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 Greater than 30%
 Between 10% and 30%
 Between 5% and 10%
 Between 3% and 5%
 Between 1% and 3%
 Less than 1%

190

This data is sourced from the British Geological Survey and Public Health England.



20 Soil chemistry

20.1 BGS Estimated Background Soil Chemistry

Records within 50m

23

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 - 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 - 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 - 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 - 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 - 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 - 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	35 - 45 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	30 - 45 mg/kg
1m NW	35 - 45 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	30 - 45 mg/kg
12m N	15 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
15m N	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	30 - 45 mg/kg
17m NW	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg



Location	Arsenic	Bioaccessible Arsenic	Lead	Bioaccessible Lead	Cadmium	Chromium	Nickel
18m SW	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	30 - 45 mg/kg
20m SW	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	30 - 45 mg/kg
20m S	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	30 - 45 mg/kg
22m N	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
24m NW	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
30m SE	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
30m E	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	15 - 30 mg/kg
31m W	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	30 - 45 mg/kg
46m NE	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 mg/kg	60 - 90 mg/kg	30 - 45 mg/kg
49m W	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 - 2.2 mg/kg	60 - 90 mg/kg	30 - 45 mg/kg
49m SW	15 - 25 mg/kg	No data	100 mg/kg	60 mg/kg	1.8 - 2.2 mg/kg	60 - 90 mg/kg	30 - 45 mg/kg

This data is sourced from the British Geological Survey.

20.2 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.



20.3 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.



21 Railway infrastructure and projects



- Site Outline
- Search buffers in metres (m)
- C1 Crossrail 1 Stations
- Crossrail 1 Route
- Crossrail 1 Worksites
- 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

21.1 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.

21.2 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.

21.3 Railway tunnels

Records within 250m

0

Railway tunnels taken from contemporary Ordnance Survey mapping.

This data is sourced from the Ordnance Survey.

21.4 Historical railway and tunnel features

Records within 250m

42

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 195**

Location	Land Use	Year of mapping	Mapping scale
On site	Railway Sidings	1900	2500
On site	Tramway Sidings	1875	2500
On site	Railway	1875	-
On site	Railways	1875	-
On site	Railways	1900	-
On site	Railways	1919	-
On site	Mineral Railway Sidings	1900	2500
On site	Mineral Railway Sidings	1901	10560
On site	Mineral Railway Sidings	1922	10560
On site	Railway Sidings	1938	10560
On site	Railway Sidings	1948	10560
On site	Railway Sidings	1875	10560
7m NE	Railways	1919	-
12m S	Railway Sidings	1875	10560
12m SW	Railway	1875	-
13m NE	Railway Sidings	1919	2500
17m NE	Railway Sidings	1919	2500



Location	Land Use	Year of mapping	Mapping scale
20m SW	Mineral Railway Sidings	1901	10560
20m NE	Railway Sidings	1938	10560
21m NE	Railway Sidings	1922	10560
22m NE	Railway Sidings	1915	10560
47m NE	Tramway Sidings	1901	10560
49m NE	Tramway Sidings	1903	10560
52m NE	Railway Sidings	1900	2500
61m N	Railway Sidings	1875	10560
67m W	Railway Sidings	1875	2500
76m NE	Railway Sidings	1875	2500
98m E	Railway Sidings	1875	2500
105m NE	Railway Sidings	1948	10560
132m SW	Railway Sidings	1875	10560
140m E	Railway Sidings	1900	2500
163m N	Railway	1875	-
184m E	Railway Sidings	1919	2500
194m E	Tramway Sidings	1900	2500
205m N	Railway Sidings	1948	10560
213m NW	Railway Sidings	1875	10560
214m N	Mineral Railway Sidings	1921	10560
233m N	Mineral Railway Sidings	1915	10560
234m N	Mineral Railway Sidings	1919	2500
238m N	Tramway Sidings	1900	2500
247m N	Railway Sidings	1901	10560
248m N	Railway Sidings	1900	2500

This data is sourced from Ordnance Survey/Groundsure.



21.5 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.

21.6 Historical railways

Records within 250m

1

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 195**

Location	Description
212m N	Abandoned

This data is sourced from OpenStreetMap.

21.7 Railways

Records within 250m

17

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 195**

Location	Name	Type
On site		rail
On site	Not given	Single Track
On site	Not given	Single Track
On site	Not given	Single Track
On site	Not given	Single Track
On site	Not given	Single Track
On site	Not given	Single Track
On site	Not given	Single Track



Location	Name	Type
4m W	Not given	Single Track
4m W	Not given	Single Track
4m W	Not given	Single Track
16m NW	Not given	Single Track
20m SE	Not given	Single Track
84m N	Not given	Single Track
132m N	Not given	Single Track
181m N	Not given	Single Track
246m N	Not given	Single Track

This data is sourced from Ordnance Survey and OpenStreetMap.

21.8 Crossrail 1

Records within 500m 0

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

This data is sourced from publicly available information by Groundsure.

21.9 Crossrail 2

Records within 500m 0

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

This data is sourced from publicly available information by Groundsure.

21.10 HS2

Records within 500m 0

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

This data is sourced from HS2 Ltd.



Data providers

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

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Client Ref: PO_4800510468_Hoover_Factory
Report Ref: HMD-191-8496647
Grid Ref: 305767, 204211

Map Name: County Series

Map date: 1875

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1875
Revised 1875
Edition N/A
Copyright N/A
Levelled N/A

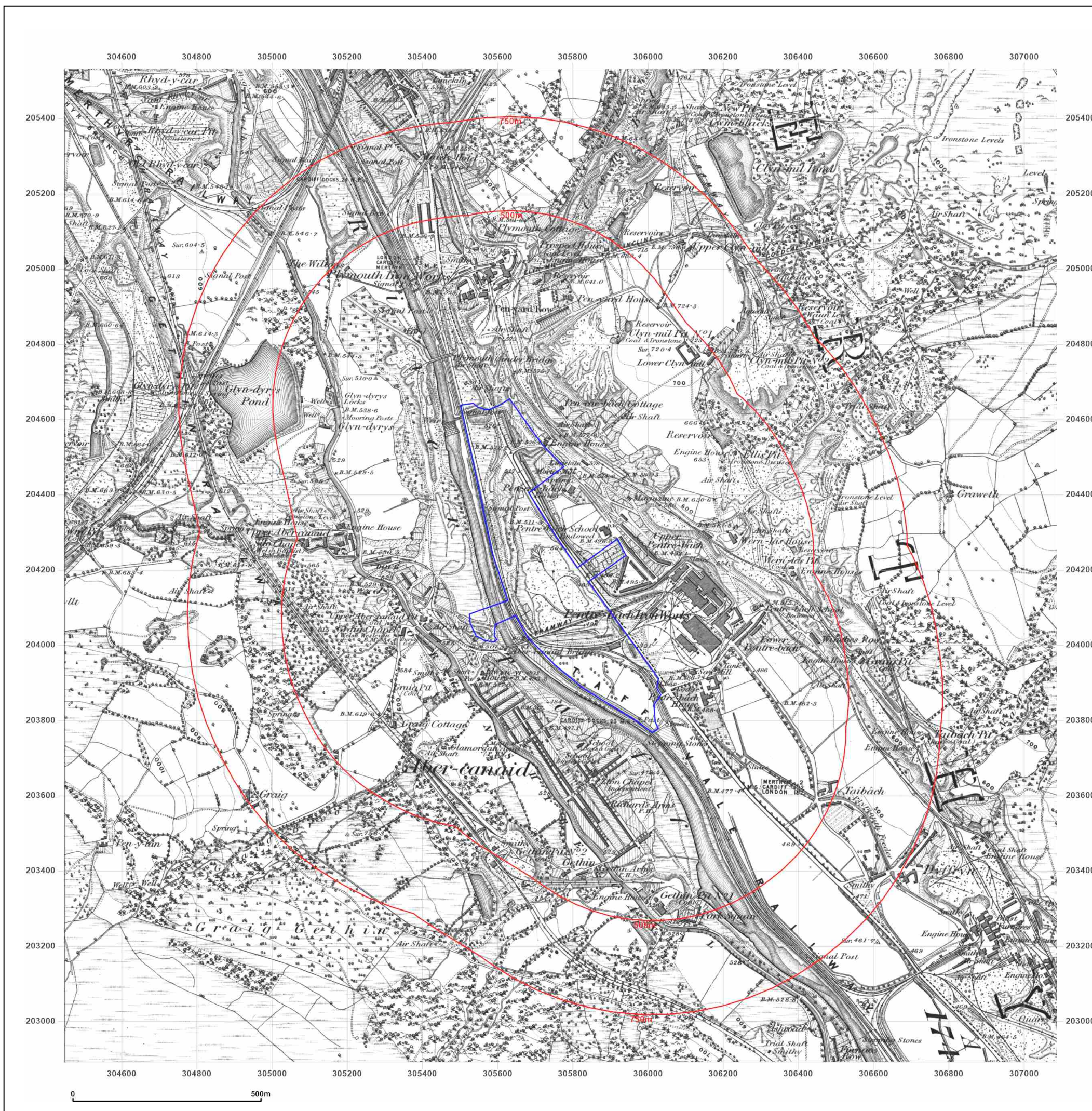


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Grid Ref: 305767, 204211

Map Name: County Series

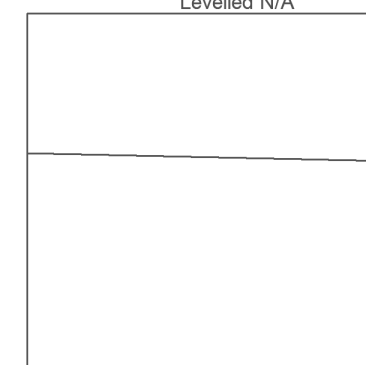
Map date: 1884

Scale: 1:10,560

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 Revised 1884
 Edition N/A
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Client Ref: PO_4800510468_Hoover_Factory
Report Ref: HMD-191-8496647
Grid Ref: 305767, 204211

Map Name: County Series

Map date: 1901

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1884
 Revised 1901
 Edition N/A
 Copyright N/A
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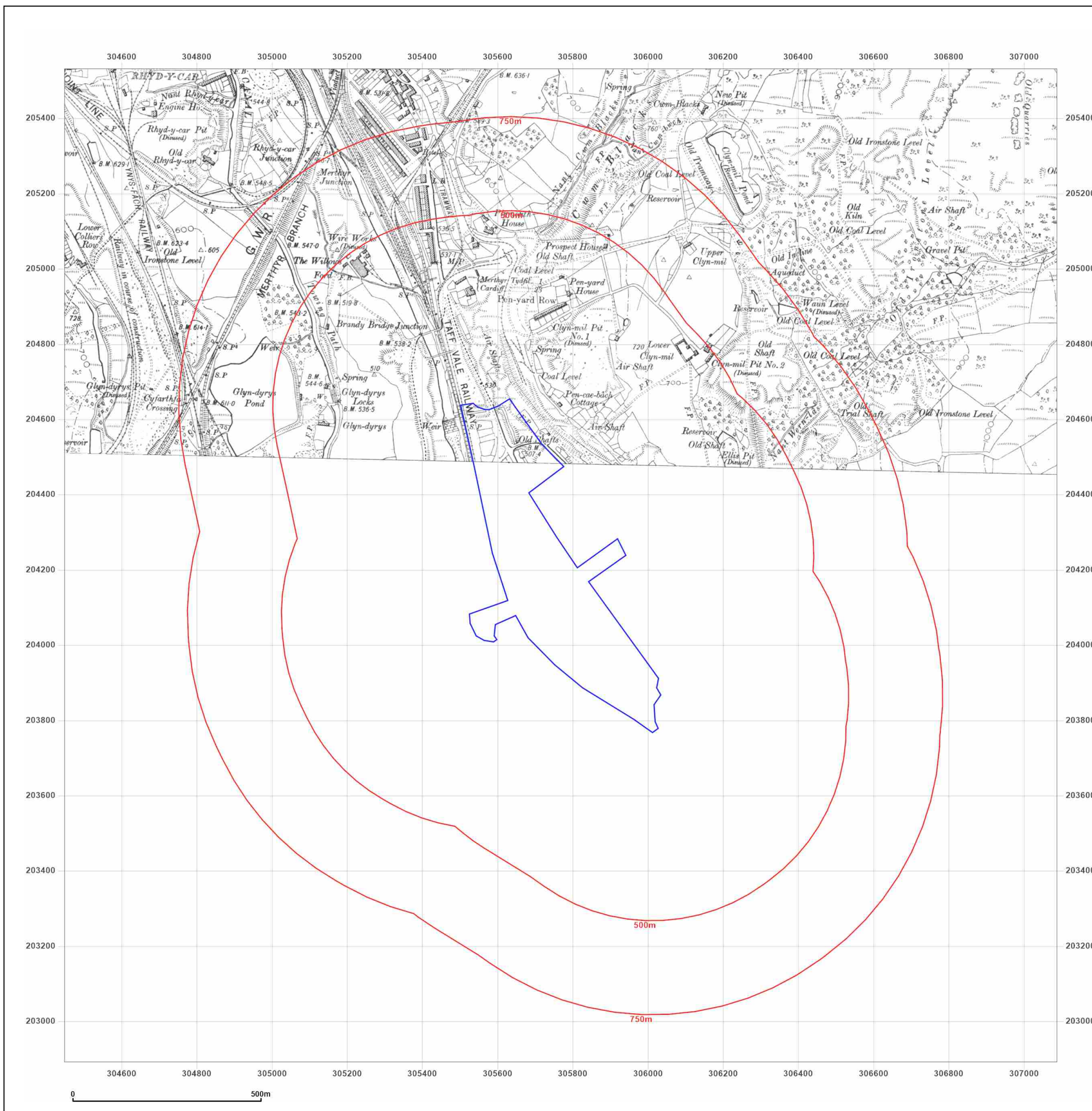


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Grid Ref: 305767, 204211

Map Name: County Series

Map date: 1901-1903

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1884
Revised 1903
Edition N/A
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Surveyed 1875
Revised 1901
Edition N/A
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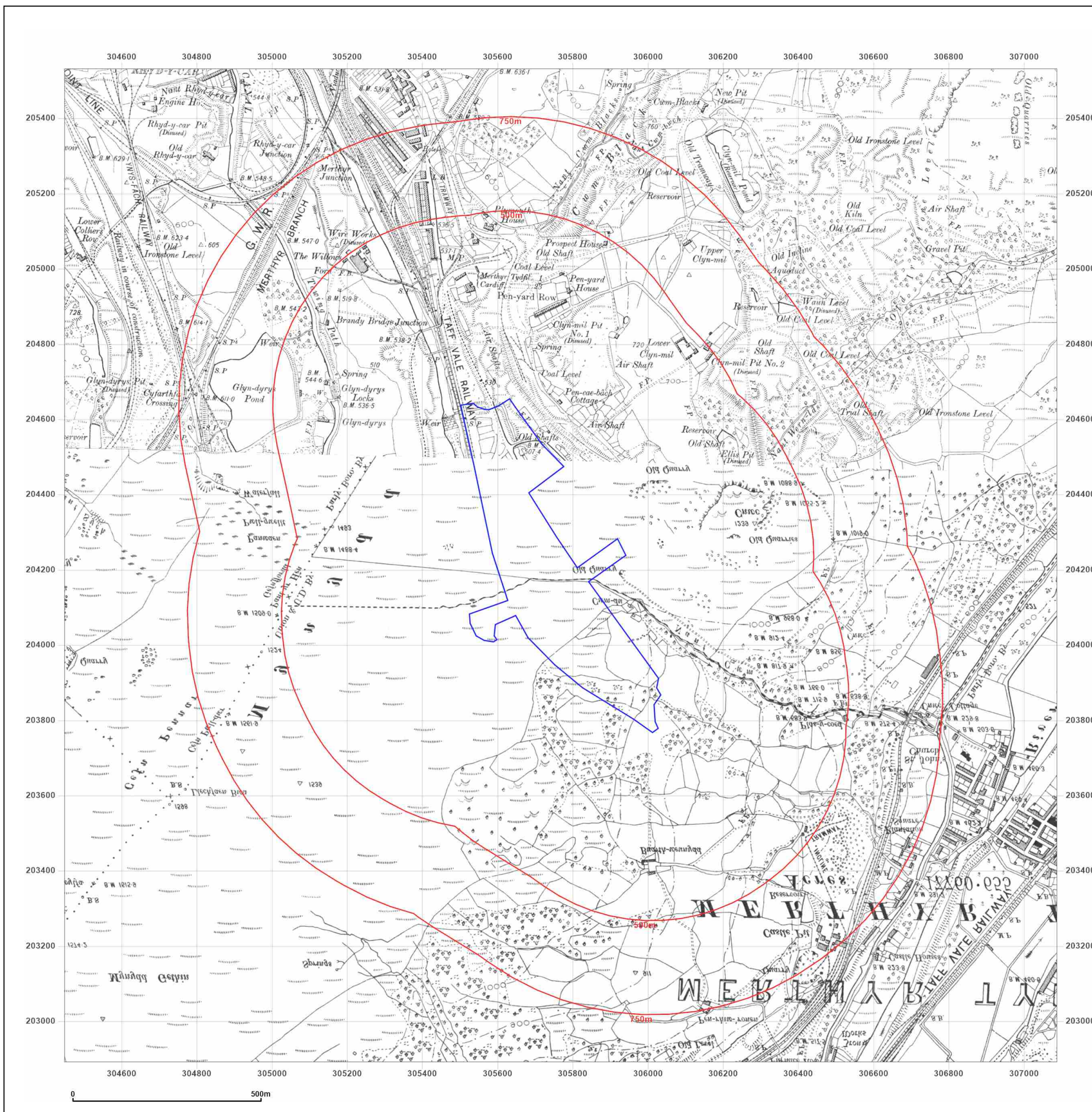


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Grid Ref: 305767, 204211

Map Name: County Series

Map date: 1915

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1884
Revised 1915
Edition N/A
Copyright N/A
Levelled N/A

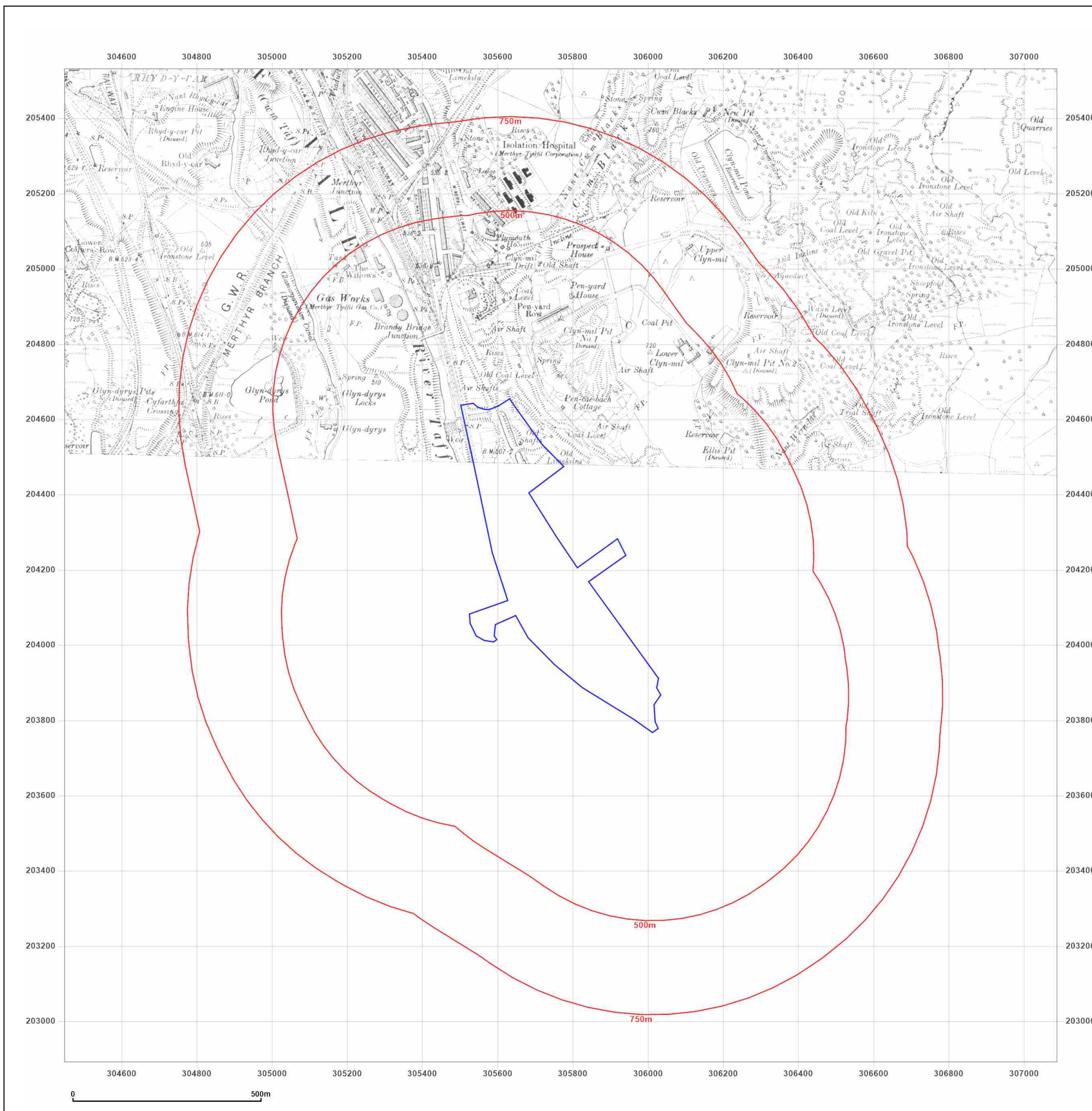


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Map Name: County Series

Map date: 1921-1922

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1884
Revised 1915
Edition 1922
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Levelled 1915

