001	0.01	20	<0.0001	<0.0001	0							
Aromatic TPH >C12-C16	mg/l	0.0001	0.01	20	<0.0001	<0.0001	0							
Aromatic TPH >C16-C21	mg/l	0.0001	0.01	20	<0.0001	<0.0001	0							
Aromatic TPH >C21-C35	mg/l	0.0001	0.01	20	<0.0001	<0.0001	0							
Aromatic TPH >C35-C44	mg/l	0.0001	0.01	20	<0.0001	<0.0001	0							
Total Aromatic Hydrocarbons	mg/l	0.005	No WSV	20	<0.005	<0.005	0							
Total Petroleum Hydrocarbons	mg/l	0.01	No WSV	20	<0.01	<0.01	0							
Naphthalene	mg/l	0.00001	0.002	20	<0.00001	<0.00001	0							
Acenaphthylene	mg/l	0.00001	Screen BaP only	20	<0.00001	<0.00001	0							
Acenaphthene	mg/l	0.00001	Screen BaP only	20	<0.00001	<0.00001	0							
Fluorene	mg/l	0.00001	N/A	20	<0.00001	<0.00001	0							
Phenanthrene	mg/l	0.00001	Screen BaP only	20	<0.00001	<0.00001	0							
Anthracene	mg/l	0.00001	0.0001	20	<0.00001	<0.00001	0							
Fluoranthene	mg/l	0.00001	0.0000063	20	<0.00001	<0.00001	0							
Pyrene	mg/l	0.00001	N/A	20	<0.00001	<0.00001	0							
Benzoanthracene	mg/l	0.00001	No WSV	20	<0.00001	<0.00001	0							
Chrysene	mg/l	0.00001	Screen BaP only	20	<0.00001	<0.00001	0							
Benzofluoranthene	mg/l	0.00001	No WSV	20	<0.00001	<0.00001	0							
Benzo[k]fluoranthene	mg/l	0.00001	Screen BaP only	20	<0.00001	<0.00001	0							
Benzopyrene	mg/l	0.00001	No WSV	20	<0.00001	<0.00001	0							
Indeno(1,2,3-c,d)Pyrene	mg/l	0.00001	Screen BaP only	20	<0.00001	<0.00001	0							
Dibenz(a,h)Anthracene	mg/l	0.00001	N/A	20	<0.00001	<0.00001	0							
Benzo[g,h,i]perylene	mg/l	0.00001	Screen BaP only	20	<0.00001	<0.00001	0							
Coronene	mg/l	0.00001	No WSV	20	<0.00001	<0.00001	0							
Total Of 16 PAH's	mg/l	0.0002	No WSV	20	<0.0002	<0.0002	0							
Benzene	mg/l	0.001	0.01	20	<0.001	<0.001	0							
Toluene	mg/l	0.001	0.074	20	<0.001	<0.001	0							
Ethylbenzene	mg/l	0.001	0.02	20	<0.001	0.0018	0							
m & p-Xylene	mg/l	0.001	See Xylenes (total)	20	<0.001	0.0076	0							
o-Xylene	mg/l	0.001	See Xylenes (total)	20	<0.001	0.015	0							
Methyl Tert-Butyl Ether	mg/l	0.001	No WSV	20	<0.001	<0.001	0							
Total Phenols	mg/l	0.03	No WSV	20	<0.03	<0.03	0							

Location	RS-TP07A	RS-TP07	RS-BH01	RS-TP05	RS-TP04	RS-TP03	RS-TP02	RS-TP01	RS-HP02	RS-HP03	RS-HP03A	RS-HP04	RS-HP04C	RS-HP04C	RS-HP05	RS-HP06	RS-HP07	RS-BH02	RS-BH04A
Sample ID	RS-TP07A	RS-TP07	RS-BH01	RS-TP05	RS-TP04	RS-TP03	RS-TP02	RS-TP01	RS-HP02	RS-HP03	RS-HP03A	RS-HP04	RS-HP04C	RS-HP04C	RS-HP05	RS-HP06	RS-HP07	RS-BH02	RS-BH04A
Depth	1.2m	1.2m	2m	0.5m	0.3m	1.4m	0.3m	0.3m	0.5m	1.1m	0.5m	0.4m	0.4m	1.2m	0.3m	0.6m	0.6m	0.5m	0.6m
Date	09-Sep-2020	09-Sep-2020	14-Sep-2020																
Strata																			
Zone																			
8.4	9	8.3	8.6	7.6	7.6	8	8.5	8.4	8.4	8.2	8.2	8.2	8.2	8.3	8.5	8.4	8	8.2	8.2
11	18	12	17	13	44	23	30	12	16	20	13	22	12	19	18	18	14	16	21
0.16	0.11	0.16	0.16	0.078	0.064	0.06	0.3	0.058	0.11	0.093	<0.05	0.16	0.062	0.076	0.072	0.078	0.086	0.074	0.063
0.021	0.029	<0.02	<0.02	<0.02	<0.02	<0.02	0.32	<0.02	0.052	0.028	<0.02	0.15	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
<0.5	1.1	<0.5	4.8	1.9	28	1.7	3	0.7	4.4	5.8	8.5	12	36	3.5	18	60	4.5	7.3	24
20	89	29	13	11	7.1	3.4	85	8.2	25	15	17	9.9	24	11	50	3.5	2.8	6.6	4.2
<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
