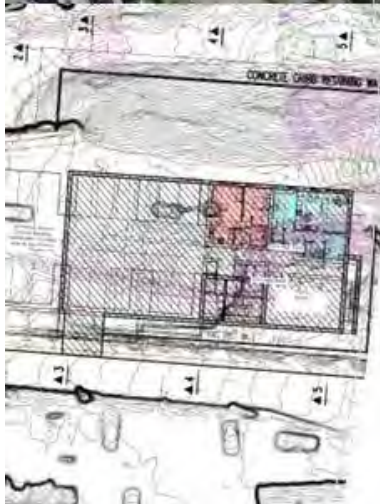




**EARTH ENVIRONMENTAL
& GEOTECHNICAL**
A Technics Group Company

GeoEnvironmental Site Investigation Report

Land Off Station Road

Bargoed

Report Ref: B5556/26

May 2026

Earth Environmental & Geotechnical
(Southern) Ltd
3 Tollbridge Studios
Toll Bridge Road
Bath
BA1 7DE

Tel : 01225 858823

Email
southwest@earthenvironmental.co.uk
www.earthenvironmental.co.uk

**GEOENVIRONMENTAL
SITE INVESTIGATION REPORT**

LAND OFF STATION ROAD

BARGOED

Report Ref: B5556/26

MAY 2026

Prepared on Behalf of:

Langstone Construction Group Ltd

By:

Earth Environmental & Geotechnical (Southern) Ltd
3 Tollbridge Studios
Toll Bridge Road
Bath
BA1 7DE

DISTRIBUTION:

1 electronic copy Langstone Construction Group Ltd

GEOENVIRONMENTAL SITE INVESTIGATION REPORT

LAND OFF STATION ROAD, BARGOED

Report Reference: B5556/26

Version B.0

Date: 29th May 2026

Prepared for: Langstone Construction Group Ltd

Prepared by: Earth Environmental & Geotechnical (Southern) Ltd
3 Tollbridge Studios
Toll Bridge Road
Bath
BA1 7DE

Definition of Version Code:

- D. Applied during initial drafting of the report before it has been reviewed.
- C. Applied after the report has been reviewed but before it has been approved by the Project Manager.
- B. Applied after the Project Manager has approved the report ready for issue to the client.
- A. Applied to reports after external/internal review.

The version number starts at "□" and is raised by "□" at each re-type.

Written by:

Finn Lewkowicz
Geo-Environmental Consultant



Approved by:

John Grace
Regional Director

TABLE OF CONTENTS

1.0	INTRODUCTION	1
1.1	BACKGROUND.....	1
1.2	TERMS OF REFERENCE	1
1.3	REPORT SCOPE.....	1
1.4	LIMITATIONS OF THE STUDY	1
2.0	SITE LOCATION & DESCRIPTION	2
2.1	PROPOSED DEVELOPMENT	4
3.0	GEOLOGICAL SETTING	5
3.1	GEOLOGY.....	5
3.2	GROUND STABILITY	6
3.3	RADON POTENTIAL	6
3.4	MINING, GROUND WORKINGS & NATURAL CAVITIES	6
4.0	ENVIRONMENTAL SETTING	8
4.1	INDUSTRIAL LAND USE INFORMATION	8
4.2	WASTE AND LANDFILL SITES.....	8
4.3	ENVIRONMENTAL PERMITS, INCIDENTS AND REGISTERS	9
4.4	HYDROGEOLOGY AND HYDROLOGY	9
4.5	POTENTIAL FLOOD RISKS	10
4.6	ENVIRONMENTALLY SENSITIVE SITES	10
4.7	ARCHAEOLOGY.....	10
4.8	VISUAL AND CULTURAL DESIGNATIONS.....	10
5.0	SITE HISTORY	11
6.0	PRELIMINARY CONTAMINATION RISK ASSESSMENT	13
6.1	INTRODUCTION	13
6.2	POTENTIAL SOURCES	14
6.3	POTENTIAL RECEPTORS	14
6.4	POTENTIAL PATHWAYS.....	14
6.5	PRELIMINARY RISK ASSESSMENT	16
7.0	SITE INVESTIGATION	17
7.1	EXPLORATORY FIELDWORK.....	17
7.2	LABORATORY TESTING PROGRAMME	19
7.2.1	<i>Geotechnical Testing</i>	<i>19</i>
7.2.2	<i>Environmental Testing</i>	<i>20</i>
8.0	GROUND CONDITIONS ENCOUNTERED	21
8.1	SOIL PROFILE ENCOUNTERED	21
8.2	OBSTRUCTIONS	21
8.3	GROUNDWATER	22
8.4	LAND GAS	22
8.5	VISUAL / OLFACTORY EVIDENCE OF CONTAMINATION.....	22
8.6	EVIDENCE OF MINING	22
9.0	ENGINEERING PROPERTIES OF STRATA ENCOUNTERED	23
9.1	GENERAL	23
9.2	MADE GROUND	23
9.3	HUGHES MEMBER - COHESIVE DEPOSITS	25
9.4	HUGHES MEMBER – GRANULAR SOILS	25
9.5	RESULTS OF IN-SITU TESTING.....	26
9.5.1	<i>In-situ CBR Testing</i>	<i>26</i>

10.0	GEOTECHNICAL ASSESSMENT.....	27
10.1	PROPOSED DEVELOPMENT	27
10.2	GROUND CONDITIONS ENCOUNTERED	27
10.3	GEOTECHNICAL CONSIDERATIONS.....	27
10.4	GROUND IMPROVEMENT	27
10.5	PILES.....	28
10.6	CONTROLLED MODULUS COLUMNS.....	28
10.7	RETAINING WALLS	29
10.8	PAVEMENT DESIGN.....	29
10.9	CHEMICAL ATTACK ON BURIED CONCRETE.....	29
10.10	SUITABILITY OF EXCAVATED MATERIALS.....	30
10.11	TEMPORARY WORKS	30
10.12	DRAINAGE	31
11.0	SOIL CONTAMINATION RISK ASSESSMENT	32
11.1	TIER I HUMAN HEALTH SOIL RISK ASSESSMENT – FUTURE SITE USERS	32
11.2	SOIL WASTE ASSESSMENT	34
12.0	GROUND GAS RISK ASSESSMENT	35
12.1	LAND GAS	35
12.2	RADON GAS	36
13.0	REVIEW OF PRELIMINARY CONTAMINATION RISK ASSESSMENT	37
14.0	CONCLUSIONS AND RECOMMENDATIONS	38
14.1	SOIL CONTAMINATION.....	38
14.2	SOIL DISPOSAL	38
14.3	ASBESTOS.....	38
14.4	FOUNDATIONS	38
14.4	RETAINING WALL	38
14.5	LAND GAS PROTECTION MEASURES	38
14.6	RISK TO GROUNDWATER AND SURFACE WATERS.....	38
14.7	RISK TO BURIED (WATER) SERVICES.....	38
14.8	SITE PERSONNEL & OTHER MATTERS.....	39

LIST OF FIGURES

Figure 1	Site Location Plan
Figure 2	Aerial Photograph Showing Site Location
Figure 3	General Site Photograph
Figure 4	Proposed Development Details
Figure 5	Geology Map Extract
Figure 6	Historical Map Extracts
Figure 7	Exploratory Hole Location Plan
Figure 8	SPT N Value v Depth Plot

TABLES

Table 1	Geohazards Risk Ratings
Table 2	Summary of Industrial Land Use
Table 3	Environmental Permits, Incidents and Registers Within 250m of the Site
Table 4	Summary of Site History
Table 5	Consequence, Probability and Risk
Table 6	Estimation of Level of Risk by Comparison of Consequence and Probability
Table 7	Preliminary Conceptual Model
Table 8	Summary of Exploratory Holes Undertaken



Table 9	Summary of Geotechnical Laboratory Tests Undertaken
Table 10	Summary of Ground Conditions Encountered
Table 11	Summary of Laboratory Geotechnical Test Results
Table 12	Summary of In Situ CBR Test Results
Table 13	Characteristic Values for Design of Buried Concrete
Table 14	Soil Results Comparison with C4SL/S4UL Levels (Metals)
Table 15	Soil Results Comparison with C4SL/S4UL Levels (Petroleum Hydrocarbons)
Table 16	Soil Results Comparison with C4SL/S4UL Levels (Polyaromatic Hydrocarbons & Phenols)
Table 17	Gas Screening Values
Table 18	Modified Wilson & Card Classification (CIRIA Report 659)
Table 19	Revised Conceptual Model

APPENDICES

Appendix 1	GroundSure Report
Appendix 2	Exploratory Hole Logs
Appendix 3	Photographs
Appendix 4	In Situ Test Results
Appendix 5	Monitoring Results
Appendix 6	Laboratory Test Results
Appendix 7	Soil Waste Classification
Appendix 8	Report Limitations

1.0 INTRODUCTION

1.1 Background

A GeoEnvironmental site investigation has been commissioned by Langstone Construction Group Ltd, □ the ' Client to examine ground conditions for a proposed development on land off Station Road, Bargoed.

1.2 Terms of Reference

Earth Environmental & Geotechnical (Southern) Ltd (EEGSL) was commissioned by the Client to undertake a geoenvironmental site investigation in accordance with a proposal B5556 dated 19th January 2026.

The objectives of this investigation are as follows:

- *Assessment of ground conditions for design of foundations and infrastructure associated with proposed development.*
- *Assess the presence and likely extent of any potential environmental hazards (soil, groundwater, and gas) associated within the areas of the site investigated.*

1.3 Report Scope

This report presents full factual records of the site work carried out, the ground conditions encountered in the exploratory holes, the in situ and laboratory test results and results of any monitoring.

All information collected has been used to provide an interpretation of the ground conditions, with recommendations on geotechnical design and potential ground contamination risks for the proposed development.

1.4 Limitations of the Study

The report is written in the context of an agreed scope of work and budget and should not be used in a different context. New information, improved practices, or changes in legislation may require a reinterpretation of the report in whole or in part. EEGSL reserve the right to amend either conclusions or recommendations considering any further information that may become available.

The report is provided for the sole use by the client and is confidential to them.

Recommendations within this report are also based on exploratory records, examination of samples and, where applicable, laboratory tests.

No liability can be accepted for conditions not revealed by the boreholes and trial pits, particularly at intervening locations.

Whilst every effort is made to ensure accuracy of data supplied, all opinions expressed as to the spatial distribution of strata between sampling locations is for guidance only and no responsibility is accepted as to its accuracy.

2.0 SITE LOCATION & DESCRIPTION

The site is an area of land located off Station Road, Bargoed, centred on National Grid Reference 315118, 200089 with the nearest postcode of CF81 9AL.

The site and surrounding area are shown in Figure 1.

Figure 1 – Site Location Plan



The site covers approximately 0.25 hectares and is situated in northeast Bargoed, approximately 20km north of Cardiff.

The site is located on a slope, built into two plateaus using demolition material and fill.

The highest point (southwest half of site) is connected to the lower point via a steep track on the furthest most point on the south side of the site.

There are various piles of demolition material throughout the site. The ground cover is mixed hard standing and soft landscaping.

The site is located opposite Bargoed railway station, which provides regular services to Cardiff, Penarth, and Barry.

To the north, is a hand car wash facility, while to the south there is a vehicle charging station.

The Rhymney River lies to the east on lower ground.

Figure 2 shows an aerial photograph of the site and surrounding area.



Figure 2 – Aerial Photograph Showing Site Location



A general site photograph is presented in Figure 3 showing a southeast facing view from the upper plateau.

Figure 3 – General Site Photograph



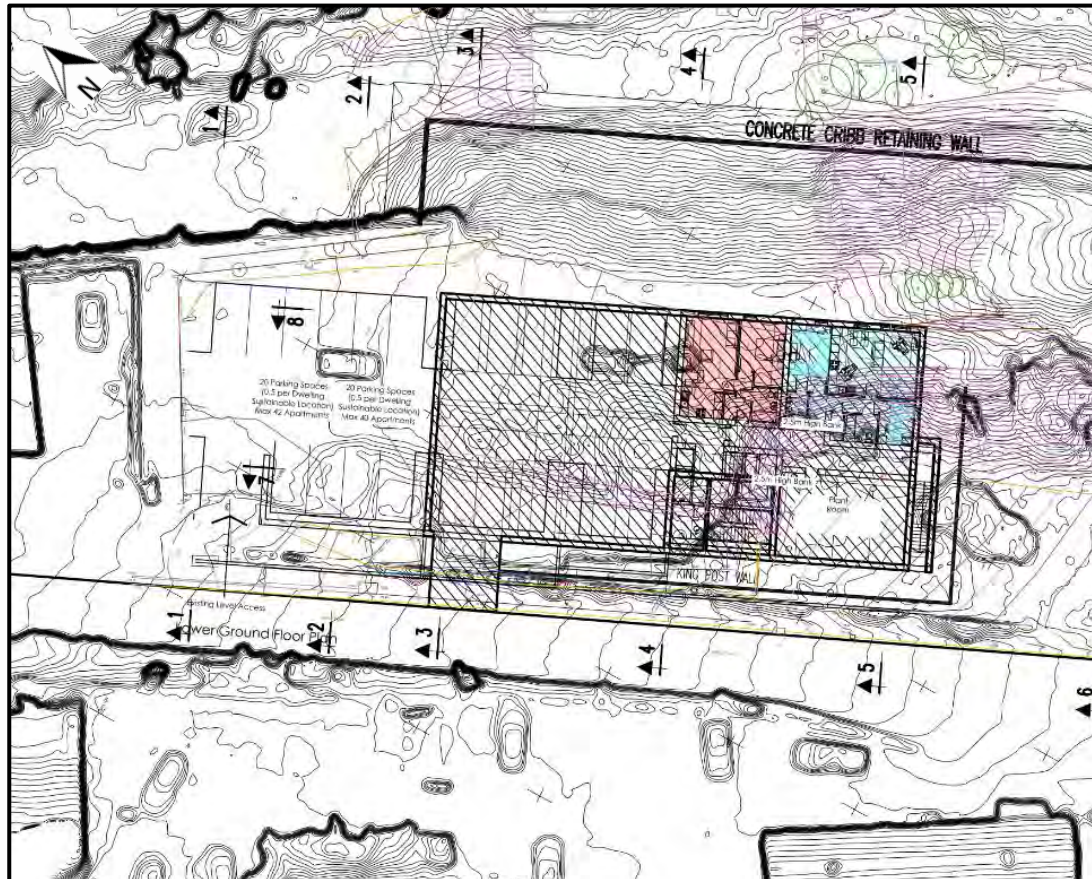
2.1 Proposed Development

It is proposed to construct a five-storey building set into the sloping valley. This will feature twenty-nine one and two bed apartments, basement carparking and associated amenities such as plant rooms, cleaners store, meter cupboards, bin store, and cycle store.

A retaining wall along the northeast boundary is also proposed.

The proposed development layout details are shown in Figure 4.

Figure 4 – Proposed Development Details



3.0 GEOLOGICAL SETTING

The geology of the site is covered by British Geological Survey (BGS) online data and the site-specific Groundsure Insight Report (Appendix 1).

3.1 Geology

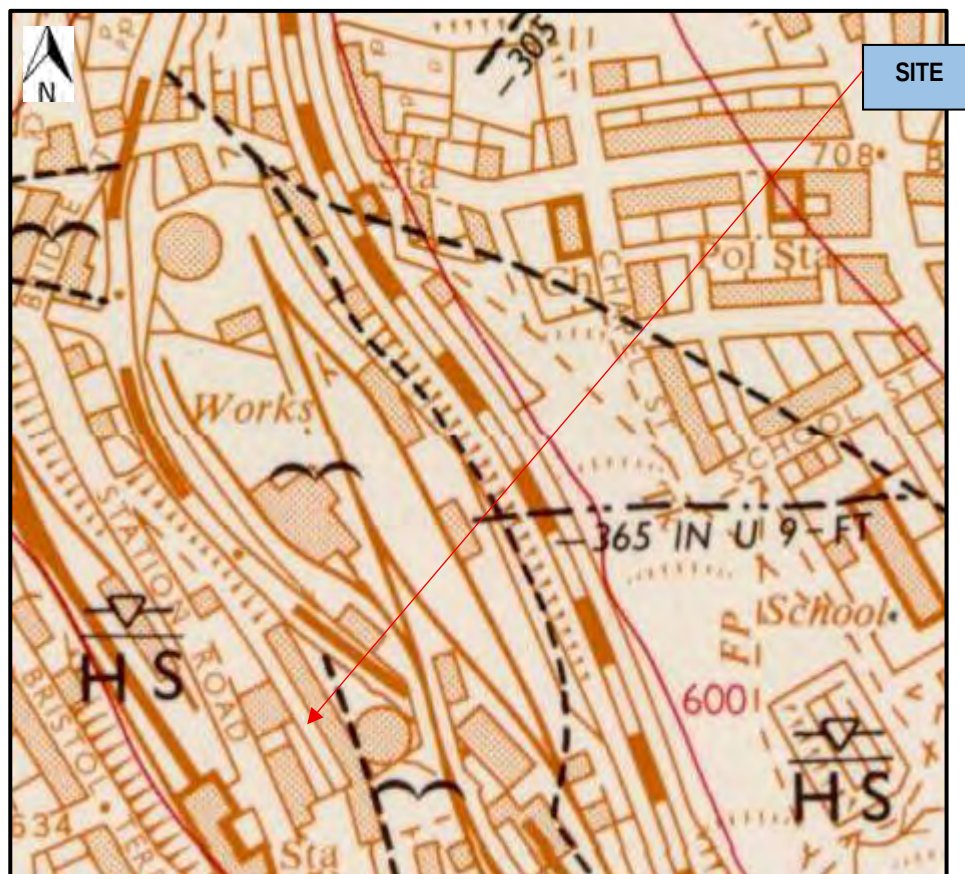
British Geological Survey (BGS) data indicates that the site is not underlain by artificial ground (Made Ground).

The site is underlain by glacial till deposits and river alluvium.

The site is underlain by the Hughes Member - Sandstone, part of the Pennant Sandstone Formation, of Astrurian substage.

The Hughes Member is described as green-grey, lithic arenites ('Pennant sandstones'), with thin mudstone/siltstone and seatearth interbeds, and thin coals.

Figure 5 – Geology Map Extract



There are no geological faults within 250m of the site.

There are 2no. historical BGS borehole records located within 250m of the site. The closest of which (BGS ref. SO10SE73) on the land immediately north of the site.

The following sequence was recorded:

0.00-0.30m	Reinforced concrete
0.30-2.20m	MADE GROUND
2.20-7.25m+	Weathered SANDSTONE

3.2 Ground Stability

The hazard ratings for specific Geohazards in the surrounding area are presented in Table 1.

Table 1 - Geohazards Risk Ratings

Geohazards	Risk Rating
Highly Compressible Ground	Moderate due to alluvium
Collapse soils	Very Low
Shrink Swell Clays	Very Low
Running Sands	Very Low
Ground Dissolution	Negligible
Landslides	Low to Moderate
Mining & Quarrying	There are twenty-six records of ground workings within 250m of the assessment site. The site is located within a Coal Mining Reporting Area. Non-coal mining potential is not noted on site.

3.3 Radon Potential

The property is in a Radon Affected Area where between 5% and 10% of properties are above the Action Level.

Therefore, basic radon protection measures are required for any new structures, unless a programme of soil radon gas monitoring is undertaken.

3.4 Mining, Ground Workings & Natural Cavities

The assessment site is not located within gypsum, brine, tin, or clay mining areas.

There are 26no. surface ground workings located within 250m of the site boundary. 4no. are located on site and referenced as a colliery dated 1916 to 1948.

There are 5no. underground workings located within 250m of the site boundary. The closest being a colliery mapped in 1916-1948 located 12m northeast of the site.

There are no BritPits records located within 250m of the site boundary.

The site is located within a coal mining area as defined by the Coal Authority.

According to the Coal Authority Interactive Map Viewer the site is not located within a Development High Risk Area.

There is no record of non-coal mining onsite.

4.0 ENVIRONMENTAL SETTING

Environmental conditions are covered by Environment Agency (EA) and British Geological Survey (BGS) online data, and the site-specific Groundsure Insight report (Appendix 1).

The following sections are limited to locations within 250m of the site boundary unless it is considered that installations or activities beyond that range could potentially have an impact on the site or be affected by the redevelopment of the site.

4.1 Industrial Land Use Information

Historical and current industrial land usage on-site and within 250m of the site is summarised in Table 2:

Table 2 - Summary of Industrial Land Use

Description	Records On-site	Records within 250m of site	Details
Historical Industrial Land Uses	3	79	<u>On-site:</u> Unspecified Commercial/Industrial (1898), gas works (1916-1948), colliery (1916-1948). <u>Nearest off-site:</u> 4m NE Unspecified tanks (1898).
Historical Tanks	3	23	<u>On-site:</u> Gas works (1920-1992). <u>Nearest off-site:</u> 8m E Gasometer (1901-1920).
Historical Energy Features	3	7	<u>On-site:</u> Gas works (1920-1992). <u>Nearest off-site:</u> 8m E Gasometer (1901-1920).
Historical Petrol Station	0	0	-
Historical Garage	0	0	-
Historical Military Land	0	0	-
Historical Railway Features	0	57	<u>Nearest off-site:</u> 6m W Railway sidings (1922).
Recent Industrial Land Use	0	5	<u>Nearest off-site:</u> 22m W South Wales Spares – Vehicle Parts and Accessories.
Current/Recent Petrol Stations	0	1	<u>Nearest off-site:</u> 2m SW Murco – Status obsolete.
Electricity Cables	0	0	-
Gas Pipelines	0	0	-
Current Railway Features	0	15	<u>Nearest off-site:</u> 24m SW Rhymney Line

4.2 Waste and Landfill Sites

There are no historical or current landfill sites or historical waste facilities within 250m of the site.

There are 7no. current licensed waste sites located within 250m of the site, all of which are at the same address 28m NW. A J Davies Car Spares, a vehicle depollution site, has had licenses issued since 17/10/2012.

4.3 Environmental Permits, Incidents and Registers

The Groundsure report includes records of environmental permits, incidents, and registers within 250m of the site, the details of which are summarised in Table 3.

Table 3 - Environmental Permits, Incidents and Registers Within 250m of the Site

Permit/Incident/Register	On Site	Within 250m of Site	Details
Sites Determined as Contaminated Land under Part 2A EPA1990	0	0	-
Dangerous or Hazardous (COMAH and NIHHS) Sites	0	0	-
Regulated Explosive Sites	0	0	-
Hazardous Substance Storage/Usage	0	0	-
Historical Licensed Industrial Activities (IPC)	0	0	-
Licensed Industrial Activities Part A (1)	0	0	-
Licensed Pollutant Release Part A (2) and Part B	0	4	Nearest off-site: 4m NW Petrol Express Service Station – Unloading of petrol into storage at service stations.
Radioactive Substance Authorisations	0	0	-
Licensed Discharge to Controlled Waters	0	7	Nearest off-site: 193m NW 2 Bridges Street Bargoed – Sewage discharges, sewer storm overflow. Issued 15/03/1995 revoked 15/03/2001.
Pollutant Release to surface waters (Red List)	0	0	-
Pollutant Release to Public Sewer	0	0	-
List 1 Dangerous Substances	0	0	-
List 2 Dangerous Substances	0	0	-
Pollution Incidents (EA/NRW)	0	18	Nearest off-site: 12m NE 23/01/2002 Specific Waste Materials – Batteries. Minor impact on water and land, no impact on air.
Pollution Inventory Substances / Waste Transfers/ Radioactive Waste	0	0	-

4.4 Hydrogeology and Hydrology

The bedrock geology beneath the site is classified as a 'Secondary A Aquifer' by the Environment Agency. The EA definition of a Secondary A Aquifer is given below:

“Secondary A - Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers.”

Groundwater vulnerability: The bedrock aquifer has been classed as having medium vulnerability rating on site.

There are no groundwater, surface water, potable water abstractions, or Source Protection Zone (SPZ) within 250m of the assessment site.

The site is located within the Rhymney surface water body catchment and within the SE Valleys Carboniferous Coal Measures groundwater body.

There are 21no. records of surface water features within 250m of the site, the nearest of which is located 9m northeast and is described as an inland river not influenced by normal tidal action.

4.5 Potential Flood Risks

A detailed flood risk assessment falls outside of this scope, however from a review of preliminary flood data, it is suggested that there is low risk on site.

The highest risk of surface water flooding on site gives a water depth of greater than 1m during a 1 in 30-year weather event.

The risk of groundwater flooding on site is low.

4.6 Environmentally Sensitive Sites

There are no records of sites of special scientific interest, conserved wetland sites, special areas of conservation, special protection areas, local or national nature reserves, within 250m of the assessment site.

The site is not located in a nitrate sensitive area or in a nitrate vulnerable zone.

There is 1no. designated ancient woodland located 124m northwest, categorised as an 'Ancient Semi Natural Woodland' .

The site is not located in a site of special scientific interest impact risk zone.

4.7 Archaeology

An archaeological assessment falls outside the brief of this report. Where considered necessary, advice should be sought from an archaeological specialist in this respect.

4.8 Visual and Cultural Designations

The site is not located within a world heritage site or conservation area. There are no areas of outstanding natural beauty, national parks, scheduled ancient monuments or registered parks and gardens within 250m of the site.

There are 2no. listed buildings located within 250m of the site, the closest of which is located 104m SW at Bargoed & Glifach War Memorial.

5.0 SITE HISTORY

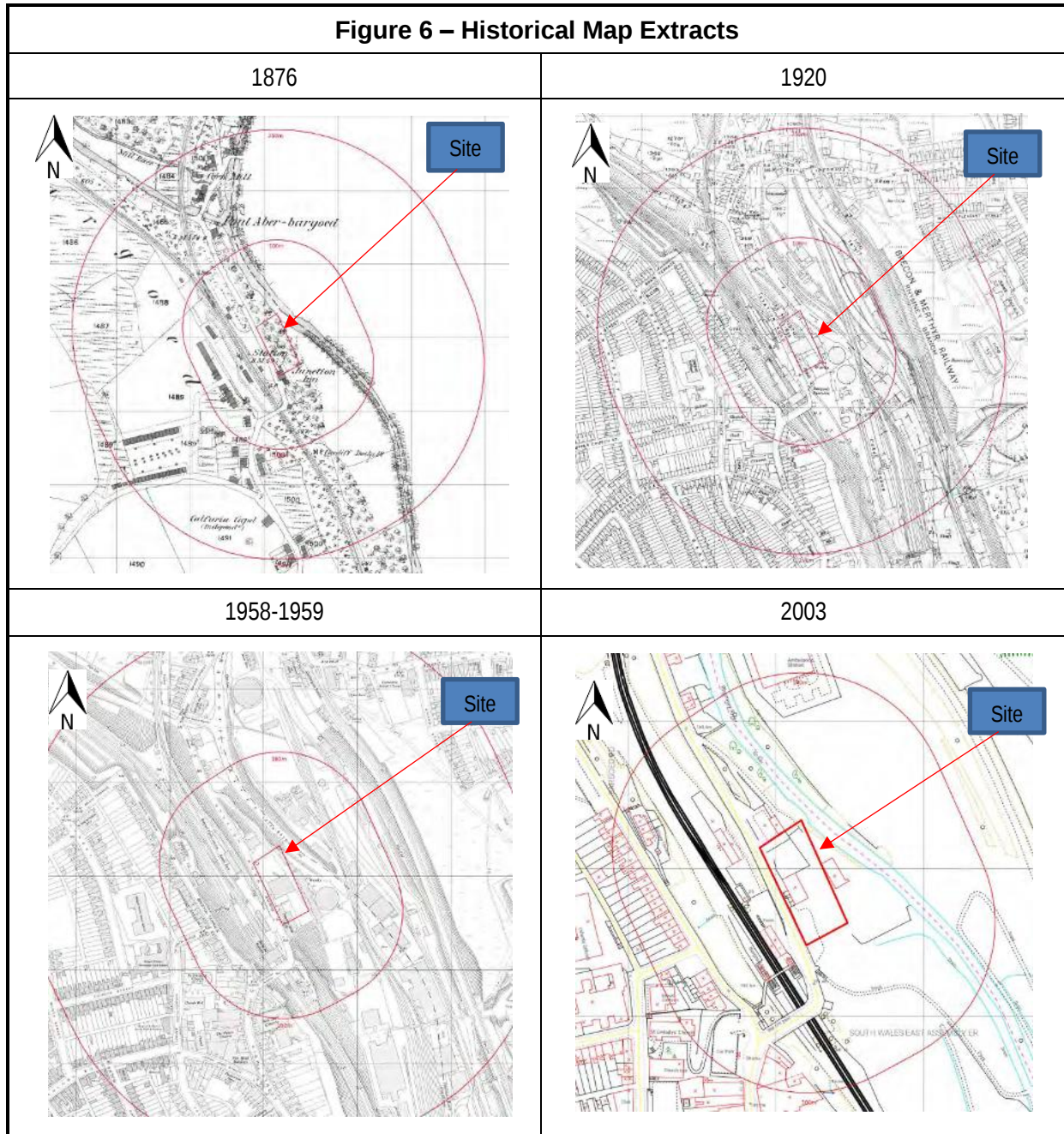
The historical development of the site has been determined by reference to historical plans and Google Earth imagery. The reviewed historical plans comprise only readily available records and may be limited; however, the information available to date indicates that additional searches are unlikely to add to our understanding of the site. The earliest available historical mapping covering the site dates to 1876. The site history is summarised in Table 4.

Table 4 - Summary of Site History

Date	Site	Surrounding Land Use (Within 250m of Site)
1876	The site is a wooded area, immediately adjacent to a road to the west and an inn to the south.	Railway and railway station adjacent SW. Railway track from NW to SE. Slopes around the station. River adjacent NE. Corn mill 200m NW. Church 200m S Few houses 50m to 250m SW and 140m to 250m NW. Site in valley – remaining land use consists of dense woodland and open fields. Viaduct 200m NW.
1881	No significant changes	Single track railway 125m NE. Houses, stations, smithy, church, burial ground, public houses 150m to 250m N to NE. Wells 150m NE and 125m S.
1898	No significant changes	No significant changes
1901	Footpath along the NE boundary.	Chapel immediately N. Gas works immediately SE, containing mapped gasometer. Further residential development W and SW. Tank 30m W.
1916	Numerous buildings located on S half of site, attributed to the gas works. Steep slope now noted, sloping down towards NE.	Large residential development W and SW, also 200m to 250m N and NE. Rail development – Expansion of adjacent station, rail yard 100m to 250m SE connecting from NE railway line, smaller yard at station and 200m NW, numerous new railway buildings around pre existing tracks and over river. Gas works immediately SE expanded, two large gas holders now present. Gasometer 175m N. Reservoir 250m E. Coke ovens 100m to 200m SE. Tanks 80m W.
1920-1948	No significant changes	No significant changes
1958-1959	No significant changes	One of the large gas holders at the gas works SE has been demolished. Buildings along E boundary slight increase in size.
1960-1965	No significant changes	No significant changes
1973	Buildings on site now mapped as builders' merchants.	No significant changes
1985-1987	No significant changes	Buildings along river no longer present. Railway yards no longer present. Many associated railway buildings no longer present.
1992	Building furthest S, along boundary, no longer present.	Ambulance station 100m N. Railway NE dismantled.
2001	No significant changes	Adjacent gas works no longer present
2003	Large central building presumed knocked down and replace with a smaller building immediately adjacent to Station Road.	No significant changes

Date	Site	Surrounding Land Use (Within 250m of Site)
2010-2015	No significant changes	No significant changes
2025	Building on site demolished.	No significant changes

Selected extracts from historical maps are presented in Figure 6.



6.0 PRELIMINARY CONTAMINATION RISK ASSESSMENT

6.1 Introduction

The following paragraphs outline a Preliminary Risk Assessment (PRA) for the site based on the above desk study information as defined by DEFRA and the EA Model Procedures for the Land Contamination Risk Management (LCRM) dated 8th October 2020.

Table 7 provides a Preliminary Conceptual Model (PCM) which considers the source-pathway-receptor linkages present alongside the likelihood, severity and risk level as defined within Table 5 and Table 6. The assessment of probability, a modified risk table, and certain consequence definitions are based on CIRIA C552 and LCRM.

Table 7 considers whether a pollution linkage is potentially present and provides a preliminary qualitative assessment of risk based on the information currently available. Where a linkage is identified, it does not necessarily mean that a significant risk exists but indicates that further information is required through appropriate site investigation to substantiate the conceptual model.

The PCM/PRA is based on a residential end use.

Table 5 - Consequence, Probability and Risk

Probability	Consequence,	Risk
High Likelihood- There is a pollution linkage and an event either appears very likely in the short term and almost inevitable over the long term, or there is evidence at the receptor of harm or pollution	Very High – acute risk to the human health likely to result in significant harm. Risk of severe or irreversible effect on ground/surface water quality. Catastrophic damage to buildings / property.	Very High – there is a high potential that the source-pathway-receptor scenarios may give rise to harm to human health, or the environment and remedial action is likely to be required.
Likely – there is a pollution linkage, and all the elements are present, which means that it is probable an event will occur. Circumstances are such that an event is not inevitable, but possible in the short term and over the long term.	High – Severe or irreversible effect on human health. Temporary severe or irreversible effect on ground/surface water quality. Reduction of water quality rendering groundwater or surface water unfit to drink and/or substantial adverse impact on groundwater dependant environmental receptors.	High – it is likely that the source-pathway-receptor scenarios may give rise to an impact on human health or the environment, which may require remediation and/or control measures to mitigate risks
Low likelihood– there is a pollutant linkage, and circumstances are possible for an event could occur. However, it is by no means certain that even over a longer period such event would take place, and is less likely in the shorter term	Moderate – Long term or short-term moderate effect on human health. Moderate effect on ground/surface water quality, reversible with time. Reduced reliability of a supply at a groundwater or surface water abstraction source	Moderate – it is possible that the source-pathway-receptor scenarios may give rise to an impact on human health or the environment, however it is either relatively unlikely that such would be severe, or if any harm were to occur it is more likely that harm would be mild.
Unlikely – there is a pollution linkage, but circumstances are such that it is doubtful that an event would occur even in the very long term.	Low – Non-permanent health effects to human health (easily prevented by means such as personal protective clothing etc.) Slight effect on ground/surface water quality, reversible with time. Marginal reduced reliability of a supply at a groundwater or surface water abstraction source.	Low – it is possible that harm could arise at the source, however it is likely that they would at worst be mild.
		Very Low – it is unlikely that the source-pathway-receptor scenarios will give rise to an impact on human health or the environment.

Table 6 - Estimation of Level of Risk by Comparison of Consequence and Probability

		Consequence			
		High	Moderate	Low	Very low
Probability	High Likelihood	Very High	High risk	Moderate risk	Moderate to low risk
	Likely	High risk	Moderate risk	Moderate to low risk	Low risk
	Low Likelihood	Moderate risk	Moderate to low risk	Low risk	Very low risk
	Unlikely	Moderate to low risk	Low risk	Very low risk	Very low risk

6.2 Potential Sources

The following potential sources have been considered for the assessment site.

- Superficial deposits of Alluvium are present on site which can include peat and organic rich layer which could potentially be a source of land gas.
- The Department of the Environment (DoE) Industry Profile for Railway Land indicates that the railway construction likely used extensive fill materials to raise ground levels and form embankments. These fill materials may have comprised of ash ballast which may contain metals, phenols, sulphates and polyaromatic hydrocarbons (PAHs). There may also have been localised leakages of fuel oils, lubricants and greases from locomotives. Such mobile contaminants may leach through the soil surface by gravity into the underlying groundwater.
- Fill materials are likely to have been used during construction, which may have included ashy materials. Ashy materials may include heavy metals, polyaromatic hydrocarbons (PAHs) and asbestos containing materials (ACM).
- Radon gas.
- The industrial use of the land has the potential to be a significant source of contamination. The former gas works located on site could have left behind numerous contaminants if the site was not properly remediated, including heavy metals, BTEX and hydrocarbons.

6.3 Potential Receptors

The following receptors have been considered as part of this assessment.

- Current land users.
- Adjacent land users.
- Future land users.
- Construction workers during site development works.

6.4 Potential Pathways

The following pathways have been considered as part of this assessment.

- Direct / dermal contact, ingestion, inhalation pathways of potentially contaminated soils.

- Vertical or lateral migration of contamination on and off site.

Table 7 - Preliminary Conceptual Model

Source	Pathway	Receptor	Probability	Consequence	Risk	Comment
Contamination of the ground beneath site due to current and historical use	Dermal contact, ingestion, and inhalation of soils dust	Current Site Users	Unlikely	Moderate	Low	The risk to current site users from potential contamination within the ground beneath site is considered LOW based on the historical usage/development and the site's disuse.
		Future Site users	Low likelihood	Moderate	Moderate to Low	The risk to future site users via direct exposure is MODERATE TO LOW given the proposed development of the site. There are no proposed areas of soft landscaping, with the basement floor being used a vehicle parking, two apartments and stores, therefore the contamination link is broken.
		Construction Workers	Likely	Moderate	Moderate	The risk to construction workers via direct exposure is MODERATE given the lack of historical use of the site, the potentially thick made ground, and the likelihood of contact during construction.
	Vertical or lateral migration of contamination (including ground gas) on and off site.	Current Site Users	Unlikely	Moderate	Low	Based on site disuse the risk to current users from migrating contamination at the assessment site is considered as LOW .
		Adjacent land users	Low likelihood	Moderate	Moderate to Low	The risk to adjacent site users from migrating contamination at the assessment site is considered MODERATE TO LOW .
		Future land users	Likely	Moderate	Moderate	Based on anticipated ground conditions beneath the site and the long-term exposure time of future site users, the risk from migrating contamination (ground gas) at the assessment site is considered MODERATE .
		Controlled Waters	Likely	Moderate	Moderate	The site has had previous industrial land use. Given the topography of the area and proximity to controlled waters the current risk to controlled waters from contamination at the assessment site is considered MODERATE .
		Construction Workers	Likely	Moderate	Moderate	Based on anticipated ground conditions beneath the site the risk to construction workers from migrating contamination (ground gas) at the assessment site is considered MODERATE in the absence of monitoring information.

6.5 Preliminary Risk Assessment

A review of historical and current day information has highlighted that the site has previously been used as a gas works. Given the potential contamination caused by these activities it can be determined that there is a moderate risk of contamination being present. Given the hard standing nature of the proposed plans, a direct contamination link is broken.

The site is underlain by alluvium which could contain peat and organic rich materials which could potentially generate land gas.

The site is, also located in an area where radon protection measures will be required in new buildings. The perceived risk from radon gas is moderate. Providing appropriate measures are taken to protect new buildings from the ingress of radon, the risk can be reduced to low.

Based on the above information the site has an overall risk rating of **MODERATE TO LOW**.

7.0 SITE INVESTIGATION

7.1 Exploratory Fieldwork

The fieldwork was carried out by EEGSL between the 8th April 2026 and 10th April 2026 and comprised:

- 2no. boreholes (designated BH01 and BH02) were drilled to depths of 15m, using a track mounted rotary coring rig. The boreholes were initially drilled through overburden using dynamic sampling methods, until material suitable for rotary coring was encountered. For coring, a 412SWF triple-tube core barrel, recovering cores of 112mm nominal diameter, in a semi rigid plastic liner, was utilised. Air/water was used as the flushing medium. The cores were stored in wooden boxes immediately on extraction.
- Standard penetration tests (SPT) were conducted in suitable materials.
- Details of groundwater conditions were noted where possible. Water levels may have been affected by the installation of casing to the boreholes or the use of air/water as a flushing medium. In addition, water level observations are those at the time of the investigation and do not necessarily reflect seasonal.
- Borehole logs are included in Appendix 2.
- 50mm standpipes were installed in both boreholes at depths of 5m below ground level. Installation and backfill details are shown with the appropriate borehole logsheet in Appendix 2.
- Rock core photographs and window sample photographs are presented in Appendix 3.
- 3no. window sample boreholes (designated WS01 to WS03) were sunk to depths of between 1.0m and 2.8m below existing ground level. Window sampler boring is carried out with a small, track-mounted rig, which uses a chain-driven trip hammer to drive sampling tubes or penetrometers into the ground. These tools are coupled to the anvil of the hammer by solid drill rods. Sampling tubes comprise “windowless samplers”, which are plain sampler tubes in which a continuous disturbed sample is recovered within a semi-rigid plastic liner. To reduce friction within the borehole, sampling tubes of progressively smaller diameter are used as the borehole depth increases. Sampler diameters generally range from approximately 50mm to 90mm.
- Standard penetration tests (SPT) were conducted in suitable materials. Groundwater observations were noted where possible. These observations relate to the time of the investigation only, and do not necessarily reflect seasonal or tidal fluctuations. Borehole logs are included in Appendix 2.
- A 50mm diameter standpipe was installed in WS03 at a depth of 2.80m below ground level. Installation and backfill details are shown with the appropriate borehole logsheet in Appendix 2. Window sample liner photographs are presented in Appendix 3.
- To supplement the borehole investigation 2no. trial pits were excavated to depths between 1.30m and 1.60m below existing ground level, using a wheeled tracked excavator, under the direct and continuous supervision of EEGSL. Details of ground and groundwater conditions were noted. The trial pits were backfilled immediately on

completion of sampling. Trial pit logs are included in Appendix 2. Trial Pit Photographs are presented in Appendix 3.

- The California Bearing Ratio (CBR) of near surface materials was tested using a handheld dynamic cone penetrometer. Each test was performed at existing ground surface. The test is performed by using an 8kg weight dropping a height of 575mm to drive a 20mm diameter 60-degree cone into the subsoil. The blow counts are recorded against penetration achieved and the results are plotted graphically. The CBR value of the various layers is then determined by reading from a graph showing the DCP-CBR relationship by Kleyn and Van Heerd⁽¹⁹⁸³⁾. Test Results are included in Appendix 4.
- EEGSL carried out 6no. weekly rounds of groundwater/gas monitoring in standpipes after the fieldwork period, the results of which are presented in Appendix 5.

Each exploratory location was scanned using a Cable Avoidance Tool (CAT) to locate unrecorded underground services, and the exploratory locations were repositioned if necessary.

On completion, all samples recovered from the site were taken to a specialist laboratory for testing.

All site investigation work was supervised full time by a representative of EEGSL. The logging of soils and rocks has been carried out in accordance with BS5930⁽²⁰¹⁵⁾ except where superseded by the soil and rock description methodology in BS EN14688-1⁽²⁰⁰²⁾, BS EN 14688-2⁽²⁰⁰⁴⁾ and BS EN 14689-1⁽²⁰⁰³⁾.

A summary of exploratory holes undertaken is presented in Table 8.

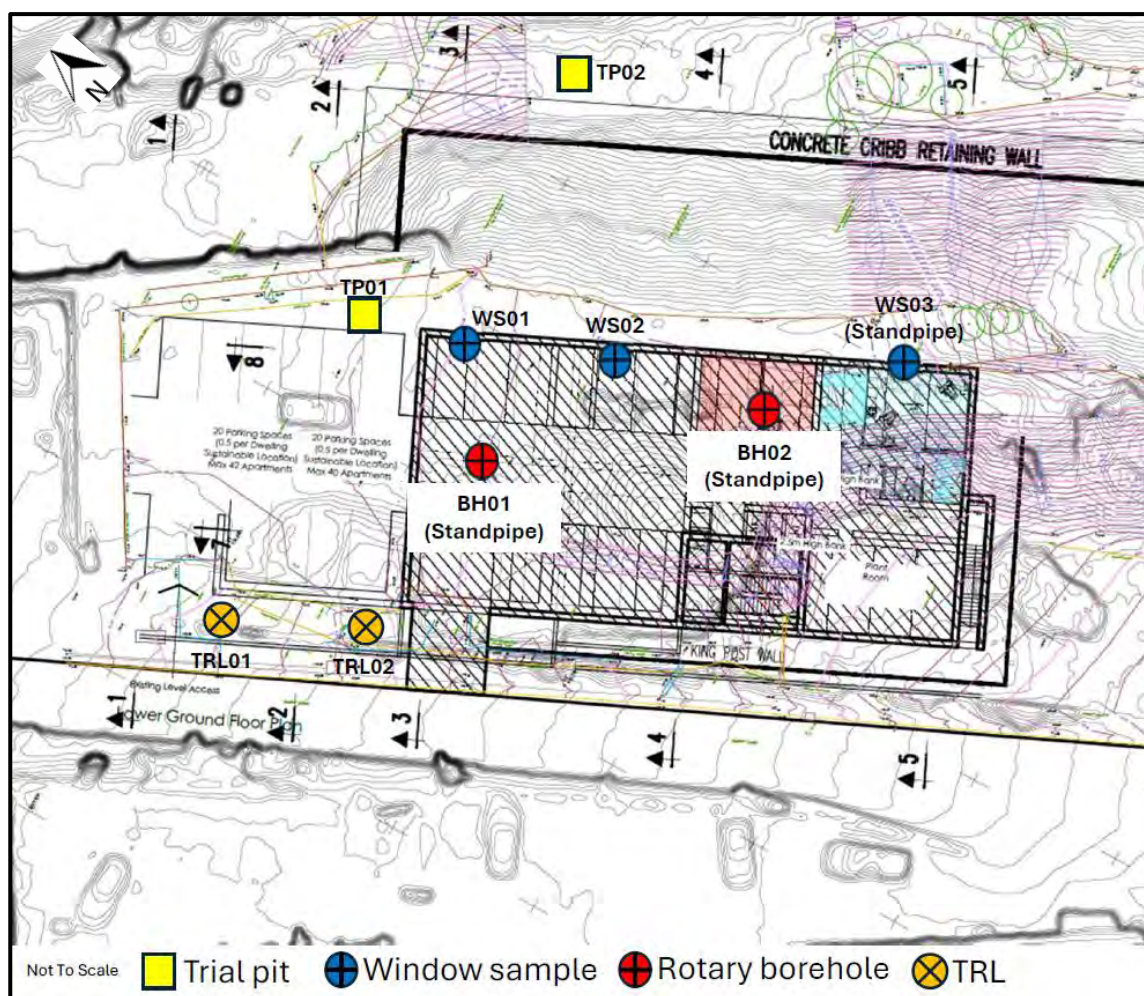
Table 8 – Summary of Exploratory Holes Undertaken

Location	Type*	Depth (m)	Date Started	Date Finished	Location		Backfill Details**
					Easting (m)	Northing (m)	
BH01	RC	15.0	8/4/2026	9/4/2026	315109	200099	SP ⁽⁰⁻⁵⁾ , G ⁽⁵⁻¹⁵⁾
BH02	RC	15.0	9/4/2026	10/4/2026	315126	200081	SP ⁽⁰⁻⁵⁾ , G ⁽⁵⁻¹⁵⁾
WS01	WS	1.0	8/4/2026	8/4/2026	315118	200102	A
WS02	WS	1.03	10/4/2026	10/4/2026	315123	200090	A
WS03	WS	2.8	10/4/2026	10/4/2026	315132	200075	SP
TP01	TP	1.3	9/4/2026	9/4/2026	315115	200108	A
TP02	TP	1.6	9/4/2026	9/4/2026	315139	200099	A
TRL01	TRL	0.97	21/4/2026	21/4/2026	315096	200105	-
TRL02	TRL	0.82	21/4/2026	21/4/2026	315098	200102	-

*RC = rotary core, WS = Window Sample, TP = Trial Pit, TRL = Dynamic Cone Penetrometer
**A = Arisings, G = Grout, SP = standpipe

The exploratory hole locations are shown in Figure 7.

Figure 7 - Exploratory Hole Location Plan



7.2 Laboratory Testing Programme

7.2.1 Geotechnical Testing

A programme of laboratory testing was carried out on samples taken from the various strata to assist in classification and determine the engineering properties of the materials underlying the site. The testing was scheduled by EEGSL and carried out by GSTL and Envirolab. The test procedures used were in accordance with the methods described in BS1377:1990 and BS EN 17892-1:2014/BRE Information Paper 4/93/any other relevant standard. Details of the specific tests used in each case are given in Table 9.

Table 9 - Summary of Geotechnical Laboratory Tests Undertaken

TEST	STANDARD	No.
Moisture Content	BS1377:1990 Part 2, Clause 3.2	1
Liquid Limit, Plastic Limit, Plasticity Index	BS1377:1990 Part 2, Clause 4/5	1
Particle size distribution (wet)	BS1377:1990 Part 2, Clause 9.2	7
Sulphate content of 2:1 soil: water extract	BS1377:1990 Part 3, Clause 5	6
pH value	BS1377:1990 Part 3, Clause 9	6
Point Load Index		5

The results of the laboratory geotechnical tests are included in Appendix 6.

7.2.2 Environmental Testing

The environmental chemistry of the ground was investigated by specialist chemical analysis of selected samples, scheduled by EEGSL, and carried out by Envirolab.

Chemical analyses were carried out on 8no. soil samples and were submitted for the following suite of determinants:

Asbestos Screen, Arsenic, Barium, Beryllium, Boron, Cadmium, Chromium, Copper, Lead, Mercury, Nickel, Selenium, Vanadium, Zinc, Cyanide, Sulphate, Sulphide, pH, Soil Organic Matter, Phenol, Speciated Petroleum Hydrocarbons and Speciated Polycyclic Aromatic Hydrocarbons (PAH).

3no. samples were also tested for Waste Acceptance Criteria (WAC).

The results of the laboratory contamination tests are included in Appendix 6.

8.0 GROUND CONDITIONS ENCOUNTERED

8.1 Soil Profile Encountered

The sequence of strata encountered beneath the site was as follows:

- **Made Ground** – Variable Made Ground was encountered in all the exploratory holes, comprising:
 - o Sandy clayey gravel of various lithologies and with cobbles/boulders of brick and concrete (WS01, TP01 and TP02), thickness 0.40m to 1.60m.
 - o Sandy clayey gravel of brick, concrete (WS01), thickness 0.60m.
 - o Sandy clay with gravel of various lithologies including brick, concrete, china, glass, plastic, metal, wood, charcoal (WS02, WS03, BH01 and BH02), thickness 1.00m to 6.60m.
 - o Gravelly sand (WS02), thickness 0.10m to 0.50m.
 - o Red brick wall (BH02), thickness 2.50m.
- **Weathered Hughes Member** was encountered in BH01 and BH02 and comprised:
 - o Weathered SANDSTONE recovered as gravel/cobbles.
 - o SILT.
 - o Slightly gravelly silty SAND.
 - o Sandy GRAVEL.

The depths of the various materials encountered in each of the exploratory holes are summarised in Table 10.

Table 10 - Summary of Ground Conditions Encountered

Location	Depth to Stratum (m)									GROUND- WATER
	MADE GROUND					Weathered HUGHES MEMBER				
	Sandy clayey gravel with cobbles/boulders	Sandy clayey gravel	Sandy/gravelly clay	Gravelly sand	Red brick wall	SANDSTONE recovered as gravel/cobbles	SILT	Gravelly silty SAND	Sandy GRAVEL	
BH01			GL-6.00			8.00-9.50	9.50- 10.50	6.00- 8.00 10.50- 15.00		5.00
BH02			GL-1.00		1.00- 3.50*	3.50-10.50		10.50- 14.20	14.20- 15.00	9.00
WS01	GL-0.40	0.40- 1.00								
WS02			GL-1.03							
WS03			0.10-2.30	GL-0.10 2.30- 2.80						
TP01	GL-1.30									
TP02	GL-0.875** 1.20-1.60									
Notes: *A buried red brick all was encountered and cored through (see Appendix 3) in BH02 from 1.00m to 3.50m. **A 325mm deep void was encountered in TP02, below a buried basement layer, from 0.875m-1.20m. Ground conditions above and below were consistent.										

8.2 Obstructions

Underground man-made obstructions were encountered in a number of exploratory positions, as detailed on the appended engineering logs.

Obstructions consisted of concrete pads, encountered at 1.30m and 0.87m in TP01 and TP02, respectively. The pad was broken out in TP02, revealing a minor void measuring approximately 325mm, underlain by ground conditions consistent with those previously encountered.

A red brick wall was encountered in BH02 from 1.00m to 3.50m, attributed to the previous site development.

8.3 Groundwater

Groundwater strikes were encountered at depths varying between 5.00m^(BH01) and 9.00m^(BH02).

The groundwater level within BH02 on the second day of drilling was recorded at 6.30m.

Subsequent monitoring of groundwater in standpipes indicated no groundwater present.

8.4 Land Gas

Results obtained during the initial monitoring visit indicated methane (CH₄) levels of 0% by volume, carbon dioxide (CO₂) levels ranging from 0% to 0.4% by volume, and oxygen (O₂) levels ranging from 19.8% to 20.4% by volume.

Hydrogen sulphide levels of 0ppm and carbon monoxide levels of 0ppm were recorded.

Borehole pressures of 0Pa and gas flows of 0l/hr were recorded.

Results obtained during subsequent monitoring visits indicated methane levels of 0% by volume, carbon dioxide levels ranging from 0% to 0.7% by volume, and oxygen levels ranging from 19.7% to 20.5% by volume.

Hydrogen sulphide levels of 0ppm and carbon monoxide levels of 0ppm were recorded. Borehole pressures ranging from 0 Pascals to 1 Pascals and gas flows ranging from 0.0litres/hour to 0.2litres/hour were recorded.

It should be noted that the concentrations and levels of mobile liquid and gaseous materials are likely to vary with time. The results obtained may therefore be representative of the conditions only at the time of sampling.

8.5 Visual / Olfactory Evidence of Contamination

A hydrocarbon odour and slight visual hydrocarbon contamination was encountered at the base of WS01 (0.90m).

8.6 Evidence of Mining

No evidence of mining activity was encountered during the investigation.

9.0 ENGINEERING PROPERTIES OF STRATA ENCOUNTERED

9.1 General

This section discusses the engineering properties of the strata encountered based on results of in situ testing and laboratory testing obtained during the investigation.

Table 11 summarises results of laboratory testing.

Table 11 - Summary of Laboratory Geotechnical Test Results

Location	Depth (m)	Strata	CLASSIFICATION								STRENGTH Point Load Index Strength (MN/m ²)	CHEMICAL	
			Moisture Content (%)	Liquid Limit (%)	Plastic Limit (%)	Plasticity Index (%)	PSD Cobbles (%)	PSD Gravel (%)	PSD Sand (%)	PSD Silt/Clay (%)		Water Soluble Sulphate (mg/l)	pH Value
BH01	8.10	wHMg	-	-	-	-	-	-	-	-	-	16	8.61
BH01	9.02-9.08	wHMg	-	-	-	-	-	-	-	-	3.44	-	-
BH01	9.09-9.15	wHMg	-	-	-	-	-	-	-	-	2.86	-	-
BH01	9.80	wHMc	33.5	44	23	21	-	-	-	-	-	-	-
BH01	11.50-12.00	wHMg	-	-	-	-	0	51	35	14	-	-	-
BH01	12.20	wHMg	-	-	-	-	-	-	-	-	-	<10	8.08
BH01	13.00-13.50	wHMg	-	-	-	-	0	12	75	13	-	-	-
BH01	14.50-15.00	wHMg	-	-	-	-	0	21	57	22	-	-	-
BH02	2.10	MG	-	-	-	-	-	-	-	-	-	11	9.86
BH02	3.71-3.76	wHMg	-	-	-	-	-	-	-	-	3.07	-	-
BH02	4.64-4.73	wHMg	-	-	-	-	-	-	-	-	2.34	-	-
BH02	8.80-8.85	wHMg	-	-	-	-	-	-	-	-	2.91	-	-
BH02	10.00-10.50	wHMg	-	-	-	-	0	17	59	24	-	-	-
BH02	10.80	wHMg	-	-	-	-	-	-	-	-	-	<10	7.6
BH02	11.50-12.00	wHMg	-	-	-	-	0	69	22	9	-	-	-
BH02	13.00-13.50	wHMg	-	-	-	-	0	28	58	14	-	-	-
BH02	14.60	wHMg	-	-	-	-	-	-	-	-	-	<10	8.11
BH02	14.60-15.00	wHMg	-	-	-	-	0	69	23	8	-	-	-
TP02	1.00	MG	-	-	-	-	-	-	-	-	-	1440	7.77

*wHMg = Weathered Hughes Member Granular, wHMc = Weathered Hughes Member Cohesive, MG = Made Ground

9.2 Made Ground

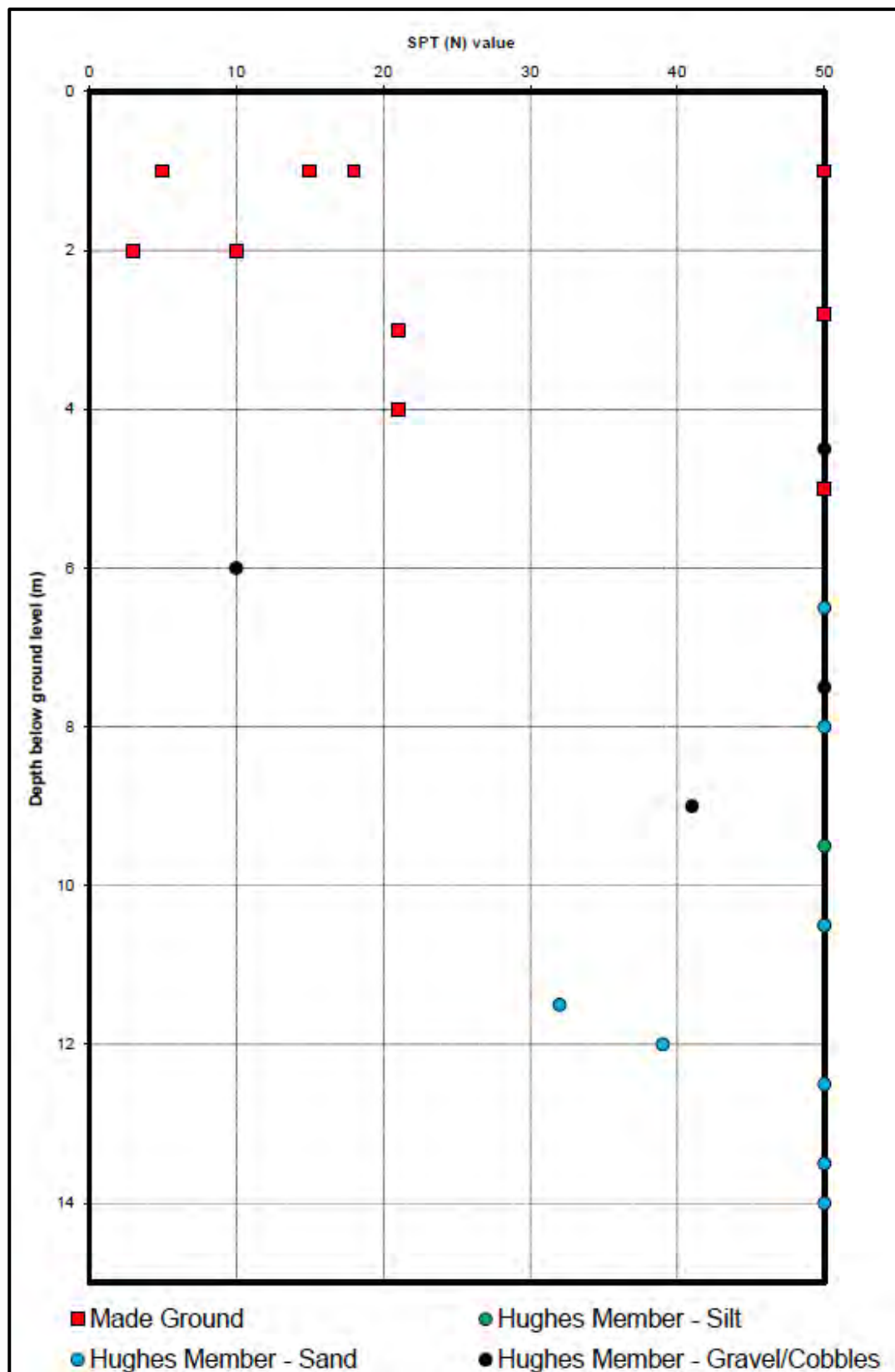
SPT N values for Made Ground range from 3 to 50, as can be seen from SPT N value v Depth Plot (Figure 8).

These results suggest the Made Ground is generally very soft to very stiff where cohesive and very loose to very dense where granular.

Laboratory tests have given values of **water-soluble sulphate** in the range <10mg/l to 1440mg/l, together with **pH Values** in the range 7.77 to 9.86.



Figure 8 – SPT N Value v Depth Plot



9.3 Hughes Member - Cohesive Deposits

A thin layer of silt was encountered in BH01 only, from 9.50m to 10.50m.

A single Atterberg Limit tests has given a value of **liquid limit** of 44% and a **plastic limit** value of 23%, resulting in a **plasticity index** value of 21%. This suggests the sample tested is a [clay/silt of intermediate] plasticity as shown on the Plasticity Chart included in the Appendices.

In accordance with NHBC Chapter 4.2 Building Near Trees ⁽²⁰⁰³⁾ soils can be classified in terms of **volume change potential**, using the relationship:

$$I_p' = I_p \times \frac{\% \text{ less than } 425\mu\text{m}}{100\%}$$

□ .where I_p' = modified plasticity index, I_p = plasticity index.

Based on the laboratory test result, the above relationship and Table 1 of NHBC Chapter 4.2, the sample of [Silty Clay] is shown to have **medium volume change potential**.

SPT N values of 50 were encountered at 9.50m and 10.50m (see Figure 8).

9.4 Hughes Member – Granular Soils

Granular material was encountered in both boreholes. Sandstone cobbles were encountered at depths of 8.00mbgl-9.50mbgl in BH01 and 3.50mbgl-10.50mbgl in BH02. Silty sand/gravel was encountered in both boreholes at depths of 10.50mbgl-15.00mbgl in BH01 and 10.50mbgl-15.00mbgl in BH02. A gravelly sand layer was also encountered from 6.00mbgl-8.00mbgl in BH01, overlying sandstone cobbles. See Appendix 2 for detailed exploratory hole logs.

Laboratory **particle size distribution** (PSD) tests suggest the samples tested are: Silty sandy gravel, gravelly silty sand, and silty gravelly sand. A summary of PSD results is included in the Appendices to this Report.

SPT N values range from 10 to 50 with most values >32, suggesting the granular soils are very dense, as can be seen from the SPT v Depth Plot (Figure 8).

It is recommended that for assessing ultimate bearing capacities, where the lower values are critical, the lower quartile value of N values is used. For assessing settlements average ground conditions will give a more realistic value of settlements, and the average of N values should be used.

For design purposes, a value of 40 seems reasonable based on the lower quartile value. Based on the correlation by Peck, Hanson, and Thornburn ⁽¹⁹⁷⁴⁾, this gives an **angle of shearing resistance** of $\phi=38.7^\circ$.

Point Load Index tests have given strength values of the weathered *Hughes Member* sandstone cobbles in the range 2.34MN/m² to 3.44MN/m². Using a factor of 20 as given by Rusnak *et al* ⁽²⁰⁰⁰⁾, these results are converted to Unconfined Compressive Strengths (UCS) in the range 46.8MN/m² to 68.8MN/m², suggesting the sandstone is moderately strong to strong, in accordance with BS-EN14689.

Laboratory tests have given values of **water-soluble sulphate** in the range <10mg/l to 1440mg/l, together with **pH Values** in the range 7.60 to 9.86.

9.5 Results of In-Situ Testing

9.5.1 In-situ CBR Testing

Results of in-situ CBR testing are summarised in Table 12 and presented in Appendix 4.

Table 12 – Summary of In Situ CBR Test Results

Location	Depth (m)	CBR Value (%)
TRL01 (failed attempt)	0.00-0.07	6.8
	0.07-0.11	56.8
	0.11-0.17	>100
	0.17-0.25	68.9
TRL01	0.00-0.15	16.0
	0.15-0.27	>100
	0.27-0.42	45.4
	0.42-0.71	17.3
TRL02	0.00-0.10	12.7
	0.10-0.15	>100
	0.15-0.48	26.1
	0.48-0.49	>100

10.0 GEOTECHNICAL ASSESSMENT

10.1 Proposed Development

It is proposed to construct a five-storey building set into the sloping valley. This will feature 29no. one and two bed apartments, basement carparking and associated amenities such as plant rooms, cleaners store, meter cupboards, bin store, and cycle store.

A retaining wall along the northeast boundary is also proposed.

At the time of authoring this report, anticipated structural loadings were not known.

10.2 Ground Conditions Encountered

The exploratory holes encountered variable Made Ground (up to 6m thickness) overlying very dense sandstone cobbles/gravels to 9.50m^(BH01) and 10.50m^(BH02).

A 1m thick layer of silt was encountered in BH01 from 9.50m to 10.50m. Silty gravel/sand was encountered from 10.50m in BH01 and BH02 to full depth (15m).

Groundwater strikes were encountered at 5m and 9m in BH01 and BH02, respectively.

Subsequent monitoring of groundwater in standpipes encountered no groundwater (maximum install depth of 5m).

Significant levels of land gas were not recorded.

10.3 Geotechnical Considerations

Based on the ground conditions encountered and proposed development conventional shallow depth strip/pad foundations are not suitable due to the thickness and variability of the Made Ground encountered across the site.

Therefore, alternative foundation options such as ground improvement, piles and controlled modulus columns should be considered.

These options are discussed in the following sections.

10.4 Ground Improvement

Ground treatment (e.g. vibro displacement) may be an option, subject to environmental and noise/vibration constraints.

For example, vibro stone columns are often used to solve a wide range of static, dynamic, and seismic foundation problems by using powerful depth vibrators to densify soils or form stone columns that compact or reinforce soils in situ. Vibro systems can be used to treat granular deposits, fills, made ground and soft clays/silts.

Soils treated by vibro could offer an allowable bearing pressure in the range 125kN/m² to 150kN/m², depending on column spacings and ground encountered.

Once the treatment has been carried out, spread foundations may be adopted across the site, and designed to the loadings given above.

Providing that any imported fill material between the tops of the columns and the underside of the floor slab is placed in a controlled manner, floor slabs may be ground bearing.

Positive assurances should be sought from an experienced specialist contractor that the proprietary system proposed can provide the required working loads in the ground conditions encountered, with a guarantee on maximum settlement for both footings and floor slabs.

10.5 Piles

The proposed building may be founded on piles taken down into the competent Hughes Member bedrock.

A variety of pile types may be used, including bored and continuous flight auger (CFA) piles. Driven piles may be suitable, subject to environmental and noise/vibration constraints.

Because of the various advantages and limitations of each pile type, and the cost implications, advice should be sought from specialist piling contractors to determine the most suitable and cost-effective type. They should also be able to give recommended pile diameters and depths and pile capacities, with guaranteed performance. It is recommended a pile test be carried out to confirm pile capacities. In assessing the pile capacities, contractors should make an allowance for the effects of negative skin friction, particularly in the near surface soft clay and made ground.

Suspended floor slabs should be used in conjunction with piled foundations.

There may be differential settlement between piled structures and the surrounding ground level. Provision should, therefore, be made to make up ground levels at threshold positions, loading bays, vehicle access doorways, etc. Alternatively, these materials should be removed and replaced in a controlled manner by suitable existing materials or imported engineered fill.

It is essential the advice of a specialist piling contractor is sought and that positive assurances are provided by the piling contractor that their proprietary system can provide the required working loads in the ground conditions encountered.

10.6 Controlled Modulus Columns

Where traditional ground improvement techniques may not be suitable due to either poor soil strength, high loadings or tight settlement criteria, controlled modulus columns (CMCs) provide a fast alternative to piling.

If controlled modulus columns are to be considered additional boreholes will be required to examine the nature of the competent Hughes Member bedrock beneath the site, to assist in pile design.

The technique installs low strength concrete columns, 280mm to 500mm in diameter, up to 20m depth using displacement tools.

The benefits are:

- Ground bearing foundation solution utilising a distribution mattress.
- The rig working platform can be used as part of the distribution mattress.

- No breaking down of CMCs. Trimming is undertaken while the CMCs are still wet.
- The vibration free displacement process creates minimal spoil.

Positive assurances should be sought from an experienced specialist contractor that the proprietary system proposed can provide the required working loads in the ground conditions encountered, with a guarantee on maximum settlement for both footings and floor slabs.

10.7 Retaining Walls

Based on access limitations to the lower plateau with both the rotary drilling rig and the window sample drilling rig, exploratory holes were not possible at the base of the proposed retaining wall.

The trial pits encountered thick and unstable variable made ground.

10.8 Pavement Design

In situ tests have given variable values of CBR in the near surface Made Ground. Based on these results and ground conditions encountered, it is recommended for preliminary design purposes a CBR value = 5% is adopted for all near surface materials.

Consideration should also be given to the use of geotextiles to allow reduction of capping thickness. The advice of a suitable contractor should be sought as to the most appropriate type of geotextile to use in the ground conditions encountered at this site.

It should be noted the type of construction will depend on proposed finished pavement levels across the site and it is recommended the pavement design is reviewed once these levels are known. In this context, it is essential further in situ CBR testing is carried out once formation levels are known to confirm design CBR values.

All formation excavations should be examined by a suitably experienced engineer or inspector to check for soft or unsuitable material, which should be removed and replaced with compacted granular fill. Also, to ensure good compaction and remove unevenness, the formation should be compacted with equipment suitable for use in the ground conditions encountered. Careful inspection of this work will also help identify any soft spots at or just below formation level.

10.9 Chemical Attack on Buried Concrete

Chemical testing (see Appendices) shows highly variable levels of water-soluble sulphates and alkaline conditions within the made ground, and low levels of water-soluble sulphates and slightly alkaline conditions within the underlying bedrock.

Characteristic values of water-soluble sulphate for the various strata, together with design values for buried concrete, are summarised in Table 13.

Table 13 – Characteristic Values for Design of Buried Concrete

Strata	Range of Water Soluble Sulphate Results (mg/l)	Range of pH Values	Characteristic Value of Water Soluble Sulphate* (mg/l)	Design Sulphate Class*	Aggressive Chemical Environment for Concrete (ACEC)*
Made Ground	11-1440	8.09-9.98	110	DS-1	AC-1s
Weathered Hughes Member	<10-16	7.6-8.61	16	DS-1	AC-1s
*based on BRE Special Digest 1 ⁽²⁰⁰⁵⁾					

The recommendations of BRE Special Digest 1 should be followed for concrete foundations and ground bearing floor slabs.

10.10 Suitability of Excavated Materials

Acceptability criteria and testing, and methods of compaction/placement will depend on the type of contract and specification used for the construction of the proposed development and it is recommended that earthworks specifications are reviewed by a suitably qualified engineer, once these have been prepared by the relevant parties.

Demolition rubble could be suitable subject to processing (i.e. crushing) and providing it is not contaminated.

Cohesive Made Ground is unlikely to be suitable for re-use as structural fill and should be used for landscaping purposes only, providing they are not contaminated.

The granular Made Ground and natural sand/gravel deposits could be suitable for re-use providing they are not contaminated, do not contain excessive amounts of clay and providing moisture contents are controlled during placement. The control of moisture contents will be important as the cohesive content of this stratum is likely to be sensitive to moisture content changes.

The dense Hughes Member could be suitable for re-use, providing it is not contaminated.

10.11 Temporary Works

Formations will be susceptible to damage both by weather and trafficking, and should be protected immediately on exposure, particularly in areas where construction plant will access the site.

Excavations in the Made Ground and natural sand/gravel are likely to be unstable and should be battered back to an angle of 1 in 2, or a system of close sheeting and shoring adopted to ensure stability, and where personnel are required to enter excavations. Vertically sided excavations in clay should be stable in the short term.

All excavations should be adequately supported where personnel are required to enter.

Groundwater seepages are likely to be encountered in excavations, depending on depth. Where required, pumping of excavations from a suitable located sump will be required to keep excavations dry.

All natural soils on site should be capable of being excavated using conventional excavating machinery.

10.12 Drainage

Based on the ground and ground water conditions encountered, soakaway drainage will not be suitable on site. It is unlikely soakaways formed in the Made Ground will be suitable due to the risk of contamination leaching from the Made Ground into water and potentially contaminating the ground and groundwater below.

11.0 SOIL CONTAMINATION RISK ASSESSMENT

11.1 Tier I Human Health Soil Risk Assessment – Future Site Users

As part of the contamination assessment, the chemical results obtained by EEGSL have been screened against accepted compliance criteria, namely:

- Defra C4SL Health Criteria Values ^(March 2014), where available;
- CL:AIRE Category 4 Screening Levels: Naphthalene (2024).
- Tier 1 assessment values - based on LQM/CIEH Suitable 4 Use Levels ⁽²⁰¹⁵⁾ (S4ULs).
- United States Environmental Protection Agency (USEPA) Regional Screening Levels 2024 (RSLs).

As a preliminary screening assessment, all results have been compared to residential end use criteria.

The comparison of results is summarised in Tables 14, 15 and 16.