Surveyed 1874
Revised 1922
Edition 1922
Copyright N/A
Levelled N/A

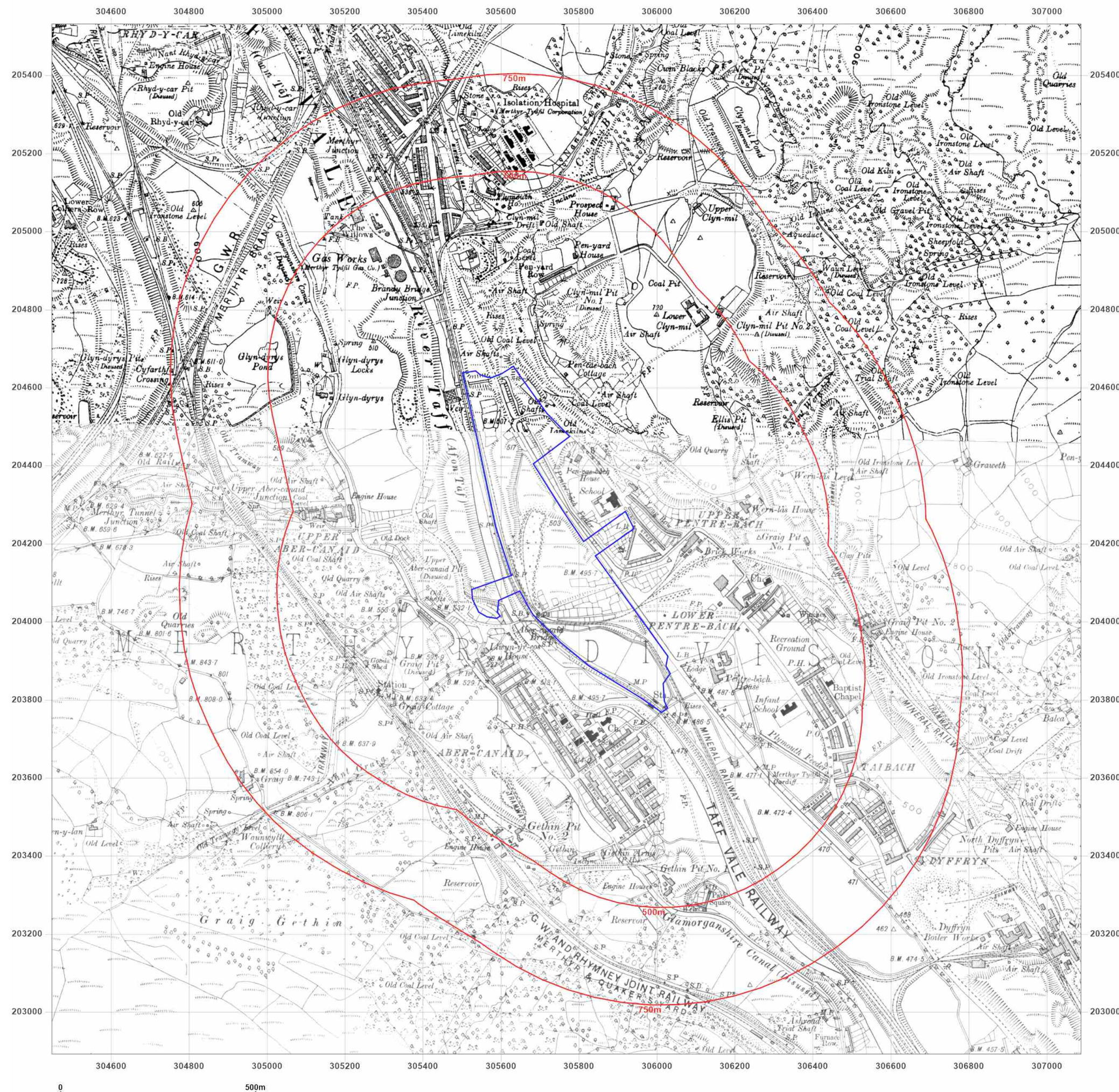


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Grid Ref: 305767, 204211

Map Name: County Series

Map date: 1922

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1922
Revised N/A
Edition N/A
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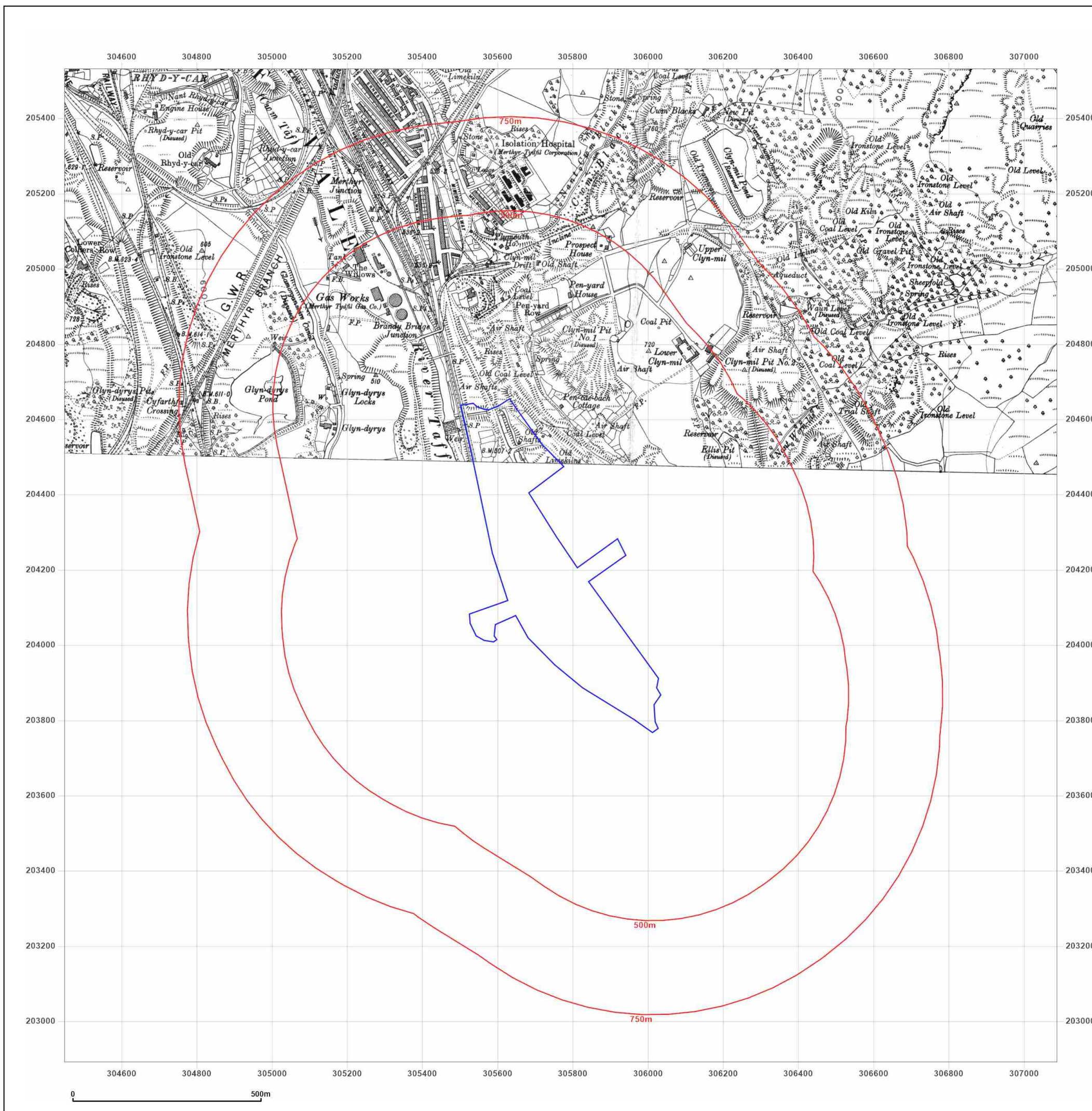


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Grid Ref: 305767, 204211

Map Name: County Series

Map date: 1938

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Printed at: 1:10,560



Surveyed 1884
 Revised 1938
 Edition 1938
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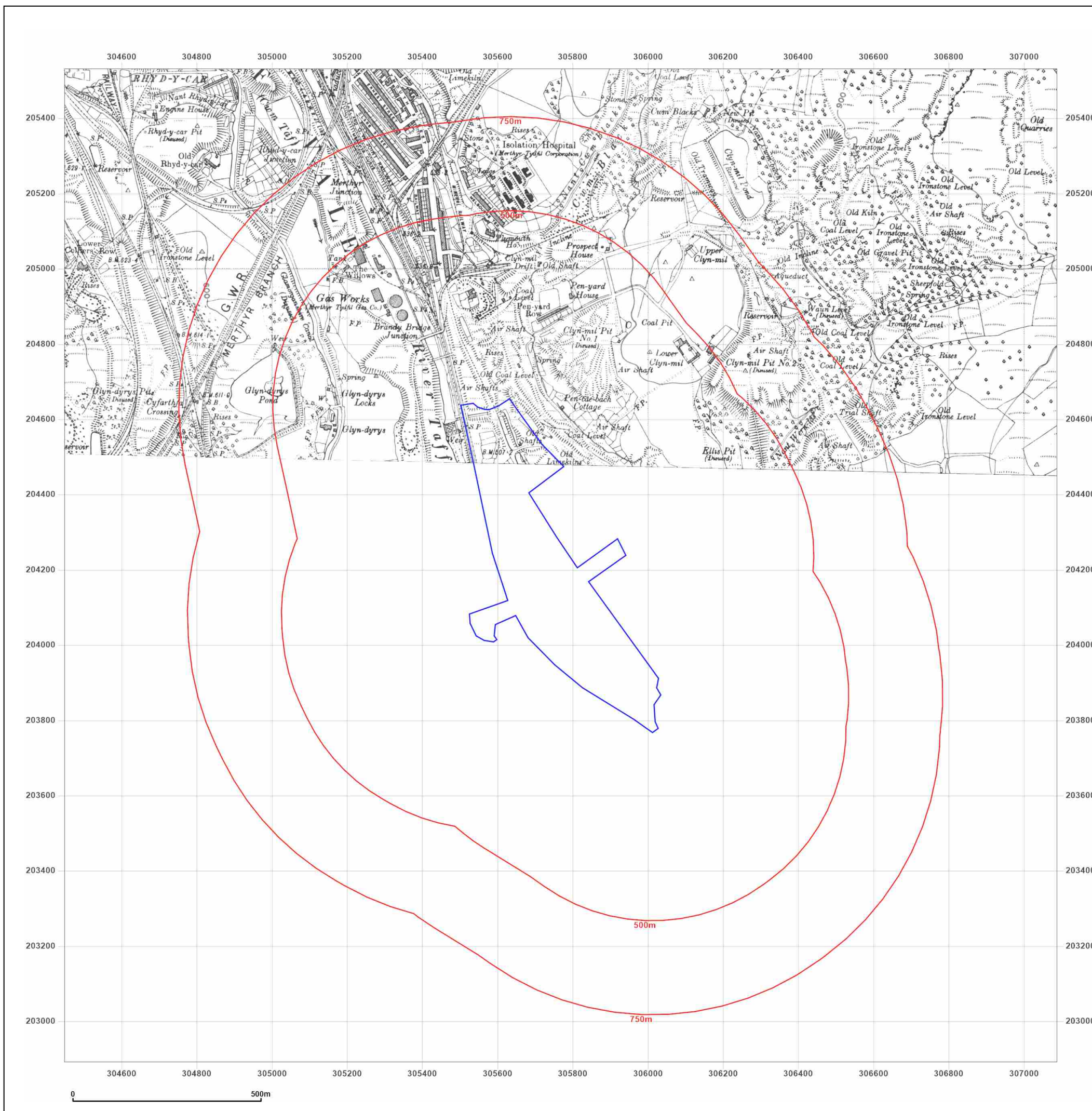


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Report Ref: HMD-191-8496647
Grid Ref: 305767, 204211

Map Name: County Series

Map date: 1948

Scale: 1:10,560

Printed at: 1:10,560



Surveyed 1884
Revised 1948
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1874
Revised 1948
Edition N/A
Copyright N/A
Levelled N/A

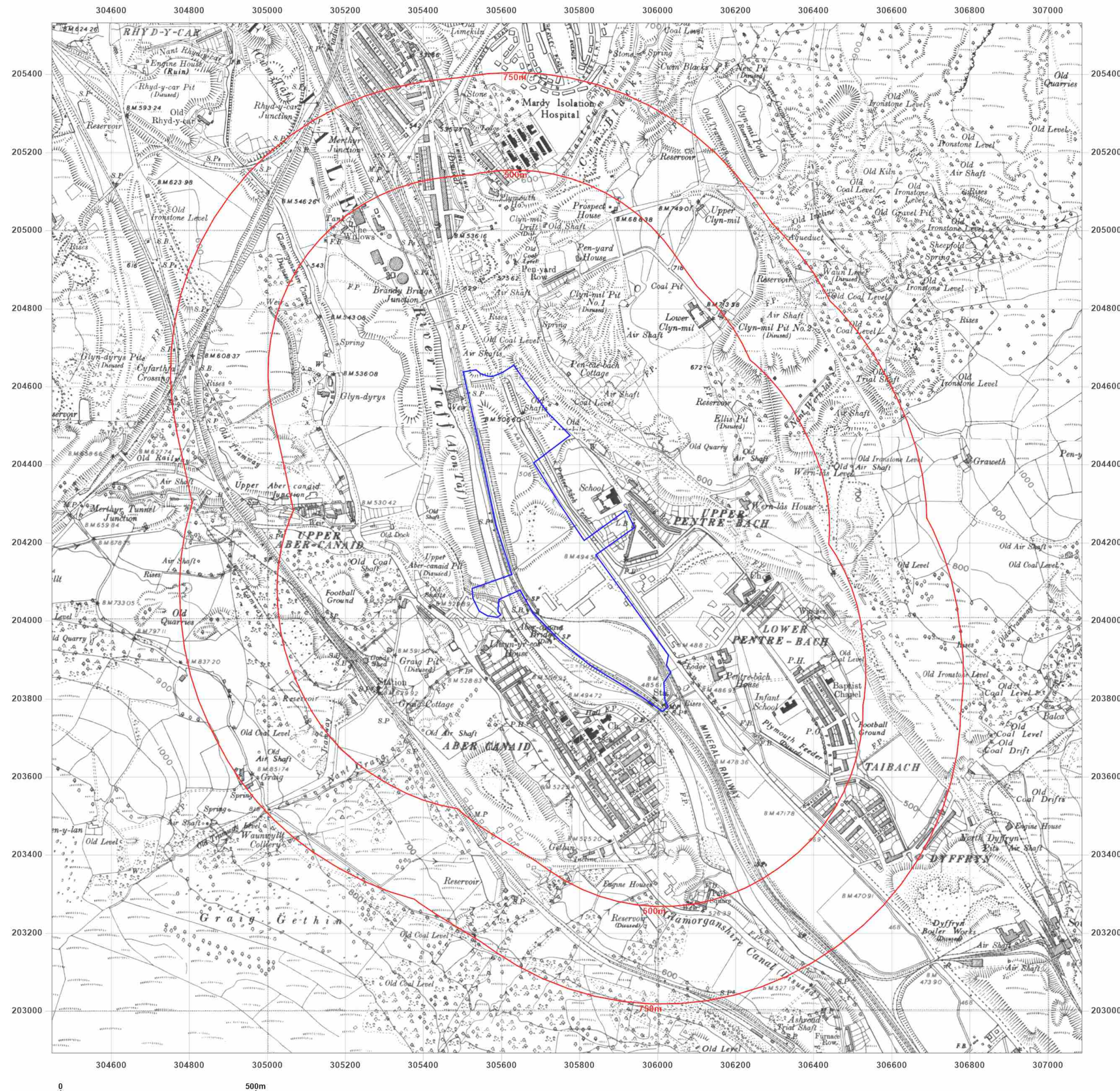


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Grid Ref: 305767, 204211

Map Name: Provisional

Map date: 1964-1965

Scale: 1:10,560

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Edition N/A
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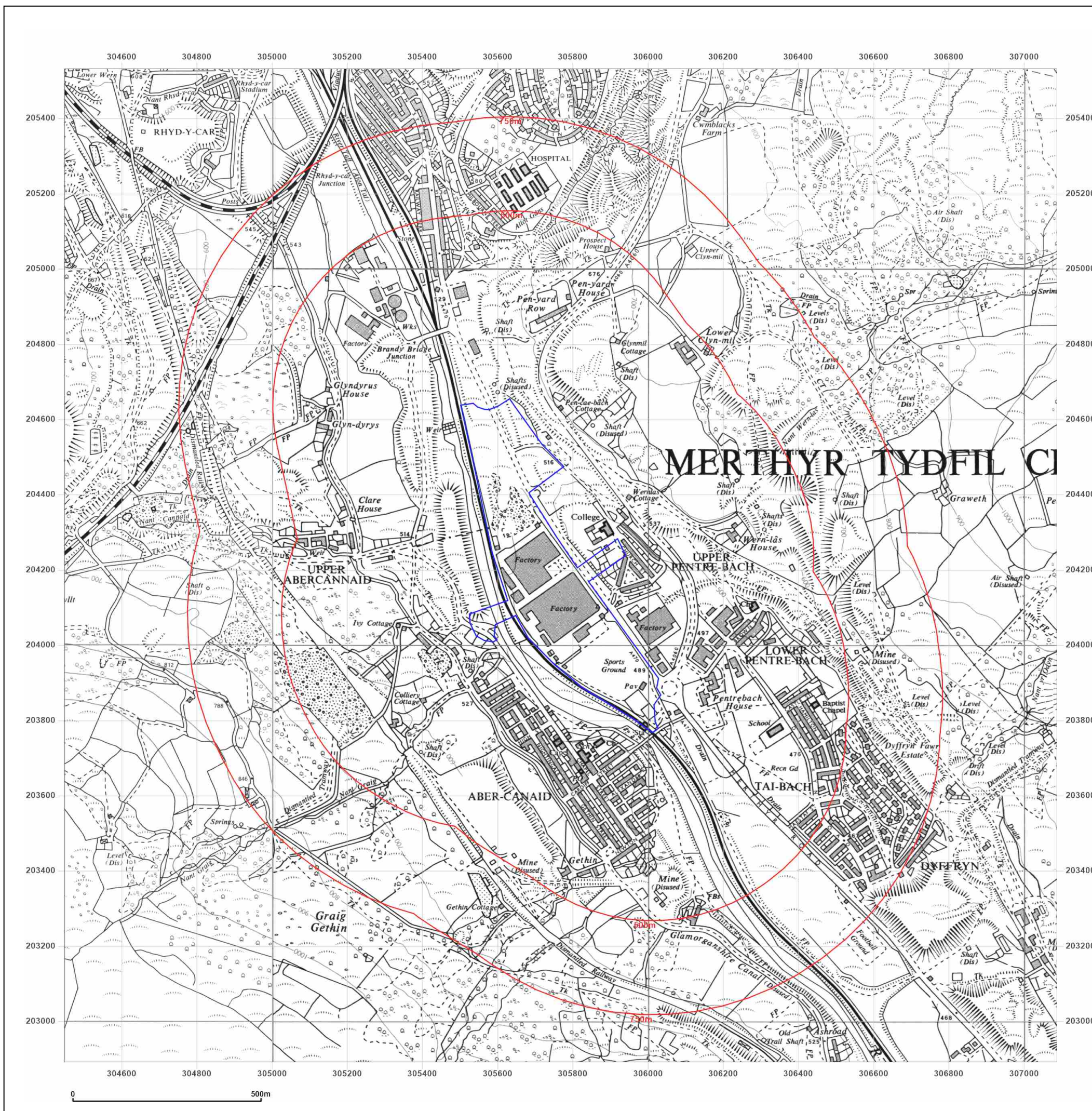


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Grid Ref: 305767, 204211

Map Name: Provisional

Map date: 1968-1969

Scale: 1:10,560

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Revised 1968
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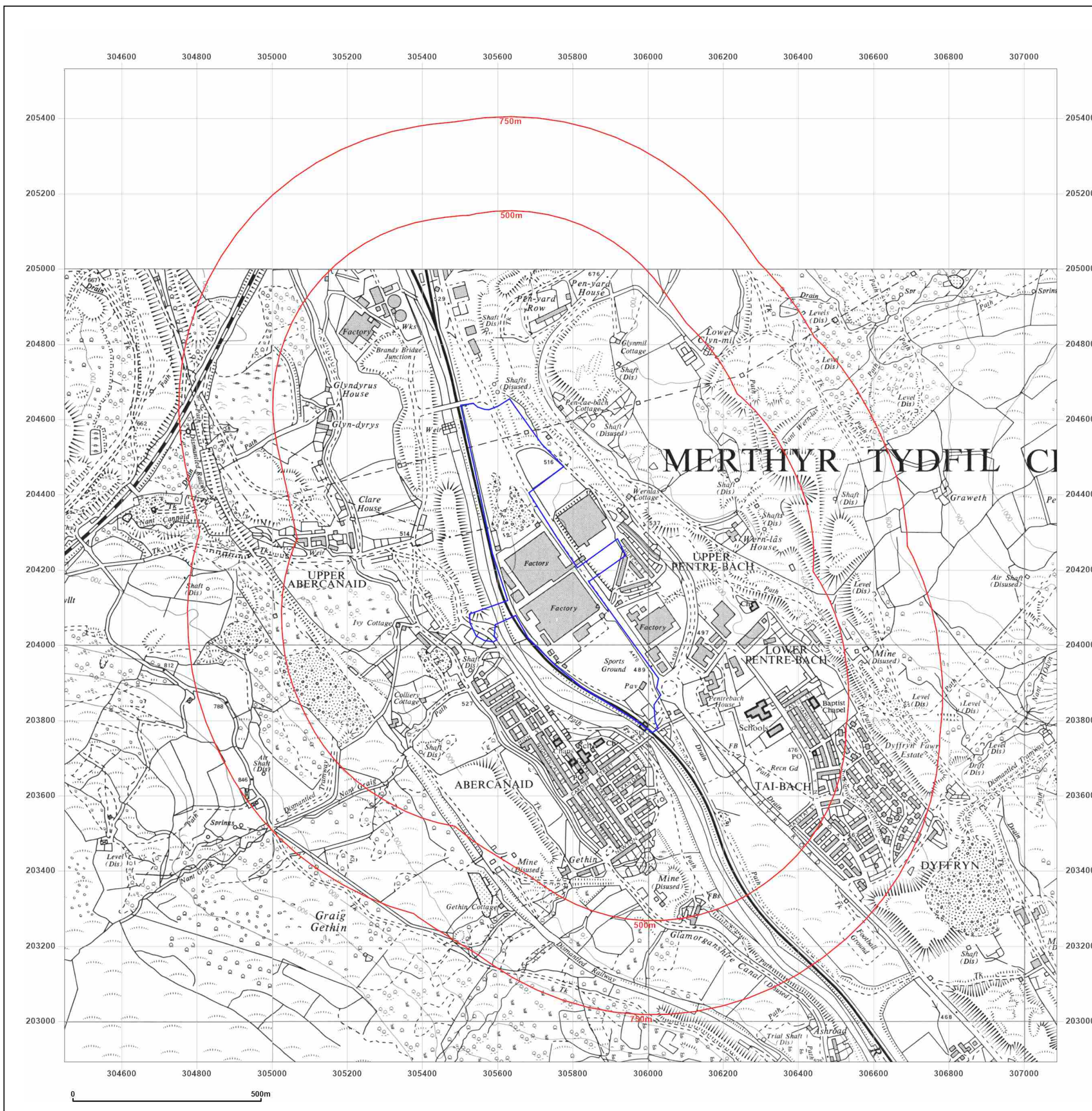


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Report Ref: HMD-191-8496647
Grid Ref: 305767, 204211

Map Name: National Grid

Map date: 1988-1992

Scale: 1:10,000

Printed at: 1:10,000



Surveyed 1990
Revised 1992
Edition N/A
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Surveyed 1989
Revised 1992
Edition N/A
Copyright N/A
Levelled N/A