11	2.3	4.6	2.2	0.62	1.6	0.87	1.2	2.6	4.3	3.6	5.2	5.2	2.6	2.7	5.1	0.92	<0.5	2.3	2.8
<0.01	0.11	<0.01	<0.01	<0.01	0.15	<0.01	<0.01	<0.01	<0.01	0.011	0.02	<0.01	0.032	0.011	0.013	<0.01	0.062	0.015	<0.01
<0.001	0.0017	<0.001	<0.001	<0.001	0.0062	<0.001	0.0069	<0.001	<0.001	<0.001	0.0011	0.0022	0.0083	0.0045	0.012	<0.001	<0.001	0.0014	<0.001
0.036	0.085	0.03	<0.02	<0.02	<0.02	<0.02	0.11	0.023	0.027	<0.02	<0.02	<0.02	<0.02	0.021	0.042	<0.02	<0.02	<0.02	<0.02
0.084	0.025	0.1	0.066	<0.005	0.018	0.0076	0.04	0.0089	0.013	0.034	0.17	0.045	0.092	0.02	0.029	0.0074	<0.005	0.054	0.025
<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008	<0.00008
<0.001	0.0016	0.0011	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.002	0.0015	0.0015	0.0051	<0.001	<0.001	0.0011	<0.001
0.0017	0.0021	0.0027	0.0025	<0.001	0.0077	<0.001	0.0025	<0.001	0.001	0.0018	<0.001	0.0028	<0.001	0.0016	0.0017	<0.001	0.0016	0.0019	0.0018
0.0032	0.0019	0.0074	0.0019	0.0017	0.032	<0.001	0.019	0.0011	0.0065	0.0037	<0.001	<0.001	<0.001	<0.001	0.0014	0.02	<0.001	<0.001	<0.001
0.0022	0.024	0.0027	0.0043	<0.001	<0.001	<0.001	0.022	<0.001	0.0047	<0.001	0.0054	0.0046	0.015	0.006	0.018	<0.001	<0.001	0.0033	<0.001
<0.001	<0.001	<0.001	<0.001	<0.001	0.0013	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
<0.001	<0.001	<0.001	<0.001	<0.001	0.0047	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0018	<0.001	<0.001	<0.001	0.0011	0.0011	0.0025	<0.001	0.0019	<0.001	<0.001	<0.001	<0.001
0.0011	0.0035	0.0017	0.0014	<0.001	<0.001	<0.001	0.0048	<0.001	<0.001	<0.001	<0.001	0.001	0.0024	<0.001	0.0042	<0.001	<0.001	0.0015	<0.001
<0.001	0.0034	<0.001	<0.001	<0.001	<0.001	<0.001	0.0036	<0.001	<0.001	<0.001	<0.001	0.0013	0.0036	<0.001	0.0073	<0.001	<0.001	<0.001	<0.001
0.0029	0.0012	0.01	0.0025	0.0026	0.0065	0.0011	0.0018	<0.001	<0.001	0.007	<0.001	<0.001	0.0018	<0.001	<0.001	<0.001	0.0018	0.0029	<0.001
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	0.000048	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
0.12	0.079	0.14	0.099	<0.02	0.76	0.07	0.073	0.032	0.041	0.085	0.068	0.091	0.12	0.065	0.057	0.062	0.31	0.1	0.081
<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
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<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
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<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
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<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
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<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001	<0.00001
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<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
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<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0018	<0.001	<0.001	<0.001	<0.001	<0.001
<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.0076	<0.001	<0.001	<0.001	<0.001	<0.001
<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.015	<0.001	<0.001	<0.001	<0.001	<0.001
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<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03

ATKINS

Assessment Criteria : Public Open Space (Residential) - 1% SOM Sand

Use MRL Values?