Table 14 - Soil Results Comparison with C4SL/S4UL Levels (Metals)

Determinand	C4SL/S4UL Levels (mg/kg)*		Recorded values (mg/kg)		No. of Exceedances
	Residential with homegrown produce	Residential without homegrown produce	Minimum	Maximum	
Arsenic	37	40	4	12	0
Beryllium	1.7	1.7	0.6	1.1	0
Boron	290	11000	<1.0	<1.0	0
Cadmium	11	85	1.1	3.3	0
Chromium	910	910	7	16	0
Chromium VI	21	21	<1.0	<1.0	0
Copper	2400	7100	7	38	0
Lead	200	310	26	154	0
Inorganic Mercury	40	56	<0.17	<0.17	0
Nickel	130	180	8	21	0
Selenium	250	430	<1.0	<1.0	0
Vanadium	410	1200	12	25	0
Zinc	3700	40000	37	907	0

Table 15- Soil Results Comparison with C4SL/S4UL Levels (Petroleum Hydrocarbons)

Determinand	C4SL/S4UL Levels (mg/kg)*						Recorded values (mg/kg)		No. of Exceedances	
	Residential with homegrown produce			Residential without homegrown produce			Minimum	Maximum		
SOM (%)	1.0	2.5	6.0	1.0	2.5	6.0	0.2	0.2	-	
Benzene	0.2	0.17	0.37	0.38	0.7	1.4	<0.01	<0.05	0	
Toluene	130	290	660	880	1900	3900	<0.01	<0.05	0	
Ethylbenzene	47	110	260	83	190	440	<0.01	<0.05	0	
o-xylenes	60	140	330	88	210	480	<0.01	0.18	0	
m & p-xylenes	56	140	310	79	190	430	<0.01	<0.05	0	
Aliphatic (EC)	5-6	42	78	160	42	78	160	<0.01	<0.05	0
	>6-8	100	230	530	100	230	530	<0.01	<0.05	0
	>8-10	27	65	150	27	65	150	<1	4	0
	>10-12	130	330	760	130	330	770	<0.01	36	0
	>12-16	1100	24000	4300	1100	24000	4400	<1	42	0
	>16-21	65000	92000	110000	65000	92000	110000	<1	<5	0
	>21-35	65000	92000	110000	65000	92000	110000	<1	81	0
Aromatic (EC)	5-7	70	140	300	370	690	1400	<0.01	<0.05	0
	>7-8	130	290	660	860	1800	3900	<0.01	<0.05	0
	>8-10	34	83	190	47	110	270	<1	2	0
	>10-12	74	180	380	250	590	1200	<1	16	0
	>12-16	140	330	660	1800	2300	2500	<1	20	0
	>16-21	260	540	930	1900	1900	1900	<1	35	0
	>21-35	1100	1500	1700	1900	1900	1900	<1	156	0
Soil Organic Matter Content (SOM) (%)							0.2	0.2	-	

Table 16 - Soil Results Comparison with C4SL/S4UL Levels (Polycyclic Aromatic Hydrocarbons & Phenols)

Determinand	C4SL/S4UL Levels (mg/kg)*						Recorded values (mg/kg)		No. of Exceedances
	Residential with homegrown produce			Residential without homegrown produce			Minimum	Maximum	
Polycyclic Aromatic Hydrocarbons									
SOM (%)	1.0	2.5	6.0	1.0	2.5	6.0	0.2	0.2	-
Naphthalene	15	36	85	15	36	85	<0.03	0.45	0
Acenaphthylene	170	420	920	2900	4600	6000	<0.01	0.3	0
Acenaphthene	210	510	1100	3000	4700	6000	<0.01	0.3	0
Fluorene	170	400	860	2800	3800	4500	<0.01	0.27	0
Phenanthrene	95	220	440	1300	1500	1500	0.07	2.25	0
Anthracene	2400	5400	11000	31000	35000	37000	<0.2	0.72	0
Fluoranthene	280	560	890	1500	1600	1600	<0.08	7.02	0
Pyrene	620	1200	2000	3700	3800	3800	<0.07	5.84	0
Benz(a)anthracene	7.2	11	13	11	14	15	<0.04	5.24	0
Chrysene	15	22	27	30	31	32	0.06	5.06	0
Benzo(a)pyrene	5.0	5.0	5.0	5.3	5.3	5.3	<0.04	5.45	1
Benzo(b)fluoranthene	2.6	3.3	3.7	3.9	4.0	4.0	0.05	6.38	3
Benzo(k)fluoranthene	77	93	100	110	110	110	<0.07	2.27	0
Indeno(1,2,3-cd)pyrene	27	36	41	45	46	46	<0.03	5.15	0
Dibenz(a,h)anthracene	0.24	0.28	0.3	0.31	0.31	0.32	<0.04	1.22	5
Benzo(ghi)perylene	320	340	350	360	360	360	<0.05	4.34	0
Phenols									
Phenol	120	200	380	440	690	1200	<0.2	<0.2	0
Soil Organic Matter Content (SOM) (%)							0.2	0.2	-

From the above tables it can be the samples have levels of contamination below the guidance levels for residential end use, besides the following exceedance:

- **Benzo(a)pyrene** – elevated levels in WS02^(0.60mbgl).
- **Benzo(b)fluoranthene** – elevated levels in BH02^(0.50mbgl), WS02^(0.60mbgl) and WS03^(2.60mbgl).
- **Dibenzo(ah)anthracene** – elevated levels in BH02^(0.50mbgl), WS01^(0.80mbgl), WS02^(0.60mbgl), WS03^(2.60mbgl) and TP01^(1.20mbgl).

Asbestos has not been encountered in any of the samples tested.

11.2 Soil Waste Assessment

Environment Agency Technical Guidance WM01: Hazardous Waste “Guidance on the classification and assessment of waste”, May 2002, published by Environment Agency of England and Wales, SEPA, NIEA and Natural Resources Wales has been used to characterise soil materials.

HazWasteOnline™ a cloud-based software application for the management, analysis and reporting of hazardous waste materials has been used to make this assessment.

The Hazardous Waste Assessment (included in Appendix 7) confirms that the samples tested can be classified as **Non-Hazardous**.

Waste Acceptance Criteria (WAC) testing has been carried out on 3no. samples, the results of which are included in Appendix 6.

All 3no. of the samples tested exceeded the total organic carbon (%) limit criteria for inert waste landfill (>3%). 2 of the samples (BH02^(2.60mbgl) and WS02^(0.60mbgl)) exceeded the total organic carbon (%) limit criteria for hazardous waste landfill (>6%).

12.0 GROUND GAS RISK ASSESSMENT

12.1 Land Gas

The potential risk associated with gases being generated in the ground (whether from natural or man-made sources) depends on the concentrations of gas and its flow rate to the surface. These factors are assessed by monitoring of the gas installations in the boreholes. The variable nature of gas generation and the effect of barometric pressure on gas flow, means that the volume of gas potentially reaching the ground surface is normally inconsistent over time.

For the assessment of sites, in terms of the potential for ground gas to present a hazard, the risk-based methodology detailed in CIRIA Report C665⁽²⁰⁰⁷⁾ and BS8485⁽²⁰¹⁹⁾.

A risk-based approach will be taken which is designed to allow quick and easy design of gas protection for a low-rise development by comparing the measured gas emission rates to Characteristic Situations, based on risk-based Gas Screening Values (GSVs). The GSVs equate to the borehole gas volume flow rate as defined by Wilson and Card⁽¹⁹⁹⁹⁾ as the borehole flow rate multiplied by the concentration in the air stream of the gas being considered. For the purposes of this evaluation the calculations will be carried out for both carbon dioxide and methane encountered in the boreholes on site.

The generation of GSVs for each borehole monitoring visit is summarised in Table 17.

Table 17 – Gas Screening Values

Monitoring Visit	Exploratory Hole	Maximum Flow Rate Recorded (l/hr)	Maximum Methane Level Recorded (%Vol)	Maximum Carbon Dioxide Level Recorded (%vol)	Maximum Gas Screening Value (GSV)
1	BH01	0.0	0.0	0.0	0.000
	BH02	0.0	0.0	0.1	0.000
	WS03	0.0	0.0	0.4	0.000
2	BH01	0.2	0.0	0.0	0.000
	BH02	0.0	0.0	0.3	0.000
	WS03	0.0	0.0	0.1	0.000
3	BH01	0.1	0.0	0.0	0.000
	BH02	0.0	0.0	0.0	0.000
	WS03	0.0	0.0	0.0	0.000
4	BH01	0.0	0.0	0.0	0.000
	BH02	0.0	0.0	0.4	0.000
	WS03	0.0	0.0	0.3	0.000
5	BH01	0.2	0.0	0.4	0.001
	BH02	0.1	0.0	0.4	<0.001
	WS03	0.0	0.0	0.7	0.000
6	BH01	0.2	0.0	0.2	<0.001
	BH02	0.0	0.0	0.4	0.000
	WS03	0.0	0.0	0.5	0.000

The above results suggest the site can be given a Characteristic Situation of 1, i.e. 'very low risk', in accordance with the following table.

According to CIRIA Report 665 and BS8485, no special precautions will be required in residential developments for Characteristic Situation 1.

Table 18 - Modified Wilson & Card Classification (CIRIA Report 659)

<i>Characteristic Situation (CIRIA Report 149)</i>	<i>Risk Classification</i>	<i>GSV (CH₄ or CO₂) (l/hr)</i>	<i>Additional Factors</i>	<i>Typical Source of Generation</i>
1	Very Low Risk	<0.07	Typically, methane ≤1%v/v and/or carbon dioxide ≤5% v/v. Otherwise consider increase to Situation 2.	Natural Soils with low organic content. "Typical" Made Ground.
2	Low Risk	<0.7	Borehole flow rate not to exceed 70l/hr. Otherwise increase to Situation 3.	Natural soil, high peat/organic content. "Typical" Made Ground.
3	Moderate Risk	<3.5		Old landfill, inert waste, mineworking flooded.
4	Moderate to High Risk	<15	Quantitative risk assessment required to evaluate scope of measures required.	Mineworking susceptible to flooding, completed landfill (WMP 26B criteria)
5	High Risk	<70		Mineworking unflooded inactive with shallow workings near surface.
6	Very High Risk	>70		Recent landfill site.

12.2 Radon Gas

Based on information included in the Groundsure report, basic protection against the ingress of radon gas into the new building is required.

Appropriate construction techniques are detailed in the BRE document *Radon: guidance on protective measures for new dwellings* ⁽²⁰¹⁵⁾.

13.0 REVIEW OF PRELIMINARY CONTAMINATION RISK ASSESSMENT

Table 19 provides a review of the Preliminary Conceptual Model/Contamination Risk Assessment included in Section 6.0, based on the findings of the site investigation, and laboratory testing.

Table 19 - Revised Conceptual Model

Source	Pathway	Receptor	Risk
Contamination of the ground beneath site due to current and historical use	Dermal contact, ingestion and inhalation of soils, dust	Current Site Users	VERY LOW
		Future Site users	LOW
		Construction Workers	LOW to MODERATE
	Vertical or lateral migration of contamination (including ground gas) on and off site.	Current Site Users	LOW
		Adjacent land users	LOW
		Future land users	LOW
		Controlled Waters	LOW
		Construction Workers	LOW

14.0 CONCLUSIONS AND RECOMMENDATIONS

14.1 Soil Contamination

As discussed in the above sections, the contamination tests indicate low concentrations of potential contaminants, except for 3no. contaminants; benzo(a)pyrene, benzo(b)fluoranthene and dibenzo(ah)anthracene.

Areas of proposed hardcover development will not require any remediation as these areas effectively seal contamination beneath and break any potential source-pathway-pollutant linkage.

The elevated contamination encountered is located within the Made Ground near surface. Areas of proposed soft landscaping will require remediation. This can be carried out by either partially removing the Made Ground from these areas, capping the Made Ground with a minimum 600mm of clean imported material, or a combination of both, depending on finished site levels.

14.2 Soil Disposal

Soils should be disposed of at a suitable site, registered to take the levels of contamination encountered. All samples tested have been classified as Non-Hazardous in accordance with Environment Agency guidance WM3.1.

All three WAC samples exceeded the acceptance criteria for total organic carbon (%), with values greater than the 3% limit.

14.3 Asbestos

No asbestos was encountered during the investigation.

14.4 Foundations

Due to the presence of thick made ground all foundations should be supported on piles.

14.4 Retaining Wall

It is recommended that a rotary borehole is conducted at the location of the proposed retaining wall.

14.5 Land Gas Protection Measures

Basic radon protection measures are required for any new buildings on site.

14.6 Risk to Groundwater and Surface Waters

Based on the ground and groundwater conditions encountered and results of laboratory testing it is considered the risk from contamination to groundwater and surface waters is low.

14.7 Risk to Buried (Water) Services

Based on the results of laboratory testing it is considered standard materials are likely to be appropriate for new water pipes.

14.8 Site Personnel & Other Matters

As with all construction sites, personnel working on the site during the construction period should be encouraged to maintain a high standard of personal hygiene and on-site washing facilities should be available.

Due diligence is required during the construction period, and should any further evidence of contamination be found, appropriate investigation and / or action should be taken. The significance of any contamination not discovered by this investigation is outside the scope of this report.



APPENDIX 1
GROUNDSURE REPORT

LAND OFF STATION ROAD, BARGOED, CF81 9AL

Order Details

Date: 11/03/2026
Your ref: B5556/JS/11032026
Our Ref: GS-WOE-FF9-XFW-988

Site Details

Location: 315118 200089
Area: 0.25 ha
Authority: [Caerffili - Caerphilly County Borough Council](#) ↗

Site plan



Quick Links

Summary of findings [p. 2](#) >
OS MasterMap site plan [p.14](#) >
Aerial image [p. 9](#) >

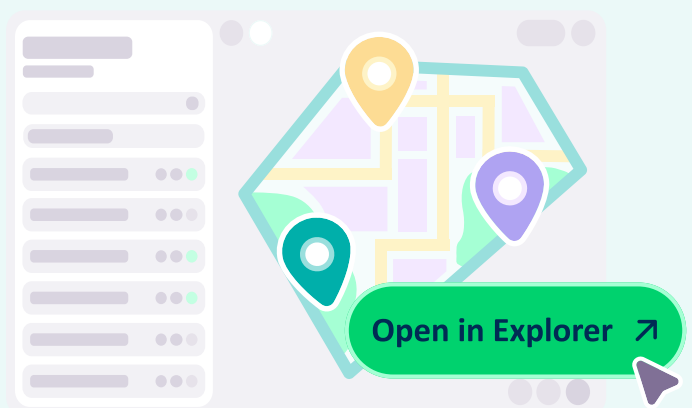
[Insight User Guide](#) ↗

Open this site in Explorer!

Access the data now in our interactive workspace.

- Map and interpret 130+ datasets across 170 years
- Generate insights and visuals quickly
- Revisit and collaborate with your team

Access to Groundsure Explorer requires an Insights account.
12 months access begins at purchase.



Summary of findings

Page	Section	Past land use >	On site	0-50m	50-250m	250-500m	500-2000m
15 >	1.1 >	Historical industrial land uses >	3	37	42	92	-
22 >	1.2 >	Historical tanks >	3	8	15	12	-
24 >	1.3 >	Historical energy features >	3	3	4	7	-
25	1.4	Historical petrol stations	0	0	0	0	-
25 >	1.5 >	Historical garages >	0	0	0	9	-
26	1.6	Historical military land	0	0	0	0	-
Page	Section	Past land use - un-grouped >	On site	0-50m	50-250m	250-500m	500-2000m
27 >	2.1 >	Historical industrial land uses >	8	53	57	116	-
36 >	2.2 >	Historical tanks >	4	11	22	13	-
38 >	2.3 >	Historical energy features >	4	5	5	14	-
39	2.4	Historical petrol stations	0	0	0	0	-
40 >	2.5 >	Historical garages >	0	0	0	10	-
Page	Section	Waste and landfill >	On site	0-50m	50-250m	250-500m	500-2000m
41	3.1	Active or recent landfill	0	0	0	0	-
41	3.2	Historical landfill (BGS records)	0	0	0	0	-
42	3.3	Historical landfill (LA/mapping records)	0	0	0	0	-
42 >	3.4 >	Historical landfill (EA/NRW records) >	0	0	0	1	-
42	3.5	Historical waste sites	0	0	0	0	-
42 >	3.6 >	Licensed waste sites >	0	7	0	0	-
44 >	3.7 >	Waste exemptions >	0	0	0	2	-
Page	Section	Current industrial land use >	On site	0-50m	50-250m	250-500m	500-2000m
46 >	4.1 >	Recent industrial land uses >	0	2	3	-	-
47	4.2	National Geographic Database (NGD) - Current or recent tanks	0	0	0	-	-
47 >	4.3 >	Current or recent petrol stations >	0	1	0	2	-
47	4.4	Electricity cables	0	0	0	0	-
48	4.5	Gas pipelines	0	0	0	0	-



48	4.6	Sites determined as Contaminated Land	0	0	0	0	-
48	4.7	Control of Major Accident Hazards (COMAH)	0	0	0	0	-
48	4.8	Regulated explosive sites	0	0	0	0	-
48	4.9	Hazardous substance storage/usage	0	0	0	0	-
49	4.10	Historical licensed industrial activities (IPC)	0	0	0	0	-
49	4.11	Licensed industrial activities (Part A(1))	0	0	0	0	-
49 >	4.12 >	<u>Licensed pollutant release (Part A(2)/B) ></u>	0	4	0	1	-
50	4.13	Radioactive Substance Authorisations	0	0	0	0	-
50 >	4.14 >	<u>Licensed Discharges to controlled waters ></u>	0	0	7	8	-
52	4.15	Pollutant release to surface waters (Red List)	0	0	0	0	-
53	4.16	Pollutant release to public sewer	0	0	0	0	-
53	4.17	List 1 Dangerous Substances	0	0	0	0	-
53	4.18	List 2 Dangerous Substances	0	0	0	0	-
53 >	4.19 >	<u>Pollution Incidents (EA/NRW) ></u>	0	2	16	5	-
56	4.20	Pollution inventory substances	0	0	0	0	-
56	4.21	Pollution inventory waste transfers	0	0	0	0	-
56	4.22	Pollution inventory radioactive waste	0	0	0	0	-
Page	Section	<u>Hydrogeology ></u>	On site	0-50m	50-250m	250-500m	500-2000m
57 >	5.1 >	<u>Superficial aquifer ></u>	Identified (within 500m)				
59 >	5.2 >	<u>Bedrock aquifer ></u>	Identified (within 500m)				
61 >	5.3 >	<u>Groundwater vulnerability ></u>	Identified (within 50m)				
62	5.4	Groundwater vulnerability- soluble rock risk	None (within 0m)				
62	5.5	Groundwater vulnerability- local information	None (within 0m)				
63	5.6	Groundwater abstractions	0	0	0	0	0
63	5.7	Surface water abstractions	0	0	0	0	0
63	5.8	Potable abstractions	0	0	0	0	0
63	5.9	Source Protection Zones	0	0	0	0	-
64	5.10	Source Protection Zones (confined aquifer)	0	0	0	0	-
Page	Section	<u>Hydrology ></u>	On site	0-50m	50-250m	250-500m	500-2000m

65 >	6.1 >	Water Network (OS MasterMap) >	0	3	41	-	-
69 >	6.2 >	Surface water features >	0	3	18	-	-
69 >	6.3 >	WFD Surface water body catchments >	1	-	-	-	-
70 >	6.4 >	WFD Surface water bodies >	0	1	0	-	-
70 >	6.5 >	WFD Groundwater bodies >	1	-	-	-	-
Page	Section	River and coastal flooding >	On site	0-50m	50-250m	250-500m	500-2000m
71 >	7.1 >	Risk of flooding from rivers and the sea >	High (within 50m)				
72	7.2	Historical Flood Events	0	0	0	-	-
72	7.3	Flood Defences	0	0	0	-	-
72	7.4	Areas Benefiting from Flood Defences	0	0	0	-	-
72	7.5	Flood Storage Areas	0	0	0	-	-
73 >	7.6 >	Flood Zone 2 >	Identified (within 50m)				
74 >	7.7 >	Flood Zone 3 >	Identified (within 50m)				
Page	Section	Surface water flooding >					
75 >	8.1 >	Surface water flooding >	1 in 30 year, Greater than 1.0m (within 50m)				
Page	Section	Groundwater flooding >					
77 >	9.1 >	Groundwater flooding >	Low (within 50m)				
Page	Section	Environmental designations >	On site	0-50m	50-250m	250-500m	500-2000m
78 >	10.1 >	Sites of Special Scientific Interest (SSSI) >	0	0	0	0	1
79	10.2	Conserved wetland sites (Ramsar sites)	0	0	0	0	0
79 >	10.3 >	Special Areas of Conservation (SAC) >	0	0	0	0	1
79	10.4	Special Protection Areas (SPA)	0	0	0	0	0
80 >	10.5 >	National Nature Reserves (NNR) >	0	0	0	0	1
80	10.6	Local Nature Reserves (LNR)	0	0	0	0	0
80 >	10.7 >	Designated Ancient Woodland >	0	0	1	4	68
83	10.8	Biosphere Reserves	0	0	0	0	0
83	10.9	Forest Parks	0	0	0	0	0
84	10.10	Marine Conservation Zones	0	0	0	0	0
84	10.11	Green Belt	0	0	0	0	0



84	10.12	Proposed Ramsar sites	0	0	0	0	0
84	10.13	Possible Special Areas of Conservation (pSAC)	0	0	0	0	0
84	10.14	Potential Special Protection Areas (pSPA)	0	0	0	0	0
85	10.15	Nitrate Sensitive Areas	0	0	0	0	0
85	10.16	Nitrate Vulnerable Zones	0	0	0	0	0
86	10.17	SSSI Impact Risk Zones	0	-	-	-	-
86	10.18	SSSI Units	0	0	0	0	0
Page	Section	Visual and cultural designations >	On site	0-50m	50-250m	250-500m	500-2000m
87	11.1	World Heritage Sites	0	0	0	-	-
88	11.2	Area of Outstanding Natural Beauty	0	0	0	-	-
88	11.3	National Parks	0	0	0	-	-
88 >	11.4 >	Listed Buildings >	0	0	2	-	-
89	11.5	Conservation Areas	0	0	0	-	-
89	11.6	Scheduled Ancient Monuments	0	0	0	-	-
89	11.7	Registered Parks and Gardens	0	0	0	-	-
Page	Section	Agricultural designations >	On site	0-50m	50-250m	250-500m	500-2000m
90 >	12.1 >	Agricultural Land Classification >	Grade 4 (within 250m)				
91	12.2	Open Access Land	0	0	0	-	-
91	12.3	Tree Felling Licences	0	0	0	-	-
92	12.4	Environmental Stewardship Schemes	0	0	0	-	-
92	12.5	Countryside Stewardship Schemes	0	0	0	-	-
Page	Section	Habitat designations	On site	0-50m	50-250m	250-500m	500-2000m
93	13.1	Priority Habitat Inventory	0	0	0	-	-
93	13.2	Habitat Networks	0	0	0	-	-
93	13.3	Open Mosaic Habitat	0	0	0	-	-
93	13.4	Limestone Pavement Orders	0	0	0	-	-
Page	Section	Geology 1:10,000 scale >	On site	0-50m	50-250m	250-500m	500-2000m
94 >	14.1 >	10k Availability >	Identified (within 500m)				
96	14.2	Artificial and made ground (10k)	0	0	0	0	-

97 >	14.3 >	Superficial geology (10k) >	1	2	8	0	-
98	14.4	Landslip (10k)	0	0	0	0	-
99 >	14.5 >	Bedrock geology (10k) >	1	1	2	0	-
100	14.6	Bedrock faults and other linear features (10k)	0	0	0	0	-
Page	Section	Geology 1:50,000 scale >	On site	0-50m	50-250m	250-500m	500-2000m
101 >	15.1 >	50k Availability >	Identified (within 500m)				
102	15.2	Artificial and made ground (50k)	0	0	0	0	-
102	15.3	Artificial ground permeability (50k)	0	0	-	-	-
103 >	15.4 >	Superficial geology (50k) >	2	0	1	0	-
104 >	15.5 >	Superficial permeability (50k) >	Identified (within 50m)				
104	15.6	Landslip (50k)	0	0	0	0	-
104	15.7	Landslip permeability (50k)	None (within 50m)				
105 >	15.8 >	Bedrock geology (50k) >	1	0	0	0	-
106 >	15.9 >	Bedrock permeability (50k) >	Identified (within 50m)				
106	15.10	Bedrock faults and other linear features (50k)	0	0	0	0	-
Page	Section	Boreholes >	On site	0-50m	50-250m	250-500m	500-2000m
107 >	16.1 >	BGS Boreholes >	1	1	0	-	-
Page	Section	Natural ground subsidence >					
109 >	17.1 >	Shrink swell clays >	Very low (within 50m)				
110 >	17.2 >	Running sands >	Low (within 50m)				
112 >	17.3 >	Compressible deposits >	Moderate (within 50m)				
114 >	17.4 >	Collapsible deposits >	Very low (within 50m)				
116 >	17.5 >	Landslides >	Moderate (within 50m)				
118 >	17.6 >	Ground dissolution of soluble rocks >	Negligible (within 50m)				
Page	Section	Mining and ground workings >	On site	0-50m	50-250m	250-500m	500-2000m
120 >	18.1 >	BritPits >	0	0	0	4	-
122 >	18.2 >	Surface ground workings >	4	3	19	-	-
123 >	18.3 >	Underground workings >	0	3	2	0	10
124	18.4	Underground mining extents	0	0	0	0	-



124	18.5	Historical Mineral Planning Areas	0	0	0	0	-
124	18.6	Non-coal mining	0	0	0	0	0
125	18.7	JPB mining areas	None (within 0m)				
125	18.8	The Coal Authority non-coal mining	0	0	0	0	-
125	18.9	Researched mining	0	0	0	0	-
125	18.10	Mining record office plans	0	0	0	0	-
126	18.11	BGS mine plans	0	0	0	0	-
126 >	18.12 >	Coal mining >	Identified (within 0m)				
126	18.13	Brine areas	None (within 0m)				
126	18.14	Gypsum areas	None (within 0m)				
126	18.15	Tin mining	None (within 0m)				
127	18.16	Clay mining	None (within 0m)				
Page	Section	Ground cavities and sinkholes	On site	0-50m	50-250m	250-500m	500-2000m
128	19.1	Natural cavities	0	0	0	0	-
128	19.2	Mining cavities	0	0	0	0	0
128	19.3	Reported recent incidents	0	0	0	0	-
128	19.4	Historical incidents	0	0	0	0	-
Page	Section	Radon >					
130 >	20.1 >	Radon >	Between 5% and 10% (within 0m)				
Page	Section	Soil chemistry >	On site	0-50m	50-250m	250-500m	500-2000m
132 >	21.1 >	BGS Estimated Background Soil Chemistry >	2	2	-	-	-
132	21.2	BGS Estimated Urban Soil Chemistry	0	0	-	-	-
133	21.3	BGS Measured Urban Soil Chemistry	0	0	-	-	-
Page	Section	Railway infrastructure and projects >	On site	0-50m	50-250m	250-500m	500-2000m
134	22.1	Underground railways (London)	0	0	0	-	-
134	22.2	Underground railways (Non-London)	0	0	0	-	-
135 >	22.3 >	Railway tunnels >	0	0	2	-	-
135 >	22.4 >	Historical railway and tunnel features >	0	28	29	-	-
137	22.5	Royal Mail tunnels	0	0	0	-	-



138 >	22.6 >	Historical railways >	0	2	5	-	-
138 >	22.7 >	Railways >	0	7	8	-	-
139	22.8	Crossrail 2	0	0	0	0	-
139	22.9	HS2	0	0	0	0	-

Recent aerial photograph



Aerial photography supplied by Getmapping PLC. © Copyright Getmapping PLC 2026. All Rights Reserved.

Capture Date: 20/05/2023

Site Area: 0.25ha



Recent site history - 2020 aerial photograph



Capture Date: 14/04/2020

Site Area: 0.25ha



Recent site history - 2014 aerial photograph



Capture Date: 23/07/2014

Site Area: 0.25ha



Recent site history - 2010 aerial photograph



Aerial photography supplied by Getmapping PLC. © Copyright Getmapping PLC 2026. All Rights Reserved

Capture Date: 23/05/2010

Site Area: 0.25ha



Recent site history - 2000 aerial photograph

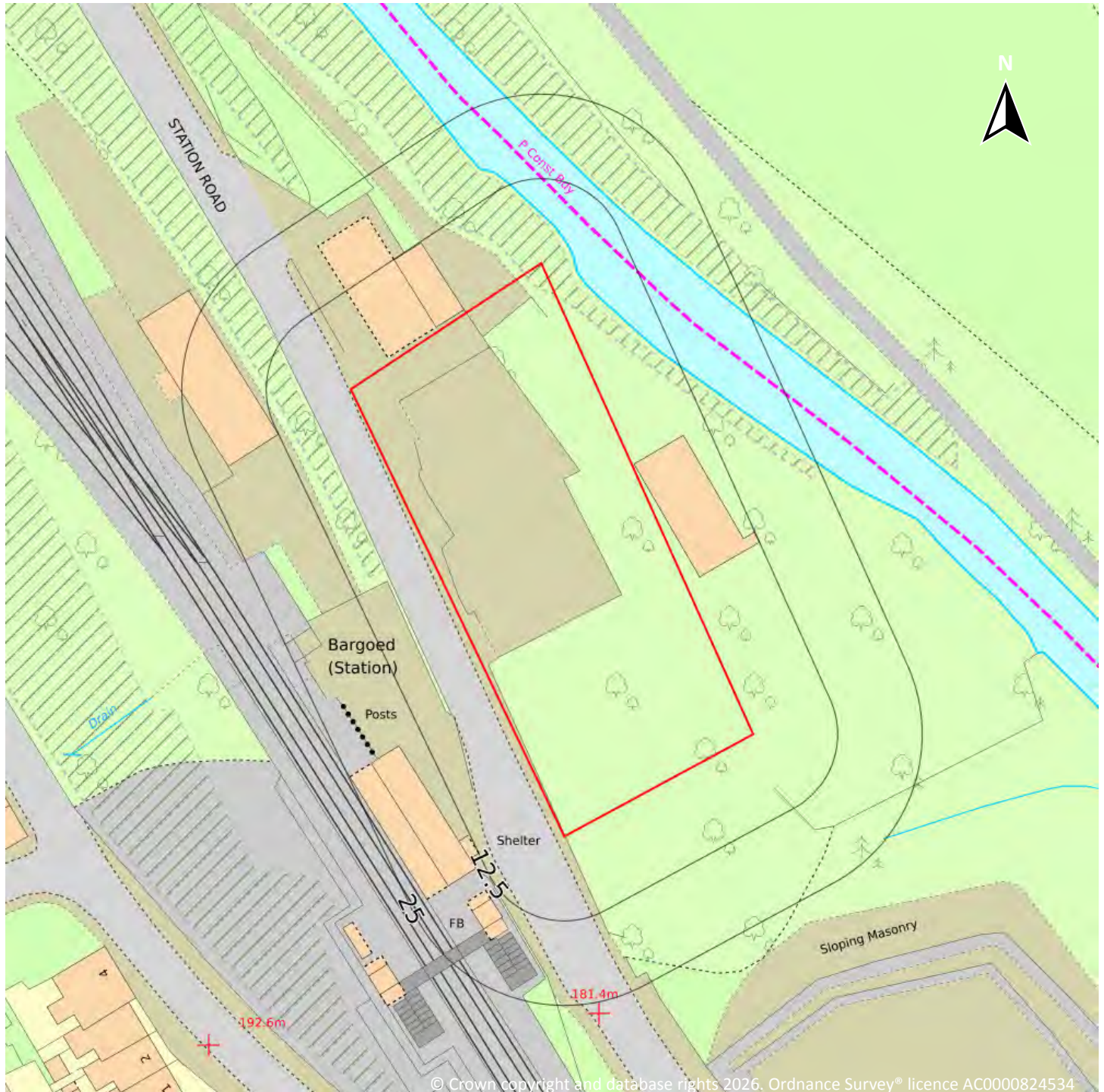


Capture Date: 18/06/2000

Site Area: 0.25ha



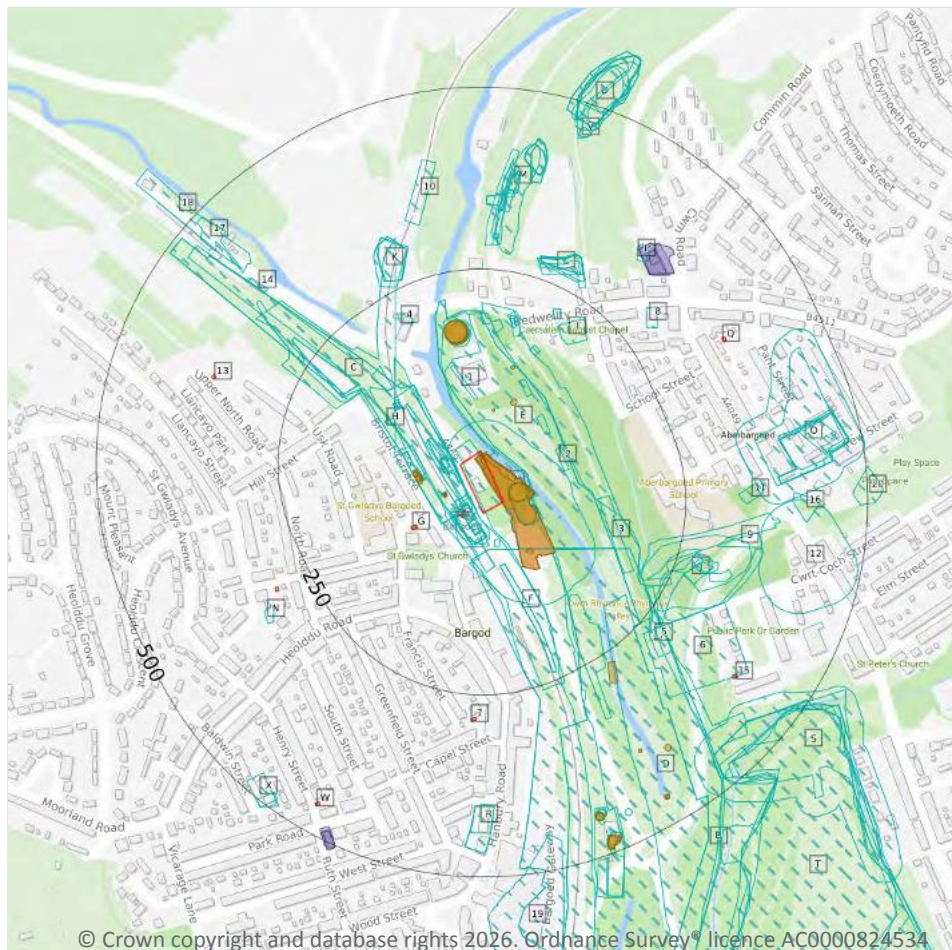
OS MasterMap site plan



Site Area: 0.25ha



1 Past land use



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

1.1 Historical industrial land uses

Records within 500m

174

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

Features are displayed on the Past land use map on [page 15](#) >

ID	Location	Land use	Dates present	Group ID
A	On site	Unspecified Commercial/Industrial	1898	1023428



ID	Location	Land use	Dates present	Group ID
A	On site	Gas Works	1916 - 1948	2403880
B	On site	Colliery	1916 - 1948	2405058
A	4m NE	Unspecified Tanks	1898	1022117
A	6m W	Railway Sidings	1922	1142767
A	6m SW	Railway Station	1964 - 1985	1127510
A	7m W	Railway Building	1945 - 1948	1148744
A	7m W	Railway Sidings	1916 - 1948	2404386
C	7m SW	Railway Sidings	1948	1055034
C	7m SW	Railway Sidings	1916	1131739
A	7m W	Railway Buildings	1922	1014283
A	9m SW	Railway Building	1916	1155559
A	9m SW	Railway Sidings	1964	1086082
A	11m NE	Gas Holder	1985	1032638
A	11m NE	Unspecified Tank	1964	1076861
A	11m E	Unspecified Tanks	1948	1057534
A	11m E	Unspecified Tanks	1916	1172461
A	12m SW	Railway Building	1922	1135385
A	12m SW	Railway Building	1948	1094283
A	12m SW	Junction Station	1898 - 1916	1153109
A	12m SW	Railway Building	1964 - 1985	1135727
A	13m SW	Railway Buildings	1945	1014282
A	13m NE	Unspecified Tanks	1945	1060136
A	14m NE	Gasometer	1948	1091067
A	14m NE	Gasometer	1916	1094733
A	14m NE	Unspecified Tank	1922	1104555
D	14m NE	Railway Sidings	1895 - 1948	2405962
A	14m W	Railway Building	1898	1070558
E	14m SE	Mineral Railway Sidings	1964	2404926



ID	Location	Land use	Dates present	Group ID
E	14m SE	Unspecified Works	1964	2405114
A	15m SW	Railway Station	1879	1134852
A	16m E	Unspecified Tank	1898	1090433
A	16m SW	Railway Sidings	1948	1149024
A	16m SW	Railway Sidings	1916	1172057
A	18m SW	Railway Station	1895	2405766
A	23m S	Railway Building	1922	1164237
A	27m SE	Gasometer	1916 - 1922	1054465
A	27m SE	Gasometer	1948	1082957
A	40m SE	Railway Building	1922 - 1945	1097202
A	48m W	Railway Station	1895	1021613
B	51m S	Unspecified Mine	1965	1186093
B	51m S	Railway Sidings	1965	1274557
A	52m SW	Railway Building	1879	1048726
A	67m W	Junction Station	1916	1039108
A	67m W	Railway Building	1948	1048722
1	71m N	Railway Sidings	1948	1072433
F	76m SE	Railway Sidings	1916	1222441
F	76m SE	Railway Sidings	1948	1249245
E	89m NE	Railway Building	1922	1048920
C	91m W	Railway Sidings	1964	1122297
B	93m SE	Unspecified Commercial/Industrial	1973	1188463
B	93m SE	Railway Sidings	1973	1246171
2	94m NE	Railway Building	1922	1048919
E	98m NE	Railway Building	1922	1048724
H	109m NW	Railway Building	1879	1048723
H	114m NW	Railway Building	1945	1061177
H	114m NW	Railway Building	1898	1062725



ID	Location	Land use	Dates present	Group ID
H	115m NW	Railway Building	1922	1075275
3	130m E	Railway Station	1916 - 1948	2404413
H	140m NW	Unspecified Pit	1922	1029950
E	146m N	Unspecified Tank	1916 - 1922	1146675
E	151m N	Unspecified Tank	1948	1157359
E	151m NE	Smithy	1898	1031872
E	152m N	Gas Holder	1985	1032637
E	152m N	Unspecified Tank	1964	1099481
E	153m N	Unspecified Tank	1945	1125377
D	158m SE	Unspecified Ground Workings	1895	1183539
E	162m N	Railway Station	1895 - 1898	1074507
E	164m N	Smithy	1895	1031873
C	168m NW	Railway Sidings	1922	1091609
E	175m N	Railway Station	1879	1169152
C	177m NW	Railway Sidings	1948	1109801
C	177m NW	Railway Sidings	1916	1138049
E	181m N	Railway Station	1964	1063386
I	188m NE	Burial Ground	1879	1042375
4	197m NW	Corn Mill	1879	1015097
B	199m SE	Colliery	1895 - 1898	1286399
I	207m NE	Smithy	1879	1031917
J	212m SE	Unspecified Quarry	1916 - 1948	2405247
J	239m E	Unspecified Heap	1965	1200704
J	241m SE	Unspecified Heaps	1965	1197275
J	245m SE	Railway Sidings	1879	1285907
5	253m SE	Railway Sidings	1898	1278584
K	253m NW	Cuttings	1898	1112117
L	256m N	Unspecified Pit	1948	1102428



ID	Location	Land use	Dates present	Group ID
C	258m NW	Railway Building	1922 - 1945	1057863
K	259m NW	Cuttings	1916 - 1922	1070895
K	259m NW	Cuttings	1948	1104585
K	260m NW	Cuttings	1945	1173523
L	262m NE	Unspecified Ground Workings	1916	1019668
6	264m SE	Unspecified Factory	1973 - 1993	1238521
J	266m E	Railway Sidings	1922	1277124
L	267m NE	Unspecified Pit	1922	1144117
J	270m E	Unspecified Pit	1965	1192090
L	270m NE	Unspecified Pit	1945	1147240
L	273m N	Unspecified Pit	1948	1134765
L	273m N	Unspecified Pit	1916	1150711
M	273m N	Unspecified Old Quarry	1895 - 1898	1116481
J	276m E	Unspecified Quarry	1879	1274999
M	282m N	Railway Sidings	1879	1050812
8	284m NE	Police Station	1964	1051669
M	284m N	Railway Building	1879	1048659
M	293m N	Railway Station	1916	1084841
M	298m N	Railway Station	1948	1139378
J	299m E	Unspecified Pit	1965	1192091
9	300m E	Refuse Heap	1964	1013784
N	314m SW	Unspecified Pit	1965	1192092
10	321m N	Railway Sidings	1879	1050811
11	322m E	Unspecified Depot	1985	1022843
O	330m E	Hospital	1985	1167918
M	330m N	Railway Building	1964	1048658
M	331m N	Railway Station	1945	1121913
M	332m N	Railway Station	1948	1056180



ID	Location	Land use	Dates present	Group ID
M	332m N	Railway Station	1916 - 1922	1067552
P	340m NE	Unspecified Ground Workings	1964 - 1985	1107259
M	351m N	Goods Shed	1916	1090799
O	355m E	Hospital	1964	1167086
12	356m E	Fire Engine Station	1916 - 1948	2405612
M	356m N	Goods Shed	1945 - 1948	1088410
14	357m NW	Railway Building	1945	1048725
M	358m N	Goods Shed	1948	1116344
M	361m N	Goods Shed	1922	1059179
M	377m N	Unspecified Quarries	1916	1068285
M	377m N	Unspecified Quarries	1948	1068667
O	378m E	Hospital	1916	1116444
O	378m E	Hospital	1945 - 1948	1056688
O	378m E	Hospital	1916	1157085
M	386m N	Unspecified Quarries	1945	1132601
O	387m E	Hospital	1922	1115603
M	389m N	Unspecified Quarries	1916 - 1922	1080247
M	389m N	Unspecified Quarries	1948	1127172
16	397m E	Unspecified Pit	1922	1029946
17	398m NW	Woollen Mill	1879 - 1895	1167298
R	403m S	Police Station and Court	1973	1237075
R	403m S	Police Station and Court	1965	1245988
R	403m S	Police Station and Court	1993	1251064
18	404m NW	Woollen Mill	1898	1064477
O	416m E	Hospital	1948	1169608
S	424m SE	Colliery	1973	1264314
B	434m S	Fire Engine Station	1922	1259214
B	436m S	Unspecified Tank	1922	1291691



ID	Location	Land use	Dates present	Group ID
B	438m S	Unspecified Tank	1948	1225280
B	438m S	Unspecified Tank	1916	1284253
B	439m S	Unspecified Tank	1945 - 1948	1273926
S	449m SE	Unspecified Disused Tip	1973	1209243
T	450m SE	Refuse Heap	1965	1223350
B	450m S	Unspecified Tank	1916	1204180
19	450m S	Unspecified Ground Workings	1973 - 1993	1292605
U	450m N	Unspecified Quarries	1945	1146127
B	452m SE	Unspecified Tank	1922	1204088
V	454m N	Unspecified Pit	1948	1029860
V	454m N	Unspecified Quarries	1916 - 1922	1163614
U	462m N	Unspecified Quarries	1948	1082009
U	462m N	Unspecified Quarries	1916	1152640
T	467m SE	Colliery	1945	1268446
B	467m S	Unspecified Tanks	1922	1275684
X	467m SW	Telephone Exchange	1965	1202848
U	471m N	Unspecified Ground Workings	1964	1019577
U	471m N	Unspecified Disused Quarry	1985	1034519
B	473m S	Unspecified Tanks	1945 - 1948	1260608
U	473m N	Unspecified Quarry	1898	1038700
B	473m S	Unspecified Tanks	1916	1210867
B	473m S	Unspecified Tanks	1948	1213326
U	474m N	Unspecified Quarries	1948	1162074
T	474m SE	Refuse Heap	1916	1245552
T	474m SE	Refuse Heap	1948	1291044
T	475m SE	Refuse Heap	1922	1269644
U	475m N	Refuse Heap	1922	1013709
U	476m N	Unspecified Quarries	1922	1154936



ID	Location	Land use	Dates present	Group ID
X	479m SW	Telecomm Exchange	1974	1185639
20	480m E	Unspecified Ground Workings	1964	1019666
U	493m N	Unspecified Old Quarry	1895	1016635
B	493m S	Unspecified Tank	1916	1204087
B	500m S	Fire Engine Station	1945 - 1948	1236855

This data is sourced from Ordnance Survey® / Groundsure.

1.2 Historical tanks

Records within 500m

38

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

Features are displayed on the Past land use map on [page 15 >](#)

ID	Location	Land use	Dates present	Group ID
A	On site	Gas Works	1992	174703
A	On site	Gas Works	1970	175823
A	On site	Gas Works	1920	447127
A	8m E	Gasometer	1901 - 1920	166954
A	10m NE	Gasholder	1970	164368
A	10m NE	Unspecified Tank	1959 - 1960	175865
A	12m NE	Gas Holder	1992	175185
A	34m SW	Unspecified Tank	1960	166992
A	34m SW	Unspecified Tank	1959	174444
A	35m SW	Unspecified Tank	1901	166484
A	35m SW	Unspecified Tank	1920	171532
A	55m W	Tanks	1992	168078
A	56m W	Tanks	1996	171410



ID	Location	Land use	Dates present	Group ID
A	56m W	Tanks	1959 - 1970	174367
A	57m W	Tanks	1920	175073
E	57m N	Unspecified Tank	1959	160575
A	59m W	Tanks	1960	167866
A	60m W	Tanks	1996	174480
A	60m W	Tanks	1959	170860
A	60m W	Tanks	1970	176171
A	73m SE	Tanks	1920	447118
E	77m NE	Unspecified Tank	1959 - 1960	174575
E	120m N	Unspecified Tank	1959 - 1970	173831
E	150m N	Gasometer	1920	164851
E	152m N	Unspecified Tank	1959 - 1960	165463
E	153m N	Gasholder	1970	164367
D	263m SE	Unspecified Tank	1920	179057
B	387m SE	Unspecified Tank	1920	179055
B	401m SE	Unspecified Tank	1920	179056
B	441m S	Unspecified Tank	1920	195703
B	442m S	Unspecified Tank	1959 - 1960	198584
B	459m SE	Unspecified Tank	1920	188753
B	461m SE	Unspecified Tank	1959	196782
B	461m SE	Unspecified Tank	1960	198245
B	475m S	Tanks	1920	186631
B	476m S	Tanks	1960	202785
B	477m S	Tanks	1959	191239
B	481m SE	Unspecified Tank	1960	179989

This data is sourced from Ordnance Survey® / Groundsure.



1.3 Historical energy features

Records within 500m

17

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

Features are displayed on the Past land use map on [page 15 >](#)

ID	Location	Land use	Dates present	Group ID
A	On site	Gas Works	1970	100613
A	On site	Gas Works	1992	103974
A	On site	Gas Works	1920	335214
A	8m E	Gasometer	1901 - 1920	100619
A	10m NE	Gasholder	1970	93410
A	12m NE	Gas Holder	1992	97789
G	90m SW	Electricity Substation	1992	98113
G	91m SW	Electricity Transformer	1970	95541
E	150m N	Gasometer	1920	95273
E	153m N	Gasholder	1970	93409
7	281m S	Electricity Substation	1972 - 1988	122850
N	298m SW	Electricity Substation	1974 - 1993	118108
13	356m W	Electricity Substation	1986	94398
Q	365m NE	Electricity Transformer	1970	95542
Q	365m NE	Electricity Substation	1992 - 1996	98138
15	395m SE	Electricity Substation	1972 - 1993	120801
W	456m SW	Electricity Substation	1974 - 1993	113041

This data is sourced from Ordnance Survey® / Groundsure.



1.4 Historical petrol stations

Records within 500m

0

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

This data is sourced from Ordnance Survey® / Groundsure.

1.5 Historical garages

Records within 500m

9

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

Features are displayed on the Past land use map on [page 15 >](#)

ID	Location	Land use	Dates present	Group ID
P	335m NE	Garage	1992	34030
P	336m NE	Garage	1970	34711
P	336m NE	Garage	1996	35053
P	336m NE	Garage	1960	32807
P	347m NE	Garage	1959	33384
W	480m SW	Garage	1993	37438
W	484m SW	Garage	1960	38794
W	485m SW	Garage	1958	36273
W	485m SW	Garage	1974	38154

This data is sourced from Ordnance Survey® / Groundsure.

1.6 Historical military land

Records within 500m

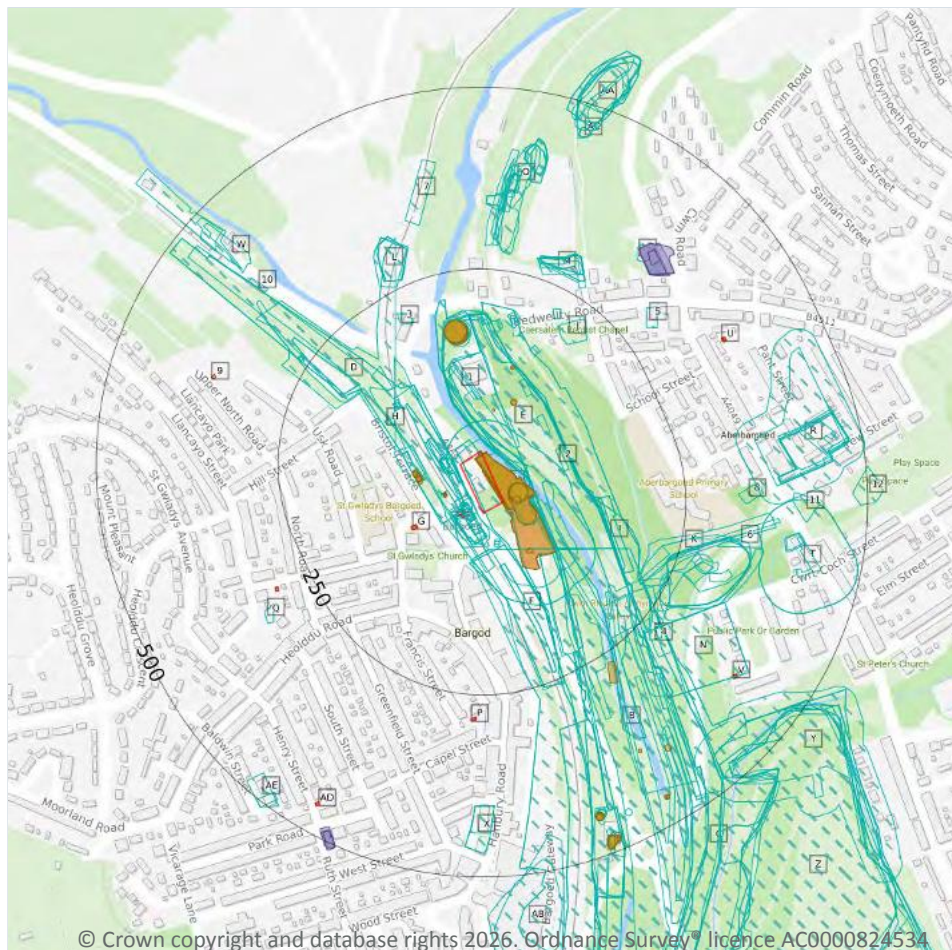
0

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

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



2 Past land use - un-grouped



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

2.1 Historical industrial land uses

Records within 500m

234

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

Features are displayed on the Past land use - un-grouped map on [page 27](#) >

ID	Location	Land Use	Date	Group ID
A	On site	Unspecified Commercial/Industrial	1898	1023428
A	On site	Gas Works	1922	2403880
A	On site	Gas Works	1948	2403880



ID	Location	Land Use	Date	Group ID
A	On site	Gas Works	1916	2403880
B	On site	Colliery	1916	2405058
B	On site	Colliery	1948	2405058
C	On site	Colliery	1945	2405058
C	On site	Colliery	1945	2405058
A	4m NE	Unspecified Tanks	1898	1022117
A	6m W	Railway Sidings	1922	1142767
A	6m SW	Railway Station	1985	1127510
A	7m W	Railway Sidings	1945	2404386
A	7m W	Railway Building	1945	1148744
D	7m SW	Railway Sidings	1948	1055034
D	7m SW	Railway Sidings	1916	1131739
A	7m W	Railway Buildings	1922	1014283
A	9m SW	Railway Building	1948	1148744
A	9m SW	Railway Building	1916	1155559
A	9m SW	Railway Sidings	1964	1086082
A	11m NE	Gas Holder	1985	1032638
A	11m NE	Unspecified Tank	1964	1076861
A	11m E	Unspecified Tanks	1916	1172461
A	11m E	Unspecified Tanks	1948	1057534
A	12m SW	Railway Building	1922	1135385
A	12m SW	Railway Building	1948	1094283
A	12m SW	Junction Station	1916	1153109
B	12m NE	Colliery	1916	2405058
C	12m NE	Colliery	1948	2405058
A	12m SW	Railway Building	1985	1135727
A	12m SW	Railway Building	1964	1135727
A	13m SW	Railway Buildings	1945	1014282



ID	Location	Land Use	Date	Group ID
A	13m NE	Unspecified Tanks	1945	1060136
A	14m NE	Gasometer	1948	1091067
A	14m NE	Gasometer	1916	1094733
A	14m NE	Unspecified Tank	1922	1104555
B	14m NE	Railway Sidings	1945	2405962
A	14m W	Railway Building	1898	1070558
E	14m SE	Unspecified Works	1964	2405114
E	14m SE	Mineral Railway Sidings	1964	2404926
A	14m SW	Junction Station	1898	1153109
A	15m SW	Railway Station	1879	1134852
A	16m SW	Railway Station	1964	1127510
A	16m E	Unspecified Tank	1898	1090433
A	16m SW	Railway Sidings	1916	1172057
A	16m SW	Railway Sidings	1948	1149024
B	17m NE	Colliery	1922	2405058
A	18m SW	Railway Station	1895	2405766
B	22m NE	Railway Sidings	1916	2405962
A	23m S	Railway Building	1922	1164237
B	24m NE	Railway Sidings	1922	2405962
B	25m NE	Railway Sidings	1948	2405962
B	25m NE	Railway Sidings	1916	2405962
A	27m SE	Gasometer	1948	1082957
A	27m SE	Gasometer	1916	1054465
A	27m SE	Gasometer	1922	1054465
C	34m E	Railway Sidings	1898	2405962
C	37m E	Railway Sidings	1895	2405962
A	40m SE	Railway Building	1922	1097202
A	42m SE	Railway Building	1945	1097202



ID	Location	Land Use	Date	Group ID
B	43m E	Railway Sidings	1948	2405962
A	48m W	Railway Station	1895	1021613
C	51m S	Railway Sidings	1965	1274557
C	51m S	Unspecified Mine	1965	1186093
F	52m SE	Railway Sidings	1948	2404386
F	52m SE	Railway Sidings	1916	2404386
A	52m SW	Railway Building	1879	1048726
A	67m W	Railway Building	1948	1048722
A	67m W	Junction Station	1916	1039108
1	71m N	Railway Sidings	1948	1072433
F	76m SE	Railway Sidings	1916	1222441
F	76m SE	Railway Sidings	1948	1249245
E	89m NE	Railway Building	1922	1048920
D	91m W	Railway Sidings	1964	1122297
C	93m SE	Railway Sidings	1973	1246171
C	93m SE	Unspecified Commercial/Industrial	1973	1188463
2	94m NE	Railway Building	1922	1048919
E	98m NE	Railway Building	1922	1048724
H	109m NW	Railway Building	1879	1048723
H	114m NW	Railway Building	1945	1061177
H	114m NW	Railway Building	1898	1062725
H	115m NW	Railway Building	1922	1075275
I	130m E	Railway Station	1916	2404413
I	130m E	Railway Station	1948	2404413
H	140m NW	Unspecified Pit	1922	1029950
E	146m N	Unspecified Tank	1916	1146675
E	151m N	Unspecified Tank	1948	1157359
E	151m N	Unspecified Tank	1916	1146675



ID	Location	Land Use	Date	Group ID
E	151m N	Unspecified Tank	1922	1146675
E	151m NE	Smithy	1898	1031872
E	152m N	Unspecified Tank	1948	1157359
E	152m N	Gas Holder	1985	1032637
E	152m N	Unspecified Tank	1964	1099481
E	153m N	Unspecified Tank	1945	1125377
B	158m SE	Unspecified Ground Workings	1895	1183539
E	162m N	Railway Station	1895	1074507
E	164m N	Smithy	1895	1031873
D	168m NW	Railway Sidings	1922	1091609
E	169m N	Railway Station	1898	1074507
E	175m N	Railway Station	1879	1169152
D	177m NW	Railway Sidings	1916	1138049
D	177m NW	Railway Sidings	1948	1109801
E	181m N	Railway Station	1964	1063386
J	188m NE	Burial Ground	1879	1042375
3	197m NW	Corn Mill	1879	1015097
C	199m SE	Colliery	1895	1286399
J	207m NE	Smithy	1879	1031917
K	208m E	Railway Sidings	1922	2405962
K	212m SE	Unspecified Quarry	1945	2405247
K	215m SE	Railway Sidings	1945	2405962
K	238m E	Unspecified Quarry	1922	2405247
K	238m E	Unspecified Quarry	1948	2405247
K	238m E	Unspecified Quarry	1916	2405247
C	239m SE	Colliery	1898	1286399
K	239m E	Unspecified Heap	1965	1200704
K	239m E	Unspecified Quarry	1916	2405247



ID	Location	Land Use	Date	Group ID
K	239m E	Unspecified Quarry	1948	2405247
K	241m SE	Unspecified Heaps	1965	1197275
K	245m SE	Railway Sidings	1879	1285907
4	253m SE	Railway Sidings	1898	1278584
L	253m NW	Cuttings	1898	1112117
M	256m N	Unspecified Pit	1948	1102428
D	258m NW	Railway Building	1945	1057863
L	259m NW	Cuttings	1922	1070895
L	259m NW	Cuttings	1948	1104585
L	259m NW	Cuttings	1916	1070895
D	259m NW	Railway Building	1922	1057863
L	260m NW	Cuttings	1945	1173523
M	262m NE	Unspecified Ground Workings	1916	1019668
N	264m SE	Unspecified Factory	1993	1238521
N	264m SE	Unspecified Factory	1973	1238521
K	266m E	Railway Sidings	1922	1277124
M	267m NE	Unspecified Pit	1922	1144117
K	270m E	Unspecified Pit	1965	1192090
M	270m NE	Unspecified Pit	1945	1147240
M	270m NE	Unspecified Pit	1945	1147240
M	273m N	Unspecified Pit	1948	1134765
M	273m N	Unspecified Pit	1916	1150711
O	273m N	Unspecified Old Quarry	1898	1116481
O	275m N	Unspecified Old Quarry	1895	1116481
K	276m E	Unspecified Quarry	1879	1274999
O	282m N	Railway Sidings	1879	1050812
5	284m NE	Police Station	1964	1051669
O	284m N	Railway Building	1879	1048659



ID	Location	Land Use	Date	Group ID
O	293m N	Railway Station	1916	1084841
O	298m N	Railway Station	1948	1139378
K	299m E	Unspecified Pit	1965	1192091
6	300m E	Refuse Heap	1964	1013784
Q	314m SW	Unspecified Pit	1965	1192092
7	321m N	Railway Sidings	1879	1050811
8	322m E	Unspecified Depot	1985	1022843
R	330m E	Hospital	1985	1167918
O	330m N	Railway Building	1964	1048658
O	331m N	Railway Station	1945	1121913
O	332m N	Railway Station	1948	1056180
O	332m N	Railway Station	1916	1067552
O	332m N	Railway Station	1922	1067552
S	340m NE	Unspecified Ground Workings	1985	1107259
S	340m NE	Unspecified Ground Workings	1964	1107259
O	351m N	Goods Shed	1916	1090799
R	355m E	Hospital	1964	1167086
O	356m N	Goods Shed	1948	1088410
T	356m E	Fire Engine Station	1948	2405612
T	356m E	Fire Engine Station	1916	2405612
10	357m NW	Railway Building	1945	1048725
O	358m N	Goods Shed	1948	1116344
O	358m N	Goods Shed	1916	1090799
O	359m N	Goods Shed	1945	1088410
O	361m N	Goods Shed	1922	1059179
O	377m N	Unspecified Quarries	1916	1068285
O	377m N	Unspecified Quarries	1948	1068667
R	378m E	Hospital	1916	1116444



ID	Location	Land Use	Date	Group ID
R	378m E	Hospital	1916	1157085
R	378m E	Hospital	1948	1056688
R	379m E	Hospital	1945	1056688
O	386m N	Unspecified Quarries	1945	1132601
R	387m E	Hospital	1922	1115603
O	389m N	Unspecified Quarries	1922	1080247
O	389m N	Unspecified Quarries	1948	1127172
O	389m N	Unspecified Quarries	1916	1080247
T	389m E	Fire Engine Station	1948	2405612
T	391m E	Fire Engine Station	1945	2405612
11	397m E	Unspecified Pit	1922	1029946
W	398m NW	Woollen Mill	1879	1167298
X	403m S	Police Station and Court	1993	1251064
X	403m S	Police Station and Court	1965	1245988
X	403m S	Police Station and Court	1973	1237075
W	404m NW	Woollen Mill	1898	1064477
T	406m E	Fire Engine Station	1922	2405612
R	416m E	Hospital	1948	1169608
Y	424m SE	Colliery	1973	1264314
C	434m S	Fire Engine Station	1922	1259214
C	436m S	Unspecified Tank	1922	1291691
C	438m S	Unspecified Tank	1948	1225280
C	438m S	Unspecified Tank	1916	1284253
C	439m S	Unspecified Tank	1945	1273926
C	439m S	Unspecified Tank	1948	1273926
W	446m NW	Woollen Mill	1895	1167298
Y	449m SE	Unspecified Disused Tip	1973	1209243
Z	450m SE	Refuse Heap	1965	1223350



ID	Location	Land Use	Date	Group ID
C	450m S	Unspecified Tank	1916	1204180
AA	450m N	Unspecified Quarries	1945	1146127
AB	450m S	Unspecified Ground Workings	1993	1292605
C	452m SE	Unspecified Tank	1922	1204088
AC	454m N	Unspecified Pit	1948	1029860
AC	454m N	Unspecified Quarries	1922	1163614
AC	454m N	Unspecified Quarries	1916	1163614
AA	462m N	Unspecified Quarries	1916	1152640
AA	462m N	Unspecified Quarries	1948	1082009
Z	467m SE	Colliery	1945	1268446
Z	467m SE	Colliery	1945	1268446
C	467m S	Unspecified Tanks	1922	1275684
AE	467m SW	Telephone Exchange	1965	1202848
AA	471m N	Unspecified Disused Quarry	1985	1034519
AA	471m N	Unspecified Ground Workings	1964	1019577
C	473m S	Unspecified Tanks	1945	1260608
AA	473m N	Unspecified Quarry	1898	1038700
C	473m S	Unspecified Tanks	1948	1213326
C	473m S	Unspecified Tanks	1916	1210867
AA	474m N	Unspecified Quarries	1948	1162074
AA	474m N	Unspecified Quarries	1916	1152640
Z	474m SE	Refuse Heap	1948	1291044
Z	474m SE	Refuse Heap	1916	1245552
Z	475m SE	Refuse Heap	1922	1269644
C	475m S	Unspecified Tanks	1948	1260608
AA	475m N	Refuse Heap	1922	1013709
AA	476m N	Unspecified Quarries	1922	1154936
Z	478m SE	Refuse Heap	1948	1291044



ID	Location	Land Use	Date	Group ID
AE	479m SW	Telecomm Exchange	1974	1185639
12	480m E	Unspecified Ground Workings	1964	1019666
Z	480m SE	Refuse Heap	1916	1245552
AB	482m S	Unspecified Ground Workings	1973	1292605
AA	493m N	Unspecified Old Quarry	1895	1016635
C	493m S	Unspecified Tank	1916	1204087
C	500m S	Fire Engine Station	1945	1236855

This data is sourced from Ordnance Survey® / Groundsure.

2.2 Historical tanks

Records within 500m

50

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

Features are displayed on the Past land use - un-grouped map on [page 27 >](#)

ID	Location	Land Use	Date	Group ID
A	On site	Gas Works	1920	447127
A	On site	Gas Works	1970	175823
A	On site	Gas Works	1992	174703
A	On site	Gas Works	1992	174703
A	8m E	Gasometer	1920	166954
A	10m NE	Gasholder	1970	164368
A	10m NE	Unspecified Tank	1959	175865
A	10m NE	Unspecified Tank	1960	175865
A	12m NE	Gas Holder	1992	175185
A	12m NE	Gas Holder	1992	175185
A	13m E	Gasometer	1901	166954
A	34m SW	Unspecified Tank	1960	166992
A	34m SW	Unspecified Tank	1959	174444



ID	Location	Land Use	Date	Group ID
A	35m SW	Unspecified Tank	1901	166484
A	35m SW	Unspecified Tank	1920	171532
A	55m W	Tanks	1992	168078
A	55m W	Tanks	1992	168078
A	56m W	Tanks	1996	171410
A	56m W	Tanks	1960	174367
A	57m W	Tanks	1920	175073
A	57m W	Tanks	1970	174367
A	57m W	Tanks	1959	174367
E	57m N	Unspecified Tank	1959	160575
A	59m W	Tanks	1960	167866
A	60m W	Tanks	1996	174480
A	60m W	Tanks	1970	176171
A	60m W	Tanks	1959	170860
A	73m SE	Tanks	1920	447118
E	77m NE	Unspecified Tank	1959	174575
E	77m NE	Unspecified Tank	1960	174575
E	120m N	Unspecified Tank	1970	173831
E	120m N	Unspecified Tank	1959	173831
E	121m N	Unspecified Tank	1960	173831
E	150m N	Gasometer	1920	164851
E	152m N	Unspecified Tank	1960	165463
E	153m N	Gasholder	1970	164367
E	153m N	Unspecified Tank	1959	165463
B	263m SE	Unspecified Tank	1920	179057
C	387m SE	Unspecified Tank	1920	179055
C	401m SE	Unspecified Tank	1920	179056
C	441m S	Unspecified Tank	1920	195703



ID	Location	Land Use	Date	Group ID
C	442m S	Unspecified Tank	1960	198584
C	443m S	Unspecified Tank	1959	198584
C	459m SE	Unspecified Tank	1920	188753
C	461m SE	Unspecified Tank	1959	196782
C	461m SE	Unspecified Tank	1960	198245
C	475m S	Tanks	1920	186631
C	476m S	Tanks	1960	202785
C	477m S	Tanks	1959	191239
C	481m SE	Unspecified Tank	1960	179989

This data is sourced from Ordnance Survey® / Groundsure.

2.3 Historical energy features

Records within 500m

28

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

Features are displayed on the Past land use - un-grouped map on [page 27 >](#)

ID	Location	Land Use	Date	Group ID
A	On site	Gas Works	1920	335214
A	On site	Gas Works	1970	100613
A	On site	Gas Works	1992	103974
A	On site	Gas Works	1992	103974
A	8m E	Gasometer	1920	100619
A	10m NE	Gasholder	1970	93410
A	12m NE	Gas Holder	1992	97789
A	12m NE	Gas Holder	1992	97789
A	13m E	Gasometer	1901	100619
G	90m SW	Electricity Substation	1992	98113
G	90m SW	Electricity Substation	1992	98113



ID	Location	Land Use	Date	Group ID
G	91m SW	Electricity Transformer	1970	95541
E	150m N	Gasometer	1920	95273
E	153m N	Gasholder	1970	93409
P	281m S	Electricity Substation	1972	122850
P	281m S	Electricity Substation	1988	122850
Q	298m SW	Electricity Substation	1974	118108
Q	298m SW	Electricity Substation	1993	118108
9	356m W	Electricity Substation	1986	94398
U	365m NE	Electricity Transformer	1970	95542
U	365m NE	Electricity Substation	1992	98138
U	365m NE	Electricity Substation	1992	98138
U	366m NE	Electricity Substation	1996	98138
V	395m SE	Electricity Substation	1993	120801
V	395m SE	Electricity Substation	1988	120801
V	395m SE	Electricity Substation	1972	120801
AD	456m SW	Electricity Substation	1993	113041
AD	456m SW	Electricity Substation	1974	113041

This data is sourced from Ordnance Survey® / Groundsure.

2.4 Historical petrol stations

Records within 500m

0

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

This data is sourced from Ordnance Survey® / Groundsure.



2.5 Historical garages

Records within 500m

10

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

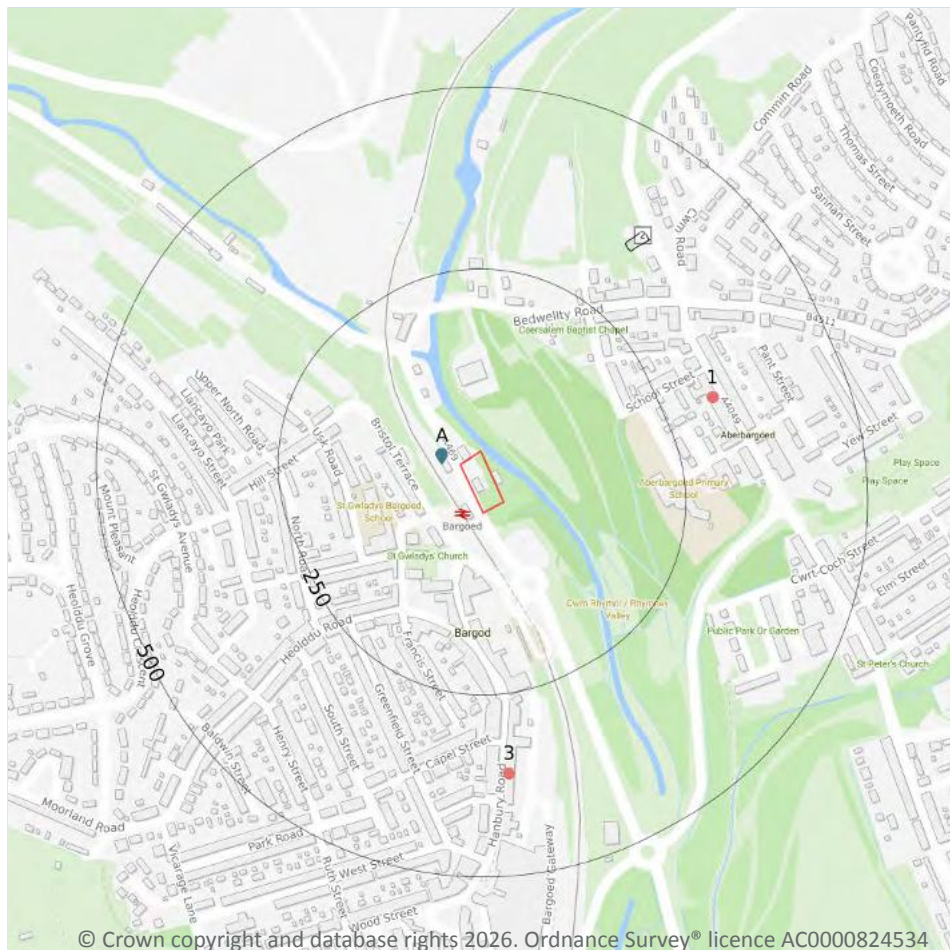
Features are displayed on the Past land use - un-grouped map on [page 27 >](#)

ID	Location	Land Use	Date	Group ID
S	335m NE	Garage	1992	34030
S	335m NE	Garage	1992	34030
S	336m NE	Garage	1970	34711
S	336m NE	Garage	1996	35053
S	336m NE	Garage	1960	32807
S	347m NE	Garage	1959	33384
AD	480m SW	Garage	1993	37438
AD	484m SW	Garage	1960	38794
AD	485m SW	Garage	1958	36273
AD	485m SW	Garage	1974	38154

This data is sourced from Ordnance Survey® / Groundsure.



3 Waste and landfill



- Site Outline
- Search buffers in metres (m)
- Historical landfill (EA/NRW)
- Licensed waste sites
- Waste exemptions

3.1 Active or recent landfill

Records within 500m

0

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

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

3.2 Historical landfill (BGS records)

Records within 500m

0

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

This data is sourced from the British Geological Survey.