Surveyed 1986
Revised 1988
Edition N/A
Copyright N/A
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Surveyed 1984
Revised 1988
Edition N/A
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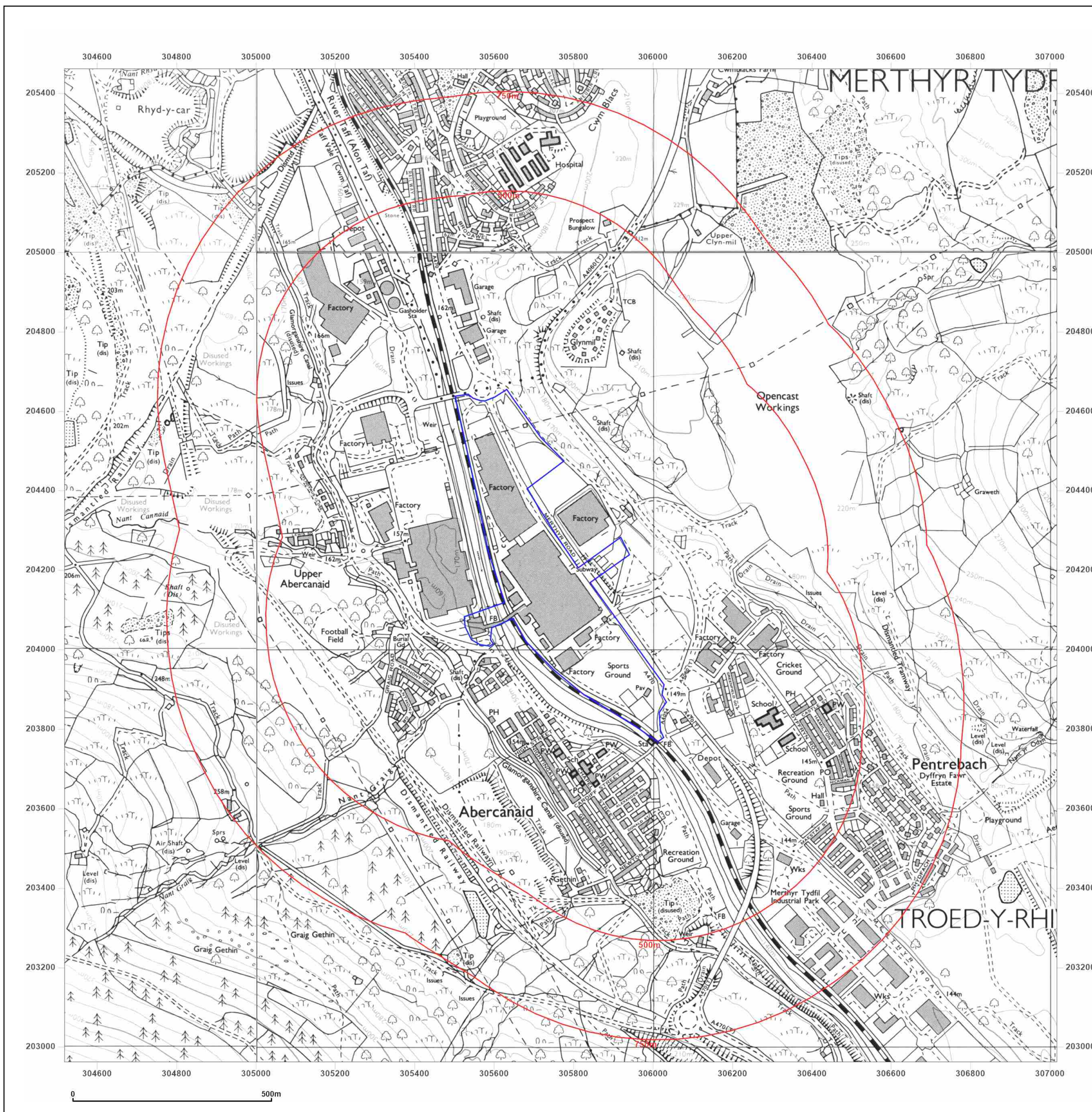


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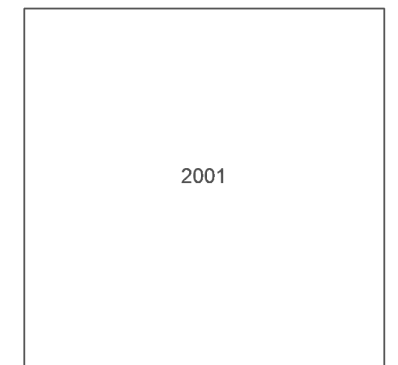
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Grid Ref: 305767, 204211

Map Name: National Grid

Map date: 2001

Scale: 1:10,000

Printed at: 1:10,000

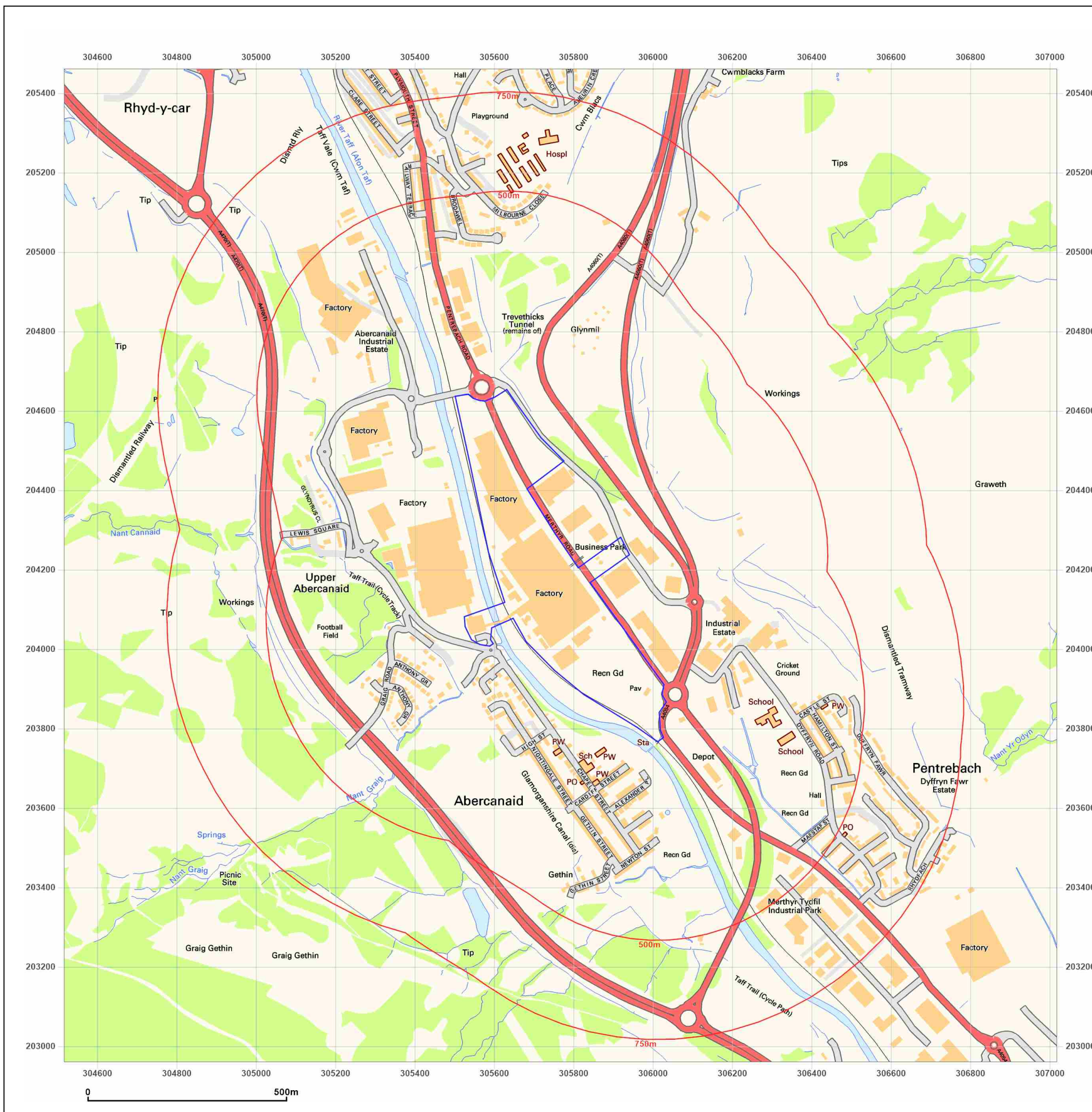


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Client Ref: PO_4800510468_Hoover_Factory
Report Ref: HMD-191-8496647
Grid Ref: 305767, 204211

Map Name: National Grid

Map date: 2010

Scale: 1:10,000

Printed at: 1:10,000



2010

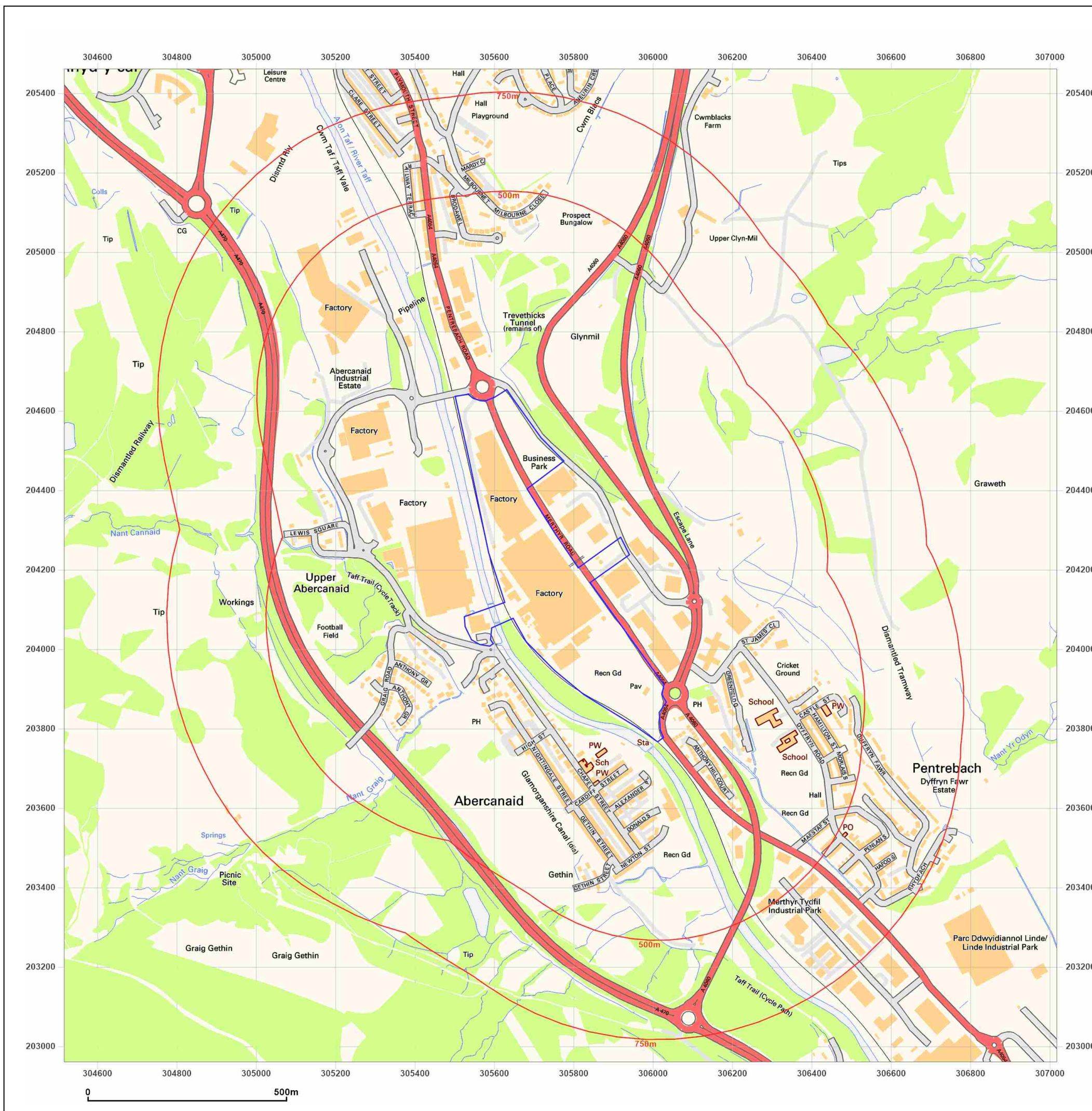


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Report Ref: HMD-191-8496647
Grid Ref: 305767, 204211

Map Name: National Grid

Map date: 2022

Scale: 1:10,000

Printed at: 1:10,000



2022

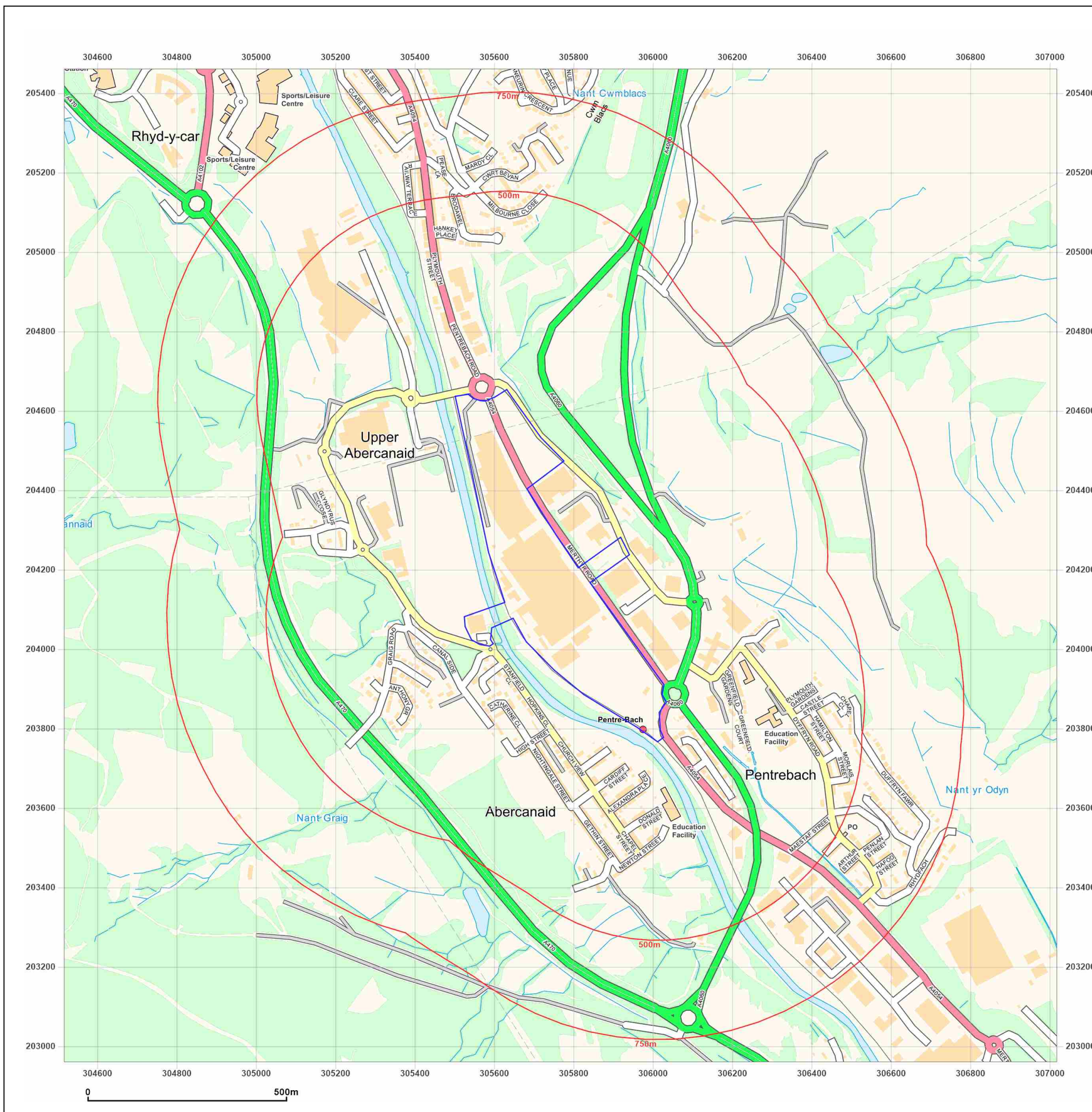


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 W: www.groundsure.com

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Production date: 04 February 2022

Map legend available at:
www.groundsure.com/sites/default/files/groundsure_legend.pdf



APPENDIX C

BGS RADON GEOREPORT

LAURA PULLIN
INTEGRAL GEOTECHNIQUE
INTEGRAL HOUSE
7 BEDDAU WAY
CAERPHILLY
CF83 2AX
UNITED KINGDOM

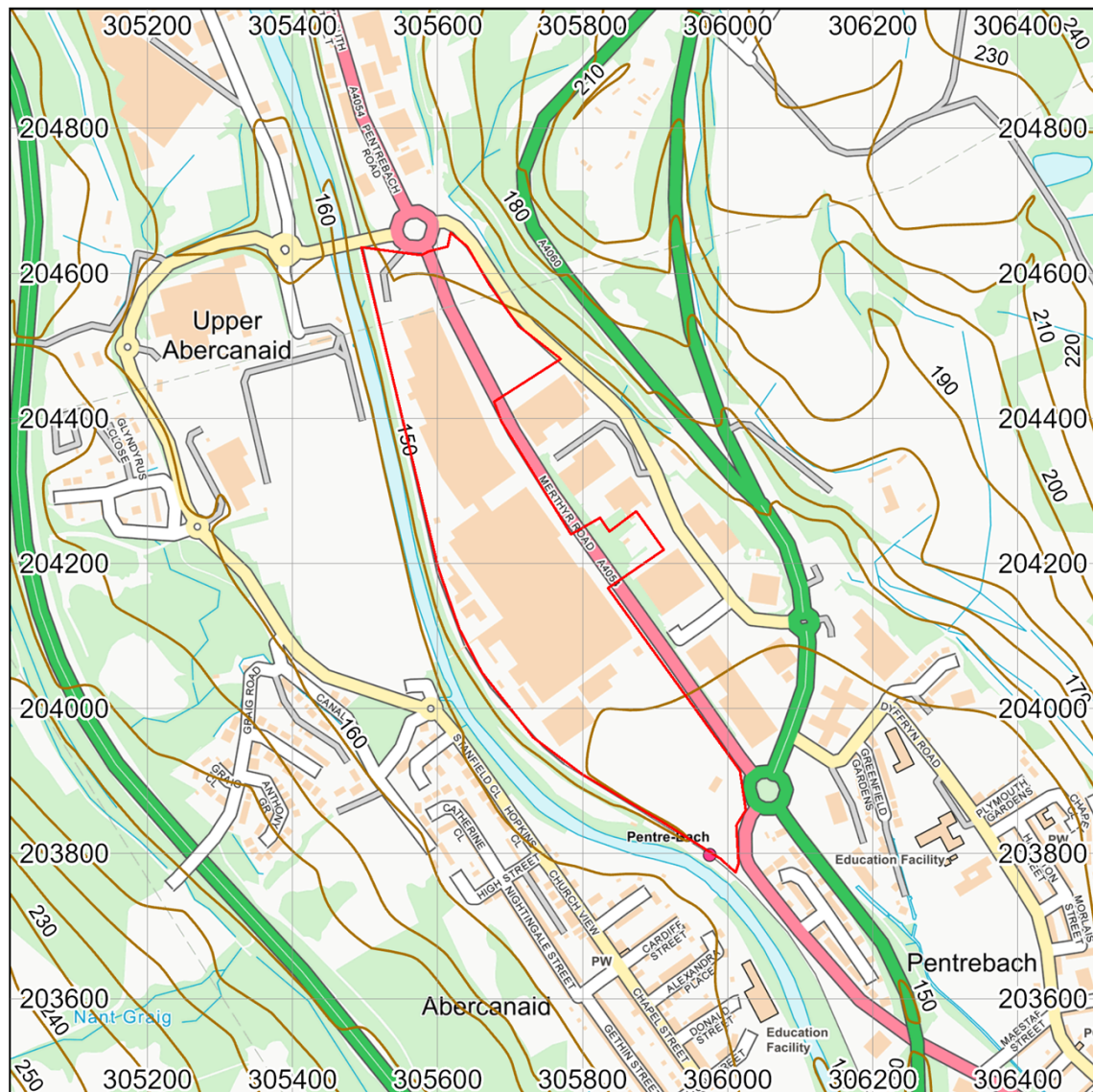
Radon Report

Advisory report on the requirement for radon protective measures in new buildings, conversions and extensions to existing buildings. The report also indicates whether a site is located within a radon Affected Area

Report Id: *BGS_341819/59078*

Client reference: 14275 Former Hoover Factory, Merthyr Tydfil

Search location



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Search location indicated in red

*This report describes a site located at National Grid Reference 305760, 204215.
Note that for sites of irregular shape, this point may lie outside the site boundary.
Where the client has submitted a site plan the assessment will be based on the area given.*

Radon Report: UK

When extensions are made to existing buildings in high radon areas, or new buildings are constructed in these areas, the Building Regulations for England, Wales, Scotland and Northern Ireland require that protective measures are taken against radon entering the building.

This report provides information on whether radon protective measures are required. Depending on the probability of buildings having high radon levels, the Regulations may require either:

1. No protective measures
2. Basic protective measures
3. Full protective measures

This is an advisory report on the requirement for radon protective measures in new buildings, conversions and extensions. The report also indicates whether a site is located within a radon Affected Area

Requirement for radon protective measures

The determination below follows advice in *BR211 Radon: Guidance on protective measures for new buildings (2023 edition)*, which also provides guidance on what to do if the result indicates that protective measures are required.

Is the property in an area where radon protective measures are required for new buildings or extensions to existing ones as described in publication BR211 (2023 edition) Radon: Guidance on protective measures for new buildings?

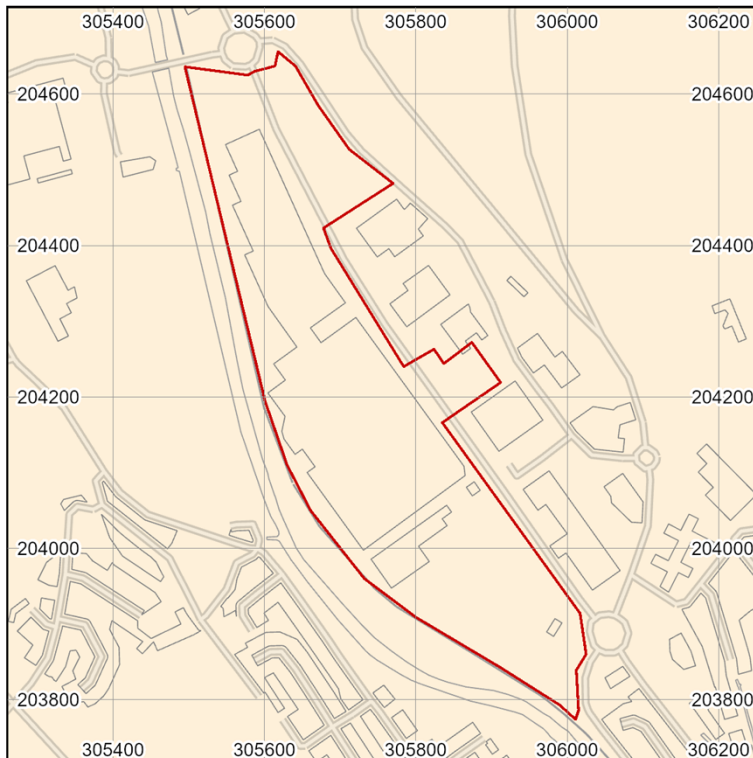
NO RADON PROTECTIVE MEASURES ARE REQUIRED FOR THE REPORT AREA.

More details of the protective measures required are available in *BR211 Radon: Guidance on protective measures for new buildings (2023 Edition)*.

Whether or not the radon level in a building is above or below the radon Action Level can only be established by having the building tested. The UKHSA provides a radon testing service which can be accessed at www.ukradon.org or by telephone (01235 822622).

If you require further information or guidance, you should contact your local authority building control officer or approved inspector.