Constituent	Unit	Limit of Detection	Generic Assessment Criteria	Number of Samples	Minimum Value	Maximum Value	Number of Exceedances	Locations of Exceedances	Location	Sample ID	Depth	Date	Strata	Zone
Asbestos Identification		N/A	No SSV	37	-	-	0			RS-TP08	0.7m	##########		
ACM Detection Stage		N/A	No SSV	0	-	-	0			RS-TP08	2m	09-Sep-2020		
Moisture	%	0.02	No SSV	37	3.1	26	0			RS-TP08	1.2m	09-Sep-2020		
Soil Colour		N/A	No SSV	37	-	-	0			RS-TP07A	0.3m	09-Sep-2020		
Other Material		N/A	No SSV	37	-	-	0			RS-TP07	1.2m	09-Sep-2020		
Soil Texture		N/A	No SSV	37	-	-	0			RS-TP07	3m	09-Sep-2020		
pH		4	No SSV	37	6.8	9.6	0			RS-TP07	0.3m	09-Sep-2020		
Boron (Hot Water Soluble)	mg/kg	0.4	No SSV	37	<0.4	0.77	0			RS-TP07	1.2m	09-Sep-2020		
Magnesium (Water Soluble)	mg/kg	20	No SSV	37	<20	34	0			RS-TP07	3m	09-Sep-2020		
Sulphate (2:1 Water Soluble) as SO4	g/l	0.01	No SSV	37	<0.01	0.22	0			RS-TP07	0.3m	14-Sep-2020		
Nitrite (Extractable)	mg/kg	0.1	No SSV	37	<0.1	0.24	0			RS-TP07	1.2m	14-Sep-2020		
Nitrate (Water Soluble)	g/l	0.01	No SSV	37	<0.01	0.022	0			RS-TP07	3m	14-Sep-2020		
Cyanide (Complex)	mg/kg	0.5	No SSV	37	<0.5	1.4	0			RS-BH01	0.3m	14-Sep-2020		
Cyanide (Free)	mg/kg	0.5	34	37	<0.5	<0.5	0			RS-BH01	0.5m	14-Sep-2020		
Cyanide (Total)	mg/kg	0.5	No SSV	37	<0.5	1.4	0			RS-BH01	1m	14-Sep-2020		
Sulphide (Easily Liberatable)	mg/kg	0.5	No SSV	37	0.83	400	0			RS-BH01	2m	14-Sep-2020		
Ammoniacal Nitrogen	mg/kg	0.5	No SSV	37	<0.5	22	0			RS-BH01	0.5m			
Aluminium (Total)	mg/kg	100	No SSV	37	440	14000	0			RS-BH01	1m			
Iron (Total)	mg/kg	100	No SSV	37	1500	26000	0			RS-BH01	2m			
Sulphate (Total)	mg/kg	100	No SSV	37	190	4700	0			RS-TP05	0.3m			
Arsenic	mg/kg	1	79.1	37	5.5	57	0			RS-TP04	0.5m			
Barium	mg/kg	10	2680	37	23	810	0			RS-TP04	1m			
Beryllium	mg/kg	1	61	37	<1	2	0			RS-TP03	0.3m			
Cadmium	mg/kg	0.1	710	37	<0.1	2.2	0			RS-TP03	0.5m			
Chromium	mg/kg	1	30600	37	5.4	93	0			RS-TP02	0.3m			
Manganese	mg/kg	5	No SSV	37	130	3700	0			RS-TP02	1m			
Molybdenum	mg/kg	2	1360	37	<2	2.4	0			RS-TP01	0.3m			
Antimony	mg/kg	2	749	37	<2	5	0			RS-TP01	0.5m			
Copper	mg/kg	0.5	68130	37	3.1	130	0			RS-TP01	1m			
Mercury	mg/kg	0.1	No SSV	37	<0.1	0.62	0			RS-HP02	0.4m			
Nickel	mg/kg	0.5	347	37	2.5	51	0			RS-HP02	1m			
Lead	mg/kg	0.5	625	37	12	660	1	RS-HP04C: 0.4m		RS-HP03	0.3m			