3.3 Historical landfill (LA/mapping records)

Records within 500m

0

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

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

3.4 Historical landfill (EA/NRW records)

Records within 500m

1

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

Features are displayed on the Waste and landfill map on [page 41 >](#)

ID	Location	Details		
2	343m NE	Site Address: Duffryn Garage, Duffryn, Aberbargoed Licence Holder Address: -	Waste Licence: Yes Site Reference: 25 Waste Type: Inert, Industrial, Household Environmental Permitting Regulations (Waste) Reference: - Licence Issue: - Licence Surrender: -	Operator: - Licence Holder: W Hughes Esquire First Recorded 31/12/1983 Last Recorded: 31/12/1984

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

3.5 Historical waste sites

Records within 500m

0

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

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

3.6 Licensed waste sites

Records within 500m

7

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

Features are displayed on the Waste and landfill map on [page 41 >](#)

ID	Location	Details		
A	28m NW	Site Name: A J Davies Car Spares Site Address: Station Yard, Station Road, Bargoed, Mid Glamorgan, CF81 9AL Correspondence Address: -	Type of Site: Vehicle Depollution Facility 5000 tps Size: Unknown Environmental Permitting Regulations (Waste) Licence Number: DAV186 EPR reference: LB3133DS/A001 Operator: Davies Andrew Waste Management licence No: 104680 Annual Tonnage: 0	Issue Date: 17/10/2012 Effective Date: - Modified: - Surrendered Date: 0 Expiry Date: 0 Cancelled Date: 0 Status: Issued
A	28m NW	Site Name: - Site Address: A J Davies Car Spares, Station Yard, Bargoed, Mid Glamorgan, CF81 9AL Correspondence Address: -	Type of Site: Vehicle Depollution Facility 5000 tps Size: - Environmental Permitting Regulations (Waste) Licence Number: LB3133DS EPR reference: - Operator: Andrew Davies Waste Management licence No: - Annual Tonnage: 4999	Issue Date: 17/10/2012 Effective Date: 17/10/2012 Modified: - Surrendered Date: 06/08/2018 Expiry Date: - Cancelled Date: - Status: Surrender
A	28m NW	Site Name: - Site Address: A J Davies Car Spares, Station Yard, Bargoed, Mid Glamorgan, CF81 9AL Correspondence Address: -	Type of Site: Vehicle Depollution Facility 5000 tps Size: - Environmental Permitting Regulations (Waste) Licence Number: LB3133DS EPR reference: - Operator: Andrew Davies Waste Management licence No: - Annual Tonnage: 4999	Issue Date: 17/10/2012 Effective Date: 17/10/2012 Modified: - Surrendered Date: 06/08/2018 Expiry Date: - Cancelled Date: - Status: Surrender
A	28m NW	Site Name: A J Davies Car Spares Site Address: Station Yard, Station Road, Bargoed, Mid Glamorgan, CF81 9AL Correspondence Address: -	Type of Site: Vehicle Depollution Facility 5000 tps Size: 25000 tonnes Environmental Permitting Regulations (Waste) Licence Number: DAV186 EPR reference: EA/EPR/LB3133DS/A001 Operator: Davies Andrew Waste Management licence No: 104680 Annual Tonnage: 4999	Issue Date: 17/10/2012 Effective Date: - Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Issued



ID	Location	Details		
A	28m NW	Site Name: - Site Address: A J Davies Car Spares, Station Yard, Bargoed, Mid Glamorgan, CF81 9AL Correspondence Address: -	Type of Site: Vehicle Depollution Facility 5000 tps Size: Unknown Environmental Permitting Regulations (Waste) Licence Number: LB3133DS EPR reference: - Operator: - Waste Management licence No: 104680 Annual Tonnage: 4999	Issue Date: 17/10/2012 Effective Date: 17/10/2012 Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Effective
A	28m NW	Site Name: - Site Address: A J Davies Car Spares, Station Yard, Bargoed, Caerphilly, CF81 9AL Correspondence Address: -	Type of Site: - Size: Unknown Environmental Permitting Regulations (Waste) Licence Number: LB3133DS EPR reference: - Operator: Andrew Davies Waste Management licence No: 0 Annual Tonnage: 4999	Issue Date: 17/10/2012 Effective Date: 17/10/2012 Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Effective
A	28m NW	Site Name: - Site Address: A J Davies Car Spares, Station Yard, Mid Glamorgan, Bargoed, Caerphilly, CF81 9AL Correspondence Address: -	Type of Site: - Size: Unknown Environmental Permitting Regulations (Waste) Licence Number: LB3133DS EPR reference: - Operator: Andrew Davies Waste Management licence No: 104680 Annual Tonnage: 4999	Issue Date: 17/10/2012 Effective Date: 17/10/2012 Modified: - Surrendered Date: - Expiry Date: - Cancelled Date: - Status: Effective

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

3.7 Waste exemptions

Records within 500m	2
----------------------------	----------

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

Features are displayed on the Waste and landfill map on [page 41](#) >



ID	Location	Site	Reference	Category	Sub-Category	Description
1	320m NE	Vida Rogers Ltd, 26 Commercial Street, Aberbargoed, Bargod, Cf819bw	NRW-WME022218	Treating waste exemption	Not on a farm	Sorting and de-naturing of controlled drugs for disposal
3	360m S	Vida Rogers Ltd, Mervyn Davies, 18 Hanbury Road, Bargoed, Cf818qs	NRW-WME022215	Treating waste exemption	Not on a farm	Sorting and de-naturing of controlled drugs for disposal

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



4 Current industrial land use



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

4.1 Recent industrial land uses

Records within 250m

5

Current potentially contaminative industrial sites.

Features are displayed on the Current industrial land use map on [page 46 >](#)

ID	Location	Company	Address	Activity	Category
A	22m W	South Wales Spares	Station Yard, Station Road, Bargoed, Gwent, CF81 9AL	Vehicle Parts and Accessories	Motoring
1	23m SW	Bargoed Rail Station	Gwent, CF81	Railway Stations, Junctions and Halts	Public Transport, Stations and Infrastructure



ID	Location	Company	Address	Activity	Category
2	93m SW	Electricity Sub Station	Gwent, CF81	Electrical Features	Infrastructure and Facilities
B	110m N	Ambulance Station	Gwent, CF81	Ambulance and Medical Transportation Services	Health Support Services
3	212m S	Bus Station	Gwent, CF81	Bus and Coach Stations, Depots and Companies	Public Transport, Stations and Infrastructure

This data is sourced from Ordnance Survey®.

4.2 National Geographic Database (NGD) - Current or recent tanks

Records within 250m

0

Current or recent tanks identified from the Ordnance Survey® NGD.

This data is sourced from Ordnance Survey®.

4.3 Current or recent petrol stations

Records within 500m

3

Open, closed, under development and obsolete petrol stations.

Features are displayed on the Current industrial land use map on [page 46 >](#)

ID	Location	Company	Address	LPG	Status
A	2m SW	MURCO	Station Road, Bargoed, Caerphilly, CF81 9AL	Not Applicable	Obsolete
5	356m NE	BP	New Road, Aberbargoed, Bargoed, Caerphilly, CF81 9BP	Not Applicable	Obsolete
F	489m SE	MORRISONS	Station Road, Bargoed, Caerphilly, CF81 8QT	Yes	Open

This data is sourced from Experian.

4.4 Electricity cables

Records within 500m

0

High voltage underground electricity transmission cables.

This data is sourced from National Grid.



4.5 Gas pipelines

Records within 500m

0

High pressure underground gas transmission pipelines.

This data is sourced from National Grid.

4.6 Sites determined as Contaminated Land

Records within 500m

0

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

This data is sourced from Local Authority records.

4.7 Control of Major Accident Hazards (COMAH)

Records within 500m

0

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

This data is sourced from the Health and Safety Executive.

4.8 Regulated explosive sites

Records within 500m

0

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

This data is sourced from the Health and Safety Executive.

4.9 Hazardous substance storage/usage

Records within 500m

0

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

This data is sourced from Local Authority records.



4.10 Historical licensed industrial activities (IPC)

Records within 500m

0

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

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

4.11 Licensed industrial activities (Part A(1))

Records within 500m

0

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

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

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

Records within 500m

5

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

Features are displayed on the Current industrial land use map on [page 46 >](#)

ID	Location	Address	Details	
A	4m NW	Petrol Express Service Station (Texaco), Station Road, Bargoed, CF81 9AL	Process: Unloading of Petrol into Storage at Service Stations Status: Historical Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of enforcement: No Enforcements Notified Comment: No Enforcements Notified
A	6m NW	St Albans Operating Company Ltd, Station Road, Bargoed, Caerphilly, CF81 9AL	Process: Unloading of Petrol into Storage at Service Stations Status: Historical Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of enforcement: No Enforcements Notified Comment: No Enforcements Notified
A	9m NW	Murco Petroleum Ltd, Station Road, Bargoed, CF81 9AL	Process: Unloading of Petrol into Storage at Service Stations Status: Historical Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of enforcement: No Enforcements Notified Comment: No Enforcements Notified
A	11m NW	Bargoed Service Station, Station Road, Bargoed, CF81 9AL	Process: Unloading of Petrol into Storage at Service Stations Status: Historical Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of enforcement: No Enforcements Notified Comment: No Enforcements Notified



ID	Location	Address	Details	
F	476m S	Morrisons Petrol Station, Angel Way, Bargoed, NR1 1WU	Process: Unloading of Petrol into Storage at Service Stations Status: Current Permit Permit Type: Part B	Enforcement: No Enforcements Notified Date of enforcement: No Enforcements Notified Comment: No Enforcements Notified

This data is sourced from Local Authority records.

4.13 Radioactive Substance Authorisations

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

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

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

4.14 Licensed Discharges to controlled waters

Records within 500m	15
----------------------------	-----------

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

Features are displayed on the Current industrial land use map on [page 46 >](#)

ID	Location	Address	Details	
C	193m NW	CSOAJTO2BRIDGESTREETBARGOE , CSOAJTO2BRIDGESTREETBAR, BARGOED	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: AN0256901 Permit Version: 1 Receiving Water: RIVER BARGOED RHYMNI	Status: CONSENT EXPIRED - TIME LIMIT Issue date: 15/03/1995 Effective Date: 01/04/1995 Revocation Date: 15/03/2001
B	196m N	Bedwellty Road CSO, Nr 1 Bedwellty Rd, Aberbargoed, Bargoed, CF81 9AE	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: AN0095101 Permit Version: 0 Receiving Water: River Bargoed	Status: Effective Issue date: 07/08/2019 Effective Date: 07/08/2019 Revocation Date: -
C	197m NW	CSO at Factory Road, Below Viaduct, Factory Road, Bargoed, CF81 9GG	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: CB3894HR Permit Version: 0 Receiving Water: River Bargoed Rhymni	Status: Effective Issue date: 23/05/2023 Effective Date: 23/05/2023 Revocation Date: -

ID	Location	Address	Details	
C	199m NW	CSOATTRAFFICISLANDBELOWRAIL WAY, CSOATTRAFFICISLANDBELOWRAIL, BELOWRAILWAYVIADUCTFACTORY RO, FACTORYROADBARGOED, BARGOED	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: AN0276201 Permit Version: 1 Receiving Water: RIVER BARGOED RHYMNI	Status: NEW CONSENT (WRA 91, S88 & SCHED 10 AS AMENDED BY Issue date: 29/09/1997 Effective Date: 29/09/1997 Revocation Date: 15/10/2001
B	215m N	ABERBARGOEDBEDWELLYRD	Effluent Type: UNSPECIFIED Permit Number: AN0050701 Permit Version: 1 Receiving Water: RHYMNEY	Status: NEW CONSENT, BY APPLICATION (WRA 91, SECTION 88) Issue date: 16/11/1987 Effective Date: 16/11/1987 Revocation Date: 30/03/2002
C	246m NW	CSO AT ABERBARGOED VIADUCT, Nr Playground, Factory Road, Aberbargoed, Caerphilly, CAERPHILLY, CF81 9AA	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: AN0320301 Permit Version: 0 Receiving Water: NANT BARGOED RHYMNEY	Status: Effective Issue date: 07/10/2019 Effective Date: 07/10/2019 Revocation Date: -
C	246m NW	ABERBARGOEDBRIDGE, ABERBARGOED, CAERPHILLY	Effluent Type: SEWAGE DISCHARGES - STW STORM OVERFLOW/STORM TANK - WATER COMPANY Permit Number: AN0050701 Permit Version: 2 Receiving Water: NANT BARGOED RHYMNEY	Status: REVOKED (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV Issue date: 01/02/2002 Effective Date: 31/03/2002 Revocation Date: 28/03/2002
D	256m SE	Bargoed Colliery CSO, Bedwellty Rd, Commercial Street, Aberbargoed, Caerphilly, CF81 9DD	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: AE2017307 Permit Version: 0 Receiving Water: RHYMNEY	Status: Effective Issue date: 07/08/2019 Effective Date: 07/08/2019 Revocation Date: -
D	259m SE	BARGOEDCOLLIERYSSO	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: AE2017307 Permit Version: 1 Receiving Water: RHYMNEY	Status: Effective Issue date: 18/10/1963 Effective Date: 18/10/1963 Revocation Date: -
E	284m N	63 Bedwellty Rd CSO, Bedwellty Road, Aberbargoed, Aberbargoed, CF81 9AX	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: AE2017305 Permit Version: 0 Receiving Water: River Bargoed	Status: Effective Issue date: 26/09/2019 Effective Date: 26/09/2019 Revocation Date: -



ID	Location	Address	Details	
4	332m NE	ABERBARGOEDBRIDGE, CF819BT	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: AN0095101 Permit Version: 2 Receiving Water: BARGOED RHYMNEY	Status: Effective Issue date: 08/09/2010 Effective Date: 08/09/2010 Revocation Date: -
7	391m NE	ABERBARGOEDDSBRIDGEBEDWELL TY, ABERBARGOEDDSBRIDGEBEDWELL , BEDWELLYROAD	Effluent Type: UNSPECIFIED Permit Number: AE2017306 Permit Version: 1 Receiving Water: RHYMNEY	Status: REVOKED (WRA 91, S88 & SCHED 10 AS AMENDED BY ENV Issue date: 18/10/1963 Effective Date: 18/10/1963 Revocation Date: 28/03/2002
8	400m N	TAIYRYNYSABERBARGOED, TAIYRYNYS, OFFBEDWELLYROAD, ABERBARGOED, CAERPHILLY, CF819AF	Effluent Type: SEWAGE DISCHARGES - FINAL/TREATED EFFLUENT - NOT WATER COMPANY Permit Number: AN0401401 Permit Version: 1 Receiving Water: RIVER RHYMNEY	Status: NEW CONSENT (WRA 91, S88 & SCHED 10 AS AMENDED BY Issue date: 09/10/2006 Effective Date: 09/10/2006 Revocation Date: -
9	436m SE	BARGOEDCOLLIERY	Effluent Type: MINEWATER Permit Number: AE2008401 Permit Version: 1 Receiving Water: RIVER RHYMNEY	Status: CONSENT EXPIRED - TIME LIMIT Issue date: 15/08/1963 Effective Date: 15/08/1963 Revocation Date: 12/03/1993
10	455m NE	ABERBARGOEDREAROFBEDWELLT	Effluent Type: SEWAGE DISCHARGES - SEWER STORM OVERFLOW - WATER COMPANY Permit Number: AE2017305 Permit Version: 1 Receiving Water: RHYMNEY	Status: Effective Issue date: 18/10/1963 Effective Date: 18/10/1963 Revocation Date: -

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

4.15 Pollutant release to surface waters (Red List)

Records within 500m

0

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

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



4.16 Pollutant release to public sewer

Records within 500m

0

Discharges of Special Category Effluents to the public sewer.

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

4.17 List 1 Dangerous Substances

Records within 500m

0

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

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

4.18 List 2 Dangerous Substances

Records within 500m

0

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

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

4.19 Pollution Incidents (EA/NRW)

Records within 500m

23

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

Features are displayed on the Current industrial land use map on [page 46 >](#)

ID	Location	Details	
A	12m NE	Incident Date: 23/01/2002 Incident Identification: 54103 Pollutant: Specific Waste Materials Pollutant Description: Batteries	Water Impact: Category 3 (Minor) Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
A	12m NE	Incident Date: 13/06/2001 Incident Identification: 8995 Pollutant: Sewage Materials Pollutant Description: Crude Sewage	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)

ID	Location	Details	
B	115m NW	Incident Date: 08/03/2016 Incident Identification: 1600904 Pollutant: Sewage Material Pollutant Description: Other Sewage Material	Water Impact: Category 4 (No Impact) Land Impact: No Details Air Impact: No Details
B	115m NW	Incident Date: 08/03/2016 Incident Identification: 1600904 Pollutant: - Pollutant Description: -	Water Impact: Category 4 (No Impact) Land Impact: No Details Air Impact: No Details
B	122m NW	Incident Date: 08/07/2003 Incident Identification: 172009 Pollutant: General Biodegradable Materials and Wastes Pollutant Description: Vegetable Cuttings and Deposits	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
B	140m NW	Incident Date: 04/07/2002 Incident Identification: 89412 Pollutant: Sewage Materials Pollutant Description: Grey Water	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
B	140m NW	Incident Date: 04/07/2002 Incident Identification: 89412 Pollutant: Sewage Materials Pollutant Description: Grey Water	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
B	170m N	Incident Date: 08/03/2016 Incident Identification: 1600741 Pollutant: Inert Materials and Waste Pollutant Description: Other Inert Material or Waste	Water Impact: Category 4 (No Impact) Land Impact: No Details Air Impact: No Details
B	170m N	Incident Date: 08/03/2016 Incident Identification: 1600741 Pollutant: - Pollutant Description: -	Water Impact: Category 4 (No Impact) Land Impact: No Details Air Impact: No Details
B	189m N	Incident Date: 12/04/2002 Incident Identification: 71189 Pollutant: Pollutant Not Identified Pollutant Description: Not Identified	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
B	193m N	Incident Date: 22/08/2002 Incident Identification: 102419 Pollutant: Pollutant Not Identified Pollutant Description: Not Identified	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
B	199m NW	Incident Date: 07/05/2013 Incident Identification: 1110473 Pollutant: Sewage Materials Pollutant Description: Grey Water	Water Impact: - Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)



ID	Location	Details	
B	200m N	Incident Date: 02/09/2013 Incident Identification: 1154892 Pollutant: Contaminated Water Pollutant Description: Other Contaminated Water	Water Impact: - Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
D	225m SE	Incident Date: 11/07/2002 Incident Identification: 90853 Pollutant: Organic Chemicals/Products Pollutant Description: Adhesives	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
D	230m SE	Incident Date: 30/04/2014 Incident Identification: 1231617 Pollutant: Sewage Materials Pollutant Description: Crude Sewage	Water Impact: - Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
C	232m NW	Incident Date: 08/12/2015 Incident Identification: 1393243 Pollutant: Sewage Materials Pollutant Description: Other Sewage Material	Water Impact: - Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
C	243m NW	Incident Date: 22/11/2016 Incident Identification: 1607010 Pollutant: - Pollutant Description: -	Water Impact: Category 4 (No Impact) Land Impact: No Details Air Impact: No Details
C	243m NW	Incident Date: 22/11/2016 Incident Identification: 1607010 Pollutant: Sewage Material Pollutant Description: Storm Sewage	Water Impact: Category 4 (No Impact) Land Impact: No Details Air Impact: No Details
E	280m N	Incident Date: 05/02/2016 Incident Identification: 1408543 Pollutant: Sewage Materials Pollutant Description: Crude Sewage	Water Impact: - Land Impact: Category 3 (Minor) Air Impact: Category 4 (No Impact)
E	299m N	Incident Date: 09/08/2002 Incident Identification: 99055 Pollutant: Pollutant Not Identified Pollutant Description: Not Identified	Water Impact: Category 3 (Minor) Land Impact: Category 4 (No Impact) Air Impact: Category 4 (No Impact)
E	311m N	Incident Date: 06/05/2016 Incident Identification: 1602246 Pollutant: Sewage Material Pollutant Description: Crude Sewage	Water Impact: Category 3 (Minor) Land Impact: No Details Air Impact: No Details
E	311m N	Incident Date: 06/05/2016 Incident Identification: 1602246 Pollutant: - Pollutant Description: -	Water Impact: Category 3 (Minor) Land Impact: No Details Air Impact: No Details



ID	Location	Details	
6	390m NE	Incident Date: 17/07/2014 Incident Identification: 1257036 Pollutant: Inert Materials and Wastes Pollutant Description: Construction and Demolition Materials and Wastes	Water Impact: - Land Impact: Category 4 (No Impact) Air Impact: Category 3 (Minor)

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

4.20 Pollution inventory substances

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

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

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

4.21 Pollution inventory waste transfers

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

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

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

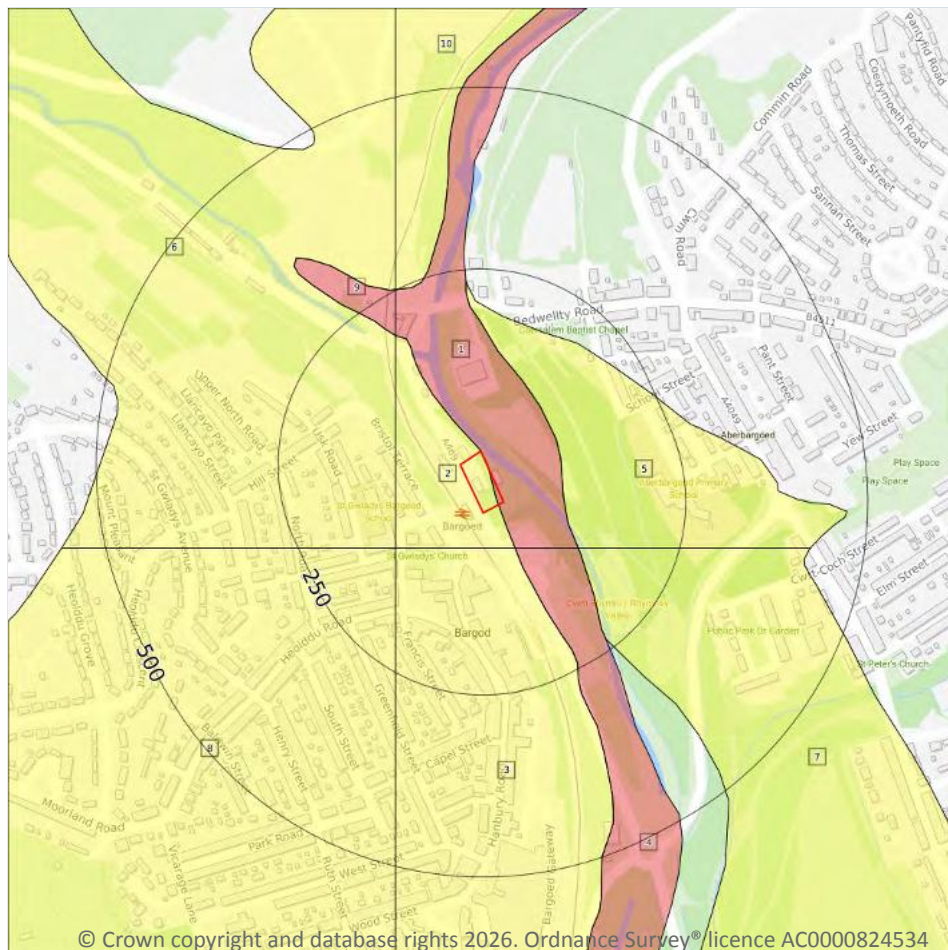
4.22 Pollution inventory radioactive waste

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

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

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

5 Hydrogeology - Superficial aquifer



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

5.1 Superficial aquifer

Records within 500m

10

Aquifer status of groundwater held within superficial geology.

Features are displayed on the Hydrogeology map on [page 57 >](#)

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

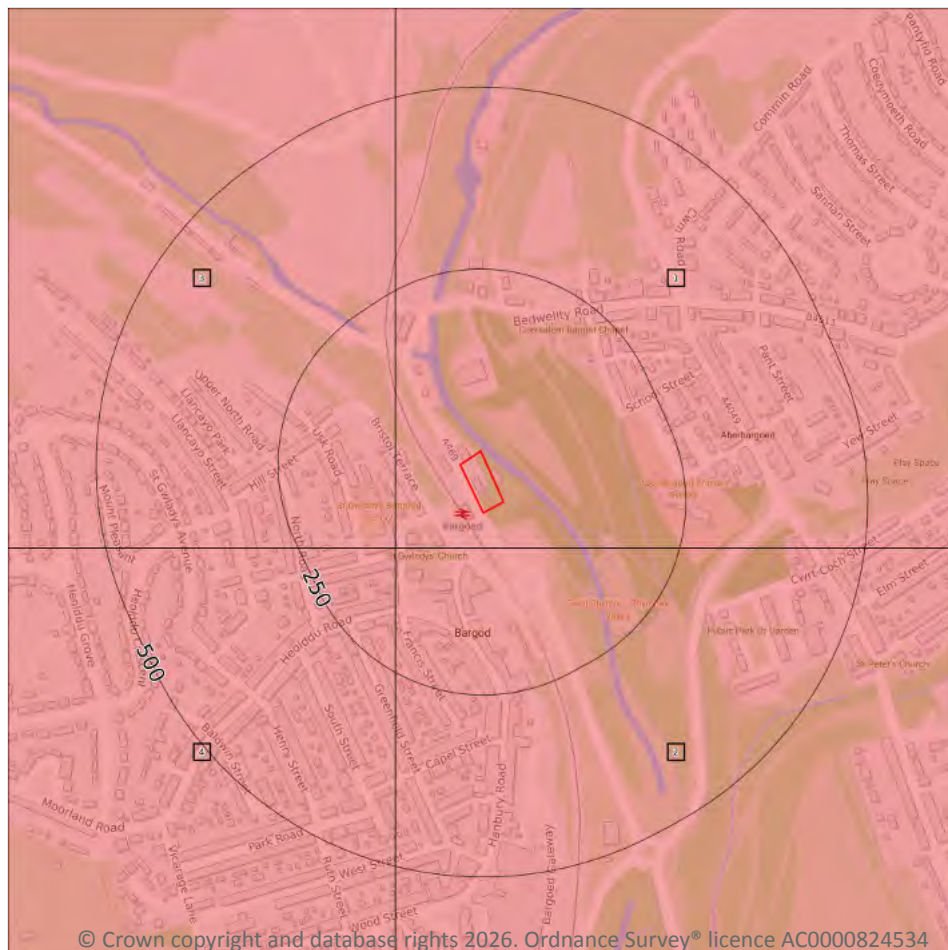


ID	Location	Designation	Description
3	48m S	Secondary Undifferentiated	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type
4	63m SE	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
5	83m E	Secondary Undifferentiated	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type
6	89m W	Secondary Undifferentiated	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type
7	120m SE	Secondary Undifferentiated	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type
8	130m SW	Secondary Undifferentiated	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type
9	197m NW	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
10	244m NW	Secondary Undifferentiated	Assigned where it is not possible to attribute either category A or B to a rock type. In general these layers have previously been designated as both minor and non-aquifer in different locations due to the variable characteristics of the rock type

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



Bedrock aquifer



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

5.2 Bedrock aquifer

Records within 500m

4

Aquifer status of groundwater held within bedrock geology.

Features are displayed on the Bedrock aquifer map on [page 59](#) >

ID	Location	Designation	Description
1	On site	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
2	48m S	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers

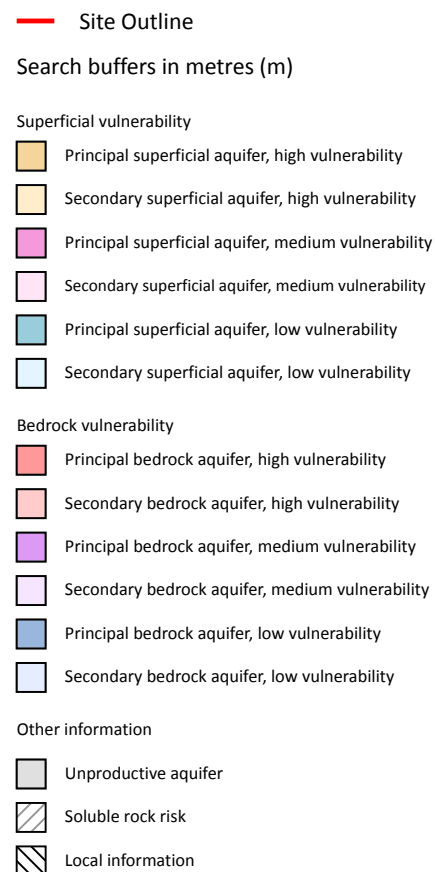
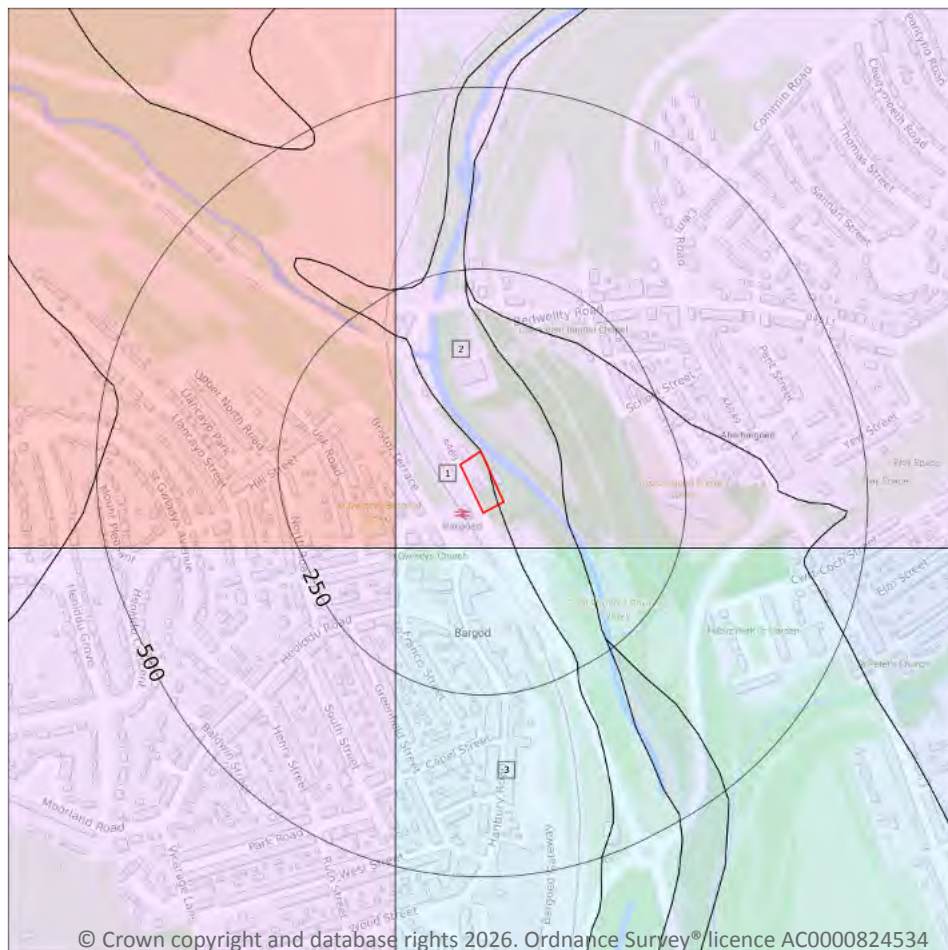


ID	Location	Designation	Description
3	89m W	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers
4	130m SW	Secondary A	Permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers. These are generally aquifers formerly classified as minor aquifers

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



Groundwater vulnerability



5.3 Groundwater vulnerability

Records within 50m

3

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

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

Features are displayed on the Groundwater vulnerability map on [page 61](#) >

ID	Location	Summary	Soil / surface	Superficial geology	Bedrock geology
1	On site	Summary Classification: Secondary bedrock aquifer - Medium Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: Low Infiltration value: 40-70% Dilution value: >550mm/year	Vulnerability: Low Aquifer type: Secondary Thickness: 3-10m Patchiness value: <90% Recharge potential: Medium	Vulnerability: Medium Aquifer type: Secondary Flow mechanism: Well connected fractures
2	On site	Summary Classification: Secondary bedrock aquifer - Medium Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: Low Infiltration value: 40-70% Dilution value: >550mm/year	Vulnerability: Low Aquifer type: Secondary Thickness: 3-10m Patchiness value: <90% Recharge potential: Medium	Vulnerability: Medium Aquifer type: Secondary Flow mechanism: Well connected fractures
3	48m S	Summary Classification: Secondary superficial aquifer - Low Vulnerability Combined classification: Productive Bedrock Aquifer, Productive Superficial Aquifer	Leaching class: Low Infiltration value: <40% Dilution value: >550mm/year	Vulnerability: Low Aquifer type: Secondary Thickness: >10m Patchiness value: >90% Recharge potential: Medium	Vulnerability: Low Aquifer type: Secondary Flow mechanism: Well connected fractures

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

5.4 Groundwater vulnerability- soluble rock risk

Records on site

0

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

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

5.5 Groundwater vulnerability- local information

Records on site

0

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

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



Abstractions and Source Protection Zones

5.6 Groundwater abstractions

Records within 2000m

0

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

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

5.7 Surface water abstractions

Records within 2000m

0

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

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

5.8 Potable abstractions

Records within 2000m

0

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

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

5.9 Source Protection Zones

Records within 500m

0

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

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



5.10 Source Protection Zones (confined aquifer)

Records within 500m

0

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

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



6 Hydrology



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

6.1 Water Network (OS MasterMap)

Records within 250m

44

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

Features are displayed on the Hydrology map on [page 65](#) >

ID	Location	Type of water feature	Ground level	Permanence	Name
A	9m NE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Afon Rhymni



ID	Location	Type of water feature	Ground level	Permanence	Name
B	25m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
C	46m SW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
B	105m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
B	105m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Afon Rhymni
B	108m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
B	109m SE	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
B	111m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
B	111m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
B	111m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
B	116m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
B	133m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
B	133m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
B	137m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-



ID	Location	Type of water feature	Ground level	Permanence	Name
D	144m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Afon Rhymni
D	144m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Nant Bargod Rhymni
B	159m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
B	160m E	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
B	163m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
B	164m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
B	165m SE	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
D	166m NW	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	Nant Bargod Rhymni
B	168m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
E	177m E	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
B	178m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
B	185m SE	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
B	186m SE	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-



ID	Location	Type of water feature	Ground level	Permanence	Name
B	188m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
B	193m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
7	215m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Afon Rhymni
D	215m N	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
9	221m NW	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Nant Bargod Rhymni
B	222m SE	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
B	223m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
B	227m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
B	230m SE	Inland river not influenced by normal tidal action.	Underground	Watercourse contains water year round (in normal circumstances)	-
B	235m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
B	235m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	Afon Rhymni
B	240m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
B	240m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-



ID	Location	Type of water feature	Ground level	Permanence	Name
B	241m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
B	245m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
B	249m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-
B	249m SE	Inland river not influenced by normal tidal action.	On ground surface	Watercourse contains water year round (in normal circumstances)	-

This data is sourced from the Ordnance Survey®.

6.2 Surface water features

Records within 250m

21

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

Features are displayed on the Hydrology map on [page 65 >](#)

This data is sourced from the Ordnance Survey®.

6.3 WFD Surface water body catchments

Records on site

1

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

Features are displayed on the Hydrology map on [page 65 >](#)

ID	Location	Type	Water body catchment	Water body ID	Operational catchment	Management catchment
1	On site	River WB catchment	Rhymney R - Nant Bargod Rhymni to conf Nant Cylla	GB109057027190	Rhymney	South East Valleys

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



6.4 WFD Surface water bodies

Records identified

1

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

Features are displayed on the Hydrology map on [page 65 >](#)

ID	Location	Type	Name	Water body ID	Overall rating	Chemical rating	Ecological rating	Year
2	9m NE	River	Rhymney R - Nant Bargod Rhymni to conf Nant Cylla	GB109057027190	Good	Good	Good	2016

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

6.5 WFD Groundwater bodies

Records on site

1

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

Features are displayed on the Hydrology map on [page 65 >](#)

ID	Location	Name	Water body ID	Overall rating	Chemical rating	Quantitative	Year
A	On site	SE Valleys Carboniferous Coal Measures	GB40902G201900	Poor	Poor	Good	2017

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



7 River and coastal flooding



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

7.1 Risk of flooding from rivers and the sea

Records within 50m

107

The chance of flooding from rivers and/or the sea in any given year, based on cells of 50m within the Risk of Flooding from Rivers and Sea (RoFRaS)/Flood Risk Assessment Wales (FRAW) models. Each cell is allocated one of four flood risk categories, taking into account flood defences and their condition. The risk categories for RoFRaS for rivers and the sea and FRAW for rivers are; Very low (less than 1 in 1000 chance in any given year), Low (less than 1 in 100 but greater than or equal to 1 in 1000 chance), Medium (less than 1 in 30 but greater than or equal to 1 in 100 chance) or High (greater than or equal to 1 in 30 chance). The risk categories for FRAW for the sea are; Very low (less than 1 in 1000 chance in any given year), Low (less than 1 in 200 but greater than or equal to 1 in 1000 chance), Medium (less than 1 in 30 but greater than or equal to 1 in 200 chance) or High (greater than or equal to 1 in 30 chance).

Features are displayed on the River and coastal flooding map on [page 71 >](#)



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

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

7.2 Historical Flood Events

Records within 250m	0
----------------------------	----------

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

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

7.3 Flood Defences

Records within 250m	0
----------------------------	----------

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

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

7.4 Areas Benefiting from Flood Defences

Records within 250m	0
----------------------------	----------

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

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

7.5 Flood Storage Areas

Records within 250m	0
----------------------------	----------

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

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



River and coastal flooding - Flood Zones



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

7.6 Flood Zone 2

Records within 50m

1

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

Features are displayed on the River and coastal flooding map on [page 71](#) >

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

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

7.7 Flood Zone 3

Records within 50m

1

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

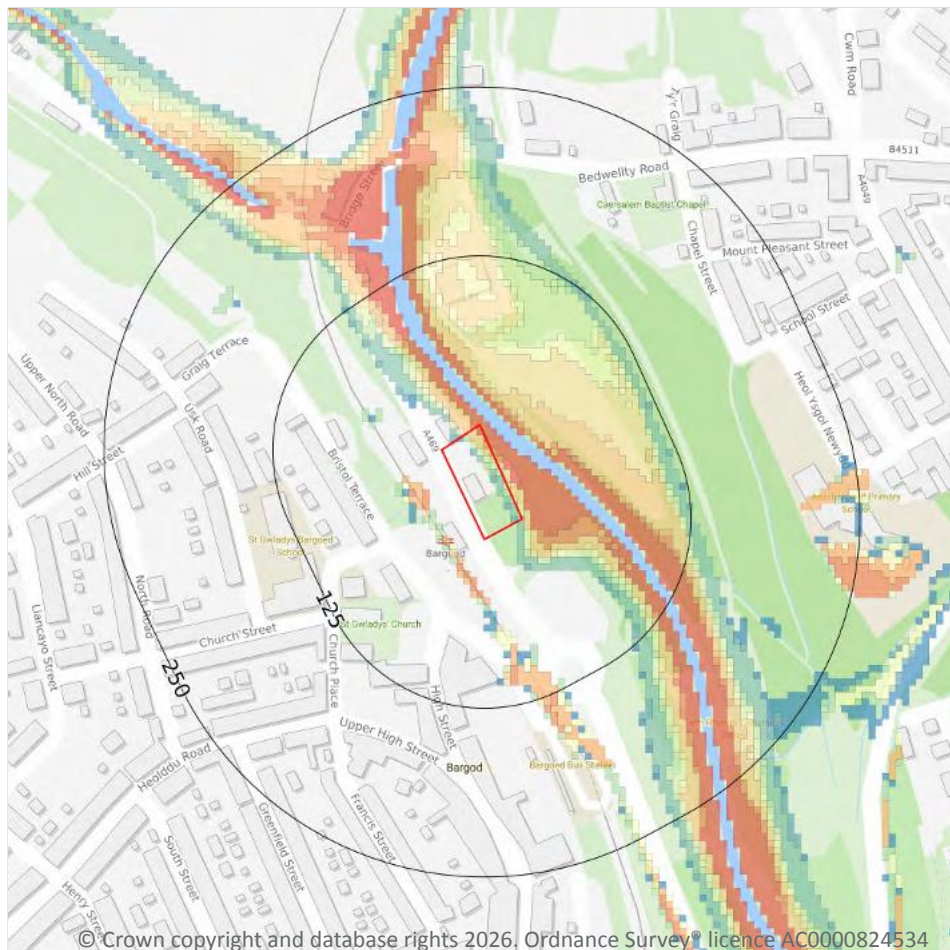
Features are displayed on the River and coastal flooding map on [page 71](#) >

Location	Type
On site	Zone 3 - (Fluvial /Tidal Models)

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



8 Surface water flooding



— Site Outline

Search buffers in metres (m)

1 in 1000 return period

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

1 in 250 return period

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

1 in 100 return period

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

1 in 30 return period

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

8.1 Surface water flooding

Highest risk on site

1 in 30 year, Greater than 1.0m

Highest risk within 50m

1 in 30 year, Greater than 1.0m

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

Features are displayed on the Surface water flooding map on [page 75 >](#)

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

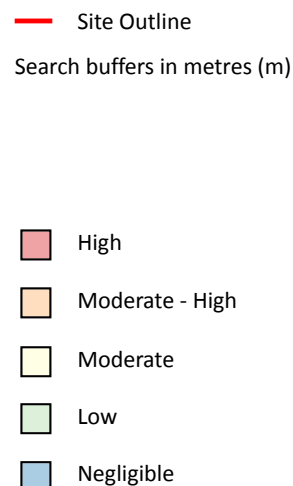
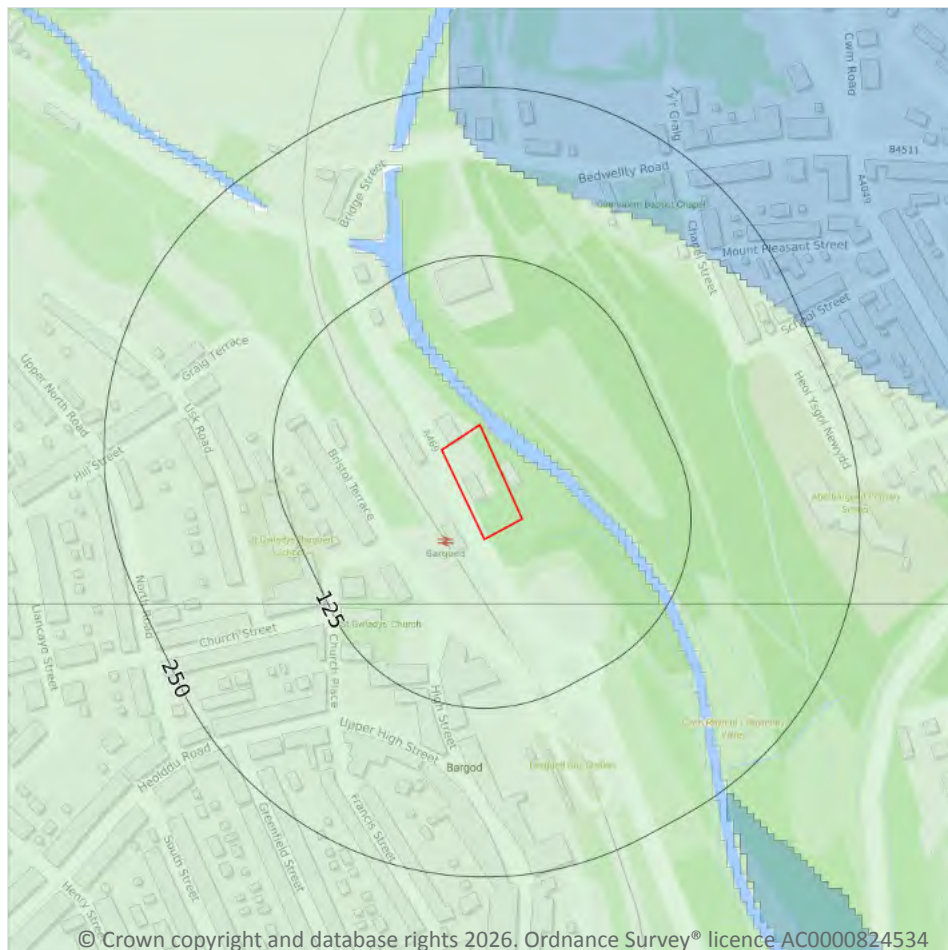
The table below shows the maximum flood depths for a range of return periods for the site.

Return period	Maximum modelled depth
1 in 1000 year	Greater than 1.0m
1 in 250 year	Greater than 1.0m
1 in 100 year	Greater than 1.0m
1 in 30 year	Greater than 1.0m

This data is sourced from Ambiantal Risk Analytics.



9 Groundwater flooding



9.1 Groundwater flooding

Highest risk on site

Low

Highest risk within 50m

Low

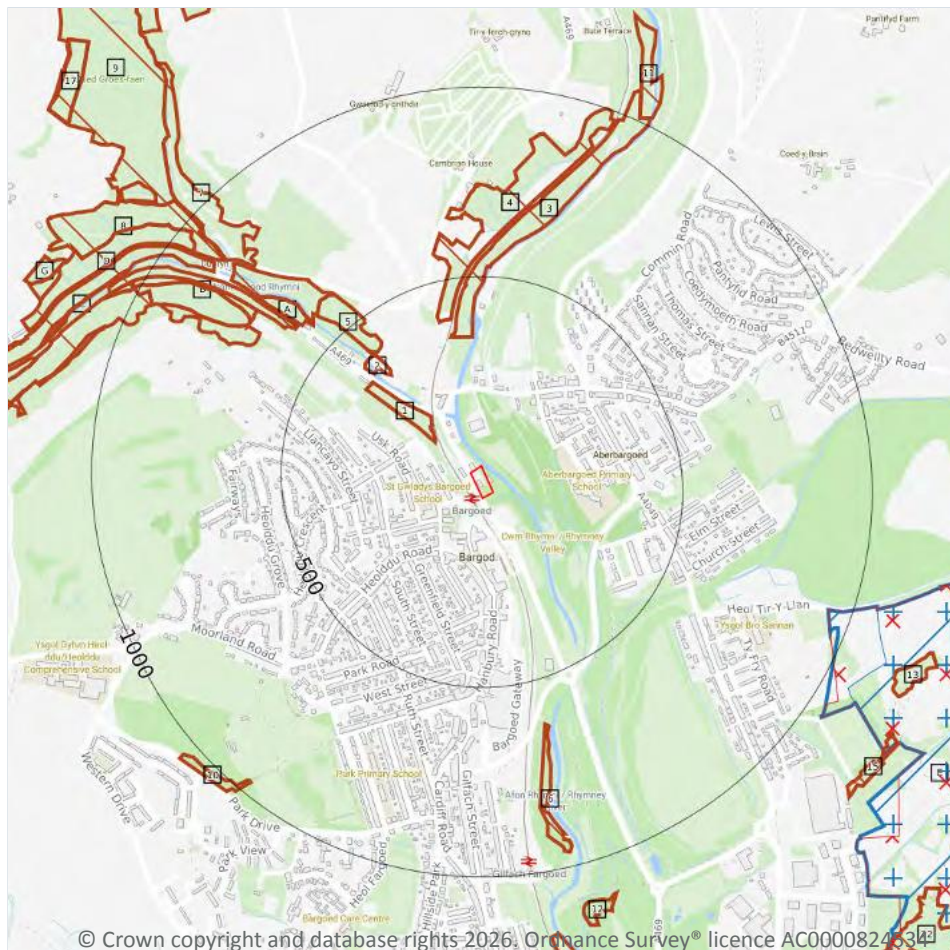
Groundwater flooding is caused by unusually high groundwater levels. It occurs when the water table rises above the ground surface or within underground structures such as basements or cellars. Groundwater flooding tends to exhibit a longer duration than surface water flooding, possibly lasting for weeks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

Features are displayed on the Groundwater flooding map on [page 77 >](#)

This data is sourced from Ambiantal Risk Analytics.



10 Environmental designations



- Site Outline
- Search buffers in metres (m)
- Sites of Special Scientific Interest (SSSI)
- + Special Areas of Conservation (SAC)
- × National Nature Reserves (NNR)
- Designated Ancient Woodland

10.1 Sites of Special Scientific Interest (SSSI)

Records within 2000m

1

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

Features are displayed on the Environmental designations map on [page 78](#) >

ID	Location	Name	Data source
E	937m E	Aberbargoed Grasslands	Natural Resources Wales



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

10.2 Conserved wetland sites (Ramsar sites)

Records within 2000m

0

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

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

10.3 Special Areas of Conservation (SAC)

Records within 2000m

1

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

Features are displayed on the Environmental designations map on [page 78 >](#)

ID	Location	Name	Features of interest	Habitat description	Data source
E	1059m E	Aberbargoed Grasslands	Wet heathland with cross-leaved heath; Purple moor-grass meadows; Marsh fritillary butterfly	Inland water bodies (Standing water, Running water); Heath, Scrub, Maquis and Garrigue, Phygrana; Dry grassland, Steppes; Other land (including Towns, Villages, Roads, Waste places, Mines, Industrial sites); Humid grassland, Mesophile grassland; Bogs, Marshes, Water fringed vegetation, Fens; Broad-leaved deciduous woodland	Natural Resources Wales

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

10.4 Special Protection Areas (SPA)

Records within 2000m

0

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

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



10.5 National Nature Reserves (NNR)

Records within 2000m

1

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

Features are displayed on the Environmental designations map on [page 78 >](#)

ID	Location	Name	Data source
E	937m E	Aberbargoed Grasslands/glaswelltiroedd Aberbargoed	Natural Resources Wales

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

10.6 Local Nature Reserves (LNR)

Records within 2000m

0

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

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

10.7 Designated Ancient Woodland

Records within 2000m

73

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

Features are displayed on the Environmental designations map on [page 78 >](#)

ID	Location	Name	Woodland Type
1	124m NW	Unknown	Ancient Semi Natural Woodland
2	332m NW	Unknown	Ancient Semi Natural Woodland
3	342m N	Unknown	Ancient Semi Natural Woodland
4	395m N	Unknown	Ancient Semi Natural Woodland
5	398m NW	Unknown	Ancient Semi Natural Woodland
A	570m NW	Unknown	Ancient Semi Natural Woodland



ID	Location	Name	Woodland Type
A	574m NW	Unknown	Ancient Semi Natural Woodland
B	599m NW	Unknown	Ancient Semi Natural Woodland
6	619m S	Unknown	Ancient Woodland Site of Unknown Category
B	664m NW	Unknown	Ancient Semi Natural Woodland
B	703m NW	Unknown	Ancient Semi Natural Woodland
B	705m NW	Unknown	Ancient Semi Natural Woodland
7	789m NW	Unknown	Ancient Semi Natural Woodland
B	857m NW	Unknown	Ancient Semi Natural Woodland
C	862m NW	Unknown	Ancient Semi Natural Woodland
8	863m NW	Unknown	Plantation on Ancient Woodland Site
B	870m NW	Unknown	Plantation on Ancient Woodland Site
B	933m NW	Unknown	Ancient Semi Natural Woodland
D	935m NW	Unknown	Ancient Semi Natural Woodland
C	950m NW	Unknown	Plantation on Ancient Woodland Site
9	959m NW	Unknown	Plantation on Ancient Woodland Site
10	967m SW	Unknown	Ancient Semi Natural Woodland
11	1009m NE	Unknown	Ancient Semi Natural Woodland
D	1013m NW	Unknown	Plantation on Ancient Woodland Site
C	1041m W	Unknown	Plantation on Ancient Woodland Site
C	1049m NW	Unknown	Ancient Semi Natural Woodland
12	1100m S	Unknown	Ancient Semi Natural Woodland
13	1162m SE	Unknown	Ancient Semi Natural Woodland
14	1167m S	Unknown	Ancient Semi Natural Woodland
F	1185m W	Unknown	Ancient Semi Natural Woodland
F	1186m W	Unknown	Plantation on Ancient Woodland Site
G	1201m NW	Unknown	Plantation on Ancient Woodland Site
G	1203m NW	Unknown	Ancient Semi Natural Woodland
15	1214m SE	Unknown	Ancient Semi Natural Woodland



ID	Location	Name	Woodland Type
F	1244m W	Unknown	Ancient Semi Natural Woodland
-	1339m W	Unknown	Ancient Semi Natural Woodland
16	1399m NW	Unknown	Ancient Semi Natural Woodland
17	1405m NW	Unknown	Plantation on Ancient Woodland Site
-	1416m W	Unknown	Ancient Woodland Site of Unknown Category
-	1418m W	Unknown	Ancient Semi Natural Woodland
18	1427m NW	Unknown	Ancient Semi Natural Woodland
-	1438m W	Unknown	Plantation on Ancient Woodland Site
-	1480m SE	Unknown	Ancient Semi Natural Woodland
-	1492m W	Unknown	Ancient Woodland Site of Unknown Category
-	1495m W	Unknown	Restored Ancient Woodland Site
-	1522m NW	Unknown	Plantation on Ancient Woodland Site
-	1535m NW	Unknown	Restored Ancient Woodland Site
-	1544m N	Unknown	Ancient Semi Natural Woodland
22	1548m SE	Unknown	Ancient Semi Natural Woodland
-	1630m W	Unknown	Plantation on Ancient Woodland Site
-	1638m NW	Unknown	Restored Ancient Woodland Site
-	1650m S	Unknown	Ancient Semi Natural Woodland
-	1671m S	Unknown	Ancient Semi Natural Woodland
-	1688m NW	Unknown	Restored Ancient Woodland Site
-	1690m W	Unknown	Ancient Woodland Site of Unknown Category
-	1713m SE	Unknown	Ancient Semi Natural Woodland
-	1721m W	Unknown	Plantation on Ancient Woodland Site
-	1725m W	Unknown	Ancient Woodland Site of Unknown Category
-	1782m SE	Unknown	Ancient Semi Natural Woodland
-	1798m N	Unknown	Ancient Semi Natural Woodland
-	1808m W	Unknown	Ancient Semi Natural Woodland
-	1822m W	Unknown	Restored Ancient Woodland Site

ID	Location	Name	Woodland Type
-	1835m SW	Unknown	Ancient Semi Natural Woodland
-	1839m W	Unknown	Plantation on Ancient Woodland Site
-	1845m S	Unknown	Ancient Semi Natural Woodland
-	1850m SE	Unknown	Ancient Semi Natural Woodland
-	1851m W	Unknown	Ancient Semi Natural Woodland
-	1864m S	Unknown	Ancient Woodland Site of Unknown Category
-	1881m S	Unknown	Ancient Semi Natural Woodland
-	1922m W	Unknown	Plantation on Ancient Woodland Site
-	1943m S	Unknown	Ancient Semi Natural Woodland
-	1965m E	Unknown	Ancient Semi Natural Woodland
-	1998m SE	Unknown	Plantation on Ancient Woodland Site

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

10.8 Biosphere Reserves

Records within 2000m

0

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

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

10.9 Forest Parks

Records within 2000m

0

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

This data is sourced from the Forestry Commission.



10.10 Marine Conservation Zones

Records within 2000m**0**

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

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

10.11 Green Belt

Records within 2000m**0**

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

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

10.12 Proposed Ramsar sites

Records within 2000m**0**

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

This data is sourced from Natural England.

10.13 Possible Special Areas of Conservation (pSAC)

Records within 2000m**0**

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

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

10.14 Potential Special Protection Areas (pSPA)

Records within 2000m**0**

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

This data is sourced from Natural England.



10.15 Nitrate Sensitive Areas

Records within 2000m

0

Areas where nitrate concentrations in drinking water sources exceeded or was at risk of exceeding the limit of 50 mg/l set by the 1980 EC Drinking Water Directive. Voluntary agricultural measures as a means of reducing the levels of nitrate were introduced by DEFRA as MAFF, with payments being made to farmers who complied. The scheme was started as a pilot in 1990 in ten areas, later implemented within 32 areas. The scheme was closed to further new entrants in 1998, although existing agreements continued for their full term. All Nitrate Sensitive Areas fell within the areas designated as Nitrate Vulnerable Zones (NVZs) in 1996 under the EC Nitrate Directive (91/676/EEC).

This data is sourced from Natural England.

10.16 Nitrate Vulnerable Zones

Records within 2000m

0

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

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



SSSI Impact Zones and Units

10.17 SSSI Impact Risk Zones

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

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

This data is sourced from Natural England.

10.18 SSSI Units

Records within 2000m	0
----------------------	---

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

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



11 Visual and cultural designations



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

11.1 World Heritage Sites

Records within 250m

0

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

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

11.2 Area of Outstanding Natural Beauty

Records within 250m

0

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

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

11.3 National Parks

Records within 250m

0

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

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

11.4 Listed Buildings

Records within 250m

2

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

Features are displayed on the Visual and cultural designations map on [page 87 >](#)

ID	Location	Name	Grade	Reference Number	Listed date
1	104m SW	Bargoed & Gilfach War Memorial, Standing Within St Gwladys Gardens, Having Been Relocated From Bargoed Park. To Se Of St Gwladys Church.	II	26491	29/04/2002
2	204m NW	Railway Viaduct Over Factory Road, Spanning The Valley Of Nant Bargoed Approximately 300m N Of Bargoed Station.	II	26492	29/04/2002

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



11.5 Conservation Areas

Records within 250m

0

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

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

11.6 Scheduled Ancient Monuments

Records within 250m

0

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

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

11.7 Registered Parks and Gardens

Records within 250m

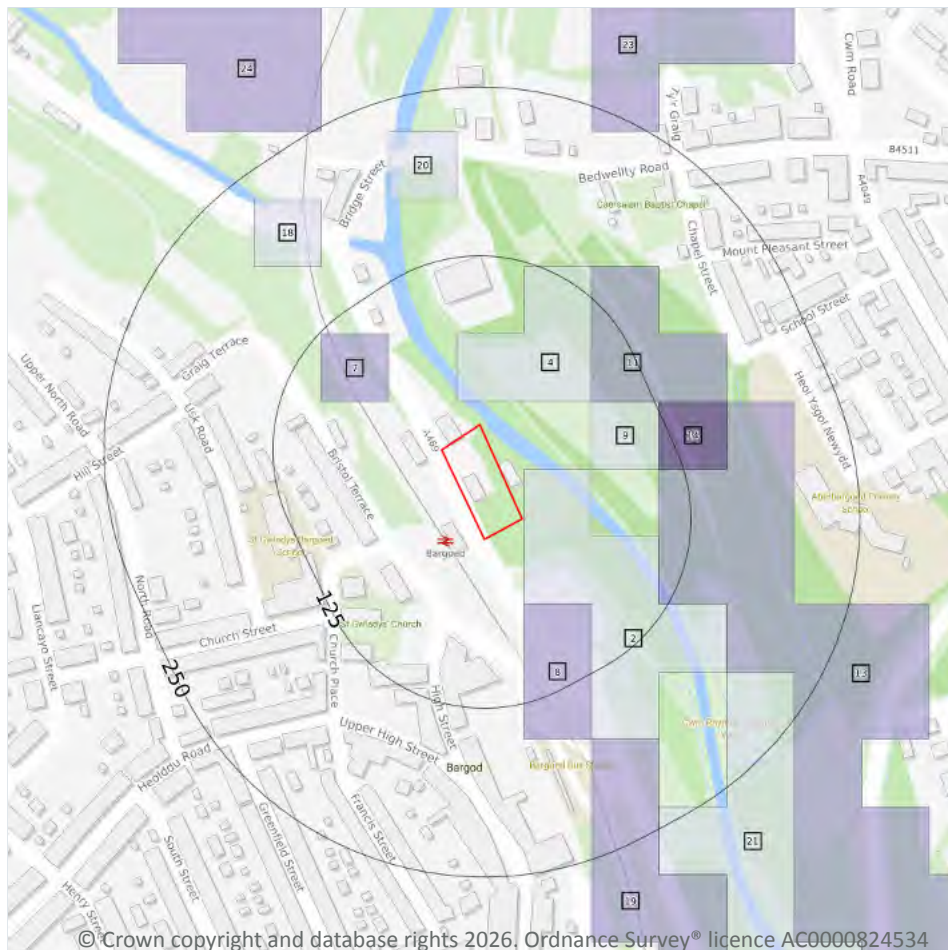
0

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

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



12 Agricultural designations



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

12.1 Agricultural Land Classification

Records within 250m

14

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

Features are displayed on the Agricultural designations map on [page 90](#) >

ID	Location	Classification	Description
2	1m E	Grade 3b	Moderate quality agricultural land
4	17m N	Grade 3b	Moderate quality agricultural land
7	53m NW	Grade 4	Poor quality agricultural land



ID	Location	Classification	Description
8	56m SE	Grade 4	Poor quality agricultural land
9	62m NE	Grade 3b	Moderate quality agricultural land
11	83m NE	Grade 4	Poor quality agricultural land
13	101m E	Grade 4	Poor quality agricultural land
14	108m E	Grade 5	Very poor quality agricultural land
18	163m NW	Grade 3b	Moderate quality agricultural land
19	168m SE	Grade 4	Poor quality agricultural land
20	168m N	Grade 3b	Moderate quality agricultural land
21	189m SE	Grade 3b	Moderate quality agricultural land
23	232m N	Grade 4	Poor quality agricultural land
24	247m NW	Grade 4	Poor quality agricultural land

This data is sourced from Natural Resources Wales.

12.2 Open Access Land

Records within 250m

0

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

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

12.3 Tree Felling Licences

Records within 250m

0

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

This data is sourced from the Forestry Commission.



12.4 Environmental Stewardship Schemes

Records within 250m

0

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

This data is sourced from Natural England.

12.5 Countryside Stewardship Schemes

Records within 250m

0

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

This data is sourced from Natural England.



13 Habitat designations

13.1 Priority Habitat Inventory

Records within 250m

0

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

This data is sourced from Natural England.

13.2 Habitat Networks

Records within 250m

0

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

This data is sourced from Natural England.

13.3 Open Mosaic Habitat

Records within 250m

0

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

This data is sourced from Natural England.

13.4 Limestone Pavement Orders

Records within 250m

0

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

This data is sourced from Natural England.



14 Geology 1:10,000 scale - Availability



— Site Outline
Search buffers in metres (m)

- Full coverage
- Partial coverage
- No coverage

14.1 10k Availability

Records within 500m

4

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

Features are displayed on the Geology 1:10,000 scale - Availability map on [page 94](#) >

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	Full	Full	Full	Full	SO10SE
2	48m S	No coverage	Full	Full	Full	ST19NE
3	89m W	Full	Full	Full	Full	SO10SW
4	130m SW	No coverage	Full	Full	No coverage	ST19NW



This data is sourced from the British Geological Survey.



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

14.2 Artificial and made ground (10k)

Records within 500m

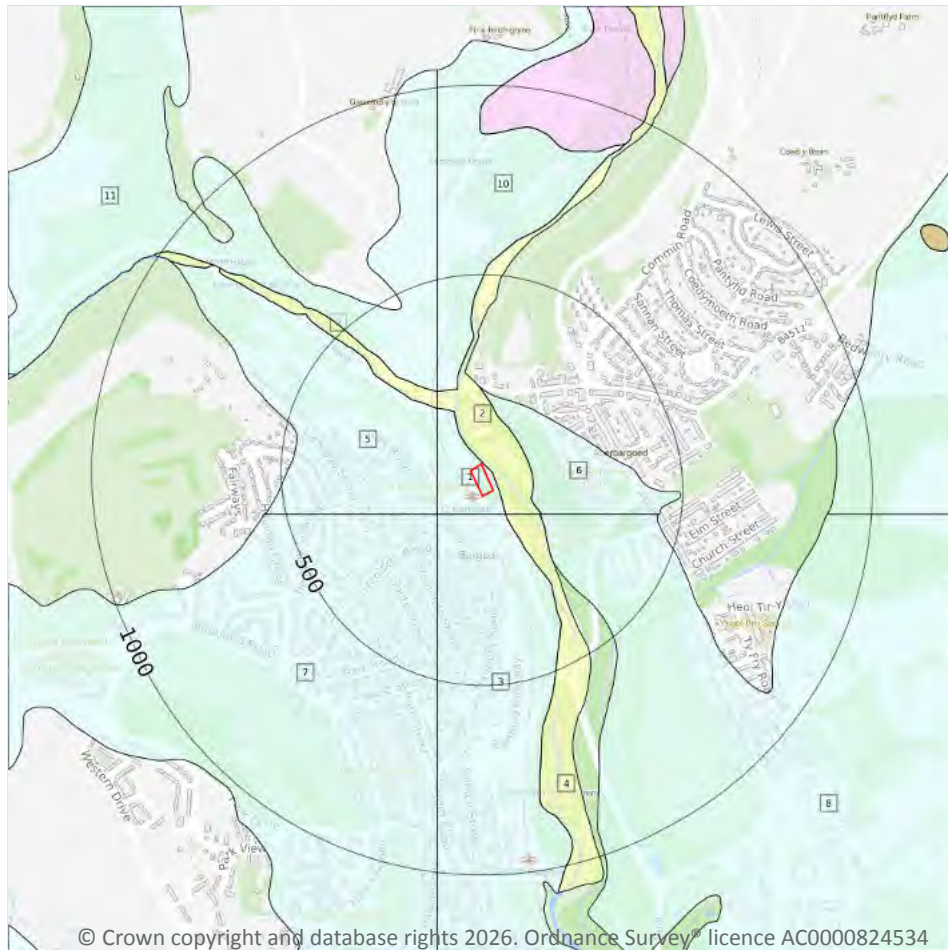
0

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

This data is sourced from the British Geological Survey.



Geology 1:10,000 scale - Superficial



Site Outline

Search buffers in metres (m)

Landslip (10k)

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

14.3 Superficial geology (10k)

Records within 500m

11

Superficial geological deposits at 1:10,000 scale. Also known as 'drift', these are the youngest geological deposits, formed during the Quaternary. They rest on older deposits or rocks referred to as bedrock.

Features are displayed on the Geology 1:10,000 scale - Superficial map on [page 97](#) >

ID	Location	LEX Code	Description	Rock description
1	On site	TILLD-DMTN	Till, Devensian-Diamicton	Diamicton
2	5m NE	ALV-XCZSV	Alluvium-Clay, Silt, Sand And Gravel	Clay, silt, sand and gravel
3	48m S	TILLD-DMTN	Till, Devensian-Diamicton	Diamicton



ID	Location	LEX Code	Description	Rock description
4	71m SE	ALV-XCZSV	Alluvium-Clay, Silt, Sand And Gravel	Clay, silt, sand and gravel
5	89m W	TILLD-DMTN	Till, Devensian-Diamicton	Diamicton
6	102m E	TILLD-DMTN	Till, Devensian-Diamicton	Diamicton
7	130m SW	TILLD-DMTN	Till, Devensian-Diamicton	Diamicton
8	141m SE	TILLD-DMTN	Till, Devensian-Diamicton	Diamicton
9	187m NW	ALV-XCZSV	Alluvium-Clay, Silt, Sand And Gravel	Clay, silt, sand and gravel
10	207m N	TILLD-DMTN	Till, Devensian-Diamicton	Diamicton
11	224m NW	TILLD-DMTN	Till, Devensian-Diamicton	Diamicton

This data is sourced from the British Geological Survey.

14.4 Landslip (10k)

Records within 500m

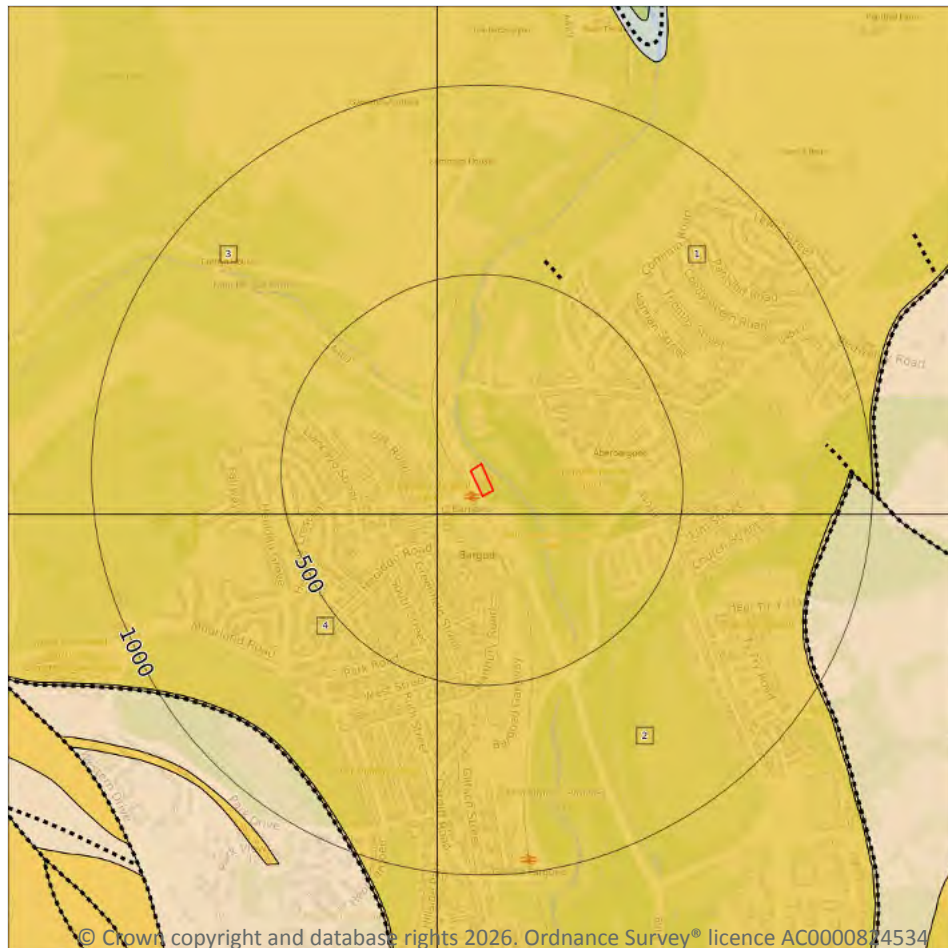
0

Mass movement deposits on BGS geological maps at 1:10,000 scale. Primarily superficial deposits that have moved down slope under gravity to form landslips. These affect bedrock, other superficial deposits and artificial ground.

This data is sourced from the British Geological Survey.



Geology 1:10,000 scale - Bedrock



Site Outline

Search buffers in metres (m)

..... Bedrock faults and other linear features (10k)

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

14.5 Bedrock geology (10k)

Records within 500m

4

Bedrock geology at 1:10,000 scale. The main mass of rocks forming the Earth and present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

Features are displayed on the Geology 1:10,000 scale - Bedrock map on [page 99](#) >

ID	Location	LEX Code	Description	Rock age
1	On site	H-SDST	Hughes Member-Sandstone	Westphalian
2	48m S	H-SDST	Hughes Member-Sandstone	Westphalian
3	89m W	H-SDST	Hughes Member-Sandstone	Westphalian
4	130m SW	H-SDST	Hughes Member-Sandstone	Westphalian

This data is sourced from the British Geological Survey.

14.6 Bedrock faults and other linear features (10k)

Records within 500m

0

Linear features at the ground or bedrock surface at 1:10,000 scale of six main types; rock, fault, fold axis, mineral vein, alteration area or landform. Features are either observed or inferred, and relate primarily to bedrock.

This data is sourced from the British Geological Survey.



15 Geology 1:50,000 scale - Availability



— Site Outline
Search buffers in metres (m)
☐ Geological map tile

15.1 50k Availability

Records within 500m

1

An indication on the coverage of 1:50,000 scale geology data for the site. Either 'Full' or 'No coverage' for each geological theme. Where 50k data is not available, this area has been filled in with 625k scale data.

Features are displayed on the Geology 1:50,000 scale - Availability map on [page 101](#) >

ID	Location	Artificial	Superficial	Bedrock	Mass movement	Sheet No.
1	On site	Full	Full	Full	Full	EW249_newport_v4

This data is sourced from the British Geological Survey.



Geology 1:50,000 scale - Artificial and made ground

15.2 Artificial and made ground (50k)

Records within 500m

0

Details of made, worked, infilled, disturbed and landscaped ground at 1:50,000 scale. Artificial ground can be associated with potentially contaminated material, unpredictable engineering conditions and instability.

This data is sourced from the British Geological Survey.

15.3 Artificial ground permeability (50k)

Records within 50m

0

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

This data is sourced from the British Geological Survey.



© Crown copyright and database rights 2026. Ordnance Survey, licence AC0000824534

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

103

This data is sourced from the British Geological Survey.

15.5 Superficial permeability (50k)

Records within 50m

3

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

Location	Flow type	Maximum permeability	Minimum permeability
On site	Intergranular	High	Very Low
On site	Mixed	High	Low
48m S	Mixed	High	Low

This data is sourced from the British Geological Survey.

15.6 Landslip (50k)

Records within 500m

0

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

This data is sourced from the British Geological Survey.

15.7 Landslip permeability (50k)

Records within 50m

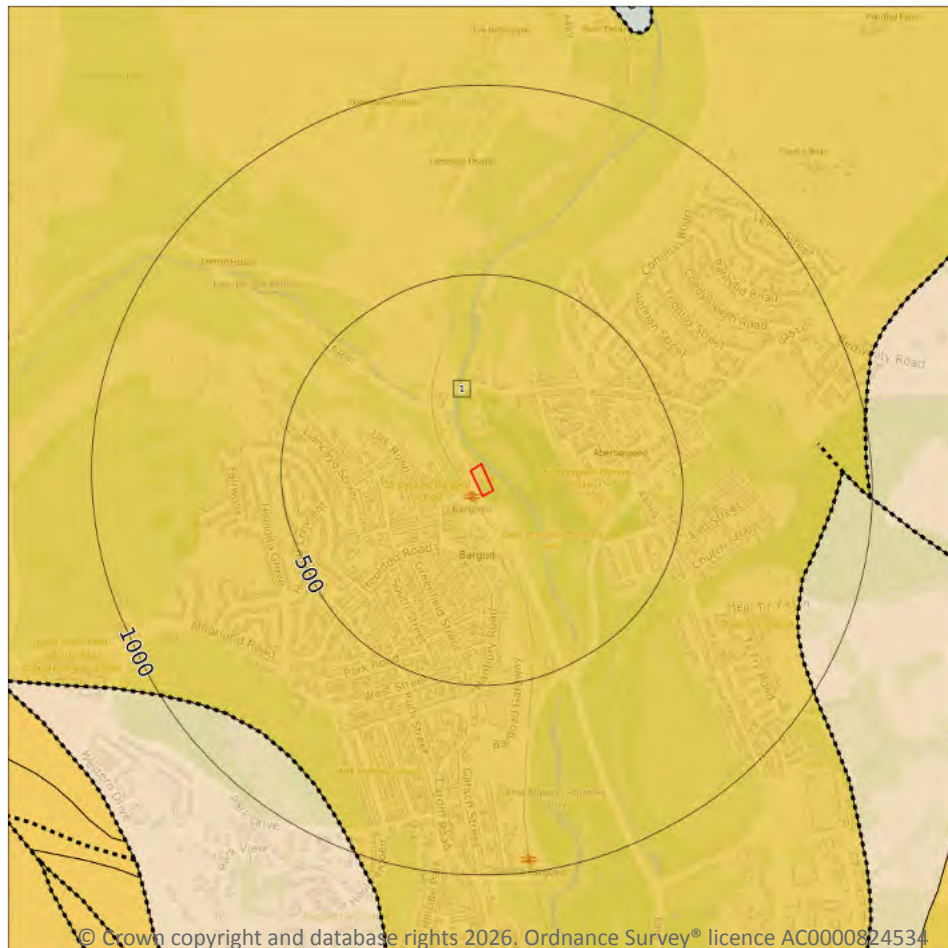
0

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

This data is sourced from the British Geological Survey.