Radon Affected Area



% Homes estimated to be at or above the action level
0-1%
1-3%
3-5%
5-10%
10-30%
30-100%

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Scale: 1:10 000 (1cm = 100 m)

Search area indicated in red

Is the property in a radon Affected Area as defined by the UK Health Security Agency (UKHSA) and if so what percentage of homes are estimated to be at or above the Action Level? **NO**

Additional Information

THE PROPERTY IS IN AN AREA WHERE LESS THAN 1% OF HOMES ARE ESTIMATED TO BE AT OR ABOVE THE ACTION LEVEL. THE PROPERTY IS NOT IN A RADON AFFECTED AREA.

The UKHSA recommends a radon 'Action Level' of 200 Becquerels per cubic metre of air (Bq m^{-3}) for the annual average of the radon gas concentration in a home. Where 1% or more of homes are estimated to be at or above the Action Level the area should be regarded as a radon Affected Area.

This report informs you whether the property is in a radon Affected Area and the percentage of homes that are estimated to be at or above the radon Action Level at this location. Being in an Affected Area does not necessarily mean there is a high radon level within the property; the only way to determine the radon level is to carry out a radon measurement.

The UKHSA advises that radon gas should be measured in all properties within radon Affected Areas and that homes with radon levels at or above the Action Level (200 Bq m^{-3}) should be remediated. Householders with levels between the Target Level (100 Bq m^{-3}) and Action Level should seriously consider reducing their radon level, especially if they are at greater risk, such as if they are current or ex smokers. Whether or not a home is in fact above or below the Action Level or Target Level can only be established by having the building tested. The UKHSA provides a validated radon testing service which can be accessed at www.ukradon.org.

The information in this report provides an answer to one of the standard legal enquiries on house purchase in England and Wales, known as Law Society CON29 Enquiries of the Local Authority (2016); 3.14 Radon Gas: Do records indicate that the property is in a “Radon Affected Area” as identified by the UKHSA. The data can also be used to advise house buyers and sellers in Scotland and Northern Ireland.

If you are buying a new build property in a Radon Affected Area, you should ask the builder whether radon protective measures were incorporated in the construction of the property.

If you are buying a currently occupied property in a radon Affected Area, you should ask the present owner whether radon levels have been measured in the property. If they have, ask whether the results were at or above the radon Action Level and if so, whether remedial measures were installed, radon levels were re-tested, and if the results of re-testing confirmed the effectiveness of the measures.

Further information on radon is available from the UKHSA at www.ukradon.org.

What is radon?

Radon is a naturally occurring radioactive gas, which is produced by the radioactive decay of radium which, in turn, is derived from the radioactive decay of uranium. Uranium is found in small quantities in all soils and rocks, although the amount varies from place to place. Radon released from rocks and soils is quickly diluted in the atmosphere. Concentrations in the open air are normally very low and do not present a hazard. Radon that enters enclosed spaces such as some buildings (particularly basements), caves, mines, and tunnels may reach high concentrations in some circumstances. The construction method and degree of ventilation will influence radon levels in individual buildings. A person's exposure to radon will also vary according to how particular buildings and spaces are used.

Inhalation of the radioactive decay products of radon gas increases the chance of developing lung cancer. If individuals are exposed to high concentrations for significant periods of time, there may be cause for concern. In order to limit the risk to individuals, the Government has adopted an Action Level for radon in homes of 200 becquerels per cubic metre (Bq m^{-3}). The Government advises householders that, where the radon level is at or above the Action Level, measures should be taken to reduce the concentration.

Radon in workplaces

The Ionising Radiation Regulations 2017 require employers to take action when radon is present above a defined level in the workplace. Advice may be obtained from your local Health and Safety Executive Area Office or the Environmental Health Department of your local authority. The BRE publishes a guide (BR293): **Radon in the workplace**. BRE publications may be obtained from the BRE Bookshop, Tel: 01923 664262, email: bookshop@bre.co.uk website: www.brebookshop.com

Contact Details

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- The data, information and related records supplied in this Report by BGS can only be indicative and should not be taken as a substitute for specialist interpretations, professional advice and/or detailed site investigations. You must seek professional advice before making technical interpretations on the basis of the materials provided.
- Geological observations and interpretations are made according to the prevailing understanding of the subject at the time. The quality of such observations and interpretations may be affected by the availability of new data, by subsequent advances in knowledge, improved methods of interpretation, and better access to sampling locations.
- Raw data may have been transcribed from analogue to digital format, or may have been acquired by means of automated measuring techniques. Although such processes are subjected to quality control to ensure reliability where possible, some raw data may have been processed without human intervention and may in consequence contain undetected errors.
- Detail, which is clearly defined and accurately depicted on large-scale maps, may be lost when small-scale maps are derived from them.
- Although samples and records are maintained with all reasonable care, there may be some deterioration in the long term.
- The most appropriate techniques for copying original records are used, but there may be some loss of detail and dimensional distortion when such records are copied.
- Data may be compiled from the disparate sources of information at BGS's disposal, including material donated to BGS by third parties, and may not originally have been subject to any verification or other quality control process.
- Data, information and related records, which have been donated to BGS, have been produced for a specific purpose, and that may affect the type and completeness of the data recorded and any interpretation. The nature and purpose of data collection, and the age of the resultant material may render it unsuitable for certain applications/uses. You must verify the suitability of the material for your intended usage.
- If a report or other output is produced for you on the basis of data you have provided to BGS, or your own data input into a BGS system, please do not rely on it as a source of information about other areas or geological features, as the report may omit important details.
- The topography shown on any map extracts is based on the latest OS mapping and is not necessarily the same as that used in the original compilation of the BGS geological map, and to which the geological linework available at that time was fitted.
- Note that for some sites, the latest available records may be historical in nature, and while every effort is made to place the analysis in a modern geological context, it is possible in some cases that the detailed geology at a site may differ from that described.

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**Report issued by
BGS Enquiry Service**

APPENDIX D

CONSULTANTS COAL MINING REPORT FROM THE MINING REMEDIATION AUTHORITY



The Coal
Authority

Consultants Coal Mining Report

Hoover Candy Site
Pentrebach
Merthyr Tydfil
Merthyr Tydfil
CF48 4TQ

Date of enquiry:	10 October 2024
Date enquiry received:	10 October 2024
Issue date:	10 October 2024

Our reference:	51003455639001
Your reference:	14275/LP



Consultants

Coal Mining Report

This report is based on and limited to the records held by the Coal Authority at the time the report was produced.

Client name

INTEGRAL GEOTECHNIQUE (WALES) LTD.

Enquiry address

Hoover Candy Site
Pentrebach
Merthyr Tydfil
Merthyr Tydfil
CF48 4TQ

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NG18 4RG

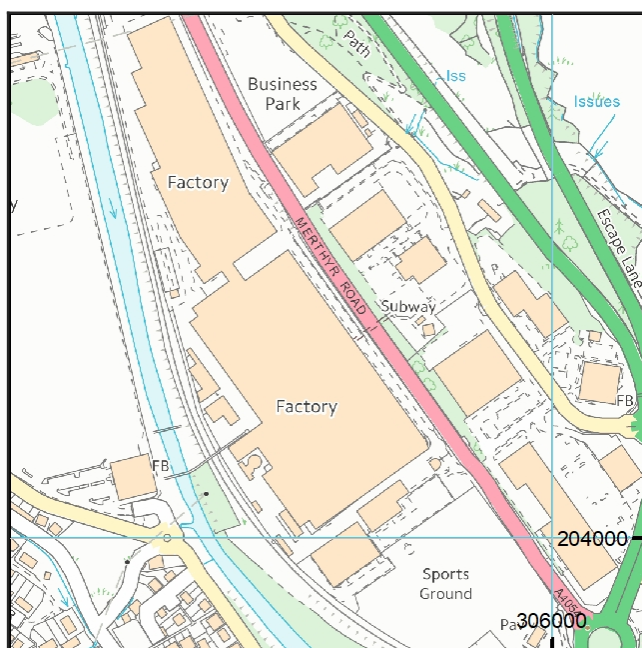
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 /thecoalauthority

 /thecoalauthority



Approximate position of property



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Section 1 – Mining activity and geology

Past underground mining

Colliery	Seam	Mineral	Coal Authority reference	Depth (m)	Direction to working	Dipping rate of seam worked (degrees)	Dipped direction of seam worked	Extraction thickness (cm)	Year last mined
unnamed	UPPER 6FT RIDER	Coal	4WJU	16	Beneath Property	6.2	South	170	1875
unnamed	UPPER 6FT RIDER	Coal	4WJS	24	Beneath Property	4.5	South	170	1875
unnamed	LOWER 7FT BOTTOM LEAF	Coal	4E29	35	North-East	7.7	South-East	114	1907
unnamed	TWO FOOT NINE	Coal	4WLA	37	Beneath Property	6.6	South-East	66	1940
unnamed	FOUR FOOT	Coal	4WIG	37	Beneath Property	5.5	South	210	1854
unnamed	TWO FOOT NINE	Coal	4WJ0	48	Beneath Property	5.2	South	130	1862
unnamed	LOWER NINE FOOT	Coal	49AZ	49	Beneath Property	8.9	South	259	1885
unnamed	UPPER 6FT (T.L.)	Coal	4WIL	52	South-West	3.9	South-East	120	1891
unnamed	FOUR FOOT	Coal	4WL6	54	Beneath Property	6.6	South	210	1891
unnamed	FOUR FOOT	Coal	4WL5	61	South	8.4	South-East	210	1891
unnamed	UPPER 6FT RIDER	Coal	4WMI	64	East	6.9	South-East	170	1900
unnamed	LOWER 7FT BOTTOM LEAF	Coal	4BDV	65	North-East	6.5	South-East	117	1902
unnamed	LOWER 7FT BOTTOM LEAF	Coal	4E2A	70	Beneath Property	8.6	South-East	117	1889
unnamed	LOWER NINE FOOT	Coal	4WJD	83	Beneath Property	6.6	South-East	145	1868
unnamed	LOWER NINE FOOT	Coal	4WJK	85	Beneath Property	3.3	South-East	145	1932
unnamed	LOWER NINE FOOT	Coal	4BDK	89	North-East	0.0	East	183	1909
unnamed	LOWER NINE FOOT	Coal	4WJN	91	Beneath Property	7.1	South-East	145	1932
unnamed	LOWER NINE FOOT	Coal	4WLG	98	North-East	6.9	South	183	1935
unnamed	LOWER 7FT BOTTOM LEAF	Coal	4WK1	117	Beneath Property	7.5	South-East	117	1899
unnamed	LOWER 7FT BOTTOM LEAF	Coal	4WK2	124	Beneath Property	5.9	South	117	1899

Colliery	Seam	Mineral	Coal Authority reference	Depth (m)	Direction to working	Dipping rate of seam worked (degrees)	Dipped direction of seam worked	Extraction thickness (cm)	Year last mined
unnamed	BOTTOM VEIN IRONSTONE	Ironstone	499Y	137	North-East	16.4	South	100	1855
unnamed	LOWER 7FT BOTTOM LEAF	Coal	4WLQ	147	North-East	6.1	South-East	117	1902
unnamed	GARW NO.1 IRONSTONE	Ironstone	499V	156	North	16.0	South-East	100	1855

Probable unrecorded shallow workings

Yes.

Spine roadways at shallow depth

No spine roadway recorded at shallow depth.

Mine entries

Entry type	Reference	Grid reference	Treatment description	Mineral	Conveyancing details
Shaft	305204-008	305591 204697		Coal	
Shaft	305204-009	305600 204677		Coal	
Adit	305204-011	305698 204719		Coal	
Shaft	305204-012	305711 204552		Coal	
Shaft	305204-013	305719 204547		Coal	
Adit	305204-014	305784 204572		Coal	
Shaft	305204-039	305754 204591		Coal	
Adit	305204-072	305719 204561		Coal	

Abandoned mine plan catalogue numbers

The following abandoned mine plan catalogue numbers intersect with some, or all, of the enquiry boundary:

SWR233	SWR3143	8695
SWR3150	PO0	SWR1878
SWR3146	SWR3187	SWR3141

Our records show we have more plans than those shown above which could affect the enquiry boundary.

Please contact us on 0345 762 6848 to determine the exact abandoned mine plans you require based on your needs.

Outcrops

Seam name	Mineral	Seam workable	Distance to outcrop (m)	Direction to outcrop	Bearing of outcrop
BUTE	Coal	Yes	Within	N/A	17
LOWER 9FT AND BUTE	Coal	Yes	Within	N/A	198
LOWER NINE FOOT TOP LEAF	Coal	Yes	Within	N/A	206
LOWER SIX FEET	Coal	Yes	Within	N/A	255
UPPER 6FT RIDER	Coal	Yes	Within	N/A	231
UPPER SIX FEET	Coal	Yes	Within	N/A	266

Geological faults, fissures and breaklines

No faults, fissures or breaklines recorded.

Opencast mines

None recorded within 500 metres of the enquiry boundary.

Coal Authority managed tips

None recorded within 500 metres of the enquiry boundary.

Section 2 – Investigative or remedial activity

Please refer to the 'Summary of findings' map (on separate sheet) for details of any activity within the area of the site boundary.

Site investigations

None recorded within 50 metres of the enquiry boundary.

Remediated sites

None recorded within 50 metres of the enquiry boundary.

Coal mining subsidence

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

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

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

Mine gas

None recorded within 500 metres of the enquiry boundary.

Mine water treatment schemes

None recorded within 500 metres of the enquiry boundary.

Section 3 – Licensing and future mining activity

Future underground mining

None recorded.

Coal mining licensing

None recorded within 200 metres of the enquiry boundary.

Court orders

None recorded.

Section 46 notices

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

Withdrawal of support notices

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

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

Payments to owners of former copyhold land

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

Section 4 – Further information

The following potential risks have been identified and as part of your risk assessment should be investigated further.

Future development

If development proposals are being considered, technical advice relating to both the investigation of coal and former coal mines and their treatment should be obtained before beginning work on site. All proposals should apply specialist engineering practice required for former mining areas. No development should be undertaken that intersects, disturbs or interferes with any coal or coal mines without first obtaining the permission of the Coal Authority.

MINE GAS: Please note, if there are no recorded instances of mine gas within 500m of the enquiry boundary, this does not mean that mine gas is not present within the vicinity. The Coal Authority Mine Gas data is limited to only those sites where a Mine Gas incident has been recorded. Developers should be aware that the investigation of coal seams, mine workings or mine entries may have the potential to generate and/or displace underground gases. Associated risks both to the development site and any neighbouring land or properties should be fully considered when undertaking any ground works. The need for effective measures to prevent gases migrating onto any land or into any properties, either during investigation or remediation work, or after development must also be assessed and properly addressed. In these instances, the Coal Authority recommends that a more detailed Gas Risk Assessment is undertaken by a competent assessor.

Development advice

The site is within an area of historical coal mining activity. Should you require advice and/or support on understanding the mining legacy, its risks to your development or what next steps you need to take, please contact us.

For further information on specific site or ground investigations in relation to any issues raised in Section 4, please call us on 0345 762 6848 or email us at groundstability@coal.gov.uk.

Section 5 – Data definitions

The datasets used in this report have limitations and assumptions within their results. For more guidance on the data and the results specific to the enquiry boundary, please **call us on 0345 762 6848** or **email us at groundstability@coal.gov.uk**.

Past underground coal mining

Details of all recorded underground mining relative to the enquiry boundary. Only past underground workings where the enquiry boundary is within 0.7 times the depth of the workings (zone of likely physical influence) allowing for seam inclination, will be included.

Probable unrecorded shallow workings

Areas where the Coal Authority believes there to be unrecorded coal workings that exist at or close to the surface (less than 30 metres deep).

Spine roadways at shallow depth

Connecting roadways either, working to working, or, surface to working, both in-seam and cross measures that exist at or close to the surface (less than 30 metres deep), either within or within 10 metres of the enquiry boundary.

Mine entries

Details of any shaft or adit either within, or within 100 metres of the enquiry boundary including approximate location, brief treatment details where known, the mineral worked from the mine entry and conveyance details where the mine entry has previously been sold by the Authority or its predecessors British Coal or the National Coal Board.

Abandoned mine plan catalogue numbers

Plan numbers extracted from the abandoned mines catalogue containing details of coal and other mineral abandonment plans deposited via the Mines Inspectorate in accordance with the Coal Mines Regulation Act and Metalliferous Mines Regulation Act 1872. A maximum of 9 plan extents that intersect with the enquiry boundary will be included. This does not infer that the workings and/or mine entries shown on the abandonment plan will be relevant to the site/property boundary.

Outcrops

Details of seam outcrops will be included where the enquiry boundary intersects with a conjectured or actual seam outcrop location (derived by either the British Geological Survey or the Coal Authority) or intersects with a defined 50 metres buffer on the coal (dip) side of the outcrop. An indication of whether the Coal Authority believes the seam to be of sufficient thickness and/or quality to have been worked will also be included.

Geological faults, fissures and breaklines

Geological disturbances or fractures in the bedrock. Surface fault lines (British Geological Survey derived data) and fissures and breaklines (Coal Authority derived data) intersecting with the enquiry boundary will be included. In some circumstances faults, fissures or breaklines have been known to contribute to surface subsidence damage as a consequence of underground coal mining.

Opencast mines

Opencast coal sites from which coal has been removed in the past by opencast (surface) methods and where the enquiry boundary is within 500 metres of either the licence area, site boundary, excavation area (high wall) or coaling area.

Coal Authority managed tips

Locations of disused colliery tip sites owned and managed by the Coal Authority, located within 500 metres of the enquiry boundary.

Site investigations

Details of site investigations within 50 metres of the enquiry boundary where the Coal Authority has received information relating to coal mining risk investigation and/or remediation by third parties.

Remediated sites

Sites where the Coal Authority has undertaken remedial works either within or within 50 metres of the enquiry boundary following report of a hazard relating to coal mining under the Coal Authority's Emergency Surface Hazard Call Out procedures.

Coal mining subsidence

Details of alleged coal mining subsidence claims made since 31 October 1994 either within or within 50 metres of the enquiry boundary. Where the claim relates to the enquiry boundary confirmation of whether the claim was accepted, rejected or whether liability is still being determined will be given. Where the claim has been discharged, whether this was by repair, payment of compensation or a combination of both, the value of the claim, where known, will also be given.

Details of any current 'Stop Notice' deferring remedial works or repairs affecting the property/site, and if so the date of the notice.

Details of any request made to execute preventative works before coal is worked under section 33 of the Coal Mining Subsidence Act 1991. If yes, whether any person withheld consent or failed to comply with any request to execute preventative works.

Mine gas

Reports of alleged mine gas emissions received by the Coal Authority, either within or within 500 metres of the enquiry boundary that subsequently required investigation and action by the Coal Authority to mitigate the effects of the mine gas emission. Please note, if there are no recorded instances of mine gas reported, this does not mean that mine gas is not present within the vicinity. The Coal Authority Mine Gas data is limited to only those sites where a Mine Gas incident has been recorded.

Mine water treatment schemes

Locations where the Coal Authority has constructed or operates assets that remove pollutants from mine water prior to the treated mine water being discharged into the receiving water body.

These schemes are part of the UK's strategy to meet the requirements of the Water Framework Directive. Schemes fall into 2 basic categories: Remedial – mitigating the impact of existing pollution or Preventative – preventing a future pollution incident.

Mine water treatment schemes generally consist of one or more primary settlement lagoons and one or more reed beds for secondary treatment. A small number are more specialised process treatment plants.

Future underground mining

Details of all planned underground mining relative to the enquiry boundary. Only those future workings where the enquiry boundary is within 0.7 times the depth of the workings (zone of likely physical influence) allowing for seam inclination will be included.

Coal mining licensing

Details of all licenses issued by the Coal Authority either within or within 200 metres of the enquiry boundary in relation to the under taking of surface coal mining, underground coal mining or underground coal gasification.

Court orders

Orders in respect of the working of coal under the Mines (Working Facilities and Support) Acts of 1923 and 1966 or any statutory modification or amendment thereof.

Section 46 notices

Notice of proposals relating to underground coal mining operations that have been given under section 46 of the Coal Mining Subsidence Act 1991.

Withdrawal of support notices

Published notices of entitlement to withdraw support and the date of the notice. Details of any revocation notice withdrawing the entitlement to withdraw support given under Section 41 of the Coal Industry Act 1994.

Payment to owners of former copyhold land

Relevant notices which may affect the property and any subsequent notice of retained interests in coal and coal mines, acceptance or rejection notices and whether any compensation has been paid to a claimant.

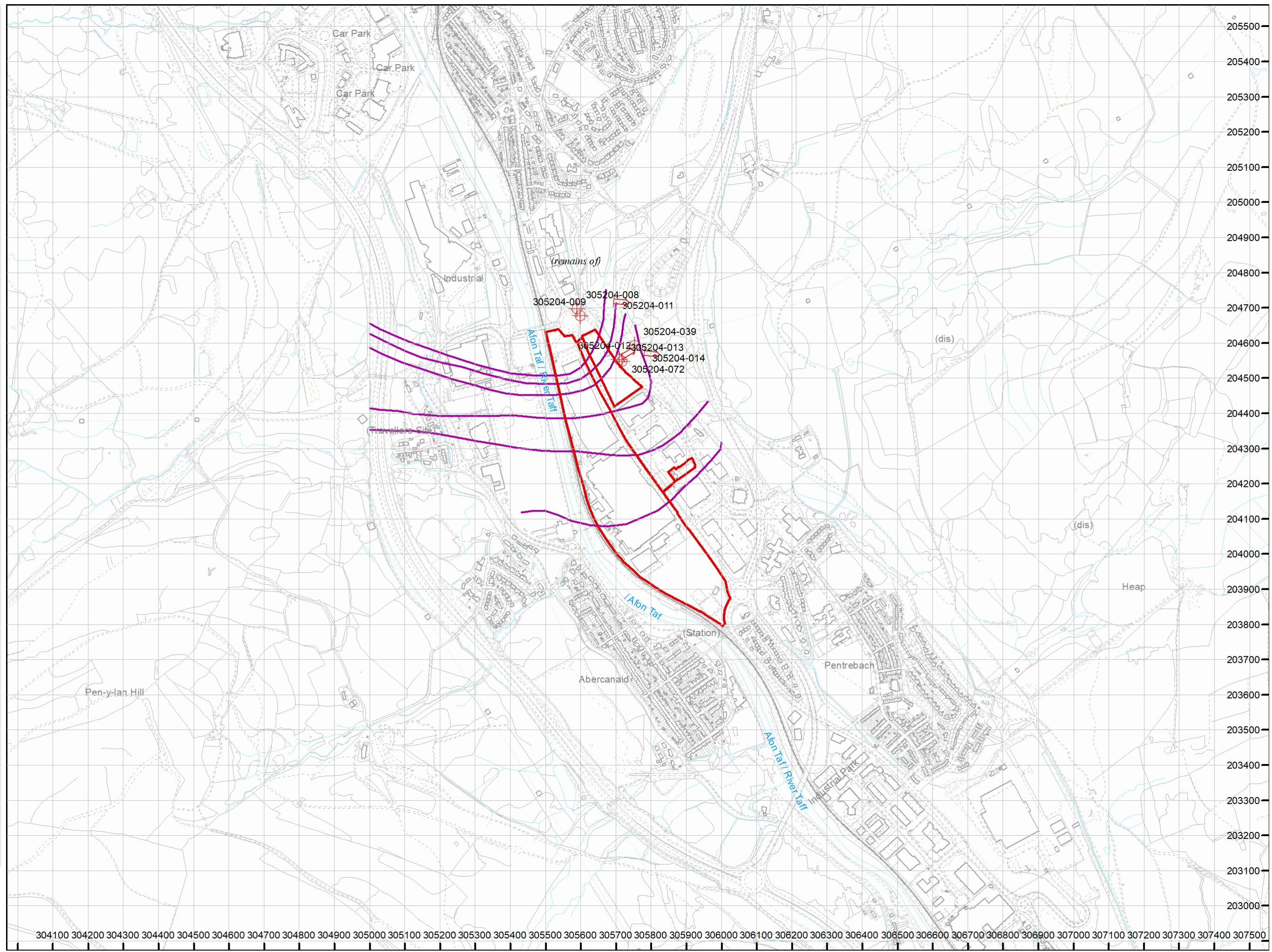
The map highlights any specific surface or subsurface features within or near to the boundary of the site.