Selenium	mg/kg	0.2	1370	37	<0.2	1.1	0			RS-HP03	1m			
Vanadium	mg/kg	5	818	37	<5	89	0			RS-TP02	0.3m			
Zinc	mg/kg	0.5	93700	37	6.3	2100	0			RS-TP02	1m			
Chromium (Hexavalent)	mg/kg	0.5	<0.5	37	<0.5	<0.5	0			RS-TP01	0.3m			
Organic Matter	%	0.4	No SSV	37	0.5	48	0			RS-TP01	0.5m			
Aliphatic TPH >C5-C6	mg/kg	0.01	682000	37	<0.01	<0.01	0			RS-TP01	1m			
Aliphatic TPH >C6-C8	mg/kg	0.01	753000	37	<0.01	<0.01	0			RS-HP02	0.4m			
Aliphatic TPH >C8-C10	mg/kg	0.1	18000	37	<0.1	30	0			RS-HP02	1m			
Aliphatic TPH >C10-C12	mg/kg	0.1	18500	37	<0.1	10	0			RS-HP03	0.3m			
Aliphatic TPH >C12-C16	mg/kg	0.1	18600	37	<0.1	32	0			RS-HP03	1m			
Aliphatic TPH >C16-C21	mg/kg	0.1	445000	37	<0.1	72	0			RS-HP03A	0.3m			
Aliphatic TPH >C21-C35	mg/kg	0.1	445000	37	<0.1	310	0			RS-HP03A	1m			
Aliphatic TPH >C35-C44	mg/kg	0.1	No SSV	37	<0.1	300	0			RS-HP04	0.3m			
Total Aliphatic Hydrocarbons	mg/kg	1	No SSV	37	<1	750	0			RS-HP04B	0.3m			
Aromatic TPH >C5-C7	mg/kg	0.01	140	37	<0.01	<0.01	0			RS-HP04B	1m			
Aromatic TPH >C7-C8	mg/kg	0.01	55300	37	<0.01	<0.01	0			RS-HP04C	0.4m			
Aromatic TPH >C8-C10	mg/kg	0.1	7300	37	<0.1	24	0			RS-HP04C	1m			
Aromatic TPH >C10-C12	mg/kg	0.1	7420	37	<0.1	8.7	0			RS-HP05	0.3m			
Aromatic TPH >C12-C16	mg/kg	0.1	7470	37	<0.1	460	0			RS-HP05	1m			
Aromatic TPH >C16-C21	mg/kg	0.1	No SSV	37	<0.1	2200	0			RS-HP06	0.3m			
Aromatic TPH >C21-C35	mg/kg	0.1	3770	37	<0.1	2100	0			RS-HP06	1m			
Aromatic TPH >C35-C44	mg/kg	0.1	No SSV	37	<0.1	38	0			RS-HP07	0.3m			
Total Aromatic Hydrocarbons	mg/kg	1	No SSV	37	<1	3500	0			RS-BH02	0.3m			
Total Petroleum Hydrocarbons	mg/kg	2	No SSV	37	<2	4200	0			RS-BH04A	0.3m			
Naphthalene	mg/kg	0.01	3490	37	<0.01	6.6	0			RS-BH04	0.6m			
Acenaphthylene	mg/kg	0.01	No SSV	37	<0.01	11	0							
Acenaphthene	mg/kg	0.01	14700	37	<0.01	57	0							
Fluorene	mg/kg	0.01	9870	37	<0.01	69	0							
Phenanthrene	mg/kg	0.01	No SSV	37	<0.01	630	0							
Anthracene	mg/kg	0.01	74100	37	<0.01	25	0							
Fluoranthene	mg/kg	0.01	9870	37	<0.01	1100	0							
Pyrene	mg/kg	0.01	7400	37	<0.01	920	0							
Benzo[a]anthracene	mg/kg	0.01	BaP Surrogate	37	<0.01	620	0							
Chrysene	mg/kg	0.01	BaP Surrogate	37	<0.01	590	0							
Benzo[b]fluoranthene	mg/kg	0.01	BaP Surrogate	37	<0.01	770	0							
Benzo[k]fluoranthene	mg/kg	0.01	BaP Surrogate	37	<0.01	270	0							