Geology 1:50,000 scale - Bedrock



— Site Outline

Search buffers in metres (m)

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

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

15.8 Bedrock geology (50k)

Records within 500m

1

Bedrock geology at 1:50,000 scale. The main mass of rocks forming the Earth and present everywhere, whether exposed at the surface in outcrops or concealed beneath superficial deposits or water.

Features are displayed on the Geology 1:50,000 scale - Bedrock map on [page 105 >](#)

ID	Location	LEX Code	Description	Rock age
1	On site	H-SDST	Hughes Member-Sandstone	Westphalian

This data is sourced from the British Geological Survey.



15.9 Bedrock permeability (50k)

Records within 50m**2**

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

Location	Flow type	Maximum permeability	Minimum permeability
On site	Fracture	High	Moderate
48m S	Fracture	High	Moderate

This data is sourced from the British Geological Survey.

15.10 Bedrock faults and other linear features (50k)

Records within 500m**0**

Linear features at the ground or bedrock surface at 1:50,000 scale of six main types; rock, fault, fold axis, mineral vein, alteration area or landform. Features are either observed or inferred, and relate primarily to bedrock.

This data is sourced from the British Geological Survey.



16 Boreholes



- Site Outline
- Search buffers in metres (m)
- Confidential
 - 0 - 10m
 - 10 - 30m
 - 30m+
 - Unknown

16.1 BGS Boreholes

Records within 250m

2

The Single Onshore Boreholes Index (SOBI); an index of over one million records of boreholes, shafts and wells from all forms of drilling and site investigation work held by the British Geological Survey. Covering onshore and nearshore boreholes dating back to at least 1790 and ranging from one to several thousand metres deep.

Features are displayed on the Boreholes map on [page 107](#) >

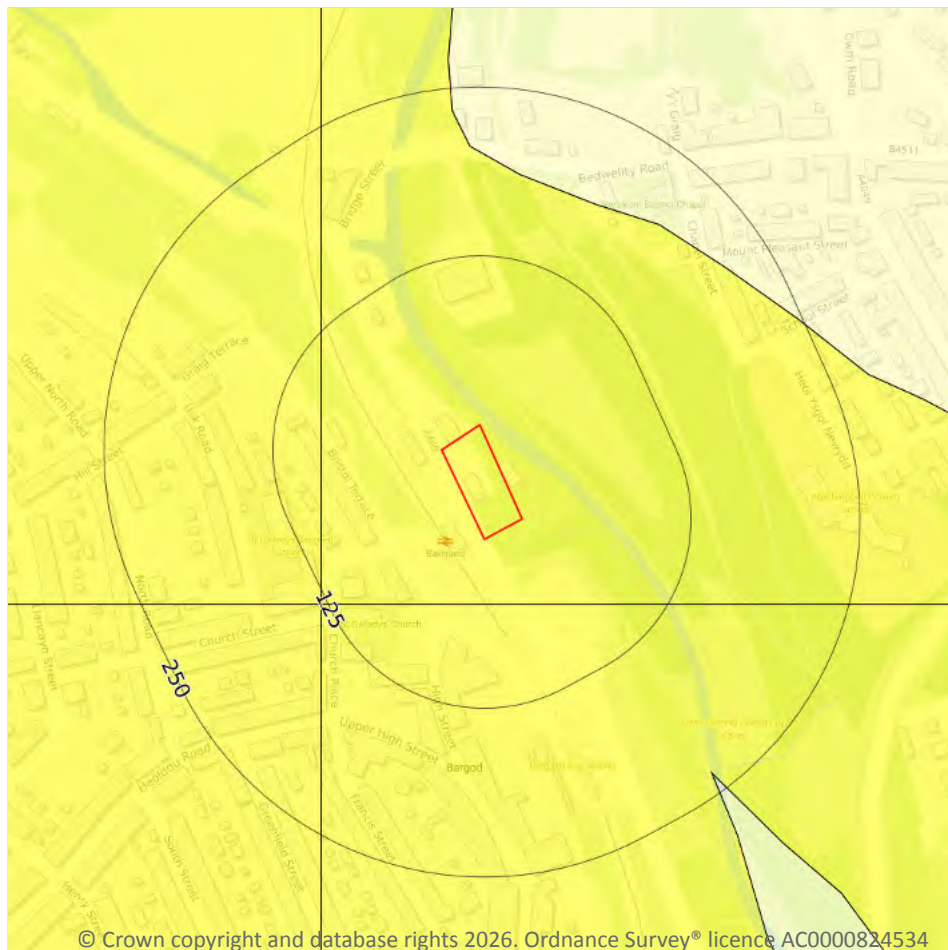
ID	Location	Grid reference	Name	Length	Confidential	Web link
A	On site	315092 200115	PETROL FILING STATION STATION RD BARGOED 2	7.25	N	20292097 ↗
A	20m NW	315082 200133	PETROL FILING STATION STATION RD BARGOED 3	9.75	N	20292098 ↗



This data is sourced from the British Geological Survey.



17 Natural ground subsidence - Shrink swell clays



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

17.1 Shrink swell clays

Records within 50m

2

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

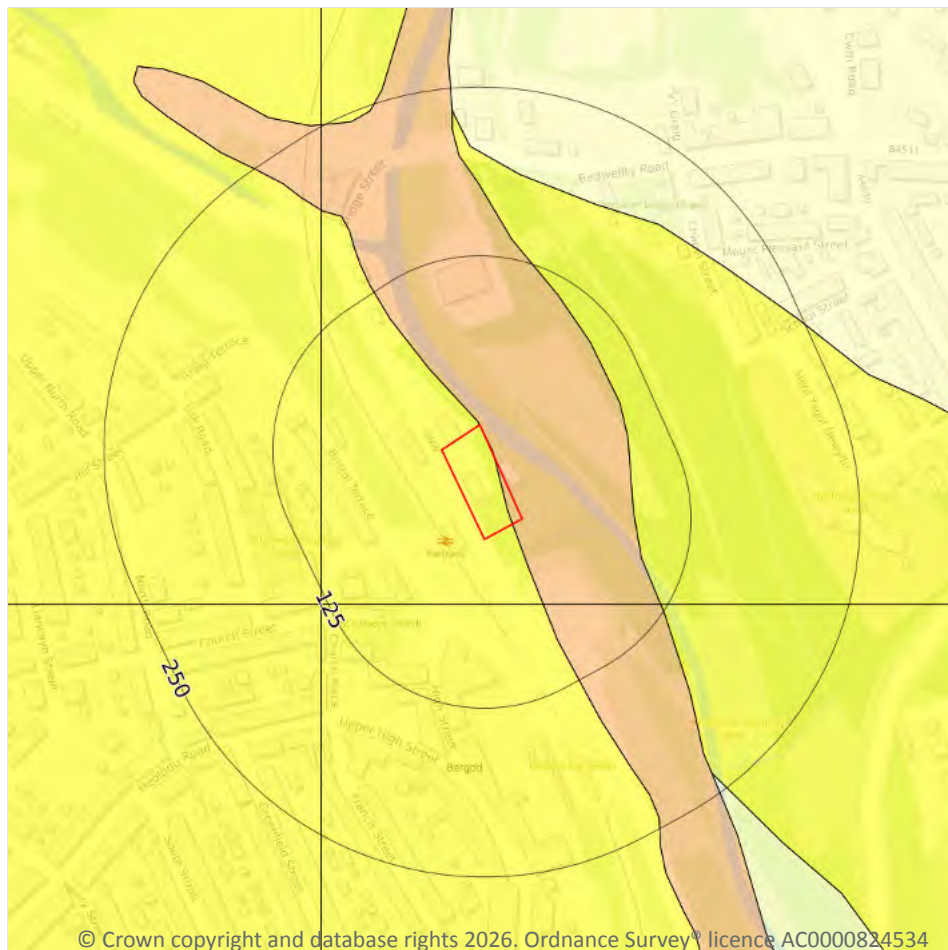
Features are displayed on the Natural ground subsidence - Shrink swell clays map on [page 109](#) >

Location	Hazard rating	Details
On site	Very low	Ground conditions predominantly low plasticity.
48m S	Very low	Ground conditions predominantly low plasticity.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Running sands



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

17.2 Running sands

Records within 50m

3

The potential hazard presented by rocks that can contain loosely-packed sandy layers that can become fluidised by water flowing through them. Such sands can 'run', removing support from overlying buildings and causing potential damage.

Features are displayed on the Natural ground subsidence - Running sands map on [page 110 >](#)

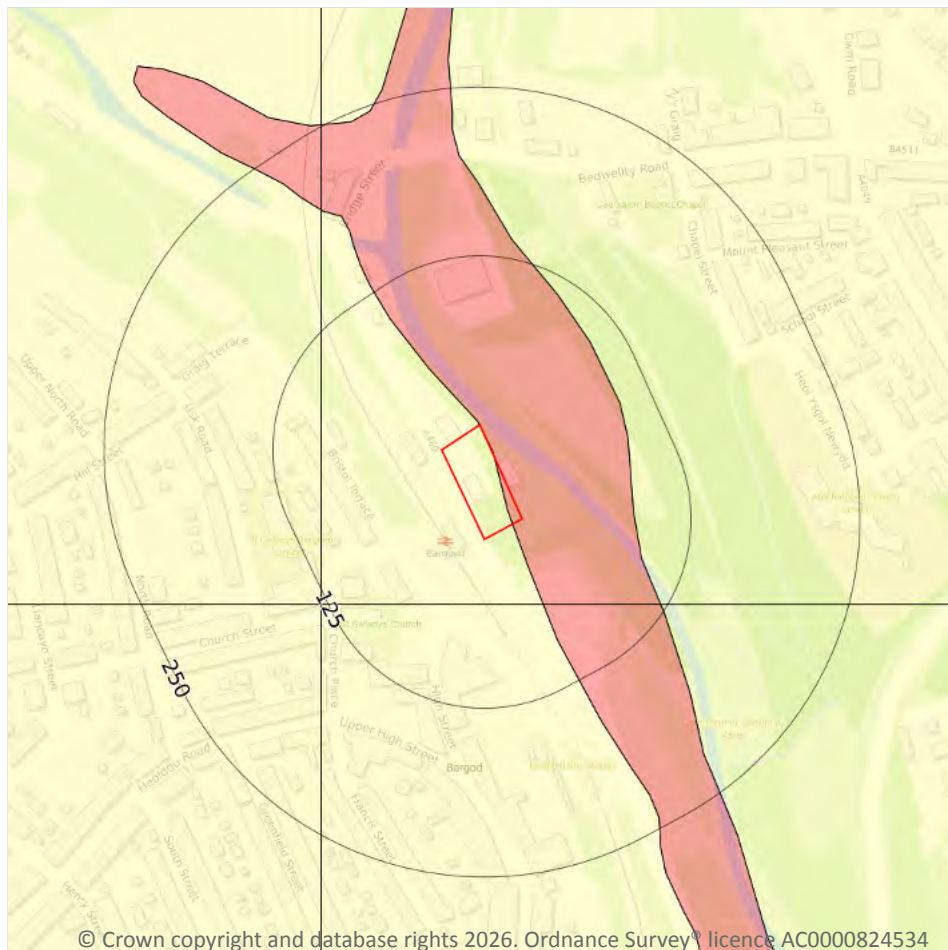
Location	Hazard rating	Details
On site	Very low	Running sand conditions are unlikely. No identified constraints on land use due to running conditions unless water table rises rapidly.

Location	Hazard rating	Details
On site	Low	Running sand conditions may be present. Constraints may apply to land uses involving excavation or the addition or removal of water.
48m S	Very low	Running sand conditions are unlikely. No identified constraints on land use due to running conditions unless water table rises rapidly.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Compressible deposits



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

17.3 Compressible deposits

Records within 50m

3

The potential hazard presented by types of ground that may contain layers of very soft materials like clay or peat and may compress if loaded by overlying structures, or if the groundwater level changes, potentially resulting in depression of the ground and disturbance of foundations.

Features are displayed on the Natural ground subsidence - Compressible deposits map on [page 112 >](#)

Location	Hazard rating	Details
On site	Negligible	Compressible strata are not thought to occur.
On site	Moderate	Compressibility and uneven settlement hazards are probably present. Land use should consider specifically the compressibility and variability of the site.



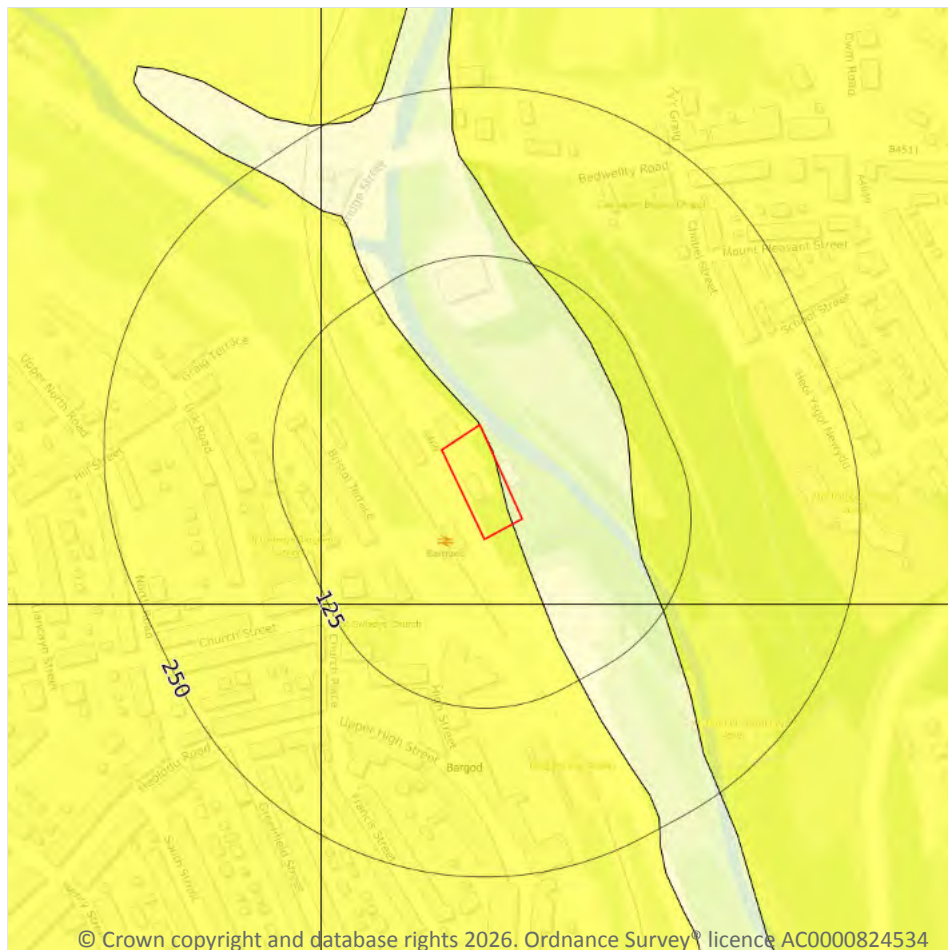
Location	Hazard rating	Details
----------	---------------	---------

48m S	Negligible	Compressible strata are not thought to occur.
-------	------------	---

This data is sourced from the British Geological Survey.



Natural ground subsidence - Collapsible deposits



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

17.4 Collapsible deposits

Records within 50m

3

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

Features are displayed on the Natural ground subsidence - Collapsible deposits map on [page 114 >](#)

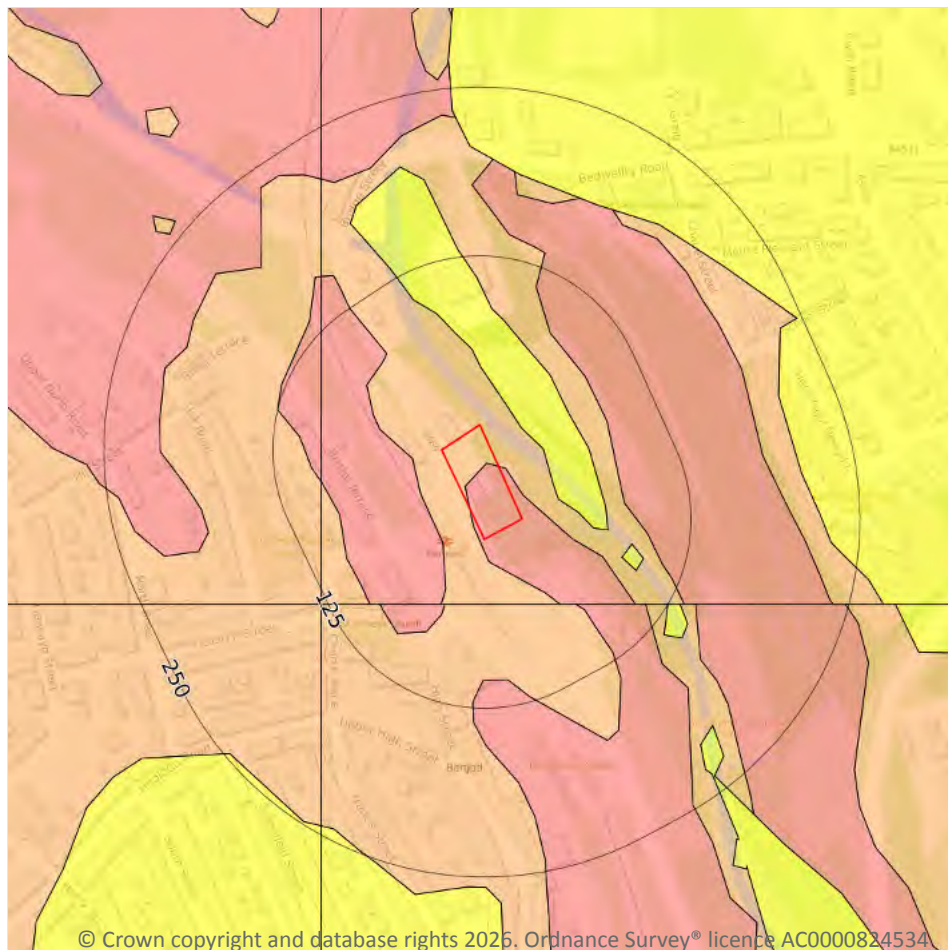
Location	Hazard rating	Details
On site	Negligible	Deposits with potential to collapse when loaded and saturated are believed not to be present.
On site	Very low	Deposits with potential to collapse when loaded and saturated are unlikely to be present.
48m S	Very low	Deposits with potential to collapse when loaded and saturated are unlikely to be present.



This data is sourced from the British Geological Survey.



Natural ground subsidence - Landslides



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

17.5 Landslides

Records within 50m

5

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

Features are displayed on the Natural ground subsidence - Landslides map on [page 116 >](#)

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

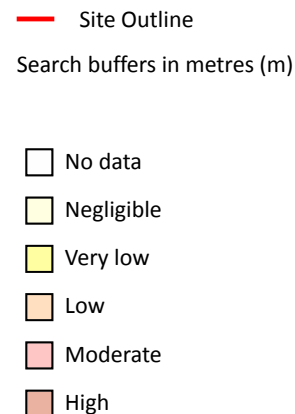
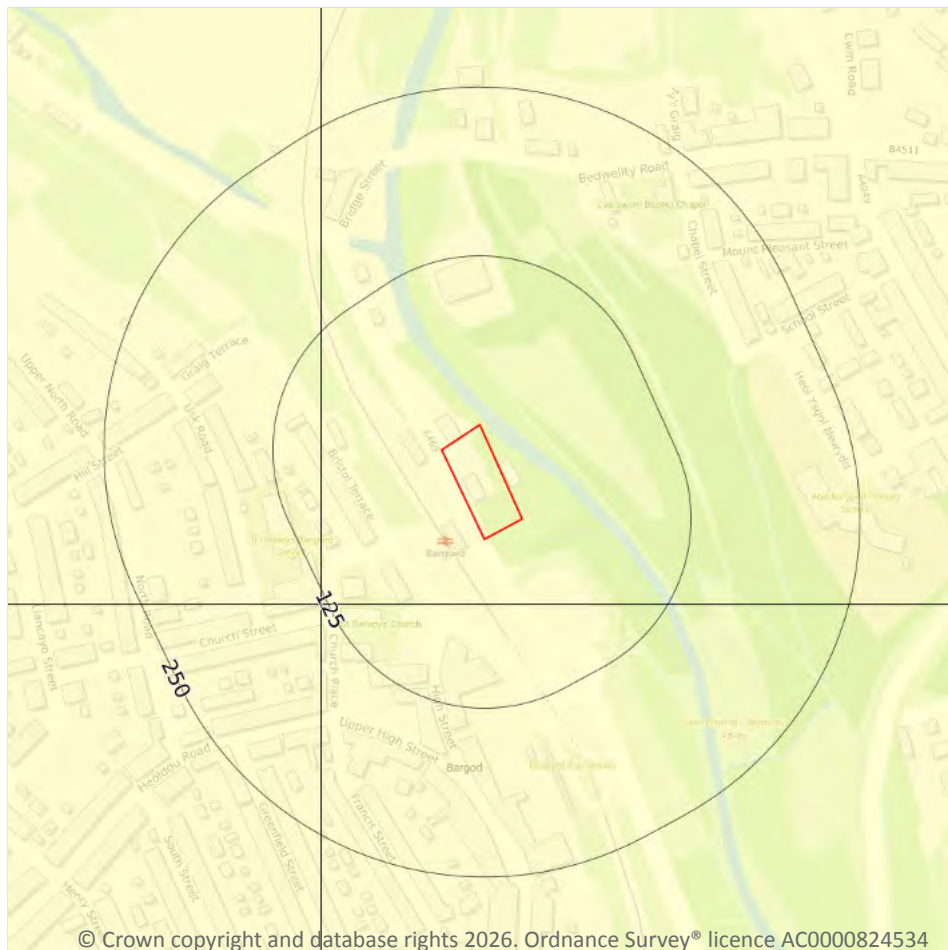


Location	Hazard rating	Details
On site	Moderate	Slope instability problems are probably present or have occurred in the past. Land use should consider specifically the stability of the site.
23m W	Moderate	Slope instability problems are probably present or have occurred in the past. Land use should consider specifically the stability of the site.
25m NE	Very low	Slope instability problems are not likely to occur but consideration to potential problems of adjacent areas impacting on the site should always be considered.
48m S	Low	Slope instability problems may be present or anticipated. Site investigation should consider specifically the slope stability of the site.

This data is sourced from the British Geological Survey.



Natural ground subsidence - Ground dissolution of soluble rocks



17.6 Ground dissolution of soluble rocks

Records within 50m

2

The potential hazard presented by ground dissolution, which occurs when water passing through soluble rocks produces underground cavities and cave systems. These cavities reduce support to the ground above and can cause localised collapse of the overlying rocks and deposits.

Features are displayed on the Natural ground subsidence - Ground dissolution of soluble rocks map on [page 118](#) >

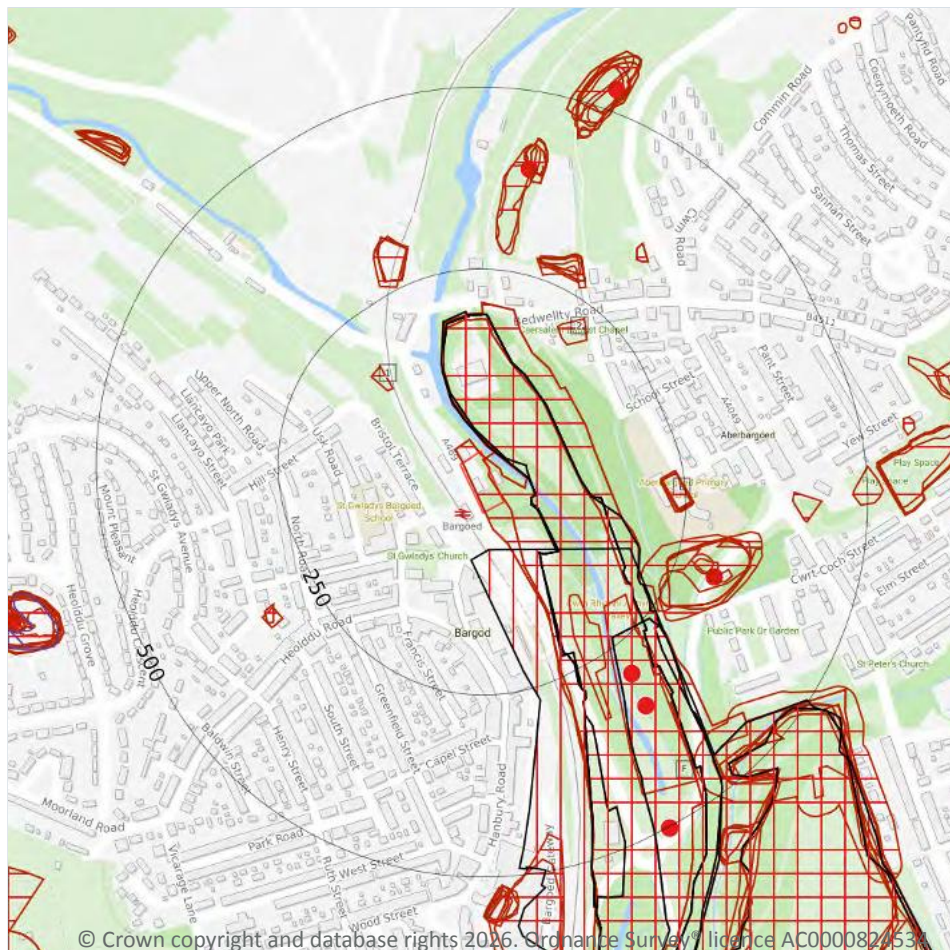
Location	Hazard rating	Details
On site	Negligible	Soluble rocks are either not thought to be present within the ground, or not prone to dissolution. Dissolution features are unlikely to be present.

Location	Hazard rating	Details
48m S	Negligible	Soluble rocks are either not thought to be present within the ground, or not prone to dissolution. Dissolution features are unlikely to be present.

This data is sourced from the British Geological Survey.



18 Mining and ground workings



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

18.1 BritPits

Records within 500m

4

BritPits (an abbreviation of British Pits) is a database maintained by the British Geological Survey of currently active and closed surface and underground mineral workings. Details of major mineral handling sites, such as wharfs and rail depots are also held in the database.

Features are displayed on the Mining and ground workings map on [page 120](#) >



ID	Location	Details	Description
A	294m SE	Name: Bargoed Colliery North Pit Address: Aberbargoed, BARGOED, Caerphilly Commodity: Coal, Deep Status: Ceased	Type: Working is wholly underground, access by shaft, adit, drift or incline. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun' Ee' - Scots). May also be locally termed 'Quarry' or 'Underground Quarry' when referring to sites extracting building stone (e.g. in Dorset and Wiltshire). The location given is that of the mine entrance and may be approximate for older sites shown on contemporaneous mapping by the Geological Survey used as the source document. Status description: Site which has ceased to extract minerals. May be considered as 'Closed' by operator. May be considered to have 'Active', 'Dormant' or 'Expired' planning permissions by the Mineral Planning Authority.
D	307m E	Name: Drill Hall Address: BARGOED, Glamorgan Commodity: Sandstone Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Delf, Delph, Gravel Pit, Sand Pit, Sand and Gravel Pit, Clay Pit, Pit, Opencast Coal Site or Surface Mine. It may be mapped as Worked Ground or Worked and Made Ground on BGS mapping. Status description: Site which has ceased to extract minerals. May be considered as 'Closed' by operator. May be considered to have 'Active', 'Dormant' or 'Expired' planning permissions by the Mineral Planning Authority.
A	342m SE	Name: Bargoed Colliery South Pit Address: Aberbargoed, BARGOED, Caerphilly Commodity: Coal, Deep Status: Ceased	Type: Working is wholly underground, access by shaft, adit, drift or incline. Working may be termed Colliery, Mine, Drift Mine, Slant, Level, Adit or Ingoing Eye (Ingaun' Ee' - Scots). May also be locally termed 'Quarry' or 'Underground Quarry' when referring to sites extracting building stone (e.g. in Dorset and Wiltshire). The location given is that of the mine entrance and may be approximate for older sites shown on contemporaneous mapping by the Geological Survey used as the source document. Status description: Site which has ceased to extract minerals. May be considered as 'Closed' by operator. May be considered to have 'Active', 'Dormant' or 'Expired' planning permissions by the Mineral Planning Authority.



ID	Location	Details	Description
I	393m N	Name: Ty'r-graig Address: Aberbargoed, BARGOED, Glamorgan Commodity: Sandstone Status: Ceased	Type: A surface mineral working. It may be termed Quarry, Delf, Delph, Gravel Pit, Sand Pit, Sand and Gravel Pit, Clay Pit, Pit, Opencast Coal Site or Surface Mine. It may be mapped as Worked Ground or Worked and Made Ground on BGS mapping. Status description: Site which has ceased to extract minerals. May be considered as 'Closed' by operator. May be considered to have 'Active', 'Dormant' or 'Expired' planning permissions by the Mineral Planning Authority.

This data is sourced from the British Geological Survey.

18.2 Surface ground workings

Records within 250m	26
----------------------------	-----------

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

Features are displayed on the Mining and ground workings map on [page 120 >](#)

ID	Location	Land Use	Year of mapping	Mapping scale
A	On site	Colliery	1945	1:10560
A	On site	Colliery	1945	1:10560
A	On site	Colliery	1916	1:10560
A	On site	Colliery	1948	1:10560
A	12m NE	Colliery	1948	1:10560
A	12m NE	Colliery	1916	1:10560
A	17m NE	Colliery	1922	1:10560
1	140m NW	Unspecified Pit	1922	1:10560
A	158m SE	Unspecified Ground Workings	1895	1:10560
2	188m NE	Burial Ground	1879	1:10560
A	199m SE	Colliery	1895	1:10560
D	212m SE	Unspecified Quarry	1945	1:10560
E	218m E	Reservoirs	1916	1:10560
E	218m E	Reservoirs	1948	1:10560



ID	Location	Land Use	Year of mapping	Mapping scale
E	219m E	Reservoir	1948	1:10560
E	219m E	Reservoir	1916	1:10560
E	219m E	Reservoir	1922	1:10560
E	219m E	Reservoir	1945	1:10560
D	238m E	Unspecified Quarry	1948	1:10560
D	238m E	Unspecified Quarry	1916	1:10560
D	238m E	Unspecified Quarry	1922	1:10560
F	239m SE	Colliery	1898	1:10560
D	239m E	Unspecified Heap	1965	1:10560
D	239m E	Unspecified Quarry	1916	1:10560
D	239m E	Unspecified Quarry	1948	1:10560
D	241m SE	Unspecified Heaps	1965	1:10560

This is data is sourced from Ordnance Survey®/Groundsure.

18.3 Underground workings

Records within 1000m

15

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

Features are displayed on the Mining and ground workings map on [page 120 >](#)

ID	Location	Land Use	Year of mapping	Mapping scale
B	12m NE	Colliery	1948	1:10560
C	12m NE	Colliery	1916	1:10560
C	17m NE	Colliery	1922	1:10560
B	51m S	Unspecified Mine	1965	1:10560
F	239m SE	Colliery	1898	1:10560
-	737m SE	Disused Colliery	1922	1:10560
-	741m SE	Disused Colliery	1948	1:10560
-	741m SE	Disused Colliery	1916	1:10560



ID	Location	Land Use	Year of mapping	Mapping scale
-	858m E	Colliery	1898	1:10560
-	864m E	Colliery	1879	1:10560
-	915m E	Unspecified Old Level	1922	1:10560
-	970m SW	Coal Shaft	1898	1:10560
-	972m E	Unspecified Old Level	1948	1:10560
-	972m E	Unspecified Old Level	1916	1:10560
-	979m SW	Unspecified Disused Mine	1960	1:10560

This data is sourced from Ordnance Survey®/Groundsure.

18.4 Underground mining extents

Records within 500m

0

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

This data is sourced from Groundsure.

18.5 Historical Mineral Planning Areas

Records within 500m

0

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

This data is sourced from the British Geological Survey.

18.6 Non-coal mining

Records within 1000m

0

The potential for historical non-coal mining to have affected an area. The assessment is drawn from expert knowledge and literature in addition to the digital geological map of Britain. Mineral commodities may be divided into seven general categories - vein minerals, chalk, oil shale, building stone, bedded ores, evaporites and 'other' commodities (including ball clay, jet, black marble, graphite and chert).

This data is sourced from the British Geological Survey.



18.7 JPB mining areas

Records on site

0

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

This data is sourced from Johnson Poole and Bloomer.

18.8 The Coal Authority non-coal mining

Records within 500m

0

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

This data is sourced from The Coal Authority.

18.9 Researched mining

Records within 500m

0

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

This data is sourced from Groundsure.

18.10 Mining record office plans

Records within 500m

0

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

This data is sourced from Groundsure.



18.11 BGS mine plans

Records within 500m**0**

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

This data is sourced from Groundsure.

18.12 Coal mining

Records on site**1**

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

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

This data is sourced from the Coal Authority.

18.13 Brine areas

Records on site**0**

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

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

18.14 Gypsum areas

Records on site**0**

Generalised areas that may be affected by gypsum extraction.

This data is sourced from British Gypsum.

18.15 Tin mining

Records on site**0**

Generalised areas that may be affected by historical tin mining.

This data is sourced from Groundsure.



18.16 Clay mining

Records on site

0

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

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



19 Ground cavities and sinkholes

19.1 Natural cavities

Records within 500m

0

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

This data is sourced from Stantec UK Ltd.

19.2 Mining cavities

Records within 1000m

0

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

This data is sourced from Stantec UK Ltd.

19.3 Reported recent incidents

Records within 500m

0

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

This data is sourced from Groundsure.

19.4 Historical incidents

Records within 500m

0

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

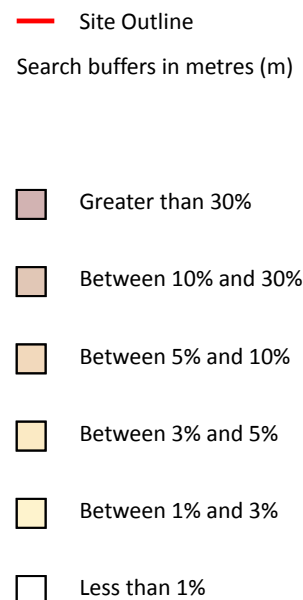
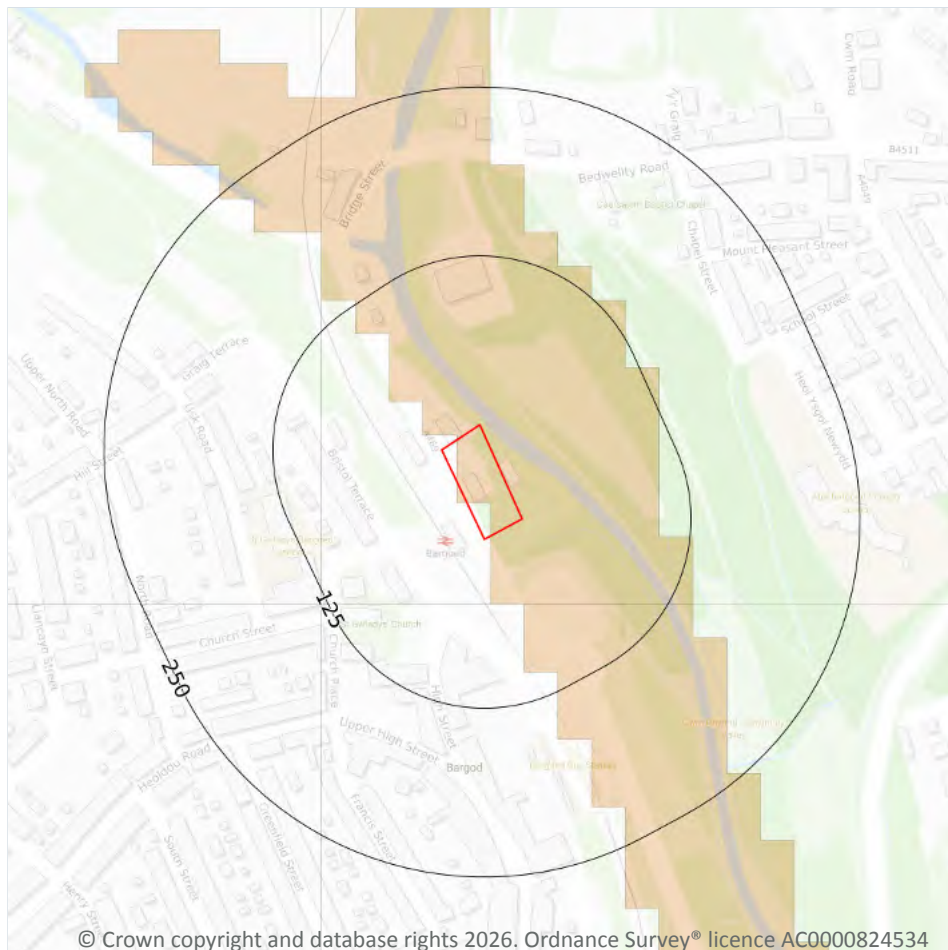
Not all 'holes' noted on Ordnance Survey® mapping will necessarily be present within this dataset.



This data is sourced from Groundsure.



20 Radon



20.1 Radon

Records on site

2

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

Features are displayed on the Radon map on [page 130 >](#)

Location	Estimated properties affected	Radon Protection Measures required
On site	Between 5% and 10%	Basic



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

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



21 Soil chemistry

21.1 BGS Estimated Background Soil Chemistry

Records within 50m

4

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

Location	Arsenic	Bioaccessible Arsenic	Lead	Bioaccessible Lead	Cadmium	Chromium	Nickel
On site	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
On site	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
48m S	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
48m S	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg

This data is sourced from the British Geological Survey.

21.2 BGS Estimated Urban Soil Chemistry

Records within 50m

0

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

This data is sourced from the British Geological Survey.



21.3 BGS Measured Urban Soil Chemistry

Records within 50m

0

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

This data is sourced from the British Geological Survey.



22 Railway infrastructure and projects



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

22.1 Underground railways (London)

Records within 250m

0

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

This data is sourced from publicly available information by Groundsure.

22.2 Underground railways (Non-London)

Records within 250m

0

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



This data is sourced from publicly available information by Groundsure.

22.3 Railway tunnels

Records within 250m

2

Railway tunnels taken from contemporary Ordnance Survey® mapping.

Features are displayed on the Railway infrastructure and projects map on [page 134 >](#)

Location	Type
75m S	Railway Tunnel
91m S	Railway Tunnel

This data is sourced from the Ordnance Survey®.

22.4 Historical railway and tunnel features

Records within 250m

57

Railways and tunnels digitised from historical Ordnance Survey® mapping as scales of 1:1,250, 1:2,500, 1:10,000 and 1:10,560.

Features are displayed on the Railway infrastructure and projects map on [page 134 >](#)

Location	Land Use	Year of mapping	Mapping scale
6m W	Railway Sidings	1922	10560
7m W	Railway Sidings	1945	10560
7m SW	Railway Sidings	1916	10560
7m SW	Railway Sidings	1948	10560
9m SW	Railway Sidings	1964	10560
10m SW	Railway Sidings	1960	2500
11m SW	Railway Sidings	1959	1250
12m SW	Railway Sidings	1901	2500
13m SW	Railway Sidings	1920	2500
14m NE	Railway Sidings	1945	10560
14m SE	Mineral Railway Sidings	1964	10560
16m SW	Railway Sidings	1948	10560



Location	Land Use	Year of mapping	Mapping scale
16m SW	Railway Sidings	1916	10560
22m SW	Railway Sidings	1876	2500
22m SW	Railway Sidings	1881	2500
22m NE	Railway Sidings	1916	10560
22m NE	Railway Sidings	1920	2500
24m NE	Railway Sidings	1922	10560
25m NE	Railway Sidings	1916	10560
25m NE	Railway Sidings	1948	10560
26m NE	Railway Sidings	1960	2500
27m NE	Railway Sidings	1970	1250
27m NE	Railway Sidings	1959	1250
34m E	Railway Sidings	1898	10560
37m E	Railway Sidings	1895	10560
38m SW	Railway Sidings	1901	2500
40m E	Railway Sidings	1901	2500
43m E	Railway Sidings	1948	10560
51m S	Railway Sidings	1965	10560
52m SE	Railway Sidings	1948	10560
52m SE	Railway Sidings	1916	10560
55m S	Railway Sidings	1960	2500
56m S	Railway Sidings	1972	1250
67m S	Railway Sidings	1960	2500
68m S	Railway Sidings	1959	1250
71m N	Railway Sidings	1948	10560
72m S	Railway Sidings	1901	2500
76m SE	Railway Sidings	1948	10560
76m SE	Railway Sidings	1916	10560
86m NW	Railway Sidings	1970	1250



Location	Land Use	Year of mapping	Mapping scale
87m SE	Railway Sidings	1920	2500
91m W	Railway Sidings	1964	10560
93m SE	Railway Sidings	1973	10000
100m SE	Railway Sidings	1960	2500
101m SE	Railway Sidings	1959	1250
101m SE	Railway Sidings	1972	1250
103m NW	Railway Sidings	1958	1250
108m NW	Railway Sidings	1987	2500
111m S	Railway Sidings	1959	1250
168m NW	Railway Sidings	1922	10560
177m NW	Railway Sidings	1916	10560
177m NW	Railway Sidings	1948	10560
208m E	Railway Sidings	1922	10560
211m SE	Railway Sidings	1920	2500
215m SE	Railway Sidings	1945	10560
245m SE	Railway Sidings	1879	10560
248m SE	Railway Sidings	1881	2500

This data is sourced from Ordnance Survey®/Groundsure.

22.5 Royal Mail tunnels

Records within 250m

0

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

This data is sourced from Groundsure/the Postal Museum.



22.6 Historical railways

Records within 250m

7

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

Features are displayed on the Railway infrastructure and projects map on [page 134 >](#)

Location	Description
33m SW	Disused
35m SW	Disused
67m W	Abandoned
102m NW	Historical OSM
127m E	Historical OSM
167m NW	Abandoned
230m N	Historical OSM

This data is sourced from OpenStreetMap.

22.7 Railways

Records within 250m

15

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

Features are displayed on the Railway infrastructure and projects map on [page 134 >](#)

Location	Name	Type
24m SW	Rhymney Line	rail
25m SW	Not given	Multi Track
27m SW	Rhymney Line	rail
32m SW	Not given	Multi Track
33m SW	Rhymney Line	rail
34m SW	Not given	Multi Track
47m W	Rhymney Line	rail
72m S	Rhymney Line	rail
74m S	Rhymney Line	rail



Location	Name	Type
136m NW	Not given	Multi Track
166m NW	Not given	Multi Track
166m NW	Rhymney Line	rail
223m SE	Rhymney Line	rail
223m SE	Rhymney Line	rail
223m SE	Not given	Multi Track

This data is sourced from Ordnance Survey® and OpenStreetMap.

22.8 Crossrail 2

Records within 500m

0

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

This data is sourced from publicly available information by Groundsure.

22.9 HS2

Records within 500m

0

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

This data is sourced from HS2 Ltd.



Data providers

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

Terms and conditions

Groundsure's Terms and Conditions can be accessed at this link: www.groundsure.com/terms-and-conditions-april-2023/ ↗.



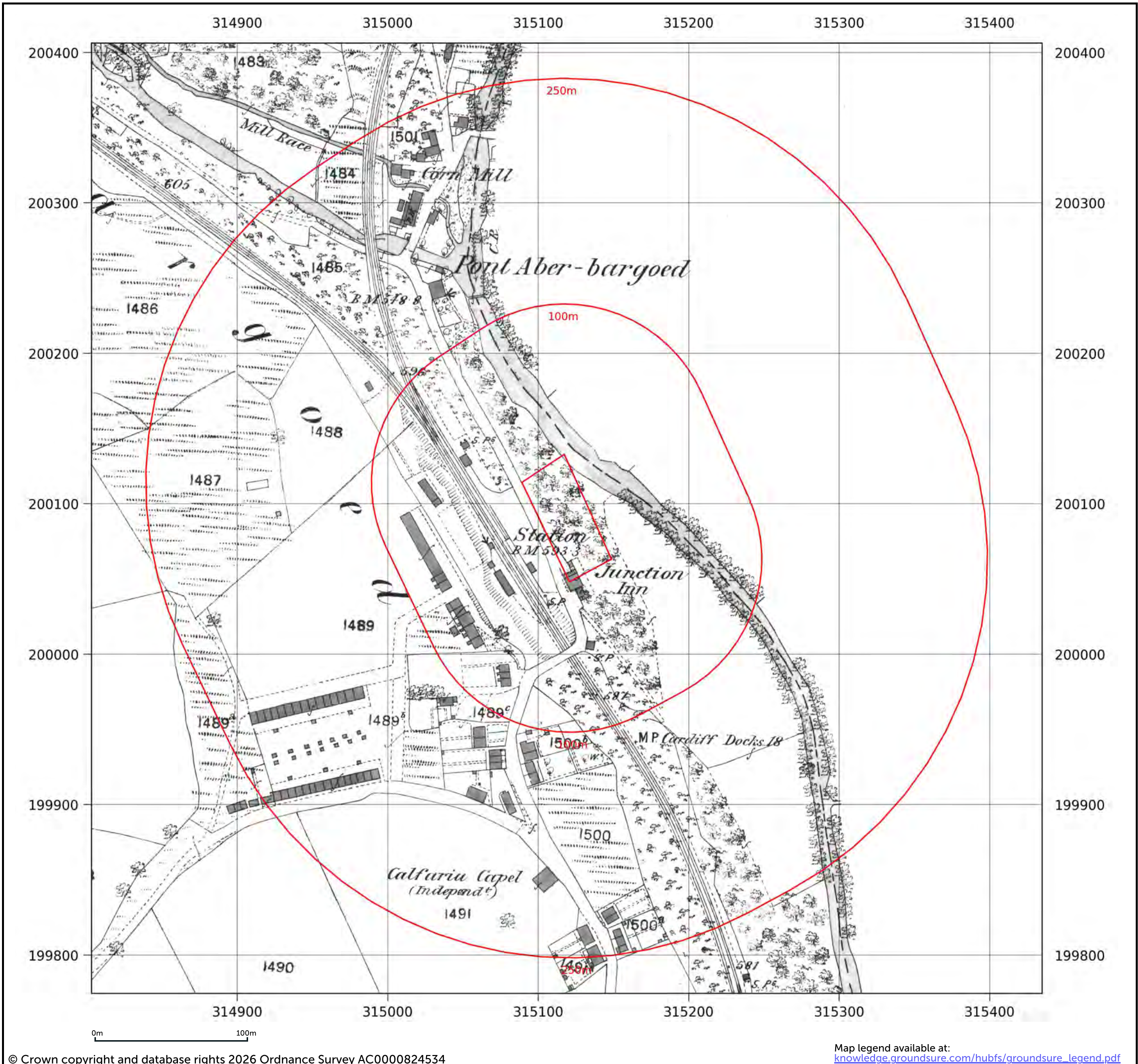
Site details:	LAND OFF STATION ROAD, BARGOED, CF81 9AL
Client ref:	B5556/JS/11032026
Report ref:	GS-9V6-R5H-HOA-8K1
Grid ref:	315118.89, 200089.88
Production date:	11 March 2026

Map name:	County Series
Map date:	1876
Scale:	1:2,500
Printed at:	1:2,500



Date: 1876
Surveyed: 1876
Revised: 1876

Contact us with any questions at:
info@groundsure.com
01273 257 755



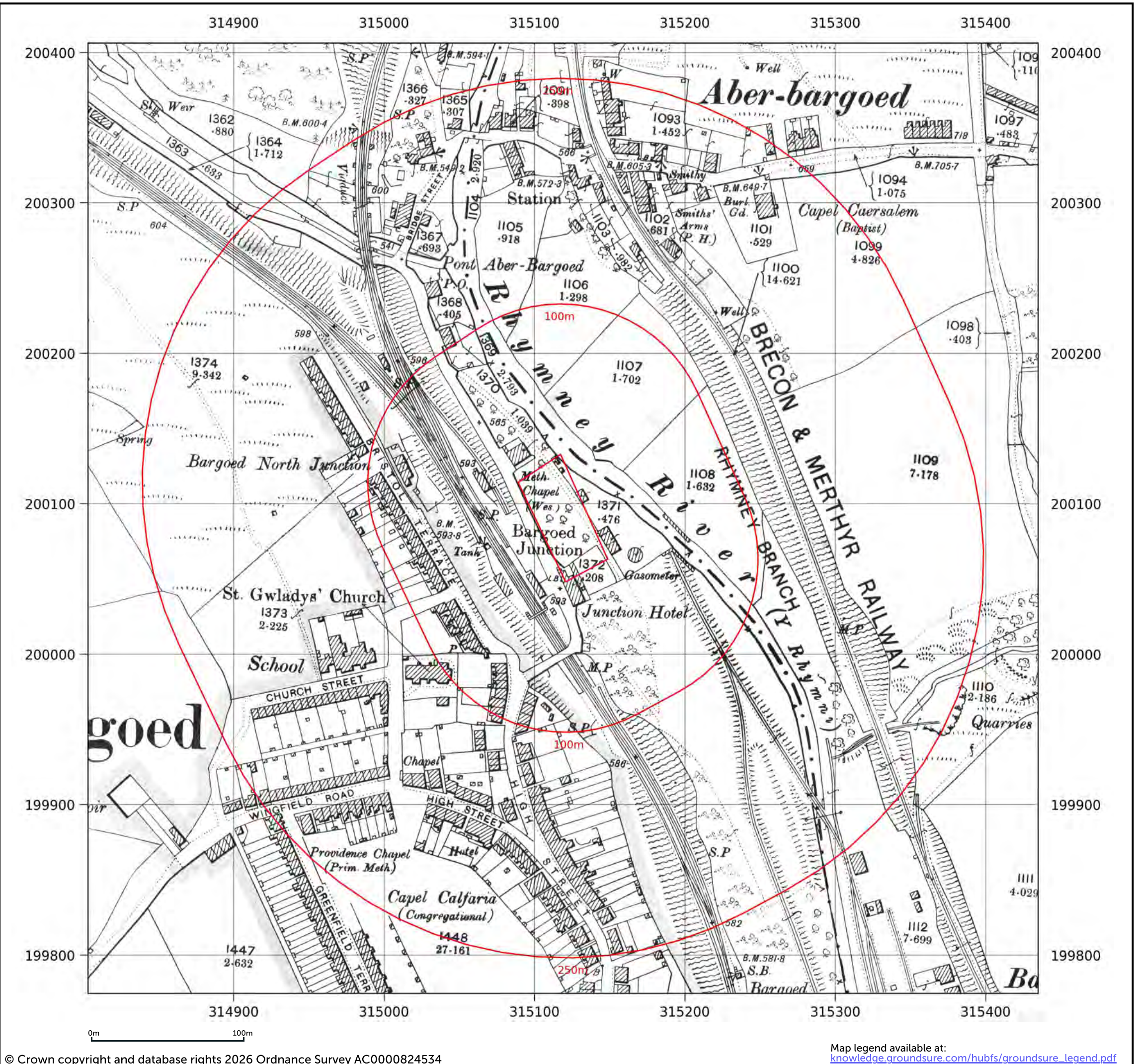
Site details:	LAND OFF STATION ROAD, BARGOED, CF81 9AL
Client ref:	B5556/JS/11032026
Report ref:	GS-9V6-R5H-HOA-8K1
Grid ref:	315118.89, 200089.88
Production date:	11 March 2026

Map name:	County Series
Map date:	1901
Scale:	1:2,500
Printed at:	1:2,500



Date: 1901 Surveyed: 1901 Revised: 1901

Contact us with any questions at:
info@groundsure.com
01273 257 755



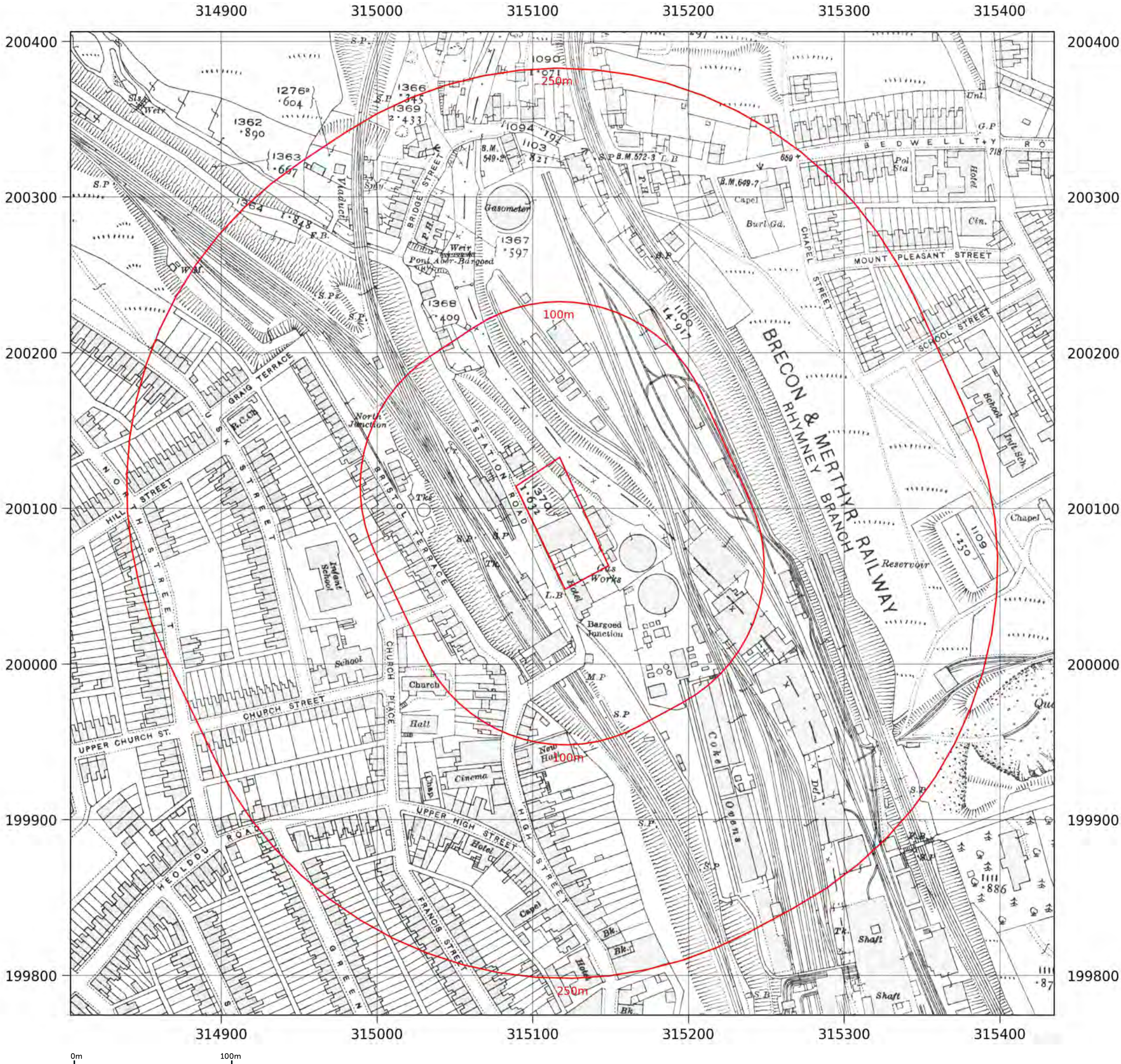
Site details: LAND OFF STATION ROAD, BARGOED, CF81 9AL
Client ref: B5556/JS/11032026
Report ref: GS-9V6-R5H-HOA-8K1
Grid ref: 315118.89, 200089.88
Production date: 11 March 2026

Map name: County Series
Map date: 1920
Scale: 1:2,500
Printed at: 1:2,500



Date: 1920
Surveyed: 1920
Revised: 1920

Contact us with any questions at:
info@groundsure.com
01273 257 755



Site details: LAND OFF STATION ROAD, BARGOED, CF81 9AL
Client ref: B5556/JS/11032026
Report ref: GS-9V6-R5H-HOA-8K1
Grid ref: 315118.89, 200089.88
Production date: 11 March 2026

Map name: National Grid
Map date: 1958-1959
Scale: 1:1,250
Printed at: 1:2,000



Date: 1958 Surveyed: 1958 Revised: 1958 Levelled: 1949	Date: 1959 Surveyed: 1958 Revised: 1958 Copyright: 1959 Levelled: 1949
Date: 1958 Surveyed: 1958 Revised: 1958 Levelled: 1949	Date: 1959 Surveyed: 1958 Revised: 1958 Copyright: 1959 Levelled: 1949

Contact us with any questions at:
info@groundsure.com
01273 257 755



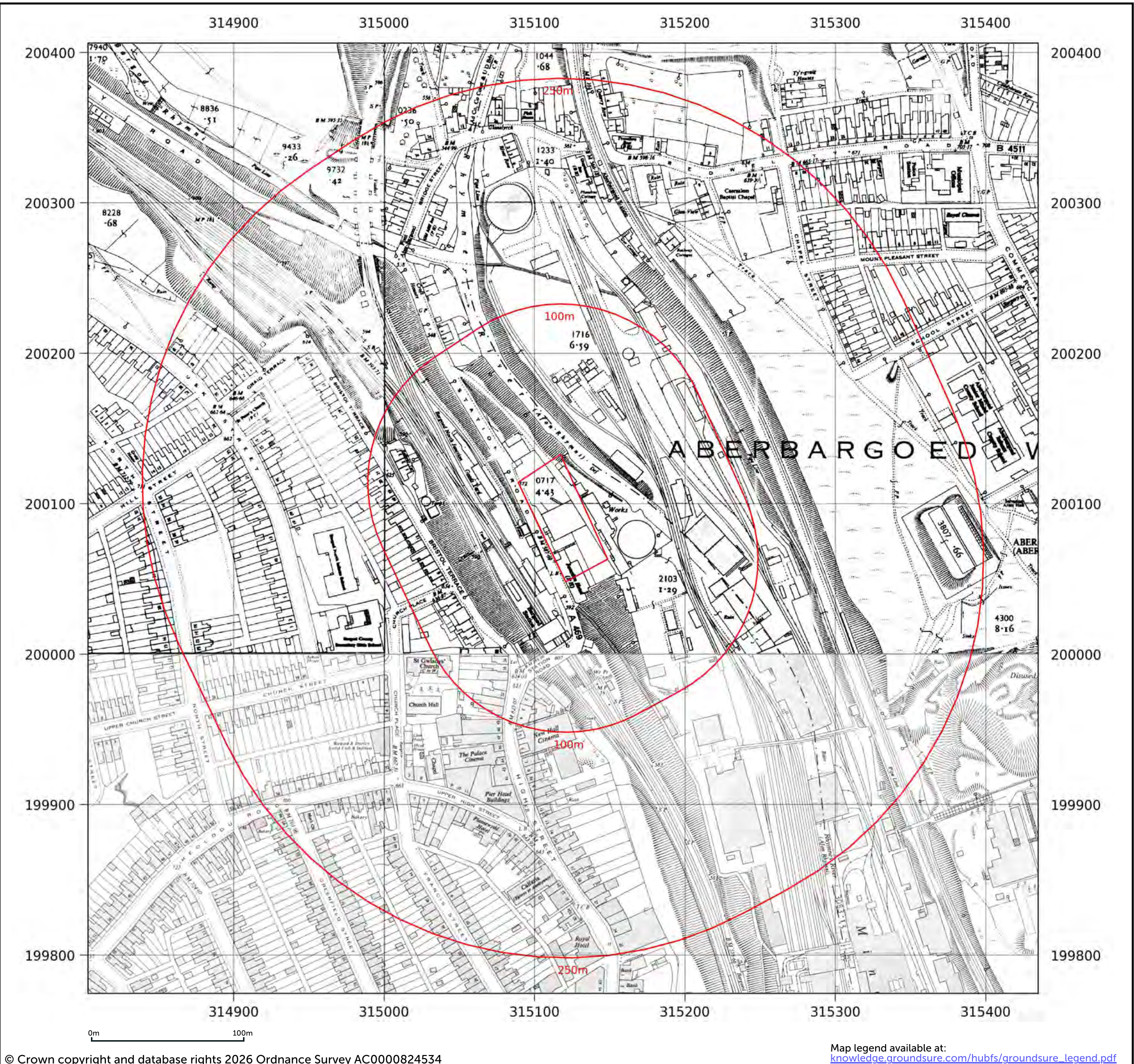
Site details: LAND OFF STATION ROAD, BARGOED, CF81 9AL
Client ref: B5556/JS/11032026
Report ref: GS-9V6-R5H-HOA-8K1
Grid ref: 315118.89, 200089.88
Production date: 11 March 2026

Map name: National Grid
Map date: 1960
Scale: 1:2,500
Printed at: 1:2,500



Date: 1960	Date: 1960
Date: 1960 Surveyed: 1958 Revised: 1958 Edition: 1960 Copyright: 1960 Levelled: 1949	

Contact us with any questions at:
info@groundsure.com
01273 257 755



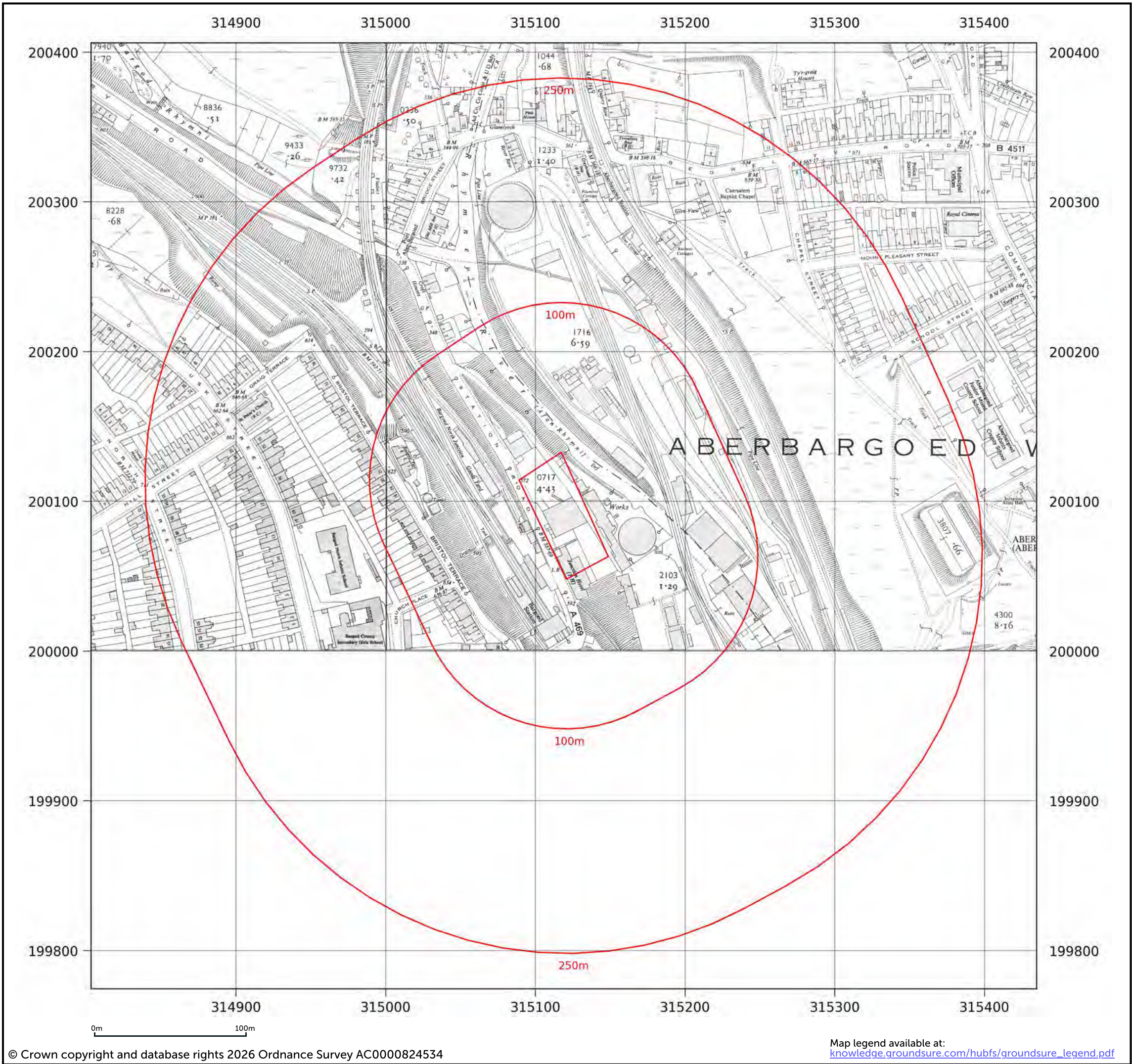
Site details: LAND OFF STATION ROAD, BARGOED, CF81 9AL
Client ref: B5556/JS/11032026
Report ref: GS-9V6-R5H-HOA-8K1
Grid ref: 315118.89, 200089.88
Production date: 11 March 2026

Map name: National Grid
Map date: 1960
Scale: 1:2,500
Printed at: 1:2,500



Date: 1960
Surveyed: 1959
Revised: 1959
Edition: 1960
Copyright: 1960
Levelled: 1949

Contact us with any questions at:
info@groundsure.com
01273 257 755

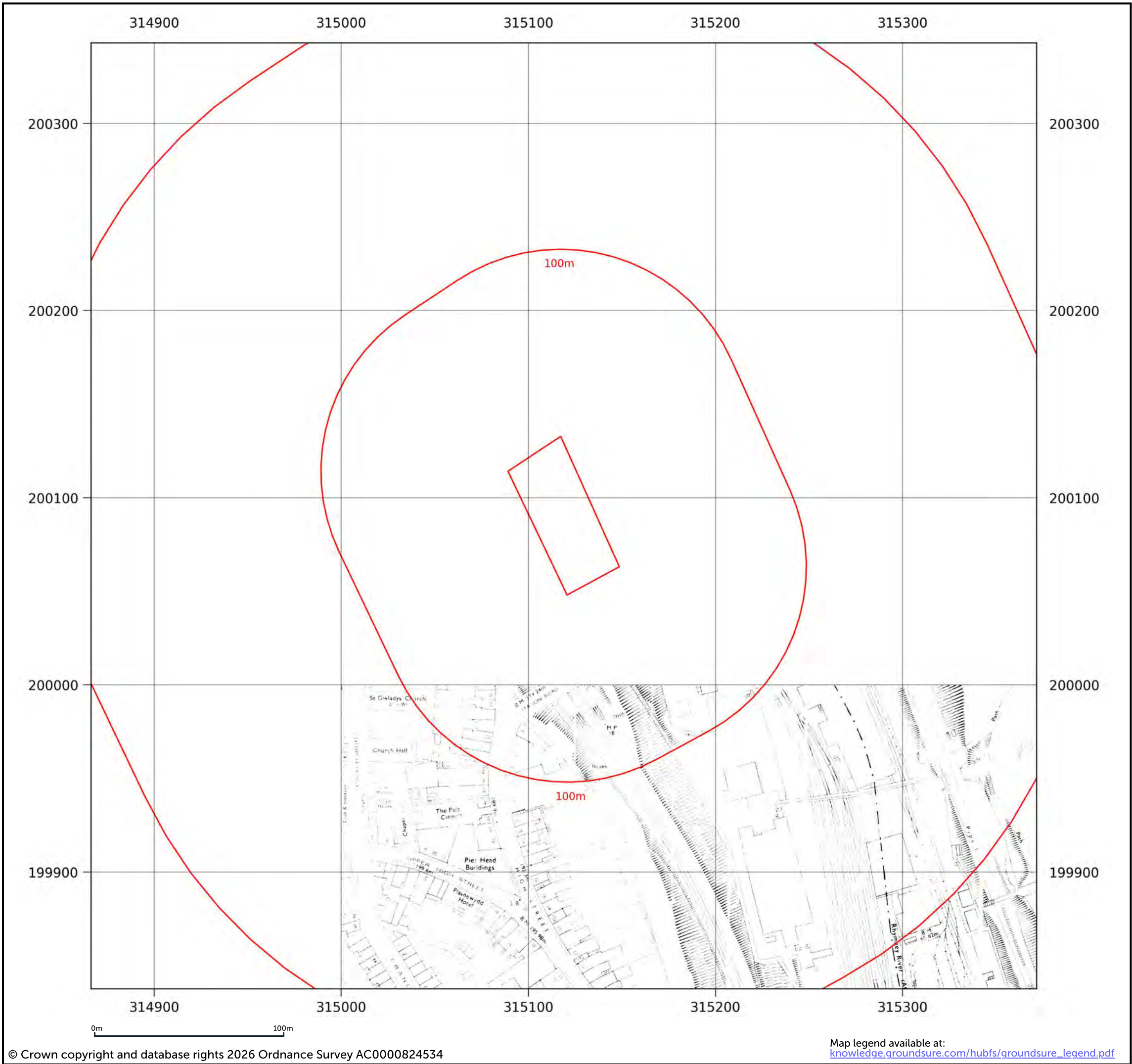


Site details: LAND OFF STATION ROAD, BARGOED, CF81 9AL
Client ref: B5556/JS/11032026
Report ref: GS-9V6-R5H-HOA-8K1
Grid ref: 315118.89, 200089.88
Production date: 11 March 2026

Map name: National Grid
Map date: 1973
Scale: 1:1,250
Printed at: 1:2,000



Contact us with any questions at:
info@groundsure.com
01273 257 755



Site details: LAND OFF STATION ROAD, BARGOED, CF81 9AL
Client ref: B5556/JS/11032026
Report ref: GS-9V6-R5H-HOA-8K1
Grid ref: 315118.89, 200089.88
Production date: 11 March 2026

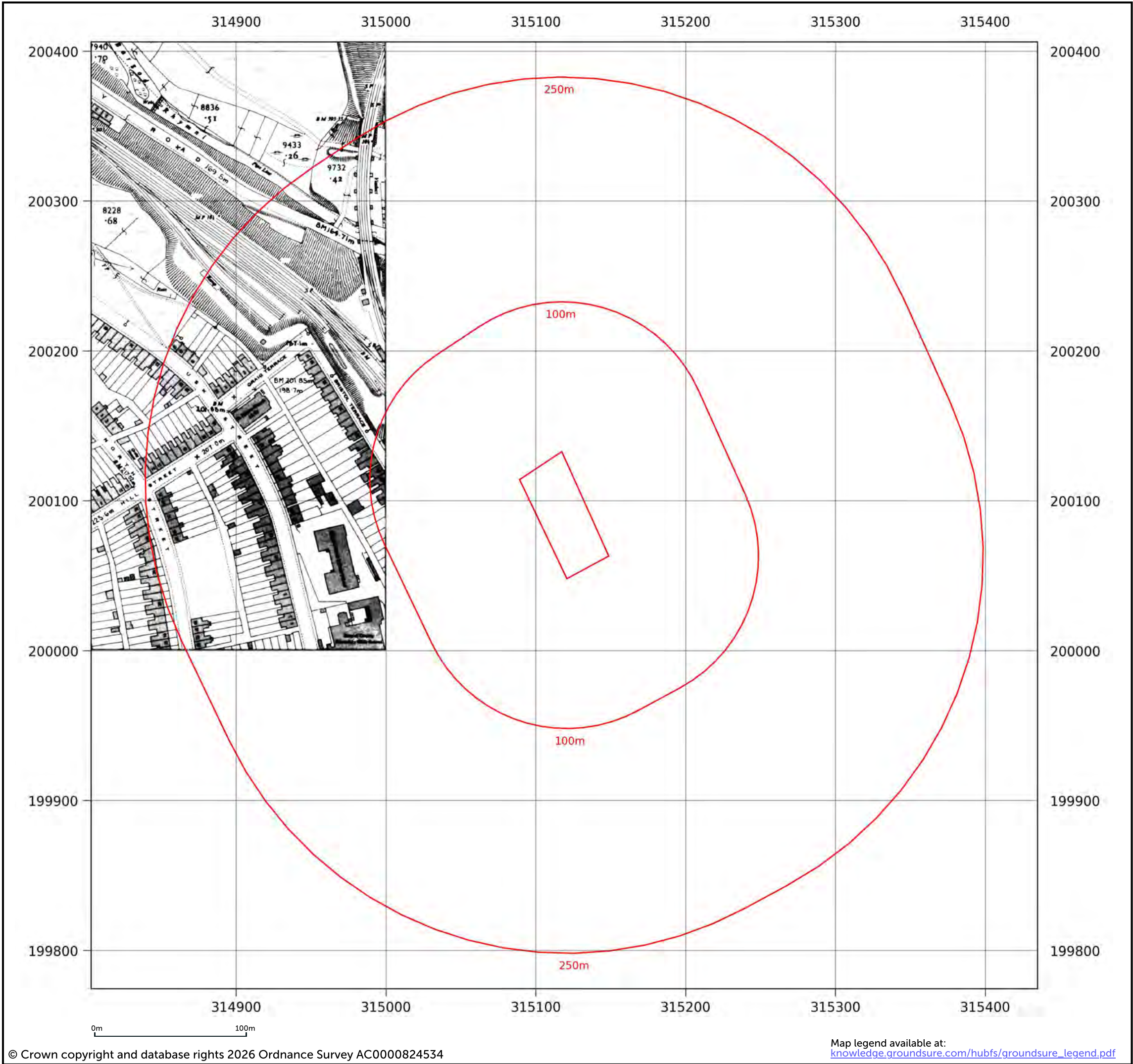
Map name: National Grid
Map date: 1970-1974
Scale: 1:1,250
Printed at: 1:2,000