Key

- Approximate position of the enquiry boundary shown 
- Disused mine shaft 
- Disused adit 
- Outcrop (Proven) 

How to contact us

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+44 (0)1623 637 000 (International)
www.groundstability.com



APPENDIX E

CABLE PERCUSSION BOREHOLE LOGS

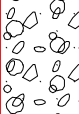
Contract : Hoover Candy Factory Client : Merthyr Tydfil County Borough Council										Borehole No. CP101		
Dates : 4/7/22 - 6/7/22 Location :				Job Number : Q0838 Engineer : Redstart				Ground Level : 149.86 m A.O.D. <i>Level to Ordnance Datum</i> Coordinates: 305952.61 E 203879.04 N <i>Co-ordinates to National Grid</i>				

m B.G.L.	Samples		Insitu Test Results		Strata			Water	Install/ Backfill
	Depth	Type No. Blows	Depth	Test Results	Depth (Thickness)	Description	Legend		
0	0.05 - 0.20 0.20 0.20 - 0.65 0.50	B1 ES1 B2 ES2			(0.20) 0.20	Grass over black sandy SILT with rootlets. (TOPSOIL) at 0.2mbgl PID = 0ppm		(0.20) 149.66	
1	0.90 - 1.20 1.00 1.20 - 1.65	B3 ES3 B4	1.20	SPT (C) 36 (8-10-9-8-8-11)		Loose black gravelly fine to coarse SAND. Gravel is angular to subangular fine to coarse of coal, clinker and slag. (MADE GROUND) at 0.5mbgl PID = 0ppm at 1.0mbgl PID = 0ppm			
2					(3.70)			(3.70)	
	2.50 2.70 - 3.15	ES4 B5	2.70	SPT (C) 16 (3-4-4-3-5-4)		at 2.5mbgl PID = 0ppm			
4	3.90 3.95 - 4.15 4.00 4.20 - 4.65	D1 B6 ES5 SPT1 B7	4.20	SPT (S) 33 (2-2-5-7-10-11)	3.90 (0.60) 4.50	Soft greyish brown sandy gravelly CLAY with a low cobble content of subrounded sandstone. Gravel is subangular to subrounded fine to coarse of sandstone. (ALLUVIUM) at 4.0mbgl PID = 0ppm		145.96 (0.60) 145.36	
5						Dense to medium dense brown sandy subangular to subrounded fine to coarse GRAVEL of sandstone with a medium cobble content of subrounded sandstone. (RIVER TERRACE DEPOSITS) at 5.5mbgl PID = 0ppm			
6	5.50 5.53 5.55 5.70 - 6.15	ES6 EW1 EW B8	5.70	SPT (C) 24 (5-5-6-6-6-7)					
7	7.20 - 7.65	B B9	7.20	SPT (C) 39 (4-6-10-11-9-9)					
8					(7.20)			(7.20)	
9	8.70 - 9.15	B10	8.70	SPT (C) 21 (3-5-5-4-6-6)					

Hole Progress / Water Obs				Casing		Groundwater				Chiselling		
Date / Time	H. Depth	C. Depth	Water	Depth	Cas. Dia.	Struck	Rose To	Behaviour	Sealed	From	To	Hours
04/07/2022 08:00	0.00					7.80	6.10	Moderate groundwater inflow.		4.70	4.90	0:30
04/07/2022 17:00	1.20									7.40	7.60	0:30
05/07/2022 08:00	1.20											

Equipment / plant used: Dando 2000 Remarks: 1.) PAS survey undertaken prior to breaking ground, 2.) Hand pit dug to 1.20m, 3.) Borehole terminated at 13.80mbgl due to refusal in dense gravels.																
 Plas Newydd Swansea Tel: 01554744880 email: enquiries@quantumgeotechnic.co.uk					Operator: NF & MW		Logged By: T. Goodrick		Sheet No. 1 Of 2		m Per Page 10		All measurements in metres unless otherwise stated			

Contract : Hoover Candy Factory Client : Merthyr Tydfil County Borough Council										Borehole No. CP101		
Dates : 4/7/22 - 6/7/22 Location :				Job Number : Q0838 Engineer : Redstart				Ground Level : 149.86 m A.O.D. <i>Level to Ordnance Datum</i> Coordinates: 305952.61 E 203879.04 N <i>Co-ordinates to National Grid</i>				

m B.G.L.	Samples		Insitu Test Results		Strata				Water	Install/ Backfill
	Depth	Type No. Blows	Depth	Test Results	Depth (Thick- ness)	Description	Legend	Red. Level A.O.D.		
10	10.20 - 10.65	B B11	10.20	SPT (C) 22 (4-4-5-5-5-7)						
11										
12			11.70	SPT (C) 16 (2-3-1-3-2-10)	11.70	Dense to very dense brown sandy subangular to subrounded fine to coarse GRAVEL of sandstone with a medium cobble content of subrounded sandstone. (RIVER TERRACE DEPOSITS)		138.16		
13					(2.10)			(2.10)		
14			13.20	SPT (C) 50/275mm (16-9/40mm-7-17-16-10/50mm)						
			13.80	SPT (C) 50/115mm (15-10/20mm-34-16/40mm-)	13.80	Terminatedt at 13.8mbgl upon refusal		136.06		
15										
16										
17										
18										
19										

Hole Progress / Water Obs				Casing		Groundwater				Chiselling		
Date / Time	H. Depth	C. Depth	Water	Depth	Cas. Dia.	Struck	Rose To	Behaviour	Sealed	From	To	Hours
05/07/2022 17:00	10.70	10.70	7.10	13.60	200.00					13.60	13.80	1:00
06/07/2022 08:00	10.70	10.70	5.60									
06/07/2022 17:00	13.80	13.80	6.60									

Equipment / plant used: Dando 2000 Remarks: 1.) PAS survey undertaken prior to breaking ground, 2.) Hand pit dug to 1.20m, 3.) Borehole terminated at 13.80mbgl due to refusal in dense gravels.																
 Plas Newydd Swansea Tel : 01554744880 email: enquiries@quantumgeotechnic.co.uk					Operator: NF& MW		Logged By: T.Goodrick		Sheet No. 2 Of 2		m Per Page 10		All measurements in metres unless otherwise stated			

Contract : Hoover Candy Factory Client : Merthyr Tydfil County Borough Council										Borehole No. CP102		
Dates : 6/7/22 - 8/7/22 Location :				Job Number : Q0838 Engineer : Redstart				Ground Level : 149.78 m A.O.D. <i>Level to Ordnance Datum</i> Coordinates: 305837.71 E 203910.53 N <i>Co-ordinates to National Grid</i>				

m B.G.L.	Samples		Insitu Test Results		Strata			Red. Level A.O.D.	Water	Install/ Backfill
	Depth	Type No. Blows	Depth	Test Results	Depth (Thickness)	Description	Legend			
0	0.05 - 0.15 0.20 0.20 - 0.35 0.40 - 0.85 0.50	B1 ES1 B2 B3 ES2			(0.15) 0.15 (0.25) 0.40	Grass over loose black sandy SILT with rootlets. (TOPSOIL)		(0.15) 149.63 (0.25) 149.38		
1	1.00 1.20 - 1.65	ES3 B4	1.20	SPT (C) 18 (3-5-3-5-5-5)	(1.10) 1.50	Medium dense black gravelly fine to coarse SAND. Gravel is angular to subangular fine to coarse of brick, slag and clinker. (MADE GROUND) at 0.2mbgl PID = 0ppm Medium dense reddish grey to black gravelly fine to coarse SAND. Gravel is angular to subangular fine to coarse of brick, slag and clinker. (MADE GROUND) at 0.5mbgl PID = 0ppm at 1.0mbgl PID = 0ppm		(1.10) 148.28		
2	2.50 2.70 - 3.15	ES4 B5	2.70	SPT (C) 24 (7-5-7-6-6-5)		Dense brown sandy subangular to subrounded fine to coarse GRAVEL of mixed lithologies with a medium cobble content of subangular sandstone. (RIVER TERRACE DEPOSITS) at 2.5mbgl PID = 0ppm				
3	3.60 - 4.05	B6								
4	4.00 4.20 - 4.65	ES5 B7	4.20	SPT (C) 18 (5-4-5-5-4-4)	(6.40)	at 4.0mbgl PID = 0ppm		(6.40)		
5	5.44 5.46 5.50 5.70 - 6.15	EW1 EW ES6 B8	5.70	SPT (C) 41 (13-11-7-8-11-15)		at 5.5mbgl PID = 0ppm				
6										
7	7.20 - 7.65	B9	7.20	SPT (C) 50/210mm (9-14-15-18-17/60mm-)						
8					7.90	Terminated at 7.9mbgl		141.88		
9										

Hole Progress / Water Obs				Casing		Groundwater				Chiselling		
Date / Time	H. Depth	C. Depth	Water	Depth	Cas. Dia.	Struck	Rose To	Behaviour	Sealed	From	To	Hours
06/07/2022 08:00	0.00					6.60	5.30	Moderate groundwater inflow.		4.70	5.00	1:00
06/07/2022 17:00	3.20	3.20	2.50							5.50	5.70	0:30
07/07/2022 08:00	3.20	3.20								6.10	6.30	0:30
07/07/2022 17:00	7.90	7.90	5.40							6.90	7.30	1:00
08/07/2022 08:00	7.90	7.90	5.40							7.70	7.90	0:30
08/07/2022 09:00	7.90	7.90	5.40							7.90	7.90	1:00

Equipment / plant used: Dando 2000 Remarks: 1.) PAS survey undertaken prior to breaking ground, 2.) Hand pit dug to 1.20m, 3.) Borehole terminated at 7.90mbgl due to refusal in dense gravels.																
 Plas Newydd Swansea Tel: 01554744880 email: enquiries@quantumgeotechnic.co.uk					Operator: NF & MW		Logged By: T.Goodrick		Sheet No. 1 Of 1		m Per Page 10		All measurements in metres unless otherwise stated			

Contract : Hoover Candy Factory Client : Merthyr Tydfil County Borough Council										Borehole No. CP103		
Dates : 8/7/22 - 8/7/22 Location :				Job Number : Q0838 Engineer : Redstart				Ground Level : 150.86 m A.O.D. <i>Level to Ordnance Datum</i> Coordinates: 305853.80 E 204060.19 N <i>Co-ordinates to National Grid</i>				

m B.G.L.	Samples		Insitu Test Results		Strata				Water	Install/ Backfill
	Depth	Type No. Blows	Depth	Test Results	Depth (Thickness)	Description	Legend	Red. Level A.O.D.		
0	0.20 - 0.65	B1			(0.20)	Tarmac over concrete.		(0.20)		
	0.20	ES1			0.20	at 0.2mbgl PID = 0ppm		150.66		
	0.50	ES				Loose black to reddish grey gravelly fine to coarse				
	0.70 - 1.15	ES2				SAND. Gravel is angular to subangular fine to				
		B				coarse of brick, clinker and slag.(MADE GROUND)				
1	1.00	B2				at 0.5mbgl PID = 0ppm				
	1.20 - 1.65	ES3	1.20	SPT (C) 13 (3-4-3-3-3-4)		at 1.0mbgl PID = 0ppm				
		B3								
2										
	2.50	ES4				at 2.5mbgl PID = 0ppm				
	2.70 - 3.15	B4	2.70	SPT (C) 22 (5-5-5-6-6-5)	(5.20)			(5.20)		
3										
	4.00	ES				at 4.0mbgl PID = 0ppm				
	4.20 - 4.65	ES5	4.20	SPT (C) 22 (5-4-4-5-6-7)						
		B5								
5										
	5.40 - 0.00	D			5.40	Soft greyish brown sandy SILT. (ALLUVIUM)		145.46		
	5.40	D1			(0.50)	at 5.5mbgl PID = 0ppm		(0.50)		
	5.50	ES								
	5.70 - 6.15	ES6	5.70	SPT (C) 50/285mm (1-1-0-12-17-21/60mm)	5.90	Dense to very dense brown sandy subangular to		144.96		
6		SPT1			(0.30)	subrounded fine to coarse GRAVEL of mixed		(0.30)		
		B6			6.20	lithologies with a medium cobble content of		144.66		
						subrounded sandstone. (RIVER TERRACE				
						DEPOSITS)				
						Terminated at 6.2mbgl				
7										
8										
9										

Hole Progress / Water Obs				Casing		Groundwater				Chiselling		
Date / Time	H. Depth	C. Depth	Water	Depth	Cas. Dia.	Struck	Rose To	Behaviour	Sealed	From	To	Hours
08/07/2022 08:00	0.00			6.20	200.00					6.00	6.20	1:00
08/07/2022 17:00	6.20	6.20	5.30									

Equipment / plant used: Dando 2000 Remarks: 1.) PAS survey undertaken prior to breaking ground, 2.) Hand pit dug to 1.20m, 3.) Borehole terminated at 6.20mbgl due to refusal in dense gravels. 4.) No Groundwater Encountered																	
 Swansea Tel: 01554744880 email: enquiries@quantumgeotechnic.co.uk						Operator: NF & MW		Logged By: T.Goodrick		Sheet No. 1 Of 1		m Per Page 10		All measurements in metres unless otherwise stated			

Contract : Hoover Candy Factory Client : Merthyr Tydfil County Borough Council										Borehole No. CP104		
Dates : 11/7/22 - 12/7/22 Location :				Job Number : Q0838 Engineer : Redstart				Ground Level : 151.33 m A.O.D. <i>Level to Ordnance Datum</i> Coordinates: 305687.25 E 204049.09 N <i>Co-ordinates to National Grid</i>				

m B.G.L.	Samples		Insitu Test Results		Strata				Water
	Depth	Type No. Blows	Depth	Test Results	Depth (Thickness)	Description	Legend	Red. Level A.O.D.	
0	0.20 - 0.50	B1			(0.20)	Concrete.		(0.20)	
	0.30	ES1			0.20	at 0.2mbgl PID = 0ppm		151.13	
	0.50 - 0.70	B2				Loose grey to black and red gravelly fine to coarse SAND. Gravel is angular to subangular fine to coarse of slag, clinker and mudstone. (MADE GROUND)			
	0.50	ES2				at 0.5mbgl PID = 0ppm			
	0.70 - 1.20	B3				at 1.0mbgl PID = 0ppm			
1	1.00	ES3							
	1.20 - 1.65	B4	1.20	SPT (C) 1 (1-0-1-0-0-0)	(2.60)			(2.60)	
2									
	2.50	ES4				at 2.5mbgl PID = 0ppm			
	2.70 - 3.15	B5	2.70	SPT (C) 1 (1-1-0-0-1-0)					
3					2.80	Soft brown sandy SILT. (ALLUVIUM)		148.53	
					(0.80)			(0.80)	
4	4.00	ES5			3.60	Very dense brown sandy subangular to subrounded fine to coarse GRAVEL of mixed lithologies, with a medium cobble content of subrounded sandstone. (RIVER TERRACE DEPOSITS)		147.73	
	4.20 - 4.60	B6	4.20	SPT (C) 29 (3-4-8-6-8-7)	(1.50)	at 4.0mbgl PID = 0ppm		(1.50)	
5			5.10	SPT (C) 70/160mm (18-7-20-41-9/10mm-)	5.10	Terminated at 5.1mbgl upon refusal		146.23	
6									
7									
8									
9									

Hole Progress / Water Obs				Casing		Groundwater				Chiselling		
Date / Time	H. Depth	C. Depth	Water	Depth	Cas. Dia.	Struck	Rose To	Behaviour	Sealed	From	To	Hours
11/07/2022 08:00	0.00			5.10	200.00					4.90	5.10	2:00
11/07/2022 17:00	5.10	5.10	4.80									

Equipment / plant used: Dando 2000
Remarks: 1.) PAS survey undertaken prior to breaking ground,
2.) Hand pit dug to 1.20m,
3.) Borehole terminated at 5.10mbgl due to refusal in dense gravels.
4.) No Groundwater Encountered

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Contract : Hoover Candy Factory Client : Merthyr Tydfil County Borough Council										Borehole No. CP105		
Dates : 8/7/22 - 8/7/22 Location :				Job Number : Q0838 Engineer : Redstart				Ground Level : 151.27 m A.O.D. <i>Level to Ordnance Datum</i> Coordinates: 305650.55 E 204121.69 N <i>Co-ordinates to National Grid</i>				

m B.G.L.	Samples		Insitu Test Results		Strata				Water	
	Depth	Type No. Blows	Depth	Test Results	Depth (Thickness)	Description	Legend	Red. Level A.O.D.		
0	0.30 - 0.50	B1			(0.30)	Concrete.		(0.30)		
	0.50	ES1			0.30	Loose black gravelly fine to coarse SAND. Gravel is angular to subangular fine to coarse of brick, slag and mudstone. (MADE GROUND) at 0.5mbgl PID = 0.5mbgl Loose to medium dense reddish brown sandy angular to subangular GRAVEL of mudstone. (MADE GROUND - COLLIERY SPOIL) at 1.0mbgl PID = 1.0mbgl		150.97		
	0.50 - 0.70	B2			(0.20)				(0.20)	
					0.50				150.77	
1	1.00	ES2								
	1.00 - 1.20	B3			(1.50)			(1.50)		
	1.50	SPT1	1.50	SPT (S) 13 (2-2-4-3-3-3)						
2					2.00	Terminated at 2.0mbgl upon refusal on obstruction, possibly large rubber tyre.		149.27		
3										
4										
5										
6										
7										
8										
9										

Hole Progress / Water Obs				Casing		Groundwater				Chiselling		
Date / Time	H. Depth	C. Depth	Water	Depth	Cas. Dia.	Struck	Rose To	Behaviour	Sealed	From	To	Hours
08/07/2022 08:00	0.00			1.50	200.00							
08/07/2022 17:00	2.00	1.50										

Equipment / plant used: Pilcon 1500 Remarks: 1.) PAS survey undertaken prior to breaking ground. Hand pit dug to 1.20m, 2.) Borehole terminated due to obstruction at 2.00m, 3.) Borehole moved to CP105A. 4.) No Groundwater Encountered										Operator: JW & AB	Logged By: T.Goodrick	Sheet No. 1 Of 1	m Per Page 10	All measurements in metres unless otherwise stated	
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Contract : Hoover Candy Factory Client : Merthyr Tydfil County Borough Council										Borehole No. CP105A		
Dates : 8/7/22 - 11/7/22 Location :				Job Number : Q0838 Engineer : Redstart				Ground Level : 151.25 m A.O.D. <i>Level to Ordnance Datum</i> Coordinates: 305653.44 E 204118.32 N <i>Co-ordinates to National Grid</i>				

m B.G.L.	Samples		Insitu Test Results		Strata				Water
	Depth	Type No. Blows	Depth	Test Results	Depth (Thickness)	Description	Legend	Red. Level A.O.D.	
0					(0.20)	Concrete.		(0.20)	
0.20					0.20	Loose black to grey gravelly fine to coarse SAND. Gravel is angular to subangular fine to coarse of mudstone and slag. (MADE GROUND)		151.05	
1					(2.30)			(2.30)	
2									
2.50					2.50	Concrete.		148.75	
(0.10)					(0.10)	Void.		(0.10)	
2.60					2.60	Concrete.		148.65	
(0.20)					(0.20)			(0.20)	
2.80					2.80	Terminated at 3.0mbgl upon refusal on concrete		148.45	
(0.20)					(0.20)			(0.20)	
3.00					3.00			148.25	
3			3.00	SPT (C) 50/20mm (25/40mm-50/20mm-)					
4									
5									
6									
7									
8									
9									

Hole Progress / Water Obs				Casing		Groundwater				Chiselling		
Date / Time	H. Depth	C. Depth	Water	Depth	Cas. Dia.	Struck	Rose To	Behaviour	Sealed	From	To	Hours
11/07/2022 08:00	0.00			2.50	200.00					3.00	3.00	1:00
11/07/2022 17:00	3.00	2.50										

Equipment / plant used: Pilcon 1500 Remarks: 1.) PAS survey undertaken prior to breaking ground. Hand pit dug to 1.20m, 2.) Borehole terminated at 3.00m due to obstruction at 3.00m, 3.) Borehole moved to CP105B, 4.) No groundwater encountered.															
 Swansea Tel: 01554744880 email: enquiries@quantumgeotechnic.co.uk				Operator: JW & AB		Logged By: T.Goodrick		Sheet No. 1 Of 1		m Per Page 10		All measurements in metres unless otherwise stated			

Contract : Hoover Candy Factory Client : Merthyr Tydfil County Borough Council										Borehole No. CP105B		
Dates : 11/7/22 - 11/7/22 Location :				Job Number : Q0838 Engineer : Redstart				Ground Level : 151.29 m A.O.D. <i>Level to Ordnance Datum</i> Coordinates: 305647.99 E 204120.46 N <i>Co-ordinates to National Grid</i>				

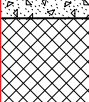
m B.G.L.	Samples		Insitu Test Results		Strata				Water
	Depth	Type No. Blows	Depth	Test Results	Depth (Thickness)	Description	Legend	Red. Level A.O.D.	
0					(0.20)	Concrete.		(0.20)	
1					0.20	Medium dense black to grey gravelly fine to coarse SAND. Gravel is angular to subangular fine to coarse of mudstone and slag. (MADE GROUND)		151.09	
2					(2.80)			(2.80)	
3	3.50 - 4.00	B B1	3.00	SPT (C) 50/190mm (8-12-15-15-20/40mm-)	3.00	Very dense brown to reddish brown sandy subangular to subrounded fine to coarse GRAVEL of mixed lithologies with a medium cobble content of subrounded sandstone. (RIVER TERRACE DEPOSITS)		148.29	
4	4.00	ES1	4.00 4.05	SPT (C) 50/20mm (25/30mm-50/20mm-) SPT (C) 50/20mm (25/20mm-50/20mm-)	(1.05) 4.05	Terminated at 4.05mbgl upon refusal		(1.05) 147.24	
5									
6									
7									
8									
9									

Hole Progress / Water Obs				Casing		Groundwater				Chiselling		
Date / Time	H. Depth	C. Depth	Water	Depth	Cas. Dia.	Struck	Rose To	Behaviour	Sealed	From	To	Hours
11/07/2022 08:00	0.00									3.50	4.00	1:00
11/07/2022 17:00	4.00	3.00								4.00	4.00	1:00

Equipment / plant used: Pilcon 1500
Remarks: 1.) PAS survey undertaken prior to breaking ground. Hand pit dug to 1.20m,
 2.) Borehole terminated at 4.00m upon refusal in dense gravel,
 3.) No groundwater encountered