Benzo[a]pyrene	mg/kg	0.01	10.3	37	<0.01	470	6	RS-TP02, 0.3m; RS-HP03A, 0.5m; RS-HP04, 0.4m; RS-HP04B, 0.3m; RS-HP04C, 0.4m: RS-HP05, 0.3m						
Indeno(1,2,3-c,d)Pyrene	mg/kg	0.01	BaP Surrogate	37	<0.01	320	0							
Dibenz(a,h)Anthracene	mg/kg	0.01	BaP Surrogate	37	<0.01	64	0							
Benzo(g,h,i)perylene	mg/kg	0.01	BaP Surrogate	37	<0.01	280	0							
Coronene	mg/kg	0.01	No SSV	37	<0.01	<0.01	0							
Total Of 17 PAH's	mg/kg	0.2	No SSV	37	<0.2	6400	0							
Benzene	mg/kg	0.001	140	37	<0.001	<1	0							
Toluene	mg/kg	0.001	55300	37	<0.001	<1	0							
Ethylbenzene	mg/kg	0.001	24300	37	<0.001	<1	0							
m & p-Xylene	mg/kg	0.001	No SSV	37	<0.001	<1	0							
o-Xylene	mg/kg	0.001	37800	37	<0.001	<1	0							
Methyl Tert-Butyl Ether	mg/kg	0.001	73600	37	<0.001	<1	0							
Total Phenols	mg/kg	0.3	No SSV	37	<0.3	0.67	0							

ATKINS

Assessment Criteria :			Manual SSAC									
CaCO (mg/l):	185.00		pH	8.40								
Calcium (mg/l):	53.00		DOC (mg/l)	5.15	Catchment area:		Freshwater not listed					
									Location			
									Sample ID		Up Stream	Down Stream
									Depth			
									Date			
									Strata			
Constituents	Unit	Limit of Detection	Generic Assessment Criteria	Number of Samples	Minimum Value	Maximum Value	Number of Exceedences	Locations of Exceedences		Zone		
pH		N/A	6-9	2	8.3	8.5	0				8.3	8.5
Biochemical Oxygen Demand Low Level	mg O2/l	1	No WSV	2	<1	<1	0				<1	<1
Alkalinity (Total)	mg/l	10	No WSV	2	190	200	0				200	190
Chloride	mg/l	1	250	2	10	20	0				10	20
Ammonia (Free)	mg/l	0.05	No WSV	2	<0.05	<0.05	0				<0.05	<0.05
Ammonium	mg/l	0.05	0.26	2	<0.05	0.055	0				0.055	<0.05
Ammoniacal Nitrogen	mg/l	0.05	0.2	2	<0.05	<0.05	0				<0.05	<0.05
Nitrate	mg/l	0.5	N/A	2	1.8	2.9	0				2.9	1.8
Phosphorus (Dissolved)	mg/l	0.02	No WSV	2	0.028	0.036	0				0.028	0.036
Sulphate	mg/l	1	400	2	28	32	0				28	32
Cyanide (Total)	mg/l	0.05	N/A	2	<0.05	<0.05	0				<0.05	<0.05
Cyanide (Free)	mg/l	0.05	0.001	2	<0.05	<0.05	0				<0.05	<0.05
Sulphide	mg/l	0.05	No WSV	2	<0.05	<0.05	0				<0.05	<0.05
Calcium	mg/l	5	N/A	2	48	58	0				58	48
Total Hardness as CaCO3	mg/l	15	No WSV	2	180	190	0				190	180
Aluminium (Dissolved)	mg/l	0.01	No WSV	2	<0.01	0.013	0				0.013	<0.01
Arsenic (Dissolved)	mg/l	0.001	0.05	2	<0.001	<0.001	0				<0.001	<0.001