Date: 1970 Surveyed: 1958 Revised: 1969 Copyright: 1970 Levelled: 1959	Date: 1974 Surveyed: 1958 Revised: 1974 Copyright: 1974 Levelled: 1959	Date: 1972 Surveyed: 1958 Revised: 1972 Copyright: 1972 Levelled: 1959
--	--	--

Contact us with any questions at:
info@groundsure.com
01273 257 755





Site details:	LAND OFF STATION ROAD, BARGOED, CF81 9AL
Client ref:	B5556/JS/11032026
Report ref:	GS-9V6-R5H-HOA-8K1
Grid ref:	315118.89, 200089.88
Production date:	11 March 2026

Map name:	National Grid
Map date:	1987
Scale:	1:2,500
Printed at:	1:2,500

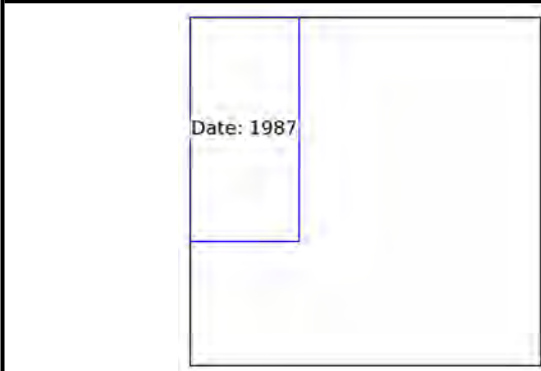
Date: 1987
Surveyed: 1958
Revised: 1987
Copyright: 1987
Levelled: 1958



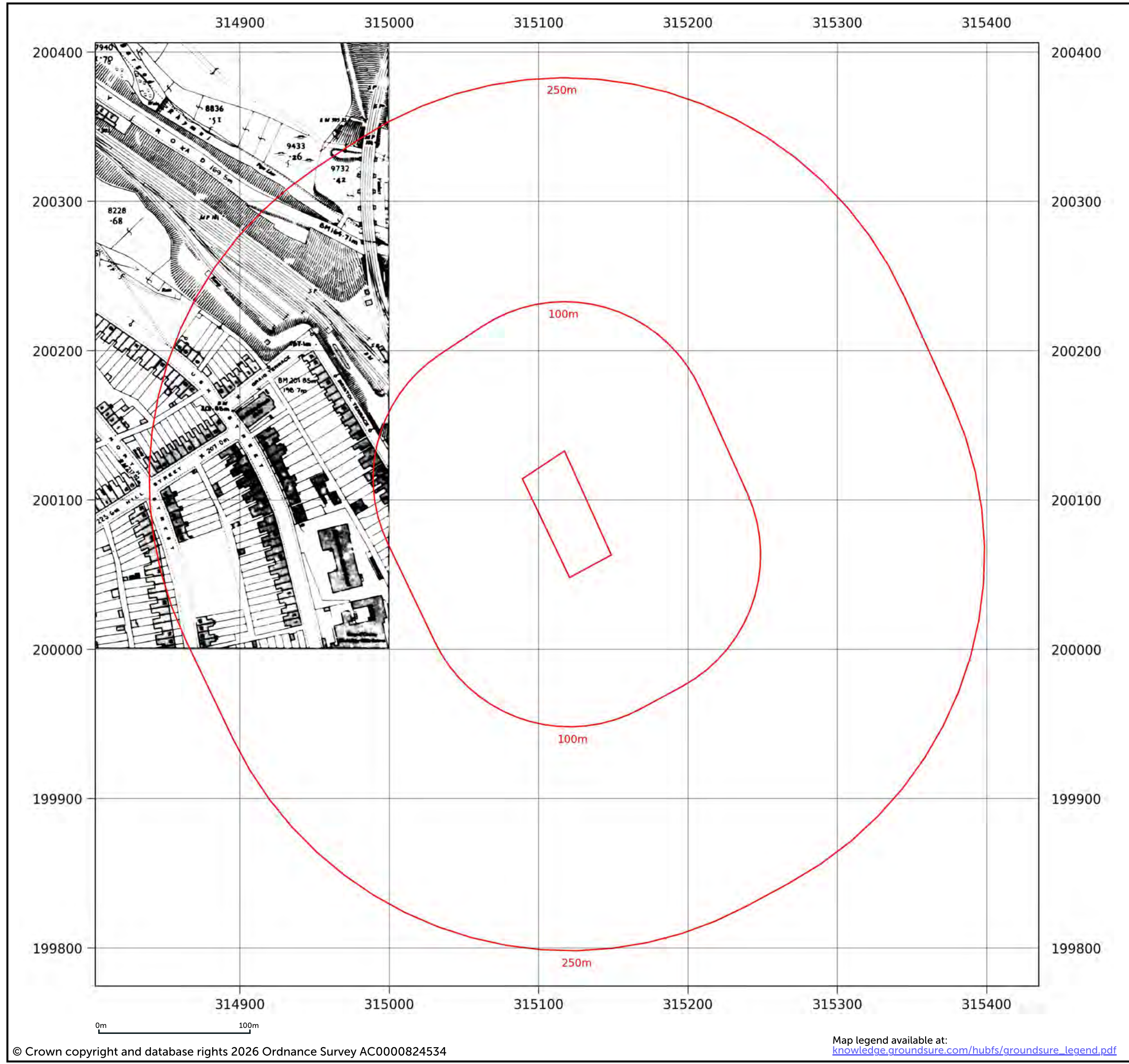
Contact us with any questions at:
info@groundsure.com
01273 257 755

Site details: LAND OFF STATION ROAD, BARGOED, CF81 9AL
Client ref: B5556/JS/11032026
Report ref: GS-9V6-R5H-HOA-8K1
Grid ref: 315118.89, 200089.88
Production date: 11 March 2026

Map name: National Grid
Map date: 1987
Scale: 1:2,500
Printed at: 1:2,500



Contact us with any questions at:
info@groundsure.com
01273 257 755



Site details: LAND OFF STATION ROAD,
BARGOED, CF81 9AL
Client ref: B5556/JS/11032026
Report ref: GS-9V6-R5H-HOA-8K1
Grid ref: 315118.89, 200089.88
Production date: 11 March 2026

Map name: National Grid
Map date: 1986-1988
Scale: 1:1,250
Printed at: 1:2,000



Date: 1986 Surveyed: 1958 Revised: 1986 Copyright: 1986 Levelled: 1958	Date: 1988 Surveyed: 1959 Revised: 1988 Copyright: 1988 Levelled: 1959
--	--

Contact us with any questions at:
info@groundsure.com
01273 257 755



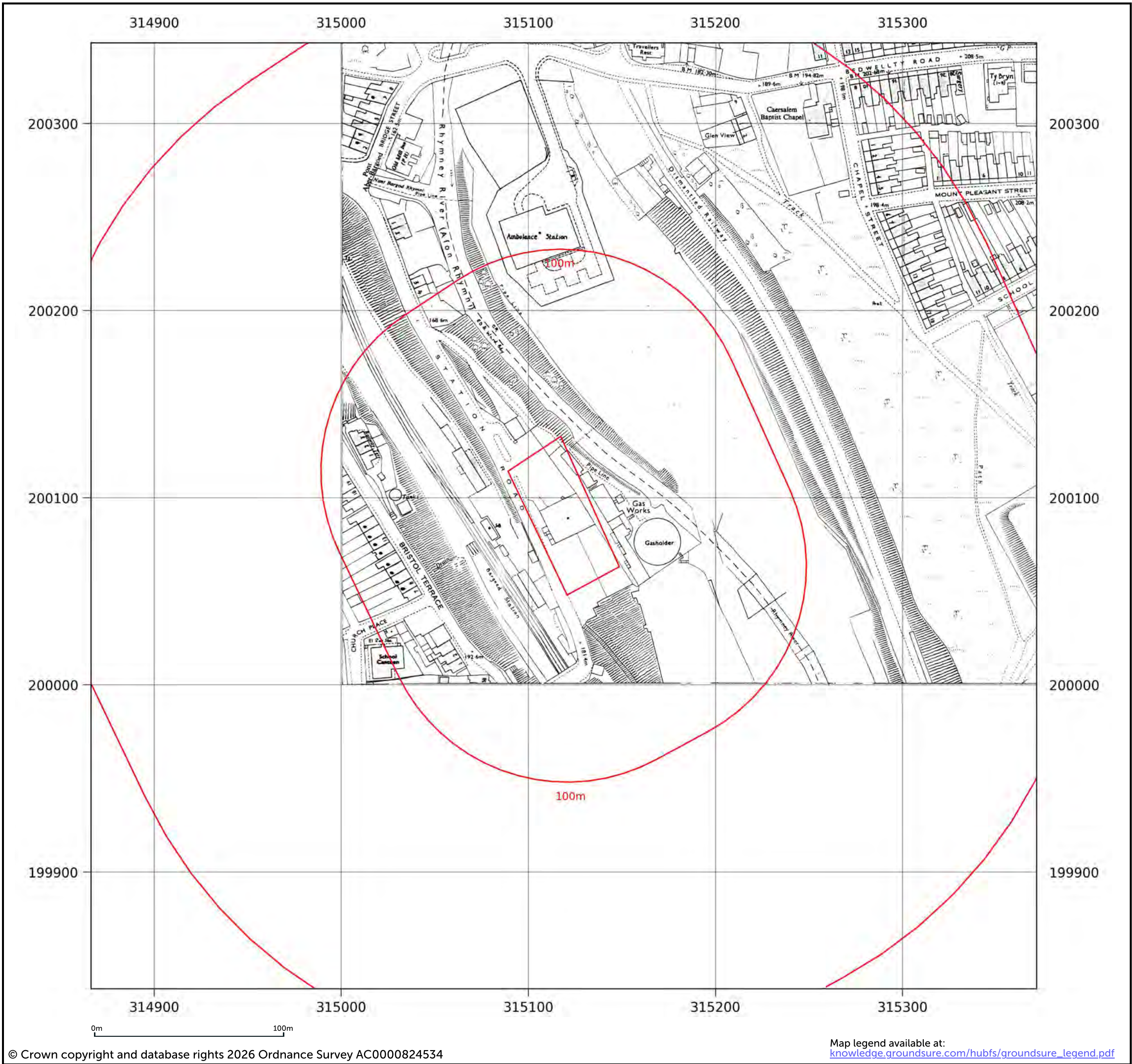
Site details: LAND OFF STATION ROAD, BARGOED, CF81 9AL
Client ref: B5556/JS/11032026
Report ref: GS-9V6-R5H-HOA-8K1
Grid ref: 315118.89, 200089.88
Production date: 11 March 2026

Map name: National Grid
Map date: 1992
Scale: 1:1,250
Printed at: 1:2,000



Date: 1992
Surveyed: 1959
Revised: 1992
Copyright: 1992
Levelled: 1959

Contact us with any questions at:
info@groundsure.com
01273 257 755



Site details: LAND OFF STATION ROAD, BARGOED, CF81 9AL
Client ref: B5556/JS/11032026
Report ref: GS-9V6-R5H-HOA-8K1
Grid ref: 315118.89, 200089.88
Production date: 11 March 2026

Map name: National Grid
Map date: 1992-1993
Scale: 1:1,250
Printed at: 1:2,000



Date: 1993 Copyright: 1993	Date: 1992 Surveyed: 1959 Revised: 1992 Copyright: 1992 Levelled: 1959
Date: 1993 Surveyed: 1993 Copyright: 1993	Date: 1993 Surveyed: 1993 Copyright: 1993

Contact us with any questions at:
info@groundsure.com
 01273 257 755



Site details: LAND OFF STATION ROAD,
BARGOED, CF81 9AL
Client ref: B5556/JS/11032026
Report ref: GS-9V6-R5H-HOA-8K1
Grid ref: 315118.89, 200089.88
Production date: 11 March 2026

Map name: National Grid
Map date: 1993
Scale: 1:1,250
Printed at: 1:2,000



Date: 1993
Copyright: 1993

Contact us with any questions at:
info@groundsure.com
01273 257 755



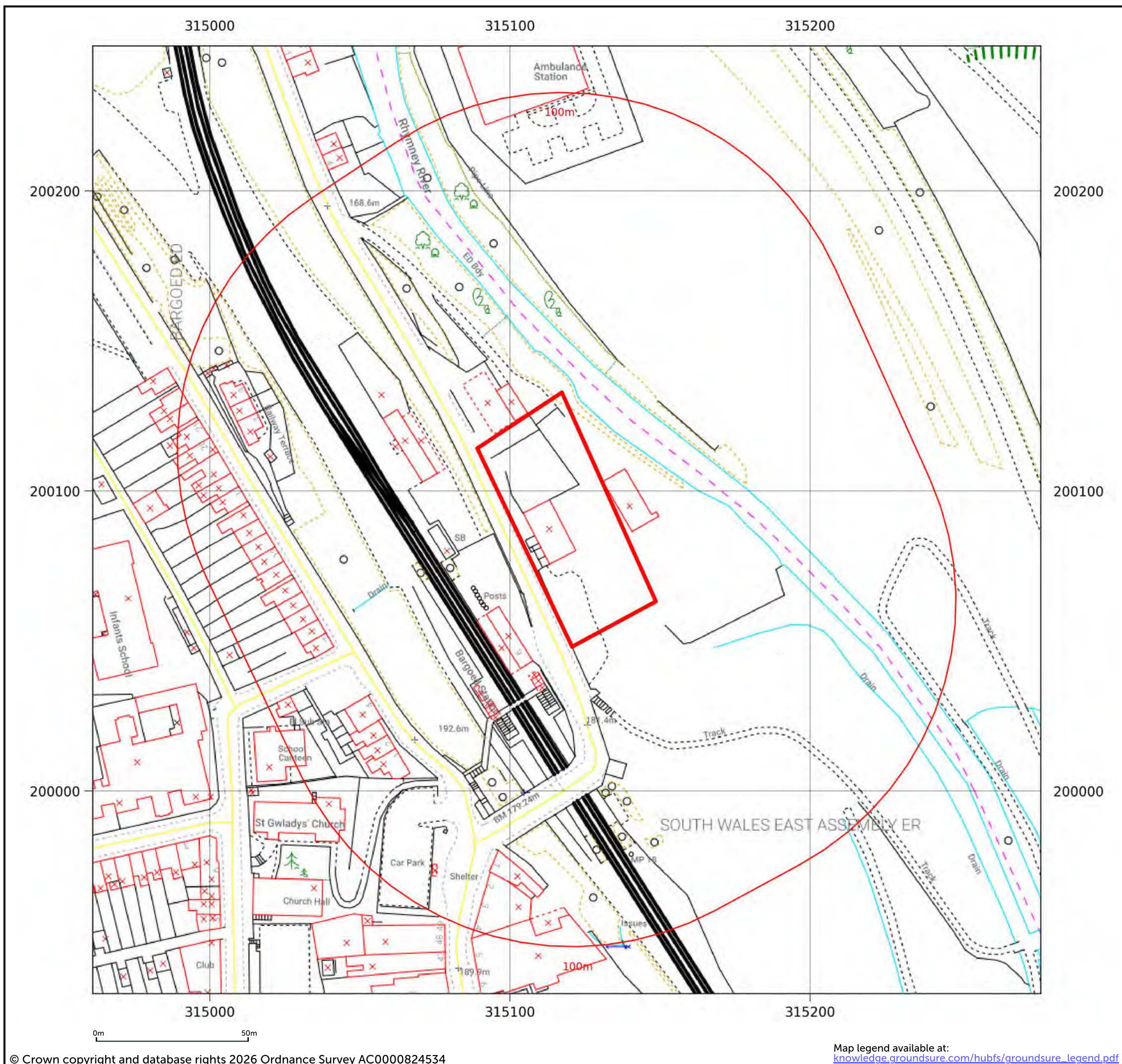
Site details: LAND OFF STATION ROAD, BARGOED, CF81 9AL
Client ref: B5556/JS/11032026
Report ref: GS-9V6-R5H-HOA-8K1
Grid ref: 315118.89, 200089.88
Production date: 11 March 2026

Map name: LandLine
Map date: 2003
Scale: 1:1,250
Printed at: 1:1,250



Date: 2003

Contact us with any questions at:
info@groundsure.com
 01273 257 755



Site details:	LAND OFF STATION ROAD, BARGOED, CF81 9AL
Client ref:	B5556/JS/11032026
Report ref:	GS-9V6-R5H-HOA-8K1
Grid ref:	315118.89, 200089.88
Production date:	11 March 2026

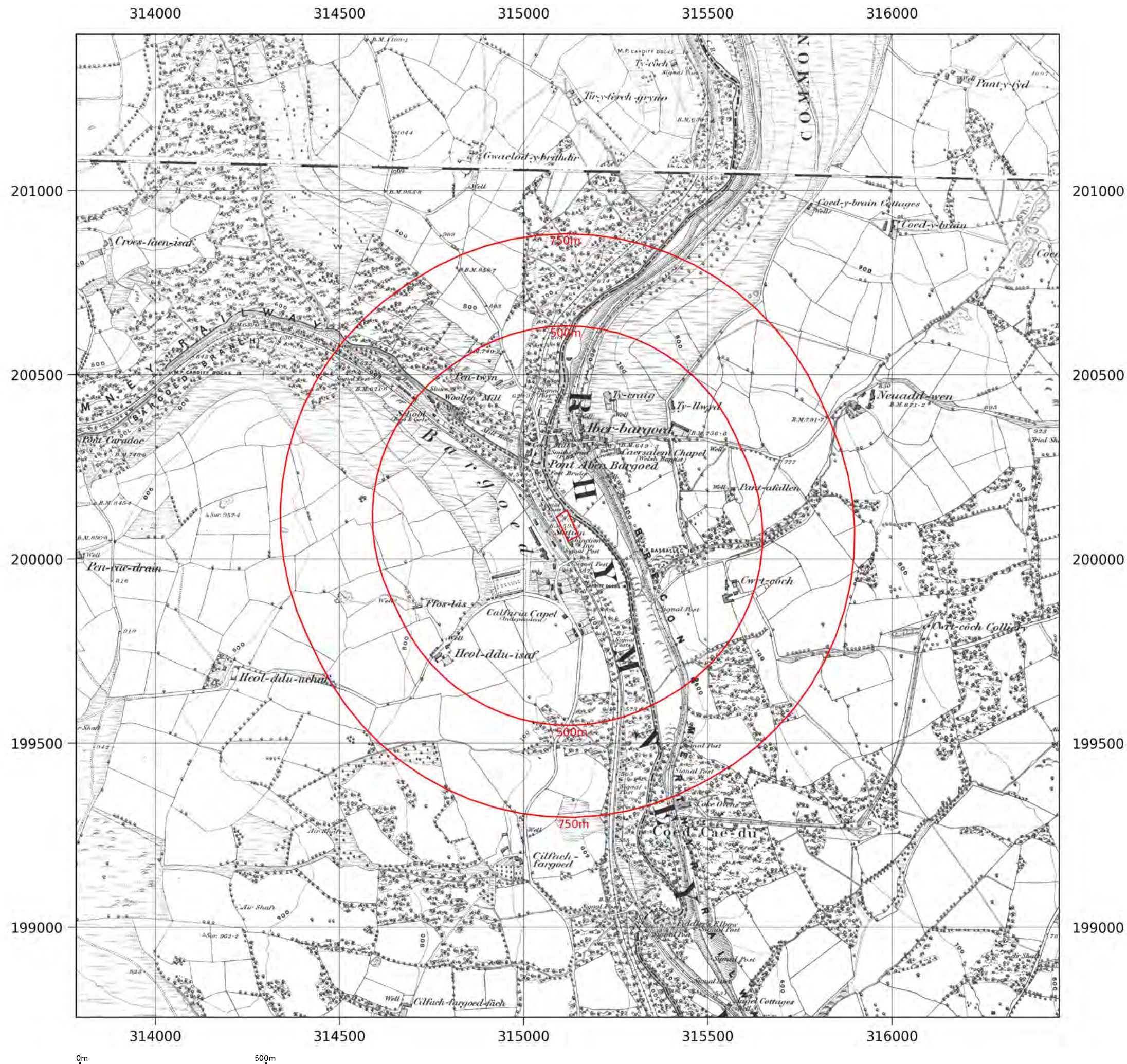
Map name:	County Series
Map date:	1879
Scale:	1:10,560
Printed at:	1:10,560



Date: 1879
Surveyed: 1879
Revised: 1879

Date: 1879
Surveyed: 1879
Revised: 1879

Contact us with any questions at:
info@groundsure.com
 01273 257 755



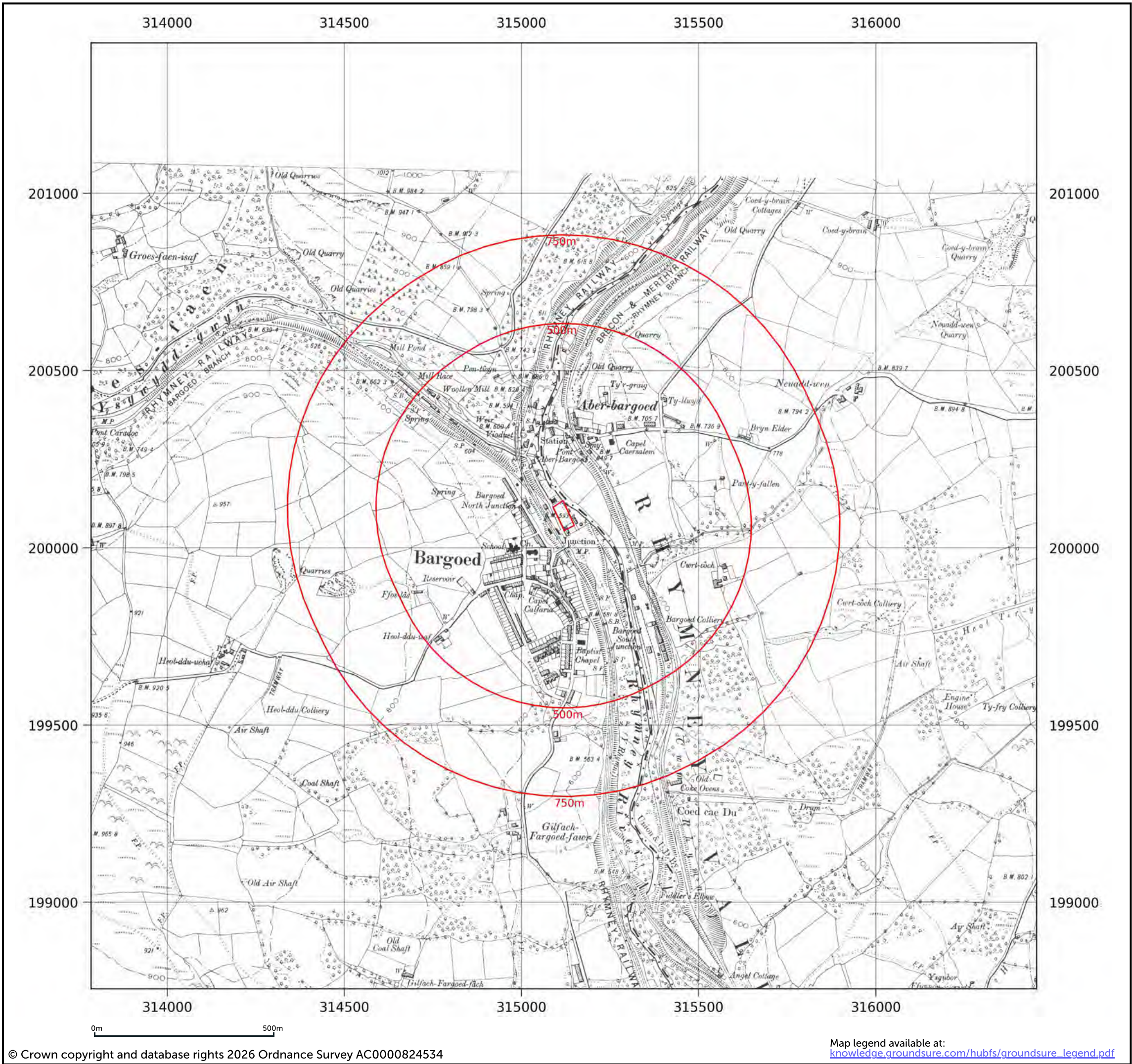
Site details: LAND OFF STATION ROAD, BARGOED, CF81 9AL
Client ref: B5556/JS/11032026
Report ref: GS-9V6-R5H-HOA-8K1
Grid ref: 315118.89, 200089.88
Production date: 11 March 2026

Map name: County Series
Map date: 1898
Scale: 1:10,560
Printed at: 1:10,560



Date: 1898
Surveyed: 1876
Revised: 1898

Contact us with any questions at:
info@groundsure.com
01273 257 755



Site details: LAND OFF STATION ROAD,
BARGOED, CF81 9AL

Client ref: B5556/JS/11032026

Report ref: GS-9V6-R5H-HOA-8K1

Grid ref: 315118.89, 200089.88

Production date: 11 March 2026

Map name: County Series

Map date: 1895-1899

Scale: 1:10,560

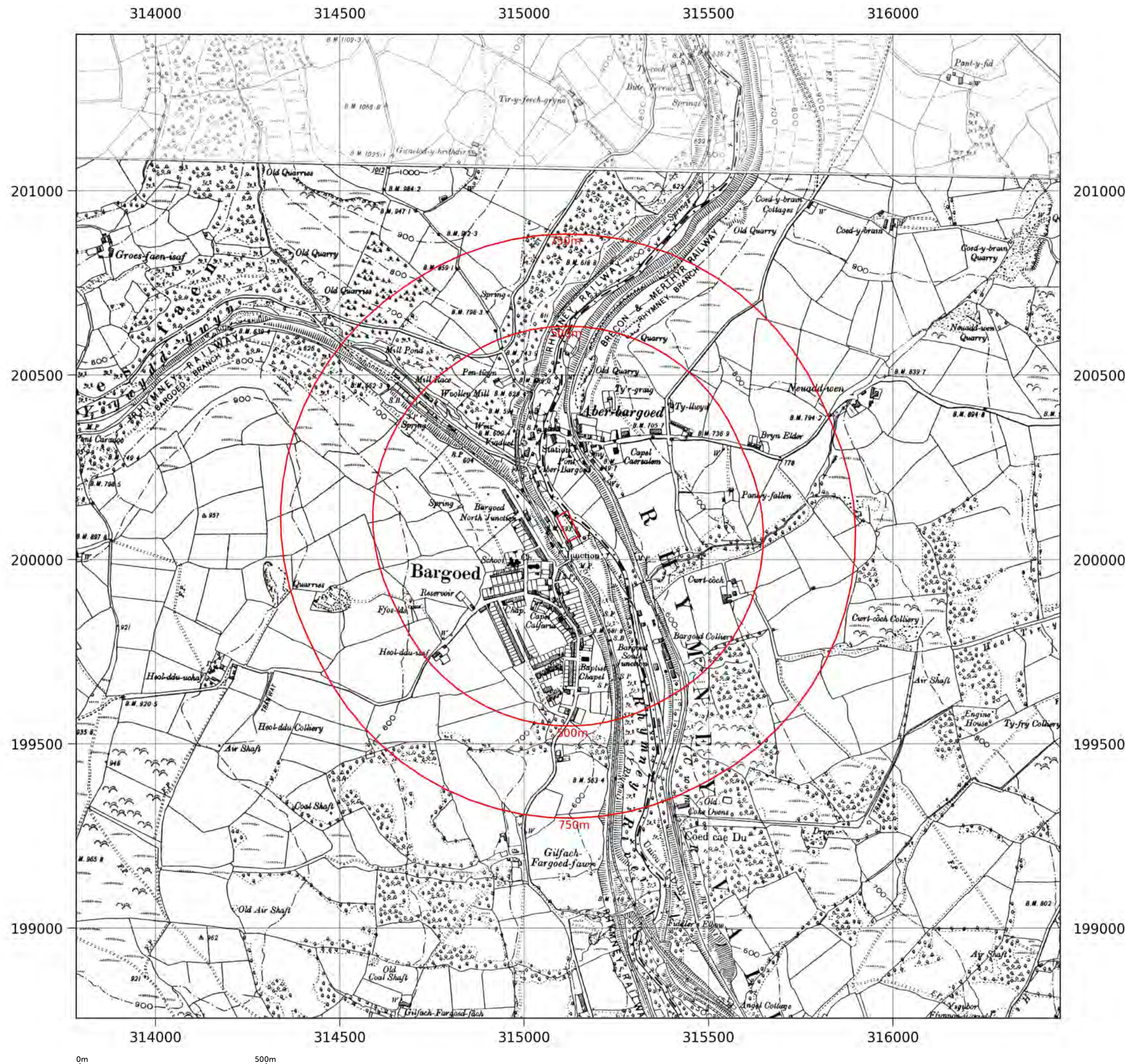
Printed at: 1:10,560



Date: 1899
Surveyed: 1873
Revised: 1899

Date: 1895

Contact us with any questions at:
info@groundsure.com
01273 257 755



Site details: LAND OFF STATION ROAD, BARGOED, CF81 9AL
Client ref: B5556/JS/11032026
Report ref: GS-9V6-R5H-HOA-8K1
Grid ref: 315118.89, 200089.88
Production date: 11 March 2026

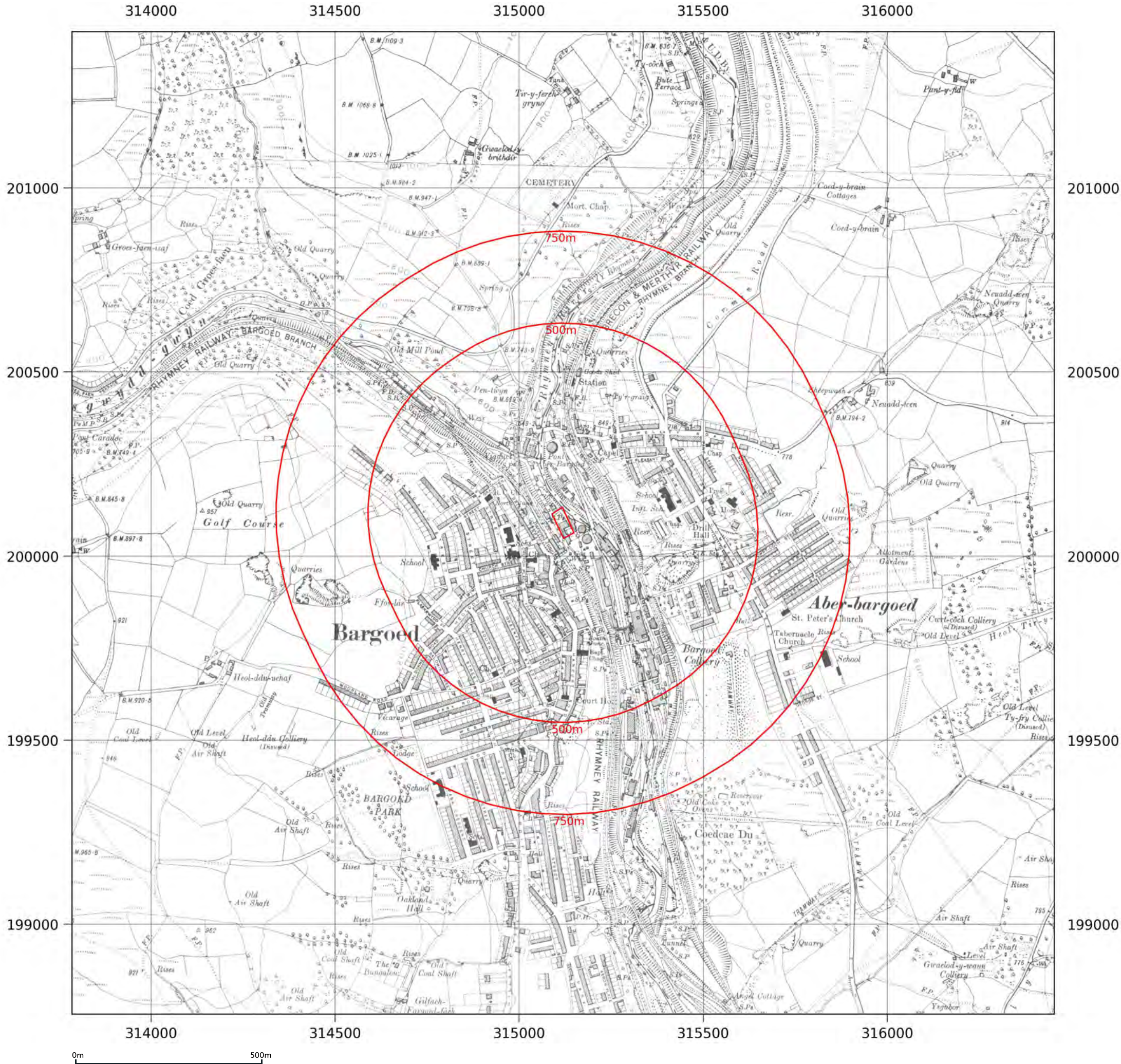
Map name: County Series
Map date: 1916
Scale: 1:10,560
Printed at: 1:10,560



Date: 1916
Surveyed: 1873
Revised: 1916

Date: 1916
Surveyed: 1873
Revised: 1916

Contact us with any questions at:
info@groundsure.com
01273 257 755



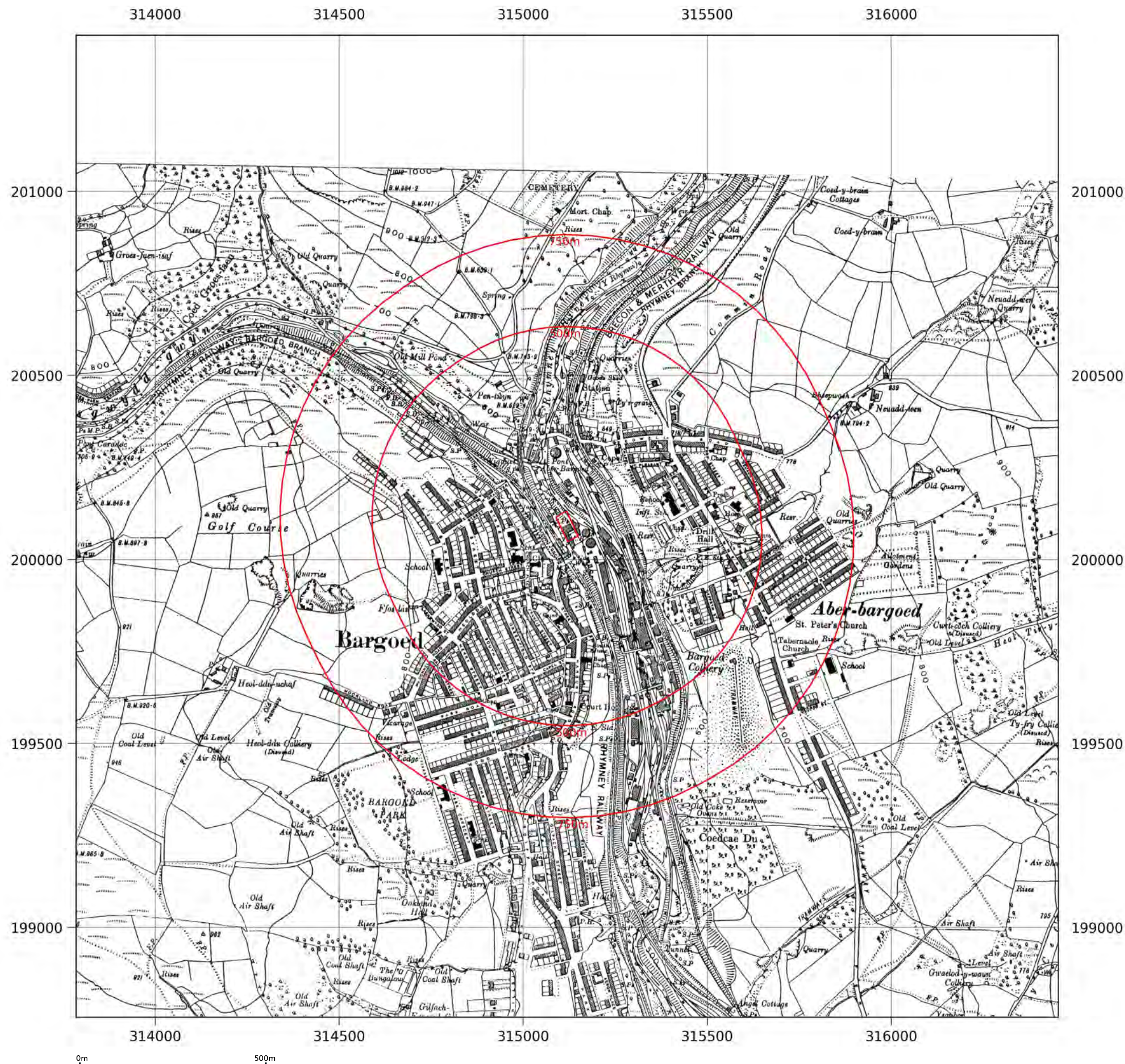
Site details:	LAND OFF STATION ROAD, BARGOED, CF81 9AL
Client ref:	B5556/JS/11032026
Report ref:	GS-9V6-R5H-HOA-8K1
Grid ref:	315118.89, 200089.88
Production date:	11 March 2026

Map name:	County Series
Map date:	1916
Scale:	1:10,560
Printed at:	1:10,560



Date: 1916

Contact us with any questions at:
info@groundsurre.com
 01273 257 755



Site details: LAND OFF STATION ROAD, BARGOED, CF81 9AL
Client ref: B5556/JS/11032026
Report ref: GS-9V6-R5H-HOA-8K1
Grid ref: 315118.89, 200089.88
Production date: 11 March 2026

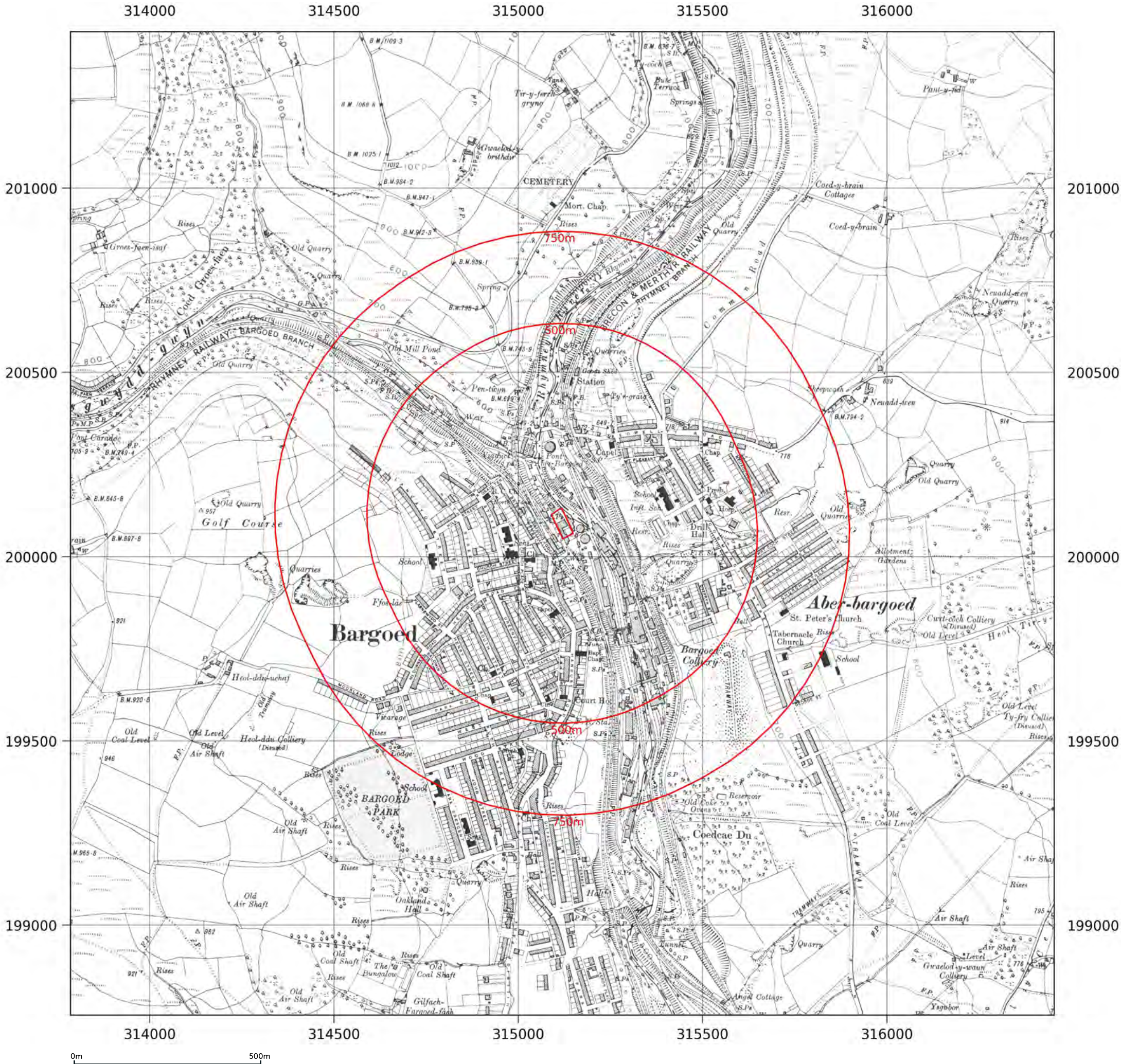
Map name: County Series
Map date: 1922
Scale: 1:10,560
Printed at: 1:10,560



Date: 1922
Surveyed: 1873
Revised: 1922

Date: 1922
Surveyed: 1873
Revised: 1922

Contact us with any questions at:
info@groundsure.com
01273 257 755



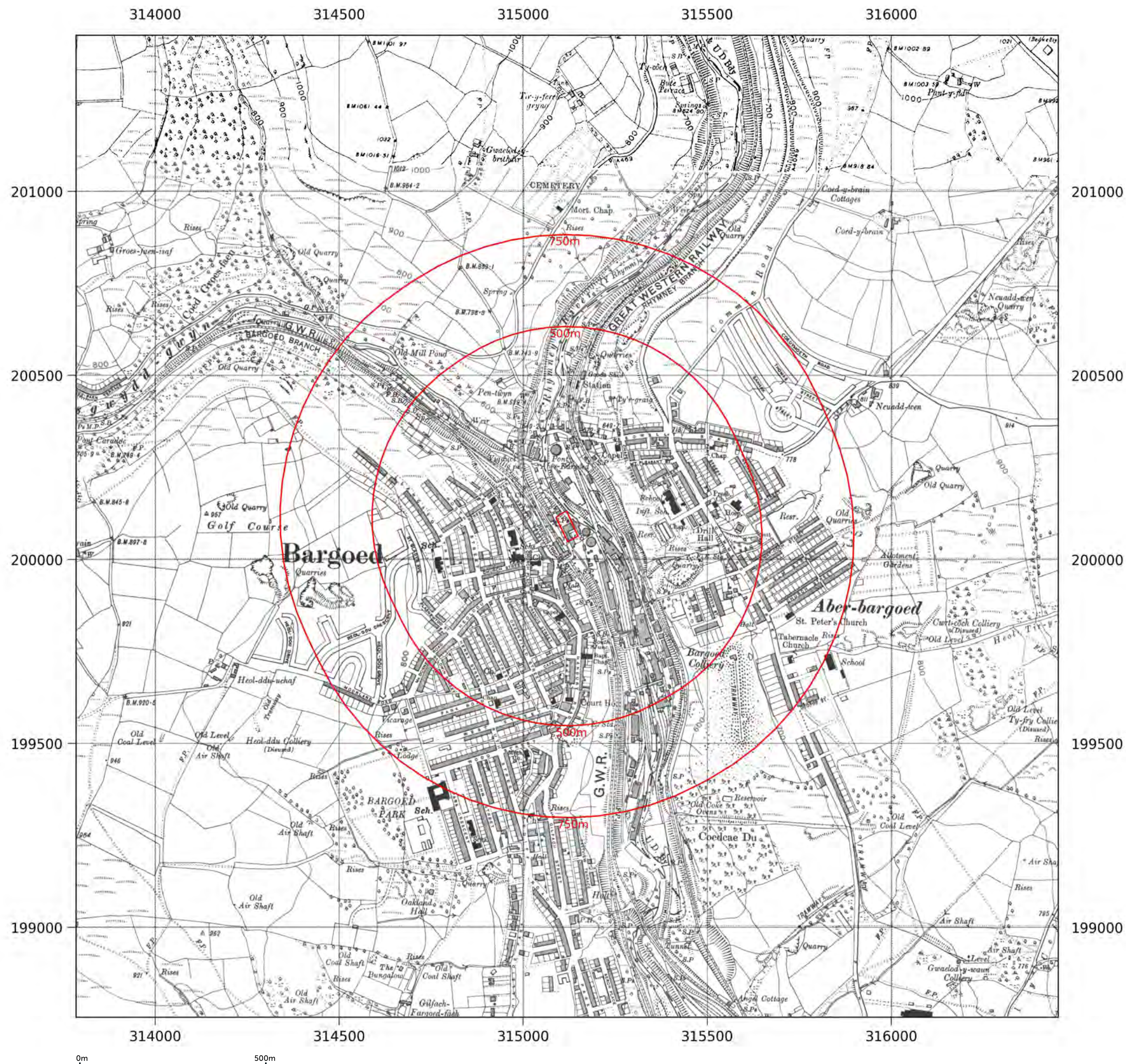
Site details:	LAND OFF STATION ROAD, BARGOED, CF81 9AL
Client ref:	B5556/JS/11032026
Report ref:	GS-9V6-R5H-HOA-8K1
Grid ref:	315118.89, 200089.88
Production date:	11 March 2026

Map name:	County Series
Map date:	1945-1948
Scale:	1:10,560
Printed at:	1:10,560



Date: 1948
Date: 1945 Surveyed: 1873 Revised: 1945 Edition: 1945

Contact us with any questions at:
info@groundsure.com
 01273 257 755



Site details: LAND OFF STATION ROAD, BARGOED, CF81 9AL
Client ref: B5556/JS/11032026
Report ref: GS-9V6-R5H-HOA-8K1
Grid ref: 315118.89, 200089.88
Production date: 11 March 2026

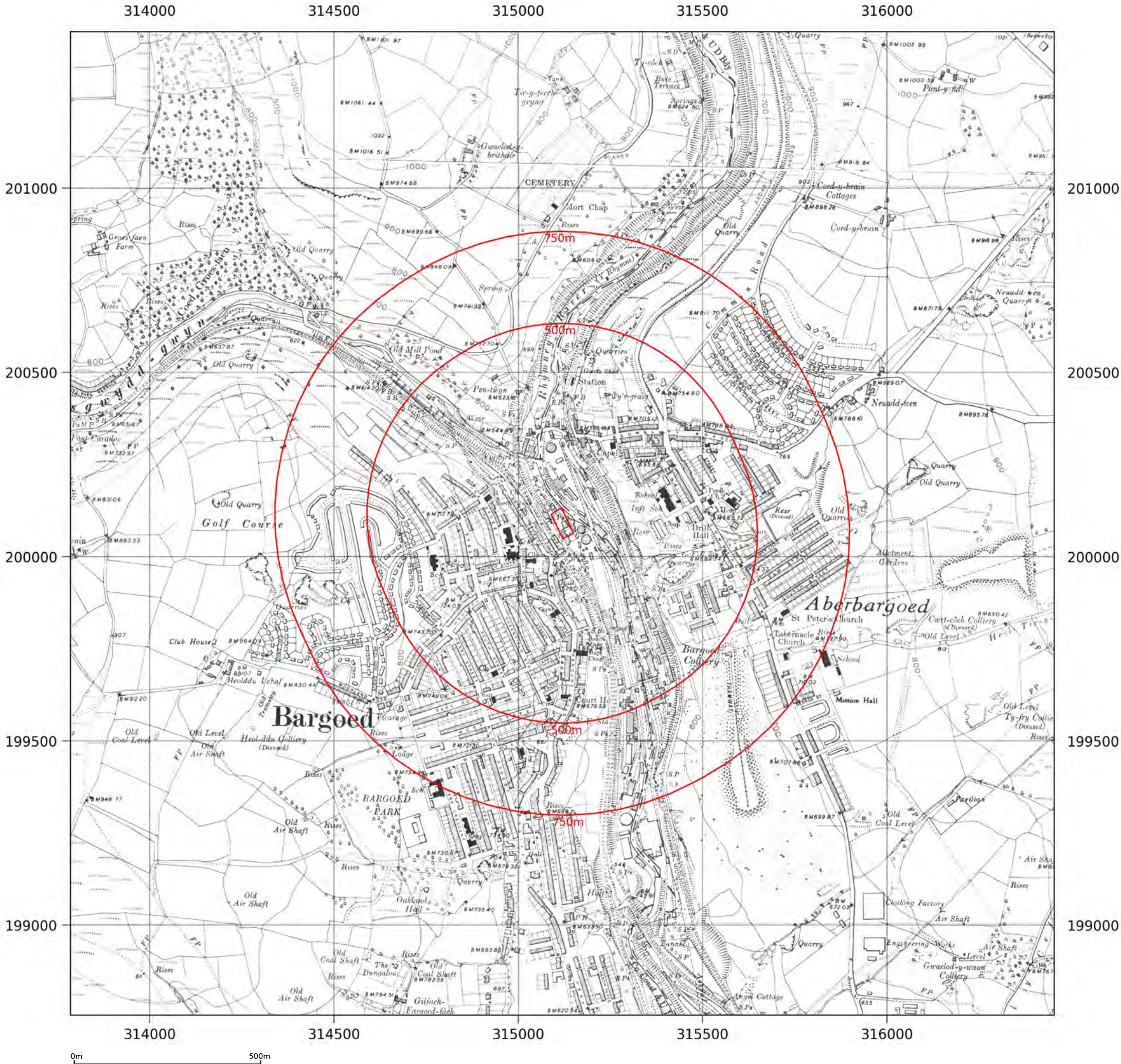
Map name: County Series
Map date: 1948
Scale: 1:10,560
Printed at: 1:10,560



Date: 1948
Surveyed: 1873
Revised: 1948

Date: 1948
Surveyed: 1873
Revised: 1948

Contact us with any questions at:
info@groundsure.com
01273 257 755



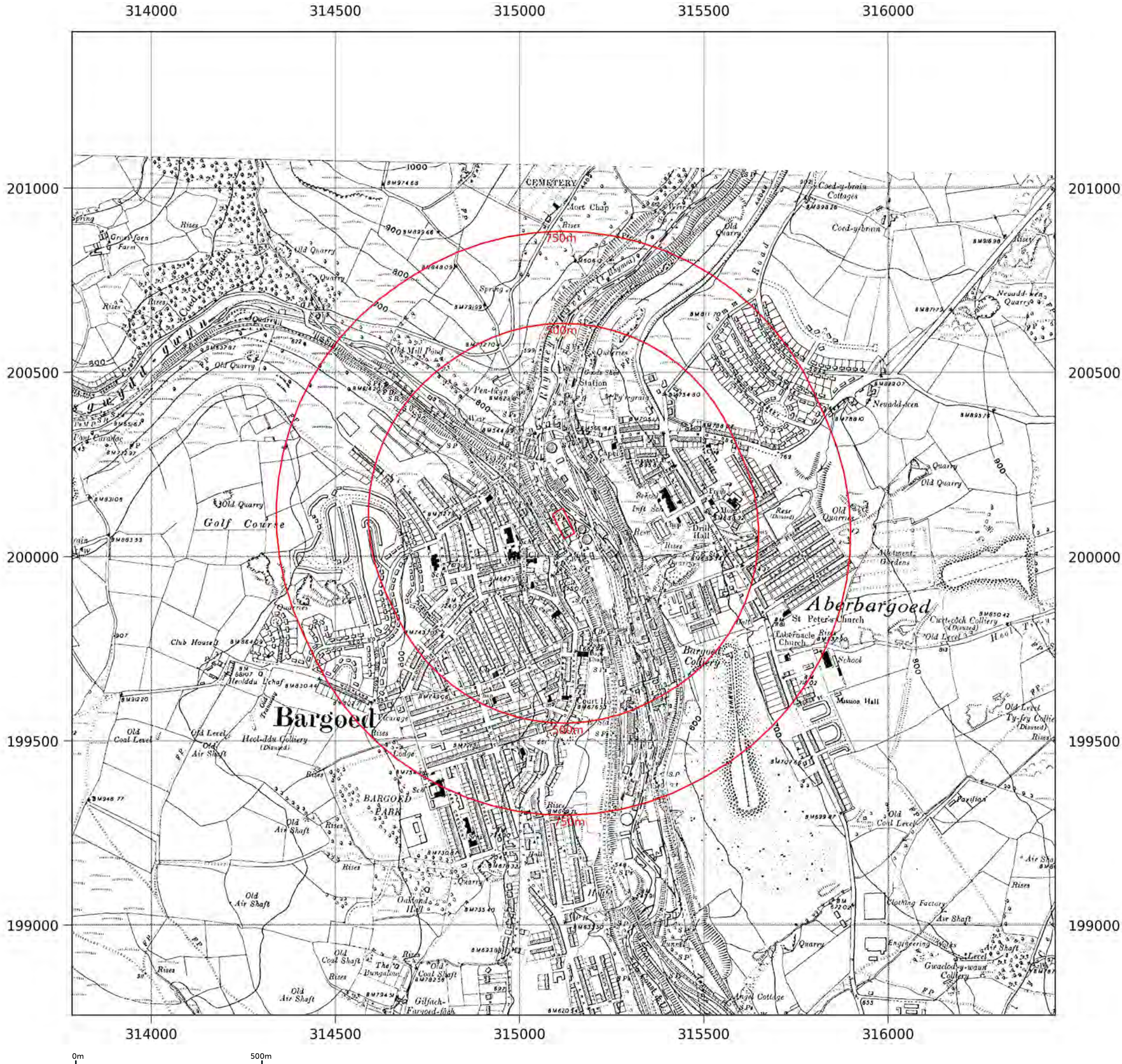
Site details: LAND OFF STATION ROAD, BARGOED, CF81 9AL
Client ref: B5556/JS/11032026
Report ref: GS-9V6-R5H-HOA-8K1
Grid ref: 315118.89, 200089.88
Production date: 11 March 2026

Map name: County Series
Map date: 1948
Scale: 1:10,560
Printed at: 1:10,560



Date: 1948

Contact us with any questions at:
info@groundsure.com
01273 257 755



Site details:

LAND OFF STATION ROAD,
BARGOED, CF81 9AL

Client ref:

B5556/JS/11032026

Report ref:

GS-9V6-R5H-HOA-8K1

Grid ref:

315118.89, 200089.88

Production date:

11 March 2026

Map name:

Provisional

Map date:

1960-1965

Scale:

1:10,560

Printed at:

1:10,560

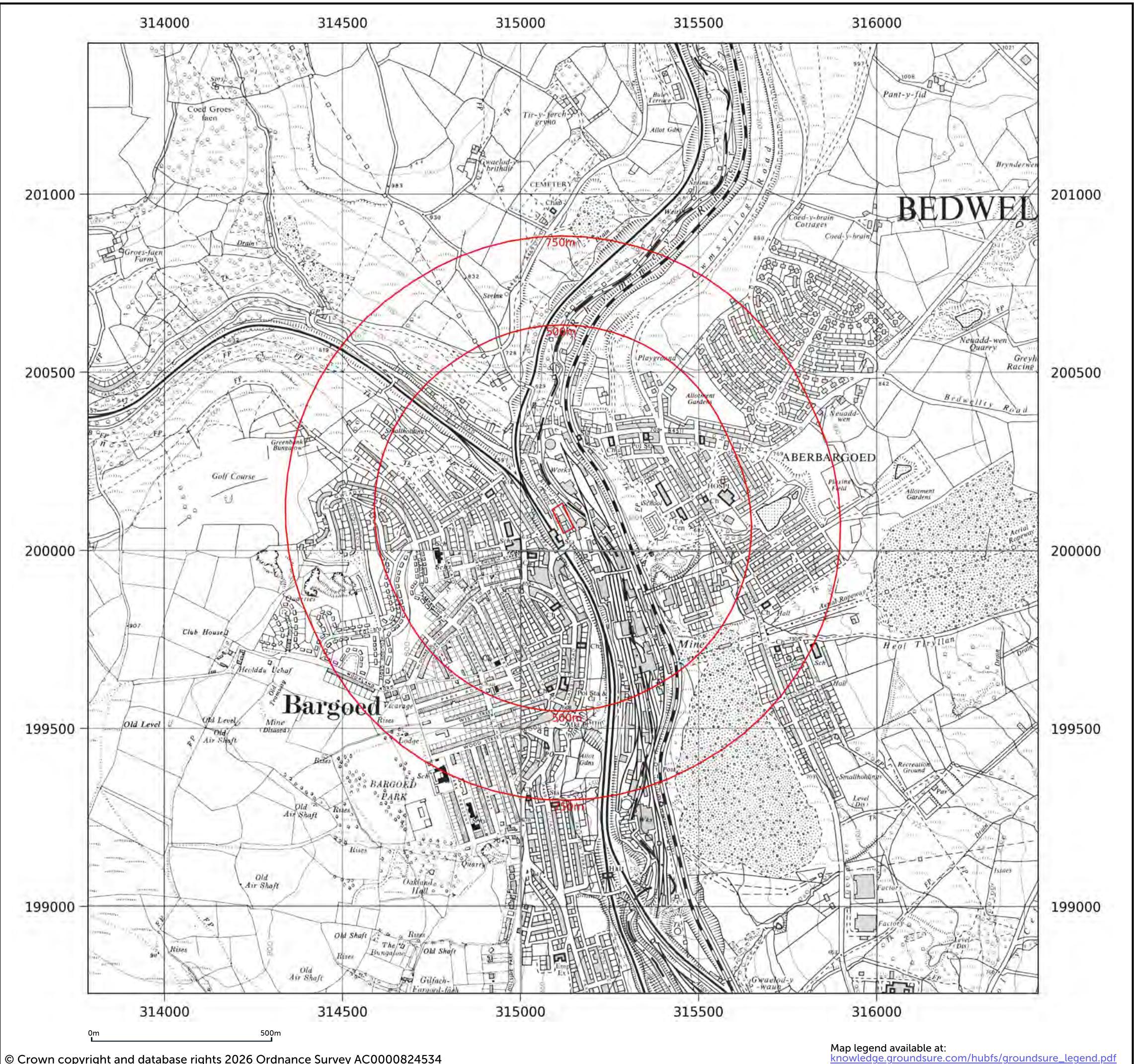
Date: 1964
Surveyed: 1964
Revised: 1964

Date: 1964
Surveyed: 1964
Revised: 1964

Date: 1960
Revised: 1948
Copyright: 1960

Date: 1965
Surveyed: 1965
Revised: 1965

Contact us with any questions at:
info@groundsure.com
01273 257 755



Site details:

LAND OFF STATION ROAD,
BARGOED, CF81 9AL

Client ref:

B5556/JS/11032026

Report ref:

GS-9V6-R5H-HOA-8K1

Grid ref:

315118.89, 200089.88

Production date:

11 March 2026

Map name:

Provisional

Map date:

1965

Scale:

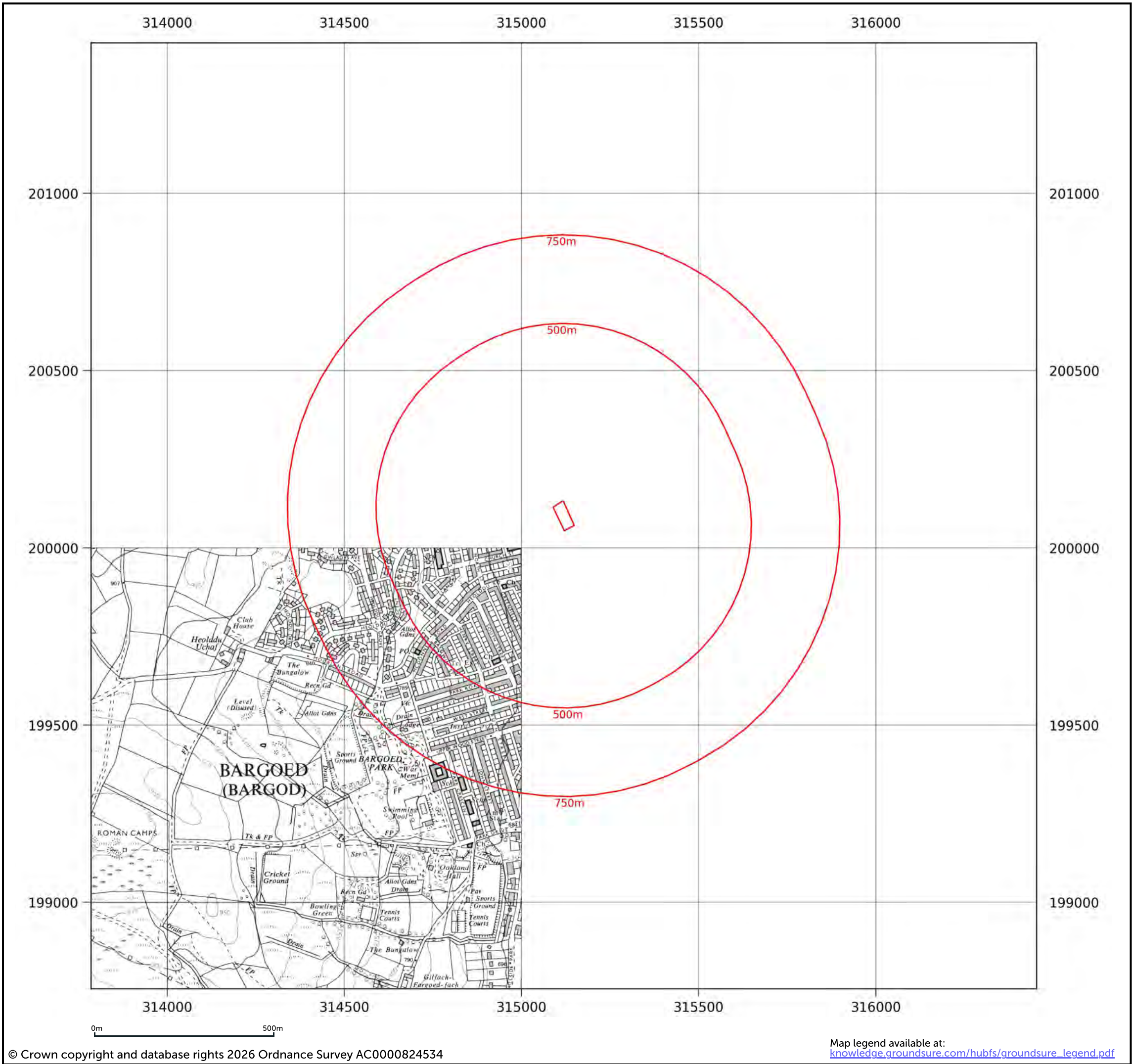
1:10,560

Printed at:

1:10,560



Contact us with any questions at:
info@groundsure.com
01273 257 755



Site details:

LAND OFF STATION ROAD,
BARGOED, CF81 9AL

Client ref:

B5556/JS/11032026

Report ref:

GS-9V6-R5H-HOA-8K1

Grid ref:

315118.89, 200089.88

Production date:

11 March 2026

Map name:

National Grid

Map date:

1973-1974

Scale:

1:10,000

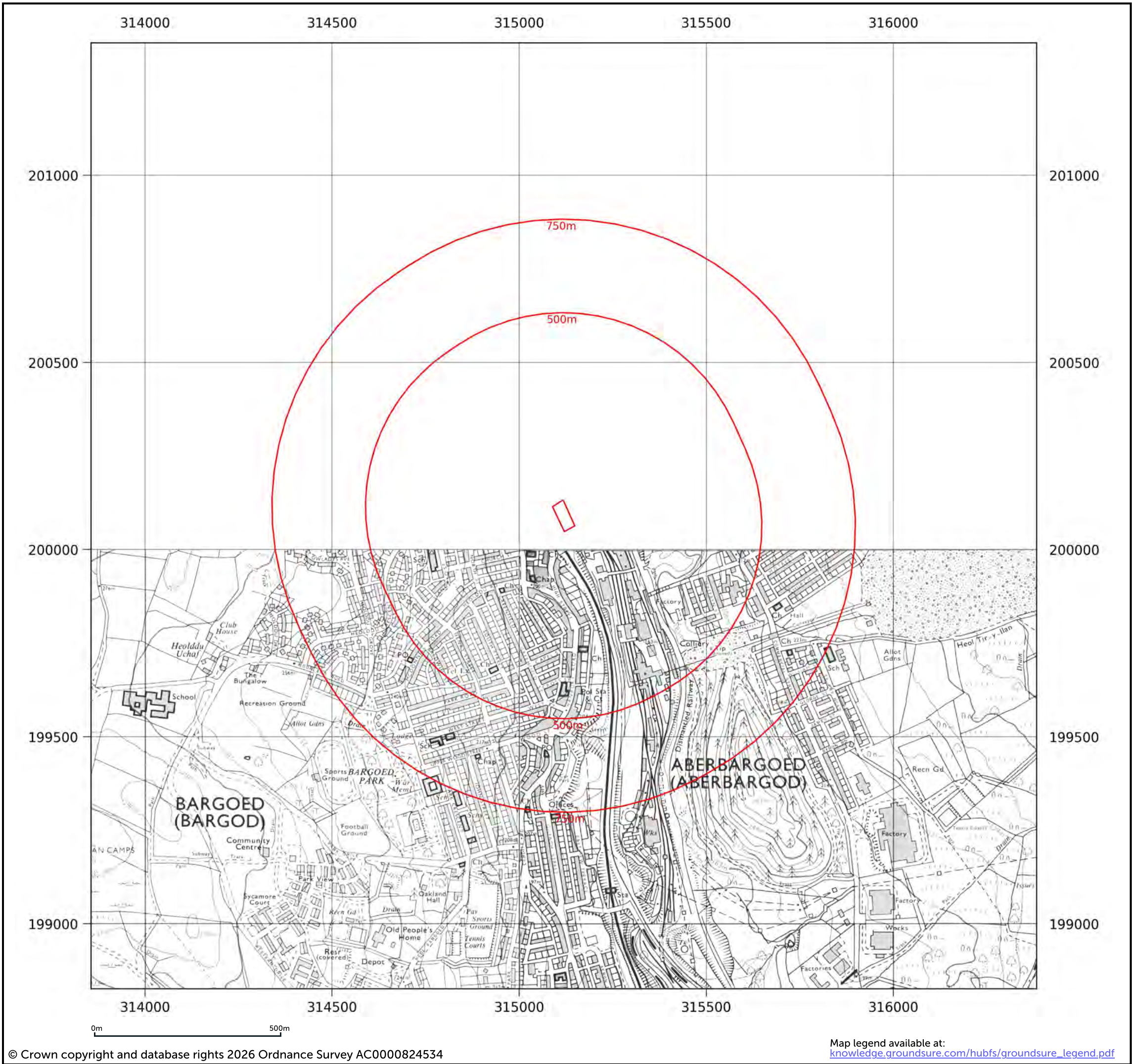
Printed at:

1:10,000



Date: 1974 Surveyed: 1974 Revised: 1974	Date: 1973 Surveyed: 1973 Revised: 1973

Contact us with any questions at:
info@groundsure.com
01273 257 755



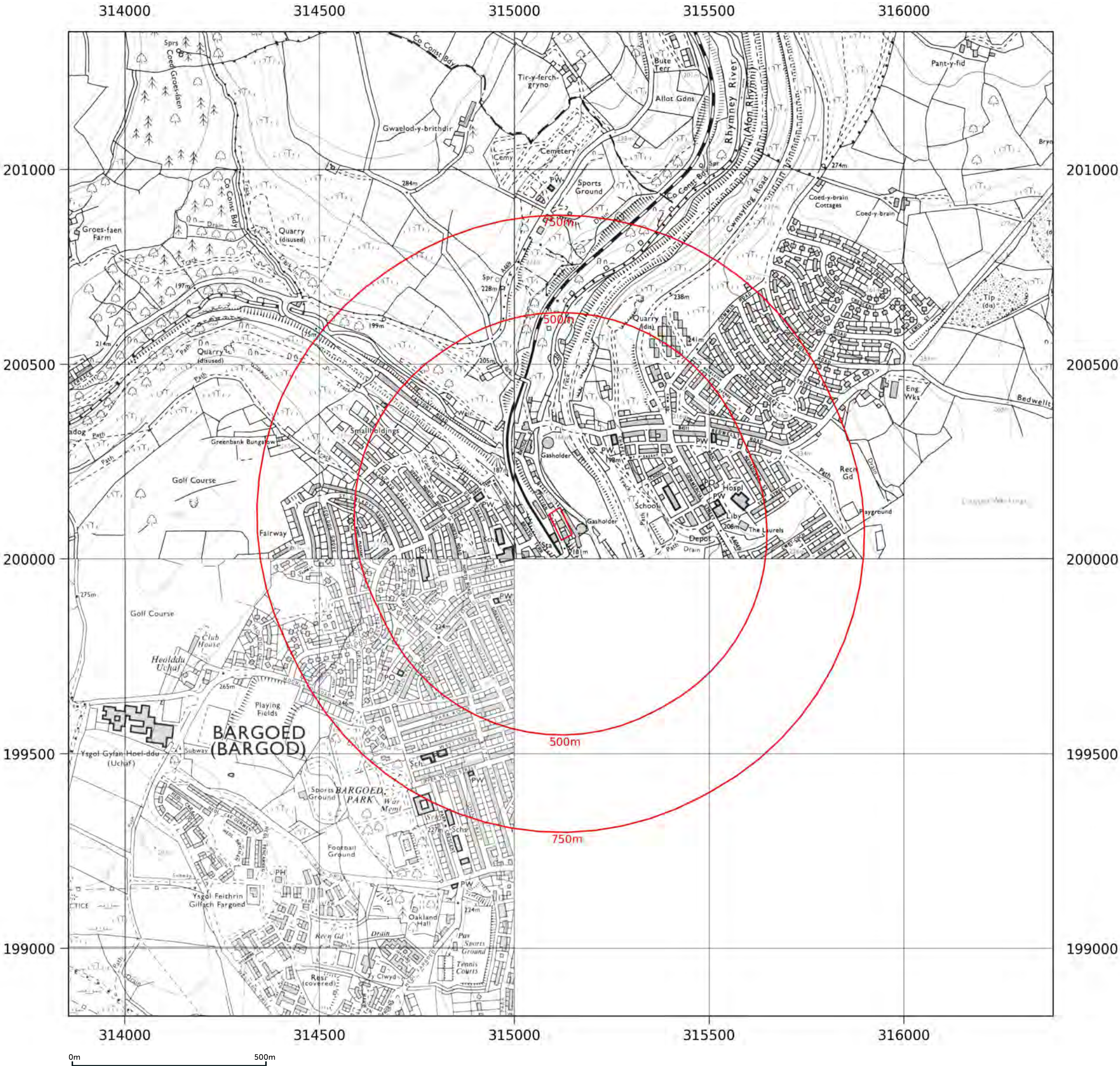
Site details: LAND OFF STATION ROAD, BARGOED, CF81 9AL
Client ref: B5556/JS/11032026
Report ref: GS-9V6-R5H-HOA-8K1
Grid ref: 315118.89, 200089.88
Production date: 11 March 2026

Map name: National Grid
Map date: 1984-1985
Scale: 1:10,000
Printed at: 1:10,000



Date: 1985 Surveyed: 1983 Revised: 1985	Date: 1985 Surveyed: 1975 Revised: 1985
Date: 1984 Surveyed: 1978 Revised: 1984	

Contact us with any questions at:
info@groundsure.com
01273 257 755



Site details:

LAND OFF STATION ROAD,
BARGOED, CF81 9AL

Client ref:

B5556/JS/11032026

Report ref:

GS-9V6-R5H-HOA-8K1

Grid ref:

315118.89, 200089.88

Production date:

11 March 2026

Map name:

National Grid

Map date:

1993

Scale:

1:10,000

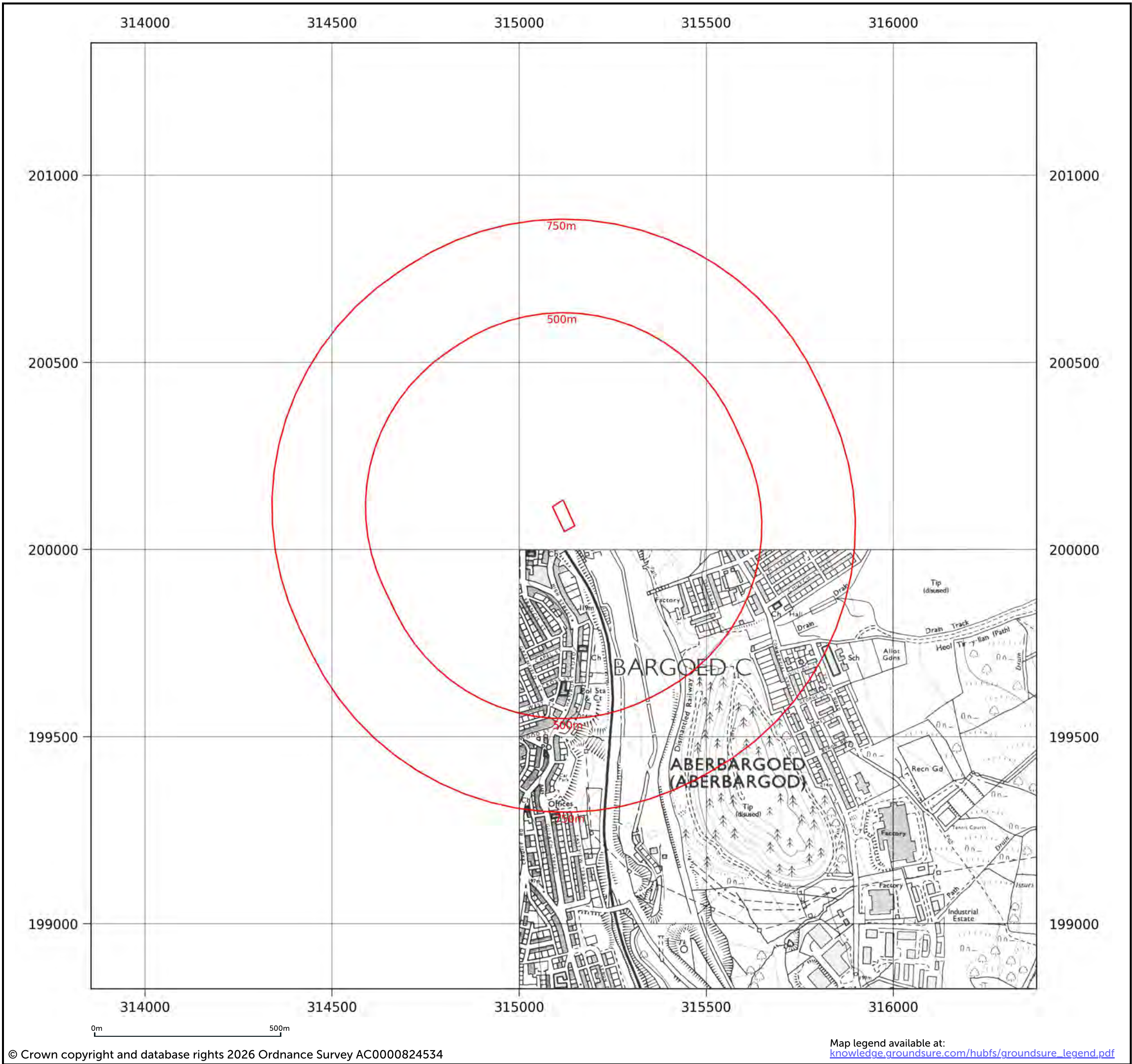
Printed at:

1:10,000



Date: 1993
Surveyed: 1973
Revised: 1993

Contact us with any questions at:
info@groundsure.com
01273 257 755



Site details:	LAND OFF STATION ROAD, BARGOED, CF81 9AL
Client ref:	B5556/JS/11032026
Report ref:	GS-9V6-R5H-HOA-8K1
Grid ref:	315118.89, 200089.88
Production date:	11 March 2026

Map name:	National Grid
Map date:	2001
Scale:	1:10,000
Printed at:	1:10,000



Date: 2001	Date: 2001
Date: 2001	Date: 2001

Contact us with any questions at:
info@groundsure.com
01273 257 755



Site details:

Client ref:

Report ref:

Grid ref:

Production date:

LAND OFF STATION ROAD,
BARGOED, CF81 9AL

B5556/JS/11032026

GS-9V6-R5H-HOA-8K1

315118.89, 200089.88

11 March 2026

Map name:

Map date:

Scale:

Printed at:

National Grid

2010

1:10,000

1:10,000

Date: 2010

Date: 2010

Date: 2010

Date: 2010

N

W

E

S

Contact us with any questions at:
info@groundsure.com
01273 257 755



Site details: LAND OFF STATION ROAD, BARGOED, CF81 9AL
Client ref: B5556/JS/11032026
Report ref: GS-9V6-R5H-HOA-8K1
Grid ref: 315118.89, 200089.88
Production date: 11 March 2026

Map name: National Grid
Map date: 2015
Scale: 1:10,000
Printed at: 1:10,000



Date: 2015	Date: 2015
Date: 2015	Date: 2015

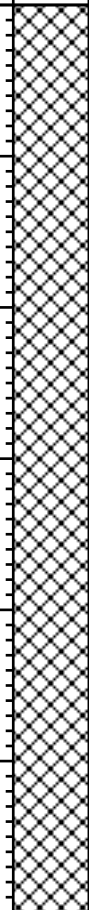
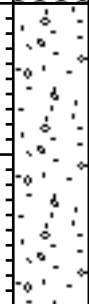
Contact us with any questions at:
info@groundsure.com
01273 257 755

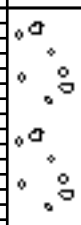
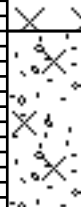
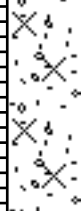
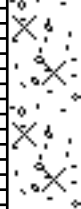
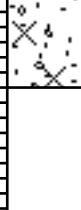
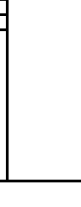
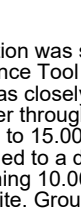
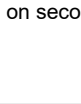


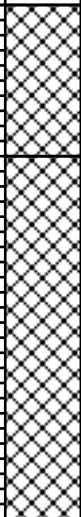
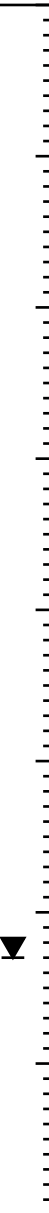


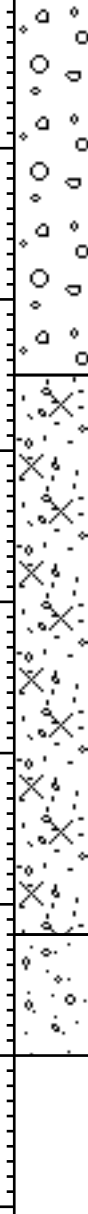
APPENDIX 2

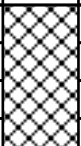
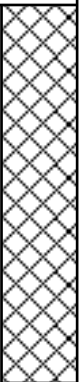
EXPLORATORY HOLE LOGS

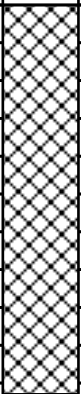
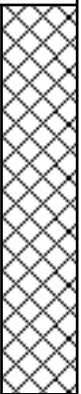
 EARTH ENVIRONMENTAL & GEOTECHNICAL A Technics Group Company				Project Title: Bargoed					BH01																																																		
				Project Number: B5556		Client: Langstone Construction Group Ltd																																																					
				GL (mAOD): 0		N Coord: 200099			E Coord: 315109																																																		
Date: 08/04/2026-09/04/2026				Method: Rotary Core		Driller: GK Drilling		Logged By: FL																																																			
Core/Samples	TCR	SCR	RQD	FI	ISPT	Level	Legend	Depth (m)	Description	Water	Standpipe																																																
0.80 ES					N=5	1.00		1.00	MADE GROUND: Soft red brown and dark grey brown slightly gravelly slightly sandy clay with medium cobble content. Gravel is angular to subrounded fine to coarse of concrete brick limestone and charcoal. Sand is fine to coarse. Cobbles are angular to subangular of limestone brick and concrete. 0.60 - 0.70 ...Loose sandy gravel. Gravel is angular fine to medium of limestone. Sand is coarse.																																																		
2.60 ES				N=3	2.00	2.00																																																					
				N=21	3.00	3.00																																																					
				N=23	4.00	4.00																																																					
5.80 ES				N=50	5.00	5.00																																																					
				N=50	7.00	7.00		6.00	Weathered SANDSTONE recovered as dense to very dense red brown slightly gravelly SAND. Gravel is angular to subrounded fine to coarse of sandstone. Sand is fine to coarse. 6.50 - 8.00 ...No recovery.																																																		
				N=50	8.00	8.00																																																					
									Borehole Continues																																																		
KEY D - Disturbed Sample B - Bulk Sample U - Undisturbed W - Water Sample S - Standard Penetration Test C - Core Sample N - Penetration Test 'N' Value V - Hand Shear Vane kPa  - Groundwater Strike  - Groundwater Level				REMARKS Exploratory hole location was scanned using a Cable Avoidance Tool prior to excavation. Drilling was closely monitored by an EEGSL engineer throughout. Borehole rotary cored to 15.00mbgl. Stand pipe was installed to a depth of 5.00mbgl, The remaining 10.00m was backfilled with bentonite. Groundwater level was at 5.00mbgl on second day of drilling.					Water Strikes <table border="1"> <tr> <th>Date</th> <th>Strike</th> <th>Level</th> <th>Minutes</th> <th>Casing</th> <th>Remarks</th> </tr> <tr> <td>09/04/2026</td> <td>5</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>			Date	Strike	Level	Minutes	Casing	Remarks	09/04/2026	5																																								
Date	Strike	Level	Minutes	Casing	Remarks																																																						
09/04/2026	5																																																										
				Daily Log Of Depths <table border="1"> <tr> <th>Date</th> <th>Casing</th> <th>Water</th> <th>From</th> <th>To</th> <th>Type</th> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>					Date	Casing	Water	From	To	Type																			Flushing Medium <table border="1"> <tr> <th>Date</th> <th>Casing</th> <th>Water</th> <th>From</th> <th>To</th> <th>Type</th> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>			Date	Casing	Water	From	To	Type																		
Date	Casing	Water	From	To	Type																																																						
Date	Casing	Water	From	To	Type																																																						
				Scale 1:50																																																							

 EARTH ENVIRONMENTAL & GEOTECHNICAL A Technics Group Company				Project Title: Bargoed					BH01					
				Project Number: B5556			Client: Langstone Construction Group Ltd						Sheet 2 Of 2	
				GL (mAOD): 0			N Coord: 200099		E Coord: 315109					
Date: 08/04/2026-09/04/2026				Method: Rotary Core			Driller: GK Drilling			Logged By: FL				
Core/Samples	TCR	SCR	RQD	FI	ISPT	Level	Legend	Depth (m)	Description		Water	Standpipe		
8.10 D	13	10	0			N =50		8.00-9.50 9.02-9.08 C 9.09-9.15 C	Medium strong light grey fine grained SANDSTONE recovered as angular to subangular coarse sandstone GRAVEL with angular to subangular sandstone cobbles. Orange staining on fractures.					
9.80 D									Very stiff brown SILT.					
11.50-12.00 B									Very dense slightly gravelly silty SAND. Gravel is angular to subangular fine to medium of sandstone. Sand is fine to coarse.					
14.50-15.00 B									End Of Borehole At 15.00 m					
12.20 D						N =50		10.00						
13.00-13.50 B						N =32		10.50						
14.20 D						N =50		11.00						
						N =50		12.00						
						N =50		13.00						
						N =50		14.00						
						N =50		15.00						
						N =50		16.00						
KEY D - Disturbed Sample B - Bulk Sample U - Undisturbed W - Water Sample S - Standard Penetration Test C - Core Sample N - Penetration Test 'N' Value V - Hand Shear Vane kPa ▽ - Groundwater Strike ▼ - Groundwater Level 				REMARKS Exploratory hole location was scanned using a Cable Avoidance Tool prior to excavation. Drilling was closely monitored by an EEGSL engineer throughout. Borehole rotary cored to 15.00mbgl. Stand pipe was installed to a depth of 5.00mbgl. The remaining 10.00m was backfilled with bentonite. Groundwater level was at 5.00mbgl on second day of drilling. Scale 1:50					Water Strikes					
									Date	Strike	Level	Minutes	Casing	Remarks
									09/04/2026	5				
Daily Log Of Depths			Flushing Medium											
Date	Casing	Water	From	To	Type									

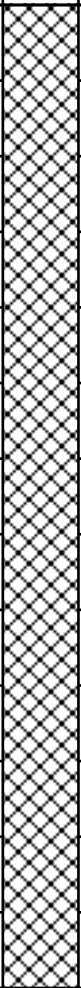
 EARTH ENVIRONMENTAL & GEOTECHNICAL A Technics Group Company				Project Title: Bargoed					BH02					
				Project Number: B5556		Client: Langstone Construction Group Ltd								
				GL (mAOD): 0		N Coord: 200081			E Coord: 315126					
Date: 09/04/2026-10/04/2026				Method: Rotary Core		Driller: GK Drilling		Logged By: FL						
Core/Samples	TCR	SCR	RQD	FI	ISPT	Level	Legend	Depth (m)	Description	Water	Standpipe			
0.50 ES								1.00	MADE GROUND: Firm brown mottled dark grey brown slightly gravelly sandy clay. Gravel is subangular to subrounded fine to medium of red brick limestone and concrete. Sand is medium to coarse. 0.70 ...Angular red brick cobble. 0.80 ...Angular limestone cobble.					
2.10 D						2.00		MADE GROUND: Red brick wall. 70mm-80mm thick red and pale yellow sandstone bricks.						
						3.00								
3.71-3.76 C						-3.5		3.50	Medium strong grey fine grained SANDSTONE recovered as gravelly COBBLES. Gravel is angular to subrounded medium to coarse of sandstone. Cobbles are angular to subangular of sandstone. Orange and dark grey staining on fractures.					
4.64-4.73 C					N =50	4.00								
4.50-6.00	53	5	0		N =10	5.00								
						6.00								
6.00-7.50	27	0	0		N =50	7.00								
						8.00		Borehole Continues						
KEY				REMARKS					Water Strikes					
D - Disturbed Sample B - Bulk Sample U - Undisturbed W - Water Sample S - Standard Penetration Test C - Core Sample N - Penetration Test 'N' Value V - Hand Shear Vane kPa ▽ - Groundwater Strike ▼ - Groundwater Level 				Exploratory hole location was scanned using a Cable Avoidance Tool prior to excavation. Drilling was closely monitored by an EEGSL engineer throughout. Borehole rotary cored to 15.00mbgl. Stand pipe was installed to a depth of 5.00mbgl, The remaining 10.00m was backfilled with bentonite. Groundwater was encountered at 9.00mbgl and the level was at 6.30mbgl on second day of drilling. Scale 1:50					Date	Strike	Level	Minutes	Casing	Remarks
									09/04/2026	9	6.3	960		
									Daily Log Of Depths			Flushing Medium		
									Date	Casing	Water	From	To	Type

 EARTH ENVIRONMENTAL & GEOTECHNICAL A Technics Group Company				Project Title: Bargoed					BH02				
				Project Number: B5556			Client: Langstone Construction Group Ltd						Sheet 2 Of 2
				GL (mAOD): 0			N Coord: 200081		E Coord: 315126				
Date: 09/04/2026-10/04/2026				Method: Rotary Core			Driller: GK Drilling			Logged By: FL			
Core/Samples	TCR	SCR	RQD	FI	ISPT	Level	Legend	Depth (m)	Description		Water	Standpipe	
7.50-9.00 8.60 D 8.80-8.85 C	23	0	0		N =41			9.00	Medium strong grey fine grained SANDSTONE recovered as gravelly COBBLES. Gravel is angular to subrounded medium to coarse of sandstone. Cobbles are angular to subangular of sandstone. Orange and dark grey staining on fractures.		▽		
10.00-10.50 B					N =50	-10.5		10.00					
10.80 D								10.50					
11.50-12.00 B					N =39			11.00	Very dense brown slightly gravelly silty SAND. Gravel is subangular to subrounded fine to medium of sandstone. Sand is fine to coarse.				
13.00-13.50 B								12.00					
					N =50	-14.2		13.00					
14.60-15.00 B 14.60 D						14.00		14.20	Very dense brown sandy GRAVEL. Gravel is angular to subrounded fine to medium of sandstone. Sand is medium to coarse.				
						15.00			End Of Borehole At 15.00 m				
						16.00							
KEY D - Disturbed Sample B - Bulk Sample U - Undisturbed W - Water Sample S - Standard Penetration Test C - Core Sample N - Penetration Test 'N' Value ▽ - Hand Shear Vane kPa ▽ - Groundwater Strike ▽ - Groundwater Level 				REMARKS Exploratory hole location was scanned using a Cable Avoidance Tool prior to excavation. Drilling was closely monitored by an EEGSL engineer throughout. Borehole rotary cored to 15.00mbgl. Stand pipe was installed to a depth of 5.00mbgl, The remaining 10.00m was backfilled with bentonite. Groundwater was encountered at 9.00mbgl and the level was at 6.30mbgl on second day of drilling. Scale 1:50				Water Strikes					
								Date	Strike	Level	Minutes	Casing	Remarks
								09/04/2026	9	6.3	960		
								Daily Log Of Depths			Flushing Medium		
								Date	Casing	Water	From	To	Type

 EARTH ENVIRONMENTAL & GEOTECHNICAL A Technics Group Company			Project Title: Bargoed				WS01				
			Project Number: B5556		Client: Langstone Construction Group Ltd					Sheet 1 Of 1	
			GL (mAOD): 0		N Coord: 200102		E Coord: 315118				
Date: 08/04/2026			Method: Window Sampler		Driller: GK Drilling		Logged By: RVJ				
Depth (m)	Type	Test Result	Level	Legend	Depth (m)	Description	Water	Standpipe			
0.80	ES	S N=50/10mm	-0.4		0.40	MADE GROUND: Red brown mottled grey sandy clayey gravel with occasional cobbles. Gravel is angular to subangular fine to coarse of brick. Sand is fine to coarse. Cobbles are angular of brick. 0.10 ...Angular brick cobble.					
					1.00	MADE GROUND: Dark grey mottled black sandy clayey gravel. Gravel is angular to subangular fine to coarse of brick and sandstone. Sand is fine to coarse. 0.90 ...Hydrocarbon odour. End Of Borehole At 1.00 m					
					2.00						
					3.00						
KEY D - Disturbed Sample B - Bulk Sample U - Undisturbed W - Water Sample S - Standard Penetration Test C - Cone Penetration Test N - Penetration Test 'N' Value V - Hand Shear Vane kPa  - Groundwater Strike  - Groundwater Level			REMARKS Exploratory hole location was scanned using a Cable Avoidance Tool prior to excavation. Hole terminated at 1.00mbgl due to refusal. Hole was backfilled with arisings. Groundwater was not encountered. Scale: 1:20			Water Strikes					
						Date	Strike	Level	Minutes	Casing	Sealed
Daily Log Of Depths						Chiselling					
Date	Casing	Water	From	To	Hours						

 EARTH ENVIRONMENTAL & GEOTECHNICAL A Technics Group Company			Project Title: Bargoed				WS02																																																	
			Project Number: B5556		Client: Langstone Construction Group Ltd					Sheet 1 Of 1																																														
			GL (mAOD): 0		N Coord: 200090		E Coord: 315123																																																	
Date: 10/04/2026			Method: Window Sampler		Driller: GK Drilling		Logged By: FL																																																	
Depth (m)	Type	Test Result	Level	Legend	Depth (m)	Description	Water	Standpipe																																																
0.60	ES	S N=18 (4,2,6,6)			1.00	MADE GROUND: Firm brown mottled dark grey brown slightly sandy gravelly clay. Gravel is angular to subrounded fine to coarse of red brick limestone concrete and china. Sand is fine to coarse. 0.50 ...Subangular concrete cobble. 0.60 - 0.70 ...Angular pale yellow gravel layer of unknown typing. 0.80 ...Subangular limestone cobble.																																																		
					End Of Borehole At 1.03 m																																																			
					2.00																																																			
					3.00																																																			
KEY D - Disturbed Sample B - Bulk Sample U - Undisturbed W - Water Sample S - Standard Penetration Test C - Cone Penetration Test N - Penetration Test 'N' Value V - Hand Shear Vane kPa  - Groundwater Strike  - Groundwater Level			REMARKS Exploratory hole location was scanned using a Cable Avoidance Tool prior to excavation. Hole terminated at 1.03mbgl due to refusal. Hole was backfilled with arisings. Groundwater was not encountered. Scale: 1:20			Water Strikes <table border="1"> <thead> <tr> <th>Date</th> <th>Strike</th> <th>Level</th> <th>Minutes</th> <th>Casing</th> <th>Sealed</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table> <table border="1"> <thead> <tr> <th colspan="3">Daily Log Of Depths</th> <th colspan="3">Chiselling</th> </tr> <tr> <th>Date</th> <th>Casing</th> <th>Water</th> <th>From</th> <th>To</th> <th>Hours</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td><td> </td><td> </td><td> </td></tr> </tbody> </table>			Date	Strike	Level	Minutes	Casing	Sealed																			Daily Log Of Depths			Chiselling			Date	Casing	Water	From	To	Hours												
Date	Strike	Level	Minutes	Casing	Sealed																																																			
Daily Log Of Depths			Chiselling																																																					
Date	Casing	Water	From	To	Hours																																																			

 EARTH ENVIRONMENTAL & GEOTECHNICAL A Technics Group Company			Project Title: Bargoed				WS03				
			Project Number: B5556		Client: Langstone Construction Group Ltd						
			GL (mAOD): 0		N Coord: 200075		E Coord: 315132				
Date: 10/04/2026			Method: Window Sampler		Driller: GK Drilling		Logged By: FL				
Depth (m)	Type	Test Result	Level	Legend	Depth (m)	Description	Water	Standpipe			
0.40	ES	S N=15 (1,2,6,6)	-0.1		0.10	MADE GROUND: Dense orange slightly gravelly sand. Gravel is angular to subangular fine of sandstone and limestone. Sand is fine to coarse. MADE GROUND: Firm to stiff brown mottled dark grey brown slightly sandy gravelly clay. Gravel is angular to subrounded fine to coarse of limestone brick concrete sandstone china glass fragments and plastic fragments. Sand is fine to coarse.					
			1.00		1.80 - 1.90 ...Dense angular medium limestone gravel layer.						
2.60	ES	S N=10 (1,1,1,7)	2.00		2.30	MADE GROUND: Dense to very dense light grey mottled yellow brown gravelly sand. Gravel is angular to subangular fine to coarse of concrete brick limestone and plastic. Sand is medium to coarse.					
			-2.3		2.80	End Of Borehole At 2.80 m					
		S N=50/10mm	-2.8		2.80						
					3.00						
KEY D - Disturbed Sample B - Bulk Sample U - Undisturbed W - Water Sample S - Standard Penetration Test C - Cone Penetration Test N - Penetration Test 'N' Value V - Hand Shear Vane kPa  - Groundwater Strike  - Groundwater Level			REMARKS Exploratory hole location was scanned using a Cable Avoidance Tool prior to excavation. Hole terminated at 2.80mbgl due to refusal. Hole was backfilled with arisings. Groundwater was not encountered. Scale: 1:20			Water Strikes					
						Date	Strike	Level	Minutes	Casing	Sealed
Daily Log Of Depths						Chiselling					
Date	Casing	Water	From	To	Hours						

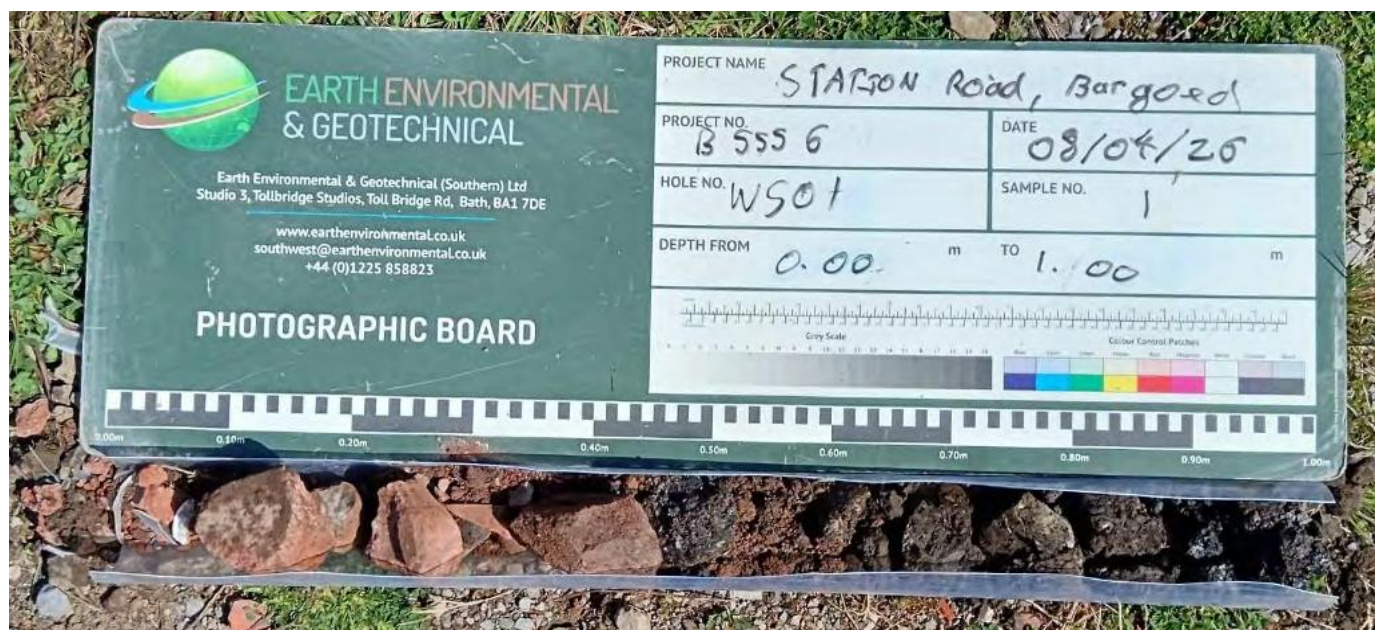
 EARTH ENVIRONMENTAL & GEOTECHNICAL A Technics Group Company			Project Title: Bargoed			TP01	
			Project Number: B5556		Client: Langstone Construction Group Ltd		
			GL (mAOD): 0		N Coord: 200108	E Coord: 315115	
Date: 09/04/2026			Method: 8-tonne Excavator		Logged By: FL	Scale: 1:10	
Depth (m)	Type	Test Result	Level	Legend	Depth (m)	Description	Water
0.30	ES					MADE GROUND: Very dense dark grey brown slightly clayey slightly sandy gravel with very high cobble content and low boulder content. Gravel is angular to subrounded fine to coarse of brick limestone concrete old plastic pipe fragments and metal fragments. Sand is fine to coarse. Cobbles are angular to subangular of brick limestone and concrete. Boulders are angular to subangular of concrete.	
					1.00	0.80 ...Old pipe work (plastic and clay).	
1.20	ES		-1.3		1.30	1.30 ...Hole terminated due to encountering concrete pad. End Of Trial Pit At 1.30 m	
					2.00		
KEY D - Disturbed Sample B - Bulk Sample W - Water Sample V - Hand Shear Vane kPa  - Groundwater Strike  - Groundwater Level 						REMARKS Trial Pit location was scanned using a Cable Avoidance Tool (CAT) prior to excavation. Excavation was monitored by an EEGSL engineer throughout. Hole was excavated to 1.30mbgl. Groundwater was not encountered. Hole was backfilled with arisings.	

 EARTH ENVIRONMENTAL & GEOTECHNICAL A Technics Group Company			Project Title: Bargoed			TP02	
			Project Number: B5556		Client: Langstone Construction Group Ltd		
			GL (mAOD): 0		N Coord: 200099	E Coord: 315139	
Date: 09/04/2026			Method: 8-tonne Excavator		Logged By: FL	Scale: 1:10	
Depth (m)	Type	Test Result	Level	Legend	Depth (m)	Description	Water
0.50	ES					MADE GROUND: Dense dark brown slightly clayey slightly sandy gravel with very high cobble content and high boulder content. Gravel is angular to subrounded fine to coarse of brick concrete china plastic glass wood fragments and metal fragments. Sand is fine to coarse. Cobbles are angular to subangular of brick and concrete. Boulders are angular to subangular of concrete.	
						0.80 - 0.875 ...Concrete basement layer	
1.00	D		-0.875		0.875	VOID	
			-1.2		1.20	MADE GROUND: Dense dark brown slightly clayey slightly sandy gravel with very high cobble content and high boulder content. Gravel is angular to subrounded fine to coarse of brick concrete china plastic glass wood fragments and metal fragments. Sand is fine to coarse. Cobbles are angular to subangular of brick and concrete. Boulders are angular to subangular of concrete.	
1.50	ES					1.60 ...Hole terminated due to constant collapsing of pit walls.	
			-1.6		1.60	End Of Trial Pit At 1.60 m	
					2.00		
KEY D - Disturbed Sample B - Bulk Sample W - Water Sample V - Hand Shear Vane kPa  - Groundwater Strike  - Groundwater Level 						REMARKS Trial Pit location was scanned using a Cable Avoidance Tool (CAT) prior to excavation. Excavation was monitored by an EEGSL engineer throughout. Hole was excavated to 1.60mbgl. Groundwater was not encountered. Hole was backfilled with arisings.	



APPENDIX 3

PHOTOGRAPHS



 EARTH ENVIRONMENTAL & GEOTECHNICAL A Technics Group Company	Project	Bargoed B5556	Drawing Title	Window Sample Photographs
	Client	Langstone Construction Group Ltd	Reference	WS01



 EARTH ENVIRONMENTAL & GEOTECHNICAL A Technics Group Company	Project	Bargoed B5556	Drawing Title	Window Sample Photographs
	Client	Langstone Construction Group Ltd	Reference	WS02



 EARTH ENVIRONMENTAL & GEOTECHNICAL A Technics Group Company	Project	Bargoed B5556	Drawing Title	Window Sample Photographs
	Client	Langstone Construction Group Ltd	Reference	WS03









**EARTH ENVIRONMENTAL
& GEOTECHNICAL**
A Technics Group Company

Project

Bargoed B5556

Drawing Title

Trial Pit Photographs

Client

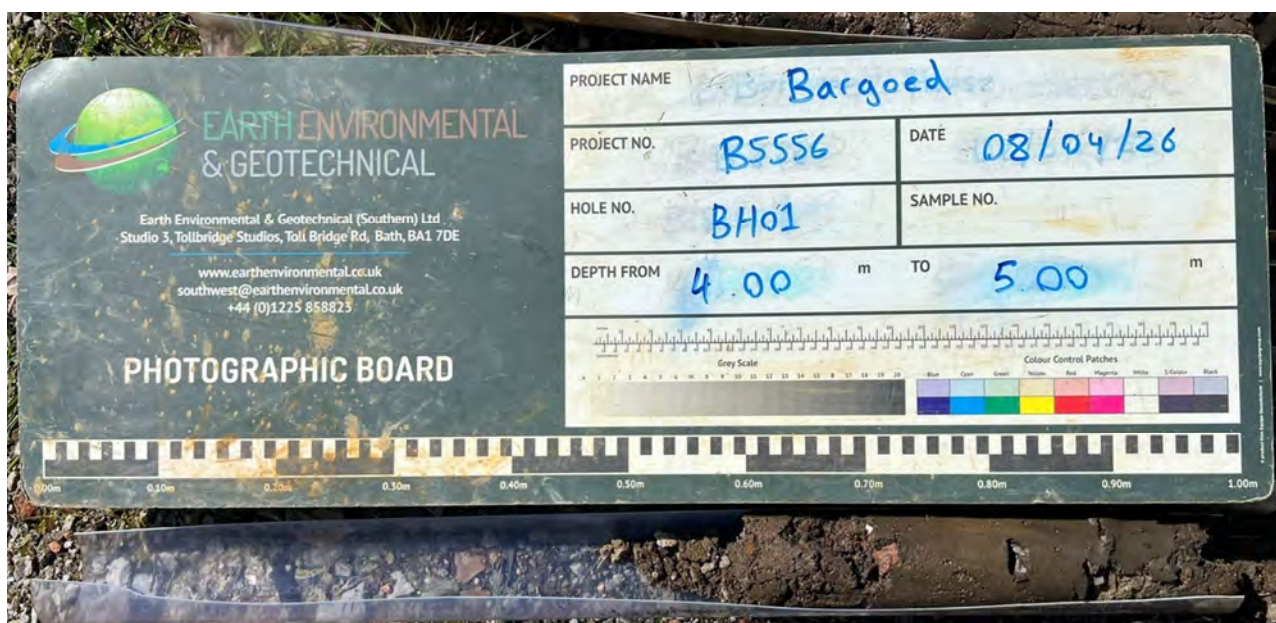
**Langstone Construction
Group Ltd**

Reference

TP02 2/2



 EARTH ENVIRONMENTAL & GEOTECHNICAL A Technics Group Company	Project	Bargoed B5556	Drawing Title	Rotary Cored Photographs
	Client	Langstone Construction Group Ltd	Reference	BH01 1/6



EARTH ENVIRONMENTAL & GEOTECHNICAL
 A Technics Group Company

Project

Bargoed B5556

Drawing Title

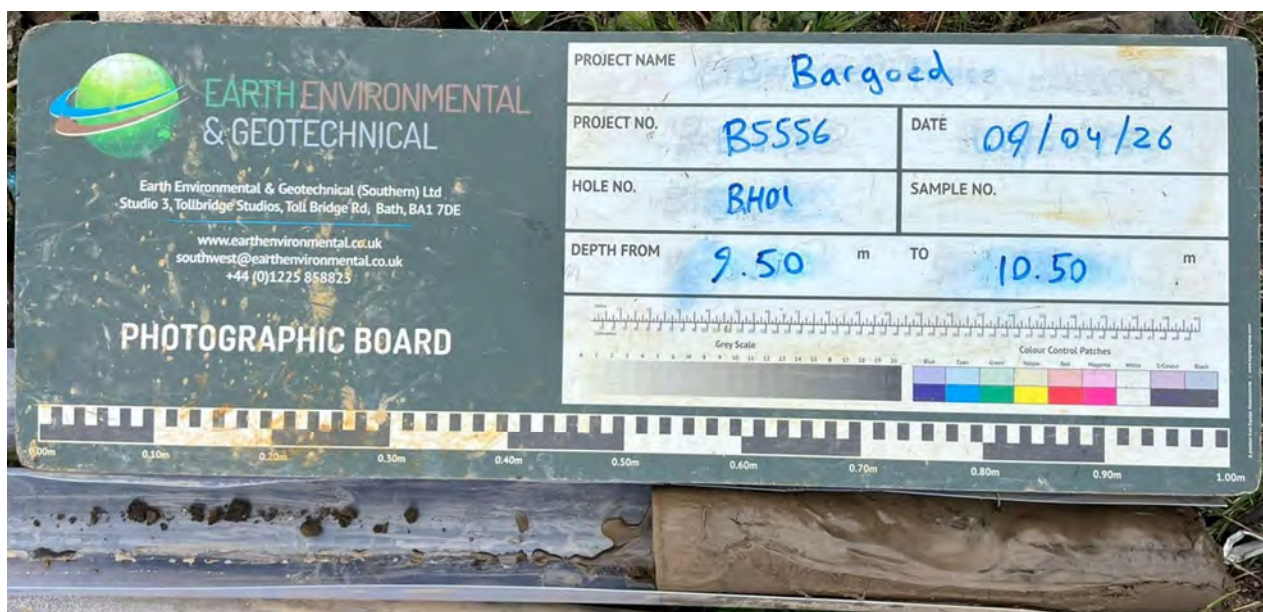
Rotary Cored Photographs

Client

Langstone Construction
 Group Ltd

Reference

BH01 2/6



EARTH ENVIRONMENTAL & GEOTECHNICAL
 A Technics Group Company

Project

Bargoed B5556

Client

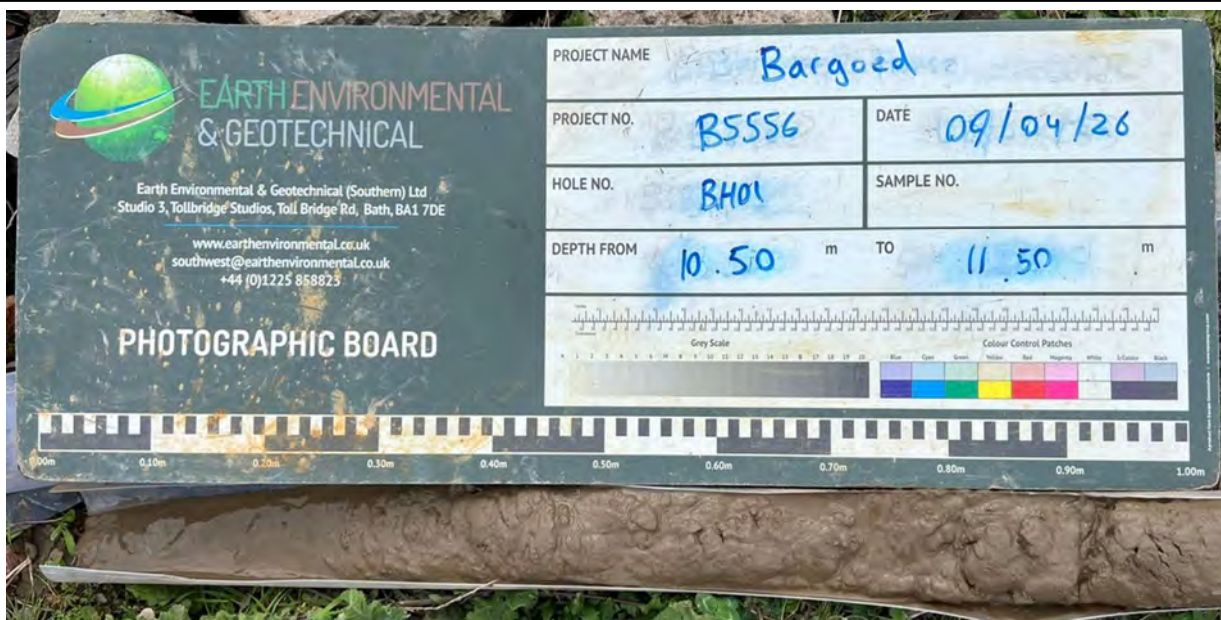
Langstone Construction
 Group Ltd

Drawing Title

Rotary Cored Photographs

Reference

BH01 3/6



EARTH ENVIRONMENTAL & GEOTECHNICAL
 A Technics Group Company

Project

Bargoed B5556

Drawing Title

Rotary Cored Photographs

Client

Langstone Construction
 Group Ltd

Reference

BH01 4/6



 EARTH ENVIRONMENTAL & GEOTECHNICAL A Technics Group Company	Project	Bargoed B5556	Drawing Title	Rotary Cored Photographs
	Client	Langstone Construction Group Ltd	Reference	BH01 5/6



 EARTH ENVIRONMENTAL & GEOTECHNICAL A Technics Group Company	Project	Bargoed B5556	Drawing Title	Rotary Cored Photographs
	Client	Langstone Construction Group Ltd	Reference	BH01 6/6



EARTH ENVIRONMENTAL & GEOTECHNICAL
 A Technics Group Company

Project

Bargoed B5556

Drawing Title

Rotary Cored Photographs

Client

Langstone Construction
 Group Ltd

Reference

BH02 1/5



EARTH ENVIRONMENTAL & GEOTECHNICAL
 A Technics Group Company

Project

Bargoed B5556

Client

Langstone Construction
 Group Ltd

Drawing Title

Rotary Cored Photographs

Reference

BH02 2/5



 EARTH ENVIRONMENTAL & GEOTECHNICAL A Technics Group Company	Project	Bargoed B5556	Drawing Title	Rotary Cored Photographs
	Client	Langstone Construction Group Ltd	Reference	BH02 3/5



 EARTH ENVIRONMENTAL & GEOTECHNICAL A Technics Group Company	Project	Bargoed B5556	Drawing Title	Rotary Cored Photographs
	Client	Langstone Construction Group Ltd	Reference	BH02 4/5



EARTH ENVIRONMENTAL & GEOTECHNICAL
 A Technics Group Company

Project

Bargoed B5556

Client

**Langstone Construction
 Group Ltd**

Drawing Title

Rotary Cored Photographs

Reference

BH02 5/5



APPENDIX 4

IN SITU TEST RESULTS

Dynamic Probe Test Results Sheet

Site: **Bargoed**

Date: **08-Apr-26**



**EARTH ENVIRONMENTAL
& GEOTECHNICAL**
A Technics Group Company

Job Number: **B5556**

Test Type: **DPSH**

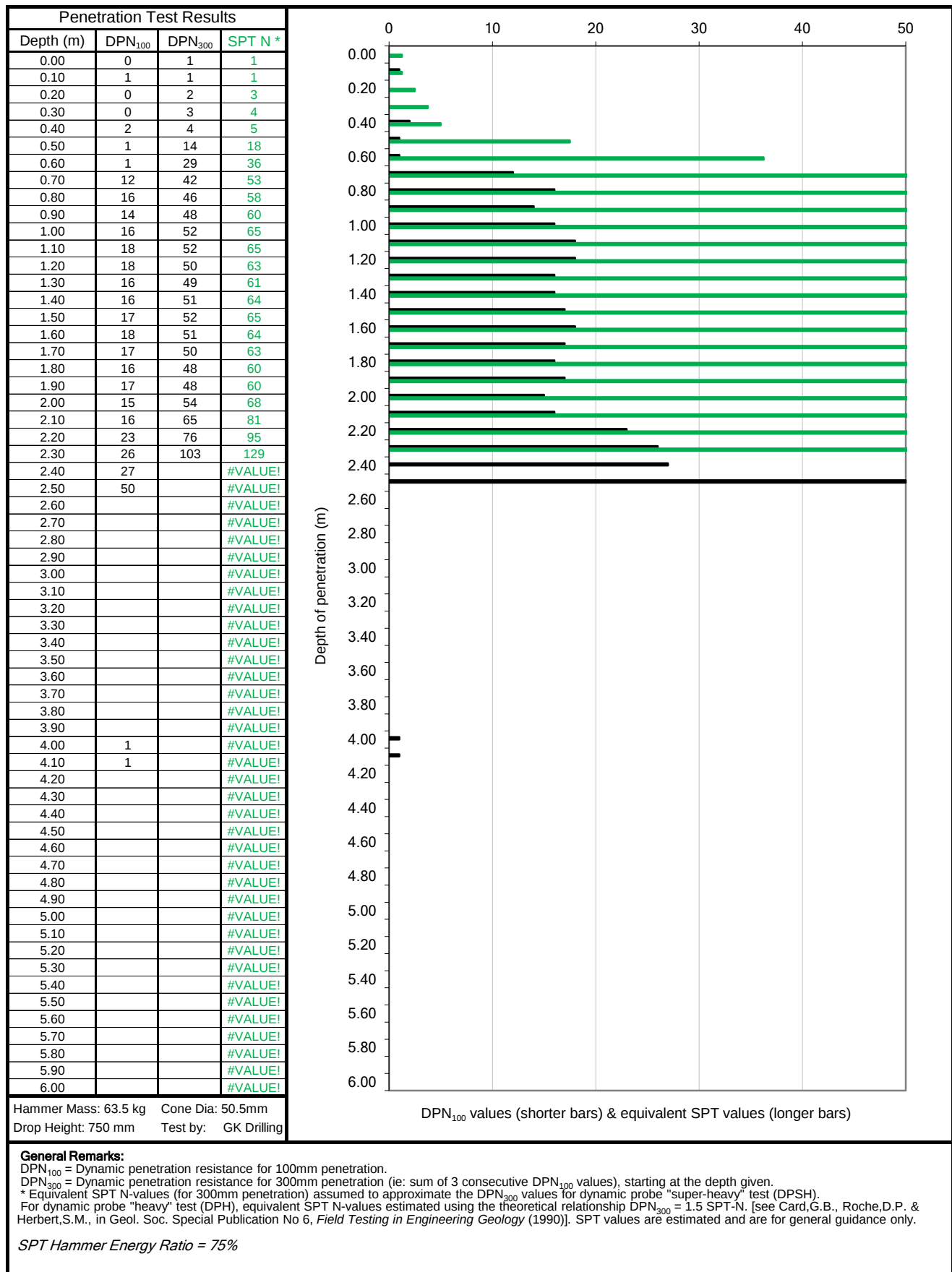
Client: **Langstoen Construction Group Ltd**

Final Depth: **2.50**

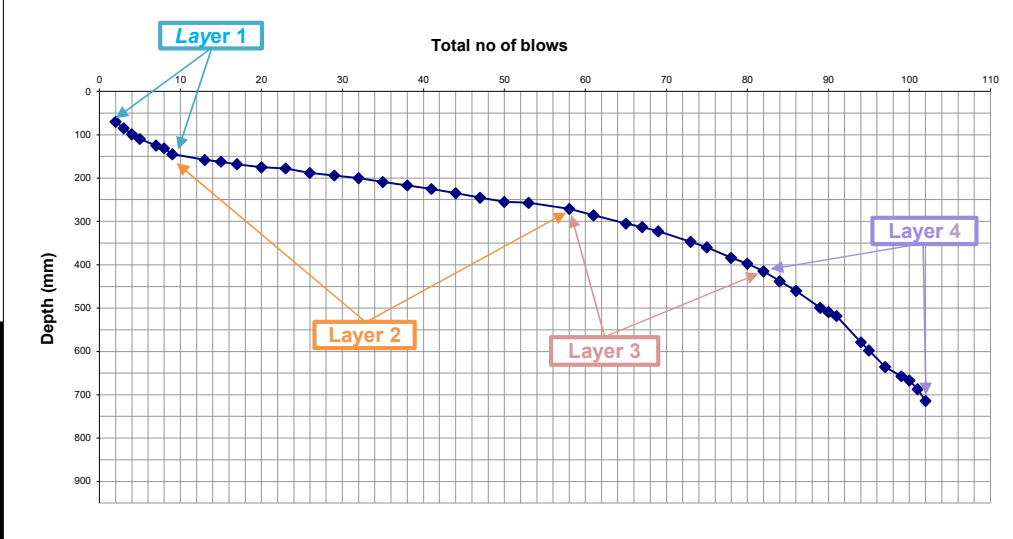
Rig Type: **Archway Dart**

Sheet 1 of 1

DP No: DP01



DYNAMIC CONE PENETRATION TEST RESULTS						Date	21/04/2026	 EARTH ENVIRONMENTAL & GEOTECHNICAL A Services Group Company		
Client Name		Langstone Construction Group Ltd				Job No.	B5556	Zero Reading		255
Job Name		Bargoed				Test No.		TRL01	Depth (mm)	190
									Location	TRL01
No. of Blows	Depth Reading (mm)	Total depth (mm)	Mean penetration per blow (mm)	Layer	Top of layer (mm)	Base of layer (mm)	Blows at top of layer	Blows at base of layer	Mean penetration per blow (mm)	CBR of layer (%)
0	255	0	0	1	0	145	0	9	16.11	16.0
1	305	50	50.00	2	145	271	9	58	2.57	>100
2	325	70	35.00	3	271	415	58	82	6.00	45.4
3	340	85	28.33	4	415	714	82	102	14.95	17.3
4	354	99	24.75							
5	365	110	22.00							
7	380	125	17.86							
8	386	131	16.38							
9	400	145	16.11							
13	413	158	12.15							
15	417	162	10.80							
17	423	168	9.88							
20	430	175	8.75							
23	433	178	7.74							
26	443	188	7.23							
29	449	194	6.69							
32	455	200	6.25							
35	464	209	5.97							
38	472	217	5.71							
41	480	225	5.49							
44	490	235	5.34							
47	500	245	5.21							
50	510	255	5.10							
53	512	257	4.85							
58	526	271	4.67							
61	541	286	4.69							
65	560	305	4.69							
67	568	313	4.67							
69	578	323	4.68							
73	602	347	4.75							
75	615	360	4.80							
78	639	384	4.92							
80	652	397	4.96							
82	670	415	5.06							
84	693	438	5.21							
86	715	460	5.35							
89	754	499	5.61							
90	764	509	5.66							
91	773	518	5.69							
94	834	579	6.16							
95	853	598	6.29							
97	891	636	6.56							
99	912	657	6.64							
100	922	667	6.67							
101	942	687	6.80							
102	969	714	7.00							



Remarks:	CBR calculations based on IAN 73/06 (supercedes HD 25/94).		
Particles >20mm			Weather: Clear
Operators	TD&RVJ		Comments:



APPENDIX 5

MONITORING RESULTS

Gas Monitoring Record

Project Number:	B5556
Project Name:	Bargoed
Date:	15/04/2026
Logger	TD

Weather:	Overcast
----------	----------

*mbgl - Meters below Ground Level

			Initial	10 [s]	20 [s]	30 [s]	40 [s]	50 [s]	60 [s]	70 [s]	80 [s]	90 [s]	100 [s]	110 [s]	120 [s]	130 [s]	140 [s]	150 [s]	180 [s]	300 [s]	Steady State Flow Readings (taken after gas readings)		Groundwater Level (mbgl*)	Borehole Base (mbgl*)	Comments
Borehole ID	BH01	CH4 (%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			Dry	4.47	Loose seal
Flow Rate (l/hr)	0	CO2 (%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Flow Rate (l/hr)	0			
Atmospheric Pressure (mbar)	988	O2 (%)	20.3	20.4	20.4	20.4	20.4	20.4	20.4	20.4	20.4	20.4	20.4	20.4	20.4	20.4	20.4	20.4	20.4	20.4	Atmospheric Pressure (mbar)	988			
Borehole Pressure (Pa)	0	CO (ppm)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Borehole Pressure (Pa)	0			
Time	00:57	H2S (ppm)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Time	03:36			
Peak VOC		LEL (%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Peak VOC				
			Initial	10 [s]	20 [s]	30 [s]	40 [s]	50 [s]	60 [s]	70 [s]	80 [s]	90 [s]	100 [s]	110 [s]	120 [s]	130 [s]	140 [s]	150 [s]	180 [s]	300 [s]	Steady State Flow Readings (taken after gas readings)		Groundwater Level (mbgl*)	Borehole Base (mbgl*)	Comments
Borehole ID	BH02	CH4 (%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			Dry	4.15	
Flow Rate (l/hr)	0	CO2 (%)	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	Flow Rate (l/hr)	0			
Atmospheric Pressure (mbar)	987	O2 (%)	20.2	20.2	19.9	19.9	19.9	19.8	19.8	19.8	19.8	19.8	19.8	19.8	19.8	19.8	19.8	19.8	19.8	19.8	Atmospheric Pressure (mbar)	986			
Borehole Pressure (Pa)	0	CO (ppm)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Borehole Pressure (Pa)	0			
Time	11:24	H2S (ppm)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Time	08:24			
Peak VOC		LEL (%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Peak VOC				
			Initial	10 [s]	20 [s]	30 [s]	40 [s]	50 [s]	60 [s]	70 [s]	80 [s]	90 [s]	100 [s]	110 [s]	120 [s]	130 [s]	140 [s]	150 [s]	180 [s]	300 [s]	Steady State Flow Readings (taken after gas readings)		Groundwater Level (mbgl*)	Borehole Base (mbgl*)	Comments
Borehole ID	WS03	CH4 (%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			Dry	2.7	
Flow Rate (l/hr)	0	CO2 (%)	0.2	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	Flow Rate (l/hr)	0			
Atmospheric Pressure (mbar)	987	O2 (%)	20	19.9	19.8	19.8	19.8	19.8	19.8	19.8	19.8	19.8	19.8	19.8	19.8	19.9	19.8	19.8	19.9	19.9	Atmospheric Pressure (mbar)	986			
Borehole Pressure (Pa)	0	CO (ppm)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Borehole Pressure (Pa)	0			
Time	10:33	H2S (ppm)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Time	12:57			
Peak VOC		LEL (%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Peak VOC				

Gas Monitoring Record

Project Number:	B5556
Project Name:	Bargoed
Date:	21/04/26
Logger	TD

Weather:	Overcast
----------	----------

*mbgl - Meters below Ground Level

			Initial	10 [s]	20 [s]	30 [s]	40 [s]	50 [s]	60 [s]	70 [s]	80 [s]	90 [s]	100 [s]	110 [s]	120 [s]	130 [s]	140 [s]	150 [s]	180 [s]	300 [s]	Steady State Flow Readings (taken after gas readings)		Groundwater Level (mbgl*)	Borehole Base (mbgl*)	Comments
Borehole ID	BH01	CH4 (%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			Dry	4.48	
Flow Rate (l/hr)	0.2	CO2 (%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Flow Rate (l/hr)	0			
Atmospheric Pressure (mbar)	1002	O2 (%)	20	20.2	20.3	20.2	20.2	20.2	20.2	20.2	20.2	20.2	20.2	20.2	20.2	20.2	20.2	20.2	20.2	20.2	Atmospheric Pressure (mbar)	1001			
Borehole Pressure (Pa)	0	CO (ppm)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Borehole Pressure (Pa)	0			
Time	10:46	H2S (ppm)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Time	10:55			
Peak VOC		LEL (%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Peak VOC				
			Initial	10 [s]	20 [s]	30 [s]	40 [s]	50 [s]	60 [s]	70 [s]	80 [s]	90 [s]	100 [s]	110 [s]	120 [s]	130 [s]	140 [s]	150 [s]	180 [s]	300 [s]	Steady State Flow Readings (taken after gas readings)		Groundwater Level (mbgl*)	Borehole Base (mbgl*)	Comments
Borehole ID	BH02	CH4 (%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			Dry	4.15	
Flow Rate (l/hr)	0	CO2 (%)	0	0	0.3	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	Flow Rate (l/hr)	0			
Atmospheric Pressure (mbar)	1002	O2 (%)	20	20.2	19.9	19.9	19.9	19.9	19.9	19.9	19.9	19.9	19.9	20	19.9	20	19.9	19.9	20	20	Atmospheric Pressure (mbar)	1001			
Borehole Pressure (Pa)	0	CO (ppm)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Borehole Pressure (Pa)	0			
Time	11:01	H2S (ppm)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Time	11:11			
Peak VOC		LEL (%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Peak VOC				
			Initial	10 [s]	20 [s]	30 [s]	40 [s]	50 [s]	60 [s]	70 [s]	80 [s]	90 [s]	100 [s]	110 [s]	120 [s]	130 [s]	140 [s]	150 [s]	180 [s]	300 [s]	Steady State Flow Readings (taken after gas readings)		Groundwater Level (mbgl*)	Borehole Base (mbgl*)	Comments
Borehole ID	WS03	CH4 (%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			Dry	2.7	
Flow Rate (l/hr)	0	CO2 (%)	0	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	Flow Rate (l/hr)	0			
Atmospheric Pressure (mbar)	1001	O2 (%)	20	20.2	20.2	20.2	20.2	20.2	20.2	20.2	20.2	20.2	20.2	20.2	20.2	20.2	20.2	20.2	20.2	20.2	Atmospheric Pressure (mbar)	1001			
Borehole Pressure (Pa)	0	CO (ppm)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Borehole Pressure (Pa)	0			
Time	11:16	H2S (ppm)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Time	11:24			
Peak VOC		LEL (%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Peak VOC				

Gas Monitoring Record

Project Number:	B5556
Project Name:	Bargoed
Date:	29/04/2026
Logger	TD

Weather:	Fair
----------	------

*mbgl - Meters below Ground Level

			Initial	10 [s]	20 [s]	30 [s]	40 [s]	50 [s]	60 [s]	70 [s]	80 [s]	90 [s]	100 [s]	110 [s]	120 [s]	130 [s]	140 [s]	150 [s]	180 [s]	300 [s]	Steady State Flow Readings (taken after gas readings)		Groundwater Level (mbgl*)	Borehole Base (mbgl*)	Comments
Borehole ID	BH01	CH4 (%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			Dry	4.48	
Flow Rate (l/hr)	0.1	CO2 (%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Flow Rate (l/hr)	0			
Atmospheric Pressure (mbar)	1000	O2 (%)	20	20.2	20.3	20.3	20.3	20.3	20.3	20.3	20.3	20.3	20.3	20.3	20.3	20.3	20.3	20.3	20.3	20.3	Atmospheric Pressure (mbar)	1000			
Borehole Pressure (Pa)	0	CO (ppm)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Borehole Pressure (Pa)	0			
Time	10:54	H2S (ppm)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Time	11:04			
Peak VOC		LEL (%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Peak VOC				
			Initial	10 [s]	20 [s]	30 [s]	40 [s]	50 [s]	60 [s]	70 [s]	80 [s]	90 [s]	100 [s]	110 [s]	120 [s]	130 [s]	140 [s]	150 [s]	180 [s]	300 [s]	Steady State Flow Readings (taken after gas readings)		Groundwater Level (mbgl*)	Borehole Base (mbgl*)	Comments
Borehole ID	BH02	CH4 (%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			Dry	4.16	
Flow Rate (l/hr)	0	CO2 (%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Flow Rate (l/hr)	0			
Atmospheric Pressure (mbar)	1000	O2 (%)	20	20.3	20.3	20.3	20.4	20.4	20.4	20.4	20.4	20.4	20.4	20.4	20.4	20.4	20.4	20.4	20.4	20.4	Atmospheric Pressure (mbar)	1000			
Borehole Pressure (Pa)	0	CO (ppm)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Borehole Pressure (Pa)	0			
Time	11:11	H2S (ppm)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Time	11:18			
Peak VOC		LEL (%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Peak VOC				
			Initial	10 [s]	20 [s]	30 [s]	40 [s]	50 [s]	60 [s]	70 [s]	80 [s]	90 [s]	100 [s]	110 [s]	120 [s]	130 [s]	140 [s]	150 [s]	180 [s]	300 [s]	Steady State Flow Readings (taken after gas readings)		Groundwater Level (mbgl*)	Borehole Base (mbgl*)	Comments
Borehole ID	WS03	CH4 (%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			Dry	2.72	
Flow Rate (l/hr)	0	CO2 (%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Flow Rate (l/hr)	0			
Atmospheric Pressure (mbar)	999	O2 (%)	20.5	20.5	20.5	20.4	20.4	20.4	20.4	20.4	20.5	20.5	20.5	20.5	20.4	20.4	20.4	20.5	20.4	20.4	Atmospheric Pressure (mbar)	999			
Borehole Pressure (Pa)	0	CO (ppm)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Borehole Pressure (Pa)	0			
Time	11:23	H2S (ppm)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Time	11:30			
Peak VOC		LEL (%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Peak VOC				

Gas Monitoring Record

Project Number:	B5556
Project Name:	Bargoed
Date:	06/05/2026
Logger	TD

Weather:

*mbgl - Meters below Ground Level

			Initial	10 [s]	20 [s]	30 [s]	40 [s]	50 [s]	60 [s]	70 [s]	80 [s]	90 [s]	100 [s]	110 [s]	120 [s]	130 [s]	140 [s]	150 [s]	180 [s]	300 [s]	Steady State Flow Readings (taken after gas readings)		Groundwater Level (mbgl*)	Borehole Base (mbgl*)	Comments
Borehole ID	BH01	CH4 (%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			Dry	4.46	Bung changed
Flow Rate (l/hr)	0	CO2 (%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Flow Rate (l/hr)	0			
Atmospheric Pressure (mbar)	992	O2 (%)	20	20.2	20.3	20.3	20.3	20.3	20.3	20.3	20.3	20.3	20.3	20.3	20.3	20.3	20.3	20.3	20.3	20.3	Atmospheric Pressure (mbar)	992			
Borehole Pressure (Pa)	0	CO (ppm)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Borehole Pressure (Pa)	0			
Time	10:46	H2S (ppm)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Time	10:53			
Peak VOC		LEL (%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Peak VOC				
			Initial	10 [s]	20 [s]	30 [s]	40 [s]	50 [s]	60 [s]	70 [s]	80 [s]	90 [s]	100 [s]	110 [s]	120 [s]	130 [s]	140 [s]	150 [s]	180 [s]	300 [s]	Steady State Flow Readings (taken after gas readings)		Groundwater Level (mbgl*)	Borehole Base (mbgl*)	Comments
Borehole ID	BH02	CH4 (%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			Dry	4.14	
Flow Rate (l/hr)	0	CO2 (%)	0	0.2	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	Flow Rate (l/hr)	0			
Atmospheric Pressure (mbar)	992	O2 (%)	20	20.2	20	20	19.9	19.9	19.9	19.9	19.9	19.9	19.9	19.9	19.9	19.9	19.9	19.9	19.9	19.9	Atmospheric Pressure (mbar)	992			
Borehole Pressure (Pa)	0	CO (ppm)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Borehole Pressure (Pa)	0			
Time	11:15	H2S (ppm)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Time	11:23			
Peak VOC		LEL (%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Peak VOC				
			Initial	10 [s]	20 [s]	30 [s]	40 [s]	50 [s]	60 [s]	70 [s]	80 [s]	90 [s]	100 [s]	110 [s]	120 [s]	130 [s]	140 [s]	150 [s]	180 [s]	300 [s]	Steady State Flow Readings (taken after gas readings)		Groundwater Level (mbgl*)	Borehole Base (mbgl*)	Comments
Borehole ID	WS03	CH4 (%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			Dry	2.7	
Flow Rate (l/hr)	0	CO2 (%)	0	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	Flow Rate (l/hr)	0			
Atmospheric Pressure (mbar)	991	O2 (%)	20.4	20.2	20.1	20	20	20	20.1	20.1	20.1	20.1	20.1	20.1	20.1	20.2	20.2	20.2	20.2	20.2	Atmospheric Pressure (mbar)	992			
Borehole Pressure (Pa)	0	CO (ppm)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Borehole Pressure (Pa)	0			
Time	11:24	H2S (ppm)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Time	11:35			
Peak VOC		LEL (%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Peak VOC				

Gas Monitoring Record

Project Number:	B5556
Project Name:	Bargoed
Date:	
Logger	TD

Weather:	Drizzle
----------	---------

*mbgl - Meters below Ground Level

			Initial	10 [s]	20 [s]	30 [s]	40 [s]	50 [s]	60 [s]	70 [s]	80 [s]	90 [s]	100 [s]	110 [s]	120 [s]	130 [s]	140 [s]	150 [s]	180 [s]	300 [s]	Steady State Flow Readings (taken after gas readings)		Groundwater Level (mbgl*)	Borehole Base (mbgl*)	Comments
Borehole ID	BH01	CH4 (%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			Dry	4.47	
Flow Rate (l/hr)	0.2	CO2 (%)	0	0.2	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	Flow Rate (l/hr)	0.1			
Atmospheric Pressure (mbar)	982	O2 (%)	20	20	20	20	20	20	19.9	19.9	19.9	19.9	19.9	19.9	19.9	19.9	19.9	19.9	19.9	19.9	Atmospheric Pressure (mbar)	981			
Borehole Pressure (Pa)	1	CO (ppm)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Borehole Pressure (Pa)	0			
Time	10:45	H2S (ppm)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Time	10:52			
Peak VOC		LEL (%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Peak VOC				
			Initial	10 [s]	20 [s]	30 [s]	40 [s]	50 [s]	60 [s]	70 [s]	80 [s]	90 [s]	100 [s]	110 [s]	120 [s]	130 [s]	140 [s]	150 [s]	180 [s]	300 [s]	Steady State Flow Readings (taken after gas readings)		Groundwater Level (mbgl*)	Borehole Base (mbgl*)	Comments
Borehole ID	BH02	CH4 (%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			Dry	4.13	
Flow Rate (l/hr)	0.1	CO2 (%)	0	0.2	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	Flow Rate (l/hr)	0			
Atmospheric Pressure (mbar)	982	O2 (%)	20.1	20.3	20.1	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	Atmospheric Pressure (mbar)	981			
Borehole Pressure (Pa)	0	CO (ppm)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Borehole Pressure (Pa)	0			
Time	10:56	H2S (ppm)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Time	11:03			
Peak VOC		LEL (%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Peak VOC				
			Initial	10 [s]	20 [s]	30 [s]	40 [s]	50 [s]	60 [s]	70 [s]	80 [s]	90 [s]	100 [s]	110 [s]	120 [s]	130 [s]	140 [s]	150 [s]	180 [s]	300 [s]	Steady State Flow Readings (taken after gas readings)		Groundwater Level (mbgl*)	Borehole Base (mbgl*)	Comments
Borehole ID	WS03	CH4 (%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			Dry	2.71	
Flow Rate (l/hr)	0	CO2 (%)	0	0.1	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.6	0.6	Flow Rate (l/hr)	0			
Atmospheric Pressure (mbar)	981	O2 (%)	20.2	20.4	20	19.8	19.8	19.7	19.7	19.7	19.7	19.7	19.7	19.7	19.7	19.7	19.7	19.7	19.7	19.7	Atmospheric Pressure (mbar)	981			
Borehole Pressure (Pa)	0	CO (ppm)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Borehole Pressure (Pa)	0			
Time	11:07	H2S (ppm)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Time	11:15			
Peak VOC		LEL (%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Peak VOC				

Gas Monitoring Record

Project Number:	B5556
Project Name:	Bargoed
Date:	
Logger	TD

Weather:	Cloudy
----------	--------

*mbgl - Meters below Ground Level

			Initial	10 [s]	20 [s]	30 [s]	40 [s]	50 [s]	60 [s]	70 [s]	80 [s]	90 [s]	100 [s]	110 [s]	120 [s]	130 [s]	140 [s]	150 [s]	180 [s]	300 [s]	Steady State Flow Readings (taken after gas readings)		Groundwater Level (mbgl*)	Borehole Base (mbgl*)	Comments
Borehole ID	BH01	CH4 (%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			Dry	4.48	
Flow Rate (l/hr)	0.2	CO2 (%)	0	0	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	Flow Rate (l/hr)	0.1			
Atmospheric Pressure (mbar)	994	O2 (%)	20	20.2	20.3	20.2	20.2	20.2	20.2	20.2	20.2	20.2	20.1	20.2	20.2	20.2	20.1	20.1	20.2	20.2	Atmospheric Pressure (mbar)	994			
Borehole Pressure (Pa)	1	CO (ppm)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Borehole Pressure (Pa)	1			
Time	11:00	H2S (ppm)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Time	11:06			
Peak VOC		LEL (%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Peak VOC				
			Initial	10 [s]	20 [s]	30 [s]	40 [s]	50 [s]	60 [s]	70 [s]	80 [s]	90 [s]	100 [s]	110 [s]	120 [s]	130 [s]	140 [s]	150 [s]	180 [s]	300 [s]	Steady State Flow Readings (taken after gas readings)		Groundwater Level (mbgl*)	Borehole Base (mbgl*)	Comments
Borehole ID	BH02	CH4 (%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			Dry	4.15	
Flow Rate (l/hr)	0	CO2 (%)	0	0.1	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	Flow Rate (l/hr)	0			
Atmospheric Pressure (mbar)	994	O2 (%)	20.3	20.3	20.3	20	19.8	19.8	19.8	19.9	19.9	19.9	19.9	19.9	19.9	19.9	19.9	19.9	19.9	19.9	Atmospheric Pressure (mbar)	994			
Borehole Pressure (Pa)	0	CO (ppm)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Borehole Pressure (Pa)	0			
Time	11:11	H2S (ppm)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Time	11:18			
Peak VOC		LEL (%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Peak VOC				
			Initial	10 [s]	20 [s]	30 [s]	40 [s]	50 [s]	60 [s]	70 [s]	80 [s]	90 [s]	100 [s]	110 [s]	120 [s]	130 [s]	140 [s]	150 [s]	180 [s]	300 [s]	Steady State Flow Readings (taken after gas readings)		Groundwater Level (mbgl*)	Borehole Base (mbgl*)	Comments
Borehole ID	WS03	CH4 (%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			Dry	2.71	
Flow Rate (l/hr)	0	CO2 (%)	0	0.2	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	Flow Rate (l/hr)	0			
Atmospheric Pressure (mbar)	994	O2 (%)	20.1	20.1	20	19.9	19.8	19.7	19.7	19.7	19.7	19.7	19.7	19.7	19.7	19.7	19.7	19.7	19.7	19.7	Atmospheric Pressure (mbar)	994			
Borehole Pressure (Pa)	0	CO (ppm)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Borehole Pressure (Pa)	0			
Time	11:21	H2S (ppm)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Time	11:28			
Peak VOC		LEL (%)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Peak VOC				



APPENDIX 6

LABORATORY TEST RESULTS



Laboratory Report



Contract Number: 86069

Client Ref: **B5556**

Client PO: **B5556/FL/14042026**

Date Received: **15-04-2026**

Date Completed: **08-05-2026**

Report Date: **08-05-2026**

Client: **Earth Environmental & Geotechnical**

This report has been checked and approved by:

Contract Title: **Bargoed**

For the attention of: **Finn Lewkowicz**

Darren Bourne

Quality Senior Technician

Description	Qty
Determination of water content BS EN ISO 17892-1:2014 - * UKAS	1
4 Point Liquid & Plastic Limit.. BS EN ISO 17892-12 - * UKAS	1
Particle Size Distribution BS EN ISO 17892-4 : 5.1 - * UKAS	7
Determination of Point Load Value Axial or Diametrical including WC *Please note GSTL is not accredited for the water content of rock* ISRM Suggested Method for Point Load Strength - * UKAS	5

Notes: Observations and Interpretations are outside the UKAS Accreditation

* - denotes test included in laboratory scope of accreditation

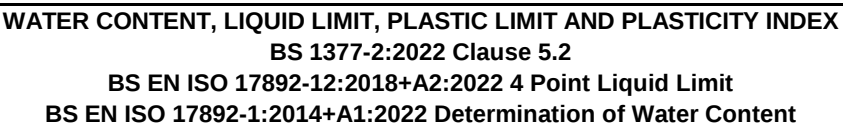
- denotes test carried out by approved contractor

@ - 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 test report/certificate shall not be reproduced except in full, without the approval of GEO Site & Testing Services Ltd. Any opinions or interpretations stated - within this report/certificate are excluded from the laboratories UKAS accreditation.

Approved Signatories:

Brendan Evans (Business Support Co-ordinator) - Darren Bourne (Quality Senior Technician) - Jason Jenkins (Business Development Manager)
Luke Williams (Senior Laboratory Technician) - Paul Evans (Director) - Richard John (Quality/Technical Manager)
Shaun Jones (Laboratory manager) - Shaun Thomas (Site Manager) - Vince Williams (Site Technician)
Wayne Honey (HR & HSE Manager)



Contract Number	86069	
Project Name	Bargoed	
Date Tested	01/05/2026	
	DESCRIPTIONS	

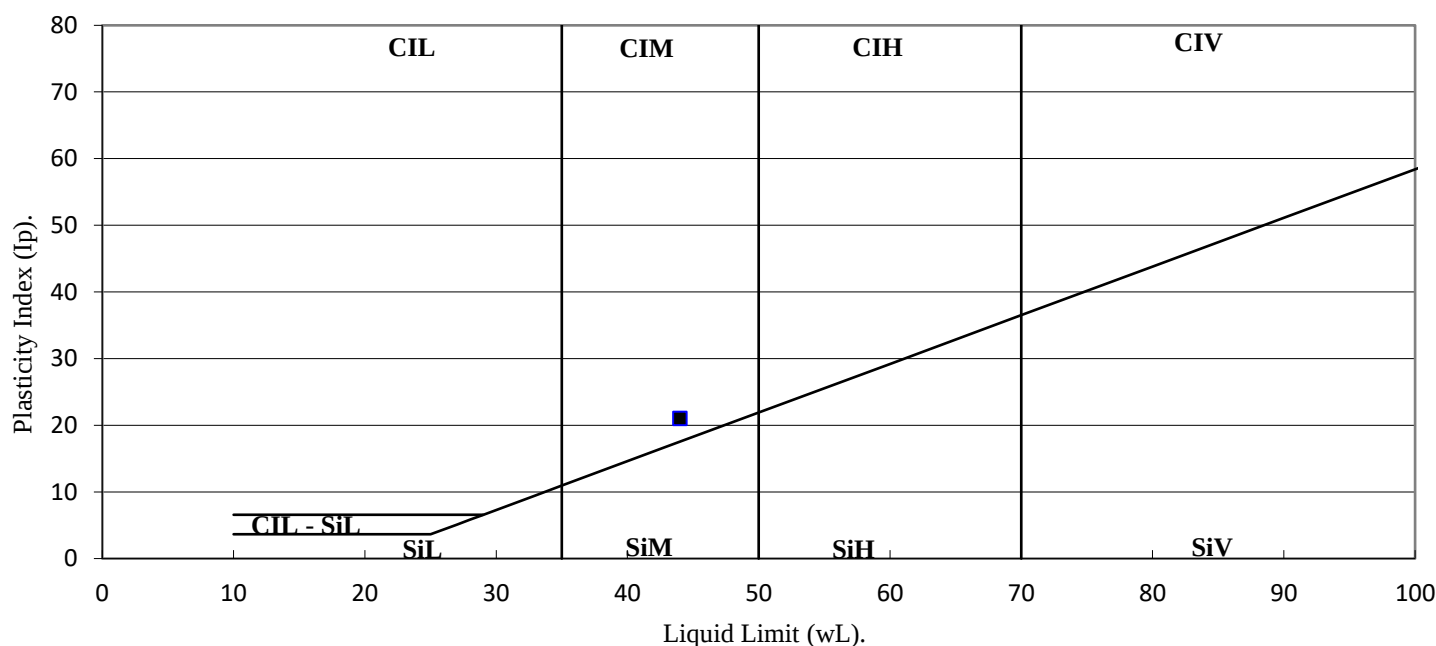
[illegible]

Operator
Jason. S

[illegible]

PLASTICITY CHART

BS EN ISO 14688-2:2018 Clause 4.4





PARTICLE SIZE DISTRIBUTION
BS 1377-2:2022 Clause 10 &
BS EN ISO 17892-4:2016
Wet Sieve, Clause 5.2

Contract Number **86069**

Borehole/Pit No. **BH01**

Project Name **Bargoed**

Sample No.