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Contract : Hoover Candy Factory Client : Merthyr Tydfil County Borough Council										Borehole No. CP106		
Dates : 6/7/22 - 6/7/22 Location :				Job Number : Q0838 Engineer : Redstart				Ground Level : 151.61 m A.O.D. <i>Level to Ordnance Datum</i> Coordinates: 305619.29 E 204212.64 N <i>Co-ordinates to National Grid</i>				

m B.G.L.	Samples		Insitu Test Results		Strata				Water
	Depth	Type No. Blows	Depth	Test Results	Depth (Thickness)	Description	Legend	Red. Level A.O.D.	
0	0.30 - 0.50 0.30 0.50 0.70 - 1.00	B1 ES1 ES2 B2			(0.20) 0.20 (0.70)	Reinforced concrete. Medium dense reddish brown sandy angular to subangular fine to coarse GRAVEL of brick and clinker. (MADE GROUND)		(0.20) 151.41 (0.70)	
1					0.90	Concrete pipe. Hole terminated and moved to CP106A.		150.71	
2									
3									
4									
5									
6									
7									
8									
9									

Hole Progress / Water Obs				Casing		Groundwater				Chiselling		
Date / Time	H. Depth	C. Depth	Water	Depth	Cas. Dia.	Struck	Rose To	Behaviour	Sealed	From	To	Hours

Equipment / plant used: Pilcon 1500 Remarks: 1.) PAS survey undertaken prior to breaking ground. Hand pit dug to 0.90m, 2.) Borehole terminated upon encountering concrete pipe at 0.90m, 3.) Borehole moved to CP106A, 4.) No groundwater encountered.																
 Swansea Tel: 01554744880 email: enquiries@quantumgeotechnic.co.uk					Operator: JW & AB		Logged By: T.Goodrick		Sheet No. 1 Of 1		m Per Page 10		All measurements in metres unless otherwise stated			

Contract : Hoover Candy Factory Client : Merthyr Tydfil County Borough Council										Borehole No. CP106A		
Dates : 6/7/22 - 7/7/22 Location :				Job Number : Q0838 Engineer : Redstart				Ground Level : 151.55 m A.O.D. <i>Level to Ordnance Datum</i> Coordinates: 305617.91 E 204214.44 N <i>Co-ordinates to National Grid</i>				

m B.G.L.	Samples		Insitu Test Results		Strata				Water	Install/Backfill
	Depth	Type No. Blows	Depth	Test Results	Depth (Thickness)	Description	Legend	Red. Level A.O.D.		
0					(0.20)	Reinforced concrete.		(0.20)		
1	0.80 - 1.00 0.80	B1 ES1			0.20	Medium dense reddish brown sandy angular to subangular fine to coarse GRAVEL of brick and clinker. (MADE GROUND) at 0.8mbgl PID = 0ppm		151.35		
2			1.50	SPT (S) 7 (2-1-2-2-1-2)	(2.30)			(2.30)		
3	2.50 - 3.00 2.50	B2 ES2			2.50	at 2.5mbgl PID = 0ppm Dense to very dense brown SAND and GRAVEL. Gravel is fine to coarse sub-rounded to sub-angular sandstone and siltstone.		149.05		
4	3.50 - 3.70	B3	3.30 3.50 3.80	SPT (C) 50/40mm (25/70mm-50/40mm-) SPT (C) 50/40mm (25/20mm-50/40mm-) SPT (C) 50/40mm (25/20mm-50/40mm-)	(1.30)			(1.30)		
5					3.80	Terminated upon refusal at 3.8mbgl		147.75		
6										
7										
8										
9										

Hole Progress / Water Obs				Casing		Groundwater				Chiselling		
Date / Time	H. Depth	C. Depth	Water	Depth	Cas. Dia.	Struck	Rose To	Behaviour	Sealed	From	To	Hours
06/07/2022 08:00	0.00			3.00	200.00					3.30	3.50	1:00
06/07/2022 17:00	3.80	3.00								3.50	3.80	2:00

Equipment / plant used: Pilcon 1500 Remarks: 1.) PAS survey undertaken prior to breaking ground. Hand pit dug to 1.20m, 2.) Borehole terminated at 3.80m upon refusal in dense gravels, 3.) Borehole moved to already drilled WS114 where no advancement was achieved. 4.) No groundwater encountered.										Operator: JW & AB	Logged By: T.Goodrick	Sheet No. 1 Of 1	m Per Page 10	All measurements in metres unless otherwise stated	
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APPENDIX F

ROTARY BOREHOLE LOGS

Contract : Hoover Candy Factory Client : Merthyr Tydfil County Borough Council										Borehole No. RBH101 CP		
Dates : 29/6/22 - 4/6/22 Location :				Job Number : Q0838 Engineer : Redstart				Ground Level : 149.40 m A.O.D. <i>Level to Ordnance Datum</i> Coordinates: 305961.64 E 203980.38 N <i>Co-ordinates to National Grid</i>				

m B.G.L.	Samples		Insitu Test Results		Strata				Water
	Depth	Type No. Blows	Depth	Test Results	Depth (Thickness)	Description	Legend	Red. Level A.O.D.	
0	0.20 0.30 0.50	B2 ES1 ES2			(0.20) 0.20	Grass over black sandy SILT with rootlets. (TOPSOIL) at 0.2mbgl PID = 0ppm		(0.20) 149.20	
1	1.00	ES3	1.20	SPT (C) 18 (5-5-8-4-3-3)	(3.10)	Loose black slightly clayey gravelly fine to coarse SAND. Gravel is angular to subangular fine to coarse of brick, coal and slag. (MADE GROUND) at 0.5mbgl PID = 0ppm at 1.0mbgl PID = 0ppm		(3.10)	
2	2.50	ES4	2.70	SPT (C) 10 (2-2-2-3-2-3)		at 2.5mbgl PID = 0ppm			
3					3.30 (0.80)	Loose black clayey sandy SILT with wood fragments. (ALLUVIUM)		146.10 (0.80)	
4	3.90 4.00 4.20 - 4.65 4.20	D1 ES5 B B7	4.20	SPT (C) 15 (3-3-4-4-3-4)	4.10 (0.90)	at 4.0mbgl PID = 0ppm Dense black sandy subangular to subrounded fine to coarse GRAVEL of mixed lithologies. (RIVER TERRACE DEPOSITS)		145.30 (0.90)	
5	5.13	EW1			5.00	Medium dense to dense brown sandy subangular to subrounded fine to coarse GRAVEL of mixed lithologies. High cobble content of subangular sandstone. (RIVER TERRACE DEPOSITS)		144.40	
6	5.70 - 6.15	B	5.70	SPT (C) 45 (9-9-9-9-15-12)					
7	7.20 - 7.65	B	7.20	SPT (C) 37 (7-8-8-10-9-10)					
8									
9	8.70 - 9.15 8.70	B B10	8.70	SPT (C) 24 (13-11-6-5-4-9)					

Hole Progress / Water Obs				Casing		Groundwater				Chiselling		
Date / Time	H. Depth	C. Depth	Water	Depth	Cas. Dia.	Struck	Rose To	Behaviour	Sealed	From	To	Hours
29/06/2022 08:00	0.00					6.60	5.70	Moderate groundwater inflow.		5.90	6.10	1:00
29/06/2022 17:00	4.00	4.00								8.50	8.70	0:30
30/06/2022 08:00	4.00	4.00								9.10	9.50	1:00
30/06/2022 17:00	9.50	9.50	5.70									
01/07/2022 08:00	9.50	9.50	5.70									

Equipment / plant used: Dando 2000 Remarks: PAS survey undertaken prior to breaking ground. Hand excavated service clearance pit undertaken to 1.2mbgl.												
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	Plas Newydd Swansea Tel: 01554744880 email: enquiries@quantumgeotechnic.co.uk	Operator:	Logged By:	Sheet No.	m Per Page	All measurements in metres unless otherwise stated	
		NF & MW	T.Goodrick	1 Of 2	10		

Contract : Hoover Candy Factory Client : Merthyr Tydfil County Borough Council										Borehole No. RBH101 CP		
Dates : 29/6/22 - 4/6/22 Location :				Job Number : Q0838 Engineer : Redstart				Ground Level : 149.40 m A.O.D. <i>Level to Ordnance Datum</i> Coordinates: 305961.64 E 203980.38 N <i>Co-ordinates to National Grid</i>				

m B.G.L.	Samples		Insitu Test Results		Strata				Water
	Depth	Type No. Blows	Depth	Test Results	Depth (Thickness)	Description	Legend	Red. Level A.O.D.	
10	10.20 - 10.65	B	10.20	SPT (C) 16 (5-4-4-4-4)					
11									
12	11.70 - 12.15	B	11.70	SPT (C) 24 (7-8-11-5-5-3)	(13.20)			(13.20)	
13									
14	13.20 - 13.65	B	13.20	SPT (C) 17 (4-5-4-4-5-4)					
15									
16	14.70 - 15.15	B	14.70	SPT (C) 50 (3-4-12-24-7-7)					
17									
18	16.20 - 16.65	B	16.20	SPT (C) 23 (5-7-8-5-6-4)					
19									
	17.70 - 18.15	B	17.70	SPT (C) 50/245mm (8-10-11-13-19-7/20mm)					
			18.00	SPT (C) 70/105mm (16-9/20mm-20-29/30mm-21/mm-)	18.20	Terminated at 18.2mbgl upon refusal		131.20	

Hole Progress / Water Obs				Casing		Groundwater				Chiselling		
Date / Time	H. Depth	C. Depth	Water	Depth	Cas. Dia.	Struck	Rose To	Behaviour	Sealed	From	To	Hours
01/07/2022 17:00	16.00	16.00	6.30	18.00	200.00					18.00	18.20	1:00
04/07/2022 08:00	16.00	16.00	5.10									
04/07/2022 17:00	18.20	18.00	6.90									

Equipment / plant used: Dando 2000
Remarks: PAS survey undertaken prior to breaking ground. Hand excavated service clearance pit undertaken to 1.2mbgl.

	Plas Newydd Swansea Tel: 01554744880 email: enquiries@quantumgeotechnic.co.uk	Operator:	Logged By:	Sheet No.	m Per Page	All measurements in metres unless otherwise stated	
		NF & MW	T.Goodrick	2 Of 2	10		

Contract : Hoover Candy Factory

Client : Merthyr Tydfil County Borough Council

Dates : 6/7/22 - 6/7/22

Location :

Job Number : Q0838

Engineer : Redstart

Ground Level :

149.40 m A.O.D.
Level to Ordnance Datum

Coordinates:

305961.64 E
203980.38 N
Co-ordinates to National Grid

Orientation & Inclination:

Orientation:
N/A

Borehole No.

RBH101 R

m B.G.L.	Run Details				Fracture Details			Samples		Insitu Tests		Strata				Discontinuities											
	Core Run	TCR %	SCR %	RQD %	Min	Avg	Max	FI	Depth	Type No. Blows	Depth	Test Results	Depth (Thickness)	Description	Legend	Red. Level A.O.D.	Depth (Thickness)	Dip	Direction	Fracture Set	Discontinuity Description	Water	Install Backfill				
1									0.30	ES1				Progressed using Cable Percussive Drilling Techniques									✓	✓			
2									0.50	ES2															✓	✓	
3									1.00	ES3		SPT (C) 18 (5-5-8-4-3-3)	1.2												✓	✓	
4									2.50	ES4			2.7													✓	✓
5									4.00	ES5			4.2													✓	✓
6									4.20 - 4.65	B		SPT (C) 15 (3-3-4-4-3-4)	5.7													✓	✓
7									5.17	EW			5.7													✓	✓
8									5.70 - 6.15	B		SPT (C) 45 (8-9-9-9-15-12)	7.2													✓	✓
9									7.20 - 7.65	B		SPT (C) 37 (7-5-6-10-6-10)	8.7													✓	✓
10									8.70 - 9.15	B		SPT (C) 24 (13-11-6-5-4-9)	10.2													✓	✓
11									10.20 - 10.65	B		SPT (C) 16 (5-1-4-4-4-4)	11.7													✓	✓
12									11.70 - 12.15	B		SPT (C) 24 (7-2-11-6-5-5)	13.2													✓	✓
13									13.20 - 13.65	B		SPT (C) 17 (4-5-4-4-5-4)	14.7													✓	✓
14									14.70 - 15.15	B		SPT (C) 50 (3-4-12-9-7)														✓	✓
15																										✓	✓

Hole Progress / Water Obs				Casing		Groundwater			Flush			Remarks: PAS survey undertaken prior to breaking ground. Hand excavated service clearance pit undertaken to 1.2mbgl. GL - 18.0 Cable Percussive, 18.0 - 23.5mbgl ODEX / Rotary Open Hole, 23.5 - 33.8mbgl Rotary Cored, 33.8 - 45.0mbgl Rotary Open Hole		
Date / Time	H. Depth	C. Depth	Water	Depth	Diam.	Struck	Rose To	Behaviour	Sealed	Depth	Type		Returns	Colour
29/06/2022 08:00	0.00					6.60	5.70	Moderate groundwater inflow.		0.00 - 45.00	Mist		100	
29/06/2022 17:00	4.00	4.00				7.00								
30/06/2022 08:00	4.00	4.00												
30/06/2022 17:00	9.50	9.50	5.70											
01/07/2022 08:00	9.50	9.50	5.70											
01/07/2022 17:00	16.00	16.00	6.30											
04/07/2022 08:00	16.00	16.00	5.10											
06/07/2022 08:00	7.00	0.00	7.00											

Contract : Hoover Candy Factory

Client : Merthyr Tydfil County Borough Council

Borehole No.
RBH101 R

Dates : 6/7/22 - 6/7/22

Job Number : Q0838

Ground Level : 149.40 m A.O.D.
Level to Ordnance Datum

Location :

Engineer : Redstart

Coordinates: 305961.64 E
203980.38 N
Co-ordinates to National Grid



Plas Newydd
Swansea
Tel: 01554744880
email: enquiries@quantumgeotechnic.co.uk

Operator:
NF & MW

Logged By:
T.Goodrick

Sheet No.
1 Of 3

m Per
Page
2

All measurements in
metres unless
otherwise stated



Contract : Hoover Candy Factory

Client : Merthyr Tydfil County Borough Council

Borehole No.
RBH101 R

Dates : 6/7/22 - 6/7/22

Job Number : Q0838

Ground Level : 149.40 m A.O.D.
Level to Ordnance Datum

Location :

Engineer : Redstart

Coordinates: 305961.64 E
203980.38 N
Co-ordinates to National Grid



Plas Newydd
Swansea
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Operator:
NF & MW

Logged By:
T.Goodrick

Sheet No.
2 Of 3

m Per
Page
2

All measurements in
metres unless
otherwise stated



Contract : Hoover Candy Factory Client : Merthyr Tydfil County Borough Council		Borehole No. RBH101 R
Dates : 6/7/22 - 6/7/22 Location :	Job Number : Q0838 Engineer : Redstart	Ground Level : 149.40 m A.O.D. <i>Level to Ordnance Datum</i> Coordinates: 305961.64 E 203980.38 N <i>Co-ordinates to National Grid</i>



	Plas Newydd Swansea Tel: 01554744880 email: enquiries@quantumgeotechnic.co.uk	Operator: NF & MW	Logged By: T.Goodrick	Sheet No. 3 Of 3	m Per Page 2	All measurements in metres unless otherwise stated	

Contract : Hoover Candy Factory Client : Merthyr Tydfil County Borough Council											Borehole No. RBH102		
Dates : 7/7/22 - 8/7/22 Location :					Job Number : Q0838 Engineer : Redstart					Ground Level : 149.90 m A.O.D. <i>Level to Ordnance Datum</i> Coordinates: 305913.62 E 204047.92 N <i>Co-ordinates to National Grid</i>			

m B.G.L.	Run Details				Fractures		Samples		Strata					Water	Install/ Backfill
	Core Run	TCR %	SCR %	RQD %	Min Avg Max	FI	Depth	Type No. Blows	Depth (Thickness)	Description	Legend	Red. Level A.O.D.			
0										Made Ground - Drillers Description					
1									(4.20)						
2															
3															
4									4.20 (0.90)	Brown sandy Clay - Drillers Description		145.70			
5							5.33	EW1	5.10	Dense Gravel and Cobbles - Drillers Description		144.80			
6															
7									(3.40)						
8															
9									8.50	Gravel - Drillers Description		141.40			
10															
11															
12									(7.30)						
13															
14															
15															
16									15.80	Sand and Gravel - Drillers Description		134.10			
17															
18															
19															
20															
21									(9.60)						
22															
23															
24															

Hole Progress / Water Obs				Casing		Groundwater				Flush		
Date / Time	H. Depth	C. Depth	Water	Depth	Diam.	Struck	Rose To	Behaviour	Sealed	Depth	Type	Returns
07/07/2022 08:00	0.00					5.50 8.00 15.00				0.00 - 49.00	Mist	100

Plant: Commachio 600
Remarks: PAS survey undertaken prior to breaking ground. Hand excavated service clearance pit undertaken to 1.2mbgl.

	Plas Newydd Swansea Tel: 01554744880 email: enquiries@quantumgeotechnic.co.uk	Operator:	Logged By:	Sheet No.	m Per Page	All measurements in metres unless otherwise stated	
		QGL	P Darby	1 Of 2	25		

Contract : Hoover Candy Factory Client : Merthyr Tydfil County Borough Council										Borehole No. RBH102		
Dates : 7/7/22 - 8/7/22 Location :					Job Number : Q0838 Engineer : Redstart					Ground Level : 149.90 m A.O.D. <i>Level to Ordnance Datum</i> Coordinates: 305913.62 E 204047.92 N <i>Co-ordinates to National Grid</i>		

m B.G.L.	Run Details				Fractures		Samples		Strata				Water	Install/ Backfill
	Core Run	TCR %	SCR %	RQD %	Min Avg Max	FI	Depth	Type No. Blows	Depth (Thickness)	Description	Legend	Red. Level A.O.D.		
25									25.40	Siltstone - Drillers Description	o x x x x	124.50		
26									(4.10)		x x x x x			
27											x x x x x			
28											x x x x x			
29											x x x x x			
30									29.50	Coal - Drillers Description	■	120.40		
31									(0.50)	Mudstone - Drillers Description	■	119.90		
32									30.00	Coal - Drillers Description	■	119.40		
33									(0.50)	Mudstone - Drillers Description	■	118.70		
34									30.50					
35									(0.70)					
36									31.20					
37														
38									(6.40)					
39														
40									37.60	Coal - Drillers Description	■	112.30		
41									(1.20)					
42									38.80	Mudstone - Drillers Description	■	111.10		
43									(1.20)					
44									40.00	Coal - Drillers Description	■	109.90		
45									(0.50)	Mudstone - Drillers Description	■	109.40		
46									40.50					
47														
48														
49									(8.50)					
									49.00	Terminated at 49.0mbgl		100.90		

Hole Progress / Water Obs				Casing		Groundwater				Flush		
Date / Time	H. Depth	C. Depth	Water	Depth	Diam.	Struck	Rose To	Behaviour	Sealed	Depth	Type	Returns
07/07/2022 17:00	49.00	26.50		26.50	115.00							

Plant: Commachio 600
Remarks: PAS survey undertaken prior to breaking ground. Hand excavated service clearance pit undertaken to 1.2mbgl.

	Plas Newydd Swansea Tel: 01554744880 email: enquiries@quantumgeotechnic.co.uk	Operator: QGL	Logged By: P Darby	Sheet No. 2 Of 2	m Per Page 25	All measurements in metres unless otherwise stated	
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Contract : Hoover Candy Factory Client : Merthyr Tydfil County Borough Council											Borehole No. RBH103	
Dates : 1/7/22 - 4/7/22 Location :					Job Number : Q0838 Engineer : Redstart				Ground Level : 151.00 m A.O.D. <i>Level to Ordnance Datum</i> Coordinates: 305732.04 E 203975.34 N <i>Co-ordinates to National Grid</i>			

m B.G.L.	Run Details				Fractures		Samples		Strata				Water	Install/ Backfill	
	Core Run	TCR %	SCR %	RQD %	Min Avg Max	FI	Depth	Type No. Blows	Depth (Thickness)	Description	Legend	Red. Level A.O.D.			
0															
1								0.50	ES1	(1.20)	MADE GROUND - Black and reddish brown slightly silty sandy GRAVEL with many wood fragments and low cobble content. Gravel is fine to coarse angular mudstone, clinker, brick and concrete. Cobbles are angular brick, concrete and slag. Ash Fill - Drillers Description				
2								1.00	ES2	1.20			149.80		
3										(2.70)					
4										3.90	Gravel and Boulders - Drillers Description		147.10		
5															
6								6.25	EW1 EW	(6.10)					
7							6.27								
8															
9															
10										10.00	Sand and Gravel - Drillers Description		141.00		
11															
12										(3.90)					
13															
14										13.90	Sandstone and Mudstone Bands - Drillers Description		137.10		
15															
16															
17															
18															
19										19.10	Coal - Drillers Description		131.90		
20										(0.40)	Mudstone - Drillers Description		131.50		
21										19.50					
22										(2.60)					
23															
24										22.10	Coal - Drillers Description		128.90		
										(0.90)					
										23.00	Mudstone and Siltstone Bands - Drillers Description		128.00		

Hole Progress / Water Obs				Casing		Groundwater				Flush		
Date / Time	H. Depth	C. Depth	Water	Depth	Diam.	Struck	Rose To	Behaviour	Sealed	Depth	Type	Returns
01/07/2022 08:00	0.00			14.50	115.00	14.00	7.20	Fast groundwater inflow below 14.0mbgl		0.00 - 42.00	Mist	100
01/07/2022 16:00	10.00	10.00	7.40									
04/07/2022 07:00	10.00	10.00	7.40									

Plant: Commachio 600 Remarks: PAS survey undertaken prior to breaking ground. Hand excavated service clearance pit undertaken to 1.2mbgl.												
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	Plas Newydd Swansea Tel: 01554744880 email: enquiries@quantumgeotechnic.co.uk	Operator:	Logged By:	Sheet No.	m Per Page	All measurements in metres unless otherwise stated	
		QGL	P Darby	1 Of 2	25		

Contract : Hoover Candy Factory Client : Merthyr Tydfil County Borough Council											Borehole No. RBH103		
Dates : 1/7/22 - 4/7/22 Location :				Job Number : Q0838 Engineer : Redstart				Ground Level : 151.00 m A.O.D. <i>Level to Ordnance Datum</i> Coordinates: 305732.04 E 203975.34 N <i>Co-ordinates to National Grid</i>					

m B.G.L.	Run Details				Fractures		Samples		Strata					Water	Install/ Backfill
	Core Run	TCR %	SCR %	RQD %	Min Avg Max	FI	Depth	Type No. Blows	Depth (Thickness)	Description	Legend	Red. Level A.O.D.			
25											Mudstone and Siltstone Bands - Drillers Description	x x x x			
26									(6.10)						
27															
28															
29															
30									29.10 (1.10)		Coal - Drillers Description		121.90		
31									30.20		Mudstone and Siltstone Bands - Drillers Description		120.80		
32															
33															
34															
35															
36															
37									(11.80)						
38															
39															
40															
41															
42									42.00		Terminated at 42.0mbgl		109.00		
43															
44															
45															
46															
47															
48															
49															

Hole Progress / Water Obs				Casing		Groundwater				Flush		
Date / Time	H. Depth	C. Depth	Water	Depth	Diam.	Struck	Rose To	Behaviour	Sealed	Depth	Type	Returns
04/07/2022 17:00	42.00	14.50										

Plant: Commachio 600
Remarks: PAS survey undertaken prior to breaking ground. Hand excavated service clearance pit undertaken to 1.2mbgl.