Boron (Dissolved)	mg/l	0.02	No WSV	2	0.29	0.45	0				0.45	0.29
Barium (Dissolved)	mg/l	0.005	No WSV	2	0.046	0.052	0				0.052	0.046
Beryllium (Dissolved)	mg/l	0.001	No WSV	2	<0.001	<0.001	0				<0.001	<0.001
Cadmium (Dissolved)	mg/l	0.00008	0.00015	2	<0.00008	<0.00008	0				<0.00008	<0.00008
Chromium (Dissolved)	mg/l	0.001	See Cr VI as first pass	2	<0.001	<0.001	0				<0.001	<0.001
Copper (Dissolved)	mg/l	0.001	0.0096	2	0.0011	0.0011	0				0.0011	0.0011
Iron (Dissolved)	mg/l	0.02	1	2	0.055	0.07	0				0.055	0.07
Mercury (Dissolved)	mg/l	0.0005	0.00007	2	<0.0005	<0.0005	0				<0.0005	<0.0005
Molybdenum (Dissolved)	mg/l	0.001	No WSV	2	<0.001	<0.001	0				<0.001	<0.001
Nickel (Dissolved)	mg/l	0.001	0.00596	2	<0.001	<0.001	0				<0.001	<0.001
Lead (Dissolved)	mg/l	0.001	0.00618	2	<0.001	<0.001	0				<0.001	<0.001
Antimony (Dissolved)	mg/l	0.001	No WSV	2	<0.001	<0.001	0				<0.001	<0.001
Selenium (Dissolved)	mg/l	0.001	N/A	2	<0.001	<0.001	0				<0.001	<0.001
Vanadium (Dissolved)	mg/l	0.001	No WSV	2	<0.001	<0.001	0				<0.001	<0.001
Zinc (Dissolved)	mg/l	0.001	0.03077	2	0.0033	0.0046	0				0.0046	0.0033
Low-Level Chromium (Hexavalent)	mg/l	0.0001	No WSV	2	0.0001	0.0001	0				<0.0001	0.0001
Dissolved Organic Carbon	mg/l	2	No WSV	2	4.8	5.5	0				4.8	5.5
Total Organic Carbon	mg/l	2	No WSV	2	3.9	5.4	0				3.9	5.4
Aliphatic TPH >C5-C6	mg/l	0.0001	0.01	2	<0.0001	<0.0001	0				<0.0001	<0.0001
Aliphatic TPH >C6-C8	mg/l	0.0001	0.01	2	<0.0001	<0.0001	0				<0.0001	<0.0001
Aliphatic TPH >C8-C10	mg/l	0.0001	0.01	2	<0.0001	<0.0001	0				<0.0001	<0.0001
Aliphatic TPH >C10-C12	mg/l	0.0001	0.01	2	<0.0001	<0.0001	0				<0.0001	<0.0001
Aliphatic TPH >C12-C16	mg/l	0.0001	0.01	2	<0.0001	<0.0001	0				<0.0001	<0.0001
Aliphatic TPH >C16-C21	mg/l	0.0001	0.01	2	<0.0001	<0.0001	0				<0.0001	<0.0001
Aliphatic TPH >C21-C35	mg/l	0.0001	0.01	2	<0.0001	<0.0001	0				<0.0001	<0.0001
Aliphatic TPH >C35-C44	mg/l	0.0001	0.01	2	<0.0001	<0.0001	0				<0.0001	<0.0001
Total Aliphatic Hydrocarbons	mg/l	0.005	No WSV	2	<0.005	<0.005	0				<0.005	<0.005
Aromatic TPH >C5-C7	mg/l	0.0001	0.01	2	<0.0001	<0.0001	0				<0.0001	<0.0001
Aromatic TPH >C7-C8	mg/l	0.0001	0.01	2	<0.0001	<0.0001	0				<0.0001	<0.0001
Aromatic TPH >C8-C10	mg/l	0.0001	0.01	2	<0.0001	<0.0001	0				<0.0001	<0.0001
Aromatic TPH >C10-C12	mg/l	0.0001	0.01	2	<0.0001	<0.0001	0				<0.0001	<0.0001