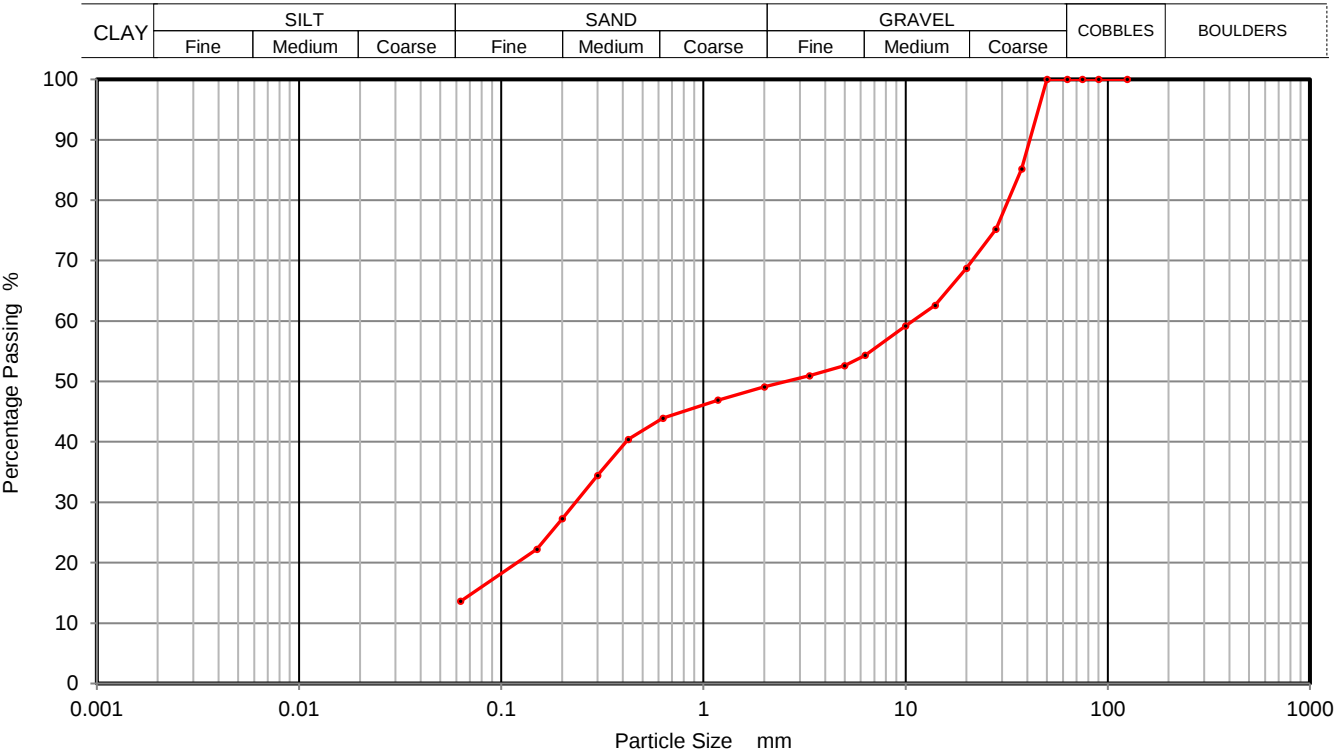
Sample Description **Brown silty/clayey fine to coarse sandy fine to coarse GRAVEL**

Depth Top **11.50**

Depth Base **12.00**

Date Tested **04/05/2026**

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	85		
28	75		
20	69		
14	63		
10	59		
6.3	54		
5	53		
3.35	51		
2	49		
1.18	47		
0.63	44		
0.425	40		
0.30	34		
0.20	27		
0.15	22		
0.063	14		

Sample Proportions	% dry mass
Cobbles	0
Gravel	51
Sand	35
Silt and Clay	14

Grading Analysis	
Uniformity Coefficient	N/A

Remarks
Preparation and testing in accordance with BS17892 unless noted below

Operator

Corey. J



PARTICLE SIZE DISTRIBUTION
BS 1377-2:2022 Clause 10 &
BS EN ISO 17892-4:2016
Wet Sieve, Clause 5.2

Contract Number **86069**

Borehole/Pit No. **BH01**

Project Name **Bargoed**

Sample No.

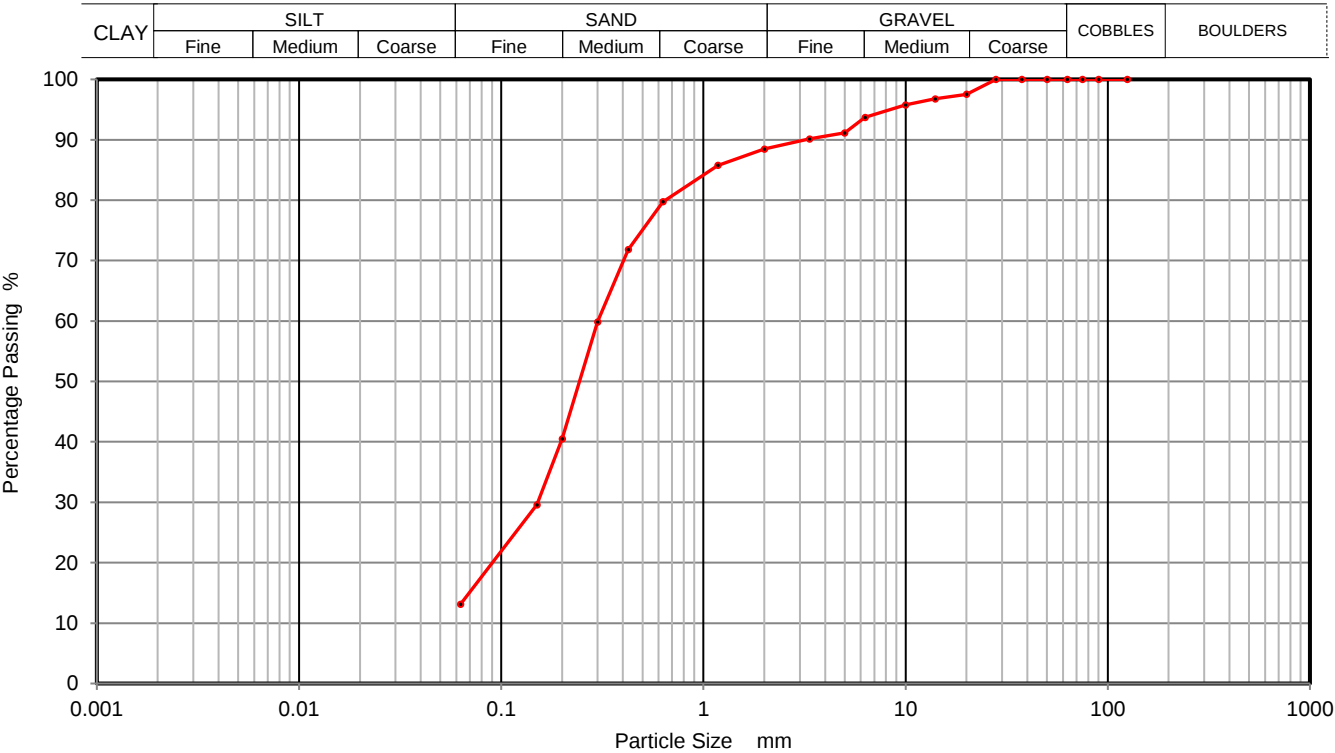
Sample Description **Brown silty/clayey fine to coarse gravelly fine to coarse SAND**

Depth Top **13.00**

Depth Base **13.50**

Date Tested **04/05/2026**

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	98		
14	97		
10	96		
6.3	94		
5	91		
3.35	90		
2	88		
1.18	86		
0.63	80		
0.425	72		
0.30	60		
0.20	41		
0.15	30		
0.063	13		

Sample Proportions	% dry mass
Cobbles	0
Gravel	12
Sand	75
Silt and Clay	13

Grading Analysis	
Uniformity Coefficient	N/A

Remarks
Preparation and testing in accordance with BS17892 unless noted below

Operator

Corey. J



PARTICLE SIZE DISTRIBUTION
BS 1377-2:2022 Clause 10 &
BS EN ISO 17892-4:2016
Wet Sieve, Clause 5.2

Contract Number **86069**

Borehole/Pit No. **BH01**

Project Name **Bargoed**

Sample No.

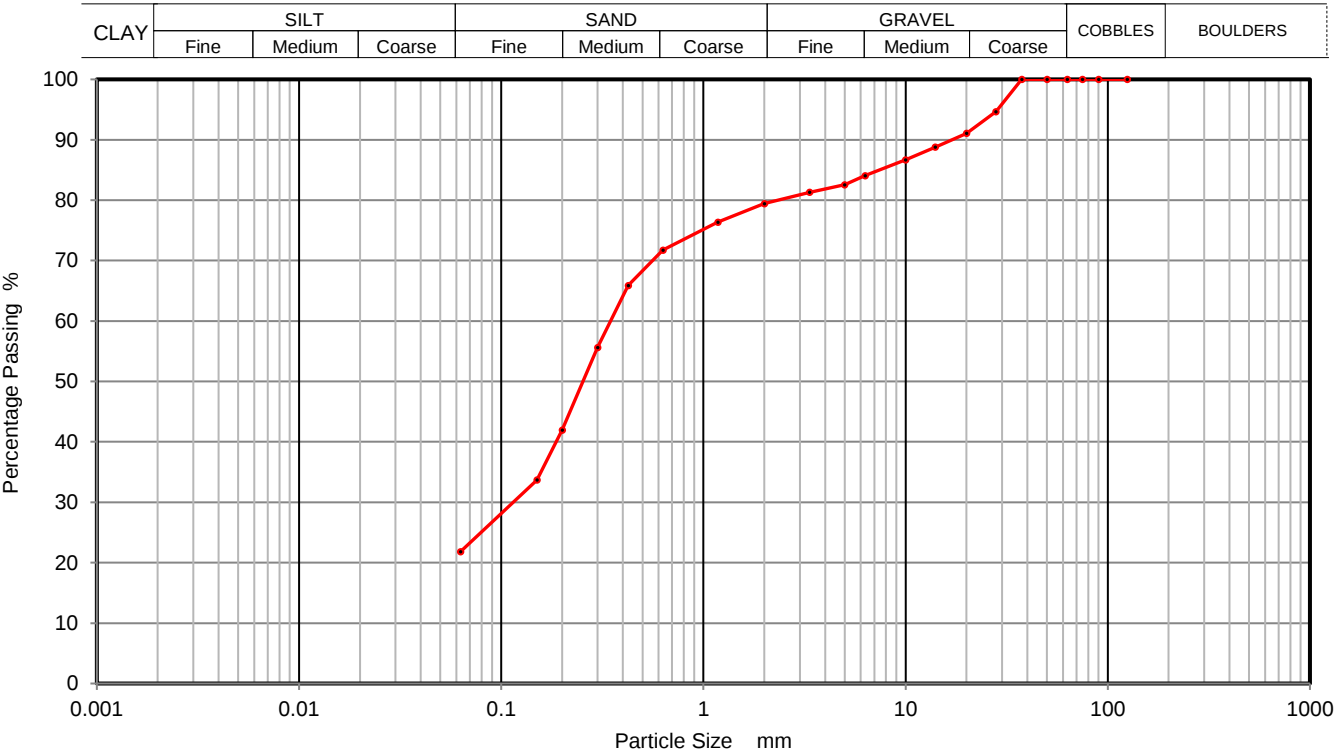
Sample Description Brown fine to coarse gravelly silty/clayey fine to coarse SAND

Depth Top **14.50**

Depth Base **15.00**

Date Tested 04/05/2026

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	95		
20	91		
14	89		
10	87		
6.3	84		
5	83		
3.35	81		
2	79		
1.18	76		
0.63	72		
0.425	66		
0.30	56		
0.20	42		
0.15	34		
0.063	22		

Sample Proportions	% dry mass
Cobbles	0
Gravel	21
Sand	57
Silt and Clay	22

Grading Analysis	
Uniformity Coefficient	N/A

Remarks
Preparation and testing in accordance with BS17892 unless noted below

Operator

Corey. J



PARTICLE SIZE DISTRIBUTION
BS 1377-2:2022 Clause 10 &
BS EN ISO 17892-4:2016
Wet Sieve, Clause 5.2

Contract Number **86069**

Borehole/Pit No. **BH02**

Project Name **Bargoed**

Sample No.

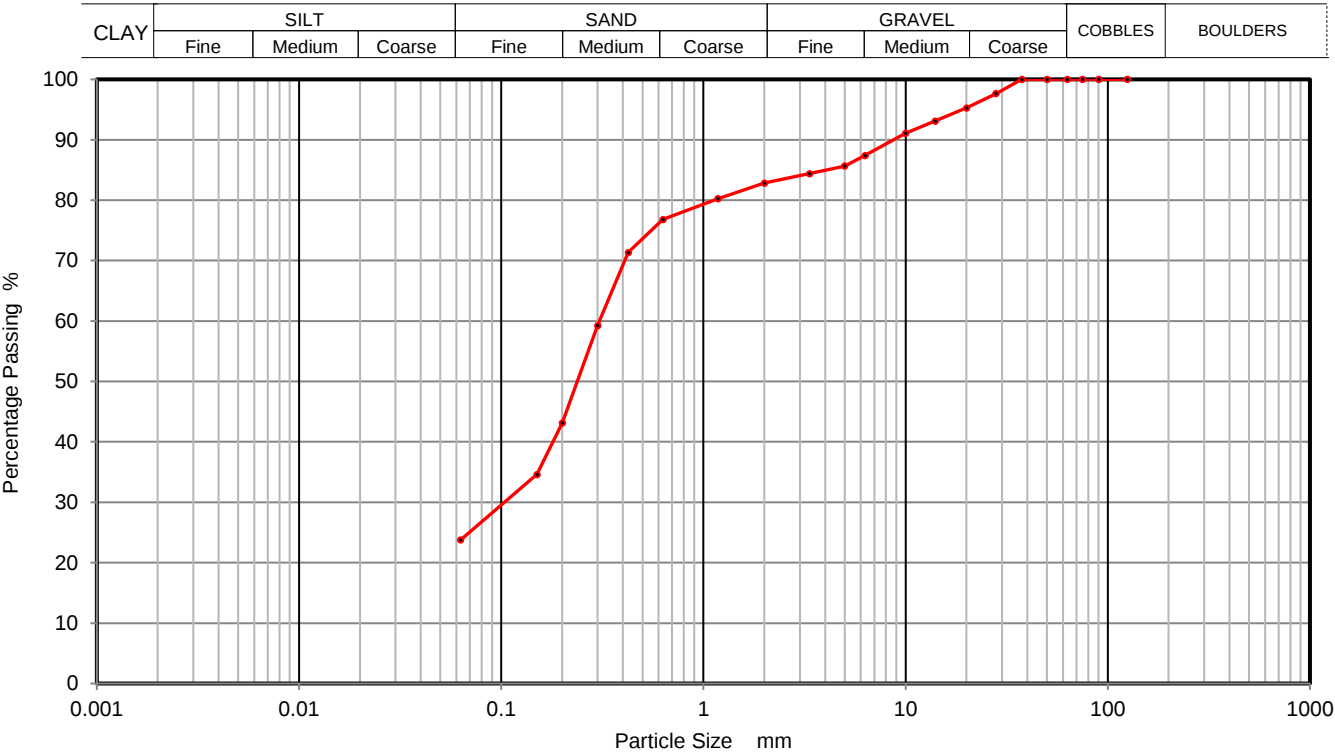
Sample Description Brown fine to coarse gravelly silty/clayey fine to coarse GRAVEL

Depth Top **10.00**

Depth Base **10.50**

Date Tested 04/05/2026

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	98		
20	95		
14	93		
10	91		
6.3	87		
5	86		
3.35	84		
2	83		
1.18	80		
0.63	77		
0.425	71		
0.30	59		
0.20	43		
0.15	35		
0.063	24		

Sample Proportions	% dry mass
Cobbles	0
Gravel	17
Sand	59
Silt and Clay	24

Grading Analysis	
Uniformity Coefficient	N/A

Remarks
Preparation and testing in accordance with BS17892 unless noted below

Operator

Corey. J



PARTICLE SIZE DISTRIBUTION
BS 1377-2:2022 Clause 10 &
BS EN ISO 17892-4:2016
Wet Sieve, Clause 5.2

Contract Number **86069**

Borehole/Pit No. **BH02**

Project Name **Bargoed**

Sample No.

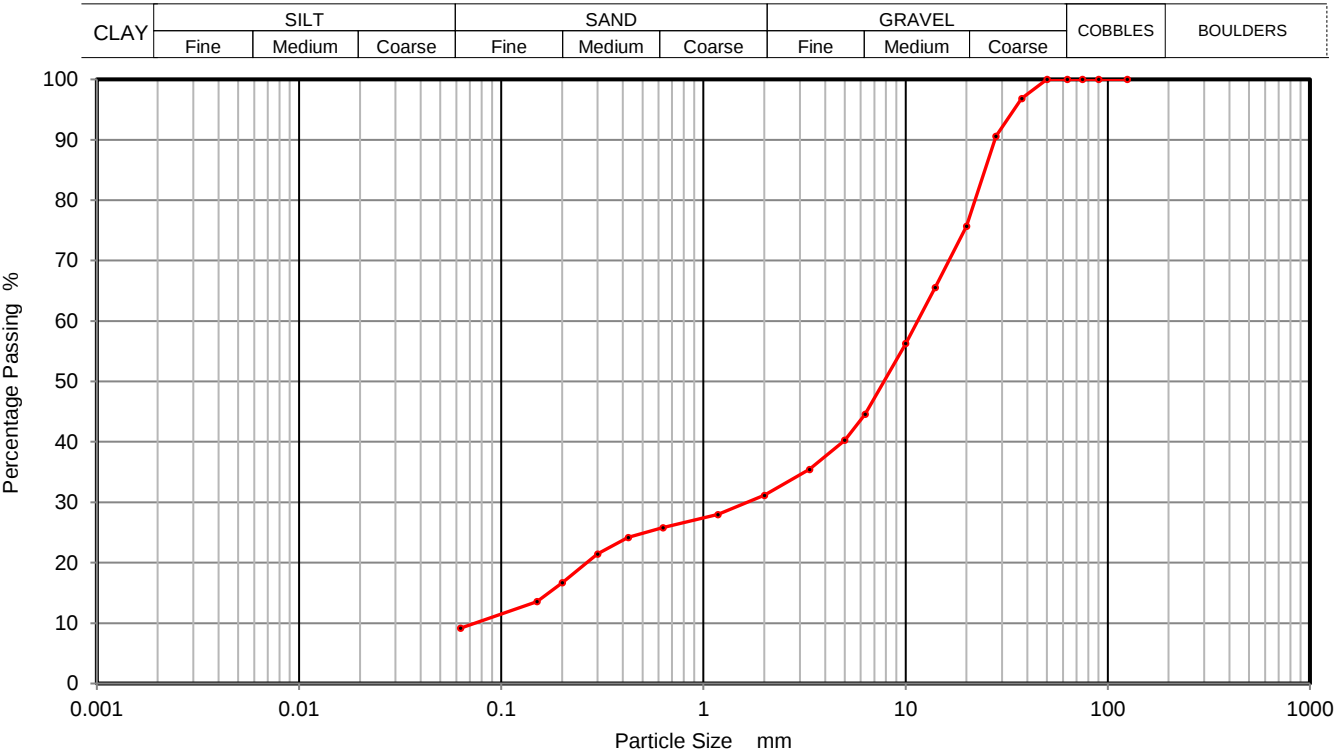
Sample Description **Brown silty/clayey fine to coarse sandy fine to coarse GRAVEL**

Depth Top **11.50**

Depth Base **12.00**

Date Tested **04/05/2026**

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	97		
28	91		
20	76		
14	66		
10	56		
6.3	45		
5	40		
3.35	35		
2	31		
1.18	28		
0.63	26		
0.425	24		
0.30	21		
0.20	17		
0.15	14		
0.063	9		

Sample Proportions	% dry mass
Cobbles	0
Gravel	69
Sand	22
Silt and Clay	9

Grading Analysis	
Uniformity Coefficient	N/A

Remarks
Preparation and testing in accordance with BS17892 unless noted below

Operator

Corey. J



PARTICLE SIZE DISTRIBUTION
BS 1377-2:2022 Clause 10 &
BS EN ISO 17892-4:2016
Wet Sieve, Clause 5.2

Contract Number **86069**

Borehole/Pit No. **BH02**

Project Name **Bargoed**

Sample No.

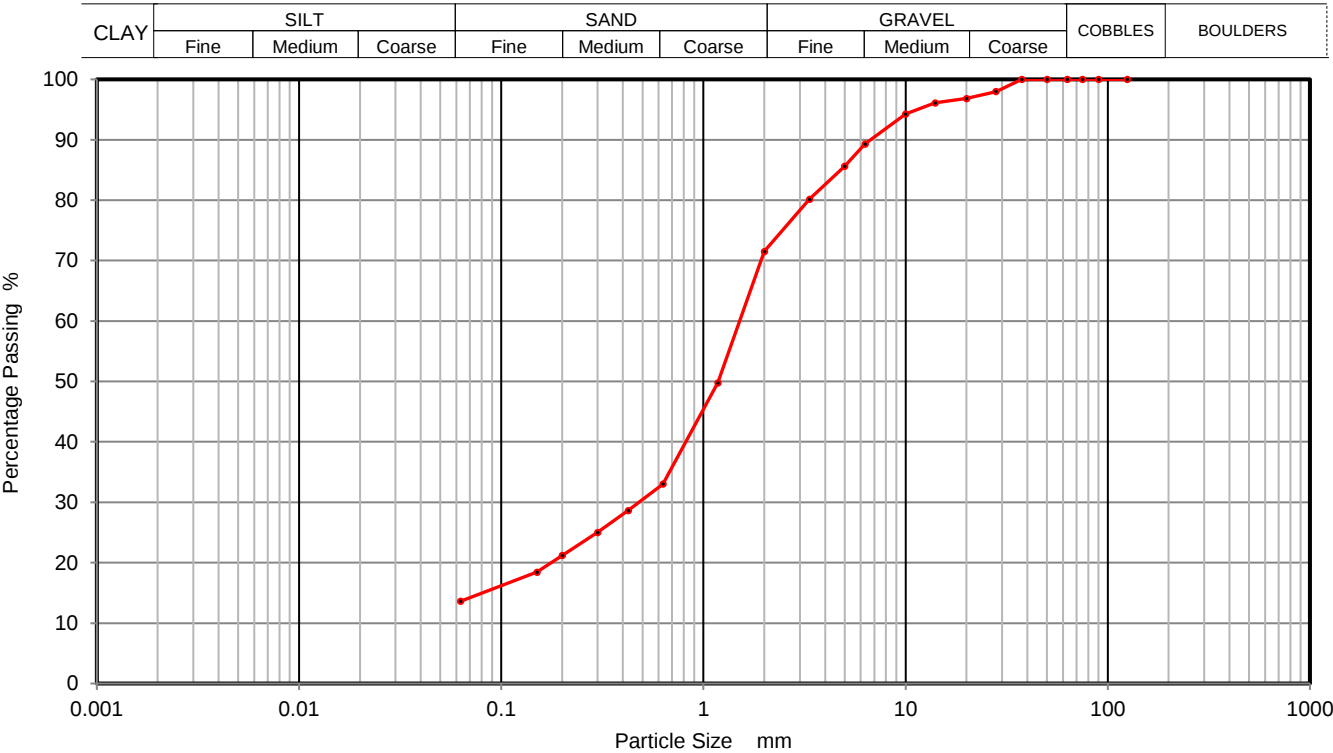
Sample Description **Brown silty/clayey fine to coarse gravelly fine to coarse SAND**

Depth Top **13.00**

Depth Base **13.50**

Date Tested **04/05/2026**

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	98		
20	97		
14	96		
10	94		
6.3	89		
5	86		
3.35	80		
2	72		
1.18	50		
0.63	33		
0.425	29		
0.30	25		
0.20	21		
0.15	18		
0.063	14		

Sample Proportions	% dry mass
Cobbles	0
Gravel	28
Sand	58
Silt and Clay	14

Grading Analysis	
Uniformity Coefficient	N/A

Remarks
Preparation and testing in accordance with BS17892 unless noted below

Operator

Corey. J



PARTICLE SIZE DISTRIBUTION
BS 1377-2:2022 Clause 10 &
BS EN ISO 17892-4:2016
Wet Sieve, Clause 5.2

Contract Number **86069**

Borehole/Pit No. **BH02**

Project Name **Bargoed**

Sample No.

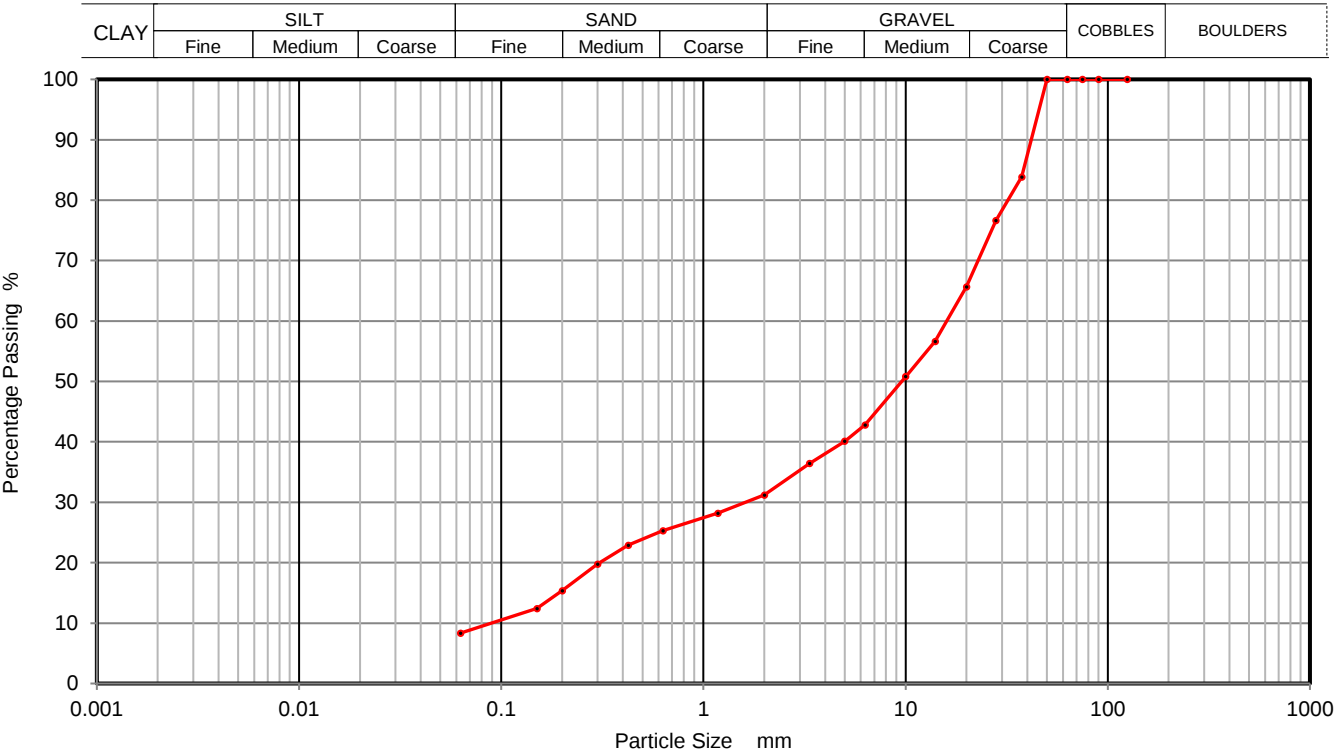
Sample Description Brown silty/clayey fine to coarse sandy fine to coarse GRAVEL

Depth Top **14.60**

Depth Base **15.00**

Date Tested 04/05/2026

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	84		
28	77		
20	66		
14	57		
10	51		
6.3	43		
5	40		
3.35	36		
2	31		
1.18	28		
0.63	25		
0.425	23		
0.30	20		
0.20	15		
0.15	12		
0.063	8		

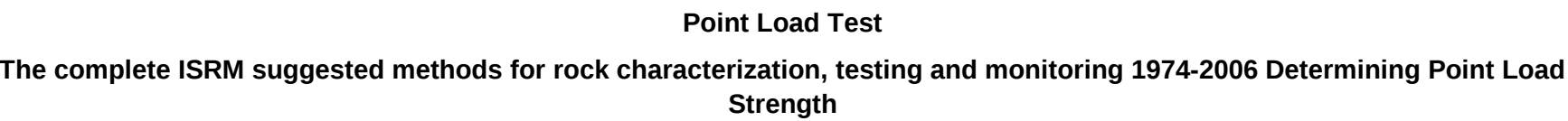
Sample Proportions	% dry mass
Cobbles	0
Gravel	69
Sand	23
Silt and Clay	8

Grading Analysis	
Uniformity Coefficient	N/A

Remarks
Preparation and testing in accordance with BS17892 unless noted below

Operator

Corey. J



*Please note that GSTL is not accredited for the water content of rock

Key	Reported As
Width	(W) mm
Platen Separation	(D) mm
Failure Load	(P) kN
Equivalent Diameter	(De) mm
Point Load	(Is) MPa
Size Factor	(F)
Point Load Index	(Is(50)) MPa
Moisture Content	%
Description	SC
Perpendicular	I
Parallel to planes of weakness	//

Page 11 of 11

FINAL ANALYTICAL TEST REPORT

Envirolab Job Number: 26/04540
Issue Number: 1

Date: 08 May, 2026

Client: Earth Environmental & Geotechnical Ltd (Bath)
Studio 3 Tollbridge Studios,
Bath
BA1 7DE

Project Manager: USE THIS ONE
Project Name: Bargoed
Project Ref: B5556
Order No: B5556/FL/14042026
Date Samples Received: 13/04/26
Date Instructions Received: 15/04/26
Date Analysis Completed: 08/05/26

Approved by:

A handwritten signature in black ink, appearing to read "Richard Wong". The signature is stylized with a large, sweeping loop at the end.

Richard Wong
Client Manager

Envirolab Job Number: 26/04540

Client Project Name: Bargoed

Client Project Ref: B5556

Lab Sample ID	26/04540/2	26/04540/3	26/04540/4	26/04540/5	26/04540/7	26/04540/8	26/04540/10	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	BH01	BH01	BH01	BH01	BH02	BH02	BH02			
Depth to Top	2.60	5.80	8.10	12.20	0.50	2.10	10.80			
Depth To Bottom										
Date Sampled	08-Apr-26	08-Apr-26	09-Apr-26	09-Apr-26	09-Apr-26	09-Apr-26	09-Apr-26			
Sample Type	SOIL - ES	SOIL - ES	SOLID	SOIL - D	SOIL - ES	SOLID	SOIL - D			
Sample Matrix Code	4AE	5AE	7	1A	4AE	7	1A			
% Moisture at <40C _A	15.9	16.5	-	-	7.8	-	-	% w/w	0.1	A-T-044
% Stones >10mm _A	6.3	14.1	<0.1	<0.1	18.4	<0.1	<0.1	% w/w	0.1	A-T-044
pH _D ^{M#}	8.27	8.20	-	-	8.25	-	-	pH	0.01	A-T-031s
pH BRE _D ^{M#}	-	-	8.61 ^U	8.08	-	9.86 ^U	7.60	pH	0.01	A-T-031s
Sulphate (water sol 2:1) _D ^{M#}	0.09	0.11	-	-	0.02	-	-	g/l	0.01	A-T-026s
Sulphate BRE (water sol 2:1) _D ^{M#}	-	-	16 ^U	<10	-	11 ^U	<10	mg/l	10	A-T-026s
Sulphate (acid soluble) _D ^{M#}	760	870	-	-	810	-	-	mg/kg	200	A-T-028s
Cyanide (free) _A ^{M#}	<1	<1	-	-	<1	-	-	mg/kg	1	A-T-042sFCN
Cyanide (complex/WAD) ^{M#}	<1	<1	-	-	<1	-	-	mg/kg	1	Calc
Cyanide (total) _A ^{M#}	<1	<1	-	-	<1	-	-	mg/kg	1	A-T-042sTCN
Phenols - Total by HPLC _A	<0.2	<0.2	-	-	<0.2	-	-	mg/kg	0.2	A-T-050s
Sulphide _A	<5	<5	-	-	<5	-	-	mg/kg	5	A-T-043-s
Organic Matter _D ^{M#}	11.9	14.6	-	-	7.78	-	-	% w/w	0.14	A-T-032s
Arsenic _D ^{M#}	12	12	-	-	7	-	-	mg/kg	1	A-T-024s
Barium _D [#]	102	135	-	-	496	-	-	mg/kg	3	A-T-024s
Beryllium _D	0.6	0.8	-	-	0.6	-	-	mg/kg	0.5	A-T-024s
Boron (water soluble) _D ^{M#}	<1.0	<1.0	-	-	<1.0	-	-	mg/kg	1	A-T-027s
Cadmium _D	<1.0	<1.0	-	-	1.2	-	-	mg/kg	1	A-T-024s
Copper _D ^{M#}	26	29	-	-	38	-	-	mg/kg	1	A-T-024s
Chromium _D ^{M#}	13	10	-	-	15	-	-	mg/kg	1	A-T-024s
Chromium (hexavalent) _D	<1	<1	-	-	<1	-	-	mg/kg	1	A-T-040s
Lead _D ^{M#}	51	45	-	-	78	-	-	mg/kg	1	A-T-024s
Mercury _D	<0.17	<0.17	-	-	<0.17	-	-	mg/kg	0.17	A-T-024s
Nickel _D ^{M#}	18	17	-	-	20	-	-	mg/kg	1	A-T-024s
Selenium _D ^{M#}	<1	<1	-	-	<1	-	-	mg/kg	1	A-T-024s
Vanadium _D ^{M#}	20	16	-	-	20	-	-	mg/kg	1	A-T-024s
Zinc _D ^{M#}	125	71	-	-	178	-	-	mg/kg	1	A-T-024s

Envirolab Job Number: 26/04540

Client Project Name: Bargoed

Client Project Ref: B5556

Lab Sample ID	26/04540/2	26/04540/3	26/04540/4	26/04540/5	26/04540/7	26/04540/8	26/04540/10	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	BH01	BH01	BH01	BH01	BH02	BH02	BH02			
Depth to Top	2.60	5.80	8.10	12.20	0.50	2.10	10.80			
Depth To Bottom										
Date Sampled	08-Apr-26	08-Apr-26	09-Apr-26	09-Apr-26	09-Apr-26	09-Apr-26	09-Apr-26			
Sample Type	SOIL - ES	SOIL - ES	SOLID	SOIL - D	SOIL - ES	SOLID	SOIL - D			
Sample Matrix Code	4AE	5AE	7	1A	4AE	7	1A			
Asbestos in Soil (inc. matrix)										
Asbestos in soil [#]	NAD	NAD	-	-	NAD	-	-			A-T-045
Asbestos Matrix (visual) _D	-	-	-	-	-	-	-			A-T-045
Asbestos Matrix (microscope) _D	-	-	-	-	-	-	-			A-T-045
Asbestos ACM - Suitable for Water Absorption Test? _D	N/A	N/A	-	-	N/A	-	-			A-T-045

Envirolab Job Number: 26/04540

Client Project Name: Bargoed

Client Project Ref: B5556

Lab Sample ID	26/04540/2	26/04540/3	26/04540/4	26/04540/5	26/04540/7	26/04540/8	26/04540/10	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	BH01	BH01	BH01	BH01	BH02	BH02	BH02			
Depth to Top	2.60	5.80	8.10	12.20	0.50	2.10	10.80			
Depth To Bottom										
Date Sampled	08-Apr-26	08-Apr-26	09-Apr-26	09-Apr-26	09-Apr-26	09-Apr-26	09-Apr-26			
Sample Type	SOIL - ES	SOIL - ES	SOLID	SOIL - D	SOIL - ES	SOLID	SOIL - D			
Sample Matrix Code	4AE	5AE	7	1A	4AE	7	1A			
PAH-16MS										
Acenaphthene _A ^{M#}	<0.01	<0.01	-	-	0.05	-	-	mg/kg	0.01	A-T-019s
Acenaphthylene _A ^{M#}	0.01	<0.01	-	-	0.07	-	-	mg/kg	0.01	A-T-019s
Anthracene _A ^{M#}	<0.02	<0.02	-	-	0.32	-	-	mg/kg	0.02	A-T-019s
Benzo(a)anthracene _A ^{M#}	0.19	<0.04	-	-	3.02	-	-	mg/kg	0.04	A-T-019s
Benzo(a)pyrene _A ^{M#}	0.20	<0.04	-	-	2.34	-	-	mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene _A ^{M#}	0.25	0.05	-	-	3.12	-	-	mg/kg	0.05	A-T-019s
Benzo(ghi)perylene _A ^{M#}	0.14	<0.05	-	-	1.42	-	-	mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene _A ^{M#}	0.10	<0.07	-	-	1.05	-	-	mg/kg	0.07	A-T-019s
Chrysene _A ^{M#}	0.27	0.06	-	-	2.73	-	-	mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene _A ^{M#}	0.06	<0.04	-	-	0.49	-	-	mg/kg	0.04	A-T-019s
Fluoranthene _A ^{M#}	0.27	<0.08	-	-	4.20	-	-	mg/kg	0.08	A-T-019s
Fluorene _A ^{M#}	<0.01	<0.01	-	-	0.07	-	-	mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene _A ^{M#}	0.20	<0.03	-	-	1.74	-	-	mg/kg	0.03	A-T-019s
Naphthalene _A ^{M#}	0.03	<0.03	-	-	0.04	-	-	mg/kg	0.03	A-T-019s
Phenanthrene _A ^{M#}	0.14	0.10	-	-	0.95	-	-	mg/kg	0.03	A-T-019s
Pyrene _A ^{M#}	0.20	<0.07	-	-	3.12	-	-	mg/kg	0.07	A-T-019s
Total PAH-16MS _A ^{M#}	2.06	0.21	-	-	24.7	-	-	mg/kg	0.01	A-T-019s

Envirolab Job Number: 26/04540

Client Project Name: Bargoed

Client Project Ref: B5556

Lab Sample ID	26/04540/2	26/04540/3	26/04540/4	26/04540/5	26/04540/7	26/04540/8	26/04540/10	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	BH01	BH01	BH01	BH01	BH02	BH02	BH02			
Depth to Top	2.60	5.80	8.10	12.20	0.50	2.10	10.80			
Depth To Bottom										
Date Sampled	08-Apr-26	08-Apr-26	09-Apr-26	09-Apr-26	09-Apr-26	09-Apr-26	09-Apr-26			
Sample Type	SOIL - ES	SOIL - ES	SOLID	SOIL - D	SOIL - ES	SOLID	SOIL - D			
Sample Matrix Code	4AE	5AE	7	1A	4AE	7	1A			
TPH CWG with Clean Up										
Ali >C5-C6 _A	<0.01	<0.01	-	-	<0.01	-	-	mg/kg	0.01	A-T-022s
Ali >C6-C8 _A	<0.01	<0.01	-	-	<0.01	-	-	mg/kg	0.01	A-T-022s
Ali >C8-C10 _A	<1	<1	-	-	<1	-	-	mg/kg	1	A-T-055s
Ali >C10-C12 _A ^{M#}	<1	<1	-	-	<1	-	-	mg/kg	1	A-T-055s
Ali >C12-C16 _A ^{M#}	<1	<1	-	-	<1	-	-	mg/kg	1	A-T-055s
Ali >C16-C21 _A ^{M#}	<1	<1	-	-	4	-	-	mg/kg	1	A-T-055s
Ali >C21-C35 _A ^{M#}	<1	<1	-	-	34	-	-	mg/kg	1	A-T-055s
Total Aliphatics _A	<1	<1	-	-	37	-	-	mg/kg	1	Calc-As Recd
Aro >C5-C7 _A [#]	<0.01	<0.01	-	-	<0.01	-	-	mg/kg	0.01	A-T-022s
Aro >C7-C8 _A [#]	<0.01	<0.01	-	-	<0.01	-	-	mg/kg	0.01	A-T-022s
Aro >C8-C10 _A	<1	<1	-	-	<1	-	-	mg/kg	1	A-T-055s
Aro >C10-C12 _A	<1	<1	-	-	<1	-	-	mg/kg	1	A-T-055s
Aro >C12-C16 _A	<1	<1	-	-	2	-	-	mg/kg	1	A-T-055s
Aro >C16-C21 _A ^{M#}	<1	<1	-	-	16	-	-	mg/kg	1	A-T-055s
Aro >C21-C35 _A ^{M#}	2	<1	-	-	117	-	-	mg/kg	1	A-T-055s
Total Aromatics _A	2	<1	-	-	135	-	-	mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C35) _A	2	<1	-	-	172	-	-	mg/kg	1	Calc-As Recd
BTEX - Benzene _A [#]	<0.01	<0.01	-	-	<0.01	-	-	mg/kg	0.01	A-T-022s
BTEX - Toluene _A [#]	<0.01	<0.01	-	-	<0.01	-	-	mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene _A [#]	<0.01	<0.01	-	-	<0.01	-	-	mg/kg	0.01	A-T-022s
BTEX - m & p Xylene _A [#]	<0.01	<0.01	-	-	<0.01	-	-	mg/kg	0.01	A-T-022s
BTEX - o Xylene _A [#]	<0.01	<0.01	-	-	<0.01	-	-	mg/kg	0.01	A-T-022s
MTBE _A [#]	<0.01	<0.01	-	-	<0.01	-	-	mg/kg	0.01	A-T-022s

Envirolab Job Number: 26/04540

Client Project Name: Bargoed

Client Project Ref: B5556

Lab Sample ID	26/04540/11	26/04540/12	26/04540/13	26/04540/14	26/04540/15	26/04540/17	26/04540/19	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	BH02	WS01	WS02	WS03	WS03	TP01	TP02			
Depth to Top	14.60	0.80	0.60	0.40	2.60	1.20	1.00			
Depth To Bottom										
Date Sampled	09-Apr-26	08-Apr-26	10-Apr-26	10-Apr-26	10-Apr-26	09-Apr-26	09-Apr-26			
Sample Type	SOIL - D	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - D			
Sample Matrix Code	4A	4A	4A	4AE	1A	4A	4AE			
% Moisture at <40C _A	-	5.1	7.4	10.3	14.4	9.0	-	% w/w	0.1	A-T-044
% Stones >10mm _A	39.5	15.6	<0.1	10.7	12.7	12.1	14.1	% w/w	0.1	A-T-044
pH _D ^{M#}	-	8.71	9.17	8.09	9.98	8.70	-	pH	0.01	A-T-031s
pH BRE _D ^{M#}	8.11	-	-	-	-	-	7.77	pH	0.01	A-T-031s
Sulphate (water sol 2:1) _D ^{M#}	-	0.03	0.09	0.04	0.23	0.02	-	g/l	0.01	A-T-026s
Sulphate BRE (water sol 2:1) _D ^{M#}	<10	-	-	-	-	-	1440	mg/l	10	A-T-026s
Sulphate (acid soluble) _D ^{M#}	-	690	1600	720	4100	810	-	mg/kg	200	A-T-028s
Cyanide (free) _A ^{M#}	-	<1	<1	<1	<1	<1	-	mg/kg	1	A-T-042sFCN
Cyanide (complex/WAD) ^{M#}	-	<1	<1	<1	<1	<1	-	mg/kg	1	Calc
Cyanide (total) _A ^{M#}	-	<1	<1	<1	<1	<1	-	mg/kg	1	A-T-042sTCN
Phenols - Total by HPLC _A	-	<0.2	<0.2	<0.2	<0.2	<0.2	-	mg/kg	0.2	A-T-050s
Sulphide _A	-	<5	<5	<5	<5	<5	-	mg/kg	5	A-T-043-s
Organic Matter _D ^{M#}	-	15.7	10.6	6.44	1.29	12.4	-	% w/w	0.14	A-T-032s
Arsenic _D ^{M#}	-	4	5	7	9	6	-	mg/kg	1	A-T-024s
Barium _D [#]	-	154	704	630	158	399	-	mg/kg	3	A-T-024s
Beryllium _D	-	<0.5	1.1	0.6	<0.5	<0.5	-	mg/kg	0.5	A-T-024s
Boron (water soluble) _D ^{M#}	-	<1.0	<1.0	<1.0	<1.0	<1.0	-	mg/kg	1	A-T-027s
Cadmium _D	-	<1.0	3.3	<1.0	<1.0	1.1	-	mg/kg	1	A-T-024s
Copper _D ^{M#}	-	12	22	31	7	34	-	mg/kg	1	A-T-024s
Chromium _D ^{M#}	-	9	16	8	7	12	-	mg/kg	1	A-T-024s
Chromium (hexavalent) _D	-	<1	<1	<1	<1	<1	-	mg/kg	1	A-T-040s
Lead _D ^{M#}	-	30	154	40	26	98	-	mg/kg	1	A-T-024s
Mercury _D	-	<0.17	<0.17	<0.17	<0.17	<0.17	-	mg/kg	0.17	A-T-024s
Nickel _D ^{M#}	-	12	18	21	8	10	-	mg/kg	1	A-T-024s
Selenium _D ^{M#}	-	<1	<1	<1	<1	<1	-	mg/kg	1	A-T-024s
Vanadium _D ^{M#}	-	13	25	12	14	12	-	mg/kg	1	A-T-024s
Zinc _D ^{M#}	-	37	281	70	56	907	-	mg/kg	1	A-T-024s

Envirolab Job Number: 26/04540

Client Project Name: Bargoed

Client Project Ref: B5556

Lab Sample ID	26/04540/11	26/04540/12	26/04540/13	26/04540/14	26/04540/15	26/04540/17	26/04540/19	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	BH02	WS01	WS02	WS03	WS03	TP01	TP02			
Depth to Top	14.60	0.80	0.60	0.40	2.60	1.20	1.00			
Depth To Bottom										
Date Sampled	09-Apr-26	08-Apr-26	10-Apr-26	10-Apr-26	10-Apr-26	09-Apr-26	09-Apr-26			
Sample Type	SOIL - D	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - D			
Sample Matrix Code	4A	4A	4A	4AE	1A	4A	4AE			
Asbestos in Soil (inc. matrix)										
Asbestos in soil [#]	-	NAD	NAD	NAD	NAD	NAD	-			A-T-045
Asbestos Matrix (visual) _D	-	-	-	-	-	-	-			A-T-045
Asbestos Matrix (microscope) _D	-	-	-	-	-	-	-			A-T-045
Asbestos ACM - Suitable for Water Absorption Test? _D	-	N/A	N/A	N/A	N/A	N/A	-			A-T-045

Envirolab Job Number: 26/04540

Client Project Name: Bargoed

Client Project Ref: B5556

Lab Sample ID	26/04540/11	26/04540/12	26/04540/13	26/04540/14	26/04540/15	26/04540/17	26/04540/19	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	BH02	WS01	WS02	WS03	WS03	TP01	TP02			
Depth to Top	14.60	0.80	0.60	0.40	2.60	1.20	1.00			
Depth To Bottom										
Date Sampled	09-Apr-26	08-Apr-26	10-Apr-26	10-Apr-26	10-Apr-26	09-Apr-26	09-Apr-26			
Sample Type	SOIL - D	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - D			
Sample Matrix Code	4A	4A	4A	4AE	1A	4A	4AE			
PAH-16MS										
Acenaphthene _A ^{M#}	-	0.13	0.21	<0.01	0.30	0.07	-	mg/kg	0.01	A-T-019s
Acenaphthylene _A ^{M#}	-	0.25	0.30	<0.01	0.06	0.17	-	mg/kg	0.01	A-T-019s
Anthracene _A ^{M#}	-	0.68	0.72	<0.02	0.65	0.30	-	mg/kg	0.02	A-T-019s
Benzo(a)anthracene _A ^{M#}	-	2.11	5.24	0.05	2.73	1.99	-	mg/kg	0.04	A-T-019s
Benzo(a)pyrene _A ^{M#}	-	2.20	5.45	0.05	2.35	2.04	-	mg/kg	0.04	A-T-019s
Benzo(b)fluoranthene _A ^{M#}	-	2.45	6.38	0.09	3.16	2.48	-	mg/kg	0.05	A-T-019s
Benzo(ghi)perylene _A ^{M#}	-	1.67	4.34	<0.05	1.78	1.60	-	mg/kg	0.05	A-T-019s
Benzo(k)fluoranthene _A ^{M#}	-	0.82	2.27	<0.07	1.10	0.90	-	mg/kg	0.07	A-T-019s
Chrysene _A ^{M#}	-	1.90	5.06	0.11	3.00	1.75	-	mg/kg	0.06	A-T-019s
Dibenzo(ah)anthracene _A ^{M#}	-	0.38	1.22	<0.04	0.61	0.38	-	mg/kg	0.04	A-T-019s
Fluoranthene _A ^{M#}	-	3.82	7.01	<0.08	4.26	2.98	-	mg/kg	0.08	A-T-019s
Fluorene _A ^{M#}	-	0.25	0.19	<0.01	0.27	0.06	-	mg/kg	0.01	A-T-019s
Indeno(123-cd)pyrene _A ^{M#}	-	2.09	5.15	0.05	2.06	1.94	-	mg/kg	0.03	A-T-019s
Naphthalene _A ^{M#}	-	0.45	0.10	<0.03	0.05	0.15	-	mg/kg	0.03	A-T-019s
Phenanthrene _A ^{M#}	-	1.45	2.25	0.07	2.00	0.71	-	mg/kg	0.03	A-T-019s
Pyrene _A ^{M#}	-	3.13	5.84	<0.07	3.01	2.62	-	mg/kg	0.07	A-T-019s
Total PAH-16MS _A ^{M#}	-	23.8	51.7	0.42	27.4	20.1	-	mg/kg	0.01	A-T-019s

Envirolab Job Number: 26/04540

Client Project Name: Bargoed

Client Project Ref: B5556

Lab Sample ID	26/04540/11	26/04540/12	26/04540/13	26/04540/14	26/04540/15	26/04540/17	26/04540/19	Units	Limit of Detection	Method ref
Client Sample No										
Client Sample ID	BH02	WS01	WS02	WS03	WS03	TP01	TP02			
Depth to Top	14.60	0.80	0.60	0.40	2.60	1.20	1.00			
Depth To Bottom										
Date Sampled	09-Apr-26	08-Apr-26	10-Apr-26	10-Apr-26	10-Apr-26	09-Apr-26	09-Apr-26			
Sample Type	SOIL - D	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - ES	SOIL - D			
Sample Matrix Code	4A	4A	4A	4AE	1A	4A	4AE			
TPH CWG with Clean Up										
Ali >C5-C6 _A	-	<0.05	<0.01	<0.05	<0.01	<0.01	-	mg/kg	0.01	A-T-022s
Ali >C6-C8 _A	-	<0.05	<0.01	<0.05	<0.01	<0.01	-	mg/kg	0.01	A-T-022s
Ali >C8-C10 _A	-	4	<1	<1	2	<5	-	mg/kg	1	A-T-055s
Ali >C10-C12 _A ^{M#}	-	36	<1	<1	5	<5	-	mg/kg	1	A-T-055s
Ali >C12-C16 _A ^{M#}	-	42	<1	<1	1	<5	-	mg/kg	1	A-T-055s
Ali >C16-C21 _A ^{M#}	-	2	1	<1	4	<5	-	mg/kg	1	A-T-055s
Ali >C21-C35 _A ^{M#}	-	10	32	<1	27	81	-	mg/kg	1	A-T-055s
Total Aliphatics _A	-	93	33	<1	39	81	-	mg/kg	1	Calc-As Recd
Aro >C5-C7 _A [#]	-	<0.05	<0.01	<0.05	<0.01	<0.01	-	mg/kg	0.01	A-T-022s
Aro >C7-C8 _A [#]	-	<0.05	<0.01	<0.05	<0.01	<0.01	-	mg/kg	0.01	A-T-022s
Aro >C8-C10 _A	-	2	<1	<1	2	<5	-	mg/kg	1	A-T-055s
Aro >C10-C12 _A	-	16	<1	<1	3	<5	-	mg/kg	1	A-T-055s
Aro >C12-C16 _A	-	20	3	<1	2	10	-	mg/kg	1	A-T-055s
Aro >C16-C21 _A ^{M#}	-	20	17	<1	13	35	-	mg/kg	1	A-T-055s
Aro >C21-C35 _A ^{M#}	-	106	136	<1	60	156	-	mg/kg	1	A-T-055s
Total Aromatics _A	-	165	157	<1	81	205	-	mg/kg	1	Calc-As Recd
TPH (Ali & Aro >C5-C35) _A	-	258	190	<1	119	286	-	mg/kg	1	Calc-As Recd
BTEX - Benzene _A [#]	-	<0.05	<0.01	<0.05	<0.01	<0.01	-	mg/kg	0.01	A-T-022s
BTEX - Toluene _A [#]	-	<0.05	<0.01	<0.05	<0.01	<0.01	-	mg/kg	0.01	A-T-022s
BTEX - Ethyl Benzene _A [#]	-	<0.05	<0.01	<0.05	<0.01	<0.01	-	mg/kg	0.01	A-T-022s
BTEX - m & p Xylene _A [#]	-	<0.05	<0.01	<0.05	<0.01	<0.01	-	mg/kg	0.01	A-T-022s
BTEX - o Xylene _A [#]	-	0.18	<0.01	<0.05	<0.01	<0.01	-	mg/kg	0.01	A-T-022s
MTBE _A [#]	-	<0.05	<0.01	<0.05	<0.01	<0.01	-	mg/kg	0.01	A-T-022s

Report Notes

General

- This report shall not be reproduced, except in full, without written approval from Envirolab.
- The client Sample No, Client Sample ID, Depth to top, Depth to Bottom and Date Sampled are all provided by the client and can affect the validity of results.
- The results reported herein relate only to the material supplied to the laboratory.
- The residue of any samples contained within this report, and any received within the same delivery, will be disposed of **four weeks** after the initial scheduling. For samples tested for Asbestos we will retain a portion of the dried sample for a minimum of **six months** after the initial Asbestos testing is completed.
- Analytical results reflect the quality of the sample at the time of analysis only.
- Opinions and Interpretations expressed are outside our scope of accreditation.
- A deviating sample report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid.
- If a sample is outside of the calibration range or affected by interferences then it may need diluting. This will result in the limit of detection (LOD) being raised.
- Subcontracted Analysis: Please see the appended report for any deviations, current LODs and accreditation status of the test.

Key

Superscript “#”	Accredited to ISO 17025
Superscript “M”	Accredited to MCertS
Superscript “U”	Individual result not accredited
None of the above symbols	Analysis unaccredited
Subscript “A”	Analysis performed on as-received Sample
Subscript “D”	Analysis performed on the dried sample, crushed to pass 2mm sieve.
Subscript “D” on Asbestos	Analysis performed on a dried aliquot of sample provided.
Subscript “A”	Analysis has dependant options against results. Details appear in the comments of your Sample receipt
Subscript “@”	Result is an opinion
IS	Insufficient Sample for analysis
US	Unsuitable Sample for analysis
NDP	No Determination Possible
NAD	No Asbestos Detected
Trace	Asbestos found not suitable for Gravimetric Quantification – not enough to accurately weigh.
N/A	Not applicable

Asbestos

Identification: Asbestos in soil analysis is performed on a dried aliquot of the submitted sample and cannot guarantee to identify asbestos if only present in small numbers as discrete fibres/fragments in the original sample.

Stones etc. are not removed from the sample prior to analysis

“Trace Asbestos Identified” will be reported if there is not enough present to verify the type.

Assigned Matrix Codes

1	SAND	6	CLAY/LOAM	A	Contains Stones
2	LOAM	7	OTHER	B	Contains Construction Rubble
3	CLAY	8	Asbestos Bulk (Only Asbestos ID accredited)	C	Contains visible hydrocarbons
4	LOAM/SAND	9	Incinerator Ash (some Metals accredited)	D	Contains glass / metal
5	SAND/CLAY			E	Contains roots / twigs

Note: 7,8,9 matrices are not covered by our ISO 17025 or MCertS accreditation, unless stated above.

Soil Chemical Analysis:

All results are reported as dry weight (<40°C).

For samples with Matrix Codes 1 - 6 natural stones, brick and concrete fragments >10mm and any extraneous material (visible glass, metal or twigs) are removed and excluded from the sample prior to analysis and reported results corrected to a whole sample basis. This is reported as '% stones >10mm'.

For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis and this supersedes any “A” subscripts

All analysis is performed on the sample as received for soil samples which are positive for asbestos or the client has informed asbestos may be present and/or if they are from outside the European Union and this supersedes any “D” subscripts.

TPH by method A-T-007:

For waters, free and visible oils are excluded from the sample used for analysis, so the reported result represents the dissolved phase only. Results “with Clean up” indicates samples cleaned up with Silica during extraction.

EPH CWG (method A-T-055) from TPH CWG:

EPH CWG results have humics mathematically subtracted through instrument calculation.

Where these humic substances have been identified in any IDs from “TPH CWG with clean up” please note that the concentration is **NOT** included in the quantified results but present in the ID for information.

Electrical Conductivity of water by method A-T-037:

Results greater than 12900µS/cm @ 25°C / 11550µS/cm @ 20°C fall outside the calibration range and as such are unaccredited.

Please contact your client manager if you require any further information.

Envirolab Deviating Samples Report

Hattersley Science & Technology Park, Stockport Road, Hattersley, SK14 3QU
Tel. 0161 368 4921 email. ask@envlab.co.uk

Client: Earth Environmental & Geotechnical Ltd (Bath), Studio 3 Tollbridge Studios,
Bath, BA1 7DE

Project No: 26/04540

Date Received: 15/04/2026 (am)

Project: Bargoed

Cool Box Temperatures (°C): 10.8 - 12.8

Clients Project No: B5556

Lab Sample ID	26/04540/2	26/04540/3	26/04540/7	26/04540/12	26/04540/13	26/04540/14	26/04540/15	26/04540/17
Client Sample No								
Client Sample ID/Depth	BH01 2.60m	BH01 5.80m	BH02 0.50m	WS01 0.80m	WS02 0.60m	WS03 0.40m	WS03 2.60m	TP01 1.20m
Date Sampled	08/04/26	08/04/26	09/04/26	08/04/26	10/04/26	10/04/26	10/04/26	09/04/26
Deviation Code								
F	✓	✓	✓	✓	✓	✓	✓	✓

Key

F Maximum holding time exceeded between sampling date and analysis for analytes listed below

HOLDING TIME EXCEEDANCES

Lab Sample ID	26/04540/2	26/04540/3	26/04540/7	26/04540/12	26/04540/13	26/04540/14	26/04540/15	26/04540/17
Client Sample No								
Client Sample ID/Depth	BH01 2.60m	BH01 5.80m	BH02 0.50m	WS01 0.80m	WS02 0.60m	WS03 0.40m	WS03 2.60m	TP01 1.20m
Date Sampled	08/04/26	08/04/26	09/04/26	08/04/26	10/04/26	10/04/26	10/04/26	09/04/26
Cyanide (free)	✓	✓	✓	✓	✓	✓	✓	✓
Cyanide (total)	✓	✓	✓	✓	✓	✓	✓	✓
VPHCWG						✓		

If, at any point before reaching the laboratory, the temperature of the samples has breached those set in published standards, e.g. BS-EN 5667-3, ISO 18400-102:2017, then the concentration of any affected analytes may differ from that at the time of sampling.

Envirolab Analysis Dates

Lab Sample ID	26/04540/2	26/04540/3	26/04540/4	26/04540/5	26/04540/7	26/04540/8	26/04540/10	26/04540/11	26/04540/12	26/04540/13	26/04540/14	26/04540/15
Client Sample No												
Client Sample ID/Depth	BH01 2.60m	BH01 5.80m	BH01 8.10m	BH01 12.20m	BH02 0.50m	BH02 2.10m	BH02 10.80m	BH02 14.60m	WS01 0.80m	WS02 0.60m	WS03 0.40m	WS03 2.60m
Date Sampled	08/04/26	08/04/26	09/04/26	09/04/26	09/04/26	09/04/26	09/04/26	09/04/26	08/04/26	10/04/26	10/04/26	10/04/26
A-T-004s	23/04/2026				23/04/2026					23/04/2026		
A-T-007m	23/04/2026				23/04/2026					23/04/2026		
A-T-019s	27/04/2026	27/04/2026			27/04/2026				27/04/2026	27/04/2026	27/04/2026	27/04/2026
A-T-022s	24/04/2026	24/04/2026			24/04/2026				24/04/2026	24/04/2026	30/04/2026	24/04/2026
A-T-024s	30/04/2026	30/04/2026			30/04/2026				30/04/2026	30/04/2026	30/04/2026	30/04/2026
A-T-025w	07/05/2026				07/05/2026					07/05/2026		
A-T-026s	30/04/2026	30/04/2026	30/04/2026	30/04/2026	30/04/2026	30/04/2026	30/04/2026	30/04/2026	30/04/2026	30/04/2026	30/04/2026	30/04/2026
A-T-026w	07/05/2026				07/05/2026					07/05/2026		
A-T-026w (F)	07/05/2026				07/05/2026					07/05/2026		
A-T-027s	29/04/2026	29/04/2026			29/04/2026				29/04/2026	29/04/2026	29/04/2026	29/04/2026
A-T-028s	30/04/2026	30/04/2026			30/04/2026				30/04/2026	30/04/2026	30/04/2026	30/04/2026
A-T-030s	29/04/2026				29/04/2026					29/04/2026		
A-T-031s	30/04/2026	30/04/2026	30/04/2026	30/04/2026	30/04/2026	30/04/2026	30/04/2026	30/04/2026	30/04/2026	30/04/2026	30/04/2026	30/04/2026
A-T-031w	07/05/2026				07/05/2026					07/05/2026		
A-T-032s	08/05/2026	08/05/2026			08/05/2026				08/05/2026	08/05/2026	08/05/2026	08/05/2026
A-T-032w	07/05/2026				07/05/2026					07/05/2026		
A-T-037w	07/05/2026				07/05/2026					07/05/2026		
A-T-040s	30/04/2026	30/04/2026			30/04/2026				30/04/2026	30/04/2026	30/04/2026	30/04/2026
A-T-042sFCN	29/04/2026	29/04/2026			29/04/2026				29/04/2026	29/04/2026	29/04/2026	29/04/2026
A-T-042sTCN	29/04/2026	29/04/2026			29/04/2026				29/04/2026	29/04/2026	29/04/2026	29/04/2026
A-T-043-s	06/05/2026	06/05/2026			06/05/2026				06/05/2026	06/05/2026	06/05/2026	06/05/2026
A-T-044	01/05/2026	01/05/2026	01/05/2026	01/05/2026	01/05/2026	01/05/2026	01/05/2026	01/05/2026	01/05/2026	01/05/2026	01/05/2026	01/05/2026
A-T-045	26/04/2026	26/04/2026			26/04/2026				26/04/2026	26/04/2026	26/04/2026	26/04/2026
A-T-050s	05/05/2026	05/05/2026			05/05/2026				05/05/2026	05/05/2026	05/05/2026	05/05/2026
A-T-050w	07/05/2026				07/05/2026					07/05/2026		
A-T-055s	24/04/2026	24/04/2026			24/04/2026				24/04/2026	24/04/2026	24/04/2026	24/04/2026
A-T-ANCs	05/05/2026				05/05/2026					05/05/2026		
Calc	30/04/2026	30/04/2026			30/04/2026				30/04/2026	30/04/2026	30/04/2026	30/04/2026
Calc-As Recd	24/04/2026	24/04/2026			24/04/2026				24/04/2026	24/04/2026	30/04/2026	24/04/2026
Calc-no stones	07/05/2026				07/05/2026					07/05/2026		
Probe (w)	07/05/2026				07/05/2026					07/05/2026		

Lab Sample ID	26/04540/17	26/04540/19
Client Sample No		
Client Sample ID/Depth	TP01 1.20m	TP02 1.00m
Date Sampled	09/04/26	09/04/26
A-T-004s		
A-T-007m		
A-T-019s	27/04/2026	
A-T-022s	24/04/2026	
A-T-024s	30/04/2026	
A-T-025w		
A-T-026s	30/04/2026	30/04/2026
A-T-026w		
A-T-026w (F)		
A-T-027s	29/04/2026	
A-T-028s	30/04/2026	
A-T-030s		
A-T-031s	30/04/2026	30/04/2026
A-T-031w		
A-T-032s	08/05/2026	
A-T-032w		
A-T-037w		
A-T-040s	30/04/2026	
A-T-042sFCN	29/04/2026	
A-T-042sTCN	29/04/2026	
A-T-043-s	06/05/2026	
A-T-044	01/05/2026	01/05/2026
A-T-045	26/04/2026	
A-T-050s	05/05/2026	
A-T-050w		
A-T-055s	28/04/2026	
A-T-ANCs		
Calc	30/04/2026	
Calc-As Recd	28/04/2026	
Calc-no stones		
Probe (w)		

The above dates are the analysis completion dates, please note that these are not necessarily the date that the analysis was weighed/extracted.

End of Report

Final Test Report

Envirolab Job Number: 26/04540
Issue Number: 1 Date: 8-May-26

Client: Earth Environmental & Geotechnical Ltd (Bath)
Studio 3 Tollbridge Studios,
Bath
BA1 7DE
Ceredigion
UK, SA44 5NW

Project Manager: USE THIS ONE
Project Name: Bargoed
Project Ref: B5556
Order No: B5556/FL/14042026

Date Samples Received: 13-Apr-26
Date Instructions Received: 15-Apr-26
Date Analysis Completed: 8-May-26

Notes - Soil analysis

All results are reported as dry weight (<40°C).

For samples with Matrix Codes 1 - 6 natural stones >10mm are removed or excluded from the sample prior to analysis and reported results corrected to a whole sample basis.

For samples with Matrix Code 7 the whole sample is dried and crushed prior to analysis.

Notes - General

This report shall not be reproduced, except in full, without written approval from Envirolab.

Subscript "A" indicates analysis performed on the sample as received. "D" indicates analysis performed on the dried sample, crushed to pass a 2mm sieve, unless asbestos is found to be present in which case all analysis is performed on the sample as received.

All analysis is performed on the dried and crushed sample for samples with Matrix Code 7 and this supercedes any "A" subscripts.

All analysis is performed on the sample as received for soil samples from outside the European Union and this supercedes any "D" subscripts

For complex, multi-compound analysis, quality control results do not always fall within chart limits for every compound and we have criteria for reporting in these situations.

If results are in italic font they are associated with such quality control failures and may be unreliable.

A deviating samples report is appended and will indicate if samples or tests have been found to be deviating. Any test results affected may not be an accurate record of the concentration at the time of sampling and, as a result, may be invalid

Predominant Matrix Codes: 1 = SAND, 2 = LOAM, 3 = CLAY, 4 = LOAM/SAND, 5 = SAND/CLAY, 6 = CLAY/LOAM, 7 = OTHER, 8 = Asbestos bulk ID sample

Secondary Matrix Codes: A = contains stones, B = contains construction rubble, C = contains visible hydrocarbons, D = contains glass/metal, E = contains roots/twigs.

IS indicates Insufficient sample for analysis, NDP indicates No Determination Possible and NAD indicates No Asbestos Detected.

Analytical results reflect the quality of the sample at the time of analysis only. Opinions and interpretations expressed are outside the scope of our accreditation.

Please contact us if you need any further information.