	Plas Newydd Swansea Tel : 01554744880 email: enquiries@quantumgeotechnic.co.uk	Operator: QGL	Logged By: P Darby	Sheet No. 2 Of 2	m Per Page 25	All measurements in metres unless otherwise stated	
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Contract : Hoover Candy Factory Client : Merthyr Tydfil County Borough Council										Borehole No. RBH104 CP		
Dates : 28/6/22 - 29/6/22 Location :				Job Number : Q0838 Engineer : Redstart				Ground Level : 151.03 m A.O.D. <i>Level to Ordnance Datum</i> Coordinates: 305832.16 E 204157.05 N <i>Co-ordinates to National Grid</i>				

m B.G.L.	Samples		Insitu Test Results		Strata				Water
	Depth	Type No. Blows	Depth	Test Results	Depth (Thickness)	Description	Legend	Red. Level A.O.D.	
0	0.30 - 0.75	B B1			(0.30)	Reinforced Concrete. Rebar at 0.25m.		(0.30)	
	0.50	ES1			0.30 (0.50)	Loose dark grey slightly silty slightly gravelly fine to coarse SAND. Gravel is angular to subangular fine to coarse of coal, brick and slag. (MADE GROUND) at 0.5mbgl PID = 0ppm		150.73 (0.50)	
1	0.80 - 1.15	B2			0.80	Loose grey to black ravelly fine to coarse SAND. Gravel is angular to subangular fine to coarse of clinker, coal and slag. (MADE GROUND - COLLIERY SPOIL) at 1.0mbgl PID = 0ppm		150.23	
	1.00	ES2							
	1.20 - 1.65	B3	1.20	SPT (C) 7 (2-1-2-2-1-2)					
2	1.90 - 2.35	B B4			(2.00)			(2.00)	
	2.50	ES3				at 2.5mbgl PID = 0ppm			
	2.70 - 3.15	B5	2.70	SPT (C) 7 (1-1-2-2-1-2)					
3					2.80 (0.90)	Loose black gravelly fine to coarse SAND. Gravel is angular to subangular of fine coal. (MADE GROUND - COAL DUST)		148.23 (0.90)	
4	3.70 - 4.15	B6			3.70	Firm greyish brown sandy gravelly CLAY with a medium cobble content of subrounded sandstone. Gravel is subrounded to rounded fine to coarse of sandstone. (ALLUVIUM) at 4.0mbgl PID = 0ppm		147.33 (0.80)	
	4.00	ES4			(0.80)				
	4.20 - 4.65	B7	4.20	SPT (C) 50/200mm (4-3-10-17-23/50mm-)					
5	5.30 - 5.80	B B8			4.50 (1.30)	Very dense brown fine to coarse SAND + GRAVEL with a medium cobble content of subrounded sandstone. (RIVER TERRACE DEPOSITS) at 5.5mbgl PID = 0ppm		146.53 (1.30)	
	5.50	ES5	5.70	SPT (C) 50/170mm (25-20-23-7/20mm-)					
6					5.80	Terminated at 5.8mbgl upon refusal		145.23	
7									
8									
9									

Hole Progress / Water Obs				Casing		Groundwater				Chiselling		
Date / Time	H. Depth	C. Depth	Water	Depth	Cas. Dia.	Struck	Rose To	Behaviour	Sealed	From	To	Hours
28/06/2022 08:00	0.00			5.70	200.00					5.70	5.80	1:00
28/06/2022 17:00	4.20	4.00										
29/06/2022 08:00	4.20	4.00										
29/06/2022 17:00	5.80	5.70	5.10									

Equipment / plant used: Dando 2000
Remarks: 1.) PAS survey undertaken prior to breaking ground. Hand dug pit to 1.20m,
 2.) Slow progress due to dense Sands and Gravels
 3.) No Groundwater Encountered

 Plas Newydd Swansea Tel: 01554744880 email: enquiries@quantumgeotechnic.co.uk	Operator: NF & MW	Logged By: T.Goodrick	Sheet No. 1 Of 1	m Per Page 10	All measurements in metres unless otherwise stated	
---	-----------------------------	---------------------------------	----------------------------	-------------------------	--	---

Contract : Hoover Candy Factory

Client : Merthyr Tydfil County Borough Council

Dates : 4/7/22 - 5/7/22

Location :

Job Number : Q0838

Engineer : Redstart

Ground Level : 151.03 m A.O.D.
Level to Ordnance Datum

Coordinates: 305832.16 E
204157.05 N
Co-ordinates to National Grid

Orientation & Inclination:
Orientation: N/A

Inclination: N/A

Borehole No.
RBH104 R

Run Details

Fracture Details

Samples

Insitu Tests

Strata

Discontinuities

Core Run

TCR %

SCR %

RQD %

Min

Avg

Max

FI

Depth

Type No.

Blovs

Depth

Test Results

Depth (Thickness)

Description

Legend

Red Level A.O.D.

Depth (Thickness)

Dip

Direction

Fracture Set

Discontinuity Description

Water

Initial/ Backfill

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Contract : Hoover Candy Factory

Client : Merthyr Tydfil County Borough Council

Dates : 4/7/22 - 5/7/22

Location :

Job Number : Q0838

Engineer : Redstart

Ground Level : 151.03 m A.O.D.
Level to Ordnance Datum

Coordinates: 305832.16 E
204157.05 N
Co-ordinates to National Grid

Orientation & Inclination:
Orientation: N/A
Inclination: N/A

Borehole No.
RBH104 R

Run Details										Fracture Details				Samples		Insitu Tests		Strata				Discontinuities				Initial/ Backfill	
Core Run	TCR %	SCR %	RQD %	Min	Avg	Max	FI	Depth	Type No. Blows	Depth (Thickness)	Test Results	Description	Red Level A.O.D.	Depth (Thickness)	Direction	Fracture Set	Discontinuity Description	Water	Initial/ Backfill								
30	97	85	70	20	112	500	12		23.90 - 34.40 C2	31.70 (0.60)		 below 30.0mbgl thinly laminated	119.33														
31	100	85	85	20	136	280	10		31.90 C 31.90 - 32.15 C3	32.30 (0.60)		Strong fine grained SANDSTONE with one discontinuity set. (SOUTH WALES MIDDLE COAL MEASURES)	118.73				At 30.5mbgl 30 degree discontinuity smooth undulating, partly open, clean. Between 30.75 and 30.85mbgl sub-horizontal to 10 degree discontinuities extremely closely spaced. Below 31.0mbgl sub-horizontal to 10 degree discontinuities medium spaced. Between 31.7 and 32.3mbgl sub-vertical discontinuity rough planar and undulating, open, with calcite surface coating.										
32							6		33.43 C 33.43 - 33.56 C4			Medium strong dark grey SILTSTONE with one discontinuity set. (SOUTH WALES MIDDLE COAL MEASURES)		10.20													
33									34.00 C 34.00 - 34.32 C5	(4.25)																	
34	100	98	97	20	187	360	7		35.07 C 35.07 - 36.25 C6	36.55 (1.65)		 between 36.55 and 36.7mbgl and between 36.85 and 37.00mbgl highly weathered to fine to medium angular Gravel Weak black COAL. (SOUTH WALES MIDDLE COAL MEASURES) between 37.0 and 38.2mbgl highly weathered to silty sandy fine to medium angular Gravel.	114.48														
35									37.00 C 37.00 - 37.10 C7			Weak to medium strong grey MUDSTONE with one discontinuity set. (SOUTH WALES MIDDLE COAL MEASURES) Mudstone - Drillers Description	112.83 (0.30) 112.53 (0.60)	38.20 (0.30) 38.50 (0.60)			Sub-horizontal to 10 degree bedding discontinuity set extremely closely spaced, rough planar to undulating, partly open with silt surface coating.										
36	93	83	64	40	143	280	7		38.30 - 38.49 C8	38.10 (0.90)		Coal - Drillers Description	111.93														
37	100	20	13																								
38																											
39																											

Remarks: PAS survey undertaken prior to breaking ground. Hand excavated service clearance pit undertaken to 1.2mbgl. GL - 5.8 Cable Percussive, 5.8 - 28.0mbgl ODEX / Rotary Open Hole, 28.0 - 38.5mbgl Rotary Cored, 38.5 - 42.0mbgl Rotary Open Hole

Quantum Geotechnics

Rien Nanyind
Swarna
Tel: 0155774880
email: enquiry@quantumgeotechnics.co.uk

Operator: QGL

Logged By: P Darby

Logged Date:

Equipment Used: Rig: Commachio 600.

Form Name: ROTARY A3, Version 2.11.000, 22/05/15 Output By: Phil Darby, Library File: C:\USERS\PHIL.DARBY\ONEDRIVE - QUANTUM GEOTECHNICS\TDQUANTUM 4.GLB.

Contract : Hoover Candy Factory

Client : Merthyr Tydfil County Borough Council

Dates : 4/7/22 - 5/7/22

Location :

Job Number : Q0838

Engineer : Redstart

Ground Level : 151.03 m A.O.D.
Level to Ordnance Datum

Coordinates: 305832.16 E
204157.05 N
Co-ordinates to National Grid

Orientation & Inclination:
Orientation: N/A
Inclination: N/A

Borehole No.
RBH104 R

Run Details

Fracture Details

Samples

Insitu Tests

Strata

Discontinuities

Core Run

TCR %

SCR %

RQD %

Min

Avg

Max

FI

Depth

Type No. Bore

Depth

Test Results

Depth (Thickness)

Description

Legend

Red Level A.O.D.

Depth (Thickness)

Dip

Direction

Fracture Set

Discontinuity Description

Water

Instal/ Backfill

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Contract : Hoover Candy Factory

Client : Merthyr Tydfil County Borough Council

Borehole No.
RBH104 R

Dates : 4/7/22 - 5/7/22

Job Number : Q0838

Ground Level : 151.03 m A.O.D.
Level to Ordnance Datum

Location :

Engineer : Redstart

Coordinates: 305832.16 E
204157.05 N
Co-ordinates to National Grid



Plas Newydd
Swansea
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email: enquiries@quantumgeotechnic.co.uk

Operator:
QGL

Logged By:
P Darby

Sheet No.
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All measurements in
metres unless
otherwise stated



Contract : Hoover Candy Factory

Client : Merthyr Tydfil County Borough Council

Borehole No.
RBH104 R

Dates : 4/7/22 - 5/7/22

Job Number : Q0838

Ground Level : 151.03 m A.O.D.
Level to Ordnance Datum

Location :

Engineer : Redstart

Coordinates: 305832.16 E
204157.05 N
Co-ordinates to National Grid



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All measurements in
metres unless
otherwise stated



Contract : Hoover Candy Factory

Client : Merthyr Tydfil County Borough Council

**Borehole No.
RBH104 R**

Dates : 4/7/22 - 5/7/22

Job Number : Q0838

Ground Level : 151.03 m A.O.D.
Level to Ordnance Datum

Location :

Engineer : Redstart

Coordinates: 305832.16 E
204157.05 N
Co-ordinates to National Grid



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All measurements in
metres unless
otherwise stated



Contract : Hoover Candy Factory

Client : Merthyr Tydfil County Borough Council

Dates : 14/7/22 - 15/7/22

Location :

Job Number : Q0838

Engineer : Redstart

Ground Level : 149.56 m A.O.D.

Level to Ordnance Datum

Coordinates: 305892.68 E

204229.87 N

Co-ordinates to National Grid

Orientation & Inclination: Orientation: N/A

Inclination: N/A

Borehole No. RBH105

Run Details										Fracture Details			Samples		Insitu Tests		Strata		Discontinuities				
Core Run	TCR %	SCR %	RQD %	Min	Avg	Max	FI	Depth	Type No. Blows	Depth	Test Results	Depth (Thickness)	Description	Legend	Red Level A.O.D.	Depth (Thickness)	Dip	Fracture Set	Discontinuity Description	Water	Installs/ Backfill		
15											(19.60mm-21.20.90mm-)												
16								16.2			SPT (C) 50.85mm (5-20.60mm-31.19.10mm-)	126.56 (0.70)	Siltstone - Drillers Description		126.56								
17								17.7			SPT (C) 50.55mm (25.70mm-50.55mm-)	126.86	Thinly laminated to thinly bedded medium strong dark grey MUDSTONE and strong light grey SANDSTONE with one discontinuity set. Sub-horizontal to 10 degree (bedding) discontinuity set closely spaced, smooth planar, tight to partly open, clean.		126.86				Sub-horizontal to 10 degree discontinuity set closely spaced, smooth planar, tight to partly open, clean.				
18								18.2			SPT (C) 50.55mm (25.50mm-50.55mm-)	(2.07)							Between 21.65 and 22.2mbgl sub-vertical discontinuity smooth to rough planar, clean.				
19												22.77	Medium strong dark grey thinly laminated MUDSTONE with one discontinuity set. (SOUTH WALES MIDDLE COAL MEASURES)		126.79				Below 22.77mbgl discontinuities close to medium spaced.				
20												(2.73)							At 24.36mbgl 30 degree discontinuity smooth undulating, open, clean.				
21	20.70 - 22.20							20.87 - 21.03	C1					 between 25.5 and 25.7mbgl highly to completely weathered to gravelly Sand		124.06							
22	22.20 - 23.70	100	100	84	40	115	250	12				(1.80)	Weak to medium strong black COAL with one dcontinuity set. (SOUTH WALES MIDDLE COAL MEASURES)										
23		100	97	72	90	150	280	9				27.10	Weak to medium strong dark grey MUDSTONE with one discontinuity set. (SOUTH WALES MIDDLE COAL MEASURES)		122.46				Sub-horizontal to 10 degree (bedding) discontinuity set extremely closely to closely spaced, rough planar to undulating, partly open to open, locally completely weathered to gravelly sand upto 50mm penetration.				
24	23.70 - 25.20							23.10 - 23.40	C2			(1.10)	Weak to medium strong black COAL with two discontinuity sets. (SOUTH WALES MIDDLE COAL MEASURES)		121.36				Sub-horizontal to 10 degree discontinuity set closely spaced, rough planar, tight to partly open, clean.				
25	25.20 - 26.70							24.56 - 24.80	C3			28.20	Weak to medium strong black COAL with two discontinuity sets. (SOUTH WALES MIDDLE COAL MEASURES)		119.99				45 degree discontinuity set closely spaced rough planar, partly open to open, locally completely weathered to sand upto 50mm penetration.				
26		80	55	29	30	100	310	4				(1.37)	Medium strong grey conglomeritic MUDSTONE with one discontinuity		119.99				Sub-horizontal to 10 degree (bedding) discontinuities extremely close				
27	26.70 - 27.20	300	146	48				27.23 - 27.32	C5			28.57											
28	27.20 - 28.70	60	46	21	120	150	230	9															
29	28.70 -	96	85	52	15	142	310	6															

Remarks: PAS survey undertaken prior to breaking ground. Hand excavated service clearance pit undertaken to 1.2mbgl. Dynamic Sampling refused at 1.6mbgl. ODEX drilling 1.6 - 20.7mbgl. 412 rotary coring 20.7 - 30.7mbgl

Flush

Groundwater

Casing

Hole Progress / Water Obs

Date / Time

Ht. Depth

C. Depth

Water

Diam.

Struck

Rose To

Behaviour

Sealed

Depth

Type

Returns

Colour

Quantum

Geotechnics

Rien Noyvold

Swansea

Tel: 0155744880

email: enquiry@quantumgeotechnics.co.uk

Operator: QGL

Logged By: P Darby

Logged Date:

Equipment Used: Rig: Commachio 600.

Sheet No. 2 Of 3

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All measurements in this report are to the datum unless otherwise stated

AGS

Contract : Hoover Candy Factory
Client : Merthyr Tydfil County Borough Council

Dates : 14/7/22 - 15/7/22
Location :
Job Number : Q0838
Engineer : Redstart

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

Coordinates: 305892.68 E
204229.87 N
Co-ordinates to National Grid

Orientation & Inclination:
Orientation: N/A
Inclination: N/A

Borehole No.
RBH105

Run Details												Fracture Details				Samples		Insitu Tests		Strata				Discontinuities				Water	Install/ Backfill
Core Run		TCR %	SCR %	RQD %	Min	Avg	Max	FI	Depth	Type No. Bore	Depth	Test Results	Depth (Thickness)	Description	Legend	Red Level A.O.D.	Depth (Thickness)	Dip	Direction	Fracture Set	Discontinuity Description								
30.70		96	85	52	15	142	310	6			30.20 - 30.50	C7	(1.13)	set. Nodules are coarse gravel size sandstone. (SOUTH WALES MIDDLE COAL MEASURES)			118.86	1.13				to closely spaced, rough planar, open, clean, locally with medium sub-angular gravel infill.							
30.7													30.70	Terminated at 30.7mbgl															
31																													
32																													
33																													
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Hole Progress / Water Obs				Casing		Groundwater		Flush			Remarks: PAS survey undertaken prior to breaking ground. Hand excavated service clearance pit undertaken to 1.2mbgl. Dynamic Sampled 1.2 - 1.6mbgl. Dynamic Sampling refused at 1.6mbgl. ODEX drilling 1.6 - 20.7mbgl. 412 rotary coring 20.7 - 30.7mbgl			
Date / Time	H. Depth	C. Depth	Water	Depth	Diam.	Struck	Rose To	Behaviour	Sealed	Depth		Type	Returns	Colour
14/07/2022 17:00	30.70	20.70												

Contract : Hoover Candy Factory

Client : Merthyr Tydfil County Borough Council

Borehole No.
RBH105

Dates : 14/7/22 - 15/7/22

Job Number : Q0838

Ground Level : 149.56 m A.O.D.
Level to Ordnance Datum

Location :

Engineer : Redstart

Coordinates: 305892.68 E
204229.87 N
Co-ordinates to National Grid



Plas Newydd
Swansea
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Operator:

QGL

Logged By:

P Darby

Sheet No.

1 Of 2

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Page

2

All measurements in
metres unless
otherwise stated



Contract : Hoover Candy Factory

Client : Merthyr Tydfil County Borough Council

Borehole No.

RBH105

Dates : 14/7/22 - 15/7/22

Job Number : Q0838

Ground Level : 149.56 m A.O.D.
Level to Ordnance Datum

Location :

Engineer : Redstart

Coordinates: 305892.68 E
204229.87 N
Co-ordinates to National Grid



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Sheet No.

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Page

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All measurements in
metres unless
otherwise stated



Contract : Hoover Candy Factory Client : Merthyr Tydfil County Borough Council											Borehole No. RBH106		
Dates : 8/7/22 - 8/7/22 Location :					Job Number : Q0838 Engineer : Redstart					Ground Level : 151.35 m A.O.D. <i>Level to Ordnance Datum</i> Coordinates: 305667.24 E 204070.36 N <i>Co-ordinates to National Grid</i>			

m B.G.L.	Run Details				Fractures		Samples		Strata					Water	Install/ Backfill
	Core Run	TCR %	SCR %	RQD %	Min Avg Max	FI	Depth	Type No. Blows	Depth (Thickness)	Description	Legend	Red. Level A.O.D.			
0											Ash Backfill - Drillers Description				
1										(2.90)					
2										2.90	Brown Clay - Drillers Description		148.45		
3										(1.10)					
4										4.00	Gravel and Boulders - Drillers Description		147.35		
5										(2.80)					
6										5.56 5.69 5.86					
7											Sand and Gravels - Drillers Description		144.55		
8															
9										(7.30)					
10															
11															
12															
13															
14										14.10	Mudstone and Siltstone - Drillers Description		137.25		
15										(2.30)					
16										16.40	Coal - Drillers Description		134.95		
17										(1.20)					
18										17.60	Mudstone and Siltstone - Drillers Description		133.75		
19															
20															
21															
22															
23															
24															

Hole Progress / Water Obs				Casing		Groundwater				Flush		
Date / Time	H. Depth	C. Depth	Water	Depth	Diam.	Struck	Rose To	Behaviour	Sealed	Depth	Type	Returns
08/07/2022 08:00	0.00			14.50	115.00	13.00		Medium groundwater inflow				

Plant: Commachio 600
Remarks: PAS survey undertaken prior to breaking ground. Hand excavated service clearance pit undertaken to 1.2mbgl.

	Plas Newydd Swansea Tel: 01554744880 email: enquiries@quantumgeotechnic.co.uk	Operator:	Logged By:	Sheet No.	m Per Page	All measurements in metres unless otherwise stated	
		QGL	P Darby	1 Of 2	25		

Form Name: ROTARY. Version 2.11.000, 22/05/15 Output By: Phil Darby. Library File: C:\USERS\PHIL DARBY\ONEDRIVE - QUANTUM GEOTECHNIC LTD\QUANTUM 4.GLB.

Contract : Hoover Candy Factory Client : Merthyr Tydfil County Borough Council											Borehole No. RBH107	
Dates : 5/7/22 - 5/7/22 Location :				Job Number : Q0838 Engineer : Redstart				Ground Level : 151.63 m A.O.D. <i>Level to Ordnance Datum</i> Coordinates: 305769.03 E 204244.24 N <i>Co-ordinates to National Grid</i>				

m B.G.L.	Run Details				Fractures		Samples		Strata					Water	Install/ Backfill
	Core Run	TCR %	SCR %	RQD %	Min Avg Max	FI	Depth	Type No. Blows	Depth (Thickness)	Description	Legend	Red. Level A.O.D.			
0							0.50	ES1		Ash Backfill - Drillers Description					
1									(5.00)						
2															
3															
4															
5									5.00	Gravel and Boulders - Drillers Description		146.63			
6									(1.80)						
7									6.80	Sand and Gravel - Drillers Description		144.83			
8															
9															
10															
11															
12															
13															
14															
15									(15.70)						
16															
17															
18															
19															
20															
21															
22															
23									22.50	Mudstone - Drillers Description		129.13			
24									(1.10)						
									23.60	Coal - Drillers Description		128.03			
									(0.50)	Mudstone - Drillers Description		127.53			
									24.10						

Hole Progress / Water Obs				Casing		Groundwater					Flush		
Date / Time	H. Depth	C. Depth	Water	Depth	Diam.	Struck	Rose To	Behaviour	Sealed	Depth	Type	Returns	
05/07/2022 08:00	0.00			23.50	115.00	5.50	4.80	Medium groundwater inflow at 5.5mbgl		0.00 - 40.00	Mist	100	

Plant: Commachio 600
Remarks: PAS survey undertaken prior to breaking ground. Hand excavated service clearance pit undertaken to 1.2mbgl.

	Plas Newydd Swansea Tel: 01554744880 email: enquiries@quantumgeotechnic.co.uk	Operator: QGL	Logged By: P Darby	Sheet No. 1 Of 2	m Per Page 25	All measurements in metres unless otherwise stated	
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Contract : Hoover Candy Factory Client : Merthyr Tydfil County Borough Council											Borehole No. RBH107		
Dates : 5/7/22 - 5/7/22 Location :					Job Number : Q0838 Engineer : Redstart					Ground Level : 151.63 m A.O.D. <i>Level to Ordnance Datum</i> Coordinates: 305769.03 E 204244.24 N <i>Co-ordinates to National Grid</i>			

m B.G.L.	Run Details					Fractures		Samples		Strata					Water	Install/ Backfill
	Core Run	TCR %	SCR %	RQD %	Min Avg Max	FI	Depth	Type No. Blows	Depth (Thickness)	Description	Legend	Red. Level A.O.D.				
25									(2.10)	Mudstone - Drillers Description						
26									26.20	Coal - Drillers Description		125.43				
27									(1.20)							
28									27.40	Mudstone and Siltstone - Drillers Description	x x x x	124.23				
29									(1.70)		x x x x					
30									29.10	Coal - Drillers Description		122.53				
31									(0.90)							
32									30.00	Mudstone - Drillers Description		121.63				
33									(4.10)							
34									34.10	Coal - Drillers Description		117.53				
35									(0.90)							
36									35.00	Mudstone and Siltstone - Drillers Description		116.63				
37											x x x x					
38									(5.00)		x x x x					
39											x x x x					
40											x x x x					
41									40.00	Terminated at 40.0mbgl		111.63				
42																
43																
44																
45																
46																
47																
48																
49																

Hole Progress / Water Obs				Casing		Groundwater				Flush		
Date / Time	H. Depth	C. Depth	Water	Depth	Diam.	Struck	Rose To	Behaviour	Sealed	Depth	Type	Returns
05/07/2022 17:00	40.00	23.50	5.80			34.00	15.80	Fast groundwater inflow at 34.0mbgl				

Plant: Commachio 600
Remarks: PAS survey undertaken prior to breaking ground. Hand excavated service clearance pit undertaken to 1.2mbgl.