Aromatic TPH >C12-C16	mg/l	0.0001	0.01	2	<0.0001	<0.0001	0				<0.0001	<0.0001
Aromatic TPH >C16-C21	mg/l	0.0001	0.01	2	<0.0001	<0.0001	0				<0.0001	<0.0001
Aromatic TPH >C21-C35	mg/l	0.0001	0.01	2	<0.0001	<0.0001	0				<0.0001	<0.0001
Aromatic TPH >C35-C44	mg/l	0.0001	0.01	2	<0.0001	<0.0001	0				<0.0001	<0.0001
Total Aromatic Hydrocarbons	mg/l	0.005	No WSV	2	<0.005	<0.005	0				<0.005	<0.005
Total Petroleum Hydrocarbons	mg/l	0.01	No WSV	2	<0.01	<0.01	0				<0.01	<0.01
Naphthalene	mg/l	0.00001	0.002	2	<0.00001	<0.00001	0				<0.00001	<0.00001
Acenaphthylene	mg/l	0.00001	Screen BaP only	2	<0.00001	<0.00001	0				<0.00001	<0.00001
Acenaphthene	mg/l	0.00001	Screen BaP only	2	<0.00001	<0.00001	0				<0.00001	<0.00001
Fluorene	mg/l	0.00001	N/A	2	<0.00001	<0.00001	0				<0.00001	<0.00001
Phenanthrene	mg/l	0.00001	Screen BaP only	2	<0.00001	<0.00001	0				<0.00001	<0.00001
Anthracene	mg/l	0.00001	0.0001	2	<0.00001	<0.00001	0				<0.00001	<0.00001
Fluoranthene	mg/l	0.00001	0.0000063	2	<0.00001	<0.00001	0				<0.00001	<0.00001
Pyrene	mg/l	0.00001	N/A	2	<0.00001	<0.00001	0				<0.00001	<0.00001
Benzoanthracene	mg/l	0.00001	No WSV	2	<0.00001	<0.00001	0				<0.00001	<0.00001
Chrysene	mg/l	0.00001	Screen BaP only	2	<0.00001	<0.00001	0				<0.00001	<0.00001
Benzo[b]fluoranthene	mg/l	0.00001	Screen BaP only	2	<0.00001	<0.00001	0				<0.00001	<0.00001
Benzo[k]fluoranthene	mg/l	0.00001	Screen BaP only	2	<0.00001	<0.00001	0				<0.00001	<0.00001
Benzopyrene	mg/l	0.00001	No WSV	2	<0.00001	<0.00001	0				<0.00001	<0.00001
Indeno(1,2,3-c,d)Pyrene	mg/l	0.00001	Screen BaP only	2	<0.00001	<0.00001	0				<0.00001	<0.00001
Dibenz(a,h)Anthracene	mg/l	0.00001	N/A	2	<0.00001	<0.00001	0				<0.00001	<0.00001
Benzo[g,h,i]perylene	mg/l	0.00001	Screen BaP only	2	<0.00001	<0.00001	0				<0.00001	<0.00001
Total Of 16 PAH's	mg/l	0.0002	No WSV	2	<0.0002	<0.0002	0				<0.0002	<0.0002
Benzene	mg/l	0.001	0.01	2	<0.001	<0.001	0				<0.001	<0.001
Toluene	mg/l	0.001	0.074	2	<0.001	<0.001	0				<0.001	<0.001
Ethylbenzene	mg/l	0.001	0.02	2	<0.001	<0.001	0				<0.001	<0.001
m & p-Xylene	mg/l	0.001	See Xylenes (total)	2	<0.001	<0.001	0				<0.001	<0.001
o-Xylene	mg/l	0.001	See Xylenes (total)	2	<0.001	<0.001	0				<0.001	<0.001
Total Phenols	mg/l	0.03	No WSV	2	<0.03	<0.03	0				<0.03	<0.03