HWOL TPH Code: EH_CU_1D_AL: Extractable hydrocarbons - i.e. everything extracted by the solvent(s), Clean-up - e.g. by florisil, silica gel, GC - Single coil gas chromatography, Aliphatics only

Approved by:



Richard Wong
Client Manager

Sample Details							Landfill Waste Acceptance Criteria Limits			
Lab Sample ID	Method	ISO17025	MCERTS	26/04540/2						
Client Sample Number							Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill	Hazardous Waste Landfill	
Client Sample ID				BH01						
Depth to Top				2.6						
Depth to Bottom										
Date Sampled				08/04/2026						
Sample Type				Soil - ES						
Sample Matrix Code				4AE						
Solid Waste Analysis										
pH (pH Units) _D	A-T-031	N	N	8.27				-	>6	-
ANC to pH 4 (mol/kg) _D	A-T-ANC	N	N	0.81				-	to be evaluated	to be evaluated
ANC to pH 6 (mol/kg) _D	A-T-ANC	N	N	0.37				-	to be evaluated	to be evaluated
Loss on Ignition (%) _D	A-T-030	N	N	7.6				-	-	10
Total Organic Carbon (%) _D	A-T-032	N	N	6.92				3	5	6
PAH Sum of 17 (mg/kg) _A	A-T-019	N	N	2.08				100	-	-
Mineral Oil (mg/kg) _{A EH_CU_1D_AL}	A-T-007	N	N	<10				500	-	-
Sum of 7 PCBs (mg/kg) _A	A-T-004	N	N	<0.007				1	-	-
Sum of BTEX (mg/kg) _A	A-T-022	N	N	<0.01				6	-	-
Eluate Analysis				2:1	8:1	2:1	Cumulative 10:1	Limit values for compliance leaching test using		
				mg/l		mg/kg		BS EN 12457-3 at L/S 10 l/kg (mg/kg)		
Arsenic	A-T-025	N	N	0.003	0.005	0.006	0.050	0.5	2	25
Barium	A-T-025	N	N	0.060	0.017	0.123	0.220	20	100	300
Cadmium	A-T-025	N	N	<0.001	<0.002	<0.002	<0.01	0.04	1	5
Chromium	A-T-025	N	N	<0.001	<0.002	<0.002	<0.01	0.5	10	70
Copper	A-T-025	N	N	<0.004	<0.008	<0.008	<0.04	2	50	100
Mercury	A-T-025	N	N	<0.0005	<0.0010	<0.001	<0.005	0.01	0.2	2
Molybdenum	A-T-025	N	N	0.004	<0.002	0.008	<0.01	0.5	10	30
Nickel	A-T-025	N	N	<0.002	<0.004	<0.004	<0.02	0.4	10	40
Lead	A-T-025	N	N	<0.001	<0.002	<0.002	<0.01	0.5	10	50
Antimony	A-T-025	N	N	0.001	<0.002	0.002	<0.01	0.06	0.7	5
Selenium	A-T-025	N	N	<0.001	<0.002	<0.002	<0.01	0.1	0.5	7
Zinc	A-T-025	N	N	0.012	0.021	0.025	0.200	4	50	200
Chloride	A-T-026	N	N	<1.00	<1.00	<2	<10	800	15000	25000
Fluoride	A-T-026	N	N	<0.10	<0.10	<0.2	<1.0	10	150	500
Sulphate as SO ₄	A-T-026	N	N	66	7	135	140	1000	20000	50000
Total Dissolved Solids	A-T-035	N	N	130	38	266	487	4000	60000	100000
Phenol Index	A-T-050	N	N	<0.01	<0.01	<0.02	<0.1	1	-	-
Dissolved Organic Carbon	A-T-032	N	N	<20.0	<20.0	<40	<200	500	800	1000
Leach Test Information										
pH (pH Units)	A-T-031	N	N	7.9	8.1					
Conductivity (µS/cm)	A-T-037	N	N	260	76					
Mass Sample (kg)				0.182						
Dry Matter (%)	A-T-044	N	N	95.9						
Stage 1										
Volume Leachant, L ₂ (l)	A-T-046			0.350						
Filtered Eluate Volume, VE ₁ (l)	A-T-046			0.200						
Stage 2										
Volume Leachant, L ₈ (l)	A-T-046			1.400						
Stated acceptance limits are for guidance only and Envirolab cannot be held responsible for any discrepancies with current legislation										

Sample Details							Landfill Waste Acceptance Criteria Limits			
Lab Sample ID	Method	ISO17025	MCERTS	26/04540/7						
Client Sample Number							Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill	Hazardous Waste Landfill	
Client Sample ID				BH02						
Depth to Top				0.5						
Depth to Bottom										
Date Sampled				09/04/2026						
Sample Type				Soil - ES						
Sample Matrix Code				4AE						
Solid Waste Analysis										
pH (pH Units) _D	A-T-031	N	N	8.25				-	>6	-
ANC to pH 4 (mol/kg) _D	A-T-ANC	N	N	3.95				-	to be evaluated	to be evaluated
ANC to pH 6 (mol/kg) _D	A-T-ANC	N	N	0.26				-	to be evaluated	to be evaluated
Loss on Ignition (%) _D	A-T-030	N	N	5.9				-	-	10
Total Organic Carbon (%) _D	A-T-032	N	N	4.51				3	5	6
PAH Sum of 17 (mg/kg) _A	A-T-019	N	N	25.1				100	-	-
Mineral Oil (mg/kg) _{A EH_CU_1D_AL}	A-T-007	N	N	185				500	-	-
Sum of 7 PCBs (mg/kg) _A	A-T-004	N	N	<0.007				1	-	-
Sum of BTEX (mg/kg) _A	A-T-022	N	N	<0.01				6	-	-
Eluate Analysis				2:1	8:1	2:1	Cumulative 10:1	Limit values for compliance leaching test using		
				mg/l		mg/kg		BS EN 12457-3 at L/S 10 l/kg (mg/kg)		
Arsenic	A-T-025	N	N	0.001	0.006	0.002	0.050	0.5	2	25
Barium	A-T-025	N	N	0.082	0.077	0.167	0.780	20	100	300
Cadmium	A-T-025	N	N	<0.001	<0.001	<0.002	<0.01	0.04	1	5
Chromium	A-T-025	N	N	<0.001	<0.001	<0.002	<0.01	0.5	10	70
Copper	A-T-025	N	N	<0.004	<0.004	<0.008	<0.04	2	50	100
Mercury	A-T-025	N	N	<0.0005	<0.0005	<0.001	<0.005	0.01	0.2	2
Molybdenum	A-T-025	N	N	0.006	0.003	0.012	0.030	0.5	10	30
Nickel	A-T-025	N	N	<0.002	<0.002	<0.004	<0.02	0.4	10	40
Lead	A-T-025	N	N	0.002	0.001	0.004	0.010	0.5	10	50
Antimony	A-T-025	N	N	<0.001	<0.001	<0.002	<0.01	0.06	0.7	5
Selenium	A-T-025	N	N	<0.001	<0.001	<0.002	<0.01	0.1	0.5	7
Zinc	A-T-025	N	N	0.010	0.004	0.020	0.050	4	50	200
Chloride	A-T-026	N	N	<1.00	<1.00	<2	<10	800	15000	25000
Fluoride	A-T-026	N	N	0.3	0.1	0.6	1.5	10	150	500
Sulphate as SO ₄	A-T-026	N	N	9	2	18	32	1000	20000	50000
Total Dissolved Solids	A-T-035	N	N	78	33	159	383	4000	60000	100000
Phenol Index	A-T-050	N	N	0.02	<0.01	0.04	<0.1	1	-	-
Dissolved Organic Carbon	A-T-032	N	N	<20.0	<20.0	<40	<200	500	800	1000
Leach Test Information										
pH (pH Units)	A-T-031	N	N	7.9	7.0					
Conductivity (µS/cm)	A-T-037	N	N	157	67					
Mass Sample (kg)				0.182						
Dry Matter (%)	A-T-044	N	N	95.9						
Stage 1										
Volume Leachant, L ₂ (l)	A-T-046			0.350						
Filtered Eluate Volume, VE ₁ (l)	A-T-046			0.200						
Stage 2										
Volume Leachant, L ₈ (l)	A-T-046			1.400						
Stated acceptance limits are for guidance only and Envirolab cannot be held responsible for any discrepancies with current legislation										

Sample Details							Landfill Waste Acceptance Criteria Limits			
Lab Sample ID	Method	ISO17025	MCERTS	26/04540/13						
Client Sample Number							Inert Waste Landfill	Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill	Hazardous Waste Landfill	
Client Sample ID				WS02						
Depth to Top				0.6						
Depth to Bottom										
Date Sampled				10/04/2026						
Sample Type				Soil - ES						
Sample Matrix Code				4A						
Solid Waste Analysis										
pH (pH Units) _D	A-T-031	N	N	9.17				-	>6	-
ANC to pH 4 (mol/kg) _D	A-T-ANC	N	N	1.36				-	to be evaluated	to be evaluated
ANC to pH 6 (mol/kg) _D	A-T-ANC	N	N	0.5				-	to be evaluated	to be evaluated
Loss on Ignition (%) _D	A-T-030	N	N	7.8				-	-	10
Total Organic Carbon (%) _D	A-T-032	N	N	6.13				3	5	6
PAH Sum of 17 (mg/kg) _A	A-T-019	N	N	52.9				100	-	-
Mineral Oil (mg/kg) _{A EH_CU_1D_AL}	A-T-007	N	N	46				500	-	-
Sum of 7 PCBs (mg/kg) _A	A-T-004	N	N	<0.007				1	-	-
Sum of BTEX (mg/kg) _A	A-T-022	N	N	<0.01				6	-	-
Eluate Analysis				2:1	8:1	2:1	Cumulative 10:1	Limit values for compliance leaching test using		
				mg/l		mg/kg		BS EN 12457-3 at L/S 10 l/kg (mg/kg)		
Arsenic	A-T-025	N	N	0.007	0.003	0.014	0.030	0.5	2	25
Barium	A-T-025	N	N	0.076	0.111	0.155	1.070	20	100	300
Cadmium	A-T-025	N	N	<0.001	<0.001	<0.002	<0.01	0.04	1	5
Chromium	A-T-025	N	N	0.002	<0.001	0.004	<0.01	0.5	10	70
Copper	A-T-025	N	N	<0.004	<0.004	<0.008	<0.04	2	50	100
Mercury	A-T-025	N	N	<0.0005	<0.0005	<0.001	<0.005	0.01	0.2	2
Molybdenum	A-T-025	N	N	0.003	<0.001	0.006	<0.01	0.5	10	30
Nickel	A-T-025	N	N	<0.002	<0.002	<0.004	<0.02	0.4	10	40
Lead	A-T-025	N	N	0.011	0.003	0.022	0.040	0.5	10	50
Antimony	A-T-025	N	N	0.001	<0.001	0.002	<0.01	0.06	0.7	5
Selenium	A-T-025	N	N	<0.001	<0.001	<0.002	<0.01	0.1	0.5	7
Zinc	A-T-025	N	N	0.015	0.005	0.031	0.060	4	50	200
Chloride	A-T-026	N	N	<1.00	<1.00	<2	<10	800	15000	25000
Fluoride	A-T-026	N	N	0.3	<0.10	0.5	<1.0	10	150	500
Sulphate as SO ₄	A-T-026	N	N	16	2	32	40	1000	20000	50000
Total Dissolved Solids	A-T-035	N	N	53	28	108	310	4000	60000	100000
Phenol Index	A-T-050	N	N	<0.01	<0.01	<0.02	<0.1	1	-	-
Dissolved Organic Carbon	A-T-032	N	N	<20.0	<20.0	<40	<200	500	800	1000
Leach Test Information										
pH (pH Units)	A-T-031	N	N	8.4	8.9					
Conductivity (µS/cm)	A-T-037	N	N	105	57					
Mass Sample (kg)				0.182						
Dry Matter (%)	A-T-044	N	N	95.9						
Stage 1										
Volume Leachant, L ₂ (l)	A-T-046			0.350						
Filtered Eluate Volume, VE ₁ (l)	A-T-046			0.200						
Stage 2										
Volume Leachant, L ₈ (l)	A-T-046			1.400						
Stated acceptance limits are for guidance only and Envirolab cannot be held responsible for any discrepancies with current legislation										



APPENDIX 7

SOIL WASTE CLASSIFICATION REPORT

Waste Classification Report

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

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



M47C2-FVWU6-4M4N8

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

Report is invalid if pages are removed.

Job name

B5556 Langstone Construction Group

Description/Comments

Project

B5556 Langstone Construction Group

Site

Station Road, Bargoed

Classified by

Name: **Daniel Shanks**
Date: **29 May 2026 13:30 GMT**
Telephone:
Company: **Earth Environmental & Geotechnical Ltd (EEGSL)**
Houldsworth Mill Business & Arts Centre
Houldsworth Street,

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

HazWasteOnline™ Certification:

-

Course

Hazardous Waste Classification

Date

-

Purpose of classification

2 - Material Characterisation

Address of the waste

Station Road, Bargoed

Post Code CF81 9AL

SIC for the process giving rise to the waste

41202 Construction of domestic buildings

Description of industry/producer giving rise to the waste

Revelopment of site.

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

Waste created during construction activities.

Description of the waste

Made Ground



Job summary

#	Sample name	Depth [m]	Classification Result	Hazard properties	Page
1	BH01	2.60	Non Hazardous		3
2	BH01[2]	5.80	Non Hazardous		6
3	BH01[3]	8.10	Non Hazardous		9
4	BH01[4]	12.20	Non Hazardous		10
5	BH02	0.50	Non Hazardous		11
6	BH02[2]	2.10	Non Hazardous		14
7	BH02[3]	10.80	Non Hazardous		15
8	BH02[4]	14.60	Non Hazardous		16
9	WS01	0.80	Non Hazardous		17
10	WS02	0.60	Non Hazardous		20
11	WS03	0.40	Non Hazardous		23
12	WS03[2]	2.60	Non Hazardous		26
13	TP01	1.20	Non Hazardous		29
14	TP02	1.00	Unknown. Chemistry data not provided.		32

Related documents

#	Name	Description
1	Example worst case waste stream template: 17 05 04 or 17 05 03 *	waste stream template used to create this Job

Report

Created by: Daniel Shanks

Created date: 29 May 2026 13:30 GMT

Appendices	Page
Appendix A: Classifier defined and non GB MCL determinands	33
Appendix B: Rationale for selection of metal species	34
Appendix C: Version	35



Classification of sample: BH01

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

Sample details

Sample name:	LoW Code:
BH01	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
2.60 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
15.9%	
(dry weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 15.9% Dry Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
1	arsenic { arsenic acid and its salts with the exception of those specified elsewhere in this Annex }				12 mg/kg	1.895	19.615	mg/kg	0.00196 %	✓	
	033-005-00-1										
2	barium { barium oxide }				102 mg/kg	1.117	98.26	mg/kg	0.00983 %	✓	
		215-127-9	1304-28-5								
3	beryllium { beryllium compounds with the exception of aluminium beryllium silicates, and with those specified elsewhere in this Annex }				0.6 mg/kg	8.868	4.591	mg/kg	0.000459 %	✓	
	004-002-00-2										
4	boron { boric acid; [1] boric acid; [2] }				<1 mg/kg	5.719	<5.719	mg/kg	<0.000572 %		<LOD
	005-007-00-2	233-139-2 [1] 234-343-4 [2]	10043-35-3 [1] 11113-50-1 [2]								
5	cadmium { cadmium sulfate }				<1 mg/kg	1.855	<1.855	mg/kg	<0.000185 %		<LOD
	048-009-00-9	233-331-6	10124-36-4								
6	chromium in Cr(III) compounds { dichromium tris(chromate); chromium III chromate; chromic chromate }				13 mg/kg	4.346	48.75	mg/kg	0.00487 %	✓	
	024-010-00-X	246-356-2	24613-89-6								
7	chromium in Cr(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }				<1 mg/kg	2.27	<2.27	mg/kg	<0.000227 %		<LOD
	024-017-00-8										
8	copper { copper sulphate pentahydrate }				26 mg/kg	3.929	88.141	mg/kg	0.00881 %	✓	
	029-023-00-4	231-847-6	7758-99-8								
9	lead { lead chromate }			1	51 mg/kg	1.56	68.637	mg/kg	0.0044 %	✓	
	082-004-00-2	231-846-0	7758-97-6								
10	mercury { mercury dichloride }				<0.17 mg/kg	1.353	<0.23	mg/kg	<0.000023 %		<LOD
	080-010-00-X	231-299-8	7487-94-7								
11	nickel { nickel dibromate }				18 mg/kg	5.358	83.218	mg/kg	0.00832 %	✓	
	028-053-00-5	238-596-1	14550-87-9								
12	selenium { nickel selenate }				<1 mg/kg	2.554	<2.554	mg/kg	<0.000255 %		<LOD
	028-031-00-5	239-125-2	15060-62-5								
13	vanadium { divanadium pentaoxide; vanadium pentoxide }				20 mg/kg	1.785	30.806	mg/kg	0.00308 %	✓	
	023-001-00-8	215-239-8	1314-62-1								



#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
14	zinc { zinc oxide }				125 mg/kg	1.245	134.244 mg/kg	0.0134 %		✓	
	030-013-00-7	215-222-5	1314-13-2								
15	TPH (C6 to C40) petroleum group				2 mg/kg		1.726 mg/kg	0.000173 %		✓	
			TPH								
16	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
	603-181-00-X	216-653-1	1634-04-4								
17	benzene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
	601-020-00-8	200-753-7	71-43-2								
18	toluene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
	601-021-00-3	203-625-9	108-88-3								
19	ethylbenzene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
	601-023-00-4	202-849-4	100-41-4								
20	xylene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]								
21	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<1 mg/kg	1.884	<1.884 mg/kg	<0.000188 %			<LOD
	006-007-00-5										
22	pH				8.27 pH		8.27 pH	8.27 pH			
			PH								
23	naphthalene				0.03 mg/kg		0.0259 mg/kg	0.00000259 %		✓	
	601-052-00-2	202-049-5	91-20-3								
24	acenaphthylene				0.01 mg/kg		0.0086 mg/kg	0.000000863 %		✓	
		205-917-1	208-96-8								
25	acenaphthene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
		201-469-6	83-32-9								
26	fluorene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
		201-695-5	86-73-7								
27	phenanthrene				0.14 mg/kg		0.121 mg/kg	0.0000121 %		✓	
		201-581-5	85-01-8								
28	anthracene				<0.02 mg/kg		<0.02 mg/kg	<0.000002 %			<LOD
		204-371-1	120-12-7								
29	fluoranthene				0.27 mg/kg		0.233 mg/kg	0.0000233 %		✓	
		205-912-4	206-44-0								
30	pyrene				0.2 mg/kg		0.173 mg/kg	0.0000173 %		✓	
		204-927-3	129-00-0								
31	benzo[a]anthracene				0.19 mg/kg		0.164 mg/kg	0.0000164 %		✓	
	601-033-00-9	200-280-6	56-55-3								
32	chrysene				0.27 mg/kg		0.233 mg/kg	0.0000233 %		✓	
	601-048-00-0	205-923-4	218-01-9								
33	benzo[b]fluoranthene				0.25 mg/kg		0.216 mg/kg	0.0000216 %		✓	
	601-034-00-4	205-911-9	205-99-2								
34	benzo[k]fluoranthene				0.1 mg/kg		0.0863 mg/kg	0.00000863 %		✓	
	601-036-00-5	205-916-6	207-08-9								
35	benzo[a]pyrene; benzo[def]chrysene				0.2 mg/kg		0.173 mg/kg	0.0000173 %		✓	
	601-032-00-3	200-028-5	50-32-8								
36	indeno[123-cd]pyrene				0.2 mg/kg		0.173 mg/kg	0.0000173 %		✓	
		205-893-2	193-39-5								
37	dibenz[a,h]anthracene				0.06 mg/kg		0.0518 mg/kg	0.00000518 %		✓	
	601-041-00-2	200-181-8	53-70-3								
38	benzo[ghi]perylene				0.14 mg/kg		0.121 mg/kg	0.0000121 %		✓	
		205-883-8	191-24-2								
39	phenol				<0.2 mg/kg		<0.2 mg/kg	<0.00002 %			<LOD
	604-001-00-2	203-632-7	108-95-2								
Total:									0.0555 %		



Key

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

Supplementary Hazardous Property Information

HP 2: Oxidising "waste which may, generally by providing oxygen, cause or contribute to the combustion of other materials."

Force this Hazardous Property to non-hazardous for cumulative determinand results below the concentration of: 1000 mg/kg (0.1%)
because: No chromium present

Hazard Statements hit:

Ox. Sol. 1; H271 "May cause fire or explosion; strong oxidiser."

Because of determinand:

dichromium tris(chromate); chromium III chromate; chromic chromate (compound conc.: 0.00487%)

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

Force this Hazardous Property to non-hazardous for cumulative determinand results below the concentration of: 1000 mg/kg (0.1%)
because: No free phase hydrocarbons

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group (conc.: 0.00017%)

Classification of sample: BH01[2]

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

Sample details

Sample name:	LoW Code:
BH01[2]	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
5.80 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
16.5%	
(dry weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 16.5% Dry Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
1	arsenic { arsenic acid and its salts with the exception of those specified elsewhere in this Annex }				12 mg/kg	1.895	19.514 mg/kg	0.00195 %	✓	
	033-005-00-1									
2	barium { barium oxide }				135 mg/kg	1.117	129.381 mg/kg	0.0129 %	✓	
		215-127-9	1304-28-5							
3	beryllium { beryllium compounds with the exception of aluminium beryllium silicates, and with those specified elsewhere in this Annex }				0.8 mg/kg	8.868	6.09 mg/kg	0.000609 %	✓	
	004-002-00-2									
4	boron { boric acid; [1] boric acid; [2] }				<1 mg/kg	5.719	<5.719 mg/kg	<0.000572 %		<LOD
	005-007-00-2	233-139-2 [1] 234-343-4 [2]	10043-35-3 [1] 11113-50-1 [2]							
5	cadmium { cadmium sulfate }				<1 mg/kg	1.855	<1.855 mg/kg	<0.000185 %		<LOD
	048-009-00-9	233-331-6	10124-36-4							
6	chromium in Cr(III) compounds { dichromium tris(chromate); chromium III chromate; chromic chromate }				10 mg/kg	4.346	37.307 mg/kg	0.00373 %	✓	
	024-010-00-X	246-356-2	24613-89-6							
7	chromium in Cr(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }				<1 mg/kg	2.27	<2.27 mg/kg	<0.000227 %		<LOD
	024-017-00-8									
8	copper { copper sulphate pentahydrate }				29 mg/kg	3.929	97.805 mg/kg	0.00978 %	✓	
	029-023-00-4	231-847-6	7758-99-8							
9	lead { lead chromate }			1	45 mg/kg	1.56	60.25 mg/kg	0.00386 %	✓	
	082-004-00-2	231-846-0	7758-97-6							
10	mercury { mercury dichloride }				<0.17 mg/kg	1.353	<0.23 mg/kg	<0.000023 %		<LOD
	080-010-00-X	231-299-8	7487-94-7							
11	nickel { nickel dibromate }				17 mg/kg	5.358	78.19 mg/kg	0.00782 %	✓	
	028-053-00-5	238-596-1	14550-87-9							
12	selenium { nickel selenate }				<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %		<LOD
	028-031-00-5	239-125-2	15060-62-5							
13	vanadium { divanadium pentaoxide; vanadium pentoxide }				16 mg/kg	1.785	24.518 mg/kg	0.00245 %	✓	
	023-001-00-8	215-239-8	1314-62-1							



#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
14		zinc {  zinc oxide }				71	mg/kg	1.245	75.858	mg/kg	0.00759 %	✓	
	030-013-00-7	215-222-5	1314-13-2										
15		TPH (C6 to C40) petroleum group				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
			TPH										
16		tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	603-181-00-X	216-653-1	1634-04-4										
17		benzene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	601-020-00-8	200-753-7	71-43-2										
18		toluene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	601-021-00-3	203-625-9	108-88-3										
19		ethylbenzene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	601-023-00-4	202-849-4	100-41-4										
20		xylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]										
21		cyanides {  salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<LOD
	006-007-00-5												
22		pH				8.2	pH		8.2	pH	8.2 pH		
			PH										
23		naphthalene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
	601-052-00-2	202-049-5	91-20-3										
24		acenaphthylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		205-917-1	208-96-8										
25		acenaphthene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		201-469-6	83-32-9										
26		fluorene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		201-695-5	86-73-7										
27		phenanthrene				0.1	mg/kg		0.0858	mg/kg	0.00000858 %	✓	
		201-581-5	85-01-8										
28		anthracene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
		204-371-1	120-12-7										
29		fluoranthene				<0.08	mg/kg		<0.08	mg/kg	<0.000008 %		<LOD
		205-912-4	206-44-0										
30		pyrene				<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<LOD
		204-927-3	129-00-0										
31		benzo[a]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
	601-033-00-9	200-280-6	56-55-3										
32		chrysene				0.06	mg/kg		0.0515	mg/kg	0.00000515 %	✓	
	601-048-00-0	205-923-4	218-01-9										
33		benzo[b]fluoranthene				0.05	mg/kg		0.0429	mg/kg	0.00000429 %	✓	
	601-034-00-4	205-911-9	205-99-2										
34		benzo[k]fluoranthene				<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<LOD
	601-036-00-5	205-916-6	207-08-9										
35		benzo[a]pyrene; benzo[def]chrysene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
	601-032-00-3	200-028-5	50-32-8										
36		indeno[123-cd]pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
		205-893-2	193-39-5										
37		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
	601-041-00-2	200-181-8	53-70-3										
38		benzo[ghi]perylene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		205-883-8	191-24-2										
39		phenol				<0.2	mg/kg		<0.2	mg/kg	<0.00002 %		<LOD
	604-001-00-2	203-632-7	108-95-2										
Total:												0.0507 %	



Key

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

Supplementary Hazardous Property Information

HP 2: Oxidising "waste which may, generally by providing oxygen, cause or contribute to the combustion of other materials."

Force this Hazardous Property to non-hazardous for cumulative determinand results below the concentration of: 1000 mg/kg (0.1%)
because: No chromium present

Hazard Statements hit:

Ox. Sol. 1; H271 "May cause fire or explosion; strong oxidiser."

Because of determinand:

dichromium tris(chromate); chromium III chromate; chromic chromate (compound conc.: 0.00373%)



Classification of sample: BH01[3]

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

Sample details

Sample name:	LoW Code:
BH01[3]	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
8.10 m	Entry:
	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: None

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
1	● pH		PH		8.61 pH		8.61 pH	8.61 pH		
Total:								0%		

Key

- User supplied data
- Determinand defined or amended by HazWasteOnline (see Appendix A)

Classification of sample: BH01[4]



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

Sample details

Sample name:	LoW Code:	
BH01[4]	Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
12.20 m		

Hazard properties

None identified

Determinands

Moisture content: None

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
1	pH		PH		8.08 pH		8.08	pH	8.08 pH		
Total:									0%		

Key

 User supplied data
● Determinand defined or amended by HazWasteOnline (see Appendix A)



Classification of sample: BH02

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

Sample details

Sample name:	LoW Code:
BH02	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.50 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
7.8%	
(dry weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 7.8% Dry Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
1	arsenic { arsenic acid and its salts with the exception of those specified elsewhere in this Annex }				7 mg/kg	1.895	12.302	mg/kg	0.00123 %	✓	
	033-005-00-1										
2	barium { barium oxide }				496 mg/kg	1.117	513.717	mg/kg	0.0514 %	✓	
		215-127-9	1304-28-5								
3	beryllium { beryllium compounds with the exception of aluminium beryllium silicates, and with those specified elsewhere in this Annex }				0.6 mg/kg	8.868	4.936	mg/kg	0.000494 %	✓	
	004-002-00-2										
4	boron { boric acid; [1] boric acid; [2] }				<1 mg/kg	5.719	<5.719	mg/kg	<0.000572 %		<LOD
	005-007-00-2	233-139-2 [1] 234-343-4 [2]	10043-35-3 [1] 11113-50-1 [2]								
5	cadmium { cadmium sulfate }				1.2 mg/kg	1.855	2.064	mg/kg	0.000206 %	✓	
	048-009-00-9	233-331-6	10124-36-4								
6	chromium in Cr(III) compounds { dichromium tris(chromate); chromium III chromate; chromic chromate }				15 mg/kg	4.346	60.476	mg/kg	0.00605 %	✓	
	024-010-00-X	246-356-2	24613-89-6								
7	chromium in Cr(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }				<1 mg/kg	2.27	<2.27	mg/kg	<0.000227 %		<LOD
	024-017-00-8										
8	copper { copper sulphate pentahydrate }				38 mg/kg	3.929	138.501	mg/kg	0.0139 %	✓	
	029-023-00-4	231-847-6	7758-99-8								
9	lead { lead chromate }			1	78 mg/kg	1.56	112.862	mg/kg	0.00724 %	✓	
	082-004-00-2	231-846-0	7758-97-6								
10	mercury { mercury dichloride }				<0.17 mg/kg	1.353	<0.23	mg/kg	<0.000023 %		<LOD
	080-010-00-X	231-299-8	7487-94-7								
11	nickel { nickel dibromate }				20 mg/kg	5.358	99.412	mg/kg	0.00994 %	✓	
	028-053-00-5	238-596-1	14550-87-9								
12	selenium { nickel selenate }				<1 mg/kg	2.554	<2.554	mg/kg	<0.000255 %		<LOD
	028-031-00-5	239-125-2	15060-62-5								
13	vanadium { divanadium pentaoxide; vanadium pentoxide }				20 mg/kg	1.785	33.12	mg/kg	0.00331 %	✓	
	023-001-00-8	215-239-8	1314-62-1								



#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
14	zinc { zinc oxide }				178 mg/kg	1.245	205.528 mg/kg	0.0206 %		✓	
	030-013-00-7	215-222-5	1314-13-2								
15	TPH (C6 to C40) petroleum group				172 mg/kg		159.555 mg/kg	0.016 %		✓	
			TPH								
16	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
	603-181-00-X	216-653-1	1634-04-4								
17	benzene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
	601-020-00-8	200-753-7	71-43-2								
18	toluene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
	601-021-00-3	203-625-9	108-88-3								
19	ethylbenzene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
	601-023-00-4	202-849-4	100-41-4								
20	xylene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]								
21	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<1 mg/kg	1.884	<1.884 mg/kg	<0.000188 %			<LOD
	006-007-00-5										
22	pH				8.25 pH		8.25 pH	8.25 pH			
			PH								
23	naphthalene				0.04 mg/kg		0.0371 mg/kg	0.00000371 %		✓	
	601-052-00-2	202-049-5	91-20-3								
24	acenaphthylene				0.07 mg/kg		0.0649 mg/kg	0.00000649 %		✓	
		205-917-1	208-96-8								
25	acenaphthene				0.05 mg/kg		0.0464 mg/kg	0.00000464 %		✓	
		201-469-6	83-32-9								
26	fluorene				0.07 mg/kg		0.0649 mg/kg	0.00000649 %		✓	
		201-695-5	86-73-7								
27	phenanthrene				0.95 mg/kg		0.881 mg/kg	0.0000881 %		✓	
		201-581-5	85-01-8								
28	anthracene				0.32 mg/kg		0.297 mg/kg	0.0000297 %		✓	
		204-371-1	120-12-7								
29	fluoranthene				4.2 mg/kg		3.896 mg/kg	0.00039 %		✓	
		205-912-4	206-44-0								
30	pyrene				3.12 mg/kg		2.894 mg/kg	0.000289 %		✓	
		204-927-3	129-00-0								
31	benzo[a]anthracene				3.02 mg/kg		2.801 mg/kg	0.00028 %		✓	
	601-033-00-9	200-280-6	56-55-3								
32	chrysene				2.73 mg/kg		2.532 mg/kg	0.000253 %		✓	
	601-048-00-0	205-923-4	218-01-9								
33	benzo[b]fluoranthene				3.12 mg/kg		2.894 mg/kg	0.000289 %		✓	
	601-034-00-4	205-911-9	205-99-2								
34	benzo[k]fluoranthene				1.05 mg/kg		0.974 mg/kg	0.0000974 %		✓	
	601-036-00-5	205-916-6	207-08-9								
35	benzo[a]pyrene; benzo[def]chrysene				2.34 mg/kg		2.171 mg/kg	0.000217 %		✓	
	601-032-00-3	200-028-5	50-32-8								
36	indeno[123-cd]pyrene				1.74 mg/kg		1.614 mg/kg	0.000161 %		✓	
		205-893-2	193-39-5								
37	dibenz[a,h]anthracene				0.49 mg/kg		0.455 mg/kg	0.0000455 %		✓	
	601-041-00-2	200-181-8	53-70-3								
38	benzo[ghi]perylene				1.42 mg/kg		1.317 mg/kg	0.000132 %		✓	
		205-883-8	191-24-2								
39	phenol				<0.2 mg/kg		<0.2 mg/kg	<0.00002 %			<LOD
	604-001-00-2	203-632-7	108-95-2								
Total:									0.132 %		



Key

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

Supplementary Hazardous Property Information

HP 2: Oxidising "waste which may, generally by providing oxygen, cause or contribute to the combustion of other materials."

Force this Hazardous Property to non-hazardous for cumulative determinand results below the concentration of: 1000 mg/kg (0.1%)

because: No chromium present

Hazard Statements hit:

Ox. Sol. 1; H271 "May cause fire or explosion; strong oxidiser."

Because of determinand:

dichromium tris(chromate); chromium III chromate; chromic chromate (compound conc.: 0.00605%)

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

Force this Hazardous Property to non-hazardous for cumulative determinand results below the concentration of: 1000 mg/kg (0.1%)

because: No free phase hydrocarbons

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group (conc.: 0.016%)



Classification of sample: BH02[2]



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

Sample details

Sample name:	LoW Code:
BH02[2]	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)
2.10 m	

Hazard properties

None identified

Determinands

Moisture content: None

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
1	● pH		PH		9.86 pH		9.86	pH	9.86 pH		
Total:									0%		

Key

	User supplied data
●	Determinand defined or amended by HazWasteOnline (see Appendix A)



Classification of sample: BH02[3]

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

Sample details

Sample name:	LoW Code:
BH02[3]	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
10.80 m	Entry:
	17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: None

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number							
1	•	pH		PH		7.6 pH		7.6 pH	7.6 pH		
Total:									0%		

Key

- User supplied data
- Determinand defined or amended by HazWasteOnline (see Appendix A)



Classification of sample: BH02[4]



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

Sample details

Sample name:	LoW Code:
BH02[4]	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)
14.60 m	

Hazard properties

None identified

Determinands

Moisture content: None

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
1	● pH		PH		8.11 pH		8.11	pH	8.11 pH		
Total:									0%		

Key

	User supplied data
●	Determinand defined or amended by HazWasteOnline (see Appendix A)



Classification of sample: WS01

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

Sample details

Sample name:	LoW Code:
WS01	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.80 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
5.1%	
(dry weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 5.1% Dry Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
1	arsenic { arsenic acid and its salts with the exception of those specified elsewhere in this Annex }				4 mg/kg	1.895	7.21	mg/kg	0.000721 %	✓	
	033-005-00-1										
2	barium { barium oxide }				154 mg/kg	1.117	163.598	mg/kg	0.0164 %	✓	
		215-127-9	1304-28-5								
3	beryllium { beryllium compounds with the exception of aluminium beryllium silicates, and with those specified elsewhere in this Annex }				<0.5 mg/kg	8.868	<4.434	mg/kg	<0.000443 %		<LOD
	004-002-00-2										
4	boron { boric acid; [1] boric acid; [2] }				<1 mg/kg	5.719	<5.719	mg/kg	<0.000572 %		<LOD
	005-007-00-2	233-139-2 [1] 234-343-4 [2]	10043-35-3 [1] 11113-50-1 [2]								
5	cadmium { cadmium sulfate }				<1 mg/kg	1.855	<1.855	mg/kg	<0.000185 %		<LOD
	048-009-00-9	233-331-6	10124-36-4								
6	chromium in Cr(III) compounds { dichromium tris(chromate); chromium III chromate; chromic chromate }				9 mg/kg	4.346	37.218	mg/kg	0.00372 %	✓	
	024-010-00-X	246-356-2	24613-89-6								
7	chromium in Cr(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }				<1 mg/kg	2.27	<2.27	mg/kg	<0.000227 %		<LOD
	024-017-00-8										
8	copper { copper sulphate pentahydrate }				12 mg/kg	3.929	44.861	mg/kg	0.00449 %	✓	
	029-023-00-4	231-847-6	7758-99-8								
9	lead { lead chromate }			1	30 mg/kg	1.56	44.524	mg/kg	0.00285 %	✓	
	082-004-00-2	231-846-0	7758-97-6								
10	mercury { mercury dichloride }				<0.17 mg/kg	1.353	<0.23	mg/kg	<0.000023 %		<LOD
	080-010-00-X	231-299-8	7487-94-7								
11	nickel { nickel dibromate }				12 mg/kg	5.358	61.18	mg/kg	0.00612 %	✓	
	028-053-00-5	238-596-1	14550-87-9								
12	selenium { nickel selenate }				<1 mg/kg	2.554	<2.554	mg/kg	<0.000255 %		<LOD
	028-031-00-5	239-125-2	15060-62-5								
13	vanadium { divanadium pentaoxide; vanadium pentoxide }				13 mg/kg	1.785	22.081	mg/kg	0.00221 %	✓	
	023-001-00-8	215-239-8	1314-62-1								



#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
14		zinc { zinc oxide }				37	mg/kg	1.245	43.82	mg/kg	0.00438 %	✓	
		030-013-00-7	215-222-5	1314-13-2									
15		TPH (C6 to C40) petroleum group				258	mg/kg		245.48	mg/kg	0.0245 %	✓	
				TPH									
16		tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		603-181-00-X	216-653-1	1634-04-4									
17		benzene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-020-00-8	200-753-7	71-43-2									
18		toluene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-021-00-3	203-625-9	108-88-3									
19		ethylbenzene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-023-00-4	202-849-4	100-41-4									
20		xylene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
21		cyanides {  salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<LOD
		006-007-00-5											
22		pH				8.71	pH		8.71	pH	8.71 pH		
				PH									
23		naphthalene				0.45	mg/kg		0.428	mg/kg	0.0000428 %	✓	
		601-052-00-2	202-049-5	91-20-3									
24		acenaphthylene				0.25	mg/kg		0.238	mg/kg	0.0000238 %	✓	
			205-917-1	208-96-8									
25		acenaphthene				0.13	mg/kg		0.124	mg/kg	0.0000124 %	✓	
			201-469-6	83-32-9									
26		fluorene				0.25	mg/kg		0.238	mg/kg	0.0000238 %	✓	
			201-695-5	86-73-7									
27		phenanthrene				1.45	mg/kg		1.38	mg/kg	0.000138 %	✓	
			201-581-5	85-01-8									
28		anthracene				0.68	mg/kg		0.647	mg/kg	0.0000647 %	✓	
			204-371-1	120-12-7									
29		fluoranthene				3.82	mg/kg		3.635	mg/kg	0.000363 %	✓	
			205-912-4	206-44-0									
30		pyrene				3.13	mg/kg		2.978	mg/kg	0.000298 %	✓	
			204-927-3	129-00-0									
31		benzo[a]anthracene				2.11	mg/kg		2.008	mg/kg	0.000201 %	✓	
		601-033-00-9	200-280-6	56-55-3									
32		chrysene				1.9	mg/kg		1.808	mg/kg	0.000181 %	✓	
		601-048-00-0	205-923-4	218-01-9									
33		benzo[b]fluoranthene				2.45	mg/kg		2.331	mg/kg	0.000233 %	✓	
		601-034-00-4	205-911-9	205-99-2									
34		benzo[k]fluoranthene				0.82	mg/kg		0.78	mg/kg	0.000078 %	✓	
		601-036-00-5	205-916-6	207-08-9									
35		benzo[a]pyrene; benzo[def]chrysene				2.2	mg/kg		2.093	mg/kg	0.000209 %	✓	
		601-032-00-3	200-028-5	50-32-8									
36		indeno[123-cd]pyrene				2.09	mg/kg		1.989	mg/kg	0.000199 %	✓	
			205-893-2	193-39-5									
37		dibenz[a,h]anthracene				0.38	mg/kg		0.362	mg/kg	0.0000362 %	✓	
		601-041-00-2	200-181-8	53-70-3									
38		benzo[ghi]perylene				1.67	mg/kg		1.589	mg/kg	0.000159 %	✓	
			205-883-8	191-24-2									
39		phenol				<0.2	mg/kg		<0.2	mg/kg	<0.00002 %		<LOD
		604-001-00-2	203-632-7	108-95-2									
Total:											0.0677 %		



Key

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

Supplementary Hazardous Property Information

HP 2: Oxidising "waste which may, generally by providing oxygen, cause or contribute to the combustion of other materials."

Force this Hazardous Property to non-hazardous for cumulative determinand results below the concentration of: 1000 mg/kg (0.1%)

because: No chromium present

Hazard Statements hit:

Ox. Sol. 1; H271 "May cause fire or explosion; strong oxidiser."

Because of determinand:

dichromium tris(chromate); chromium III chromate; chromic chromate (compound conc.: 0.00372%)

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

Force this Hazardous Property to non-hazardous for cumulative determinand results below the concentration of: 1000 mg/kg (0.1%)

because: No free phase hydrocarbons

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group (conc.: 0.0245%)



Classification of sample: WS02



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

Sample details

Sample name:	LoW Code:
WS02	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0.60 m	
Moisture content:	
7.4%	
(dry weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 7.4% Dry Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
1	arsenic { arsenic acid and its salts with the exception of those specified elsewhere in this Annex }				5 mg/kg	1.895	8.82 mg/kg	0.000882 %	✓	
	033-005-00-1									
2	barium { barium oxide }				704 mg/kg	1.117	731.862 mg/kg	0.0732 %	✓	
		215-127-9	1304-28-5							
3	beryllium { beryllium compounds with the exception of aluminium beryllium silicates, and with those specified elsewhere in this Annex }				1.1 mg/kg	8.868	9.083 mg/kg	0.000908 %	✓	
	004-002-00-2									
4	boron { boric acid; [1] boric acid; [2] }				<1 mg/kg	5.719	<5.719 mg/kg	<0.000572 %		<LOD
	005-007-00-2	233-139-2 [1] 234-343-4 [2]	10043-35-3 [1] 11113-50-1 [2]							
5	cadmium { cadmium sulfate }				3.3 mg/kg	1.855	5.698 mg/kg	0.00057 %	✓	
	048-009-00-9	233-331-6	10124-36-4							
6	chromium in Cr(III) compounds { dichromium tris(chromate); chromium III chromate; chromic chromate }				16 mg/kg	4.346	64.748 mg/kg	0.00647 %	✓	
	024-010-00-X	246-356-2	24613-89-6							
7	chromium in Cr(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }				<1 mg/kg	2.27	<2.27 mg/kg	<0.000227 %		<LOD
	024-017-00-8									
8	copper { copper sulphate pentahydrate }				22 mg/kg	3.929	80.483 mg/kg	0.00805 %	✓	
	029-023-00-4	231-847-6	7758-99-8							
9	lead { lead chromate }			1	154 mg/kg	1.56	223.661 mg/kg	0.0143 %	✓	
	082-004-00-2	231-846-0	7758-97-6							
10	mercury { mercury dichloride }				<0.17 mg/kg	1.353	<0.23 mg/kg	<0.000023 %		<LOD
	080-010-00-X	231-299-8	7487-94-7							
11	nickel { nickel dibromate }				18 mg/kg	5.358	89.804 mg/kg	0.00898 %	✓	
	028-053-00-5	238-596-1	14550-87-9							
12	selenium { nickel selenate }				<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %		<LOD
	028-031-00-5	239-125-2	15060-62-5							
13	vanadium { divanadium pentaoxide; vanadium pentoxide }				25 mg/kg	1.785	41.555 mg/kg	0.00416 %	✓	
	023-001-00-8	215-239-8	1314-62-1							



#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
14		zinc { zinc oxide }				281	mg/kg	1.245	325.665	mg/kg	0.0326 %	✓	
		030-013-00-7	215-222-5	1314-13-2									
15		TPH (C6 to C40) petroleum group				190	mg/kg		176.909	mg/kg	0.0177 %	✓	
				TPH									
16		tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		603-181-00-X	216-653-1	1634-04-4									
17		benzene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-020-00-8	200-753-7	71-43-2									
18		toluene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-021-00-3	203-625-9	108-88-3									
19		ethylbenzene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-023-00-4	202-849-4	100-41-4									
20		xylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
21		cyanides {  salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<LOD
		006-007-00-5											
22		pH				9.17	pH		9.17	pH	9.17 pH		
				PH									
23		naphthalene				0.1	mg/kg		0.0931	mg/kg	0.00000931 %	✓	
		601-052-00-2	202-049-5	91-20-3									
24		acenaphthylene				0.3	mg/kg		0.279	mg/kg	0.0000279 %	✓	
			205-917-1	208-96-8									
25		acenaphthene				0.21	mg/kg		0.196	mg/kg	0.0000196 %	✓	
			201-469-6	83-32-9									
26		fluorene				0.19	mg/kg		0.177	mg/kg	0.0000177 %	✓	
			201-695-5	86-73-7									
27		phenanthrene				2.25	mg/kg		2.095	mg/kg	0.000209 %	✓	
			201-581-5	85-01-8									
28		anthracene				0.72	mg/kg		0.67	mg/kg	0.000067 %	✓	
			204-371-1	120-12-7									
29		fluoranthene				7.01	mg/kg		6.527	mg/kg	0.000653 %	✓	
			205-912-4	206-44-0									
30		pyrene				5.84	mg/kg		5.438	mg/kg	0.000544 %	✓	
			204-927-3	129-00-0									
31		benzo[a]anthracene				5.24	mg/kg		4.879	mg/kg	0.000488 %	✓	
		601-033-00-9	200-280-6	56-55-3									
32		chrysene				5.06	mg/kg		4.711	mg/kg	0.000471 %	✓	
		601-048-00-0	205-923-4	218-01-9									
33		benzo[b]fluoranthene				6.38	mg/kg		5.94	mg/kg	0.000594 %	✓	
		601-034-00-4	205-911-9	205-99-2									
34		benzo[k]fluoranthene				2.27	mg/kg		2.114	mg/kg	0.000211 %	✓	
		601-036-00-5	205-916-6	207-08-9									
35		benzo[a]pyrene; benzo[def]chrysene				5.45	mg/kg		5.074	mg/kg	0.000507 %	✓	
		601-032-00-3	200-028-5	50-32-8									
36		indeno[123-cd]pyrene				5.15	mg/kg		4.795	mg/kg	0.00048 %	✓	
			205-893-2	193-39-5									
37		dibenz[a,h]anthracene				1.22	mg/kg		1.136	mg/kg	0.000114 %	✓	
		601-041-00-2	200-181-8	53-70-3									
38		benzo[ghi]perylene				4.34	mg/kg		4.041	mg/kg	0.000404 %	✓	
			205-883-8	191-24-2									
39		phenol				<0.2	mg/kg		<0.2	mg/kg	<0.00002 %		<LOD
		604-001-00-2	203-632-7	108-95-2									
Total:											0.173 %		

Key

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

Supplementary Hazardous Property Information

HP 2: Oxidising "waste which may, generally by providing oxygen, cause or contribute to the combustion of other materials."

Force this Hazardous Property to non-hazardous for cumulative determinand results below the concentration of: 1000 mg/kg (0.1%)

because: No chromium present

Hazard Statements hit:

Ox. Sol. 1; H271 "May cause fire or explosion; strong oxidiser."

Because of determinand:

dichromium tris(chromate); chromium III chromate; chromic chromate (compound conc.: 0.00647%)

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

Force this Hazardous Property to non-hazardous for cumulative determinand results below the concentration of: 1000 mg/kg (0.1%)

because: No free phase hydrocarbons

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group (conc.: 0.0177%)

Classification of sample: WS03

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

Sample details

Sample name:	LoW Code:
WS03	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0.40 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
10.3%	
(dry weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 10.3% Dry Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
1	arsenic { arsenic acid and its salts with the exception of those specified elsewhere in this Annex }				7 mg/kg	1.895	12.023	mg/kg	0.0012 %	✓	
	033-005-00-1										
2	barium { barium oxide }				630 mg/kg	1.117	637.714	mg/kg	0.0638 %	✓	
		215-127-9	1304-28-5								
3	beryllium { beryllium compounds with the exception of aluminium beryllium silicates, and with those specified elsewhere in this Annex }				0.6 mg/kg	8.868	4.824	mg/kg	0.000482 %	✓	
	004-002-00-2										
4	boron { boric acid; [1] boric acid; [2] }				<1 mg/kg	5.719	<5.719	mg/kg	<0.000572 %		<LOD
	005-007-00-2	233-139-2 [1] 234-343-4 [2]	10043-35-3 [1] 11113-50-1 [2]								
5	cadmium { cadmium sulfate }				<1 mg/kg	1.855	<1.855	mg/kg	<0.000185 %		<LOD
	048-009-00-9	233-331-6	10124-36-4								
6	chromium in Cr(III) compounds { dichromium tris(chromate); chromium III chromate; chromic chromate }				8 mg/kg	4.346	31.523	mg/kg	0.00315 %	✓	
	024-010-00-X	246-356-2	24613-89-6								
7	chromium in Cr(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }				<1 mg/kg	2.27	<2.27	mg/kg	<0.000227 %		<LOD
	024-017-00-8										
8	copper { copper sulphate pentahydrate }				31 mg/kg	3.929	110.427	mg/kg	0.011 %	✓	
	029-023-00-4	231-847-6	7758-99-8								
9	lead { lead chromate }			1	40 mg/kg	1.56	56.566	mg/kg	0.00363 %	✓	
	082-004-00-2	231-846-0	7758-97-6								
10	mercury { mercury dichloride }				<0.17 mg/kg	1.353	<0.23	mg/kg	<0.000023 %		<LOD
	080-010-00-X	231-299-8	7487-94-7								
11	nickel { nickel dibromate }				21 mg/kg	5.358	102.017	mg/kg	0.0102 %	✓	
	028-053-00-5	238-596-1	14550-87-9								
12	selenium { nickel selenate }				<1 mg/kg	2.554	<2.554	mg/kg	<0.000255 %		<LOD
	028-031-00-5	239-125-2	15060-62-5								
13	vanadium { divanadium pentaoxide; vanadium pentoxide }				12 mg/kg	1.785	19.422	mg/kg	0.00194 %	✓	
	023-001-00-8	215-239-8	1314-62-1								



#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
14		zinc { zinc oxide }				70	mg/kg	1.245	78.994	mg/kg	0.0079 %	✓	
		030-013-00-7	215-222-5	1314-13-2									
15		TPH (C6 to C40) petroleum group				<1	mg/kg		<1	mg/kg	<0.0001 %		<LOD
				TPH									
16		tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		603-181-00-X	216-653-1	1634-04-4									
17		benzene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-020-00-8	200-753-7	71-43-2									
18		toluene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-021-00-3	203-625-9	108-88-3									
19		ethylbenzene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-023-00-4	202-849-4	100-41-4									
20		xylene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]									
21		cyanides {  salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		<LOD
		006-007-00-5											
22		pH				8.09	pH		8.09	pH	8.09 pH		
				PH									
23		naphthalene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
24		acenaphthylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
			205-917-1	208-96-8									
25		acenaphthene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
			201-469-6	83-32-9									
26		fluorene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
			201-695-5	86-73-7									
27		phenanthrene				0.07	mg/kg		0.0635	mg/kg	0.00000635 %	✓	
			201-581-5	85-01-8									
28		anthracene				<0.02	mg/kg		<0.02	mg/kg	<0.000002 %		<LOD
			204-371-1	120-12-7									
29		fluoranthene				<0.08	mg/kg		<0.08	mg/kg	<0.000008 %		<LOD
			205-912-4	206-44-0									
30		pyrene				<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<LOD
			204-927-3	129-00-0									
31		benzo[a]anthracene				0.05	mg/kg		0.0453	mg/kg	0.00000453 %	✓	
		601-033-00-9	200-280-6	56-55-3									
32		chrysene				0.11	mg/kg		0.0997	mg/kg	0.00000997 %	✓	
		601-048-00-0	205-923-4	218-01-9									
33		benzo[b]fluoranthene				0.09	mg/kg		0.0816	mg/kg	0.00000816 %	✓	
		601-034-00-4	205-911-9	205-99-2									
34		benzo[k]fluoranthene				<0.07	mg/kg		<0.07	mg/kg	<0.000007 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
35		benzo[a]pyrene; benzo[def]chrysene				0.05	mg/kg		0.0453	mg/kg	0.00000453 %	✓	
		601-032-00-3	200-028-5	50-32-8									
36		indeno[123-cd]pyrene				0.05	mg/kg		0.0453	mg/kg	0.00000453 %	✓	
			205-893-2	193-39-5									
37		dibenz[a,h]anthracene				<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
38		benzo[ghi]perylene				<0.05	mg/kg		<0.05	mg/kg	<0.000005 %		<LOD
			205-883-8	191-24-2									
39		phenol				<0.2	mg/kg		<0.2	mg/kg	<0.00002 %		<LOD
		604-001-00-2	203-632-7	108-95-2									
Total:											0.103 %		



Key

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

Supplementary Hazardous Property Information

HP 2: Oxidising "waste which may, generally by providing oxygen, cause or contribute to the combustion of other materials."

Force this Hazardous Property to non-hazardous for cumulative determinand results below the concentration of: 1000 mg/kg (0.1%)
because: No chromium present

Hazard Statements hit:

Ox. Sol. 1; H271 "May cause fire or explosion; strong oxidiser."

Because of determinand:

dichromium tris(chromate); chromium III chromate; chromic chromate (compound conc.: 0.00315%)



Classification of sample: WS03[2]



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

Sample details

Sample name:	LoW Code:
WS03[2]	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
2.60 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
14.4%	
(dry weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 14.4% Dry Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number							
1	arsenic { arsenic acid and its salts with the exception of those specified elsewhere in this Annex }				9 mg/kg	1.895	14.904 mg/kg	0.00149 %	✓	
	033-005-00-1									
2	barium { barium oxide }				158 mg/kg	1.117	154.203 mg/kg	0.0154 %	✓	
		215-127-9	1304-28-5							
3	beryllium { beryllium compounds with the exception of aluminium beryllium silicates, and with those specified elsewhere in this Annex }				<0.5 mg/kg	8.868	<4.434 mg/kg	<0.000443 %		<LOD
	004-002-00-2									
4	boron { boric acid; [1] boric acid; [2] }				<1 mg/kg	5.719	<5.719 mg/kg	<0.000572 %		<LOD
	005-007-00-2	233-139-2 [1] 234-343-4 [2]	10043-35-3 [1] 11113-50-1 [2]							
5	cadmium { cadmium sulfate }				<1 mg/kg	1.855	<1.855 mg/kg	<0.000185 %		<LOD
	048-009-00-9	233-331-6	10124-36-4							
6	chromium in Cr(III) compounds { dichromium tris(chromate); chromium III chromate; chromic chromate }				7 mg/kg	4.346	26.594 mg/kg	0.00266 %	✓	
	024-010-00-X	246-356-2	24613-89-6							
7	chromium in Cr(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }				<1 mg/kg	2.27	<2.27 mg/kg	<0.000227 %		<LOD
	024-017-00-8									
8	copper { copper sulphate pentahydrate }				7 mg/kg	3.929	24.041 mg/kg	0.0024 %	✓	
	029-023-00-4	231-847-6	7758-99-8							
9	lead { lead chromate }			1	26 mg/kg	1.56	35.45 mg/kg	0.00227 %	✓	
	082-004-00-2	231-846-0	7758-97-6							
10	mercury { mercury dichloride }				<0.17 mg/kg	1.353	<0.23 mg/kg	<0.000023 %		<LOD
	080-010-00-X	231-299-8	7487-94-7							
11	nickel { nickel dibromate }				8 mg/kg	5.358	37.471 mg/kg	0.00375 %	✓	
	028-053-00-5	238-596-1	14550-87-9							
12	selenium { nickel selenate }				<1 mg/kg	2.554	<2.554 mg/kg	<0.000255 %		<LOD
	028-031-00-5	239-125-2	15060-62-5							
13	vanadium { divanadium pentaoxide; vanadium pentoxide }				14 mg/kg	1.785	21.847 mg/kg	0.00218 %	✓	
	023-001-00-8	215-239-8	1314-62-1							



#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number								
14		zinc { zinc oxide }				56 mg/kg	1.245	60.93 mg/kg	0.00609 %	✓		
		030-013-00-7	215-222-5	1314-13-2								
15		TPH (C6 to C40) petroleum group				119 mg/kg		104.021 mg/kg	0.0104 %	✓		
				TPH								
16		tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD	
		603-181-00-X	216-653-1	1634-04-4								
17		benzene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD	
		601-020-00-8	200-753-7	71-43-2								
18		toluene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD	
		601-021-00-3	203-625-9	108-88-3								
19		ethylbenzene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD	
		601-023-00-4	202-849-4	100-41-4								
20		xylene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD	
		601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]								
21		cyanides {  salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<1 mg/kg	1.884	<1.884 mg/kg	<0.000188 %		<LOD	
		006-007-00-5										
22		pH				9.98 pH		9.98 pH	9.98 pH			
				PH								
23		naphthalene				0.05 mg/kg		0.0437 mg/kg	0.00000437 %	✓		
		601-052-00-2	202-049-5	91-20-3								
24		acenaphthylene				0.06 mg/kg		0.0524 mg/kg	0.00000524 %	✓		
			205-917-1	208-96-8								
25		acenaphthene				0.3 mg/kg		0.262 mg/kg	0.0000262 %	✓		
			201-469-6	83-32-9								
26		fluorene				0.27 mg/kg		0.236 mg/kg	0.0000236 %	✓		
			201-695-5	86-73-7								
27		phenanthrene				2 mg/kg		1.748 mg/kg	0.000175 %	✓		
			201-581-5	85-01-8								
28		anthracene				0.65 mg/kg		0.568 mg/kg	0.0000568 %	✓		
			204-371-1	120-12-7								
29		fluoranthene				4.26 mg/kg		3.724 mg/kg	0.000372 %	✓		
			205-912-4	206-44-0								
30		pyrene				3.01 mg/kg		2.631 mg/kg	0.000263 %	✓		
			204-927-3	129-00-0								
31		benzo[a]anthracene				2.73 mg/kg		2.386 mg/kg	0.000239 %	✓		
		601-033-00-9	200-280-6	56-55-3								
32		chrysene				3 mg/kg		2.622 mg/kg	0.000262 %	✓		
		601-048-00-0	205-923-4	218-01-9								
33		benzo[b]fluoranthene				3.16 mg/kg		2.762 mg/kg	0.000276 %	✓		
		601-034-00-4	205-911-9	205-99-2								
34		benzo[k]fluoranthene				1.1 mg/kg		0.962 mg/kg	0.0000962 %	✓		
		601-036-00-5	205-916-6	207-08-9								
35		benzo[a]pyrene; benzo[def]chrysene				2.35 mg/kg		2.054 mg/kg	0.000205 %	✓		
		601-032-00-3	200-028-5	50-32-8								
36		indeno[123-cd]pyrene				2.06 mg/kg		1.801 mg/kg	0.00018 %	✓		
			205-893-2	193-39-5								
37		dibenz[a,h]anthracene				0.61 mg/kg		0.533 mg/kg	0.0000533 %	✓		
		601-041-00-2	200-181-8	53-70-3								
38		benzo[ghi]perylene				1.78 mg/kg		1.556 mg/kg	0.000156 %	✓		
			205-883-8	191-24-2								
39		phenol				<0.2 mg/kg		<0.2 mg/kg	<0.00002 %		<LOD	
		604-001-00-2	203-632-7	108-95-2								
Total:									0.0491 %			

Key

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

Supplementary Hazardous Property Information

HP 2: Oxidising "waste which may, generally by providing oxygen, cause or contribute to the combustion of other materials."

Force this Hazardous Property to non-hazardous for cumulative determinand results below the concentration of: 1000 mg/kg (0.1%)

because: No chromium present

Hazard Statements hit:

Ox. Sol. 1; H271 "May cause fire or explosion; strong oxidiser."

Because of determinand:

dichromium tris(chromate); chromium III chromate; chromic chromate (compound conc.: 0.00266%)

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

Force this Hazardous Property to non-hazardous for cumulative determinand results below the concentration of: 1000 mg/kg (0.1%)

because: No free phase hydrocarbons

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group (conc.: 0.0104%)



Classification of sample: TP01

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

Sample details

Sample name:	LoW Code:
TP01	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
1.20 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
9%	
(dry weight correction)	

Hazard properties

None identified

Determinands

Moisture content: 9% Dry Weight Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
1	arsenic { arsenic acid and its salts with the exception of those specified elsewhere in this Annex }				6 mg/kg	1.895	10.429	mg/kg	0.00104 %	✓	
	033-005-00-1										
2	barium { barium oxide }				399 mg/kg	1.117	408.703	mg/kg	0.0409 %	✓	
		215-127-9	1304-28-5								
3	beryllium { beryllium compounds with the exception of aluminium beryllium silicates, and with those specified elsewhere in this Annex }				<0.5 mg/kg	8.868	<4.434	mg/kg	<0.000443 %		<LOD
	004-002-00-2										
4	boron { boric acid; [1] boric acid; [2] }				<1 mg/kg	5.719	<5.719	mg/kg	<0.000572 %		<LOD
	005-007-00-2	233-139-2 [1] 234-343-4 [2]	10043-35-3 [1] 11113-50-1 [2]								
5	cadmium { cadmium sulfate }				1.1 mg/kg	1.855	1.872	mg/kg	0.000187 %	✓	
	048-009-00-9	233-331-6	10124-36-4								
6	chromium in Cr(III) compounds { dichromium tris(chromate); chromium III chromate; chromic chromate }				12 mg/kg	4.346	47.848	mg/kg	0.00478 %	✓	
	024-010-00-X	246-356-2	24613-89-6								
7	chromium in Cr(VI) compounds { chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex }				<1 mg/kg	2.27	<2.27	mg/kg	<0.000227 %		<LOD
	024-017-00-8										
8	copper { copper sulphate pentahydrate }				34 mg/kg	3.929	122.558	mg/kg	0.0123 %	✓	
	029-023-00-4	231-847-6	7758-99-8								
9	lead { lead chromate }			1	98 mg/kg	1.56	140.24	mg/kg	0.00899 %	✓	
	082-004-00-2	231-846-0	7758-97-6								
10	mercury { mercury dichloride }				<0.17 mg/kg	1.353	<0.23	mg/kg	<0.000023 %		<LOD
	080-010-00-X	231-299-8	7487-94-7								
11	nickel { nickel dibromate }				10 mg/kg	5.358	49.159	mg/kg	0.00492 %	✓	
	028-053-00-5	238-596-1	14550-87-9								
12	selenium { nickel selenate }				<1 mg/kg	2.554	<2.554	mg/kg	<0.000255 %		<LOD
	028-031-00-5	239-125-2	15060-62-5								
13	vanadium { divanadium pentaoxide; vanadium pentoxide }				12 mg/kg	1.785	19.653	mg/kg	0.00197 %	✓	
	023-001-00-8	215-239-8	1314-62-1								



#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	EU CLP index number	EC Number	CAS Number								
14	zinc { zinc oxide }				907 mg/kg	1.245	1035.739 mg/kg	0.104 %		✓	
	030-013-00-7	215-222-5	1314-13-2								
15	TPH (C6 to C40) petroleum group				286 mg/kg		262.385 mg/kg	0.0262 %		✓	
			TPH								
16	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
	603-181-00-X	216-653-1	1634-04-4								
17	benzene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
	601-020-00-8	200-753-7	71-43-2								
18	toluene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
	601-021-00-3	203-625-9	108-88-3								
19	ethylbenzene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
	601-023-00-4	202-849-4	100-41-4								
20	xylene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]								
21	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }				<1 mg/kg	1.884	<1.884 mg/kg	<0.000188 %			<LOD
	006-007-00-5										
22	pH				8.7 pH		8.7 pH	8.7 pH			
			PH								
23	naphthalene				0.15 mg/kg		0.138 mg/kg	0.0000138 %		✓	
	601-052-00-2	202-049-5	91-20-3								
24	acenaphthylene				0.17 mg/kg		0.156 mg/kg	0.0000156 %		✓	
		205-917-1	208-96-8								
25	acenaphthene				0.07 mg/kg		0.0642 mg/kg	0.00000642 %		✓	
		201-469-6	83-32-9								
26	fluorene				0.06 mg/kg		0.055 mg/kg	0.0000055 %		✓	
		201-695-5	86-73-7								
27	phenanthrene				0.71 mg/kg		0.651 mg/kg	0.0000651 %		✓	
		201-581-5	85-01-8								
28	anthracene				0.3 mg/kg		0.275 mg/kg	0.0000275 %		✓	
		204-371-1	120-12-7								
29	fluoranthene				2.98 mg/kg		2.734 mg/kg	0.000273 %		✓	
		205-912-4	206-44-0								
30	pyrene				2.62 mg/kg		2.404 mg/kg	0.00024 %		✓	
		204-927-3	129-00-0								
31	benzo[a]anthracene				1.99 mg/kg		1.826 mg/kg	0.000183 %		✓	
	601-033-00-9	200-280-6	56-55-3								
32	chrysene				1.75 mg/kg		1.606 mg/kg	0.000161 %		✓	
	601-048-00-0	205-923-4	218-01-9								
33	benzo[b]fluoranthene				2.48 mg/kg		2.275 mg/kg	0.000228 %		✓	
	601-034-00-4	205-911-9	205-99-2								
34	benzo[k]fluoranthene				0.9 mg/kg		0.826 mg/kg	0.0000826 %		✓	
	601-036-00-5	205-916-6	207-08-9								
35	benzo[a]pyrene; benzo[def]chrysene				2.04 mg/kg		1.872 mg/kg	0.000187 %		✓	
	601-032-00-3	200-028-5	50-32-8								
36	indeno[123-cd]pyrene				1.94 mg/kg		1.78 mg/kg	0.000178 %		✓	
		205-893-2	193-39-5								
37	dibenz[a,h]anthracene				0.38 mg/kg		0.349 mg/kg	0.0000349 %		✓	
	601-041-00-2	200-181-8	53-70-3								
38	benzo[ghi]perylene				1.6 mg/kg		1.468 mg/kg	0.000147 %		✓	
		205-883-8	191-24-2								
39	phenol				<0.2 mg/kg		<0.2 mg/kg	<0.00002 %			<LOD
	604-001-00-2	203-632-7	108-95-2								
Total:									0.207 %		



Key

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

Supplementary Hazardous Property Information

HP 2: Oxidising "waste which may, generally by providing oxygen, cause or contribute to the combustion of other materials."

Force this Hazardous Property to non-hazardous for cumulative determinand results below the concentration of: 1000 mg/kg (0.1%)
because: No chromium present

Hazard Statements hit:

Ox. Sol. 1; H271 "May cause fire or explosion; strong oxidiser."

Because of determinand:

dichromium tris(chromate); chromium III chromate; chromic chromate (compound conc.: 0.00478%)

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

Force this Hazardous Property to non-hazardous for cumulative determinand results below the concentration of: 1000 mg/kg (0.1%)
because: No free phase hydrocarbons

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group (conc.: 0.0262%)



Classification of sample: TP02



Unknown. Chemistry data not provided.

Classified as **17 05 04** or **17 05 03 ***
in the List of Waste

Sample details

Sample name:	LoW Code:
TP02	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)
1.00 m	

Hazard properties

None identified

Determinands

Moisture content: None

#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number							
Total:									0%		

Key

User supplied data

Appendix A: Classifier defined and non GB MCL determinands

■ **barium oxide** (EC Number: 215-127-9, CAS Number: 1304-28-5)

Description/Comments: Data from ECHA's C&L Inventory Database, Sigma Aldrich SDS dated 6/2/20
Data source: <https://echa.europa.eu/information-on-chemicals/cl-inventory-database/-/discli/details/88825>
Data source date: 02 Apr 2020
Hazard Statements: Acute Tox. 3; H301 , Skin Corr. 1B; H314 , Eye Dam. 1; H318 , Acute Tox. 1; H332

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

Description/Comments: Unknown Oil

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

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

GB MCL index number: 601-023-00-4

Description/Comments:

Additional Hazard Statement(s): Carc. 2; H351

Reason for additional Hazards Statement(s):

20 Nov 2021 - Carc. 2; H351 hazard statement sourced from:: IARC Group 2B (77) 2000

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

GB MCL index number: 006-007-00-5

Description/Comments: Conversion factor based on a worst case compound: sodium cyanide

Additional Hazard Statement(s): EUH032 >= 0.2 %

Reason for additional Hazards Statement(s):

20 Nov 2021 - EUH032 >= 0.2 % hazard statement sourced from:: WM3, Table C12.2

■ **pH** (CAS Number: PH)

Description/Comments: Appendix C4

Data source: WM3 1st Edition 2015

Data source date: 25 May 2015

Hazard Statements: None.

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

Description/Comments: Data from C&L Inventory Database

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 17 Jul 2015

Hazard Statements: Acute Tox. 4; H302 , Acute Tox. 1; H330 , Acute Tox. 1; H310 , Eye Irrit. 2; H319 , STOT SE 3; H335 , Skin Irrit. 2; H315

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

Description/Comments: Data from C&L Inventory Database

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 17 Jul 2015

Hazard Statements: Eye Irrit. 2; H319 , STOT SE 3; H335 , Skin Irrit. 2; H315 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410 , Aquatic Chronic 2; H411

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

Description/Comments: Data from C&L Inventory Database

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 06 Aug 2015

Hazard Statements: Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

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

Description/Comments: Data from C&L Inventory Database

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 06 Aug 2015

Hazard Statements: Acute Tox. 4; H302 , Eye Irrit. 2; H319 , STOT SE 3; H335 , Carc. 2; H351 , Skin Sens. 1; H317 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410 , Skin Irrit. 2; H315

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

Description/Comments: Data from C&L Inventory Database

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 17 Jul 2015

Hazard Statements: Eye Irrit. 2; H319, STOT SE 3; H335, Skin Irrit. 2; H315, Skin Sens. 1; H317, Aquatic Acute 1; H400, Aquatic Chronic 1; H410

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

Description/Comments: Data from C&L Inventory Database

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 21 Aug 2015

Hazard Statements: Acute Tox. 4; H302, Aquatic Acute 1; H400, Aquatic Chronic 1; H410

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

Description/Comments: Data from C&L Inventory Database; SDS Sigma Aldrich 2014

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 21 Aug 2015

Hazard Statements: Skin Irrit. 2; H315, Eye Irrit. 2; H319, STOT SE 3; H335, Aquatic Acute 1; H400, Aquatic Chronic 1; H410

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

Description/Comments: Data from C&L Inventory Database

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 06 Aug 2015

Hazard Statements: Carc. 2; H351

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

Description/Comments: Data from C&L Inventory Database; SDS Sigma Aldrich 28/02/2015

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 23 Jul 2015

Hazard Statements: Aquatic Acute 1; H400, Aquatic Chronic 1; H410

Appendix B: Rationale for selection of metal species

arsenic {arsenic acid and its salts with the exception of those specified elsewhere in this Annex}

Worst case CLP species based on hazard statements/molecular weight and conversion factor for arsenic acid H₃AsO₄. (edit as required)

barium {barium oxide}

Oxide would be the form in soil

beryllium {beryllium compounds with the exception of aluminium beryllium silicates, and with those specified elsewhere in this Annex}

Worst case CLP species based on hazard statements/molecular weight and conversion factor for beryllium chloride. (edit as required)

boron {boric acid; [1] boric acid; [2]}

Reasonable worst case CLP species based on hazard statements/molecular weight and assuming water is or has been present. (edit as required)

cadmium {cadmium sulfate}

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

chromium in Cr(III) compounds {dichromium tris(chromate); chromium III chromate; chromic chromate}

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

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

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

copper {copper sulphate pentahydrate}

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

lead {lead chromate}

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

mercury {mercury dichloride}

Reasonable worst case CLP species based on hazard statements/molecular weight and assuming no evidence for the use of explosives. (edit as required)

nickel {nickel dibromate}

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

selenium {nickel selenate}

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

vanadium {divanadium pentaoxide; vanadium pentoxide}

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

zinc {zinc oxide}

Oxide form would be present in soil.

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

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

Appendix C: Version

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

HazWasteOnline Classification Engine Version: 2025.322.300.300 (13 May 2026)

HazWasteOnline Database: 2026.83.7020.12656 (25 Mar 2026)

This classification utilises the following guidance and legislation:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

GB MCL List - version 1.1 of 09 June 2021

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

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

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

GB MCL List v5.0 - version 5.0 of 26th June 2024

GB MCL List v6.0 - version 6.0 of 15th February 2025

GB MCL List v7.0 - version 7.0 of 23rd September 2025



APPENDIX 8

REPORT LIMITATIONS

REPORT LIMITATIONS

This contract was completed by Earth Environmental & Geotechnical Ltd based on a defined programme and scope of works and terms and conditions agreed with the client. This report was compiled with all reasonable skill, and care, bearing in mind the project objectives, the agreed scope of works, the prevailing site conditions, the budget, and staff resources allocated to the project.

Other than that, expressly contained in the above paragraph, Earth Environmental & Geotechnical Ltd provides no other representation or warranty whether express or implied, is made in relation to the services. Unless otherwise agreed this report has been prepared exclusively for the use and reliance of the client in accordance with accepted consulting practices and for the intended purposes as stated in the agreement under which this work was completed. This report may not be relied upon, or transferred to, by any other party without the written agreement of a Director of Earth Environmental & Geotechnical Ltd.

If a third party relies on this report, it does so wholly at its own and sole risk and Earth Environmental & Geotechnical Ltd disclaims any liability to such parties.

It is Earth Environmental & Geotechnical Ltd understanding that this report is to be used for the purpose described in the introduction to the report. That purpose was an important factor in determining the scope and level of the services. Should the purpose for which the report is used, or the proposed use of the site change, this report will no longer be valid and any further use of, or reliance upon the report in those circumstances by the client without Earth Environmental & Geotechnical Ltd review and advice shall be at the client's sole and own risk.

The report was written in 2026 and should be read considering any subsequent changes in legislation, statutory requirements, and industry best practices. Ground conditions can also change over time and further investigations, or assessment should be made if there is any significant delay in acting on the findings of this report. The passage of time may result in changes in site conditions, regulatory or other legal provisions, technology or economic conditions which could render the report inaccurate or unreliable. The information and conclusions contained in this report should not be relied upon in the future without the written advice of Earth Environmental & Geotechnical Ltd. In the absence of such written advice of Earth Environmental & Geotechnical Ltd, reliance on the report in the future shall be at the client's own and sole risk. Should Earth Environmental & Geotechnical Ltd be requested to review the report in the future, Earth Environmental & Geotechnical Ltd shall be entitled to additional payment at the then existing rate or such other terms as may be agreed between Earth Environmental & Geotechnical Ltd and the client.

The observations and conclusions described in this report are based solely upon the services that were provided pursuant to the agreement between the client and Earth Environmental & Geotechnical Ltd. Earth Environmental & Geotechnical Ltd has not performed any observations, investigations, studies or testing not specifically set out or mentioned within this report.

Earth Environmental & Geotechnical Ltd is not liable for the existence of any condition, the discovery of which would require performance of services not otherwise contained in the services. For the avoidance of doubt, unless otherwise expressly referred to in the introduction to this report, Earth Environmental & Geotechnical Ltd did not seek to evaluate the presence on or off the site of electromagnetic fields, lead paint, radon gas, or other radioactive materials.

The services are based upon Earth Environmental & Geotechnical Ltd observations of existing physical conditions at the site gained from a walkover survey of the site together with Earth

Environmental & Geotechnical Ltd interpretation of information including documentation, obtained from third parties and from the client on the history and usage of the site. The findings and recommendations contained in this report are based in part upon information provided by third parties, and whilst Earth Environmental & Geotechnical Ltd have no reason to doubt the accuracy and that it has been provided in full from those it was requested from, the items relied on have not been verified.

No responsibility can be accepted for errors within third party items presented in this report. Further Earth Environmental & Geotechnical Ltd was not authorised and did not attempt to independently verify the accuracy or completeness of information, documentation or materials received from the client or third parties, including laboratories and information services, during the performance of the services. Earth Environmental & Geotechnical Ltd is not liable for any inaccurate information, misrepresentation of data or conclusions, the discovery of which inaccuracies required the doing of any act including the gathering of any information which was not reasonably available to Earth Environmental & Geotechnical Ltd and including the doing of any independent investigation of the information provided to Earth Environmental & Geotechnical Ltd save as otherwise provided in the terms of the contract between the client and Earth Environmental & Geotechnical Ltd.

Where field investigations have been carried out these have been restricted to a level of detail required to achieve the stated objectives of the work. Ground conditions can also be variable and as investigation excavations only allow examination of the ground at discrete locations. The potential exists for ground conditions to be encountered which are different to those considered in this report. The extent of the limited area depends on the soil and groundwater conditions, together with the position of any current structures and underground facilities and natural and other activities on site. In addition, chemical analysis was carried out for a limited number of parameters [as stipulated in the contract between the client and Earth Environmental & Geotechnical Ltd] based on an understanding of the available operational and historical information, and it should not be inferred that other chemical species are not present.

The groundwater conditions entered on the exploratory hole records are those observed at the time of investigation. The normal speed of investigation usually does not permit the recording of an equilibrium water level for any one water strike. Moreover, groundwater levels are subject to seasonal variation or changes in local drainage conditions and higher groundwater levels may occur at other times of the year than were recorded during this investigation.

Any site drawing(s) provided in this report is (are) not meant to be an accurate base plan but is (are) used to present the general relative locations of features on, and surrounding, the site.