	Plas Newydd Swansea Tel : 01554744880 email: enquiries@quantumgeotechnic.co.uk	Operator: QGL	Logged By: P Darby	Sheet No. 2 Of 2	m Per Page 25	All measurements in metres unless otherwise stated	
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Contract : Hoover Candy Factory Client : Merthyr Tydfil County Borough Council										Borehole No. RBH108 CP		
Dates : 4/7/22 - 4/7/22 Location :				Job Number : Q0838 Engineer : Redstart				Ground Level : 151.62 m A.O.D. <i>Level to Ordnance Datum</i> Coordinates: 305734.20 E 204292.11 N <i>Co-ordinates to National Grid</i>				

m B.G.L.	Samples		Insitu Test Results		Strata				Water	
	Depth	Type No. Blows	Depth	Test Results	Depth (Thickness)	Description	Legend	Red. Level A.O.D.		
0	0.20 - 0.30	B1			(0.20)	Reinforced concrete. Rebar at 0.15m.		(0.20)		
	0.50 - 0.60	B B2			0.20	Loose black to reddish brown gravelly fine to coarse SAND. Gravel is angular to subangular fine to coarse of clinker, slag and brick. (MADE GROUND)		151.42		
1	1.00 - 1.20	B3			(1.30)				(1.30)	
	1.50	SPT1 B4	1.50	SPT (S) 5 (1-2-1-2-1-1)	1.50			Soft greyish brown sandy gravelly CLAY with a low cobble content of subrounded sandstone. Gravel is subangular to subrounded fine to coarse of sandstone. (ALLUVIUM)		150.12
2	1.50 - 2.00				(1.50)			(1.50)		
	2.50 - 3.00	B B5								
3	3.00	SPT2 B6	3.00	SPT (S) 48 (3-5-8-12-12-16)	3.00	Dense to very dense brown sandy subrounded to rounded fine to coarse GRAVEL of sandstone with a high cobble content of subrounded sandstone. (RIVER TERRACE DEPOSITS)		148.62		
	3.00 - 3.50				(1.20)			(1.20)		
4			4.00	SPT (C) 50/70mm (25/40mm-50/70mm-)						
			4.10	SPT (C) 50/20mm (25/10mm-50/20mm-)						
			4.20	SPT (C) 50/20mm (25/10mm-50/20mm-)	4.20	Terminated at 4.2mbgl upon refusal		147.42		
5										
6										
7										
8										
9										

Hole Progress / Water Obs				Casing		Groundwater				Chiselling		
Date / Time	H. Depth	C. Depth	Water	Depth	Cas. Dia.	Struck	Rose To	Behaviour	Sealed	From	To	Hours
04/07/2022 08:00	0.00			4.00	200.00					4.00	4.20	2:00
04/07/2022 17:00	4.20	4.00										
06/07/2022 08:00	4.00											

Equipment / plant used: Pilcon 1500
Remarks: 1.) PAS survey undertaken prior to breaking ground. Hand pit dug to 1.20m,
2.) Refusal at 4.20m,
3.) Borehole terminated and moved to BH108A,
4.) No Groundwater Encountered

 Quantum Geotech Swansea Tel: 01554744880 email: enquiries@quantumgeotechnic.co.uk	Operator: JW & AB	Logged By: T.Godrick	Sheet No. 1 Of 1	m Per Page 10	All measurements in metres unless otherwise stated	
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Contract : Hoover Candy Factory Client : Merthyr Tydfil County Borough Council										Borehole No. RBH108A CP		
Dates : 5/7/22 - 5/7/22 Location :				Job Number : Q0838 Engineer : Redstart				Ground Level : 151.62 m A.O.D. <i>Level to Ordnance Datum</i> Coordinates: 305734.20 E 204292.11 N <i>Co-ordinates to National Grid</i>				

m B.G.L.	Samples		Insitu Test Results		Strata				Water
	Depth	Type No. Blows	Depth	Test Results	Depth (Thickness)	Description	Legend	Red. Level A.O.D.	
0	0.20 - 0.30	B1			(0.20)	Reinforced concrete. Rebar at 0.15m.		(0.20)	
	0.30 - 0.50	B2			0.20	Loose black to reddish brown gravelly fine to coarse SAND. Gravel is angular to subangular fine to coarse of clinker, slag and brick. (MADE GROUND)		151.42	
1	1.00 - 1.20	B3			(1.30)			(1.30)	
	1.50 - 2.00	B	1.50	SPT (S) 6 (1-2-1-2-1-2)	1.50	Soft greyish brown sandy gravelly CLAY with a low cobble content of subrounded sandstone. Gravel is subangular to subrounded fine to coarse of sandstone. (ALLUVIUM)		150.12	
2	1.50	SPT1			(1.50)			(1.50)	
	1.50 - 2.00	B4							
	2.50 - 3.00	B5							
3	3.00	SPT2	3.00	SPT (S) 45 (4-4-8-10-12-15)	3.00	Dense to very dense brown sandy subrounded to rounded fine to coarse GRAVEL of sandstone with a high cobble content of subrounded sandstone. (RIVER TERRACE DEPOSITS)		148.62	
	3.00 - 3.50	B6			(1.10)			(1.10)	
	3.50 - 4.00	B7							
4			4.00	SPT (C) 50/70mm (4-12-50/70mm→)	4.10	Terminated at 4.1mbgl upon refusal		147.52	
			4.10	SPT (C) 50/40mm (25/20mm-50/40mm→)					
5									
6									
7									
8									
9									

Hole Progress / Water Obs				Casing		Groundwater				Chiselling		
Date / Time	H. Depth	C. Depth	Water	Depth	Cas. Dia.	Struck	Rose To	Behaviour	Sealed	From	To	Hours
04/07/2022 08:00	0.00									4.00	4.10	1:00
04/07/2022 17:00	4.10	4.00										

Equipment / plant used: Pilcon 1500
Remarks: 1.) PAS survey undertaken prior to breaking ground. Hand pit dug to 1.20m,
2.) Refusal at 4.10m.
3.) No Groundwater Encountered

	Plas Newydd Swansea Tel: 01554744880 email: enquiries@quantumgeotechnic.co.uk	Operator: JW & AB	Logged By: T.Goodrick	Sheet No. 1 Of 1	m Per Page 10	All measurements in metres unless otherwise stated	
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Contract : Hoover Candy Factory

Cliet : Merthyr Tydfil County Borough Council

Dates : 6/7/22 - 7/7/22

Location :

Job Number : Q0838

Engineer : Redstart

Ground Level : 151.62 m A.O.D.
Level to Ordnance Datum

Coordinates: 305734.20 E
204292.11 N
Co-ordinates to National Grid

Orientation & Indination: Orientation: N/A

Incination: N/A

Borehole No.
RBH108A R

Run Details										Fracture Details				Samples			Insitu Tests		Strata				Discontinuities					Water		Install/ Backfill
Core Run	TCR %	SCR %	RQD %	Min	Avg	Max	FI	Depth	Type No. Blows	Depth	Test Results	Depth (Thick- ness)	Description	Legend	Red Level A.O.D.	Depth (Thick- ness)	Dip	Direction	Fracture Set	Discontinuity Description				Water	Install/ Backfill					
30	93	63	0	10	60	140	22	30.55 - 30.60	C4	30.55 - 30.60		(7.60)	 between 31.0 and 31.26mbgl many Calcite veins			9.70					Below 33.56mbgl sub-horizontal to 15 degree discontinuities locally highly weathered to sand and medium angular gravel up to 50mm penetration.									
31	96	93	41	15	100	260	14	32.14 - 32.20	C5	32.14 - 32.20			 below 35.2mbgl fissile								Between 36.0 and 36.5mbgl vertical discontinuity rough planar with calcite surface coating.									
32	96	86	0	5	53	90	26	33.05 - 33.14	C6	33.05 - 33.14		36.20 (0.30)	Strong light grey SANDSTONE with one discontinuity set. (SOUTH WALES MIDDLE COAL MEASURES)		115.42	36.20					Sub-horizontal (bedding) discontinuity set closely spaced, smooth planar, open, clean.									
33	99	63	13	40	105	190	16	34.53 - 34.73	C7	34.53 - 34.73		36.50	Terminated at 36.5mbgl		115.73	0.30														
34	100	78	32	70	111	170	8	35.64 - 35.80	C8	35.64 - 35.80																				
35								36.35 - 36.50	C9	36.35 - 36.50																				
36																														
37																														
38																														
39																														
40																														
41																														
42																														
43																														
44																														

Hole Progress / Water Obs

Date / Time

H. Depth

C. Depth

Water

07/07/2022 17:00

36.50

26.50

Casing

Struck

Rose To

Depth

Diam.

Groundwater

Sealed

Depth

Type

Returns

Colour

Remarks: PAS survey undertaken prior to breaking ground. Hand excavated service clearance pit undertaken to 1.2mbgl. GL - 4.0 Cable Percussive, 4.0 - 26.5mbgl ODEX / Rotary Open Hole, 26.5 - 36.5mbgl Rotary Cored

Quantum
Geotechnics

Rien Nanyidd
Swansea
Tel: 0155774480
email: enquiries@quantumgeotechnics.co.uk

Operator: QGL

Logged By: P Darby

Logged Date:

Equipment Used: Rig: Commachio 600.

AGS

All measurements in
this report are
otherwise stated

Sheet No.
3 Of 3

m Per
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Form Name: ROTARY A3, Version 2.11.000, 22/05/15 Output By: Phil Darby, Library File: C:\USERS\PHIL.DARBY\ONEDRIVE - QUANTUM GEOTECHNIC\TDQUANTUM 4.GLB.

Contract : Hoover Candy Factory

Client : Merthyr Tydfil County Borough Council

Borehole No.
RBH108A R

Dates : 6/7/22 - 7/7/22

Job Number : Q0838

Ground Level : 151.62 m A.O.D.
Level to Ordnance Datum

Location :

Engineer : Redstart

Coordinates: 305734.20 E
204292.11 N
Co-ordinates to National Grid



Plas Newydd
Swansea
Tel: 01554744880
email: enquiries@quantumgeotechnic.co.uk

Operator:
QGL

Logged By:
P Darby

Sheet No.
1 Of 2

m Per
Page
2

All measurements in
metres unless
otherwise stated



Contract : Hoover Candy Factory

Client : Merthyr Tydfil County Borough Council

Borehole No.
RBH108A R

Dates : 6/7/22 - 7/7/22

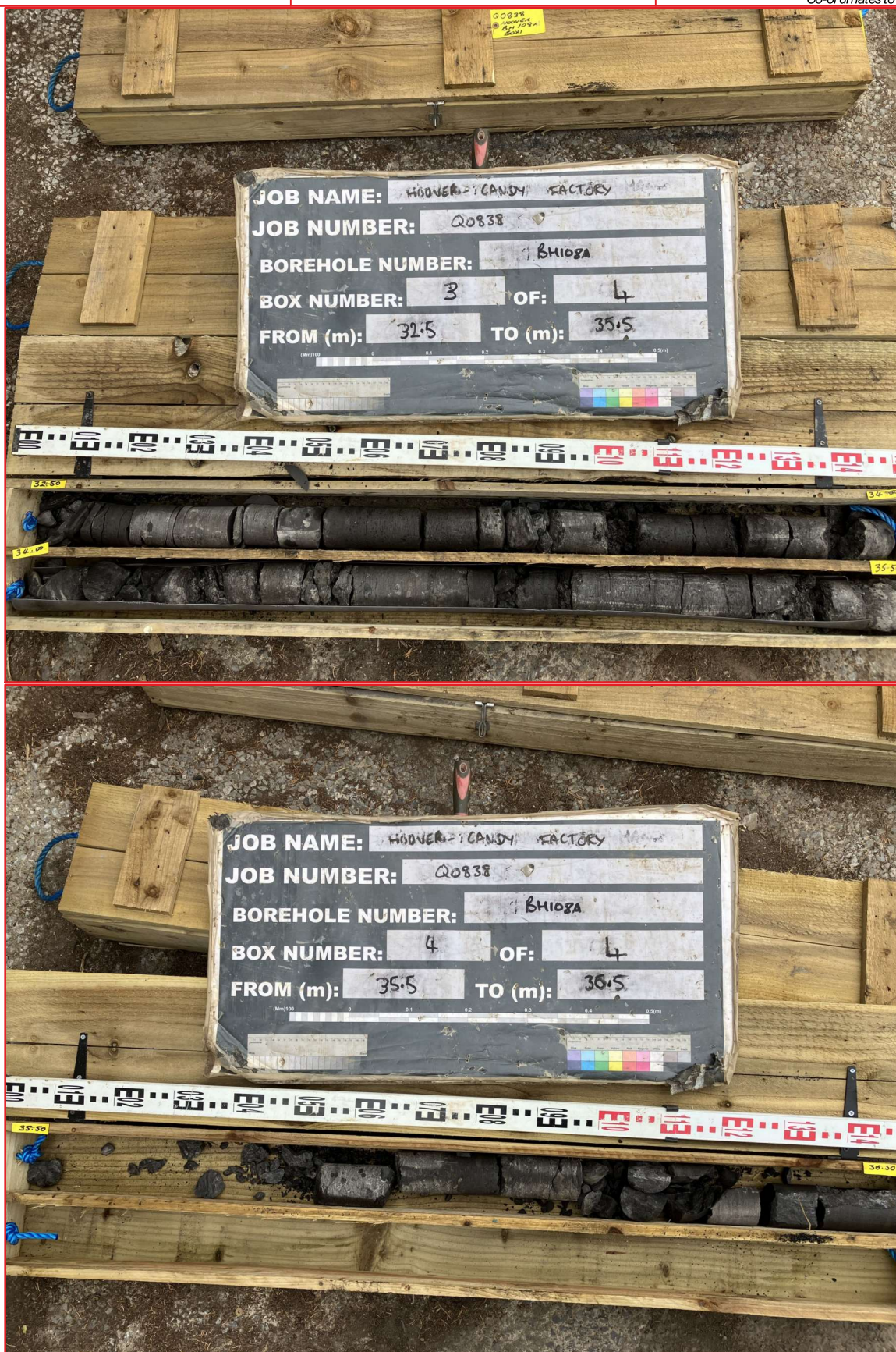
Job Number : Q0838

Ground Level : 151.62 m A.O.D.
Level to Ordnance Datum

Location :

Engineer : Redstart

Coordinates: 305734.20 E
204292.11 N
Co-ordinates to National Grid



Contract : Hoover Candy Factory Client : Merthyr Tydfil County Borough Council												Borehole No. RBH109	
Dates : 29/6/22 - 30/6/22 Location :						Job Number : Q0838 Engineer : Redstart				Ground Level : 156.39 m A.O.D. <i>Level to Ordnance Datum</i> Coordinates: 305679.58 E 204398.93 N <i>Co-ordinates to National Grid</i>			

m B.G.L.	Run Details					Fractures		Samples		Strata					Water	Install/ Backfill
	Core Run	TCR %	SCR %	RQD %	Min Avg Max	FI	Depth	Type No. Blows	Depth (Thickness)	Description	Legend	Red. Level A.O.D.				
0										(0.30)	TOPSOIL - Light brown SILT with many rootlets		156.09			
1										0.30 (0.90)	MADE GROUND - Pinkish brown gravelly SAND. Gravel is fine to coarse angular slag and brick.		155.19			
2										1.20	Colliery Spoil - Drillers Description					
3																
4										(4.70)						
5																
6										5.90 (1.30)	Brown sandy Clay - Drillers Description		150.49			
7										7.20	Dense Gravel and Boulders - Drillers Description		149.19			
8																
9							8.54 8.66	EW1 EW2		(2.80)						
10										10.00 (2.20)	Sand and Gravel - Drillers Description		146.39			
11																
12										12.20	Silty Sand (Blowing) - Drillers Description		144.19			
13																
14																
15																
16																
17																
18										(11.80)						
19																

Hole Progress / Water Obs				Casing		Groundwater				Flush		
Date / Time	H. Depth	C. Depth	Water	Depth	Diam.	Struck	Rose To	Behaviour	Sealed	Depth	Type	Returns
29/06/2022 08:00	0.00					10.00	8.80	Medium groundwater inflow.				

Plant: Commachio 600
Remarks: PAS survey undertaken prior to breaking ground. Hand excavated service clearance pit undertaken to 1.2mbgl

	Plas Newydd Swansea Tel: 01554744880 email: enquiries@quantumgeotechnic.co.uk	Operator:	Logged By:	Sheet No.	m Per Page	All measurements in metres unless otherwise stated	
		QGL	G Blades	1 Of 3	20		

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Contract : Hoover Candy Factory Client : Merthyr Tydfil County Borough Council											Borehole No. RBH109		
Dates : 29/6/22 - 30/6/22 Location :					Job Number : Q0838 Engineer : Redstart					Ground Level : 156.39 m A.O.D. <i>Level to Ordnance Datum</i> Coordinates: 305679.58 E 204398.93 N <i>Co-ordinates to National Grid</i>			

m B.G.L.	Run Details				Fractures		Samples		Strata					Water	Install/ Backfill
	Core Run	TCR %	SCR %	RQD %	Min Avg Max	FI	Depth	Type No. Blows	Depth (Thickness)	Description	Legend	Red. Level A.O.D.			
20											Silty Sand (Blowing) - Drillers Description				
21															
22															
23															
24									24.00		Dense Gravel - Drillers Description		132.39		
25									(3.20)						
26															
27									27.20		Siltstone and Mudstone Bands - Drillers Description		129.19		
28															
29															
30															
31									(6.80)						
32															
33															
34									34.00		Coal - Drillers Description		122.39		
35									(0.60)						
36									34.60		Mudstone - Drillers Description		121.79		
37									(0.60)						
38									35.20		Coal - Drillers Description		121.19		
39									(1.20)						
40									36.40		Mudstone - Drillers Description		119.99		
41															
42															
43															
44															
45															
46															
47															
48															
49															
50															

Hole Progress / Water Obs				Casing		Groundwater				Flush		
Date / Time	H. Depth	C. Depth	Water	Depth	Diam.	Struck	Rose To	Behaviour	Sealed	Depth	Type	Returns
29/06/2022 17:00	22.00	22.00		28.00	115.00	24.00	9.00	Fast groundwater inflow.				
30/06/2022 08:00	22.00	22.00										

Plant: Commachio 600
Remarks: PAS survey undertaken prior to breaking ground. Hand excavated service clearance pit undertaken to 1.2mbgl

	Plas Newydd Swansea Tel: 01554744880 email: enquiries@quantumgeotechnic.co.uk	Operator:	Logged By:	Sheet No.	m Per Page	All measurements in metres unless otherwise stated	
		QGL	G Blades	2 Of 3	20		

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Contract : Hoover Candy Factory Client : Merthyr Tydfil County Borough Council											Borehole No. RBH109						
Dates : 29/6/22 - 30/6/22 Location :				Job Number : Q0838 Engineer : Redstart				Ground Level : 156.39 m A.O.D. <i>Level to Ordnance Datum</i> Coordinates: 305679.58 E 204398.93 N <i>Co-ordinates to National Grid</i>									
m B.G.L.	Run Details				Fractures		Samples		Strata				Water	Install/ Backfill			
	Core Run	TCR %	SCR %	RQD %	Min Avg Max	FI	Depth	Type No. Blows	Depth (Thickness)	Description	Legend	Red. Level A.O.D.					
40									(6.90)	Mudstone - Drillers Description							
41																	
42																	
43																	
44									43.30 (1.10)	Coal - Drillers Description		113.09					
45									44.40 (0.60)	Mudstone - Drillers Description		111.99					
46									45.00	Terminated at 45.0mbgl		111.39					
47																	
48																	
49																	
50																	
51																	
52																	
53																	
54																	
55																	
56																	
57																	
58																	
59																	
Hole Progress / Water Obs				Casing		Groundwater				Flush							
Date / Time	H. Depth	C. Depth	Water	Depth	Diam.	Struck	Rose To	Behaviour	Sealed	Depth	Type	Returns					
30/06/2022 17:00	45.00	28.00	9.00														
Plant: Commachio 600 Remarks: PAS survey undertaken prior to breaking ground. Hand excavated service clearance pit undertaken to 1.2mbgl																	
		Plas Newydd Swansea Tel : 01554744880 email: enquiries@quantumgeotechnic.co.uk				Operator: QGL		Logged By: G Blades		Sheet No. 3 Of 3		m Per Page 20		All measurements in metres unless otherwise stated			

Contract : Hoover Candy Factory Client : Merthyr Tydfil County Borough Council											Borehole No. RBH110		
Dates : 27/6/22 - 28/6/22 Location :					Job Number : Q0838 Engineer : Redstart					Ground Level : 157.22 m A.O.D. <i>Level to Ordnance Datum</i> Coordinates: 305757.35 E 204474.84 N <i>Co-ordinates to National Grid</i>			

m B.G.L.	Run Details				Fractures		Samples		Strata				Water	Install/ Backfill	
	Core Run	TCR %	SCR %	RQD %	Min Avg Max	FI	Depth	Type No. Blows	Depth (Thickness)	Description	Legend	Red. Level A.O.D.			
0									(0.10)	Asphalt		157.12			
1								0.50 ES1	0.10	MADE GROUND - silty slightly sandy GRAVEL. Gravel is fine to coarse angular slag, mudstone and brick. Colliery Spoil - Drillers Description		156.02			
							1.00 ES2	0.10							
								(1.10)							
2									1.20						
3									(4.20)						
4															
5															
6									5.40	Clay Backfill - Drillers Description		151.82			
7									(1.10)						
8									6.50	Sand and Gravel - Drillers Description		150.72			
9									(3.10)						
10									9.60	Weathered Mudstone - Drillers Description		147.62			
11									(0.40)	Mudstone and Siltstone Bands - Drillers Description		147.22			
12									10.00						
13															
14								14.12 ESEW1							
15								14.16 EW							
16									(11.20)						
17															
18															
19															

Hole Progress / Water Obs				Casing		Groundwater				Flush		
Date / Time	H. Depth	C. Depth	Water	Depth	Diam.	Struck	Rose To	Behaviour	Sealed	Depth	Type	Returns
27/06/2022 08:00	0.00			10.00	115.00	8.50	7.00	Medium groundwater inflow.		0.00 - 30.00	Mist	100

Plant: Commachio 600
Remarks: PAS survey undertaken prior to breaking ground. Hand excavated service clearance pit undertaken to 1.2mbgl.

	Plas Newydd Swansea Tel: 01554744880 email: enquiries@quantumgeotechnic.co.uk	Operator:	Logged By:	Sheet No.	m Per Page	All measurements in metres unless otherwise stated	
		QGL	P Darby	1 Of 2	20		

Form Name: ROTARY. Version 2.11.000, 22/05/15 Output By: Phil Darby. Library File: C:\USERS\PHIL DARBY\ONEDRIVE - QUANTUM GEOTECHNIC LTD\QUANTUM 4.GLB.